

No. 19.

WELLER MFG CO.
CHICAGO

ELEVATING
CONVEYING
AND POWER
TRANSMITTING
MACHINERY



NOTE

19B Supplement

Effective July 1, 1910

THE FOLLOWING LISTS GIVEN IN
CATALOGUE No. 19 AND ALL
FORMER ISSUES ARE VOID

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Revised lists governing all the above are
given herewith and supersede all
previous lists and net prices

Weller Mfg. Co.

CHICAGO

*P. S.—Don't forget to make proper note in
Catalogue No. 19. Also see Supplement 19A
for previous changes of other list prices*

See Supplement 19A

FOR CHANGES IN FOLLOWING LISTS

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Revised lists with date of adoption governing all
the above are given in Supplement 19A
and supersede all previous lists
and net prices

**If you have no copy of Supplement 19A
write us**

Salem Steel Elevator Buckets

Pages 156-157 Catalogue No. 19

Price List—Effective April 1, 1910

Size In.	Gauge	Price	Gauge	Price	Gauge	Price	Gauge	Price	Gauge	Price
2 x2	25	\$0.10	18	\$0.15						
2½x2½	24	.10		.20						
3 x2½		.10		.20						
3½x2½		.10		.23						
3 x3	23	.10	16	.29						
3½x3		.10		.31						
4 x3		.15		.35						
4½x3		.15		.39						
4 x3½	22	.15		.38	14	\$0.41				
4½x3½		.15		.40		.43				
5 x3½		.19		.44		.47				
5 x4		.19		.48		.51	12	\$0.71		
5½x4	21	.22		.49		.53		.73		
6 x4		.22		.50		.54		.75		
7 x4½		.30		.56		.60		.83	10	\$1.03
8 x5	19	.38		.63		.68		.93		1.15
9 x5		.40		.75		.81		1.12		1.38
10 x5½		.48		.86		.93		1.28		1.58
10 x6	18	.55		.91		.98		1.36		1.67
11 x6		.63		.98		1.05		1.45		1.79
12 x6		.70		1.03		1.11		1.53		1.89
14 x6		.80		1.05		1.12		1.56		1.93
16 x6		.90		1.10		1.19		1.64		2.02
18 x6		1.00		1.15		1.24		1.71		2.15
20 x6		1.10		1.20		1.28		1.79		2.21
10 x7		.75		1.16		1.25		1.73		2.13
11 x7		.85		1.23		1.32		1.83		2.25
12 x7		.90		1.28		1.38		1.90		2.35
14 x7		.95		1.30		1.40		1.94		2.39
16 x7		1.28		1.35		1.46		2.01		2.48
18 x7		1.38		1.40		1.51		2.09		2.58
20 x7		1.40		1.45		1.57		2.16		2.67
12 x8		1.20		1.53		1.65		2.27		2.81
14 x8		1.30		1.55		1.67		2.31		2.85
16 x8		1.40		1.60		1.73		2.38		2.94
18 x8		1.50		1.65		1.78		2.46		3.03
20 x8		1.60		1.70		1.84		2.53		3.13
22 x8		1.70		1.80		1.94		2.68		3.31
24 x8		1.80		1.90		2.05		2.83		3.50

For galvanizing add 65 per cent.

Prices on other gauges and sizes quoted upon application.

Salem Steel Elevator Buckets

Pages 156-157 Catalogue No. 19

Price List—Effective April 1, 1910

Size In.	Gauge	Price	Gauge	Price	Gauge	Price	Gauge	Price	Gauge	Price
2 x2	25	\$0.10	18	\$0.15						
2½x2½	24	.10		.20						
3 x2½		.10		.20						
3½x2½		.10		.23						
3 x3	23	.10	16	.29						
3½x3		.10		.31						
4 x3		.15		.35						
4½x3		.15		.39						
4 x3½	22	.15		.38	14	\$0.41				
4½x3½		.15		.40		.43				
5 x3½		.19		.44		.47				
5 x4		.19		.48		.51	12	\$0.71		
5½x4	21	.22		.49		.53		.73		
6 x4		.22		.50		.54		.75		
7 x4½		.30		.56		.60		.83	10	\$1.03
8 x5	19	.38		.63		.68		.93		1.15
9 x5		.40		.75		.81		1.12		1.38
10 x5½		.48		.86		.93		1.28		1.58
10 x6	18	.55		.91		.98		1.36		1.67
11 x6		.63		.98		1.05		1.45		1.79
12 x6		.70		1.03		1.11		1.53		1.89
14 x6		.80		1.05		1.12				
16 x6		.90		1.10		1.19				
18 x6		1.00		1.15		1.24				
20 x6		1.10		1.20		1.28		1.79		2.21
10 x7		.75		1.16		1.25		1.73		2.13
11 x7		.85		1.23		1.32		1.83		2.25
12 x7		.90		1.28		1.38		1.90		2.35
14 x7		.95		1.30		1.40		1.94		2.39
16 x7		1.28		1.35		1.46		2.01		2.48
18 x7		1.38		1.40		1.51		2.09		2.58
20 x7		1.40		1.45		1.57		2.16		2.67
12 x8		1.20		1.53		1.65		2.27		2.81
14 x8		1.30		1.55		1.67		2.31		2.85
16 x8		1.40		1.60		1.73		2.38		2.94
18 x8		1.50		1.65		1.78		2.46		3.03
20 x8		1.60		1.70		1.84		2.53		3.13
22 x8		1.70		1.80		1.94		2.68		3.31
24 x8		1.80		1.90		2.05		2.83		3.50

For galvanizing add 65 per cent.

Prices on other gauges and sizes quoted upon application.

Transmission and Standing Rope

7 wires to the Strand

Page 269, Catalogue No. 19

Price List—Effective May 1, 1910

Diameter in inches.	LIST PER FOOT				Diameter in inches.	LIST PER FOOT			
	Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.		Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.
1 1/4	\$0.51	\$0.60	\$0.75	\$0.90	3/8	\$0.10	\$0.12	\$0.14 1/2	\$0.17 1/4
1 3/8	.43	.51	.64	.76	9/16	.08 1/4	.10	.12	.14 1/2
1 1/2	.36	.43	.53	.62	5/8	.06 1/2	.08	.09 1/2	.11 1/2
1 5/8	.30	.36	.44	.51	7/8	.05 1/2	.06 1/2	.07 1/2	.09
1	.24	.29	.35	.41	1 1/8	.04 1/2	.05 1/2	.06	.06 3/4
7/8	.18 1/2	.22 1/2	.27	.32	5/8	.03 1/2	.04 1/2	.05 1/2	.06
3/4	.14	.17	.20	.24 1/2	3/4	.03 1/4	.04	.05	.05 1/2
1 1/8	.12	.14 1/2	.17	.21	.....	.....	.....	.....	.....

Standard Hoisting Rope

19 wires to the Strand

Price List

Diameter in inches.	LIST PER FOOT				Diameter in inches.	LIST PER FOOT			
	Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.		Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.
2 1/4	\$1.17	\$1.44	\$1.70	\$2.00	3/8	\$0.20	\$0.24	\$0.29	\$0.34
2	.95	1.16	1.34	1.56	3/4	.16	.19	.22	.26
1 3/4	.80	.90	1.10	1.30	5/8	.12	.14	.16 1/2	.19
1 5/8	.65	.77	.94	1.08	9/16	.10	.12	.14	.16
1 1/2	.57	.66	.80	.93	5/8	.08 1/2	.11	.12 1/2	.14
1 3/8	.49	.56	.68	.79	7/8	.07 1/2	.10	.11 1/2	.13
1 1/4	.40	.46	.56	.65	1 1/8	.07	.09 1/2	.11	.12 1/2
1 1/8	.33	.38	.46	.54	5/8	.06 1/2	.09 1/4	.10 1/2	.12 1/4
1	.26	.31	.37	.43	3/4	.06 1/2	.09	.10 1/2	.12

Revised Price List

Steam, Brewers, Air Brake, Car Heating and Air Drill Hose

Adopted at Meeting of Mechanical Rubber Goods Manufacturers
Association April 26th 1910, and to take
effect May 2nd, 1910.

Lists on Page 483, Catalogue 19, Void

Inch	3-ply	4-ply	5-ply	6-ply	7-ply	8-ply
¼	\$ 47	\$ 56	\$ 70	\$ 84	\$ 98	\$1 12
¾	57	71	87	1 05	1 23	1 41
1	70	87	1 07	1 28	1 50	1 70
1¼	85	1 04	1 30	1 56	1 82	2 08
1½	1 02	1 25	1 56	1 87	2 18	2 50
1¾	1 18	1 45	1 81	2 17	2 53	2 90
2	1 34	1 66	2 07	2 49	2 90	3 32
2¼	1 50	1 87	2 33	2 80	3 27	3 74
2½	1 66	2 08	2 60	3 12	3 64	4 16

COTTON, Rubber Lined, MILL HOSE

INCH	PRICE
1¼	\$0.45 per foot
1½	.50 " "
2	.65 " "
2½	.80 " "

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GENERAL CATALOGUE No. 19

WELLER MFG. CO.

ENGINEERS, FOUNDERS,
MACHINISTS
AND SHEET METAL WORKERS

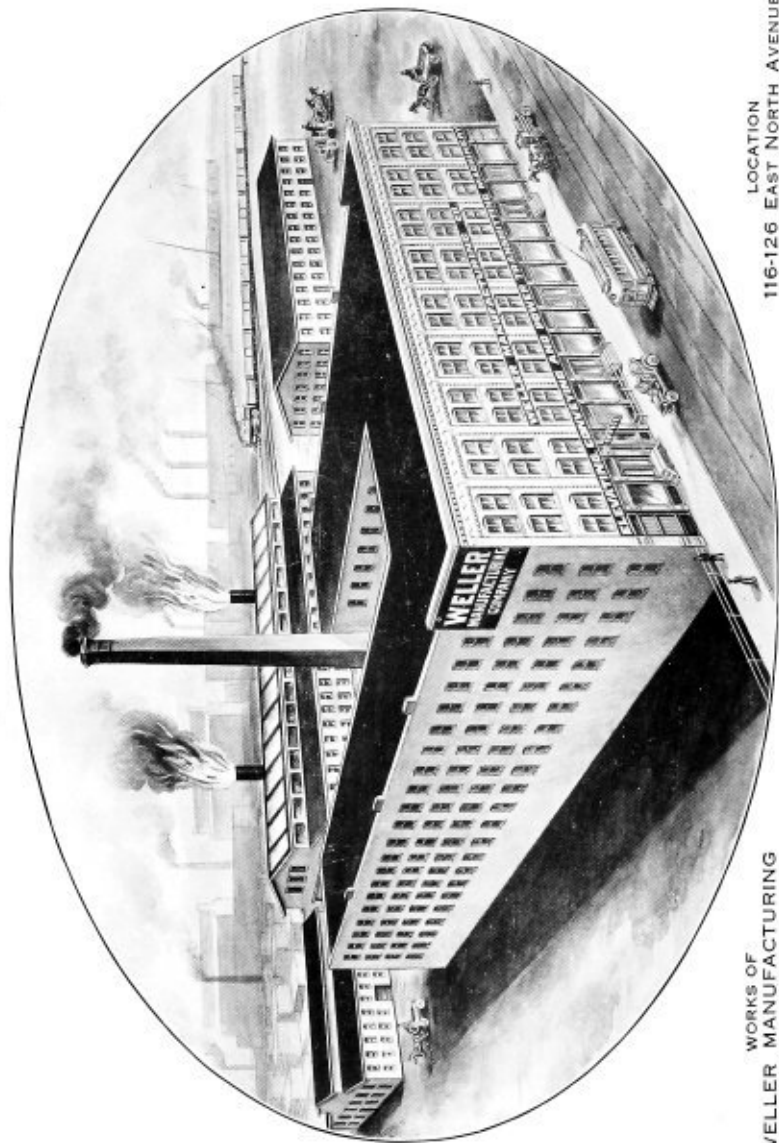
MANUFACTURERS OF
ELEVATING, CONVEYING AND POWER TRANSMITTING
MACHINERY

SPECIALTIES FOR GRAIN ELEVATORS, FLOUR
MILLS, COTON SEED OIL MILLS, LINSEED OIL
MILLS, STARCH WORKS, BREWERIES, DISTILL-
ERIES, MALT HOUSES, SUGAR REFINERIES, GLU-
COSE WORKS, CEMENT WORKS, PHOSPHATE
WORKS, TANNERIES, ETC., ETC.

COMPLETE GRAIN ELEVATOR EQUIPMENTS

MAIN OFFICE AND WORKS
116-126 EAST NORTH AVENUE
CHICAGO

AGENTS AND CORRESPONDENTS IN ALL THE
PRINCIPAL CITIES IN THE UNITED STATES, CAN-
ADA, MEXICO AND SOUTH AMERICAN COUNTRIES



WORKS OF
WELLER MANUFACTURING
COMPANY

LOCATION
116-126 EAST NORTH AVENUE
CHICAGO, ILLINOIS

INTRODUCTION

Since issuing our last General Catalogue, we have not only practically doubled the capacity of our plant, but increased our trade proportionately, which, in itself, tells the story of satisfied customers. While our line of manufacture has been for years most diversified and complete, the numerous extensions and improvements which we have made in certain branches of it, notably Belt and Spiral Conveyor Appliances, Friction Clutches, Power Shovels, Belt-tighteners and Conveyor Chains, will be particularly apparent to old customers and others familiar with our output.

Not only have we improved our line wherever possible, but, by the introduction of special machinery, much of it patented by us, we have been enabled to continue furnishing goods at comparatively low prices. We shall continue to adhere to our well-known policy of furnishing only high grade goods and earnestly invite suggestions and criticisms from our friends and customers relative to anything pertaining to our line.

Very respectfully,

WELLER MANUFACTURING CO.

NOTICE

Price Lists contained in this Catalogue supersede all those in former issues.

Quotations made are for prompt acceptance and prices are subject to change without notice.

Our responsibility ceases with the delivery of merchandise in good order to transportation company, and in allowing freight charges we do not assume any responsibility for damage to goods while in transit, or for delay on the part of carriers.

No allowance will be made for alterations or repairs unless done with our approval, and claims for defects in goods must be made within 30 days from date of bill.

Boxing and crating charged extra at cost.

All sales subject to strikes, accidents or causes beyond our control.

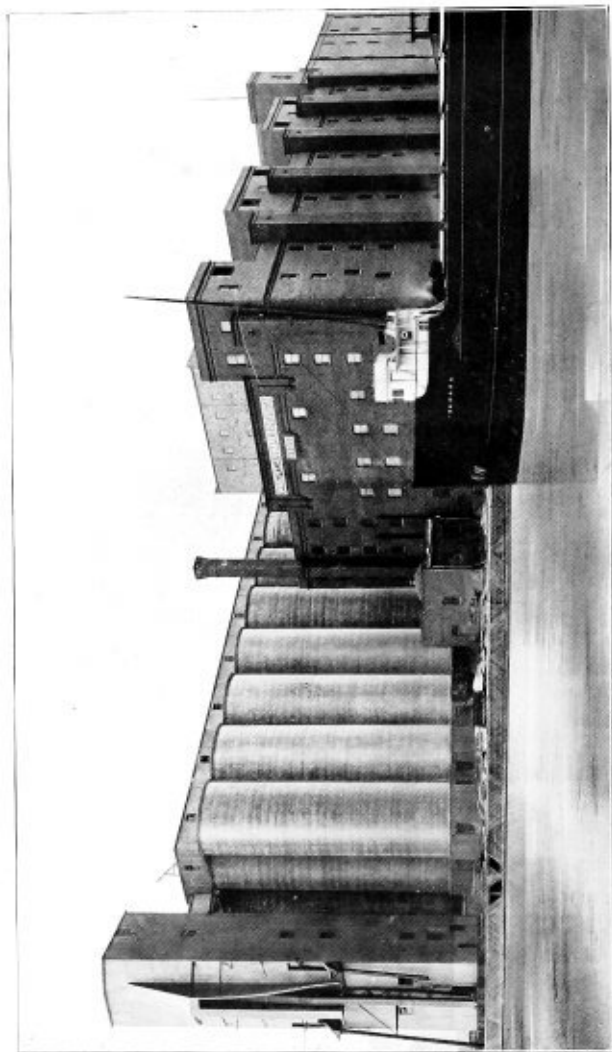
All agreements are made subject to the acceptance of an executive officer of the company at Chicago.

TERMS—Net Cash within Thirty Days from date of Invoice f. o. b. Cars Chicago, unless otherwise specified.

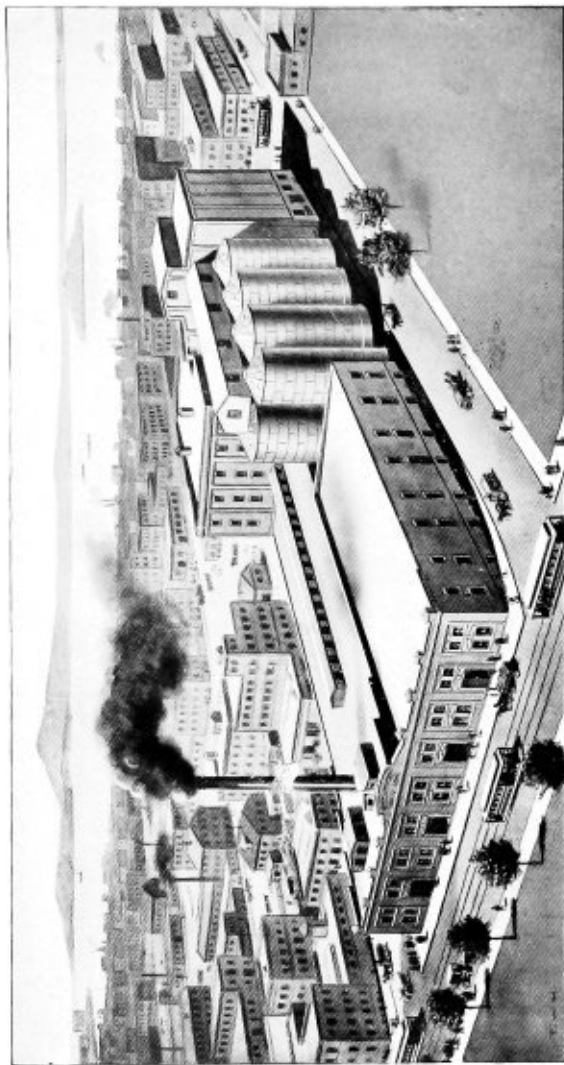
Address all communications to the Company.

DISCOUNT SHEETS

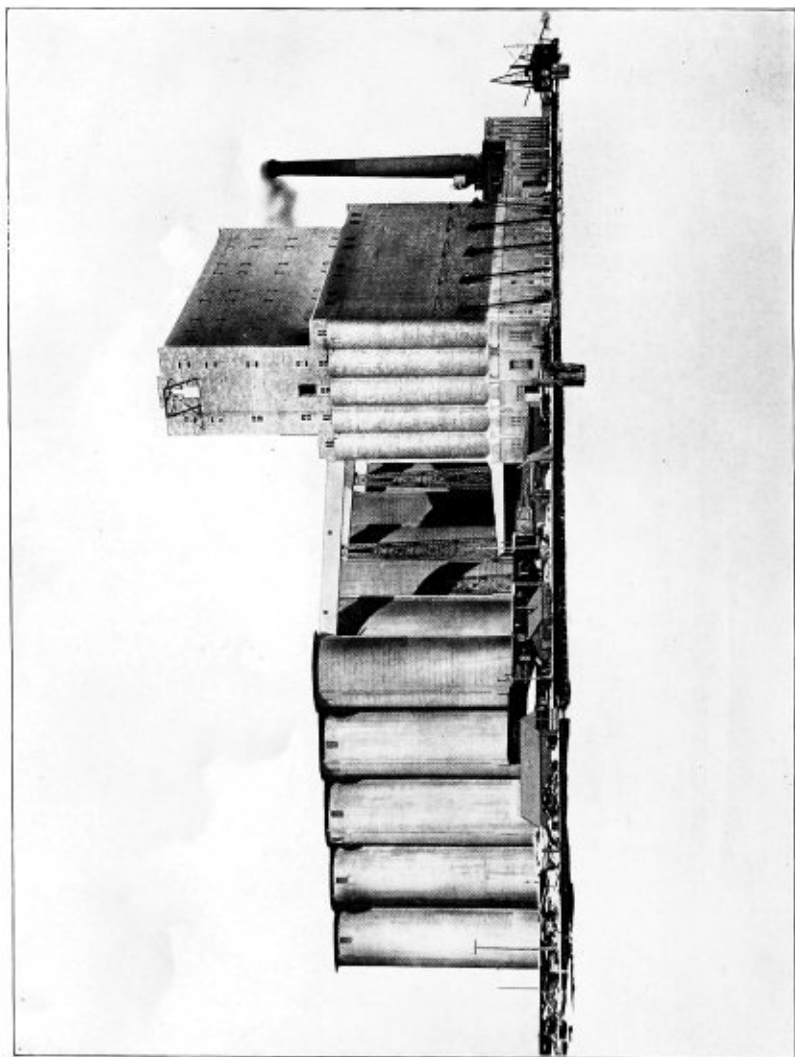
For the convenience of our customers we issue discount sheets applying to the Price Lists contained in this catalogue. Prices are continually fluctuating, however, and it may occasionally be found that quotations given several months, or even weeks previous, are apparently not as favorable as those of other manufacturers. In such case we would consider it a special favor for our customers to obtain our latest prices on the particular goods required, as we always endeavor to give our friends the benefit of the lowest possible quotations consistent with first-class goods.



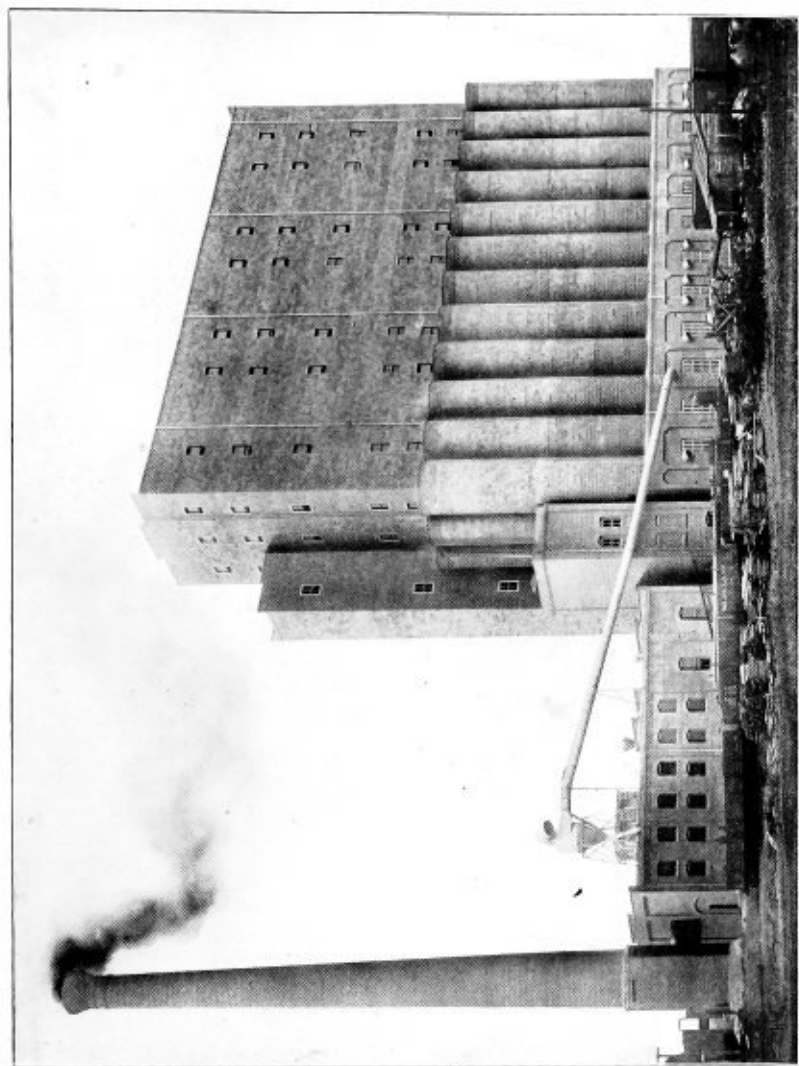
View of American Malting Company's new plant at Buffalo, N. Y. The malt house, which is the largest and most modern owned by this Company, is equipped throughout with our Elevating, Conveying and Power Transmission Machinery.



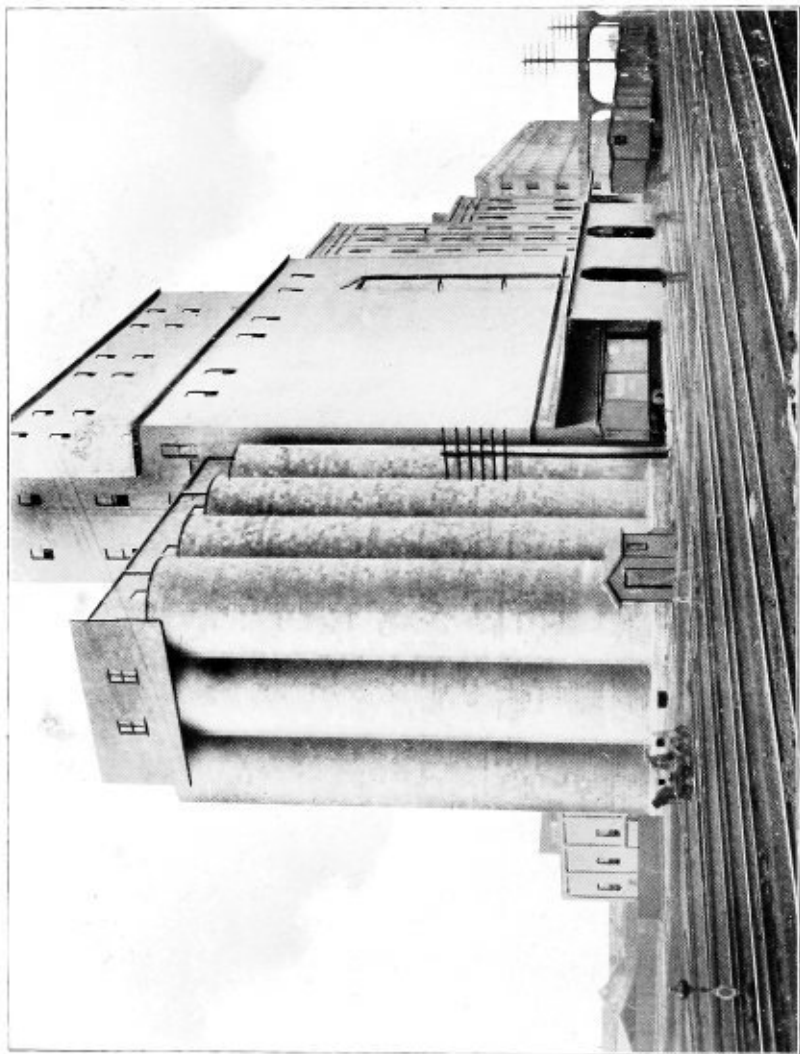
New plant of the Bauer-Schweitzer Hop and Malt Co., San Francisco, Cal., equipped with our machinery. All Conveyor Boxes, Elevator Casings, etc., are of steel, no woodwork of any character being used in the construction of the plant.



Peavey-Duluth Terminal Elevator, Duluth, Minn., equipped with a large amount of Weller Machinery.



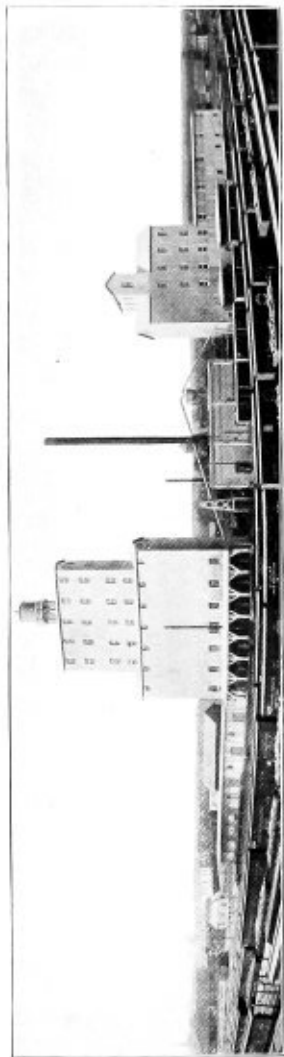
C. B. & Q. Elevator, Hartlem, Mo. Weller machinery forms an important part of the equipment in this Elevator.



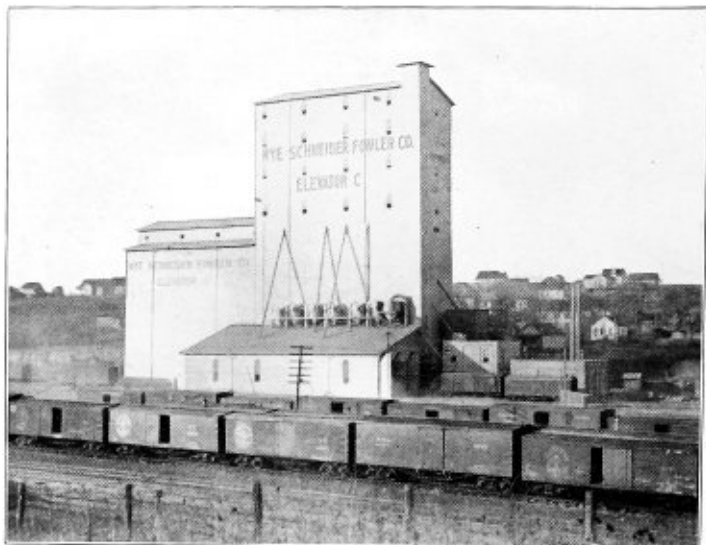
Elevator of the Quaker Oats Co., Cedar Rapids, Ia. This elevator is largely equipped with our machinery.



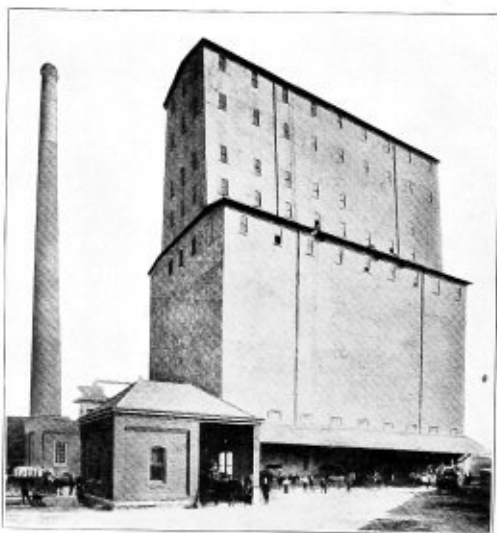
Elevators A and B, of the Texas & Pacific Ry. Co., Westwego, La. The dock conveyors on river front are 1,600 feet long, providing berths for three of the largest ships which can load at the same time. Capacity of Elevator "A," 250,000 bushels; Elevator "B," 1,000,000 bushels. Complete equipment for Elevator "B" and all dock conveyors furnished by us, also machinery for remodelling Elevator "A."



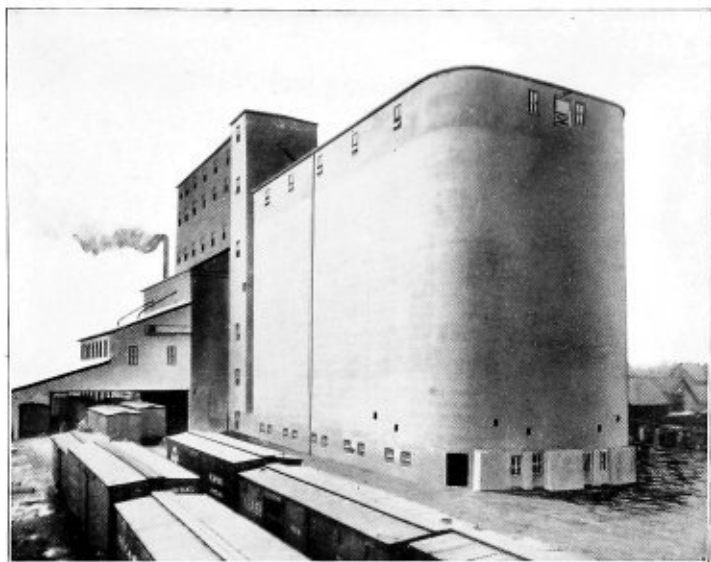
Plant of T. H. Bunch Co., Little Rock, Ark. Elevator of 200,000 bushels capacity, equipped throughout with our machinery.



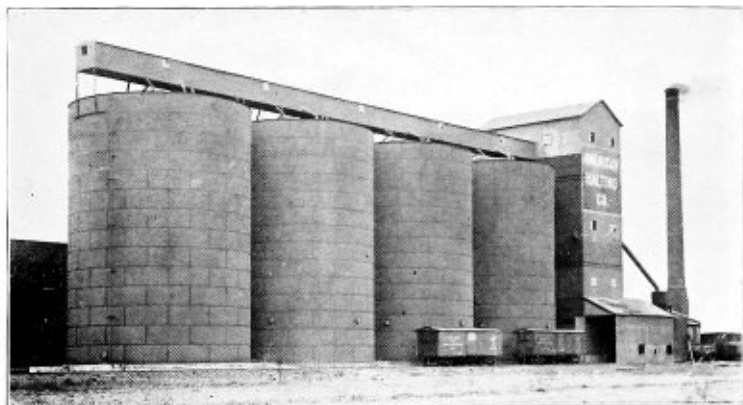
Nye Schneider Fowler Co. Elevator C. Omaha, Neb. Capacity 1,000,000 bushels.
Equipped throughout with Weller machinery.



Pennsylvania R. R. Co. Elevator, Philadelphia, Pa. Capacity, 500,000. All
machinery furnished by us.



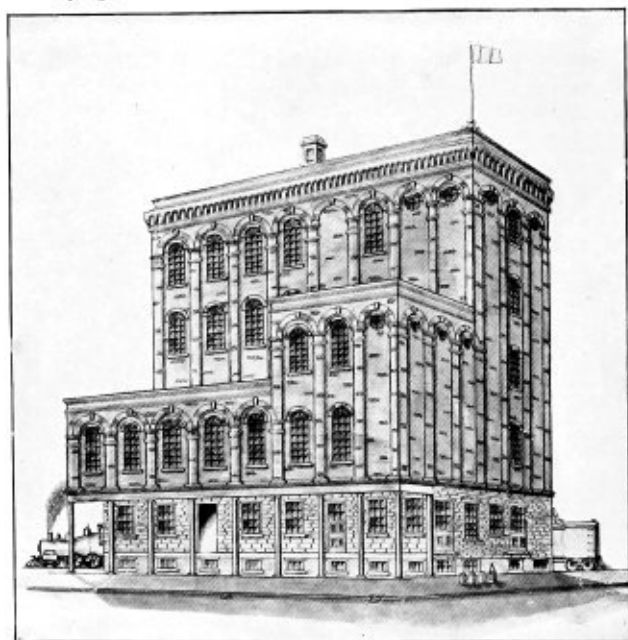
Plant of the Husted Milling Company, Buffalo, N. Y. Elevator capacity, 600,000 bushels. Largely equipped with Weller machinery.



Kensington plant of the American Malting Co. The first all-steel Elevator built in Chicago. Machinery furnished by us.



View of the Pawnee Cereal Co. plant at Cedar Rapids, Ia. All Elevating, Conveying and Power-Transmission machinery furnished by us.



Ottawa Milling Co., Ottawa, Ont., equipped with Weller machinery.



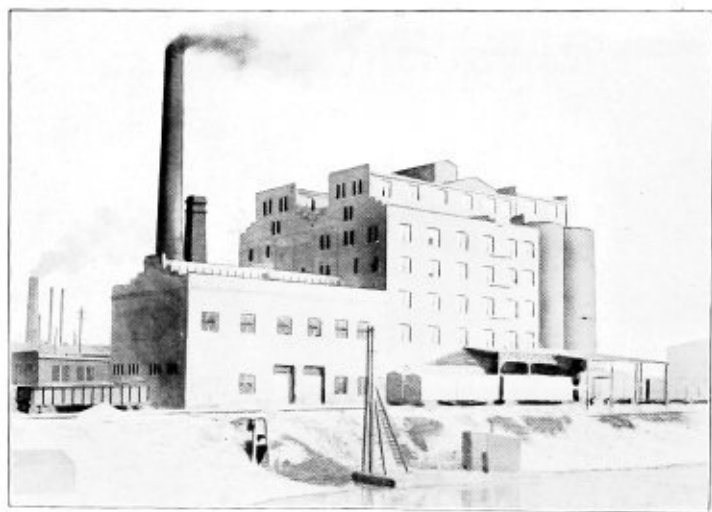
Above we illustrate the plant of the Miner Hillard Milling Co., Wilkes Barre, Pa., which is equipped with Weller machinery throughout.



Mill and Elevator of H. Dittlinger, New Braunfels, Texas, equipped with a large amount of our machinery.



Piedmont Mills, Lynchburg, Va. Largely equipped with Weller Machinery.



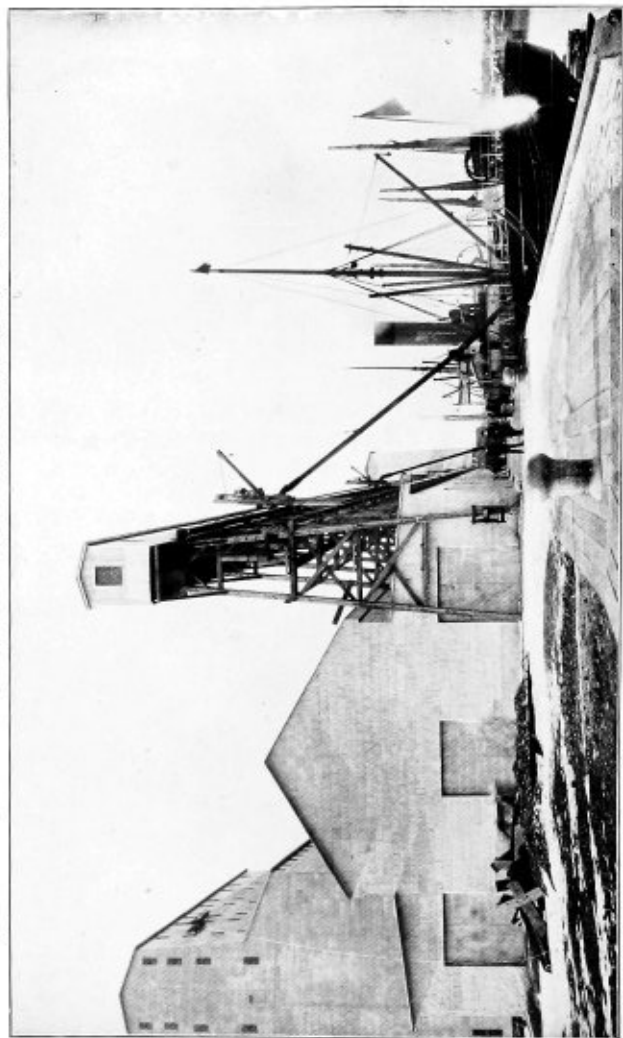
Plant of the Listman Mill Co., La Crosse, Wis. Equipped throughout with Elevating, Conveying and Power Transmitting Machinery of our manufacture.



Grain Elevator of John Wade & Sons, Memphis, Tenn., equipped throughout with Weller machinery. The Elevator shown in the background and owned by Davis & Andrews, was also equipped by us.



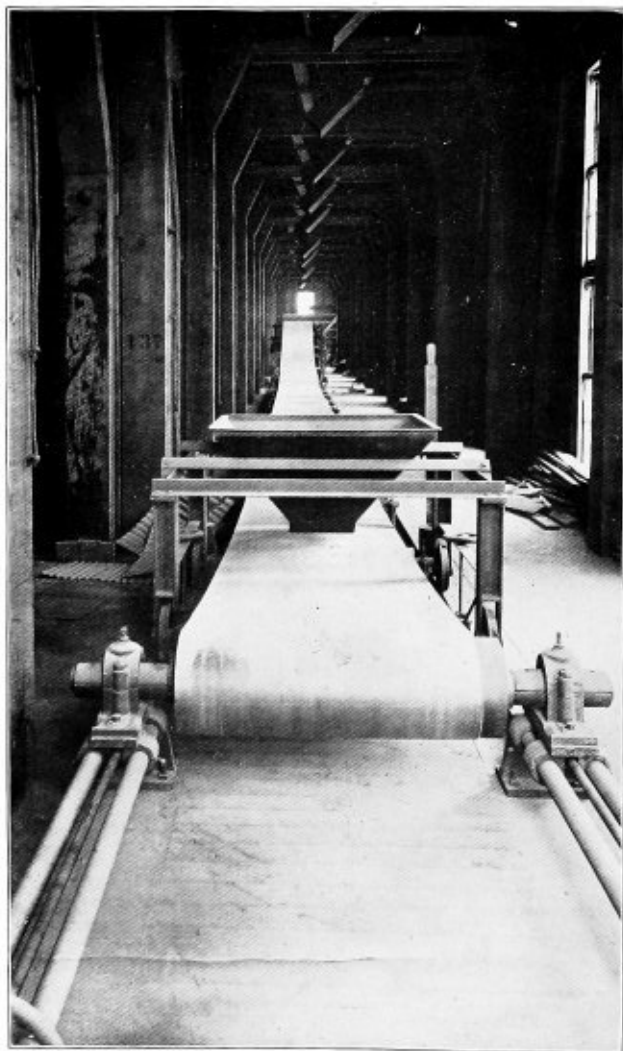
Marine Leg and Belt Conveyor for handling sand, furnished the Tri-City Sandstone Brick Co., Moline, Ill.

WELLER BELT CONVEYOR FOR LOADING VESSELS.

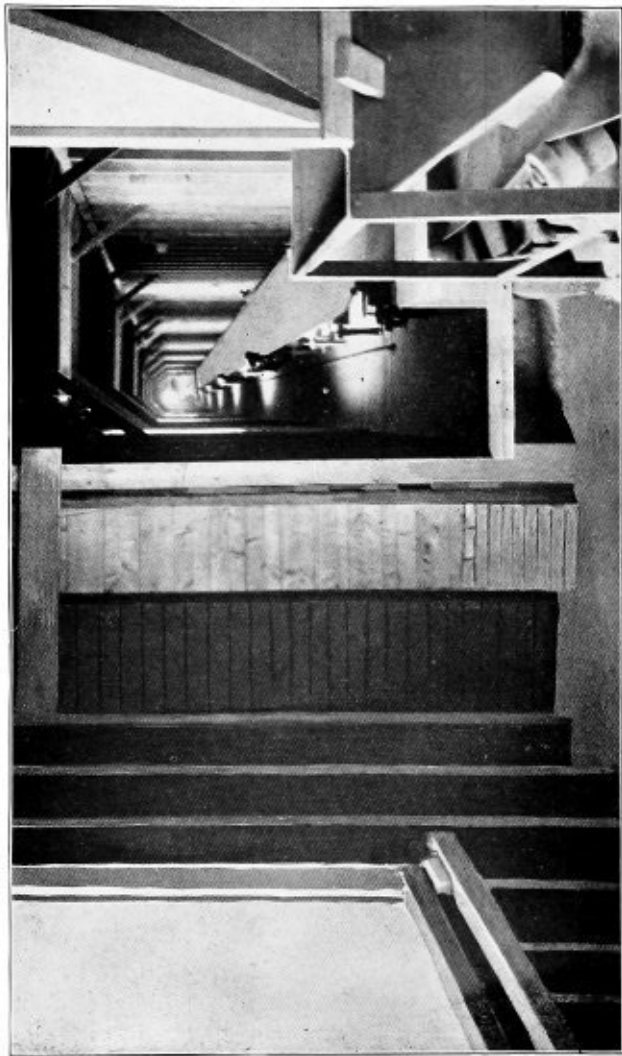
Weller Belt Conveyor, 600 feet in length, with two Movable Marine Loading Spouts in operation at the Great Northern Elevator, Quebec, Canada. Capacity, 15,000 bushels per hour.

WELLER BELT CONVEYOR SYSTEM.

Dock Galleries for Belt Conveyors with a capacity of 15,000 bushels per hour. The complete Belt Conveyor System shown in the above illustration and nearly 900 feet in length was manufactured by us for the Great Northern Elevator, Quebec, Canada.

WELLER BELT CONVEYOR.

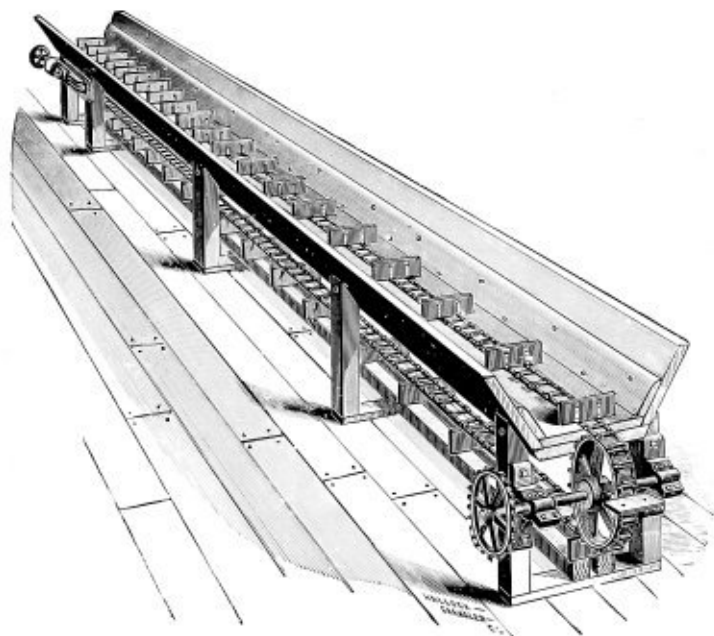
A 40-inch Weller Belt Conveyor equipped with Reversible Self-Propelling Tripper six feet in height and Steel Movable Loading Hopper with Adjustable Concentrating Rollers enabling grain to be drawn from any of the bins overhead and delivered to the elevator legs which are located to the left and beyond the railroad track that runs parallel with the Conveyor.

WELLER BELT CONVEYOR APPLIED TO STEEL STORAGE TANKS.

Belt Conveyor over 300 feet in length, running in gallery located above steel storage tanks equipped with Self-Propelling Trippers, thus permitting grain to be delivered to any tank desired. Capacity, 12,000 bushels per hour.

WELLER ENDLESS DRAG CHAIN CONVEYORS.

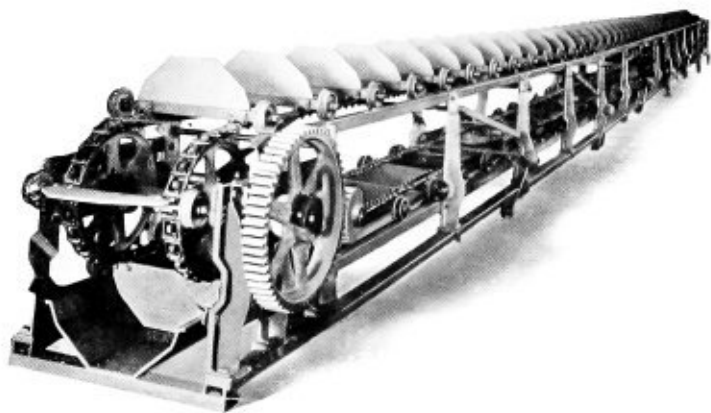
We have had wide experience in designing and furnishing Chain Conveyors of every description. State requirements and we will take pleasure in submitting designs and estimates.



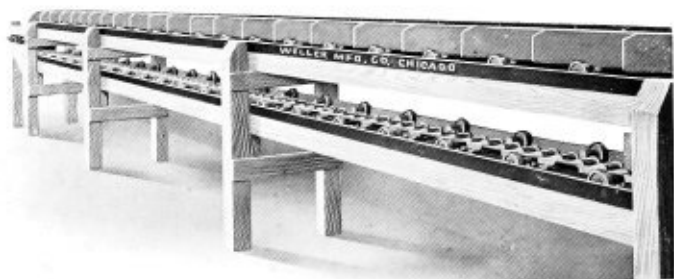
Self-Contained Single Strand Chain Conveyor.



Section of Double Strand Chain Conveyor.

WELLER STEEL ENDLESS DRAG CONVEYOR.

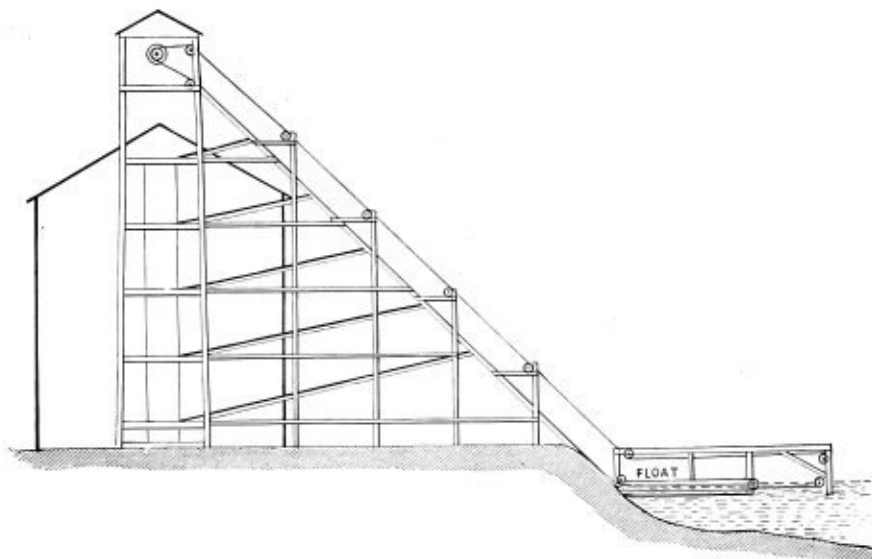
Self-Contained Steel Frame Drop Flight Drag Conveyor for handling ores, crushed stone and other abrasive materials. Modifications of this Conveyor furnished to suit requirements.

WELLER STEEL PAN CONVEYOR.

Endless Steel Pan Conveyor, designed for handling stone. We build this type of Conveyor in many different sizes and lengths.

INDEPENDENT SECTIONAL CHAIN CONVEYOR FOR HANDLING LUMBER.

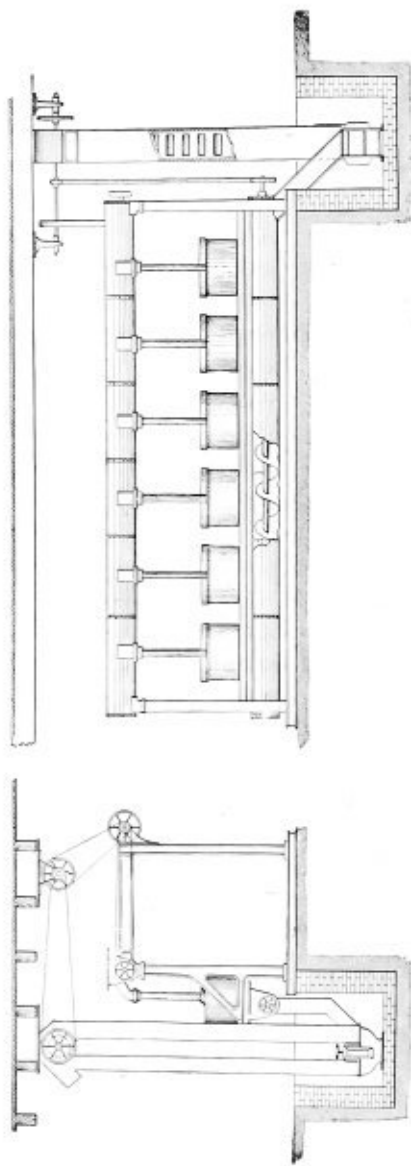
A Lumber Conveyor, 350 feet long, so designed that it will deliver at intervals of 10 feet to any one of the lines of dead rolls shown to the left. Each 10-foot section has independent driving mechanism, permitting the conveyor to be shut down beyond the desired point of delivery.

ICE ELEVATORS AND CONVEYORS.

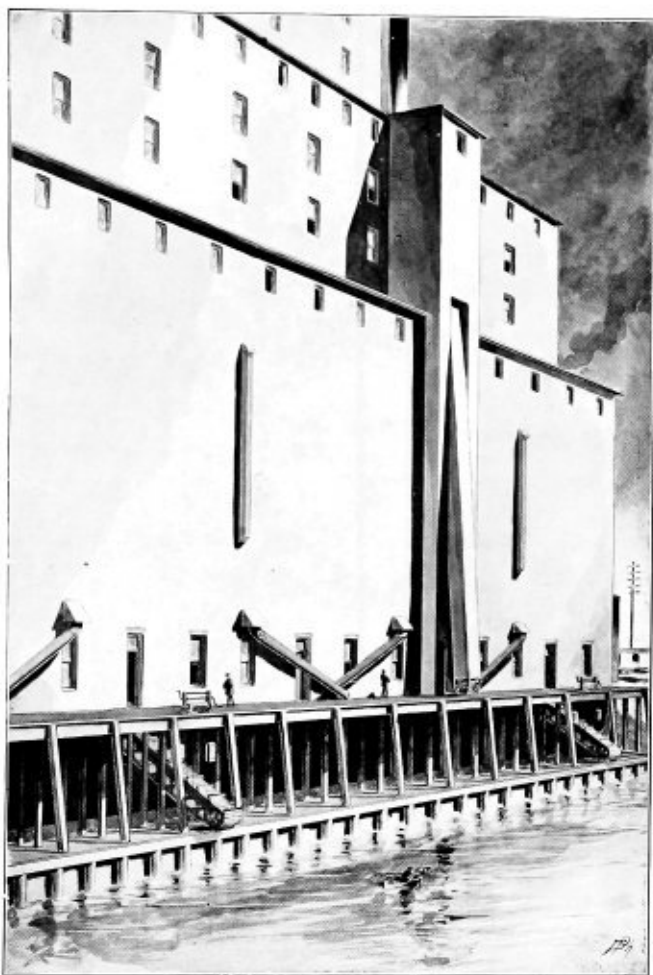
We design Ice Elevators and Conveyors of every description and furnish the necessary iron work.

We are also prepared to furnish promptly and at interesting prices special chains of any pattern for repairs.

Correspondence solicited.

ELEVATORS AND CONVEYORS FOR SUGAR HOUSES AND REFINERIES.

We manufacture a complete line of standard and special appliances for handling material in the different stages of manufacture in Sugar Houses and Refineries, including Cane, Bagasse, Boneblack, Wet and Dry Sugar, Molasses, etc.

MARINE LEG AND SACK CONVEYORS.

Marine Leg and two Sack Conveyors furnished the Advance Elevator, East St. Louis, Ill. They are all designed to meet the rise and fall of the river, on which the elevator is located.

WELLER STEEL APRON CONVEYORS.

Our Apron Conveyors may be used in connection with Link Belting Roller and Steel Chains. These Conveyors are made in various widths and the Steel Aprons in any gauge of material desired.



Fig. 1.

Double Beaded Steel Apron Conveyor with Malleable Roller Chain.



Fig. 2.

Curved Flight Steel Apron Conveyor with Malleable Roller Chain.

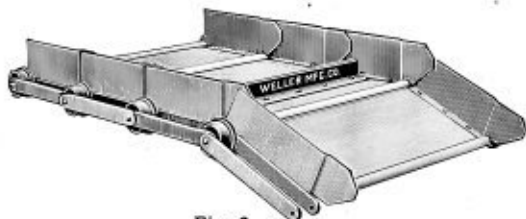


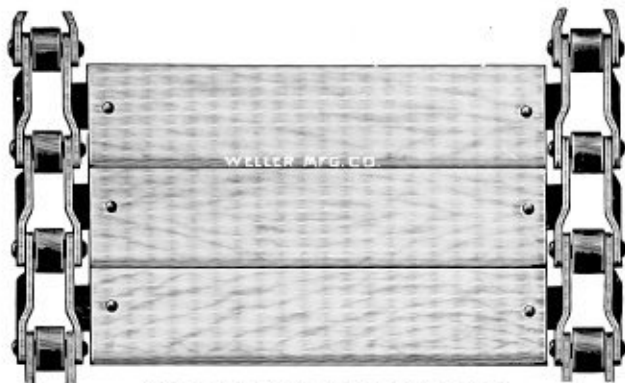
Fig. 3.

Long Pitch Double Beaded Flight Troughing Apron Conveyor with Steel Roller Chain.



Fig. 4.

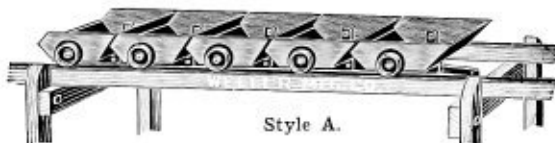
Double Beaded Flight Troughing Apron Conveyor with Malleable Roller Chain.

WELLER WOODEN APRON CONVEYORS.

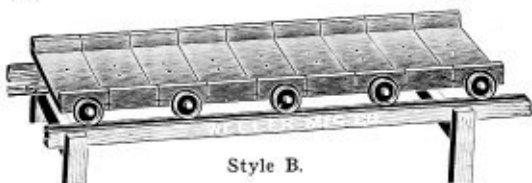
Beveled Edge Wooden Apron.

Fig. 5.

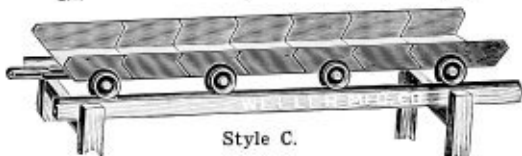
Our Wooden Apron Conveyors are designed to operate in connection with various styles of chain, the flights being made with straight or bevel edges. They are generally made from maple. Any width furnished to order.

WELLER ENDLESS STEEL PAN CONVEYORS.

Style A.



Style B.



Style C.

We illustrate above a few of the many styles of Pan Conveyors manufactured by us for handling different classes of material. Plans and estimates will be submitted upon receipt of a statement of conditions.

WELLER ENDLESS CARRIERS.

Style D. Over-Lapping Steel Buckets to Carry Horizontally or up an Incline for Coal, Ore, Earth, Gravel, Sand, Etc.



Style E. Elevator and Carrier for Vertical and Horizontal Service in Handling Coal, Ore, Etc.



Style F. Cast Iron or Steel Over-Lapping Pans for Hot Material, Cement, Clinkers, Ashes, Ore, Etc.



Style G. Steel Troughs for Ores, Earth, Cement, Clinkers, Forging, Etc.

Systems using the above styles of Carriers designed to suit requirements.

LIVE ROLL CONVEYOR SYSTEM.

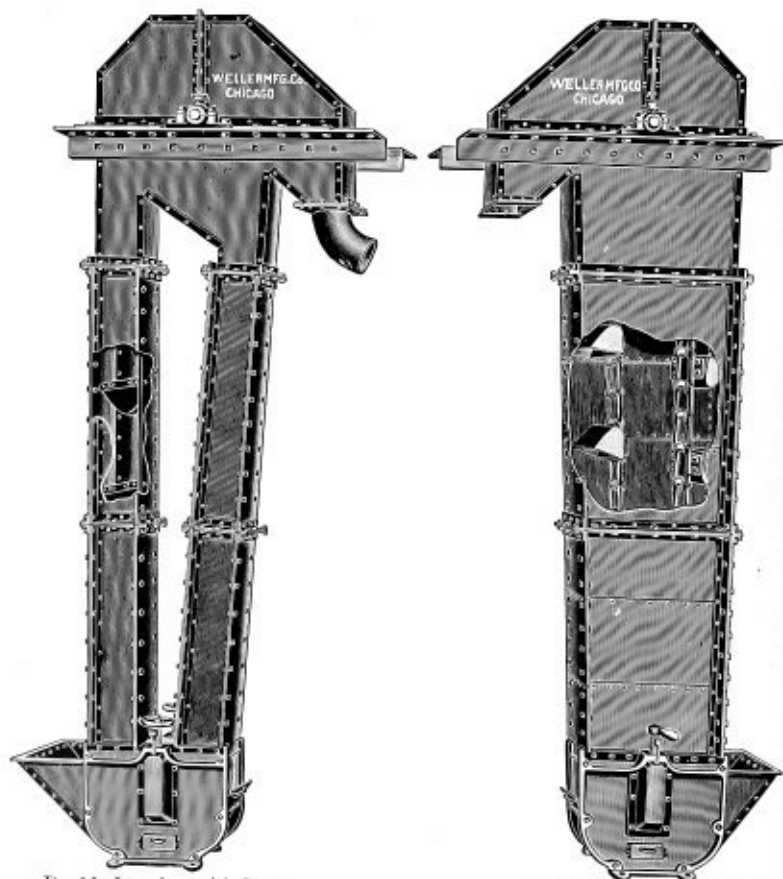
End view of Live Roll Conveyor System, over 300 feet in length. Each roll is 15 feet long and is driven by a special book tooth sprocket wheel. The Conveyor is designed to handle different grades of lumber at the same time; the steel troughs shown dividing the rolls into several separate Conveyors for this purpose. *We have facilities for manufacturing Wrought and Cast Iron Rolls any length or diameter.*

STEEL ELEVATOR CASINGS.

The modern practice of eliminating as much woodwork as possible in the construction of Elevator Casings has led to an increasing demand for Heads and Legging of Steel.

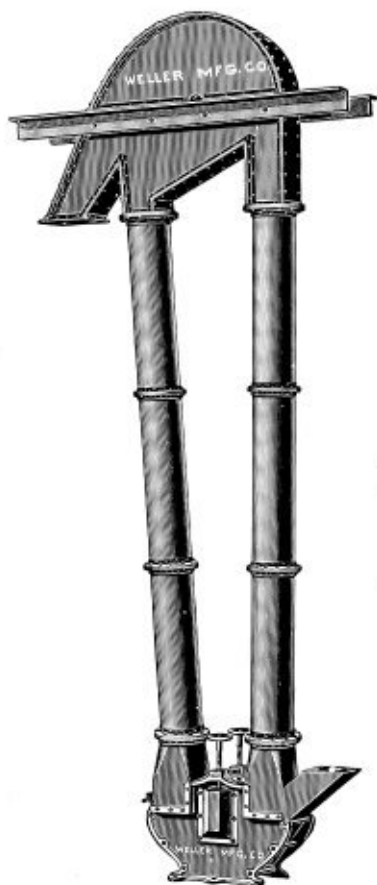
Our facilities for the manufacture of this class of work are unsurpassed.

Estimates furnished upon receipt of specifications.



Double Legging with Steel Elevator Head. Style A.

Single Legging with Steel Elevator Head. Style B.

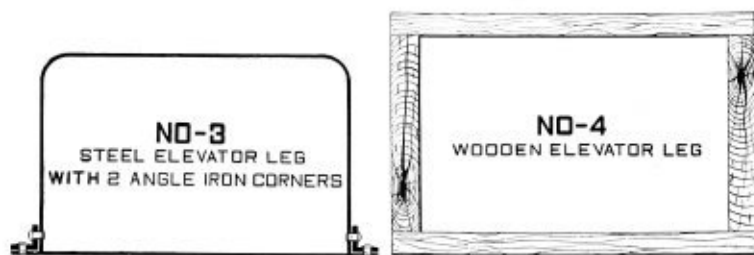
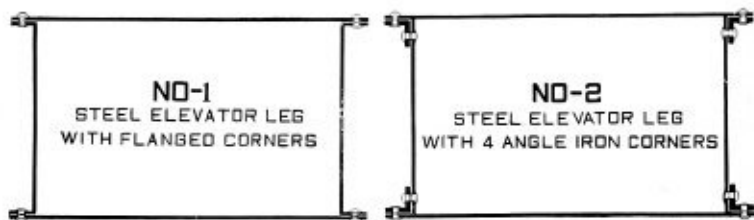
STEEL ELEVATOR CASINGS.**STEEL
ELEVATOR HEADS.**

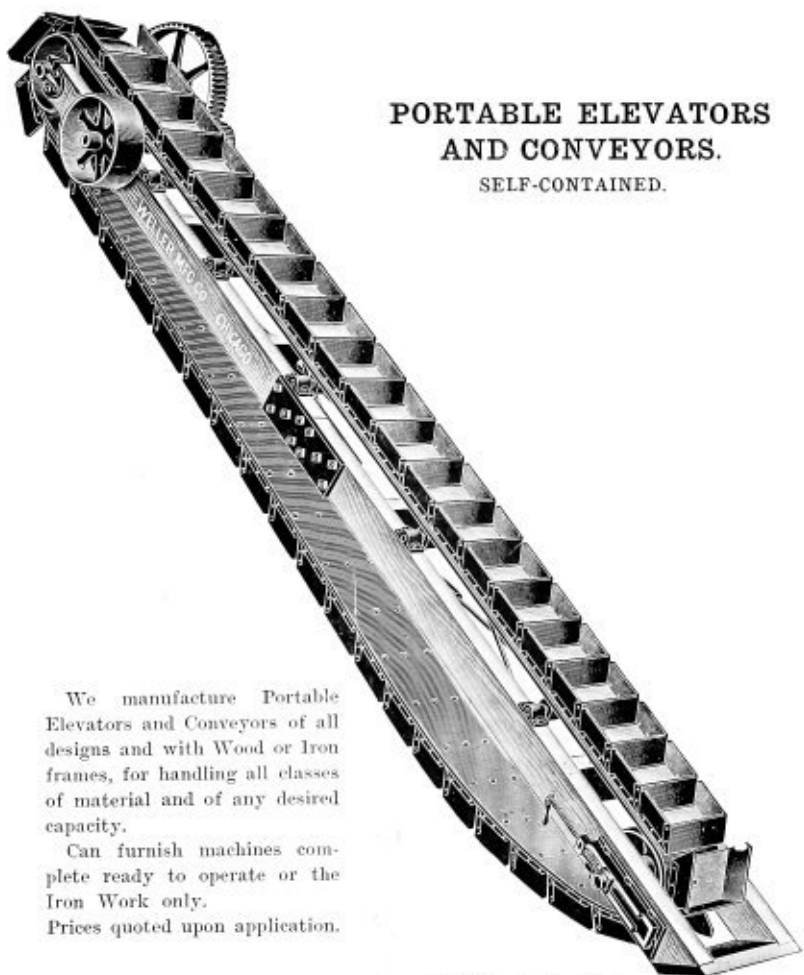
Where Steel Legging is not required we are prepared to quote separate prices on Steel Elevator Heads of improved design.

Estimates given on all classes of Sheet Metal Work.

Round Legging with Steel Elevator
Head—Style C.

CONSTRUCTION OF VARIOUS STYLES OF STEEL AND WOOD ELEVATOR LEGGING.





PORTABLE ELEVATORS AND CONVEYORS.

SELF-CONTAINED.

We manufacture Portable Elevators and Conveyors of all designs and with Wood or Iron frames, for handling all classes of material and of any desired capacity.

Can furnish machines complete ready to operate or the Iron Work only.

Prices quoted upon application.

Portable Crushed Stone Elevator.

WELLER CHAIN ELEVATORS



Single-Strand Chain Elevator.

Single Strand.

This form of elevator works admirably with buckets from 12 inches in length to the smallest size in use. We have Link Belting of various widths for use with the different sizes of buckets.

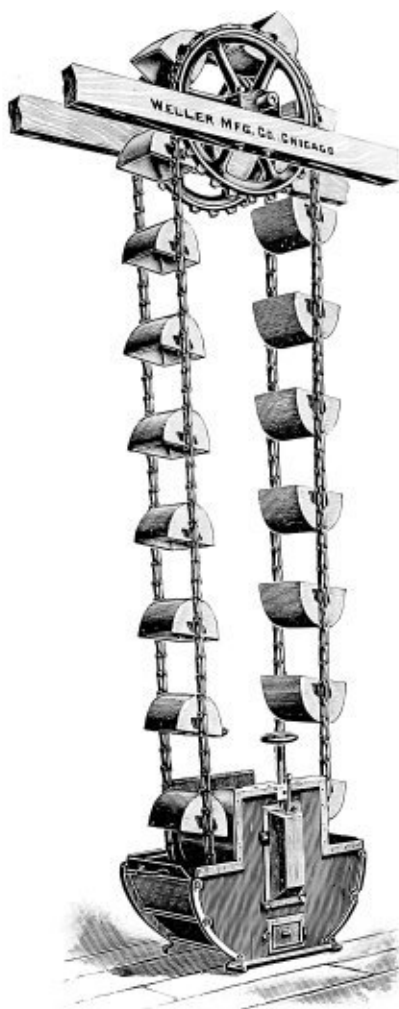


Section of Double-Strand Chain Elevator.

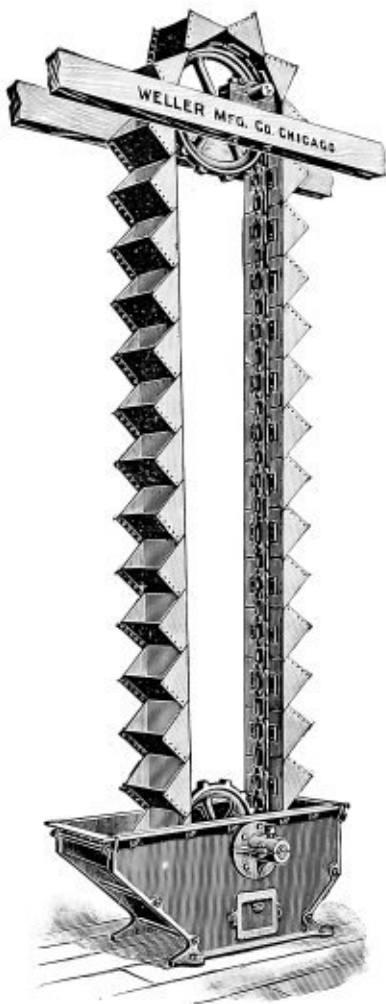
For buckets over 12 inches in length we recommend the Double Strand pattern as shown above.

The sprocket wheels on the head shaft of this style elevator should be keyed on with the teeth exactly in line, while only one of the wheels on the boot shaft should be keyed, the other being allowed to run loose between collars. This keeps the buckets level and avoids difficulty from uneven wear of the chain links.

WELLER CHAIN ELEVATORS.



Double-Strand Elevator. Centrally Hung Buckets. For Heavy Work.



Single-Strand Stone and Ore Elevator.

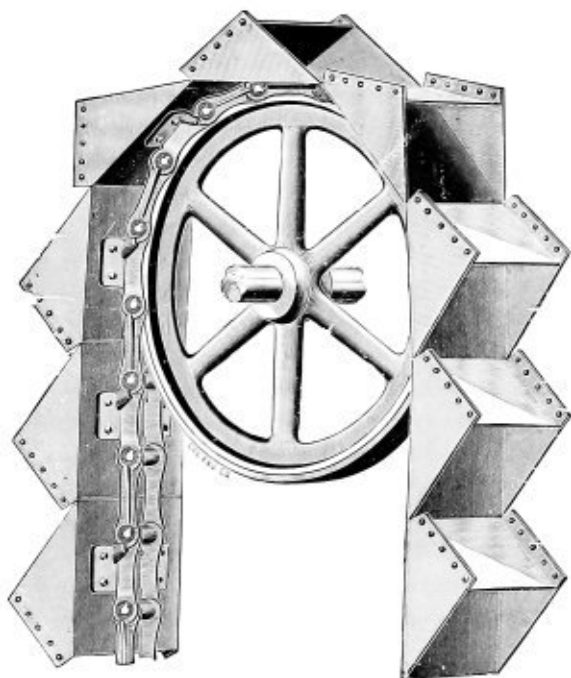
PERFECT DISCHARGE CHAIN ELEVATORS.

This design of Elevator may be operated successfully at a low speed as compared with Elevators of standard construction. It is therefore to be recommended for handling material that would break if delivered from the head of an elevator run at ordinary speed.

In passing around the head Sprocket wheels, the buckets are inverted and drop the material with little force into the chute or hopper instead of throwing it. The delivery of these buckets is also absolutely clean, no material being carried down the back leg.

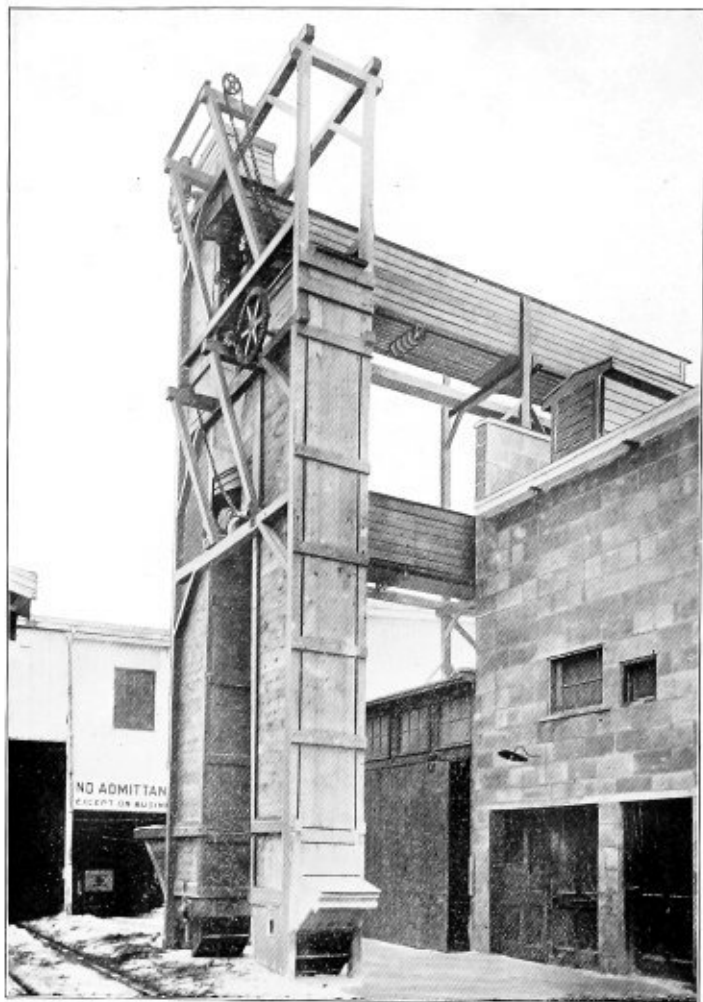
TRACTION WHEELS.

For Chain Elevators Handling Ores, Broken Stone, Etc.



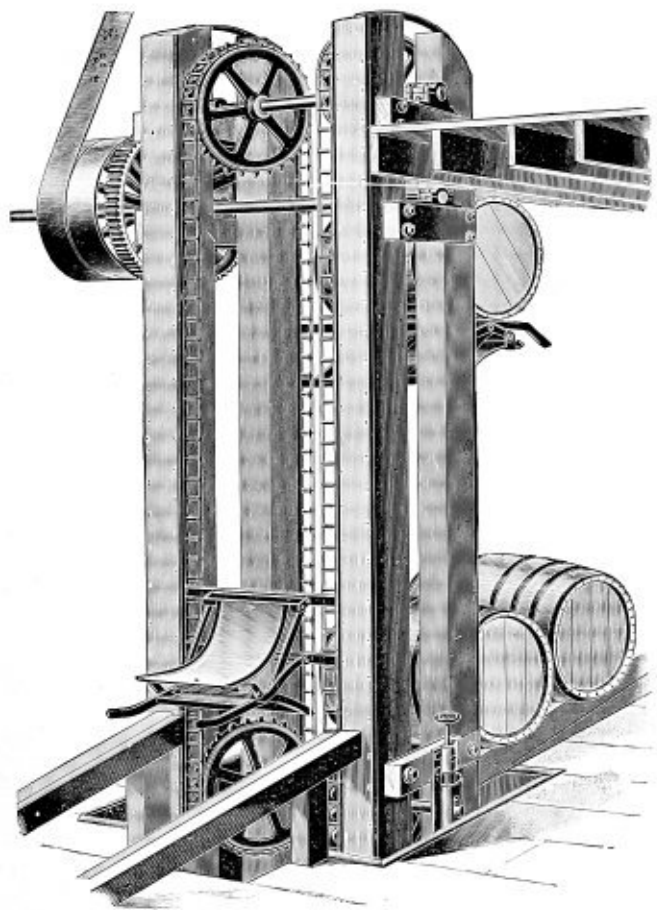
The weight of the chain and buckets on the wheel produces sufficient traction to raise the load.

This style is desirable for elevating heavy or gritty material. The advantages it has over the ordinary form where wheels with teeth are used, are as follows: Longer lived, runs smoother, and, in case of any serious obstruction, the chain will slip.



These Elevators and Conveyors were designed to handle Run-of-Mine Coal and Lime, respectively. The Elevators are very slow running and have a special Perfect Discharge head to deliver the material onto the Conveyors. The coal and lime which come in large lumps are thrown from the cars direct into the Elevators, which have a capacity of twenty tons per hour each. The machinery and housing complete, as above shown, were designed and furnished by us to the Paragon Plaster Co., of Syracuse, New York.

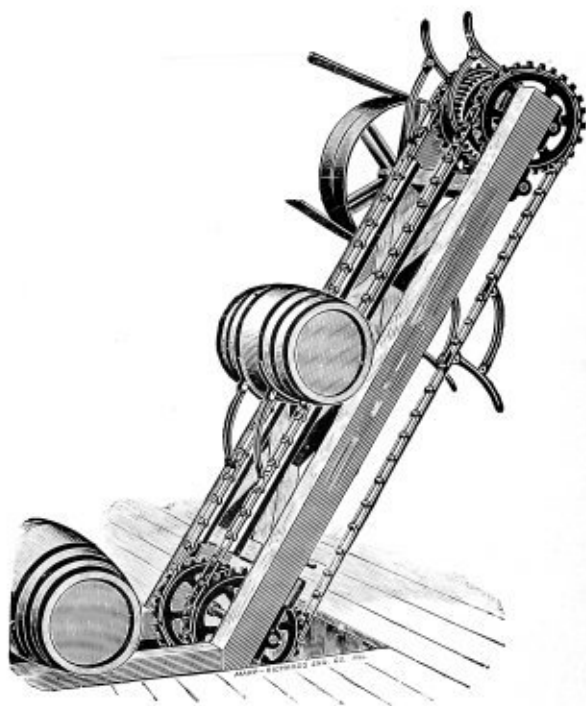
THE "RAHM" BARREL AND SACK ELEVATOR



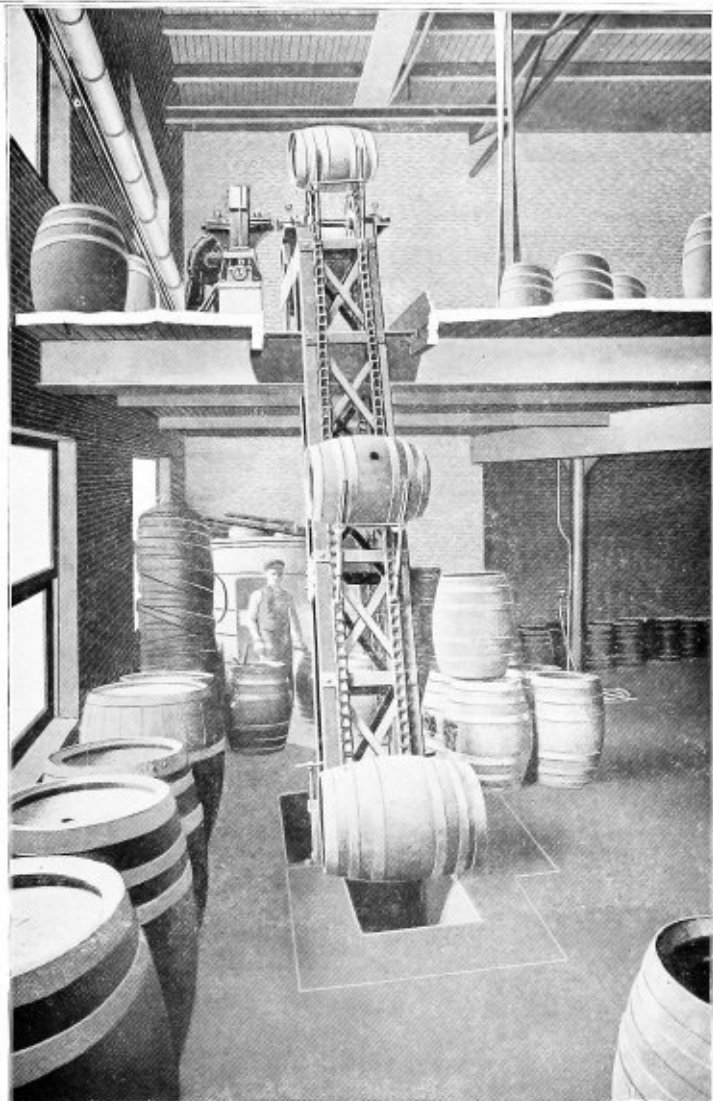
This Elevator will elevate and lower goods at the same time, automatically delivering them at any floor desired. Further particulars and prices quoted upon application.

KEG AND BARREL ELEVATORS

For Breweries, Distilleries, Flour Mills, Etc.

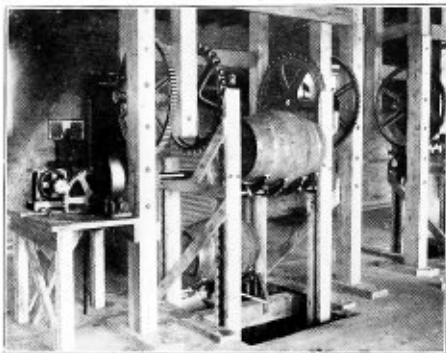


While the above Elevator is intended for barrels or kegs, we can furnish it with arms of various styles suitable for handling boxes, bales, etc. Special designs of Arm Elevators will be furnished interested parties. Correspondence solicited.



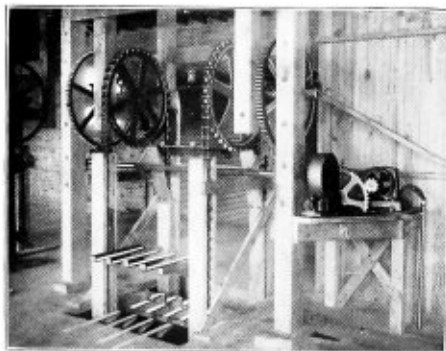
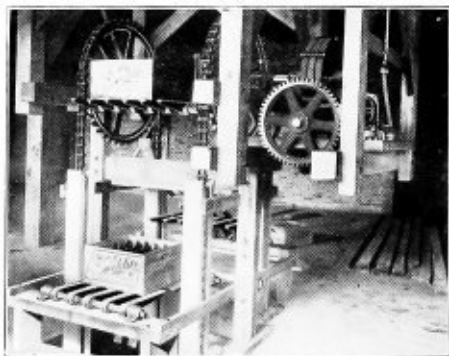
The above Elevator was furnished by us to the Birk Bros. Brewing Co., Chicago, for handling both empty and full barrels and kegs. It is of steel construction and is driven by an electric motor connected with the head shaft by means of a worm gear drive which is self-locking. This latter feature prevents the Elevator from descending in case of accident to the motor or the shutting off of the current.

CHAIN ELEVATORS FOR HANDLING PACKAGES



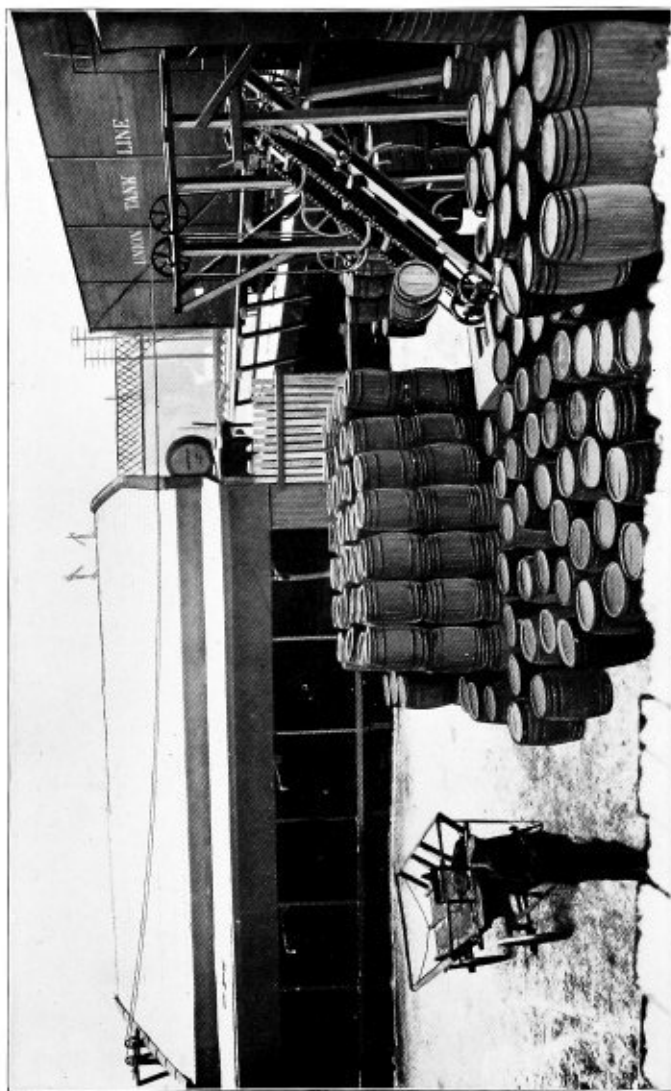
Elevator for transferring barrels and kegs to and from cooling rooms in distributing depot of the Jos. Schlitz Brewing Co., Chicago. This Elevator is driven by spur and worm gear drives, the latter being self-locking, prevents the Elevator from descending in event the power is cut off.

Elevator of 21 foot centers for elevating and lowering beer cases between cooling rooms and shipping department of the Jos. Schlitz Brewing Co. distributing depot. Capacity 540 cases per hour.

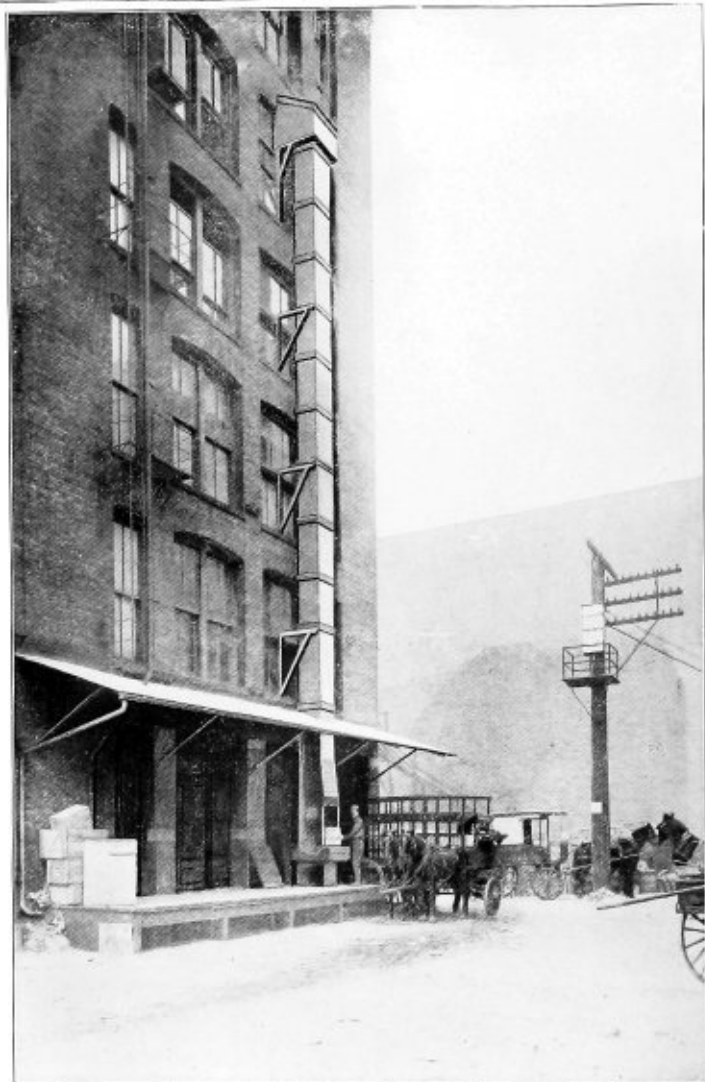


Ice Elevator driven by electric motor with intermediate spur and worm gears. Capacity 480 barrels per hour. Installed in distributing depot of the Jos. Schlitz Brewing Co., Chicago.

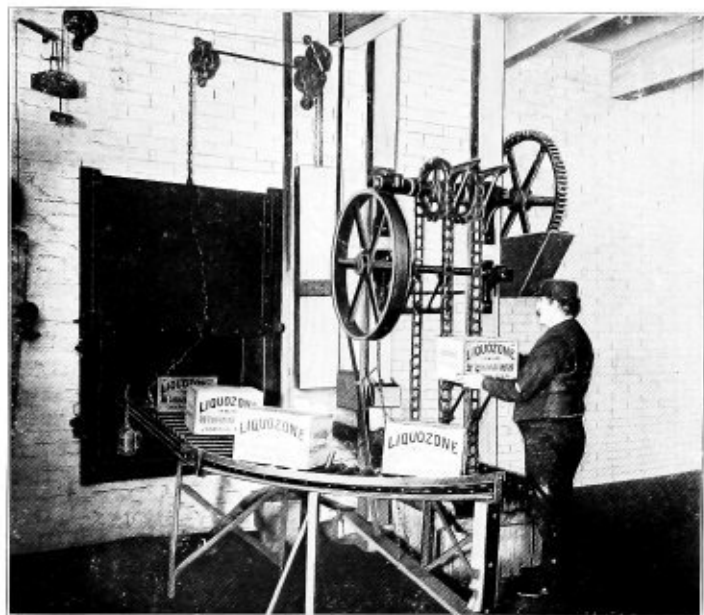
BARREL ELEVATOR.



Barrel Elevator which is operated by a rope drive running diagonally across the yard at the Standard Oil Co.'s plant, Chicago. The Elevator delivers the barrels into the cars direct.



This illustration represents an endless Rigid Tray Box Elevator and Conveyor combined, designed and erected by us for the Ligozone Co., Chicago. The Conveyor, which is a continuation of the Elevator, runs horizontally in the building, pushing the boxes in a trough at the end of which they are discharged on to another Conveyor. This conveying system handles boxes as fast as two men can take them from a wagon.

WELLER GRAVITY BOX LOWERING MACHINE.

This Gravity Box Lowering Machine was designed and installed by us for the Ligozone Co., Chicago. It is operated entirely by gravity and being carefully balanced, the weight of one box is sufficient to start it. The speed is regulated by the brake wheel shown at the left which is controlled by the foot of the operator.

We have modified designs of the above device for handling packages of any size or weight, the speed being regulated automatically in those intended for heavy service. Correspondence solicited.

WELLER REVOLVING SCREENS.

The manufacture of all classes of Screens forms one of the most important departments of our business. We build Screens for all class of work and of any desired capacity.



Fig. 6.



Fig. 7.

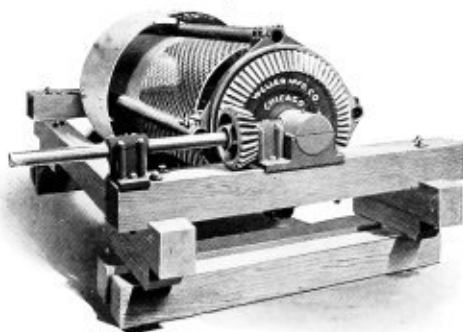


Fig. 8.

Complete Screen Equipments including power and power connections, also the necessary elevators and conveyors designed and furnished.

WELLER REVOLVING SCREENS.

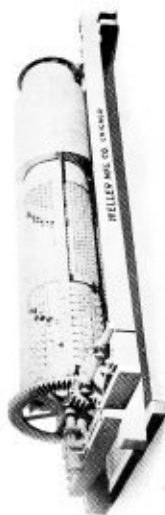


Fig. 9.

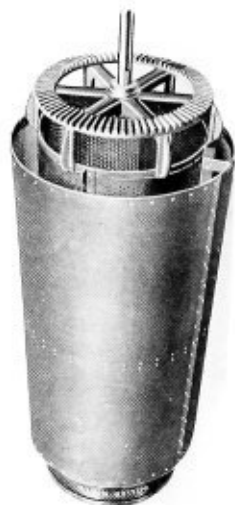


Fig. 10.

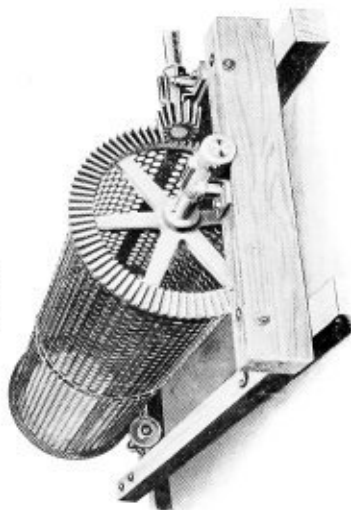


Fig. 11.

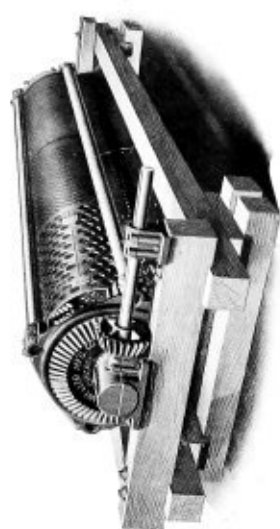


Fig. 12.

In addition to Revolving Screens, we also build Shaker or Stationary Screens of every description to order. Correspondence solicited regarding work of this class.

WELLER STEEL CARS

For Handling Ores, Coal, Rock, Gravel, Etc.

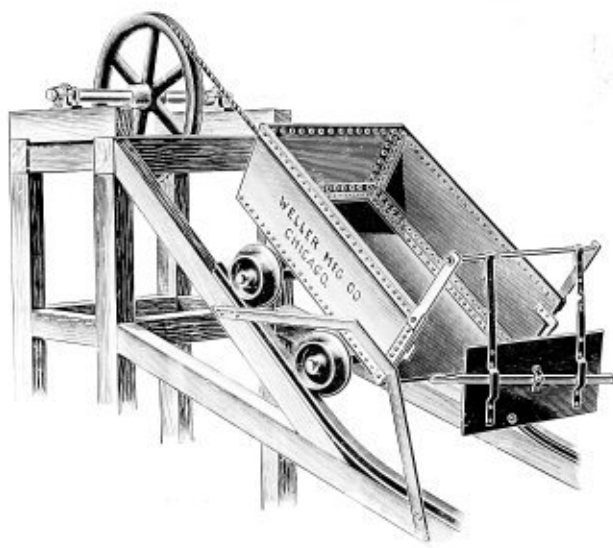


Fig. 13. Steel Automatic End-Dump Car.

We are prepared to design and build Steel Cars for handling material of any character in mines, quarries and industrial plants. Give full particulars and estimates will be promptly submitted.

WELLER STANDARD STEEL CARS

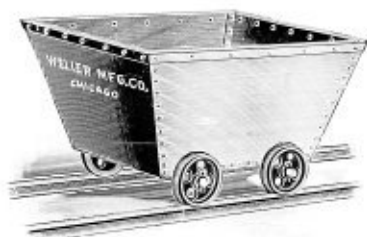


Fig. 14.

Standard Steel Sugar Cars.

Made in standard sizes and to order in any size.

These Cars are perfect in design and workmanship.

We are prepared to make these Cars at prices which will compare favorably with any manufacturer in the world.



Fig. 15.



Fig. 16.

Automatic End Dump Phosphate Car.

This type of Car is usually operated by an endless reversible cable arrangement, and dumps and rights itself automatically.

Specifications and Prices given upon Application.

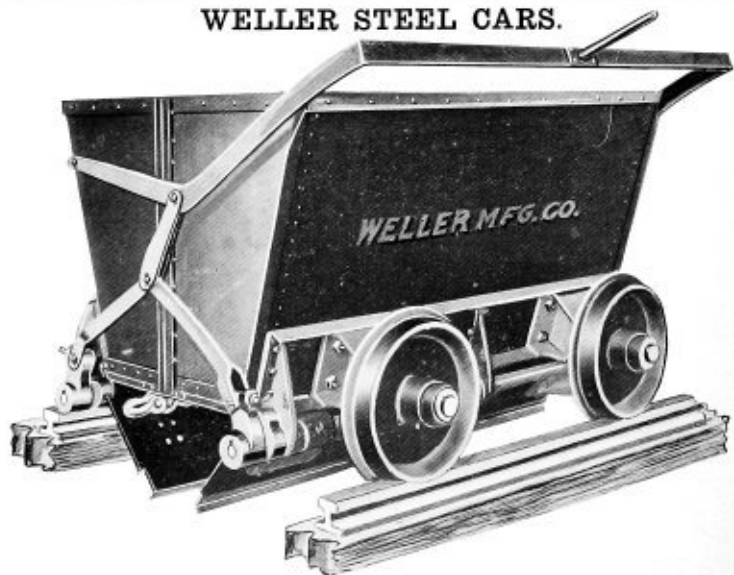
WELLER STEEL CARS.

Fig. 17. Weller Bottom Dump-Car.

We build several sizes of the above type of Car which is adapted to a wide range of service. State particulars for quotations.

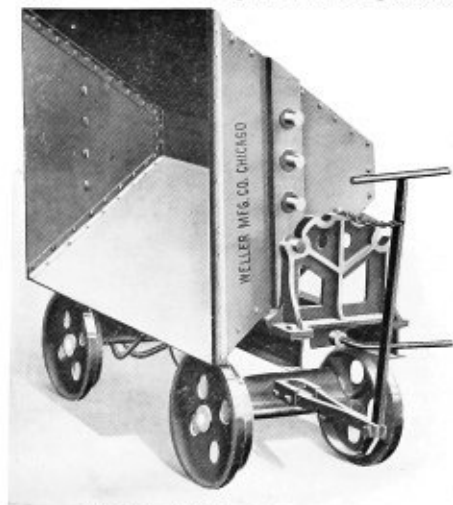
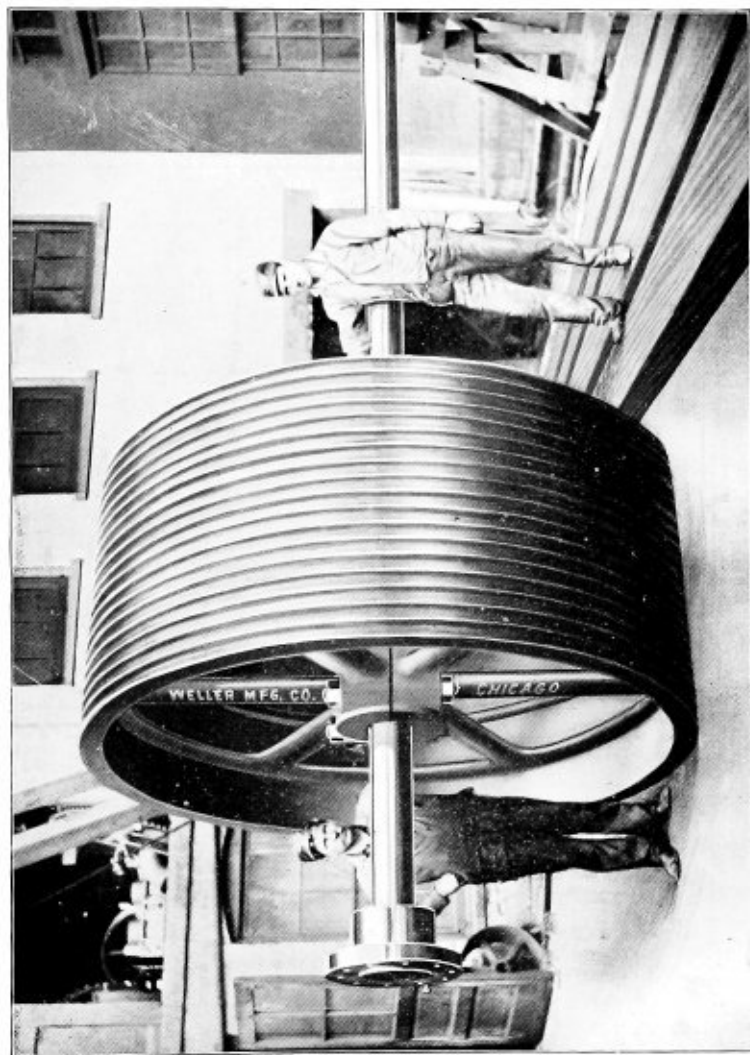


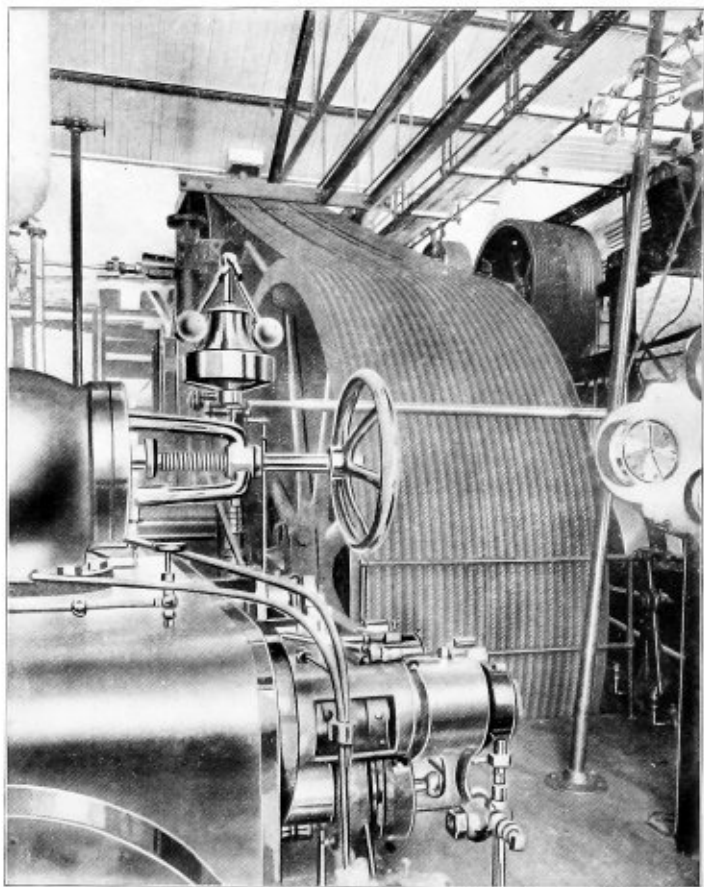
Fig. 18. Weller Side-Dump Car.

The above Car is used chiefly for the handling of coal and ashes. It is made in several forms and capacities to suit customers' requirements.

MANILA ROPE TRANSMISSION.

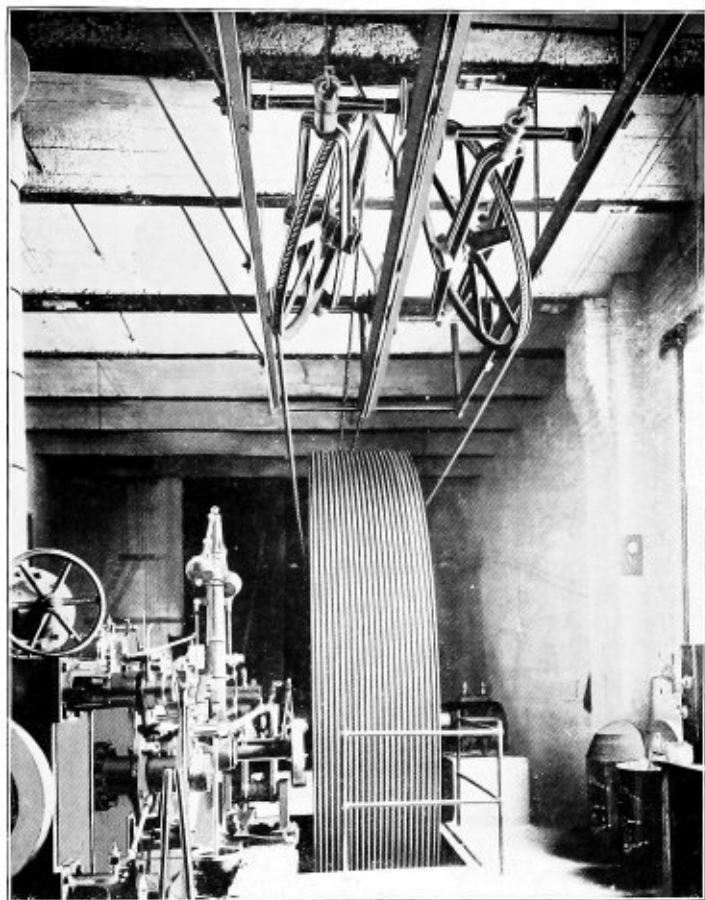


Manila Rope Sheave, 10 foot diameter, 18 grooves for $1\frac{3}{4}$ -inch rope, manufactured by us for the main drive in a large flour-milling plant.

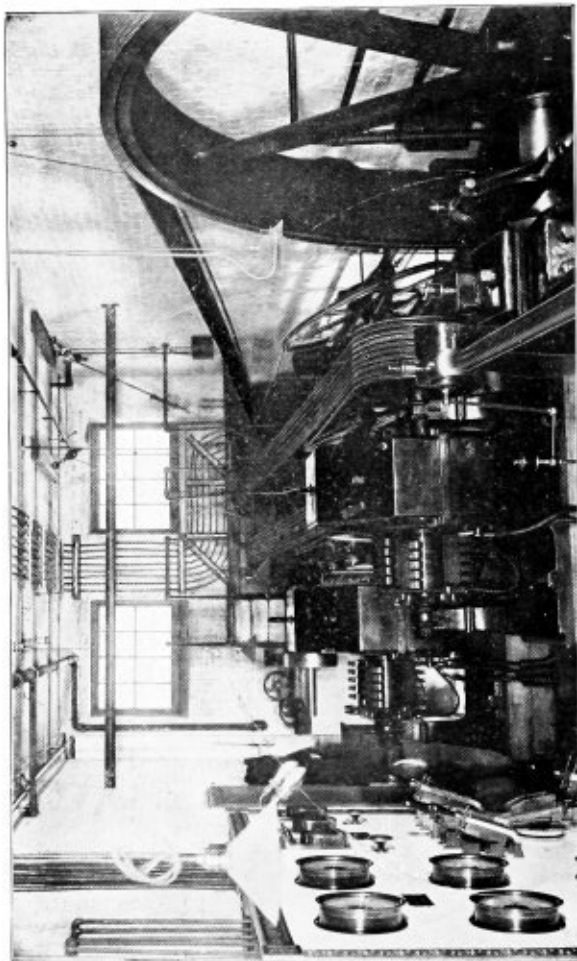
MANILA ROPE TRANSMISSION.

Main Drive of the Star and Crescent Milling Co.'s plant, South Chicago, Ill. This drive has a capacity of 1000 H. P., the engine sheave being 216 inches and that of the driven 84 inches in diameter, made with grooves for twenty-four strands of 2-inch rope.

MANILA ROPE TRANSMISSION.



View of 500 H. P. Manila Rope Drive designed and furnished by us for the Kurz-Downey Lumber Co., Chicago. The Engine Sheave is 216 inches and the driven 54 inches in diameter with grooves for twenty strands of $1\frac{1}{4}$ -inch rope.

ROPE DRIVES WITH WELLER STANDARD FRICTION CLUTCHES.

Rope Drives installed by us in the large department store of W. A. Wieboldt & Co., Chicago, driving two 50 k. w. dynamos. Each drive is furnished with a Weller Standard Friction Clutch, permitting each dynamo to be operated independently.

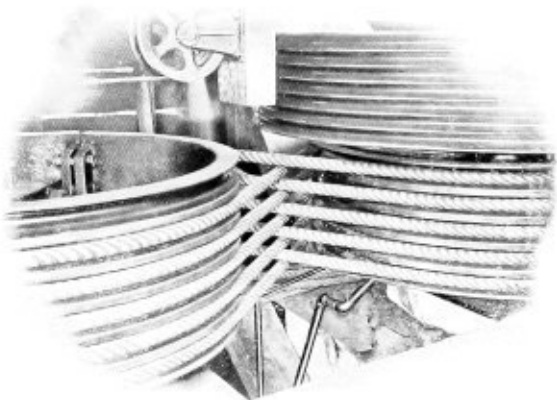
LONG DISTANCE MANILA ROPE DRIVE.

Manila Rope Drive in the plant of the Starkville Cotton Oil Co., Starkville, Miss., transmitting ninety horse power from mill to cotton ginners, a distance of about one hundred and fifty feet. When the power is not required, it is cut off by means of a Weller Standard Friction Clutch.

MANILA ROPE TRANSMISSION

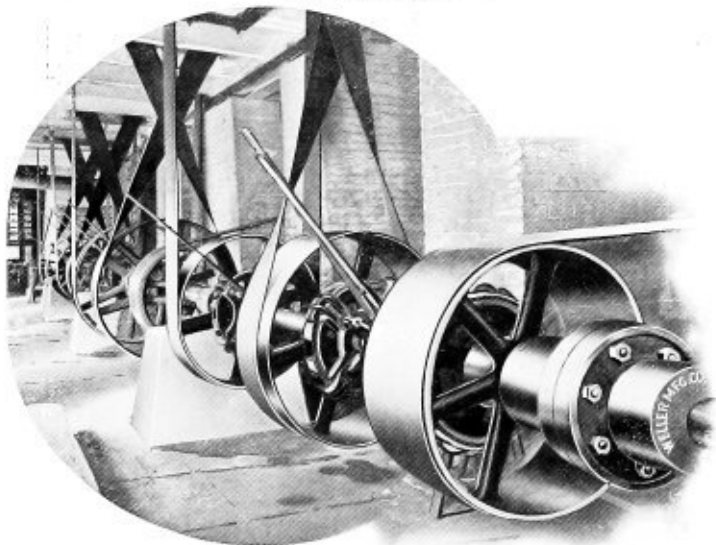


The above illustration shows a Rope Drive designed to run from main line to fan and belt conveyor in drier at the Wabash Elevator, Chicago. It makes a quarter turn about the mule stand shown in the foreground and crosses as it approaches the drier, running fan in one direction and conveyor in the other. The mule stand is designed in such a manner that the ropes cross each other without chafing.

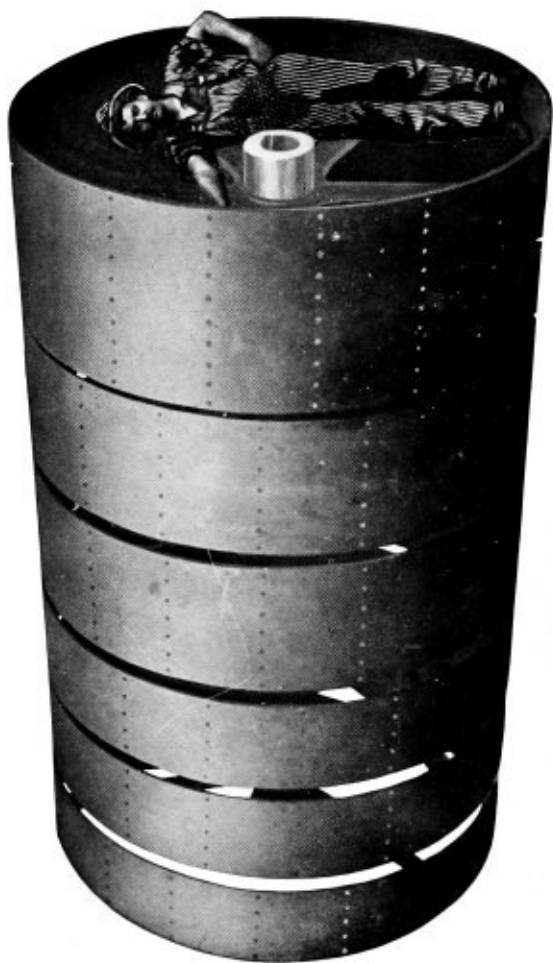


Vertical Manila Rope Cross Drive of 150 H. P. connecting two turbine water wheels. The sheaves are 60 and 66 inches in diameter, the centers between the two turbine shafts being only 72 inches. This Drive replaced two spur wheels and is giving excellent satisfaction.

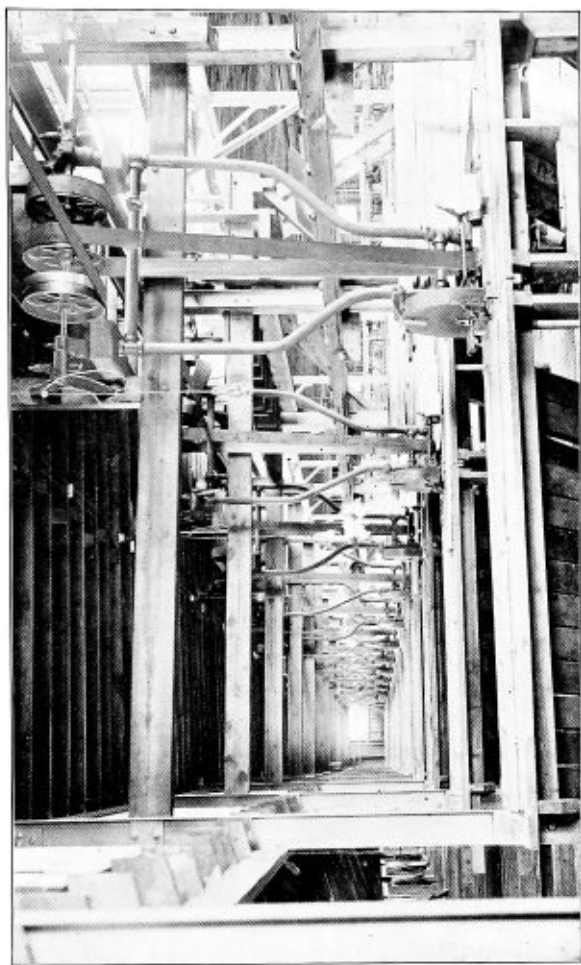
WELLER STANDARD FRICTION CLUTCH PULLEYS.



A Line of Weller Standard Friction Clutch Pulleys, Installed in a Large Plant.

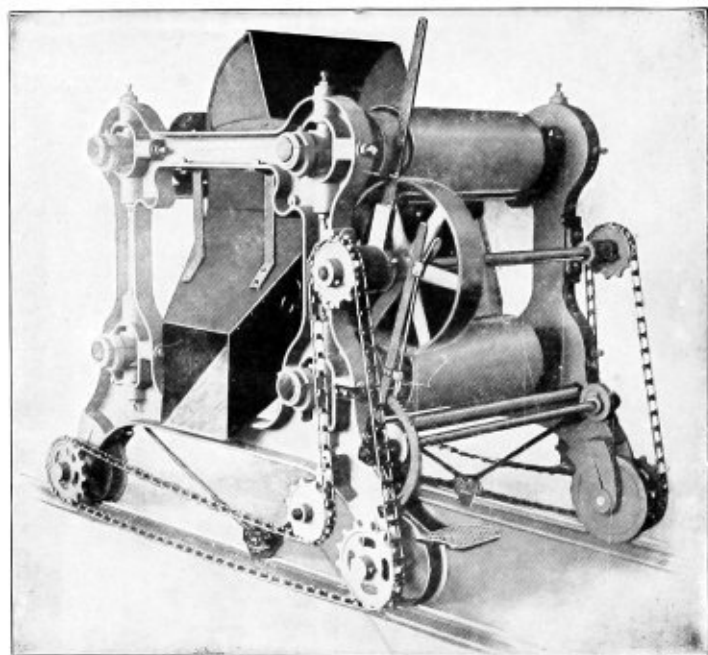
CAST IRON HEAD PULLEYS.

A group of Rubber Covered or Lagged Cast Iron Head Pulleys, manufactured by us for the Harroun Elevator Co., St. Joseph, Mo. We can also furnish pulleys lagged with leather, and iron center wood rim pulleys of any diameter.

PATULLO SWING CUT-OFF SAWS.

The above illustration shows a line of fourteen Patullo Swing Cut-off Saws, manufactured by us, installed in the plant of the Herman H. Hettler Lumber Co., Chicago. For price list of Patullo Swing Cut-off Saw, see page 432.

REVERSIBLE SELF-PROPELLING TRIPPER Style A



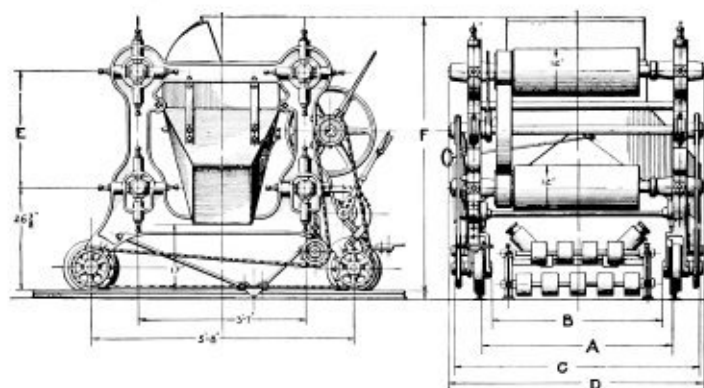
The above illustration shows our latest Reversible Self-Propelling Tripper provided with **universal adjustable bearings**, a new departure in the construction of trippers introduced by us, which has met with the unqualified approval of all operators of this class of machinery.

In this machine by simply reversing the position of the hood at the head of the discharge spout, grain may be delivered into the machine from either end. After many experiments we have adopted the spur paper friction shown as the simplest and most effective mechanism for operating Trippers. To move the tripper forward engage the lower friction, and in the opposite direction the upper. The distributing spout is furnished with a switch valve, permitting the grain to be discharged from either one or both sides at the same time.

We build these Trippers in various sizes and with high or low frames, ranging in capacity from 5,000 to 25,000 bushels per hour.

Prices quoted on application.

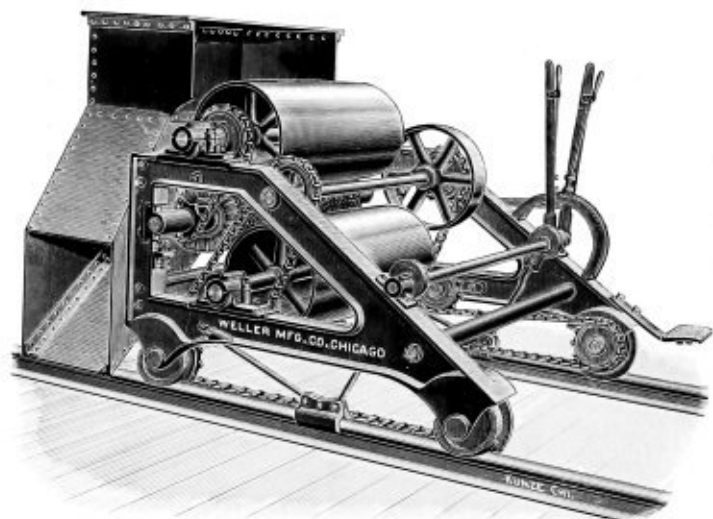
DIMENSIONS OF
REVERSIBLE SELF-PROPELLING TRIPPER
 With Ball and Socket Bearings
 Style A



DIMENSIONS.

Width of Belt.	A	B	C	D	E	F
18	34	29	47	50	27	67
20	36	31	49	52	27	67
22	38	33	51	54	27	67
24	40	35	53	56	27	67
26	46	40½	60	63	30	70
28	48	42½	62	65	30	70
30	50	44½	64	67	30	70
32	52	46½	66	69	30	70
36	56	50½	70	73	30	70
40	60	54½	74	77	30	70
44	64	58½	78	81	30	70
48	68	62½	82	85	30	70

SPECIAL SELF-PROPELLING TWO-PULLEY TRIPPER, FOR HEAVY DUTY. STYLE B.

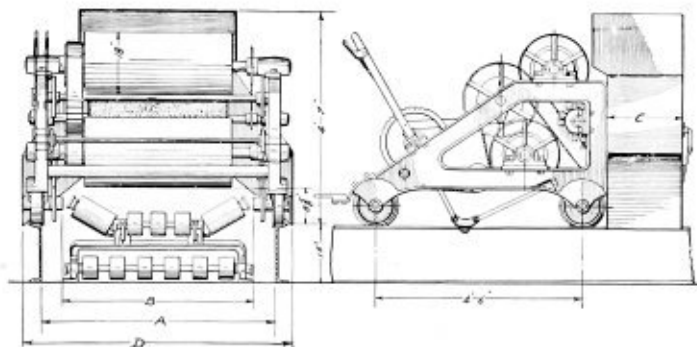


This Tripper is of specially heavy design and is intended for handling coal, crushed stone, clay, ores, sand, etc. It is provided with an adjustable rotary brush for cleaning the belt when used for handling material of a moist or adhesive character.

The frame and bearings are of heavy construction, the former, as will be seen from the illustration, having an extra long wheel base which makes it very rigid under the heaviest stresses.

Prices quoted upon application.

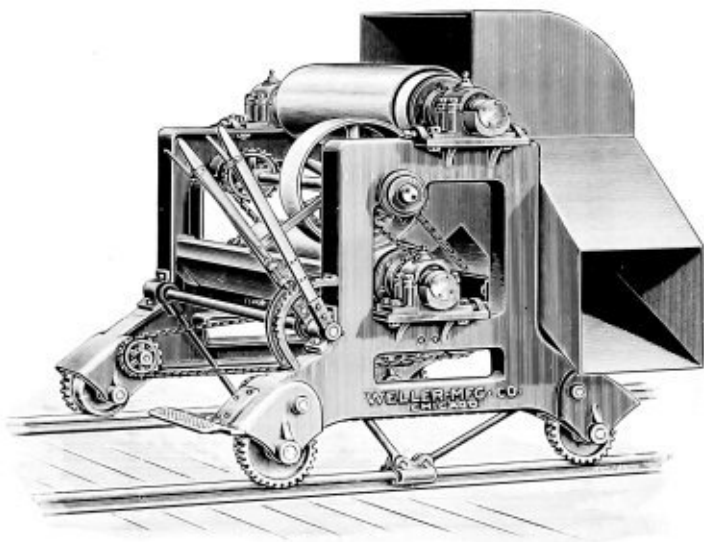
DIMENSIONS OF
**SPECIAL SELF-PROPELLING TWO PULLEY
 TRIPPER**
 Style B



DIMENSIONS.

Width of Belt.	A	B	C	D
24	48	39½	18	70
26	50	41½	18	72
28	52	43½	18	74
30	54	45½	20	76
32	56	47½	20	78
36	60	51½	20	82
40	64	55½	24	86
44	68	59½	24	90
48	72	63½	24	94

HEAVY SELF-PROPELLING TWO-PULLEY TRIPPER. STYLE C.



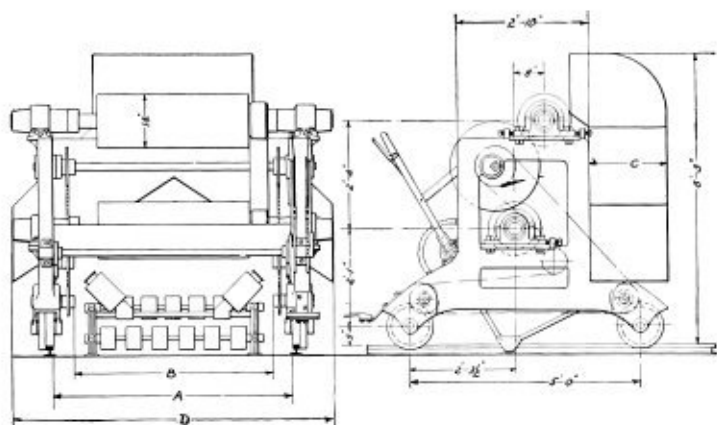
This Tripper is of heavier construction than the Two-Pulley Self-Propelling Tripper described on page 70, and is intended for belt conveyors of extra long length and large capacity.

It is the Two-Pulley type that will be found in operation in the majority of the large modern terminal grain elevators, but owing to its heavy design, it is adapted to handling any class of material for which a belt conveyor may be used. The bearings are of the ball and socket pattern and are provided with liberal lateral adjustment. We furnish this Tripper with either swivel or switch valve discharge spouts.

Prices quoted upon application.

DIMENSIONS OF
**HEAVY SELF-PROPELLING TWO PULLEY
 TRIPPER**

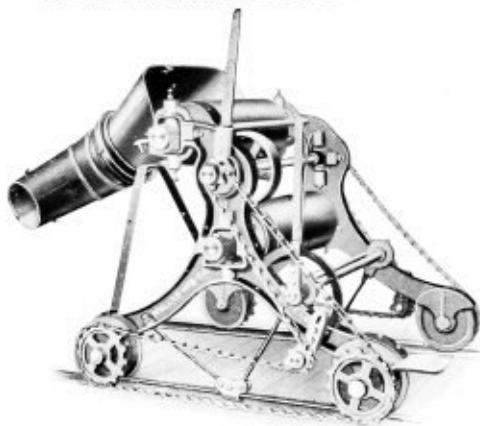
Style C



DIMENSIONS.

Width of Belt.	A	B	C	D
24	48	39½	18	70
26	50	41½	18	72
28	52	43½	18	74
30	54	45½	20	76
32	56	47½	20	78
36	60	51½	20	82
40	64	55½	24	86
44	68	59½	24	90
48	72	63½	24	94

BELT CONVEYOR TRIPPERS



Two-Pulley Self-Propelling Tripper. Style D.

This Tripper will convey material in one direction only and is provided with moving attachment. The bearings are of the universal adjustable pattern, a decided improvement over the rigid type usually furnished with Trippers of other manufacture.

This style of Tripper is made with either high or low frames as may be desired.



Two-Pulley Plain Tripper. Style E.

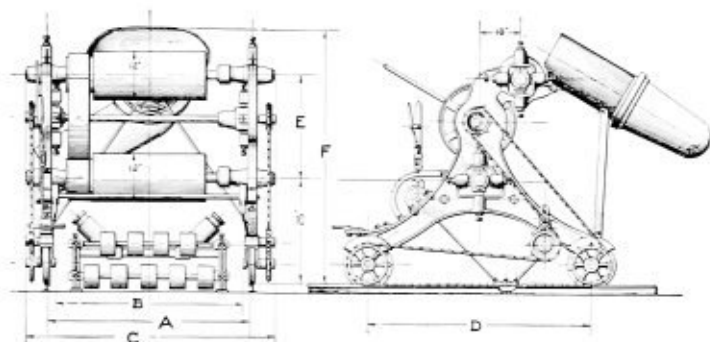
The construction of this Tripper is similar to the Two-Pulley Self-Propelling pattern but without the moving attachment. When desired, we can furnish a spool on the lower pulley shaft, around which can be wound a rope, fastened at one end of the conveyor, and the spool revolving winds the rope and draws the Tripper in any desired direction.

Both the above Trippers are made with either high or low frames and with switch valve or swivel discharge spouts.

Prices quoted upon application.

DIMENSIONS OF
**PLAIN AND SELF-PROPELLING TWO-PULLEY
 TRIPPERS**

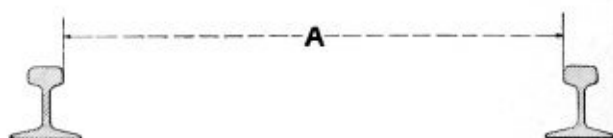
With Ball and Socket Bearings
 Styles D and E



DIMENSIONS.

Width of Belt.	A	B	C	D	E	F
18	36	32½	48	50	19	56
20	38	35½	50	50	19	56
22	40	37½	52	50	19	56
24	42	39½	54	50	19	56
26	50	48½	63	56½	25	62
28	52	50½	65	56½	25	62
30	54	52½	67	56½	25	62
32	56	54½	69	56½	25	62
36	60	58½	73	56½	25	62
40	64	62½	77	56½	25	62
44	68	66½	81	56½	25	62
48	72	70½	85	56½	25	62

GAUGES OF TRIPPER TRACKS FOR STYLES A, D AND E.

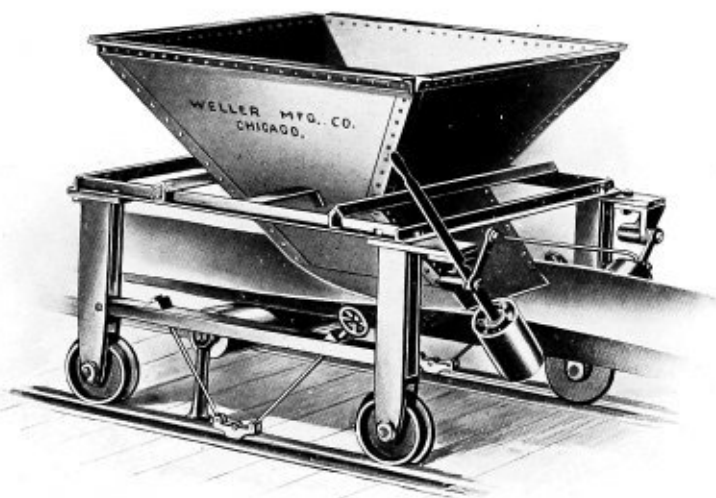


PLAIN AND SELF-PROPELLING TWO-PULLEY TRIPPERS. STYLES D & E.

Size of Tripper	A
18 inch Belt	36 inch
20 " "	38 "
22 " "	40 "
24 " "	42 "
26 " "	50 "
28 " "	52 "
30 " "	54 "
32 " "	56 "
36 " "	60 "
40 " "	64 "
44 " "	68 "
48 " "	72 "

REVERSIBLE SELF-PROPELLING FOUR-PULLEY TRIP- PER. STYLE A.

Size of Tripper.	A
18 inch Belt	34 inch
20 " "	36 "
22 " "	38 "
24 " "	40 "
26 " "	46 "
28 " "	48 "
30 " "	50 "
32 " "	52 "
36 " "	56 "
40 " "	60 "
44 " "	64 "
48 " "	68 "

THE WELLER STEEL BELT LOADING HOPPER

Traveling Belt Loading Hopper.

The Weller Steel Belt Loading Hopper is of steel construction throughout and is lighter and more durable than the old style made with wooden frame and hopper.

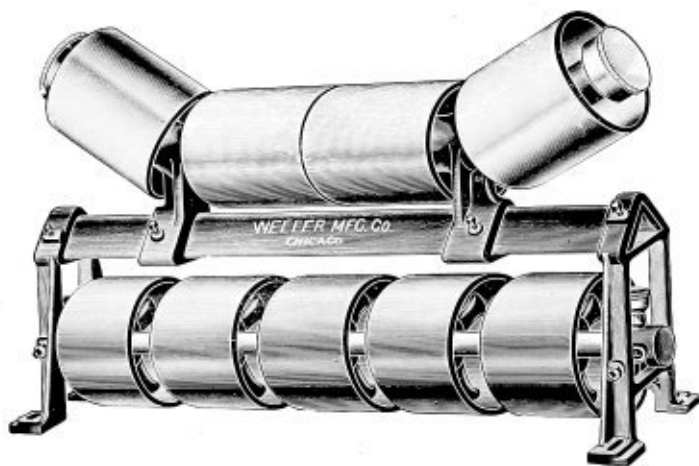
We build both traveling and stationary Loading Hoppers, the former being provided with flanged wheels for any desired gauge of track.

When placed in the desired position the belt is concentrated by means of the troughing rolls which are controlled by the lever shown in the illustration, thus receiving the grain without spilling it.

When ready to transfer to another position the troughing rolls are released and the belt returns to its former position.

We are prepared to build these Hoppers for belt conveyors of any width. Prices quoted upon application.

IMPROVED SELF-CONTAINED TROUGHING CARRIER. STYLE A.



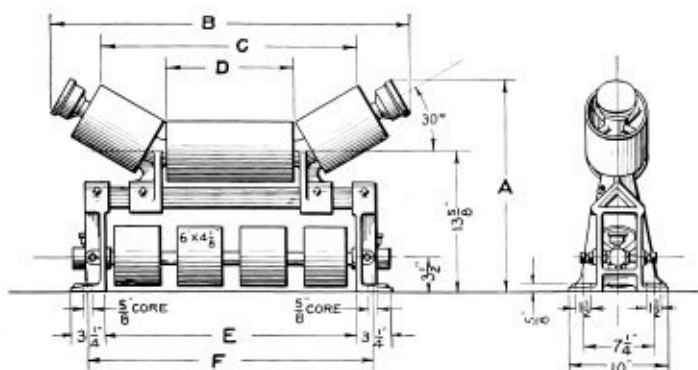
This Troughing Carrier is designed for general service being of heavy construction and embodying many desirable features. A distinctive feature of this Carrier is the fact that both the angle and horizontal rolls are in line with each other, leaving no exposed edges to come in contact with the belt and insuring a uniform curve for the latter. The Angle or Troughing Rolls run on hollow perforated steel shafts, lubrication being obtained by forcing grease into the latter with compression grease cups of special design. A free passage way for grease is provided between the lower ends of the hollow angle shafts cast in the supporting bases and the bearings carrying the horizontal carrier shafts, thus simplifying the work of lubrication. The grease cups provided are of large capacity, holding sufficient lubricant for several months' requirements.

This Carrier is made with or without return idlers, according to requirements and may also be provided with rail chairs to carry the tripper track.

Prices quoted upon application.

DIMENSIONS OF IMPROVED SELF-CONTAINED TROUGHING CARRIER

Style A

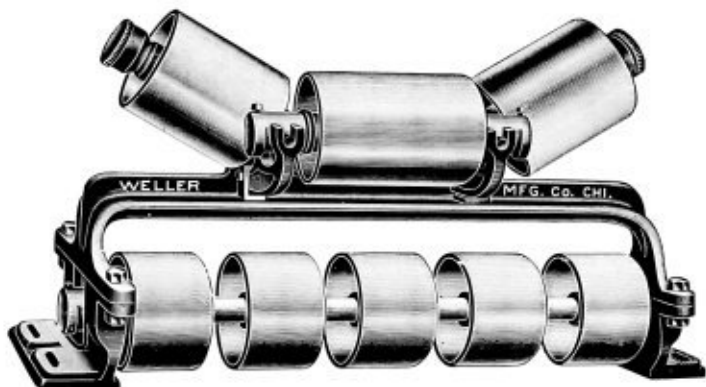


DIMENSIONS.

Width of Belt.	A	B	C	D	E	F	Size of Concentrating Rollers.	No. of Return Rollers.
16	19 $\frac{1}{2}$	26	17 $\frac{1}{2}$	9	20	23 $\frac{1}{2}$	6 x 5	3
18	20	29 $\frac{1}{2}$	20	10	22	25 $\frac{1}{2}$	6 x 5 $\frac{1}{2}$	4
20	20 $\frac{1}{2}$	32 $\frac{1}{2}$	22	12	24	27 $\frac{1}{2}$	6 x 5 $\frac{1}{2}$	4
22	20 $\frac{1}{2}$	33 $\frac{1}{2}$	23 $\frac{1}{2}$	13	26	29 $\frac{1}{2}$	6 x 6	4
24	20 $\frac{1}{2}$	35 $\frac{1}{2}$	25 $\frac{1}{2}$	14	28	31 $\frac{1}{2}$	6 x 6 $\frac{1}{2}$	4
26	20 $\frac{1}{2}$	37 $\frac{1}{2}$	27 $\frac{1}{2}$	16	31	34 $\frac{1}{2}$	6 x 6 $\frac{1}{2}$	5
28	20 $\frac{1}{2}$	38 $\frac{1}{2}$	29 $\frac{1}{2}$	17	33	36 $\frac{1}{2}$	6 x 7	5
30	21	38 $\frac{1}{2}$	31 $\frac{1}{2}$	18	35	38 $\frac{1}{2}$	6 x 7 $\frac{1}{2}$	5
36	21 $\frac{1}{2}$	43 $\frac{1}{2}$	37 $\frac{1}{2}$	21	41	44 $\frac{1}{2}$	6 x 9	6
40	21 $\frac{3}{4}$	47	40 $\frac{1}{2}$	24	45	48 $\frac{1}{2}$	6 x 9 $\frac{1}{2}$	7
48	22 $\frac{1}{2}$	54	48	29	52	55 $\frac{1}{2}$	6 x 11	8

ADJUSTABLE SELF-CONTAINED TROUGHING CARRIER

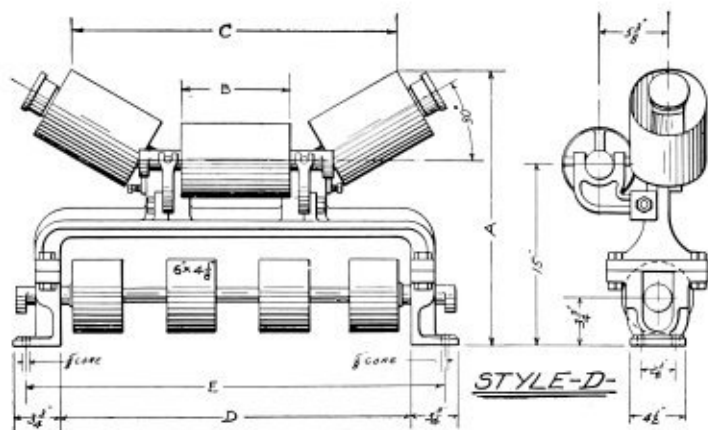
Style D



The above Carrier is intended for heavy service and is provided with troughing rolls adjustable to any angle. The latter run on a hollow perforated steel shaft fitted with special compression grease cups of extra large capacity. The bearings for the horizontal roll shafts are oscillating and are made any desired style.

This Carrier is made with or without the return rolls shown in the above illustration. Prices quoted upon application.

ADJUSTABLE SELF-CONTAINED TROUGHING CARRIERS. STYLE D.

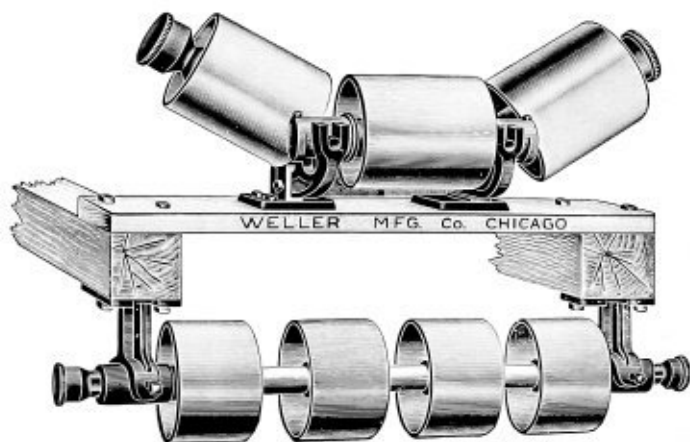


DIMENSIONS.

Width of Belt	A	B	C	D	E	Size of Con. Roller.	No. of Return Rollers.	No. Size of Car'g Roller.
18	21 $\frac{1}{4}$	4	20	22	27 $\frac{1}{2}$	6 x 7	4	1-6 x 4
20	21 $\frac{1}{4}$	6	22	24	29 $\frac{1}{2}$	6 x 7	4	1-6 x 6
22	21 $\frac{1}{4}$	8	24	26	31 $\frac{1}{2}$	6 x 7	4	2-6 x 4
24	21 $\frac{1}{2}$	8	26	28	33 $\frac{1}{2}$	6 x 8	4	2-6 x 4
26	21 $\frac{3}{4}$	10	29	31	36 $\frac{1}{2}$	6 x 8	5	2-6 x 4
28	21 $\frac{3}{4}$	10	31	33	38 $\frac{1}{2}$	6 x 9	5	2-6 x 4
30	22 $\frac{1}{4}$	10	33	35	40 $\frac{1}{2}$	6 x 10	5	2-6 x 4
36	22 $\frac{7}{16}$	16	39	41	46 $\frac{1}{2}$	6 x 10	6	3-6 x 4
40	22 $\frac{1}{2}$	20	43	45	50 $\frac{1}{2}$	6 x 10	7	4-6 x 4
48	22 $\frac{1}{2}$	28	51	53	58 $\frac{1}{2}$	6 x 10	8	5-6 x 4

ADJUSTABLE TROUGHING CARRIER WITH INDEPENDENT RETURN ROLLS

Style E

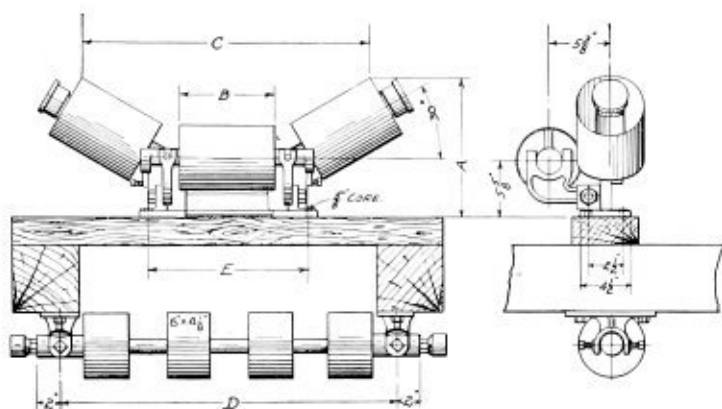


In this Carrier the construction of the Troughing and Horizontal Rolls, as well as the bearings, is similar to style D, described on page 76. Local conditions are frequently such, however, that independent Return Rolls are necessary and the above has been designed with this object in view.

We have furnished these Carriers in connection with belt conveyors handling a wide range of materials which are giving excellent satisfaction. Prices quoted upon application.

DIMENSIONS OF
**ADJUSTABLE TROUGHING CARRIER WITH
 INDEPENDENT RETURN ROLLS**

Style E

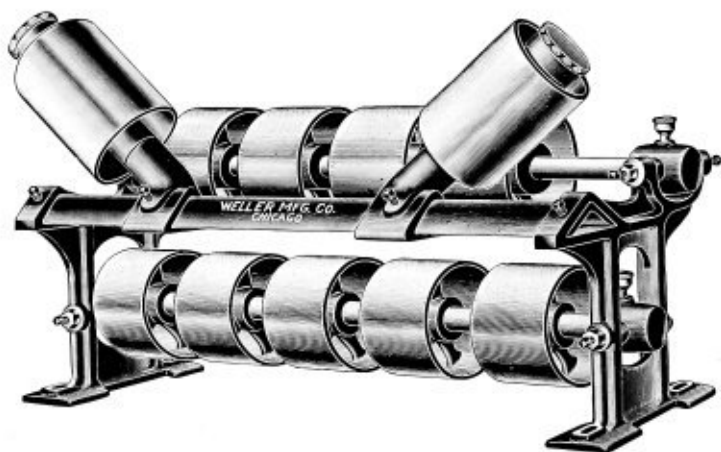


DIMENSIONS.

Width of Belt.	A	B	C	D	E	Size of Con. Roller.	No. of Return Rollers.	Size & No. of Carry'g Rol'rs
18	11½	4	20	24	9½	6 x 7	4	1-6 x 4
20	11½	6	22	26	9½	6 x 7	4	1-6 x 6
22	11½	8	24	28	14½	6 x 7	4	2-6 x 4
24	12½	8	26	30	14½	6 x 8	4	2-6 x 4
26	12½	10	29	33	16½	6 x 8	5	2-6 x 4
28	12½	10	31	35	16½	6 x 9	5	2-6 x 4
30	13	10	33	37	16½	6 x 10	5	2-6 x 4
36	13	16	39	43	22½	6 x 10	6	3-6 x 4
40	13½	20	43	47	26½	6 x 10	7	4-6 x 4
48	13½	28	51	55	34½	6 x 10	8	5-6 x 4

STANDARD COMBINATION TROUGHING CARRIER. STLYE B.

With Counter-Balanced Stands



We desire to call attention to a new feature which we have introduced in the above Carrier Stand, that will, no doubt, be appreciated by those upon whom devolve the maintenance of belt conveyors.

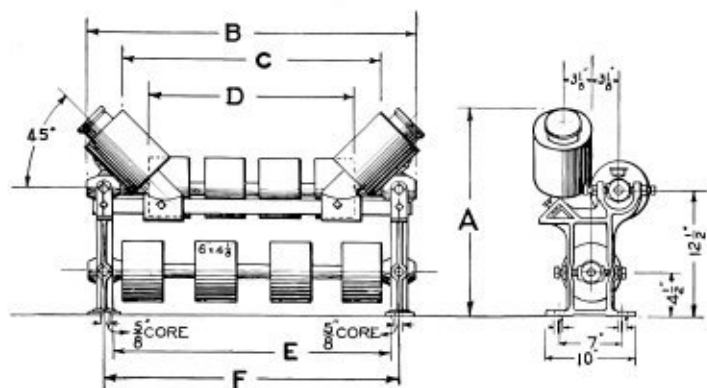
The brackets which are provided with the Stands for carrying both the cross bars and upper pulley roll bearings are equally distant in projection from the center of the lower bearings carrying the return rolls. This acts as a counter-balance for the stands when the rolls are in motion, reducing the vibration to a minimum. It also reduces the strain on the foot bolts and prevents them from continually working loose, obviating the necessity of frequently going over the entire length of the conveyor and tightening up their nuts.

We furnish these Stands with plain, self oiling, ring oiling or roller bearings and with open or closed ends. The troughing rolls are also made with roller bearings when desired.

Prices quoted upon application.

DIMENSIONS OF STANDARD COMBINATION TROUGHING CARRIERS

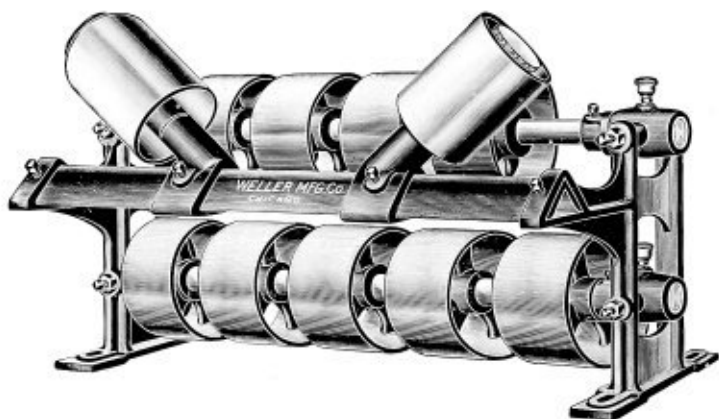
Style B



DIMENSIONS.

Width of Belt.	A	B	C	D	E	F	Size of Concentrat. Rollers.	No. of Return Rollers.	No. of Carrying Rollers.
12	17	21	14	9½	16	17½	6 x 4	3	2
14	17	23	16	13½	18	19½	6 x 4½	3	3
16	20½	25	18	14½	20	21½	6 x 5	3	3
18	20½	27	20	16	22	23½	6 x 5½	4	3
20	20½	29	22	17	24	25½	6 x 5½	4	3
22	20½	31	23½	18	26	27½	6 x 6	4	3
24	20½	33	25½	20	28	29½	6 x 6½	4	4
26	20½	36	27½	22	31	32½	6 x 6½	5	4
28	21	38	29½	22½	33	34½	6 x 7	5	4
30	21	40	31½	24	35	36½	6 x 7½	5	4
36	21½	46	37½	28½	41	42½	6 x 9	6	5
40	22	50	40½	31	45	46½	6 x 9½	7	6
48	23	58	48	36½	53	54½	6 x 11	8	7

STANDARD COMBINATION TROUGHING CARRIER. STYLE F.

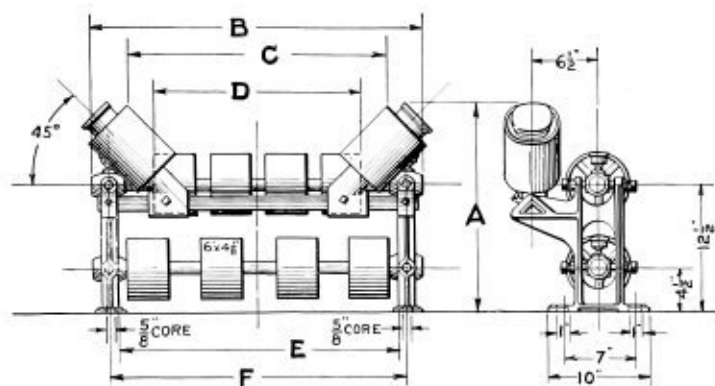


Although suitable for general service, these Carriers are designed particularly for grain conveyors and is the type adopted by several of the leading engineers and builders of terminal elevators throughout the country, many of the prominent houses built in recent years being equipped with them. Oscillating bearings, either plain, fitted with grease cups, self oiling, ring oiling or roller are furnished for the horizontal roll shafts. The troughing rolls run on hollow perforated steel shafts filled with grease which is fed by means of compression cups and are horizontally adjustable on the angle iron cross bar.

Prices quoted upon application.

DIMENSIONS OF STANDARD COMBINATION TROUGHING CARRIERS

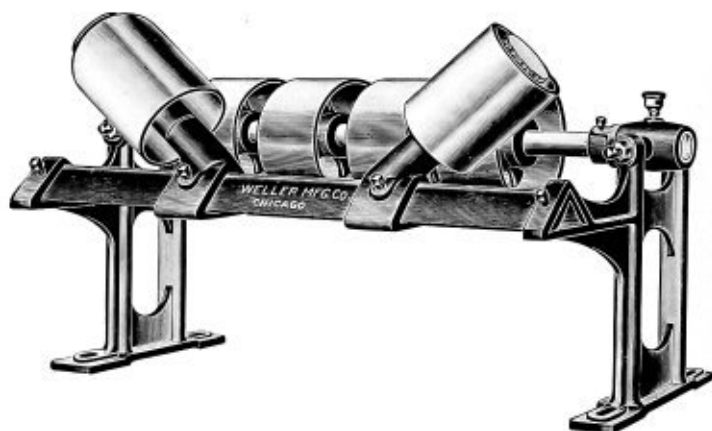
Style F



DIMENSIONS.

Width of Belt.	A	B	C	D	E	F	Size of Convent. Roller.	No. of Return Rollers.	No. of Carrying Rollers.
16	20½	25	17½	15½	20	21½	5½ x 5	3	3
18	20½	27	20	16½	22	23½	5½ x 5½	4	3
20	20½	29	22	18	24	25½	5½ x 5½	4	4
22	20½	31	23½	19	26	27½	5½ x 6	4	4
24	20½	33	25½	20½	28	29½	5½ x 6½	4	4
26	20½	36	27½	21½	31	32½	5½ x 6½	5	4
28	21	38	29½	22½	33	34½	5½ x 7	5	5
30	21	40	31½	24	35	36½	5½ x 7½	5	5
36	21½	46	37½	25½	41	42½	5½ x 9	6	6
40	22	50	40½	30	45	46½	5½ x 9½	7	6
48	23	58	48	34½	53	54½	5½ x 11	8	7

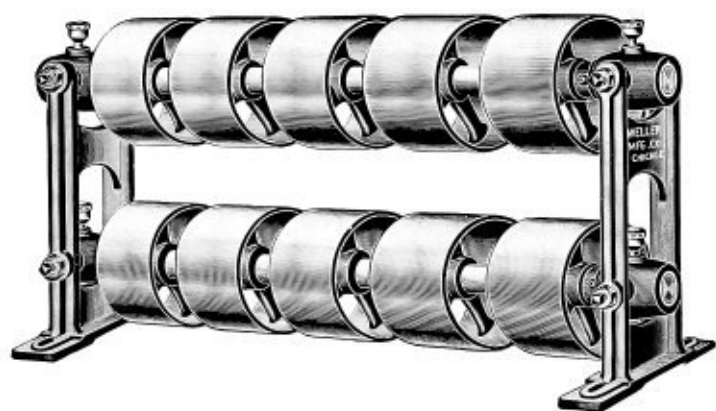
**STANDARD TROUGHING CARRIERS WITHOUT
RETURN ROLLS. STYLE F 1.**



This Carrier is similar to style F, described on page 82 but without the return rolls as the latter as a rule are used only alternately, the space between them being double that of the rolls on the carrying side of the belt. The dimensions of the above Carrier are the same as style F, page 83.

Prices quoted upon application.

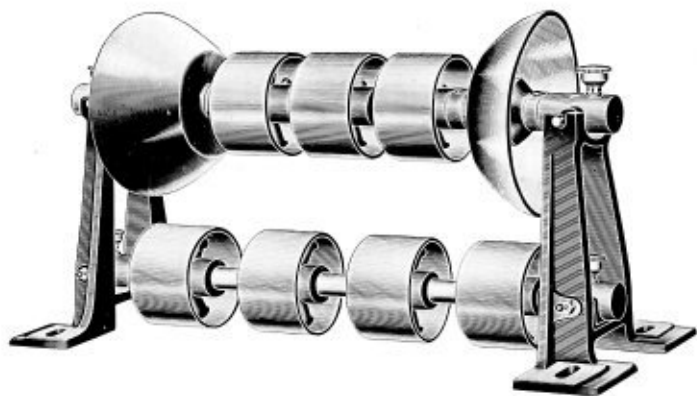
STANDARD FLAT BELT CARRIER ROLLS WITH RETURN ROLLS. STYLE F 2.



The above are intended where belt conveyors are operated with flat belts their entire length or with troughing rolls at intervals as frequently occurs, especially in grain elevators. The dimensions are such that this Carrier may be used in connection with the Standard Troughing Carriers shown on pages 80, 82 and 84. The dimensions of Style F also apply to the above Carrier Rolls.

Prices quoted upon application.

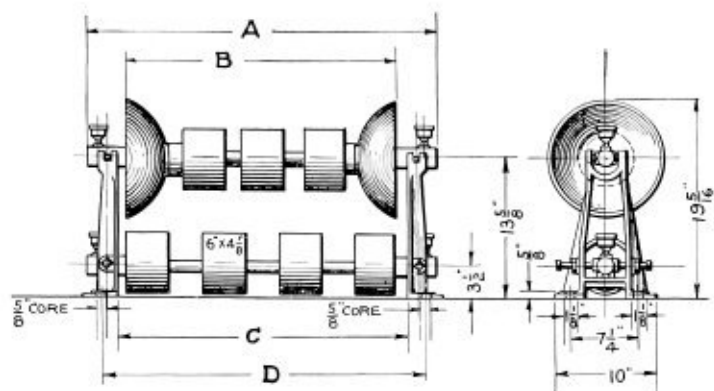
**STANDARD BELL TROUGHING CARRIER WITH
RETURN ROLLS. STYLE G.**



This style of Troughing Carrier may be used in connection with the Standard Carrier Rolls illustrated on page 85. To arrive at the price of this Carrier, add together the cost of the following for the desired width of belt. Bell Troughing Rolls, page 90. Pulley Rolls, page 91. Double Bearing Roll Stands, page 94, the total being the cost complete.

STANDARD BELL TROUGHING ROLLS

Style G



DIMENSIONS.

Width of Belt.	A	B	C	D	Number of Carrying Rollers.	Number of Return Rollers.
12	21 $\frac{1}{4}$	14	16	19 $\frac{1}{4}$	1	3
14	23 $\frac{1}{4}$	16	18	21 $\frac{1}{4}$	1	3
16	25 $\frac{1}{4}$	18	20	23 $\frac{1}{4}$	1	3
18	27 $\frac{1}{4}$	20	22	25 $\frac{1}{4}$	2	4
20	29 $\frac{1}{4}$	22	24	27 $\frac{1}{4}$	2	4
22	31 $\frac{1}{4}$	24	26	29 $\frac{1}{4}$	2	4
24	33 $\frac{1}{4}$	28	28	31 $\frac{1}{4}$	3	4
26	36 $\frac{1}{4}$	29	31	34 $\frac{1}{4}$	3	5
28	38 $\frac{1}{4}$	31	33	36 $\frac{1}{4}$	3	5
30	40 $\frac{1}{4}$	33	35	38 $\frac{1}{4}$	3	5
36	46 $\frac{1}{4}$	39	41	44 $\frac{1}{4}$	4	6
40	50 $\frac{3}{4}$	43	45	48 $\frac{1}{4}$	5	7
48	58 $\frac{1}{4}$	52	53	56 $\frac{1}{4}$	6	8

STANDARD TROUGHING ROLLS

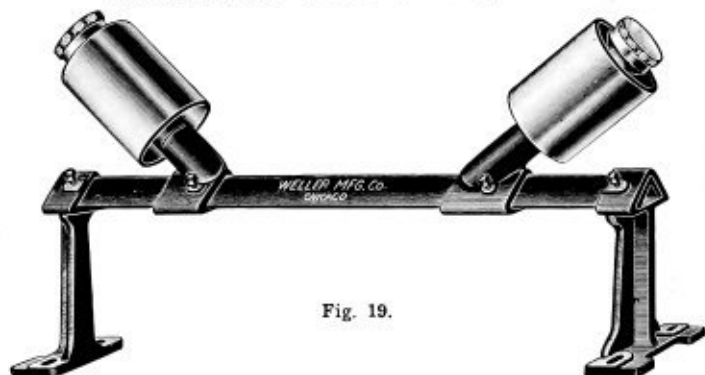


Fig. 19.

The above are used at loading points on flat conveying belts, it being necessary to trough the latter at every point where material is received. The rolls are adjustable to any width on the cross bars and are furnished in either wood or iron.

PRICE LIST.

Size of Rolls, Inches.	Price of Iron Rolls, Per Pair.	Price of Wood Rolls—Per Pair.
6 x 6	\$ 7.75	\$ 6.40
6 x 8	8.75	7.30
6 x 10	10.25	8.50

The above price list includes cross bar but no stands.

STANDS FOR TROUGHING ROLLS



Fig. 20.

These Stands are made in different heights to suit the bearing stands used to carry the upper rolls.

PRICE LIST.

Height of Stand Inches.	Price Each
6	\$.75
9	.90
12	1.10

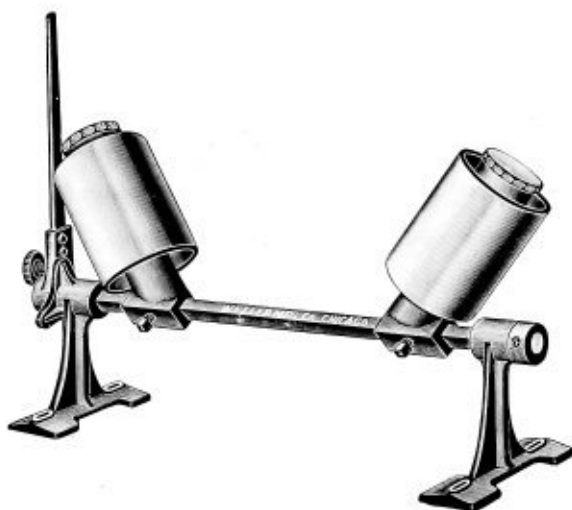
DUMPING TROUGHING ROLLS.

Fig. 21.



Fig. 22.

Where the tripper is not sufficiently high to clear stationary troughing rolls, the above are used at loading points on flat belts. They may be adjusted when the belt is running.

Prices quoted on application.

BELL TROUGHING ROLLS

Pulley Pattern

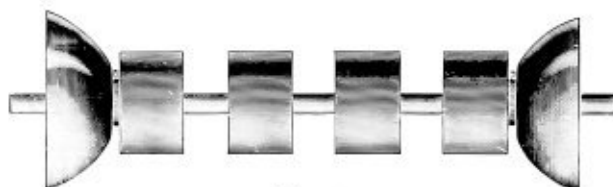


Fig. 23.

Width of Belt, Inches.	Diameter and Length of Shaft, Inches.	Dia. of Bell Pulleys, Inches.	PULLEYS.		PRICE.
			No	Size, Inches.	
12	$1\frac{3}{16} \times 21$	$11\frac{3}{8}$	1	$6 \times 4\frac{1}{2}$	\$5.44
14	$1\frac{3}{16} \times 23$	$11\frac{3}{8}$	1	$6 \times 4\frac{1}{2}$	5.60
16	$1\frac{3}{16} \times 25$	$11\frac{3}{8}$	1	$6 \times 4\frac{1}{2}$	5.70
18	$1\frac{3}{16} \times 27$	$11\frac{3}{8}$	2	$6 \times 4\frac{1}{2}$	6.18
20	$1\frac{3}{16} \times 29$	$11\frac{3}{8}$	2	$6 \times 4\frac{1}{2}$	6.28
22	$1\frac{3}{16} \times 31$	$11\frac{3}{8}$	2	$6 \times 4\frac{1}{2}$	6.38
24	$1\frac{3}{16} \times 33$	$11\frac{3}{8}$	3	$6 \times 4\frac{1}{2}$	7.40
26	$1\frac{3}{16} \times 36$	$11\frac{3}{8}$	3	$6 \times 4\frac{1}{2}$	7.68
28	$1\frac{3}{16} \times 38$	$11\frac{3}{8}$	3	$6 \times 4\frac{1}{2}$	7.88
30	$1\frac{3}{16} \times 40$	$11\frac{3}{8}$	3	$6 \times 4\frac{1}{2}$	8.10
36	$1\frac{3}{16} \times 46$	$11\frac{3}{8}$	4	$6 \times 4\frac{1}{2}$	9.40
40	$1\frac{3}{16} \times 50$	$11\frac{3}{8}$	5	$6 \times 4\frac{1}{2}$	10.70
48	$1\frac{3}{16} \times 58$	$11\frac{3}{8}$	6	$6 \times 4\frac{1}{2}$	12.36

Dimensions of Standard Projections $1\frac{3}{16} \times 3\frac{1}{2}$ inches.

An additional charge is made for projections of larger diameter or length than standard.

BELL TROUGHING ROLLS

Tubular Pattern

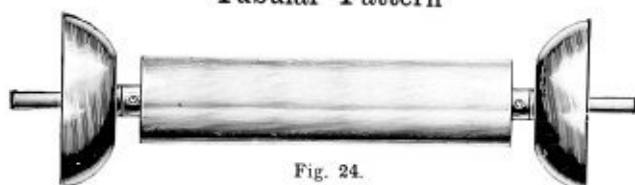


Fig. 24.

Our Iron Concentrating Rolls are made with loose convex pulleys.

Width of Belt, Inches.	Price of Complete RT with 5-inch Pipe.	Width of Belt, Inches.	Price of Complete RT with 6-inch Pipe.
16	\$ 8.00	16	\$ 8.50
18	8.25	18	8.75
20	8.50	20	9.00
22	8.75	22	9.35
24	9.00	24	9.90
28	9.50	28	11.00
30	10.00	30	12.00
34	11.00	34	14.00
36	12.00	36	16.00
40	13.50	40	18.00

Dimensions of Standard Projections $1\frac{3}{16} \times 3\frac{1}{2}$ inches.

BELT CONVEYOR PULLEY ROLLS



Fig. 25.

Width of Belt, Inches.	Dia. and L'gth Shaft For Bearings, Inches.	PULLEYS.		PRICE.
		No. of	Size, Inches	
12	$1\frac{3}{16} \times 21$	3	$6 \times 4\frac{1}{2}$	\$3.26
14	$1\frac{3}{16} \times 23$	3	$6 \times 4\frac{1}{2}$	3.34
16	$1\frac{3}{16} \times 25$	3	$6 \times 4\frac{1}{2}$	3.40
18	$1\frac{3}{16} \times 27$	4	$6 \times 4\frac{1}{2}$	4.22
20	$1\frac{3}{16} \times 29$	4	$6 \times 4\frac{1}{2}$	4.32
22	$1\frac{3}{16} \times 31$	4	$6 \times 4\frac{1}{2}$	4.40
24	$1\frac{3}{16} \times 33$	4	$6 \times 4\frac{1}{2}$	5.30
26	$1\frac{3}{16} \times 36$	5	$6 \times 4\frac{1}{2}$	5.50
28	$1\frac{3}{16} \times 38$	5	$6 \times 4\frac{1}{2}$	5.60
30	$1\frac{3}{16} \times 40$	5	$6 \times 4\frac{1}{2}$	5.66
36	$1\frac{3}{16} \times 46$	6	$6 \times 4\frac{1}{2}$	6.90
40	$1\frac{3}{16} \times 50$	7	$6 \times 4\frac{1}{2}$	8.10
48	$1\frac{3}{16} \times 58$	8	$6 \times 4\frac{1}{2}$	9.70

Dimensions of Standard Projections $1\frac{3}{16} \times 3\frac{1}{2}$ inches.

An additional charge is made for projections of larger diameter or length than standard.

STEEL AND WOOD ROLLS



Fig. 26.

STEEL ROLLS.

have ends and projections shrunk in, both are then turned true.

Width of Belt, Inches.	Price of 5-inch Dia. Roller.	Price of 6-inch Dia. Roller.
16	\$4.50	\$5.50
18	4.60	5.75
20	4.75	6.00
22	5.00	6.50
24	5.50	7.25
26	6.00	7.75
28	6.50	8.25
30	7.00	8.75
32	7.50	9.25
36	8.00	9.75
40	8.75	10.50
44	9.35	11.00
48	10.00	11.65

WOOD ROLLS.

made of seasoned Maple, shaft runs through entire length, turned true.

Width of Belt, Inches.	Diameter of Roller, Inches.	PRICE.
10	5½	\$1.60
12	5½	1.75
14	5½	1.92
16	5½	2.10
18	5½	2.25
20	5½	2.40
22	5½	2.55
24	5½	2.75
26	5½	2.95
28	5½	3.15
30	5½	3.35
36	5½	3.75
40	5½	4.25

Size of Standard Projections ¾ x 3½ inches.

An additional charge is made for projections of larger diameter or length than standard.

ALL STEEL BELT CONVEYOR ROLLS

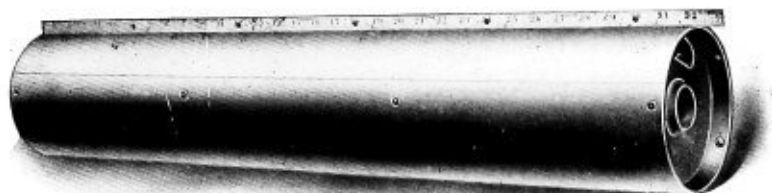


Fig. 27.

We illustrate a Conveyor Roll made entirely of steel with the exception of the malleable iron hub.

It is lighter and stronger than the ordinary cast iron roll and is made in all lengths up to 40 inches, but in only one diameter, viz: 6 inches.



Fig. 28.

The above shows an All Steel Roll with ball bearings. The Roll is held in position on the shaft upon which it revolves by collars, the shaft being stationary.

PRICE LIST. Shafts not included.

6x 4.....	\$1.05	6x16.....	\$1.85	6x30.....	\$2.60
5.....	1.10	18.....	1.95	32.....	2.75
6.....	1.15	20.....	2.10	34.....	2.90
8.....	1.30	22.....	2.20	36.....	3.00
10.....	1.35	24.....	2.30	38.....	3.10
12.....	1.60	26.....	2.40	40.....	3.15
14.....	1.75	28.....	2.50		

The above price list is for plain All Steel Rolls without ball bearings. Prices of the latter furnished upon application.

STANDARD BELT CONVEYOR DOUBLE BEARING ROLL STAND



Fig. 29.

We furnish these stands with plain, self oiling, ring oiling, or roller bearings and with open or closed ends.

Price each, with plain or self oiling bearings\$3.50

For dimensions, see page 83.

STANDARD BELT CONVEYOR COMBINATION STAND.

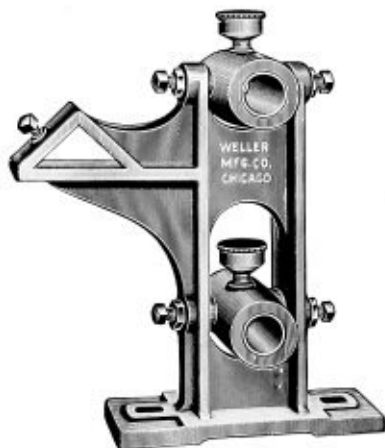


Fig. 30.

This Stand is furnished with any desired style of oscillating bearings for the carrier and idler roll shafts and bracket for cross bar upon which are mounted the angle troughing rolls.

Price each, with plain or self oiling bearings\$5.00

For dimensions see page 83.



Fig. 31.

BELT CONVEYOR ROLL STAND

We make this Stand with plain, self oiling, ring oiling or roller bearings and are prepared to furnish it in the heights given below from standard patterns. Other heights will be furnished to order.

PRICE LIST AND DIMENSIONS. With Plain or Self Oiling Bearings.

Height to Center of Bearing, Inches.	Price, Each.	Length of Base, Inches.	Width of Base, Inches.	Center of Bolt Holes in Base, Inches.	Size of Bolt, Inches.
3	\$1.10	8	3½	5½	½
4	1.20	8	3½	5½	½
6	1.30	8	3½	5½	½
9	1.40	8	3½	5½	½
12	1.50	8	3½	5½	½
14	1.60	8	3½	5½	½

BELT CONVEYOR ROLL JOURNAL BOXES



Fig. 32. Plain Oiling.



Fig. 32½. Self Oiling.

PRICE LIST AND DIMENSIONS. With Plain or Self Oiling Bearings.

Size, Inches.	Price.	Height to Center of Bearing, Inches.	Length of Base, Inches.	Width of Base, Inches.	Thickness of Base, Inches.	Center of Bolt Holes in Base, Inches.	Size of Bolt, Inches.
1/8	\$0.75	1	5½	2	7/16	4	3/8
1	.85	1	5½	2	7/16	4	3/8
1 3/16	1.00	1	5½	2	7/16	4	3/8

BELT CONVEYOR DROP HANGERS For Return Rolls



Fig. 33.

Furnished with plain, self oiling or ring oiling bearings.

PRICE LIST AND DIMENSIONS. With Plain and Self Oiling Bearings.

Drop to Center of Bearing, Inches.	Length of Base, Inches.	Width of Base, Inches.	Center of Bolt Holes in Base, Inches.	Size of Bolt, Inches.	Price, Each.
3	8	3 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	\$1.10
4	8	3 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	1.20
6	8	3 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	1.30
9	8	3 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	1.40
12	8	3 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	1.50
14	8	3 $\frac{1}{2}$	5 $\frac{1}{2}$	$\frac{1}{2}$	1.60

GUIDE SHEAVES FOR CONVEYOR BELTS

PRICE LIST.



Fig. 34.

Height Inches.	Price of Fig. 34 Adjustable.	Price of Fig. 35
4		\$2.25
6		2.75
9		3.00
12	\$5.25	3.30
14	5.50	3.60
16	6.00	3.90
18	6.50	4.25



Fig. 35.

RAIL CHAIRS



Fig. 36.

We are prepared to furnish Rail Chairs fitted to any of our Belt Conveyor Roll or Troughing Carrier Stands for any weight of Tripper Rail.

RING OILING BEARINGS FOR BELT CONVEYOR STANDS

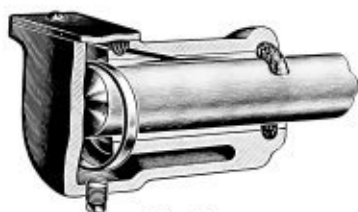


Fig. 37.

This illustration shows the construction of our Ring Oiling Bearing for belt conveyor stands.

It is interchangeable with our self oiling pattern and may be fitted to the same frames. The wick shown in the cut renders it practically dust-proof. Prices quoted upon application.

ROLLER BEARINGS FOR BELT CONVEYOR STANDS.



Fig. 38. Troughing Roll.



Fig. 39.
Roller Bearing.

We are prepared to furnish any style of belt conveyor stand or troughing rolls with Roller Bearings as illustrated above. These Bearings can be used to good advantage in many places, especially in connection with long belt conveyors as the friction and consequently the power required is reduced to a minimum.

PIPE FRAME TAKE-UP BOX

Style F



For heavy duty, we consider this Take-up Box one of the most desirable in the market especially where great length of adjustment is required.

We furnish this style in many modified forms to suit local conditions in various lengths of adjustment and fitted with any style of bearing. For extra heavy service, solid shafts may be substituted for the pipe guides and the other parts entering into its construction strengthened proportionately. The prices given below are for Take-ups fitted with ball and socket plain oiling bearings.

PRICE LIST.

1½-inch Pipe Guides.

Size of Bearing, Inches.	Length of Travel.				
	2 ft. 6 in.	3 ft.	3 ft. 6 in.	4 ft.	5 ft.
2 $\frac{3}{16}$	\$28.00	\$29.00	\$30.00	\$30.50	\$31.00
2 $\frac{7}{16}$	29.00	30.00	30.50	31.00	32.00
2 $\frac{1}{2}$	31.00	32.00	33.00	33.50	35.00

2-inch Pipe Guides.

Size of Bearing, Inches.	Length of Travel.				
	3 ft.	4 ft.	6 ft.	8 ft.	10 ft.
2 $\frac{7}{16}$	\$37.50	39.00	\$45.00	\$50.00	\$56.00
2 $\frac{1}{2}$	40.00	42.00	48.00	53.50	59.00
3 $\frac{1}{16}$	43.50	45.50	51.50	57.00	62.50
3 $\frac{1}{4}$	50.00	51.75	57.75	63.00	68.00

For dimensions see page 100.

"I" BEAM FRAME TAKE-UP BOX

Style "C"



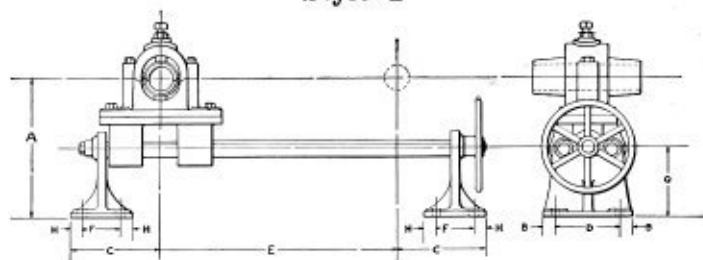
The above is a very popular design of Take-Up Box for belt and heavy chain conveyors. We are prepared to furnish it in any length of adjustment and fitted with rigid or ball and socket bearings of any desired type of oiler. The backing of the bearings in the dimensions given is for the ball and socket pattern. The prices given below are for Take-Ups fitted with ball and socket plain oiling bearings.

PRICE LIST.

Diameter of Shaft.	Length of Travel.					
	18 inches.	24 inches.	30 inches.	36 inches.	48 inches.	60 inches.
1 $\frac{1}{8}$	\$33.00	\$34.50	\$36.00	\$38.00	\$41.00	
2 $\frac{1}{8}$	34.00	36.00	38.00	41.00	44.00	
2 $\frac{3}{16}$	36.00	38.00	40.00	43.00	46.00	50.00
2 $\frac{1}{2}$		40.00	42.00	45.00	49.00	54.00
2 $\frac{3}{4}$		42.00	45.00	48.00	52.00	60.00
3 $\frac{1}{8}$				58.00	65.00	70.00

For Dimensions see page 100.

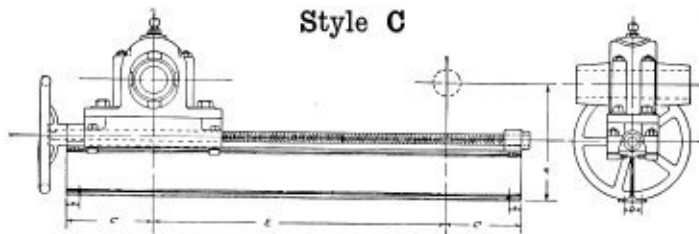
DIMENSIONS OF
PIPE FRAME TAKE-UP BOXES
 Style F



No.	Size of Shaft.	A	B	C	D	E	F	G	H	Bolts.	
										Size.	No.
1	2 $\frac{3}{16}$	12 $\frac{3}{8}$	1 $\frac{1}{2}$	8 $\frac{1}{2}$	6 $\frac{7}{16}$	24	3 $\frac{1}{2}$	7	1 $\frac{1}{16}$	1/2" x 8"	8
1	2 $\frac{1}{16}$	13	1 $\frac{1}{2}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	24	3 $\frac{1}{2}$	7	1 $\frac{1}{16}$		8
2	2 $\frac{1}{8}$	16 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{1}{2}$	7 $\frac{1}{2}$	48	4 $\frac{1}{2}$	8 $\frac{1}{2}$	1 $\frac{1}{16}$		8
2	3 $\frac{1}{16}$	17 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{1}{2}$	7 $\frac{1}{2}$	48	4 $\frac{1}{2}$	8 $\frac{1}{2}$	1 $\frac{1}{16}$		8

Adjustment (E) can be made any length desired.

DIMENSIONS OF
"I" BEAM FRAME TAKE-UP BOXES
 Style C



Size of I Beam.	Size of Shaft.	A	B	C	D	Length of Bearing.	Size of Bolts.	Number of Bolts.
4 in. - 7 $\frac{1}{2}$ lbs.	1 $\frac{1}{2}$	9 $\frac{1}{2}$	1 $\frac{1}{2}$	8 $\frac{7}{16}$	1 $\frac{1}{2}$	7 $\frac{1}{2}$	1/2" x 8"	4
4 in. - 7 $\frac{1}{2}$ lbs.	2 $\frac{3}{16}$	10 $\frac{3}{16}$	1 $\frac{1}{2}$	8 $\frac{7}{16}$	1 $\frac{1}{2}$	8 $\frac{1}{2}$		4
4 in. - 7 $\frac{1}{2}$ lbs.	2 $\frac{1}{16}$	10 $\frac{1}{16}$	1 $\frac{1}{2}$	8 $\frac{7}{16}$	1 $\frac{1}{2}$	9 $\frac{1}{2}$		4
4 in. - 7 $\frac{1}{2}$ lbs.	2 $\frac{1}{8}$	10 $\frac{1}{8}$	1 $\frac{1}{2}$	8 $\frac{7}{16}$	1 $\frac{1}{2}$	10 $\frac{1}{2}$		4
6 in. - 12 $\frac{1}{2}$ lbs.	2 $\frac{1}{8}$	13 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{3}{16}$	2	11 $\frac{1}{2}$		4
6 in. - 12 $\frac{1}{2}$ lbs.	3 $\frac{3}{16}$	13 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{3}{16}$	2	12 $\frac{1}{2}$		4
6 in. - 12 $\frac{1}{2}$ lbs.	3 $\frac{1}{8}$	14	1 $\frac{1}{2}$	10 $\frac{3}{16}$	2	13 $\frac{1}{2}$		4

Adjustment (E) can be made any length desired.

CHANNEL IRON FRAME TAKE-UP BOX Style E



We illustrate above our Channel Iron Frame Take-Up Box intended for heavy service. It is fitted with a special ball joint bearing which is made self oiling. Any length of adjustment furnished to order.

PRICE LIST.

Diameter of Shaft.	Length of Travel.					
	18"	24"	30"	36"	48"	60"
1 $\frac{1}{2}$ "	\$33.00	\$34.50	\$36.00	\$38.00	\$41.00	.....
2 $\frac{3}{16}$ "	34.00	36.00	38.00	41.00	44.00	.....
2 $\frac{1}{2}$ "	36.00	38.00	40.00	43.00	46.00	\$50.00
2 $\frac{3}{8}$"	.....	40.00	42.00	45.00	49.00	54.00
2 $\frac{1}{2}$"	.....	42.00	45.00	48.00	52.00	60.00
3 $\frac{1}{8}$"	.....	.....	.....	58.00	65.00	70.00

DIMENSIONS.



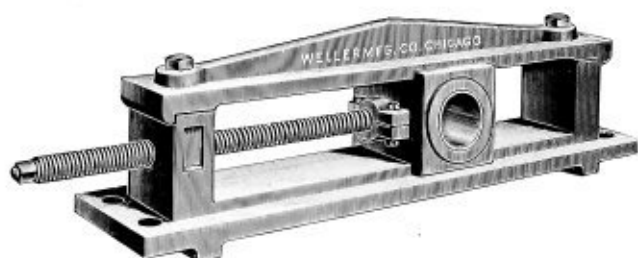
Size of Channel.	Size of Shaft.	A	B	C	D	F	G	H	Length of Bearing	Size of Foot Bolts.	No. of Foot Bolts.
5'-6 $\frac{1}{2}$ lbs.	2 $\frac{3}{16}$ "	14	1 $\frac{1}{2}$ "	13 $\frac{1}{2}$ "	4	6 $\frac{1}{2}$ "	8	1 $\frac{1}{2}$ "	9 $\frac{1}{2}$ "	1" x 3"	8
5'-6 $\frac{3}{4}$ lbs.	2 $\frac{1}{8}$ "	14	1 $\frac{1}{2}$ "	13 $\frac{1}{2}$ "	4	6 $\frac{1}{2}$ "	8	1 $\frac{1}{2}$ "	9 $\frac{1}{2}$ "	1" x 3"	8
6'-8 lbs.	2 $\frac{1}{8}$ "	15 $\frac{1}{2}$ "	1 $\frac{3}{8}$ "	14 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "	9	1 $\frac{3}{8}$ "	11 $\frac{1}{2}$ "	1" x 3"	8
6'-8 lbs.	2 $\frac{1}{4}$ "	15 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	14 $\frac{1}{2}$ "	4 $\frac{1}{2}$ "	7 $\frac{1}{2}$ "	9	1 $\frac{1}{2}$ "	11 $\frac{1}{2}$ "	1" x 3"	8
7'-9 $\frac{1}{2}$ lbs.	3 $\frac{1}{8}$ "	17	1 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	9	1 $\frac{3}{8}$ "	13 $\frac{1}{2}$ "	1" x 3"	8
7'-9 $\frac{3}{4}$ lbs.	3 $\frac{1}{8}$ "	17	1 $\frac{1}{2}$ "	16 $\frac{1}{2}$ "	6 $\frac{1}{2}$ "	8 $\frac{1}{2}$ "	9	1 $\frac{3}{8}$ "	13 $\frac{1}{2}$ "	1" x 3"	8

Adjustment (E) can be any length desired.

SPECIAL CAST IRON FRAME TAKE-UP BOX

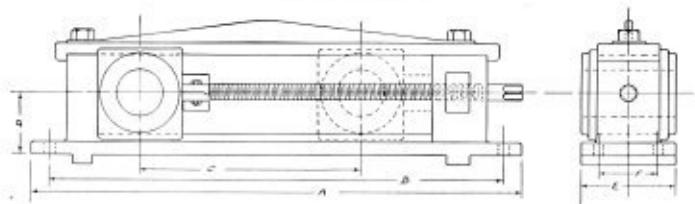
For Heavy Service

Style D



This Take-Up Box is used principally in connection with chain conveyors working under severe or irregular stresses, the frame being of extra heavy design and very rigid. We are prepared to furnish this style of Take-Up for the diameter of shafts and lengths of adjustment given below:

DIMENSIONS.



PRICE LIST AND DIMENSIONS.

Size of Shaft.	Price.	Length of Be'r'g	A	B	C	D	E	F	Size of Bolt.	No. of Bolts.
1 $\frac{1}{16}$ -2 $\frac{1}{16}$	\$30.00	5	21	19	12	3	5	3	3 $\frac{1}{4}$	4
1 $\frac{3}{16}$ -2 $\frac{3}{16}$	35.00	5	33	31	24	3	5	3	3 $\frac{1}{4}$	4
2 $\frac{1}{16}$ -2 $\frac{1}{16}$	40.00	6	27	24	12	3 $\frac{1}{2}$	6	4	3 $\frac{1}{4}$	4
2 $\frac{3}{16}$ -2 $\frac{3}{16}$	46.00	6	39	36	24	3 $\frac{1}{2}$	5	3	3 $\frac{1}{4}$	4
2 $\frac{1}{16}$ -3 $\frac{1}{16}$	59.00	6	32 $\frac{1}{2}$	30	15	4	6	3 $\frac{5}{8}$	3 $\frac{1}{4}$	4
2 $\frac{3}{16}$ -3 $\frac{1}{16}$	58.00	6	47	45	30	4	6	3 $\frac{1}{2}$	3 $\frac{1}{4}$	4
3 $\frac{1}{16}$ -3 $\frac{1}{16}$	64.00	7	34 $\frac{5}{8}$	32	15	4 $\frac{1}{2}$	7	4 $\frac{1}{8}$	1	4
3 $\frac{3}{16}$ -3 $\frac{1}{16}$	78.00	7	49 $\frac{5}{8}$	46 $\frac{5}{8}$	30	4 $\frac{1}{2}$	7	4 $\frac{1}{8}$	1	4
3 $\frac{1}{16}$ -4 $\frac{1}{16}$	80.00	8	27 $\frac{5}{8}$	30 $\frac{5}{8}$	18	5 $\frac{1}{8}$	8	5	1	4
3 $\frac{3}{16}$ -4 $\frac{1}{16}$	95.00	8	45 $\frac{5}{8}$	48 $\frac{5}{8}$	36	5 $\frac{1}{8}$	8	5	1	4
4 $\frac{1}{16}$ -4 $\frac{1}{16}$	100.00	9 $\frac{1}{2}$	31 $\frac{3}{8}$	27 $\frac{3}{8}$	18	5 $\frac{1}{2}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	1 $\frac{1}{2}$	4
4 $\frac{3}{16}$ -4 $\frac{1}{16}$	120.00	9 $\frac{1}{2}$	49 $\frac{3}{8}$	45 $\frac{3}{8}$	36	5 $\frac{1}{2}$	8 $\frac{1}{2}$	6 $\frac{1}{2}$	1 $\frac{1}{8}$	4

STANDARD TAKE-UP BOXES PRICE LIST.

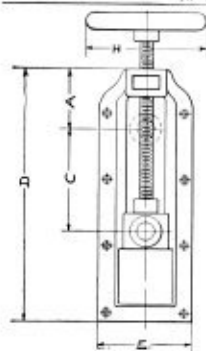


Style "A"

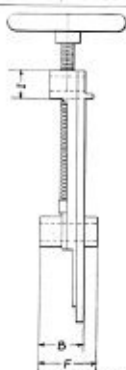
Diam. of Shaft, In.	Length of Adjustment.	Price each, A and B	D'm of Shaft, In.	Length of Adjustment.	Price each, A and B
$\frac{15}{16}$	6 Inches.	\$3.00	$2\frac{1}{16}$	18 Inches.	88.00
$\frac{1}{2}$	9 "	3.30	$2\frac{1}{8}$	12 "	8.50
$1\frac{1}{16}$	6 "	3.35	$2\frac{1}{4}$	24 "	9.75
$1\frac{1}{8}$	9 "	3.60	$3\frac{1}{16}$	14 "	10.00
$1\frac{1}{4}$	8 "	3.80	$3\frac{1}{8}$	28 "	12.00
$1\frac{3}{8}$	11 "	4.25	$3\frac{1}{4}$	14 "	13.50
$1\frac{1}{2}$	8 "	4.25	$3\frac{3}{8}$	28 "	15.50
$1\frac{5}{8}$	11 "	4.60	$3\frac{1}{2}$	15 "	16.00
$1\frac{3}{4}$	11 "	5.25	$3\frac{5}{8}$	30 "	18.50
$1\frac{7}{8}$	15 "	5.75	$3\frac{3}{4}$	15 "	19.50
$2\frac{1}{16}$	11 "	6.00	$3\frac{7}{8}$	30 "	23.00
$2\frac{1}{8}$	15 "	6.50	$4\frac{1}{16}$	20 "	25.00
$2\frac{1}{4}$	12 "	6.80	$4\frac{1}{8}$	40 "	32.00
$2\frac{3}{8}$	18 "	7.25	$4\frac{1}{4}$	20 "	34.50
$2\frac{1}{2}$	12 "	7.60	$4\frac{3}{8}$	40 "	44.00



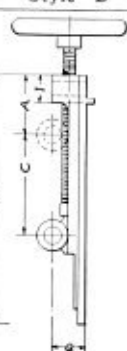
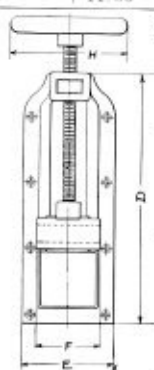
Style "B"



Style "A"



DIMENSIONS.



Style "B"

Dia. of Shaft	A	B	C	D	E	F	G	H	I
1	5	$2\frac{1}{16}$	$\frac{3}{8}$ 6	15	$5\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{8}$	6	$1\frac{1}{2}$
$1\frac{1}{16}$	5	$3\frac{1}{16}$	$\frac{3}{8}$ 6	15	$5\frac{1}{2}$	$4\frac{1}{4}$	$2\frac{1}{8}$	6	$1\frac{1}{2}$
$1\frac{1}{8}$	$5\frac{1}{2}$	$3\frac{1}{2}$	$\frac{3}{8}$ 8	$17\frac{3}{4}$	$5\frac{1}{2}$	5	$2\frac{1}{4}$	7	$2\frac{1}{4}$
$1\frac{1}{4}$	$5\frac{1}{2}$	$3\frac{1}{2}$	$\frac{3}{8}$ 11	$20\frac{3}{4}$	$5\frac{1}{2}$	5	$2\frac{1}{4}$	7	$2\frac{1}{4}$
$1\frac{3}{8}$	6	$4\frac{1}{2}$	$\frac{3}{8}$ 11	$17\frac{3}{4}$	$5\frac{1}{2}$	6	$3\frac{1}{4}$	8	$2\frac{1}{4}$
$1\frac{1}{2}$	6	$4\frac{1}{2}$	$\frac{3}{8}$ 15	$27\frac{1}{4}$	$7\frac{1}{2}$	6	$3\frac{1}{4}$	8	$2\frac{1}{4}$
$2\frac{1}{16}$	6	$4\frac{1}{2}$	$\frac{3}{8}$ 11	$23\frac{1}{4}$	$7\frac{1}{2}$	6	$3\frac{3}{4}$	8	$2\frac{1}{4}$
$2\frac{1}{8}$	$6\frac{1}{4}$	$4\frac{1}{2}$	$\frac{3}{8}$ 15	$27\frac{1}{4}$	8	6	$4\frac{1}{4}$	9	$2\frac{3}{8}$
$2\frac{1}{4}$	$6\frac{1}{2}$	$4\frac{1}{2}$	$\frac{3}{8}$ 12	$23\frac{1}{4}$	8	6	$4\frac{1}{4}$	9	$2\frac{3}{8}$
$2\frac{3}{8}$	$6\frac{1}{2}$	$4\frac{1}{2}$	$\frac{3}{8}$ 18	$29\frac{1}{4}$	8	6	$4\frac{1}{4}$	9	$2\frac{3}{8}$
$2\frac{1}{2}$	$6\frac{3}{4}$	6	$\frac{3}{8}$ 12	26	$8\frac{1}{2}$	$6\frac{1}{2}$	$5\frac{1}{2}$	11	$2\frac{3}{4}$
$3\frac{1}{16}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$\frac{3}{8}$ 24	$37\frac{1}{4}$	$8\frac{3}{4}$	$6\frac{1}{2}$	$5\frac{1}{2}$	11	$2\frac{3}{4}$
$3\frac{1}{8}$	9 $\frac{1}{2}$	$6\frac{1}{2}$	$\frac{3}{8}$ 24	$37\frac{1}{4}$	9 $\frac{1}{2}$	$7\frac{1}{2}$	$6\frac{1}{4}$	12 $\frac{1}{2}$	$2\frac{3}{4}$

SPECIAL RUBBER BELTING FOR CONVEYORS.

“Carrier” Brand.

FOR HANDLING ORES, COAL, ROCK, CEMENT CLINKER, SAND, ETC.



Fig. 40.

Our “Carrier” Rubber Belting is made expressly for handling material of an abrasive character where the requirements are too severe for a Conveyor Belt of ordinary construction. The carrying surface of this Belt is made with an extra heavy rubber cover, one-sixteenth and one-eighth of an inch being the thickness generally used.

The cover is vulcanized to best stand the wear of the particular material to be conveyed. When ordering it is therefore necessary to state the kind of material to be handled.

Prices quoted upon application.

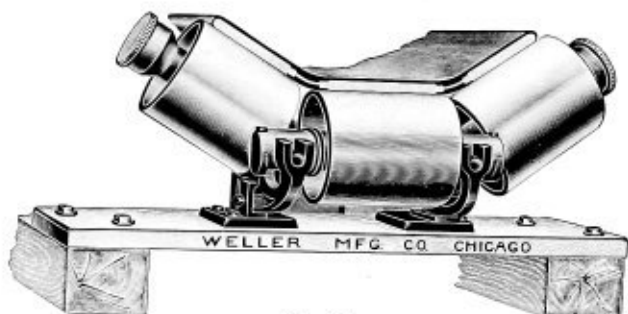
HINGE EDGE CONVEYOR BELT.

Fig. 41.

The advantages of this Belt will be realized at a glance by those who have had experience in operating Belt Conveyors.

Where the bend comes a large part of the rigid unbending plies of cotton duck are replaced by soft, flexible rubber, with the effect that the Belt can be flexed at the points any number of times without destroying it. It is stiff, strong and rigid where it ought to be, and flexible where it has to be. It troughs naturally, thus minimizing wear and tear. It takes a full face contact on carrying pulleys eliminating slip and scour. It operates with minimum tension, and wear and tear is almost directly in proportion to tension. With the Hinge Edge Belt the destructive effect of the angular bending is reduced to a minimum. Prices quoted upon application.

SPECIAL BELT CONVEYOR HEAD PULLEYS

Plain and Rubber Covered



Fig. 42.

Our Conveyor Head Pulleys are machine moulded from heavy double belt patterns and are provided with single, double and triple sets of arms according to the width of face.

For Conveyors of any considerable length, we recommend that the Pulleys be rubber covered which increases their driving efficiency and to a great extent overcomes the tendency of the belt to slip, especially when starting up.

Rubber belt of good quality is used for this purpose secured to the rim of the pulley by means of large flat-head bolts.

PRICE LIST.

Diameter of Pulley, inches.	Width of Conveyor Belt, inches.	10	12	14	16	18	20	24
	Width, Face of Pulley, inches.	13	15	17	19	21	23	27
12	Plain face	\$ 7 80	\$ 9 15	\$10 65	\$12 50	\$14 15	\$16 00	\$18 15
	Rubber covered	16 60	19 30	22 15	25 00	28 00	31 00	35 70
14	Plain face	8 70	10 00	11 50	13 00	14 75	17 25	19 80
	Rubber covered	18 70	21 25	24 00	26 60	29 90	33 65	39 00
16	Plain face	9 50	10 65	12 50	14 25	16 20	19 00	22 00
	Rubber covered	20 50	23 00	26 30	29 00	32 20	36 80	43 00
18	Plain face	10 60	12 50	14 40	17 25	19 40	22 70	24 80
	Rubber covered	22 90	26 20	29 50	33 40	37 40	42 15	47 50
20	Plain face	11 30	14 00	16 20	18 70	21 25	25 20	28 50
	Rubber covered	24 50	28 75	32 40	36 00	40 50	46 20	52 80
24	Plain face	15 10	17 50	20 00	22 70	25 50	32 75	37 40
	Rubber covered	29 75	34 00	38 25	42 20	47 00	56 50	64 75
30	Plain face	20 30	23 40	24 50	26 00	31 80	37 00	42 30
	Rubber covered	37 00	42 50	45 80	49 00	56 60	64 75	74 40
36	Plain face	24 30	28 60	30 40	35 00	39 50	45 00	52 60
	Rubber covered	43 50	50 30	54 90	61 30	67 70	76 80	89 40

Diameter of Pulley, inches.	Width of Conveyor Belt, inches.	28	30	32	36	40	42
	Width, Face of Pulley, inches.	31	33	35	39	43	45
12	Plain face	\$20 35	\$24 50	\$26 65	\$30 00	\$33 20	\$35 30
	Rubber covered	40 00	45 65	49 00	54 50	60 00	64 00
14	Plain face	23 00	26 30	30 00	32 40	35 70	37 80
	Rubber covered	44 50	49 40	54 55	59 10	65 20	69 00
16	Plain face	24 80	28 00	31 50	33 90	36 40	40 30
	Rubber covered	48 00	52 09	58 10	63 00	68 65	74 10
18	Plain face	28 00	31 00	33 10	35 60	38 20	42 00
	Rubber covered	53 75	58 00	62 00	67 50	73 00	78 70
20	Plain face	33 00	35 70	38 10	44 25	45 00	53 60
	Rubber covered	60 60	64 95	69 00	78 50	82 40	93 00
24	Plain face	41 75	43 20	46 60	50 00	60 00	68 00
	Rubber covered	72 75	76 00	80 75	88 30	102 00	112 00
30	Plain face	47 00	55 00	61 25	71 80	79 40	88 40
	Rubber covered	83 30	93 50	105 00	116 50	128 50	140 00
36	Plain face	58 00	68 25	78 30	86 25	93 75	100 00
	Rubber covered	100 00	112 50	125 00	137 50	150 00	160 00

WELLER COLD ROLLED SECTIONAL FLIGHT SPIRAL CONVEYOR.



After nearly twenty years' experience in the manufacture of Spiral Conveyor of various styles, we have finally decided upon adopting for our standard, the Cold Rolled Sectional Flight Conveyor and now make it to the exclusion of all other types.

The flights of our conveyor are rolled to form cold, instead of being heated and formed in dies, the latter method having a tendency to soften the steel and weaken the flights.

The latter are riveted together by special riveting machines of our own design and are securely attached to the pipe by means of strong wrought lugs at frequent intervals, which also serve to brace the flights.

Sectional Flight Conveyor is comparatively simple and inexpensive to repair, it only being necessary to cut off the rivet heads and remove the damaged flights, replacing them with new, which are made interchangeable. The ease with which repairs may be accomplished, has been chiefly responsible for the popularity of Sectional Flight Conveyor, which is now specified almost exclusively where the service required is of a severe character, such as in cement plants, cotton oil mills, sugar refineries, glucose works, tanneries, etc.

The workmanship and material entering into the construction of our Conveyor and its accessories are of the best and we offer it to the trade with the broad claim that all features considered, it is without exception, the best Conveyor ever offered on the market.

Our Conveyor is interchangeable with all Standard makes.

STANDARD WELLER SPIRAL STEEL CONVEYOR



PRICE LIST.

Standard Gauge of Flights and Regular Diameter of Pipe.

Diarn. Inches.	Price, per foot, Standard Steel.	Price, per foot, Gal- vanized Steel.	Standard Lengths, feet.	Inside Diameter Hollow Shaft, Inches.	Diameter of Couplings in Inches.	Maximum Capacity per Hour, Bushels.	Recommended Revolutions per Minute.
4	\$1.00	\$1.28	8	1	1	100	220
6	1.67	2.03	10	1½	1½	300	200
9	2.00	2.68	10	1½	1½	1,000	175
12	2.80	3.48	12	2	2	2,000	150
16 on 2	3.75	4.83	12	2	2	5,000	130
16 on 3	5.08	6.38	12	3	3	5,000	130
18	6.15	7.79	12	3	3	6,000	120

The Standard Lengths as given above include the Width of one Hanger Bearing.

The above price list includes the curved steel linings, one hanger and one coupling with bolts for each standard length of Conveyor.

When lengths shorter than standard are ordered, no fittings will be furnished, unless so specified, for which an extra charge will be made. A deduction will be made for fittings not required with standard lengths of Conveyor.

As a rule, a cast iron box end or pillow block is used at the driving end of the Conveyor, but if it is desired to use a regular conveyor hanger for this purpose, an extra one should be ordered, which will be charged for at regular prices.

In ordering Conveyors, always be particular to state whether Right or Left Hand is required. (See diagram page 109).

For Conveyor mounted on extra heavy pipe see additional cost, page 116.

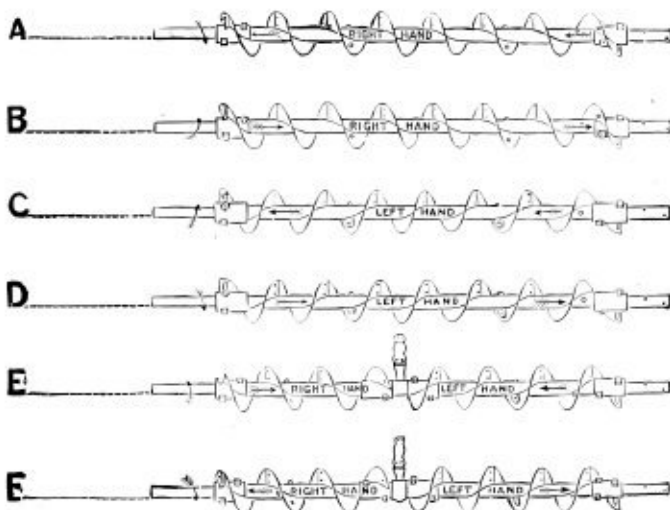
DIRECTIONS FOR ORDERING SPIRAL CONVEYOR

We print below diagrams of right and left hand Conveyors; also conveying both right hand and left hand.

In ordering, send sketch similar to the diagram given below, so that no mistakes may occur.

Conveyor driven by belts will convey either way by crossing the belt. Changing a Conveyor, end for end, does not change from right hand to left hand. In ordering, be sure to give length and diameter of driving ends.

The arrows indicate which way the Conveyor turns and which way the material is carried.



Order Blanks furnished upon application.

WELLER HEAVY SPIRAL STEEL CONVEYOR

PRICE LIST.

Outside Diameter in Inches.	Price per Foot.	Standard Length, in Feet.	Thickness of Steel Flights, in Inches.	Inside Diameter of Hollow Shaft in Inches.
4	\$1.50	8	$\frac{1}{8}$	1
4	2.50	8	$\frac{1}{4}$	1
6	2.35	10	$\frac{1}{8}$	$1\frac{1}{2}$
6	2.75	10	$\frac{3}{16}$	$1\frac{1}{2}$
6	3.00	10	$\frac{1}{4}$	$1\frac{1}{2}$
9	3.00	10	$\frac{1}{8}$	$1\frac{1}{2}$
9	3.65	10	$\frac{1}{4}$	2
9	3.90	10	$\frac{3}{16}$	$1\frac{1}{2}$
9	4.40	10	$\frac{1}{4}$	2
9	4.40	10	$\frac{1}{4}$	$1\frac{1}{2}$
9	4.90	10	$\frac{3}{8}$	2
9	6.20	10	$\frac{1}{2}$	2
12	4.80	12	$\frac{3}{16}$	2
12	5.65	12	$\frac{1}{4}$	3
12	5.70	12	$\frac{1}{4}$	2
12	6.55	12	$\frac{3}{8}$	3
12	9.00	12	$\frac{1}{2}$	3
16	7.50	12	$\frac{3}{16}$	3
16	8.50	12	$\frac{1}{4}$	3
18	12.50	12	$\frac{3}{16}$	3
18	20.00	12	$\frac{1}{2}$	3

The above prices are for regular thickness of hollow shaft and include one hanger and coupling with the necessary bolts, with each standard length, but no lining.

When lengths of Conveyor shorter than standard are ordered, no fittings will be furnished, unless specified, for which an extra charge will be made.

For additional cost if mounted on extra heavy pipe, see page 116.

We are also prepared to furnish Conveyor flights mounted on solid shafts. Prices quoted on receipt of specifications.

CONVEYORS OF BRASS AND COPPER.

We are prepared to make Conveyors of brass and copper for use in acids, wet tanbark, tartar works, etc.

Prices quoted upon application.

SPECIAL CONVEYOR APPLIANCES.

We have many patterns and dies for making Special Conveyor Appliances that it is not practical for us to list or illustrate in this catalogue. State requirements and we will be pleased to submit quotations.

ODD SIZES OF SPIRAL STEEL CONVEYOR**Standard Gauge of Flights and Regular Diameter of Pipe**

We do not carry odd sizes of Conveyor in stock, but have facilities that enable us to make them on short notice.

PRICE LIST.

Diam. Inches.	Price, per Foot, Black.	Price, per Foot, Galvanized.	Standard Lengths, Feet.	Diameter, of Couplings, Inches.	Inside Diameter of Hollow Shaft, Inches	Maximum Capacity per Hour, Bushels.	Recommended Revolutions per Minute.
3	\$1.00	\$1.28	8	$\frac{3}{4}$	$\frac{3}{4}$	60	250
5	1.67	2.03	8	$1\frac{1}{2}$	$1\frac{1}{2}$	200	210
7	2.00	2.68	10	$1\frac{1}{2}$	$1\frac{1}{2}$	550	190
8	2.00	2.68	10	$1\frac{1}{2}$	$1\frac{1}{2}$	780	180
10	2.80	3.48	10	$1\frac{1}{2}$	$1\frac{1}{2}$	1,400	160
14	3.75	4.83	12	2	2	3,400	140

The fittings specified in our price lists of standard sizes are included in the above prices.

CUT FLIGHT SPIRAL CONVEYOR

Fig. 43.

When it is desired to remove dirt, sand and grit from corn, oats, cotton seed and other materials our Cut Flight Conveyor can be used to good advantage in connection with perforated lining. A number of lengths in a line of regular Conveyor, where the material handled is of a damp character and given to packing or caking, is also to be recommended.

**CUT FLIGHT SPIRAL CONVEYOR
With Mixing Paddles**

Fig. 44.

For thoroughly mixing material passing through a short line of Conveyor, the above will be found more efficient than either the plain Conveyor with mixing paddles or the cut flight Conveyor shown above.

CUT AND FOLDED FLIGHT SPIRAL CONVEYOR.

Fig. 45.

The above cut shows another form of Spiral Conveyor for mixing purposes. It also acts as a dryer.

SPIRAL CONVEYOR WITH MIXING PADDLES.

Fig. 46.

When it is desired to mix several kinds or grades of material this may be accomplished in a most thorough manner by the use of Spiral Conveyor with mixing paddles inserted between the flights as shown in above cut.

By setting these paddles in opposite direction to the pitch of conveyor flights the material is thrown back. The combined action of the flights and paddles mixes the material.

DOUBLE-FLIGHT SPIRAL CONVEYOR

Fig. 47.

Where the work required is of a heavy character, subjecting the Conveyor to an unusual strain, and it is not desirable to use heavy flights with thick edges, we recommend Double Flight Conveyor.

Ribbon Conveyor.

Fig. 48.

For handling semi-liquid or sticky materials this style of Conveyor has proven very satisfactory.

Prices of the above styles of Conveyor quoted upon application.

WELLER CAST IRON CONVEYOR.

On Solid Steel Shaft.



Fig. 49.

We make several sizes of Cast Iron Conveyor, from 9 inches to 18 inches in diameter.

The flights are all mounted on heavy solid steel shafts, from 2 inches to 3½ inches square, according to size



Fig. 50.

Cast Iron Conveyor is intended only for extremely heavy service, such as conveying coal, ores, stone, sand, phosphate rock, slag, etc.



Fig. 51.
Style of Coupling Employed.

We illustrate above the style of coupling employed. After the bolts are removed the coupling may be slipped back into the end segment of the Conveyor and any section removed without disturbing the balance of the line.

Prices quoted upon application.

WELLER COLD ROLLED CONVEYOR FLIGHTS For Repairs

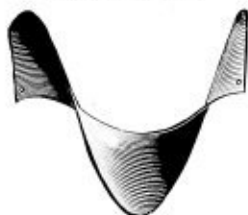


Fig. 52.

Our Flights may be used in repairing the Weller or any other Conveyor of standard manufacture, provided the outside diameter of the pipe and pitch of the flights correspond with our standard.

In ordering Flights for repairs be particular to state the inside or outside diameters of pipe, pitch of screw and whether right or left hand. If Flights are intended for the end of a section of Conveyor, special mention should be made of this as these Flights have proper space cut out to go over the end collar on the pipe. The following prices include necessary rivets and lug fastenings.

Weller Standard Gauge Conveyor Flights PRICE LIST.

Diameter of Conveyor, in Inches.	Outside Diameter of Pipe, in Inches.	Standard Pitch of Flight, in Inches.	Space on Pipe Covered by One Flight, in Inches.	Price, Each.
4 on 1 in. pipe	1 $\frac{1}{2}$	4 $\frac{1}{2}$	5	\$0.20
6 " 1 $\frac{1}{2}$ " "	1 $\frac{13}{16}$	6	6 $\frac{1}{2}$	.30
9 " 1 $\frac{1}{2}$ " "	1 $\frac{11}{16}$	9 $\frac{1}{4}$	11 $\frac{1}{2}$	.45
12 " 2 " "	2 $\frac{1}{16}$	12	14	.75
16 " 2 " "	2 $\frac{1}{16}$	14	15 $\frac{1}{2}$	1.20
16 " 3 " "	3 $\frac{1}{2}$	16	17 $\frac{1}{2}$	1.35
18 " 3 " "	3 $\frac{1}{2}$	18	22	2.25

Extra Heavy Flights PRICE LIST.

Diameter Conveyor Inches.	THICKNESS OF FLIGHT					
	Price $\frac{1}{8}$ -Inch.	Price $\frac{3}{16}$ -Inch.	Price $\frac{1}{2}$ -Inch.	Price $\frac{5}{8}$ -Inch.	Price $\frac{3}{4}$ -Inch.	Price $\frac{7}{8}$ -Inch.
4	\$0.30	\$0.50	\$0.75			
6	.40	.60	1.00	\$1.25	\$1.50	
9	.65	1.00	1.50	2.00	2.50	\$3.75
12	1.00	1.50	2.20	2.80	3.25	4.50
14	1.50	2.25	3.10	3.90	4.50	5.00
15	1.75	2.65	3.65	4.55	5.25	6.50
16	2.00	3.25	4.00	4.90	5.75	7.50
18	2.25	3.50	5.25	6.00	7.70	10.00

SPIRAL CONVEYOR PLAIN BOX LINING



Fig. 53.

With our Standard Conveyor we furnish the necessary curved Steel Lining. It is made in sections, each piece being about 30 inches in length. When Linings are not required with Conveyor, a deduction is made.

Standard Gauge Plain Lining

PRICE LIST.

Diameter of Conveyor, Inches.	Price per Lineal Foot.	Gauge of Steel.	Width of Sheet, Inches.	Standard Length of Sheet, Inches.
4	\$0.05	24	8	30
6	.06	24	12	30
8	.10	22	16	30
9	.10	22	16	30
10	.12	22	16	30
12	.13	20	24	30
14	.21	18	24	30
16	.23	18	32	30
18	.31	18	32	30

Extra Heavy Plain Lining

PRICE LIST.

Diameter of Conveyor, Inches.	Width of Sheet, Inches.	Gauge of Steel.								
		20	18	16	14	12	10	8	$\frac{3}{16}$	$\frac{1}{4}$
4	8½	\$0.06	\$0.08	\$0.11	.....	.....	.....	.....	.....	.....
4	10	.07	.09	.13	.....	.....	.....	.....	.....	.....
6	11½	.08	.10	.14	\$0.18	.....	.....	.....	.....	.....
6	14	.09	.12	.17	.20	.....	.....	.....	.....	.....
8	16	.....	.14	.17	.22	\$0.32	.....	.....	.....	.....
9	16	.....	.14	.17	.22	.32	.....	.....	.....	.....
8	18	.....	.16	.19	.25	.35	.....	.....	.....	.....
9	18	.....	.16	.19	.25	.35	.....	.....	.....	.....
10	18	.....	.16	.19	.25	.35	.....	.....	.....	.....
8	20	.....	.17	.22	.27	.40	\$0.50	.....	.....	.....
9	20	.....	.17	.22	.27	.40	.50	.....	.....	.....
10	20	.....	.17	.22	.27	.40	.50	.....	.....	.....
12	20	.....	.17	.22	.27	.40	.50	.....	.....	.....
10	24	.....	.....	.26	.32	.47	.60	.....	.....	.....
12	24	.....	.....	.26	.32	.47	.60	.....	.....	.....
14	24	.....	.....	.26	.32	.47	.60	.....	.....	.....
14	27	.....	.....	.29	.36	.50	.68	.....	.....	.....
16	27	.....	.....	.29	.36	.50	.68	\$0.85	\$0.95	\$1.25
16	30	.....	.....	.32	.40	.56	.75	.95	1.10	1.40
16	36	.....	.....	.38	.48	.70	.95	1.15	1.30	1.70
18	36	.....	.....	.38	.48	.70	.95	1.15	1.30	1.70
16	42	.....	.....	.....	.56	.80	1.05	1.35	1.50	2.00
18	42	.....	.....	.....	.56	.80	1.05	1.35	1.50	2.00
16	48	.....	.....	.....	.64	.90	1.20	1.55	1.70	2.25

SPIRAL CONVEYOR PERFORATED BOX LININGS

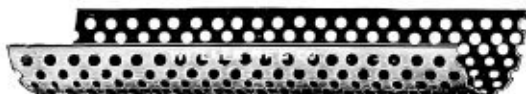


Fig. 54.

When ordering Perforated Linings, give gauge of metal, size and style of perforation, and state for what diameter of Conveyor it is intended. Prices quoted upon application.

WELER SPIRAL CONVEYOR COUPLING INTERCHANGEABLE WITH OTHERS OF STANDARD MANUFACTURE.

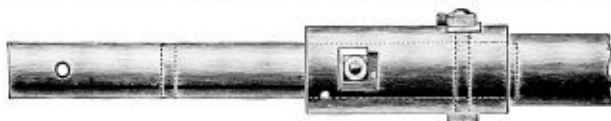


Fig. 55.

PRICE LIST.

Diameter of Conveyor	Diameter of Coupling.	Price.
4	1	\$0.50
6	1	.75
8	1	.75
9	1	.75
10	1	.75
12	2	1.50
14	2	1.50
16	2	2.00
16	3	2.50
18	3	2.50

Conveyor Mounted on Extra Heavy Pipe

When Conveyor is required mounted on extra heavy or pipe of larger diameter than standard, an additional charge is made. We give below the prices to be added to the net cost of different sizes of conveyor. This list does not supersede, however, the regular list prices of Conveyor where given mounted on more than one diameter of pipe.

For 1-inch	X	add \$0.20 per foot over price of 1-inch regular.
" 1½ "	X	" .30 " " " " " 1½ " "
" 2 "	X	" .50 " " " " " 2 " "
" 2½ " regular	"	" .50 " " " " " 2½ " "
" 2½ " X	"	" 1.30 " " " " " 2½ " "
" 3 " regular	"	" .70 " " " " " 3 " "
" 3 " X	"	" 1.20 " " " " " 3 " "
" 3½ "	X	" .70 " " " " " 3½ " "

CONVEYOR DRIVING ENDS

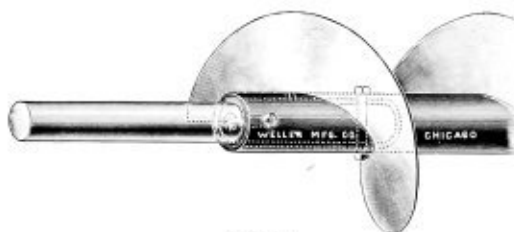


Fig. 56.

The exact standard diameters of Driving Ends are as follows:

Diameter of Conveyor, 4 in. 6 in. 9 in. 12 in. 16 on 2 in. 16 on 3 in. 18 in.
 Diameter of Drive End, 1 in. 1½ in. 1¾ in. 2 in. 2 in. 3 in. 3 in.

Where Driving Ends are of less diameter than standard, we use shaft of standard diameter and turn the projecting portion. Where Driving Ends are greater diameter than standard, we use shaft the diameter of projecting portion and turn about six inches to go into Conveyor.

For odd-size Driving Ends, we charge for shaft used and labor in cutting off, turning, drilling and fitting same. We are prepared to do this work at minimum cost with special tools.

Using Drive Ends of greater diameter than our standard, does not increase the strength of the Conveyor, because all couplings and the part of the Drive End inside of the pipe are the same diameter and strength.

PRICE LIST OF STANDARD DRIVING ENDS.

Projection from Pipe, Inches.	Diameter, 1 Inch.	Diameter, 1½ Inch.	Diameter, 2 Inches.	Diameter, 2½ Inches.	Diameter, 3 Inches.
6	\$0.50	\$0.83	\$1.40	\$1.87	\$2.54
8	.66	1.11	1.86	2.50	3.38
10	.83	1.39	2.33	3.12	4.23
12	1.00	1.65	2.75	3.75	5.05
14	1.10	1.80	3.00	4.10	5.60
16	1.20	1.95	3.25	4.45	6.15
18	1.30	2.10	3.50	4.80	6.70
20	1.40	2.25	3.75	5.15	7.25
22	1.50	2.40	4.00	5.50	7.80
24	1.60	2.55	4.25	5.85	8.35
26	1.70	2.70	4.50	6.20	8.90
28	1.80	2.85	4.75	6.55	9.45
30	1.90	3.00	5.00	6.90	10.00
32	2.00	3.15	5.25	7.25	10.55
34	2.10	3.30	5.50	7.60	11.10
36	2.20	3.45	5.75	7.95	11.65
42	2.50	3.90	6.50	9.00	13.30
48	2.80	4.35	7.25	10.05	14.95

STANDARD SPIRAL CONVEYOR HANGERS



T Hanger. Fig. 57.

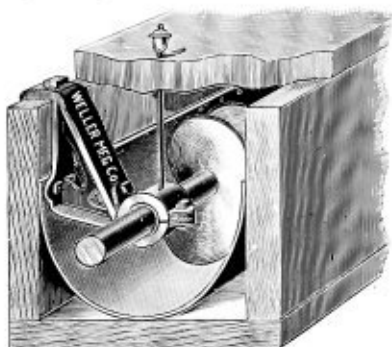
We illustrate herewith the styles of hangers we furnish with all orders for Conveyor, without extra charge.

This style of Hanger (Fig. 57) is furnished on all regular orders for Conveyor, unless otherwise specified, up to and including 18 inches in diameter. It has babbitted bearing and oil hole from top.



Brace Hanger. Fig. 58.

This style of Hanger is furnished when so specified with Conveyor 12, 14, 16 and 18 inches in diameter. It is especially adapted for heavy work.



Side Hanger. Fig. 59.

This style of Hanger is made for 6, 9 and 12 inch Conveyor.

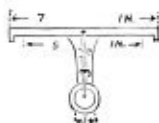
PRICE LIST.

Diameter of Conveyor, Inches.	Diameter of Bearing, Inches.	Price Fig. 57-58-59.	Diameter of Conveyor, Inches.	Diameter of Bearing, Inches.	Price Fig. 57-58-59.
4	1	\$0.25	12	2 ⁷ / ₁₆	\$1.50
6	1 ¹ / ₁₆	.40	12	3	1.75
8	1 ¹ / ₁₆	.55	14	2	2.00
9	1 ¹ / ₁₆	.55	14	2 ⁷ / ₁₆	2.25
9	2	.75	16 on 2	2	2.50
10	1 ¹ / ₁₆	1.10	16 on 3	3	3.00
10	2	1.25	18	3	3.50
12	2	1.25			

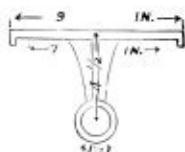
For Dimensions see page 119.

STANDARD SPIRAL CONVEYOR HANGERS

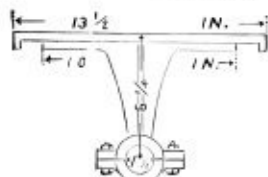
BELOW WE GIVE THE DIMENSIONS OF OUR STANDARD HANGERS.



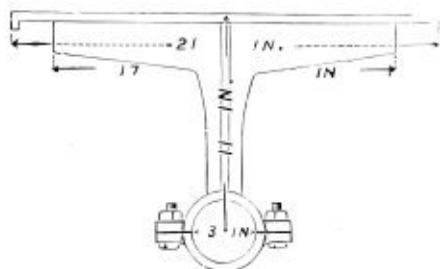
4-inch Hanger.



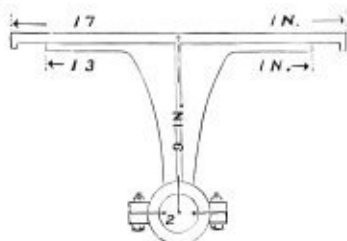
6-inch Hanger.



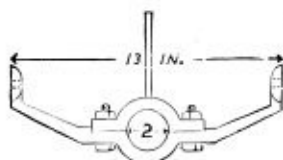
9-inch Hanger.



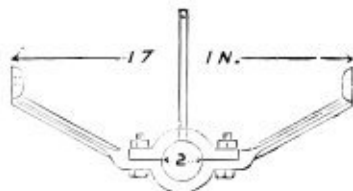
16-inch on 3-inch Pipe.



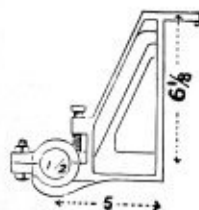
12-inch Hanger.



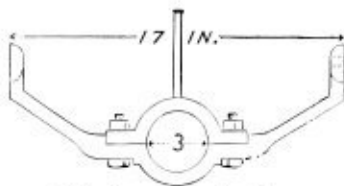
12-inch Hanger.



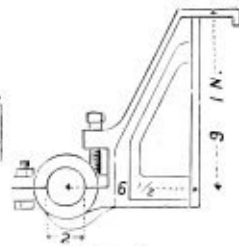
16-inch on 2-inch Pipe.



9-inch Hanger.



16-inch on 3-inch Pipe.



12-inch Hanger.

SPECIAL CHILLED BEARING CONVEYOR HANGERS.

Bushed Hanger.



Fig. 60.

This Hanger was designed expressly for handling cement and like abrasive materials. It is furnished with a chilled white iron bushing which is keyed to the conveyor coupling, the wear being upon the former instead of the latter. The bearing is also of chilled iron and when worn, both it and the bushing may be replaced at moderate cost.

Reversible Bearing Hanger.



Fig. 61.

This Hanger is of the chilled bearing type and like the Hanger described above, is intended for handling abrasive materials.

It possesses the advantage of having a split bearing, the parts of which may be reversed when one becomes worn.

Wrought Frame Hanger.



Fig. 62.

Made with wrought iron forged frame and provided with either chilled cast iron or babbitted bearings, this Hanger is intended for heavy duty.

It is a very desirable Hanger for large conveyors handling crushed stone, sand, cement, etc.

For price lists of the above Hangers see page 121.

ADJUSTABLE CONVEYOR HANGERS



Fig. 63.



Fig. 64.

The above Hangers are provided with vertical adjusting screws which are convenient in maintaining the alignment of the conveyor. We are prepared to furnish these Hangers at the prices quoted below, with or without conveyor, in the former case an allowance being made for the standard Hangers not required.

PRICE LIST.

Of Special Chilled and Adjustable Conveyor Hangers.

Diameter of Conveyor, In.	Diameter of Shaft, In.	Numbers on Hangers.				
		Fig. 60.	Fig. 61.	Fig. 62.	Fig. 63.	Fig. 64.
4	1½	.....	.....	\$1.50	.....	.....
6	1½	\$2.50	\$1.50	1.80	\$0.85	\$1.00
9	1½	3.00	1.65	2.00	1.00	1.25
9	2	3.20	1.80	2.25	1.25	1.40
10	1½	3.50	1.90	2.50	1.60	1.60
10	2	4.00	2.00	2.70	1.75	1.75
12	2	4.00	2.20	3.00	1.75	1.75
12	2⅞	4.25	2.30	3.25	2.00	2.00
12	3	4.50	2.55	3.50	2.25	2.25
14	2	5.00	3.00	4.00	2.50	2.50
16	2	5.50	3.70	4.50	3.00	3.00
16	3	6.00	4.00	5.00	3.50	3.50
18	3	10.00	6.00	7.00	4.00	4.50

SPECIAL SPIRAL CONVEYOR HANGERS

We illustrate several styles of Special Conveyor Hangers that we are prepared to furnish either with or without Conveyor at the prices given. When ordered with Conveyor, suitable deductions will be made for the standard Hangers not required.

Strap Split T Hanger



Fig. 65.

The cap furnished with this style of Hanger is held in position by means of a U-shaped rod which passes around it and up through the cross bar of the Hanger. The ends of the rod are threaded and are held in place by double nuts on each end. Its condition may be seen at a glance, and if it is necessary to tighten the cap, this can readily be done without shutting down the Conveyor.

PRICE LIST.

Diameter of Conveyor, Inches.	Diameter of Shaft, Inches.	Price.	Diameter of Conveyor, Inches.	Diameter of Shaft, Inches.	Price.
4	1	\$0.45	10	2	\$1.25
6	1½	.55	12	2	1.25
8	1½	.75	12	3	1.75
9	1½	.75	14	2	2.00
9	2	.90	16	2	2.50
10	1½	1.10	16	3	3.00
			18	3	4.00

Strap Chilled Bearing Hanger



Fig. 66.

PRICE LIST.

Diameter of Conveyor.	Price.
6 inch on 1½-inch pipe	\$1.80
9 " " 1½ " "	2.00
12 " " 2 " "	3.00
16 " " 2 " "	4.00
16 " " 3 " "	5.00
18 " " 3 " "	6.00

The above Hanger is furnished with bearing of chilled cast iron, which, when worn out, may be removed and replaced with others. It is intended for heavy Conveyor handling cement, crushed stone, gravel, phosphate rock, concrete, etc.

CAST IRON BOX ENDS FOR STEEL BOXES

For Spiral Conveyor

When Spiral Conveyor boxes are made of steel, Cast Iron End Bearings are generally used for both the drive and tail ends. We have patterns for the various sizes listed below.



Fig. 67.

PRICE LIST.

Diameter Conveyor, Inches.	Diameter Shaft, Inches.	Price.	Diameter Conveyor, Inches.	Diameter Shaft, Inches.	Price.
4	1	\$1.50	10	2	\$4.25
6	1½	2.00	12	2	6.00
8	1½	2.75	12	3	6.75
9	1½	3.00	14	2	7.50
9	2	3.25	16	2	9.00
10	1½	3.75	16	3	10.00
			18	3	12.00



Solid. Fig. 68.

CAST IRON BOX ENDS FOR WOODEN CONVEYOR BOXES



Split. Fig. 69.

PRICE LIST.

Diameter Conveyor, Inches.	Diameter Shaft, Inches.	PRICE		Diameter Conveyor, Inches.	Diameter Shaft, Inches.	PRICE	
		Solid.	Split.			Solid.	Split.
4	1	\$1.50		12	2	\$6.00	\$7.50
6	1½	2.00	2.50	12	2½	6.50	8.00
8	1½	2.75	3.50	12	3	6.75	8.25
9	1½	3.00	3.75	14	2	7.50	9.50
9	2	3.25	4.25	14	2½	7.50	9.50
10	1½	3.75	5.00	16	2	9.00	11.50
10	2	4.25	5.75	16	3	10.00	12.50
				18	3	12.00	16.00

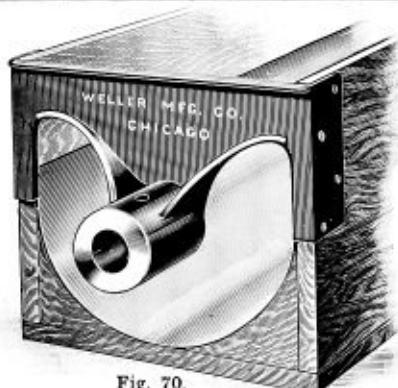


Fig. 70.

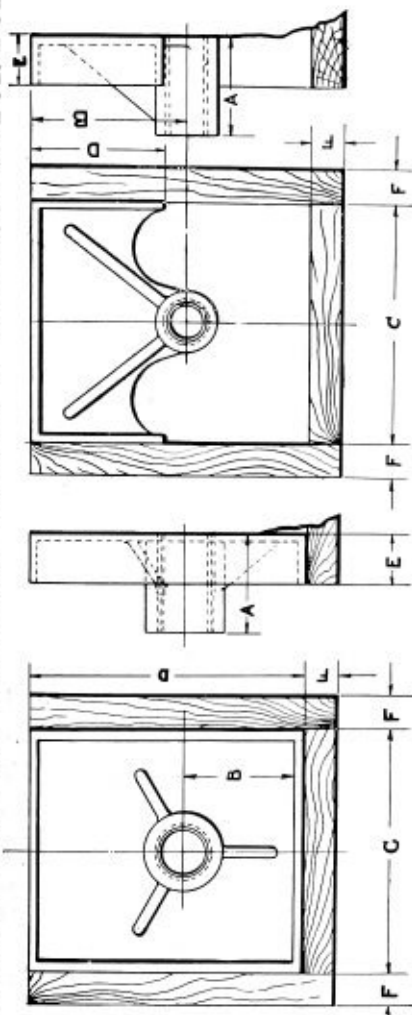
DISCHARGE BOX ENDS FOR WOODEN CON- VEYOR BOXES

It is frequently necessary to deliver material at the end of the Conveyor box without cutting a delivery opening in the bottom. In such cases we recommend our Special Box End.

PRICE LIST.

Diameter Conveyor, Inches.	Diameter Shaft, Inches.	Price.	Diameter Conveyor, Inches.	Diameter Shaft, Inches.	Price.
4	1	\$1.30	12	2	\$5.50
6	1½	1.80	12	3	6.25
8	1½	2.50	12	2½	6.00
9	1½	2.70	14	2	7.00
9	2	2.95	14	2½	7.00
10	1½	3.40	16	2	8.25
10	2	3.90	16	3	9.00
			18	3	11.00

DIMENSIONS OF CAST IRON BOX ENDS AND WOOD CONVEYOR BOXES



DIMENSIONS OF CAST IRON BOX ENDS FOR WOOD BOXES.

Size of Conveyor.	Size of Shaft.	A	B	C	D	E	F
4	1	2 1/2	2 1/2	4 1/2	5 1/2	1 1/2	1 1/2
6	1 1/2	3 1/2	3 1/2	7	7 1/2	1 1/2	1 1/2
8	1 3/4	3 3/4	4 1/2	9	10	1 1/2	1 1/2
9	1 3/4	3 3/4	4 1/2	10	11	2	1 1/2
10	2	4 1/2	5 1/2	11	12 1/2	2 1/2	1 1/2
12	2	4 1/2	6 1/2	13	15 1/2	2 1/2	1 1/2
14	2 1/2	5	7 1/2	15	17 1/2	2 1/2	1 1/2
16	3	6 1/2	8 1/2	17	19 1/2	2 1/2	1 1/2
18	3	6 1/2	9 1/2	19	21 1/2	2 1/2	1 1/2

DIMENSIONS OF CAST IRON DISCHARGE BOX ENDS FOR WOOD BOXES.

Size of Conveyor.	Size of Shaft.	A	B	C	D	E	F
4	1	2 1/2	3 1/2	4 1/2	5 1/2	1 1/2	1 1/2
6	1 1/2	3 1/2	4 1/2	7	7 1/2	1 1/2	1 1/2
8	1 3/4	3 3/4	5 1/2	9	10 1/2	2	1 1/2
9	1 3/4	3 3/4	5 1/2	10	11 1/2	2 1/2	1 1/2
10	2	4 1/2	6 1/2	11	13 1/2	2 1/2	1 1/2
12	2	4 1/2	7 1/2	13	15 1/2	2 1/2	1 1/2
14	2 1/2	5	8 1/2	15	17 1/2	2 1/2	1 1/2
16	3	6 1/2	10 1/2	17	19 1/2	2 1/2	1 1/2
18	3	6 1/2	12 1/2	19	21 1/2	2 1/2	1 1/2

Above we give not only dimensions of Cast Iron Box Ends but correct dimensions of Wood Conveyor Boxes. The latter should always be made from thoroughly seasoned lumber as any shrinkage has a tendency to throw the Conveyor out of alignment.

CAST IRON SPLIT ADJUSTABLE BOX ENDS

For Spiral Conveyor Boxes



Fig 71.
For Wooden Boxes.

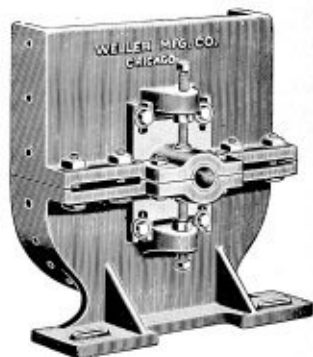


Fig 72.
For Steel Boxes.

These Box Ends have liberal vertical adjustment which simplifies lining up the conveyor or placing it the right distance from the bottom of the trough. Both the Box End and bearing are split making it more convenient to remove the conveyor, or to re-babbitt the bearing.

PRICE LIST.

Diameter of Conveyor, Inches.	Diameter of Shaft, Inches	Price.	
		For Wooden Boxes.	For Steel Boxes.
6	1½	\$3.00	.....
8	1½	4.00	\$4.25
9	1½	4.50	4.50
10	1½	6.00	6.00
12	2	9.00	9.00
12	3	10.00	10.00
14	2	12.00	12.00
16	2	14.00	15.00
16	3	15.00	16.00
18	3	18.00	19.00

COUNTERSHAFT BOX END FOR SPIRAL CONVEYOR.

With Self-Contained Bearings.

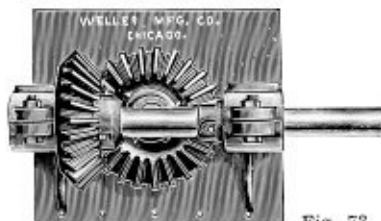


Fig. 73.

The accompanying cut shows our Improved Conveyor Box End with self-contained bearings for right-angle gear shaft, used when the Conveyor runs at right angles to driving shaft. The bearings are not affected in event of any settling, always remaining in perfect alignment.

PRICE LIST.

For 4-inch Spiral Conveyor.....	\$ 8.00
For 6 " " " "	10.00
For 9 " " " "	15.00
For 12 " " " "	26.00
For 16 " " " " on 2-inch pipe.....	40.00
For 16 " " " " " 3 " "	45.00

The above price list includes the cast-iron box end, necessary drive end projection for the Conveyor, gears and short countershaft projecting far enough to take a sprocket wheel or pulley.

IMPROVED RIGHT-ANGLE CONVEYOR DRIVE.

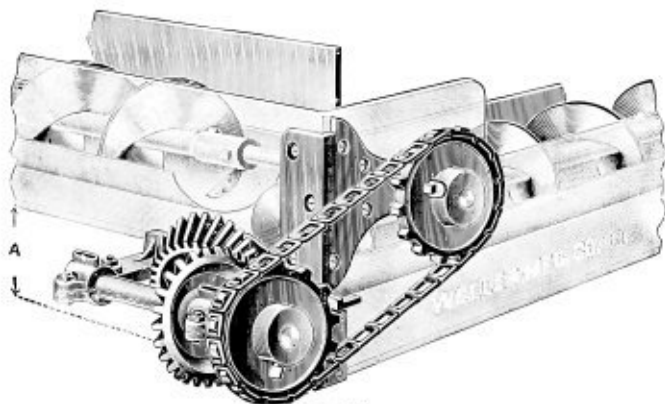


Fig. 74.

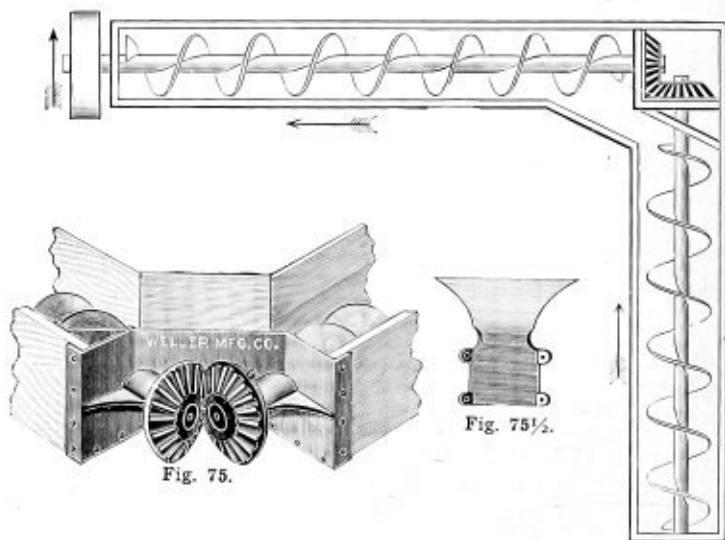
PRICE LIST.

For 4-inch Spiral Conveyor.....	\$11.50
For 6 " " " "	17.50
For 9 " " " "	21.00
For 12 " " " "	38.00
For 16 " " " " on 2-inch pipe.....	65.00
For 16 " " " " " 3 " "	75.00

MITER-GEAR BEARING ENDS FOR RIGHT-ANGLE CONVEYORS.

When it is necessary that both lines of Right-Angle Conveyor should be on the same level, we recommend our mitre-gear bearings. It is necessary, however, in order to secure the delivery from one Conveyor to the other, that the proper "hand" of Conveyor be used, so that the tendency of a Spiral Conveyor to carry on one side of the shaft will be taken advantage of, to assist the end flights of the Conveyor in pushing the material past the corner.

We furnish cast iron bearings and boxes as shown below, with mitre gears and drive ends.



PRICE LIST.

Including Gears and Driving Ends.

For 4-inch Conveyor.....	\$ 8.00
For 6 " "	10.00
For 9 " "	18.00
For 12 " "	24.00
For 16 " " on 2-inch pipe.....	42.00

STEEL CONVEYOR BOXES FOR SPIRAL CONVEYOR

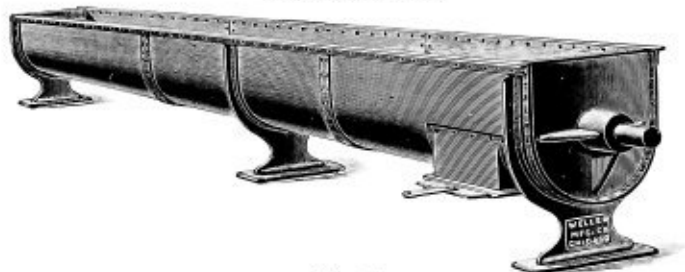


Fig. 76.

In modern plants Steel Conveyor Boxes are rapidly superseding those of wood, the many advantages derived from their use more than compensating for the increased first cost. In addition to being more durable, it is much easier to maintain the alignment of the bearings than in the case of wooden Conveyor Boxes, and the danger from fire is naturally materially lessened, especially when the boxes are furnished with steel covers. We make these boxes in lap, butt joint or flange connections of any desired gauge of metal, with or without the cast iron stands shown in illustration, and for any length or diameter of Conveyor.

For price list see page 131.

Cast Iron Saddles for Steel Conveyor Boxes.



Fig. 77.

We have patterns for all sizes of Saddles for Steel Conveyor Boxes. Prices quoted upon application.

STEEL CONVEYOR BOXES. Standard Connections.

The following illustrations show our regular method of joining the sections of Steel Conveyor Boxes:

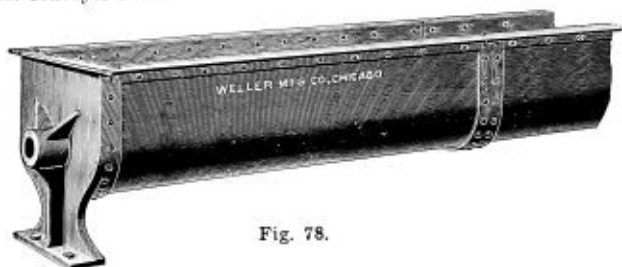


Fig. 78.

In Fig. 78 the ends of the sections are butted and riveted together by means of a butt-strap. The sections are further strengthened by the angle iron riveted along the top of the box on both sides.

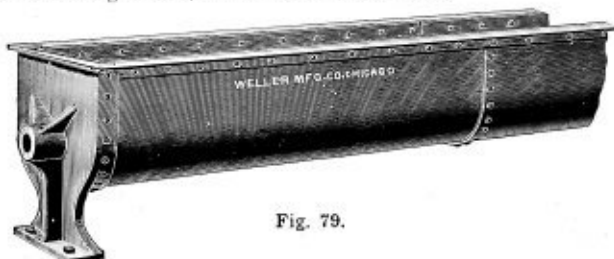


Fig. 79.

When the boxes are made of 14 gauge steel or lighter the ends of the sections are lapped and riveted as shown in Fig. 79, with angle iron riveted along the top.

For price list of Conveyor Boxes see page 131.

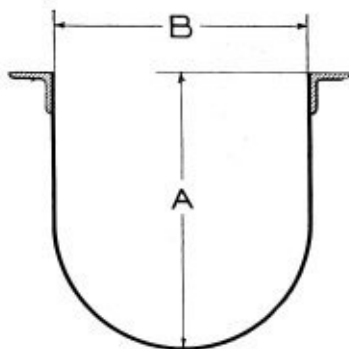
Special Flange Connections.



Fig. 80.

Special quotations furnished on Conveyor Boxes with the sections joined together with wrought or cast iron angle flanges as shown above.

STANDARD STEEL CONVEYOR BOXES



PRICE LIST AND DIMENSIONS.
With Lap or Butt Joint Connections.

Diameter of Conv'y'r Inches.	Box Gauge of Metal, No.	Cover Gauge of Metal, No.	Size of Angle Iron.	Price of Box with Cover, per foot.	Price of Box with- out Cover, per foot.	Dim'ns.	
						A. Inches.	B. In.
4	18	20	1½x1½x½	\$1.60	\$1.35	4½	4½
4	16	18	1½x1½x½	1.75	1.45		
6	16	18	1½x1½x½	1.85	1.55	7½	6½
6	14	16	1½x1½x½	2.40	1.70		
6	12	14	1½x1½x½	2.80	2.10		
9	16	18	1½x1½x¾	2.50	1.85	11	10
9	14	16	1½x1½x¾	2.85	1.90		
9	12	14	1½x1½x¾	3.50	2.20		
10	16	18	1½x1½x¾	2.80	2.20	11½	11
10	14	16	1½x1½x¾	3.15	2.40		
10	12	14	1½x1½x¾	3.70	2.80		
12	14	16	2x2x¾	3.50	2.60	14½	13
12	12	14	2x2x¾	4.40	3.00		
12	10	12	2x2x¾	5.40	3.50		
14	14	16	2x2x¾	4.00	3.20	16½	15
14	12	14	2x2x¾	4.80	3.60		
14	10	12	2x2x¾	5.90	4.20		
16	12	14	2½x2½x½	5.50	3.90	19½	17
16	10	12	2½x2½x½	6.60	4.60		
16	8	10	2½x2½x½	8.00	5.70		
18	12	14	2½x2½x½	6.50	4.60	21½	19
18	10	12	2½x2½x½	7.00	5.30		
18	8	10	2½x2½x½	8.90	6.60		

For Galvanized Boxes add 40 per cent. to the above price list.

RACK AND PINION DELIVERY GATE FOR STEEL CONVEYOR BOXES.

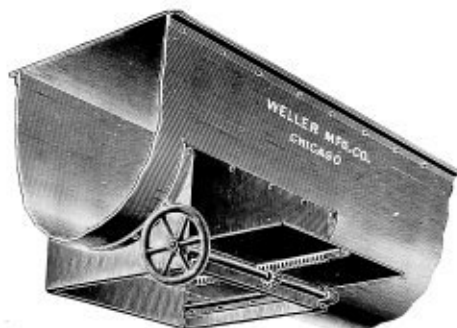


Fig. 81.

We have patterns for Delivery Gates of the above style for use in connection with Steel Conveyor Boxes. The hopper and rack and pinion are of cast iron with angle iron guides fitted to the former to receive the slide which is of heavy wrought steel.

Prices quoted upon application.

DELIVERY GATES FOR STEEL CONVEYOR BOXES.

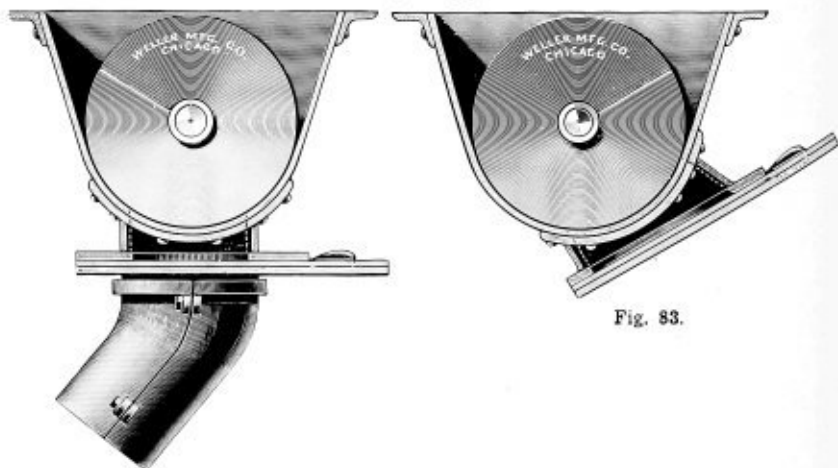


Fig. 82.

Fig. 83.

We are prepared to furnish Delivery Gates of the above designs for Steel Conveyor Boxes arranged for either straight or angle discharge.

Prices quoted upon application.

THE "ARMOUR" CAST IRON ELEVATOR BOOT

For Large Elevators

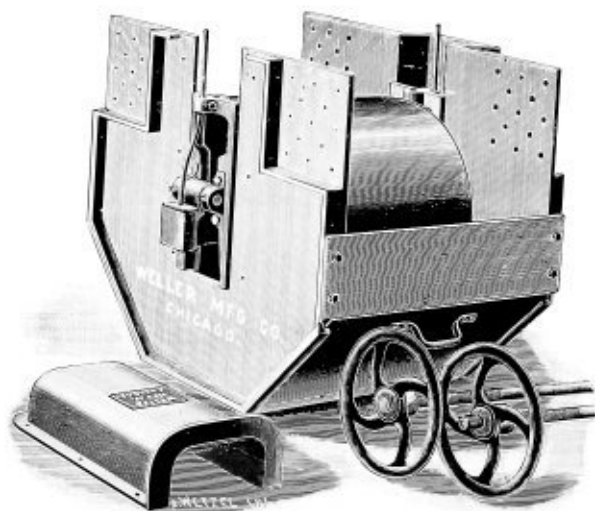


Fig. 84.

This Boot is made extra heavy and is designed to meet the requirements of large elevators where the conditions are such that a specially strong Boot is necessary. It is provided with rocking, adjustable bearings with special stuffing boxes, of the car box type, pulley, shaft, tightener screws any desired length, and oil tubes. This Boot is without exception the best and most complete for heavy service on the market.

Prices quoted upon application.

WELLER CAST IRON ELEVATOR BOOT.

For Large Elevators

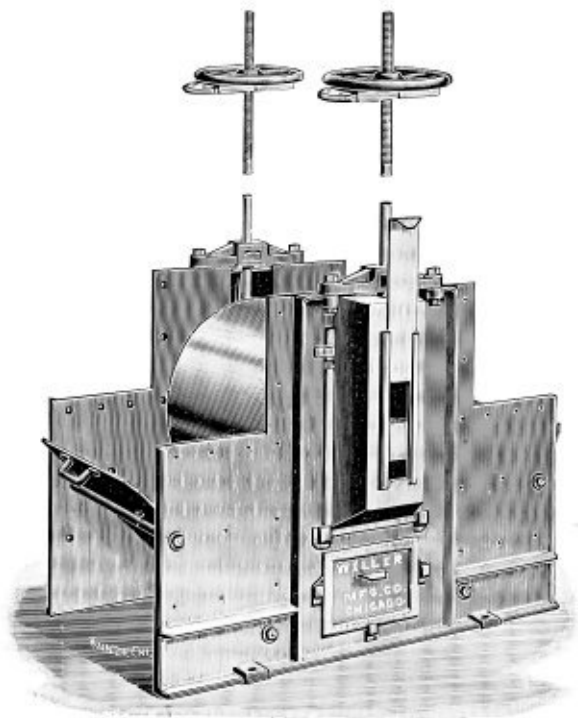


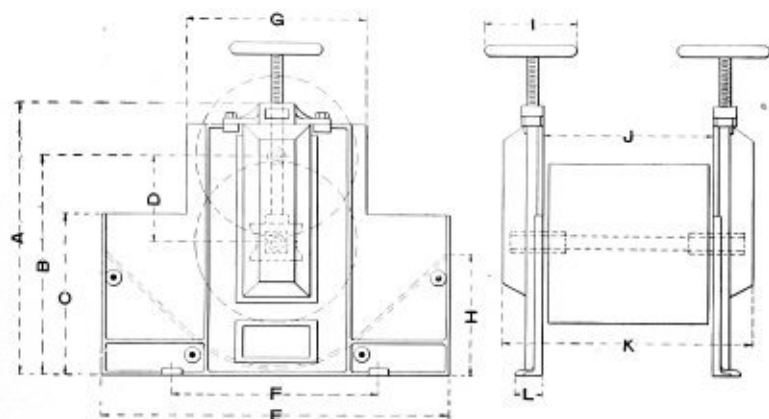
Fig. 85.

The above Boot is also designed for large elevators, and although not as strong as our Armour Cast Iron Boot, it is as heavy and equal in every particular to those of similar design of other manufacture. Both ends lift out, giving a large space underneath for cleaning purposes and hand-holes are also provided in the sides. It can be fed from either side, and is furnished with rocking or adjustable bearings, pulley, shaft, tightener screws and oil tubes. For dimensions see page 135.

Prices quoted upon application.

DIMENSIONS OF
CAST IRON ELEVATOR BOOTS

Shown on Page 134.



No. of Boot	Size of Bucket	Size of Pulley	A	B	C	D	E	F	G	H	I	J	K	L	Size of Shaft
1	20 x 6	24 x 24				13						25½	35½		2 7/16
	18 x 7	24 x 22	41½	33	24½	12	52½	31	26½	18½	13½	23½	33½	2½	
	20 x 7	24 x 24				12						25½	35½		
	18 x 8	24 x 22				11						23½	33½		
	20 x 8	24 x 24				11						25½	35½		

STANDARD CAST IRON ELEVATOR BOOTS

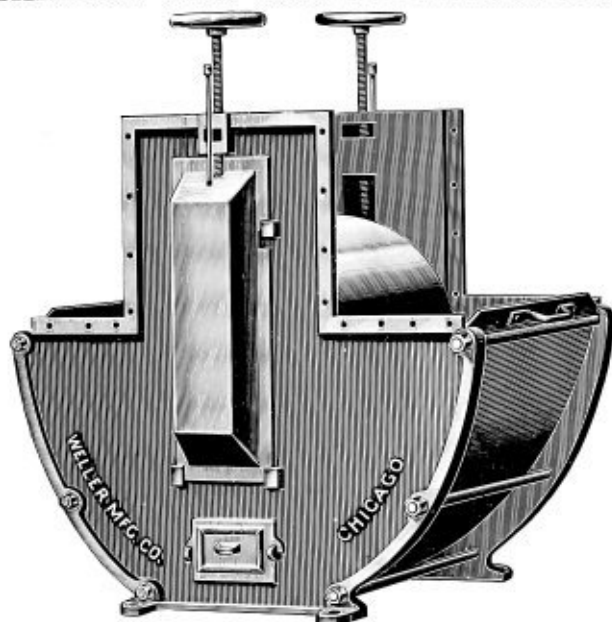


Fig. 86.

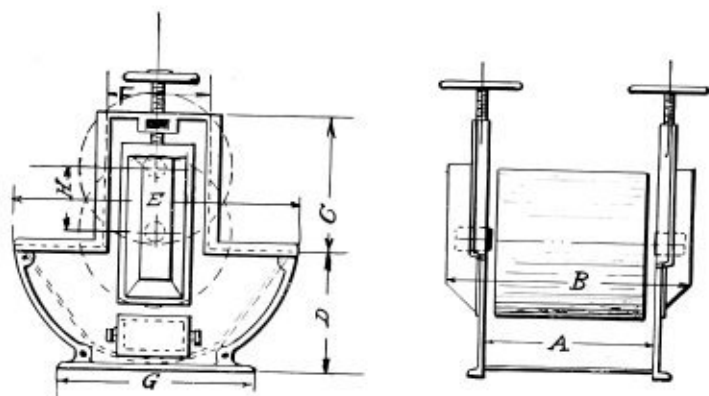
Since issuing our last catalogue, we have redesigned this Boot which is our Standard where wood logging is used. It is furnished with self-locking shields, tightener screws, pulley, shaft and oil-tubes. Gates are provided in both ends and hand holes on the sides, which facilitate the rapid clearing out of the Boot in case of a choke-down.

PRICE LIST.

No. of Boot	Size of Bucket, Inches.	Size of Pulley, Inches.	Price.	No. of Boot	Size of Bucket, Inches.	Size of Pulley, Inches.	Price.
8	4½ x 3½	10 x 5½	\$21.00	3	11 x 7	20 x 13	\$56.00
7	5 x 4	12 x 6	24.00	3	12 x 7	20 x 14	58.00
7	6 x 4	12 x 7	25.00	3	13 x 7	20 x 15	60.00
6	7 x 4½	14 x 9	28.00	3	14 x 7	20 x 16	62.00
5	8 x 5	16 x 10	34.00	3	15 x 7	20 x 17	64.00
5	9 x 5	16 x 10	36.00	2	18 x 6	22 x 20	68.00
5	10 x 5½	16 x 11	38.00	2	20 x 6	22 x 22	70.00
4	11 x 6	18 x 13	44.00	2	16 x 7	22 x 18	66.00
4	12 x 6	18 x 14	46.00	2	18 x 7	22 x 20	68.00
4	14 x 6	18 x 16	48.00	2	20 x 7	22 x 22	70.00
4	16 x 6	18 x 18	50.00				

For Dimensions see page 137.

DIMENSIONS OF STANDARD CAST IRON ELE- VATOR BOOTS



DIMENSIONS.

No. of Boot.	Size of Buckets.	Size of Pulley.	Size of Shaft	A	B	C	D	E	F	G	H
8	4½ x 3½	10 x 5½	1½	6½	12½	10½	11	25½	7½	17½	4½
7	5 x 4	12 x 6	1½	7½	12½	12½	12	27½	10	19	6
7	6 x 4	12 x 7	1½	8½	13½	12½	12	27½	10	19	6
6	7 x 4½	14 x 9	1½	10½	16½	15	13	31	10½	20½	6½
5	8 x 5	16 x 10	1½	11½	18	15½	15½	36½	12½	23	7
5	9 x 5	16 x 11	1½	12½	19	15½	15½	36½	12½	23	7
5	10 x 5½	16 x 12	1½	13½	20	15½	15½	36½	12½	23	6½
4	11 x 6	18 x 13	1½	14½	21	15½	18½	42	13½	25½	7½
4	12 x 6	18 x 14	1½	15½	22	15½	18½	42	13½	25½	7½
4	14 x 6	18 x 16	1½	17½	24	15½	18½	42	13½	25½	7½
4	16 x 6	18 x 18	1½	19½	26	15½	18½	42	13½	25½	7½
3	11 x 7	20 x 13	2½	14½	22½	17½	18½	46½	14½	27½	5½
3	12 x 7	20 x 14	2½	15½	23½	17½	18½	46½	14½	27½	6
3	13 x 7	20 x 15	2½	16½	24½	17½	18½	46½	14½	27½	6
3	14 x 7	20 x 16	2½	17½	25½	17½	18½	46½	14½	27½	6
3	15 x 7	20 x 17	2½	18½	26½	17½	18½	46½	14½	27½	6
2	18 x 6	22 x 20	2½	21½	29	20	19	50	17	30	8½
2	20 x 6	22 x 22	2½	23½	31	20	19	50	17	30	8½
2	16 x 7	22 x 18	2½	19½	27½	20	19	50	17	30	7½
2	18 x 7	22 x 20	2½	21½	29½	20	19	50	17	30	7½
2	20 x 7	22 x 22	2½	23½	31½	20	19	50	17	30	7½

STANDARD CAST IRON ELEVATOR BOOT FOR STEEL LEGGING.

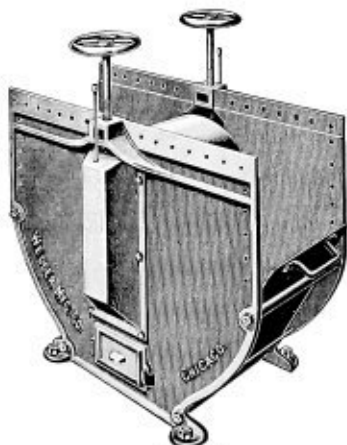


Fig. 87.

The above illustration shows a Boot similar in design to our Standard Pattern listed on page 136, except that the sides are square at the top which simplifies the work of connecting with the steel legging for which this Boot is intended.

Gates are provided at each end and hand-holes in both sides.

SOLID BEARING CAST IRON ELEVATOR BOOT.



Fig. 88.

Boots of the above design are used whenever it is necessary to drive the elevator from the bottom, the take-ups being placed at the head.

They are used largely in cement plants and for handling ashes, sand and other abrasive materials.

In this Boot the receiving end is longer than the back which has a tendency to prevent jamming or breaking of the material handled.

THE SEELEY CAST IRON ELEVATOR BOOT

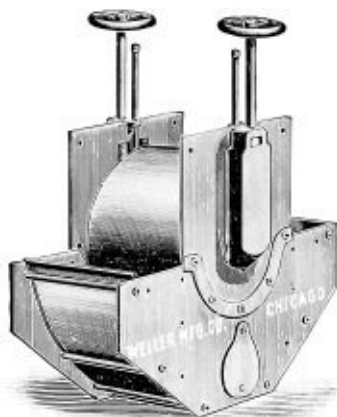


Fig. 89.

This is a light Cast Iron Boot that can be used to good advantage in many places, there being hundreds of them in operation in the grain elevators throughout the West. The legging is not intended to rest on the Boot but upon the floor, to which the sides of the legs extend, the latter being fastened to the sides of the Boot.

We are offering this Boot at a very moderate price.

PRICE LIST.

Size of Bucket, in Inches.	Size of Pulley, in Inches.	Price.	Size of Bucket, in Inches.	Size of Pulley, in Inches.	Price.
5 x 4	12 x 7	\$22.50	9 x 5	16 x 11	\$26.60
6 x 4	12 x 8	23.00	10 x 5½	16 x 12	26.90
7 x 4½	16 x 9	24.80	11 x 6	16 x 13	28.80
8 x 5	16 x 10	25.20	12 x 6	16 x 14	29.40

The above price list includes pulley, tightener screws and shaft, complete.

HEAVY STEEL ELEVATOR BOOT.

Fig. 90.

As the demand for Steel Elevator Boots to be used in connection with elevator casings of steel construction is rapidly increasing, we have designed the above Boot which embodies all the convenient features generally found in those of cast iron made for large elevators.

We are, however, prepared to build special steel Boots to suit all conditions from our own or customers' designs.

Prices quoted upon application.

STANDARD WROUGHT STEEL ELEVATOR BOOTS

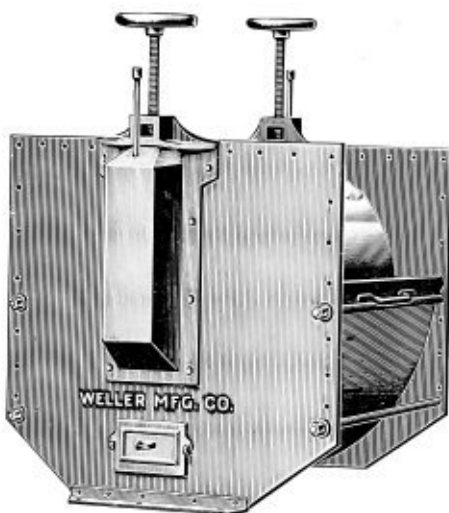


Fig. 91.

For light or medium service, we have designed this Boot which is made of wrought steel and is furnished with tightener screws, pulley, shaft and oil tubes. One end is made to lift out for cleaning purposes. When so specified, both ends will be made in this manner, and hand holes in the sides can also be provided. A small additional charge is made for such modifications.

PRICE LIST.

Size of Bucket. Inches.	Size of Pulley. Inches.	Price.	Size of Bucket. Inches.	Size of Pulley. Inches.	Price.
5 x 4	10 x 6	\$18.00	9 x 5	16 x 11	\$27.50
6 x 4	12 x 7	20.00	10 x 5½	16 x 12	30.00
7 x 4½	14 x 9	22.00	11 x 6	18 x 13	32.50
8 x 5	14 x 10	23.00	12 x 6	18 x 14	35.00

WOOD ELEVATOR BOOTS.

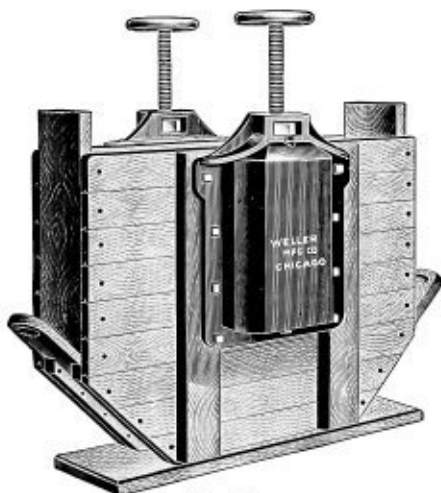


Fig. 92.

For light work Wood Elevator Boots are frequently used though they are rapidly being superseded by those of steel and iron.

PRICE LIST.

Size of Bucket		Width of Belt.	Size of Pulley.	Price without Pulley, Shaft, Collars, Take-ups or Bearings.	Price with Pulley, Shaft, Collars, Take-ups or Bearings.
Width, Inches.	Projection, Inches.				
3	3	3½	16 x 4	\$ 8.00	\$18.00
4	3	4½	16 x 5	9.00	19.00
4½	3½	5	18 x 5½	11.00	22.00
5	4	5½	18 x 6	12.00	24.00
5½	4	6	18 x 6½	13.00	25.00
6	4	7	18 x 7	14.00	26.00
7	4½	8	20 x 9	16.00	29.00
8	5	9	24 x 10	19.00	32.00
9	5	10	24 x 11	20.00	34.00

MARINE LEG BOOTS FOR UNLOADING VESSELS.

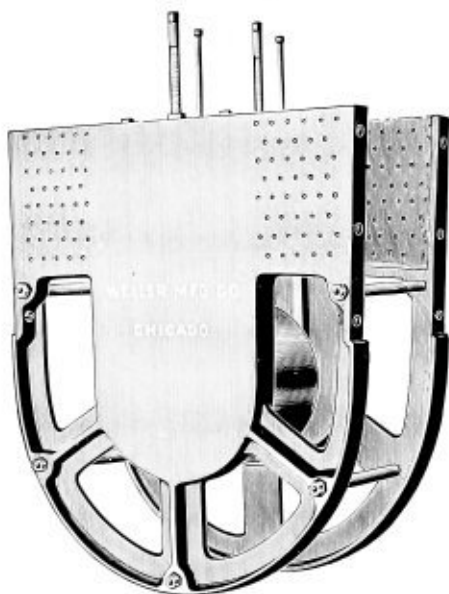


Fig. 93.

We have patterns for improved Marine Leg Boots of different capacities, also the various fittings used in connection with Marine Legs.

STEEL TANKS FOR ELEVATOR BOOTS.



Fig. 94.

We give below a list of our standard water-tight Steel Boot Tanks, but are prepared to furnish them in any size, shape or gauge of metal.

PRICE LIST.

No.	Length at top.	Length at bottom.	Width.	Height.	Thickness of Steel.					
					No. 16 Gauge.	No. 14 Gauge.	No. 12 Gauge.	No. 10 Gauge.	$\frac{3}{16}$ in.	$\frac{1}{4}$ in.
1	48	SAME AS TOP OR SMALLER	30	24	\$27.00	\$30.00	\$34.00	\$39.00	.....	.....
2	48		30	30	30.00	34.00	39.00	44.00	.....	.....
3	60		36	30	38.00	42.00	46.00	51.00	64.00	88.00
4	60		36	36	39.00	45.00	50.00	58.00	68.00	102.00
5	72		40	36	40.00	49.00	54.00	62.00	78.00	110.00
6	84		40	36	48.00	58.00	64.00	80.00	95.00	122.00
7	90		44	40	.....	75.00	86.00	92.00	105.00	146.00
8	90		44	48	.....	.....	88.00	95.00	120.00	166.00
9	96		48	48	.....	.....	95.00	104.00	136.00	180.00
10	96		48	54	.....	.....	97.00	110.00	142.00	190.00
11	108		48	54	.....	.....	105.00	120.00	152.00	210.00
12	108		48	60	.....	.....	112.00	130.00	160.00	225.00
13	108		54	60	.....	.....	120.00	140.00	175.00	240.00
14	120		54	60	.....	.....	.....	150.00	190.00	252.00
15	120		60	60	.....	.....	.....	160.00	210.00	275.00

WOOD ELEVATOR HEADS.

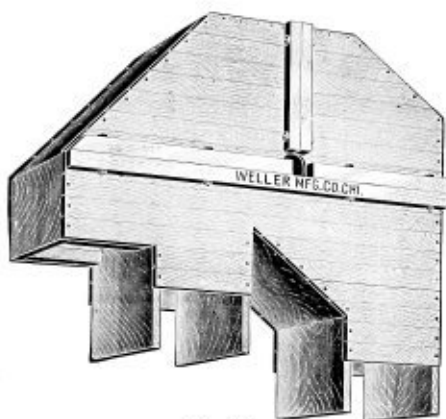


Fig. 95.

Our Elevator Heads are designed to meet the requirements of grain elevators and are superior in every respect to those generally sold by mill furnishers. They are made of kiln-dried lumber, have inclined strut board to prevent the dust from accumulating, and if the head pulleys are run at proper speed the elevators will discharge perfectly.

PRICE LIST.

Length of Bucket.	Diameter of Pulley in Inches.			
	24	30	36	42
5 in.	\$10.00	\$12.00	.....	.....
6 "	11.00	13.00	.....	.....
7 "	12.00	14.00	\$16.50	.....
8 "	13.00	15.50	18.00	\$21.00
9 "	14.00	17.00	19.50	23.00
10 "	15.00	18.50	21.00	25.00
11 "	.....	20.00	22.50	27.00
12 "	.....	21.50	24.00	29.00
14 "	.....	23.00	25.50	31.00
16 "	.....	24.50	27.00	33.00

Above price list does not include pulleys, shaftings, bearings or collars. An additional charge is made for the labor of attaching them or distributing spouts when ordered with the heads.

Prices of larger or intermediate sizes quoted upon application.

ELEVATOR HEAD TAKE-UPS.

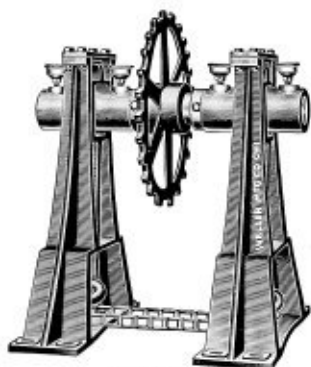


Fig. 96.

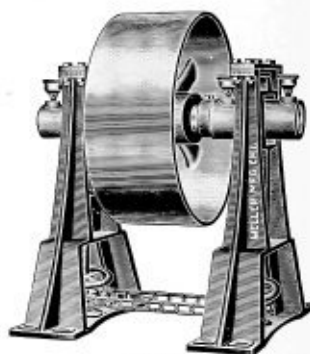


Fig. 97.

Elevator Head Take-Ups are used where it is desired to take up the slack of the chain or belt of a bucket elevator at the head instead of the boot.

They are used principally for handling cement in the process of manufacture, sand, ores and other abrasive material. We illustrate on page 133 a solid bearing boot which is generally used in connection with them. Either pulleys, sprocket wheels or traction wheels may be used with these Take-Ups.

PRICE LIST.

Diameter of Shaft, Inches.	Length of Shaft, Inches.	Price per Pair with Grease Cups.	Diameter of Shaft, Inches.	Length of Shaft, Inches.	Price per Pair with Grease Cups.
$2\frac{5}{16}$	54	\$40.00	$2\frac{1}{2}$	72	\$68.00
$2\frac{7}{16}$	60	42.00	$3\frac{7}{16}$	78	78.00

This price list includes only the shaft and collars. Pulleys, sprocket wheels and traction wheels are furnished at regular prices.

EVANS MOTOR ATTACHMENT FOR ELEVATOR LEG DRIVES.

(PATENTED).

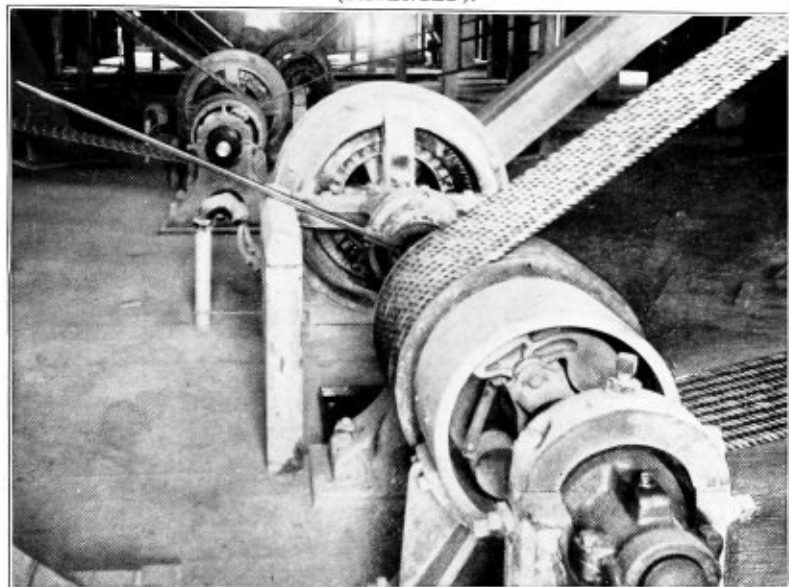


Fig. 98.

The Evans Patent Motor Attachment consists of an extension to the motor shaft connected with a Friction Cut-Off Coupling, one side of the coupling being attached to the extension of the Armature or Motor shaft and the other side of clutch being attached to the extension shaft. The extension shaft has two ring oiling bearings supported on special stands. The pinion, sheave or pulley driving the elevator leg is erected on this extension shaft between the bearings and the Automatic Non-Reversing Friction Stop is erected on the end of shaft as shown, the disc supporting ring of Friction-Stop being supported from the special stand with vertical and horizontal adjustment.

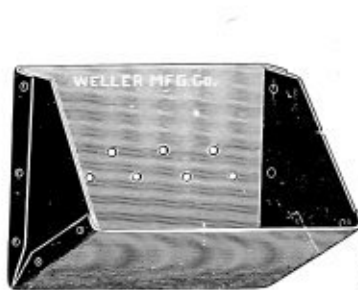
PRICE LIST.

Horse Power.	Price.	Horse Power.	Price.	Horse Power.	Price.
10	\$120.00	30	\$160.00	75	\$250.00
15	130.00	35	170.00	100	300.00
20	140.00	40	180.00	150	400.00
25	150.00	50	200.00	200	500.00
		60	220.00		

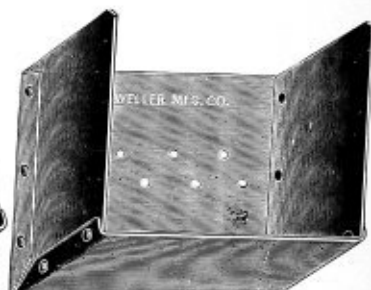
The above prices include the Friction Clutch Coupling, Extension Shaft, two Ring Oiling Bearings, two special stands and Automatic Non-Reversing Friction-Stop, all of proper size and fitted. Prices do not include the Pinion, Rope Sheave or Pulley required for drive.

We are also prepared to furnish a Stop Attachment to be used in connection with a counter shaft where chain or rope drives are used for driving the elevators. Prices quoted upon application.

WELER STANDARD STEEL STONE AND ORE ELEVATOR BUCKETS.



Style C.



Style D.

The above styles of Buckets are made with either angle or straight backs. We give below a list of standard sizes, but are prepared to make any size, shape and gauge of metal to order. These buckets can be attached to chain or belt.

Trade No. of Bucket.	SIZE OF BUCKET.			PRICE PER BUCKET.				
	Width on Belt in Inches.	Length on Belt in Inches.	Projection in Inches.	16 Gauge.	14 Gauge.	12 Gauge.	10 Gauge.	$\frac{3}{16}$ Gauge.
1 & 2	9	9	6	\$0.83	\$1.00	\$1.20	\$1.60	.....
3	11	9	6	.95	1.10	1.40	1.85	.....
4	13	10	7	.....	1.20	1.55	2.05	.....
5	15	10	7	.....	1.30	1.75	2.30	.....
6	17	12	7	.....	1.60	2.10	2.65	.....
7	21	12	10 $\frac{1}{2}$	.....	.....	2.90	3.80	.....
7 $\frac{1}{2}$	25	12	10 $\frac{1}{2}$	.....	.....	3.10	4.00	\$5.65
8	30	15	10	.....	.....	.....	4.75	6.50
9	36	16	10 $\frac{1}{2}$	.....	.....	.....	6.00	8.30

Riveted End Buckets.



Style E.

We can furnish Buckets of this type for any class of work. For Centrally Hung Bucket Elevators they have no superior, as the ends can be made from heavier material than the body of the Bucket, in order to better stand the extra strain.

Prices quoted upon receipt of specifications.

HEAVY STEEL BUCKETS.



Style F.



Style G.

The above styles of Buckets are used extensively in cement plants having practically superseded those of malleable iron in nearly every department of cement manufacture.

They are also used extensively in other industries.

Style G shows this Bucket made with curved inside bottom which is desirable for handling certain classes of material, preventing it from lodging in the bottom of the Bucket, thus insuring free delivery.

PRICE LIST, STYLES F and G.

SIZE OF BUCKET.			Price, Each. 18 Gauge.	Price, Each. 16 Gauge.	Price, Each. 14 Gauge.	Price, Each. 12 Gauge.	Price, Each. 10 Gauge.	Price, Each. 8 Gauge.
Width Across Belt, Inches.	Proje- ction from Belt, Inches.	Length, with Belt, Inches.						
5	3	4	\$0.25	\$0.30	\$0.35	\$0.40	.....	.....
6	3½	5	.30	.35	.40	.45	.....	.....
7	4	6	.35	.40	.45	.50	.....	.....
8	4½	7	.40	.45	.50	.55	\$0.65	.....
9	5	8	.....	.50	.55	.60	.70	.....
10	5½	9	.....	.55	.60	.70	.85	.....
11	5½	9½	.....	.60	.65	.75	.90	\$1.05
12	6	10	.....	.70	.80	.95	1.10	1.25
13	6½	11	.....	.80	.90	1.00	1.16	1.40
14	7	12	.....	.....	1.00	1.10	1.25	1.60
15	7½	12	.....	.....	1.20	1.40	1.60	1.85
16	8	13	.....	.....	1.30	1.50	1.75	2.00
17	8	13	.....	.....	1.40	1.60	1.85	2.20
18	9	14	.....	.....	.....	1.80	2.10	2.40
20	9	14	.....	.....	.....	2.00	2.30	2.50
22	10	14	.....	.....	.....	2.20	2.50	2.75
24	10	15	.....	.....	.....	2.40	2.70	3.00

The above are sizes used with belt. When used with chain, length of the back is made in accordance with the spacing of attachments.

FAVORITE ELEVATOR BUCKETS.

Tin and Steel.



Fig. 99.

These buckets are made of tin for the small sizes and the large of steel.

PRICE LIST. Tin.

Width on Belt, in Inches.	Projection, in Inches.	Price.	Width on Belt, in Inches.	Projection, in Inches.	Price.
2	2	\$0.08	4	3½	\$0.13
2½	2½	.08	4½	3½	.14
3	3	.09	5	4	.16
3½	3	.10	5½	4	.17
4	3	.12	6	4	.18

Steel.

Width on Belt, in Inches.	Projection, in Inches.	Price.		Width on Belt, in Inches.	Projection, in Inches.	Price.	
		Plain.	Galv.			Plain.	Galv.
5	4	\$0.16	\$0.27	11	6	\$0.40	\$0.60
5½	4	.17	.28	12	6	.44	.65
6	4	.18	.30	14	6	.50	.70
7	4½	.22	.35				
8	5	.25	.40				
9	5	.28	.45				
10	5½	.35	.55				

For larger sizes, see page 152.

An additional charge is made for odd sizes not listed.

TABLE SHOWING CARRYING CAPACITY OF THE FAVORITE BUCKET.

Size, in Inches.	Speed 200 feet per minute.	Speed 300 feet per minute.	Speed 500 feet per minute.
	No. Bush. per hour.	No. Bush. per hour.	No. Bush. per hour.
5 x 4	217	326	544
6 x 4	251	376	627
7 x 4½	390	586	976
8 x 5	530	791	1325
9 x 5	614	916	1534
10 x 5½	669	1004	1673
11 x 6	879	1319	2198
12 x 6	1004	1506	2510
14 x 6	1151	1727	2778

FAVORITE STEEL EAR CORN ELEVATOR BUCKETS.

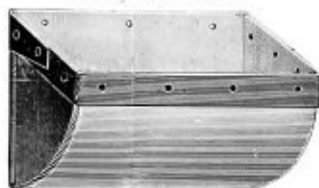


Fig. 100.

This bucket is similar to the Favorite Bucket, but is made of extra heavy steel. It is the standard Bucket for elevating ear corn, or corn and cobs, over ninety per cent of this class of Bucket elevators throughout the country being equipped with them.

PRICE LIST.

Width on Belt, in Inches.	Projection, in Inches.	Price.	Width on Belt, in Inches.	Projection, in Inches.	Price.
9	6	0.40	14	7	\$0.65
10	6½	.50	15	7	.70
11	7	.56	16	7	.76
12	7	.59	18	7	.82
13	7	.62	19	7	.87

An additional charge is made for odd sizes not listed.

WESTERN ELEVATOR BUCKETS.



Fig. 101.

For those who prefer Buckets of the round bottom type, but having the advantage of extra heavy wearing edges, we offer our Western Elevator Bucket. These Buckets are not carried in stock, but are made to order promptly.

PRICE LIST. Steel.

Width on Belt, in Inches.	Projection, in Inches.	Price.		Width on Belt, in Inches.	Projection, in Inches.	Price.	
		Plain.	Galv.			Plain.	Galv.
7	4½	\$0.22	\$0.35	11	6	\$0.40	\$0.60
8	5	.25	.40	12	6	.44	.65
9	5	.28	.45	14	6	.50	.70
10	5½	.35	.55				

An additional charge is made for odd sizes not listed.

FAVORITE STEEL ELEVATOR BUCKETS OF LARGE CAPACITY.



Fig. 102.

These Buckets are well and strongly made, the bodies being of either No. 24 or No. 26 gauge steel and bound with heavy bands. All Buckets of this style over 14" in length are furnished with either wrought iron "Z" or malleable "I" braces as may be specified.

PRICE LIST.

Width on Belt, Inches.	Projection, Inches.	Depth, Inches.	No. 26 Steel with Malleable "I" Brace.	No. 26 Steel with "Z" Brace.	No. 24 Steel with "Z" or Malleable "I" Brace.
16	6	6	\$0.66	\$0.60	\$0.73
18	6	6	.73	.70	.85
20	6	6	.80	.75	.95
16	7	7	.....	.....	.88
18	7	7	.....	.....	.97
20	7	7	.....	.....	1.05
16	7	7	.....	.....	.97
18	7	7	.....	.....	1.03
20	7	7	.....	.....	1.10
16	7 1/2	7 1/2	.....	.....	1.00
18	7 1/2	7 1/2	.....	.....	1.10
20	7 1/2	7 1/2	.....	.....	1.20
16	7 1/2	8	.....	.....	1.05
18	7 1/2	8	.....	.....	1.15
20	7 1/2	8	.....	.....	1.27
16	8	8	.....	.....	1.05
18	8	8	.....	.....	1.23
20	8	8	.....	.....	1.32

MAGEE ELEVATOR BUCKETS.



Fig. 103.

The Magee was for many years the standard Bucket for large terminal grain elevators and is still used extensively in many of the older houses.

Of late years the majority of new elevators have been equipped with Buckets of greater carrying capacity such as the Buffalo type illustrated on page 154.

The front band is made expressly for this Bucket, having an extra heavy wearing edge and rolled with an offset for the material forming the body to enter, making a smooth joint, thus reducing the wear from the action of the grain.

The body of the Bucket is made of heavy smooth refined steel or heavy tin plate, and is provided with either malleable or wrought iron brace in center. As the body of the Magee Bucket is made in many different gauges of metal, in order to avoid possible misunderstandings and consequent dissatisfaction, we would request our customers, when ordering, to send a sample bucket or give the following information: State whether tin or steel bodies are desired and give gauge of metal, also if malleable or wrought iron braces are required.

PRICE LIST.

Width on Belt, Inches.	Pro-jection, Inches.	XXX Tin with M'ble Brace.	XXX Tin with "Z" Brace.	XXXX Tin with M'ble Brace.	XXXX Tin with "Z" Brace.	No. 26 Steel w'h M'ble Brace.	No. 26 Steel w'h "Z" Brace.	No. 24 Steel w'h M'ble Brace.	No. 24 Steel w'h "Z" Brace.
14	6	\$0.80	\$0.75	\$0.83	\$0.80	\$0.64	\$0.58	\$0.70	\$0.66
16	6	.88	.84	.93	.88	.66	.60	.73	.69
18	6	.90	.86	.95	.90	.73	.69	.86	.82
20	6	.93	.88	.97	.93	.80	.75	.95	.88

Buckets furnished with two braces when desired at an advanced price.

BUFFALO ELEVATOR BUCKETS.



Fig. 104. Concave Back.

The standard Buffalo Bucket is made with concave back, as shown in illustration, to meet the curve of the head and boot pulleys. When desired, we can furnish them with straight backs, preserving, however, the round bottom, as we have dies and formers for both styles.

They are made of the best quality of steel and the larger sizes are provided with either one or two braces.

PRICE LIST.

Width on Belt, Inches.	Projection, Inches.	Depth, Inches.	No. 26 Steel with Malleable "I" Brace.	No. 26 Steel with "Z" Brace.	No. 24 Steel with "Z" or Malleable "I" Brace.
16	6	6	\$0.60	\$0.54	\$0.66
18	6	6	.66	.62	.78
20	6	6	.72	.68	.86
12	7	7 (no brace)	.....	.....	.60
14	7	7 (no brace)	.....	.....	.68
16	7	7	.....	.....	.80
18	7	7	.....	.....	.88
20	7	7	.....	.....	.94
12	7	7½ (no brace)	.....	.....	.64
14	7	7½ (no brace)	.....	.....	.72
16	7	7½	.....	.....	.86
18	7	7½	.....	.....	.94
20	7	7½	.....	.....	1.00
14	7½	7½ (no brace)	.....	.....	.78
16	7½	7½	.....	.....	.92
18	7½	7½	.....	.....	1.00
20	7½	7½	.....	.....	1.10
14	7½	8 (no brace)	.....	.....	.82
16	7½	8	.....	.....	.96
18	7½	8	.....	.....	1.04
20	7½	8	.....	.....	1.16
14	8	8 (no brace)	.....	.....	.88
16	8	8	.....	.....	1.06
18	8	8	.....	.....	1.12
20	8	8	.....	.....	1.20

Buckets 14 inches and under in length made without braces unless specially ordered.

Buckets furnished with two braces when desired at an advanced price.

LOW CUT FRONT ELEVATOR BUCKET.

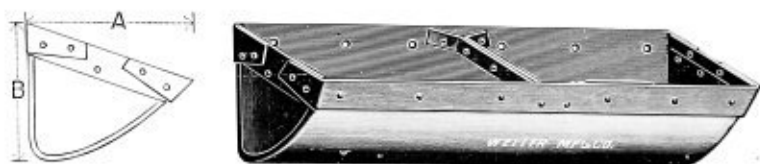


Fig. 105.

The above Bucket is becoming very popular for service in terminal elevators where high speeds and large capacities are required.

PRICE LIST.

Width on Belt, in Inches.	Projection A, in Inches.	Depth B, in Inches.	Gauge of Steel.	Price.	
No Brace {	8	5	4	26	\$0.35
	9	5	4	26	.40
	10	6	5½	24	.50
	12	6	5½	24	.55
	14	6	5½	24	.60
	16	6	5½	24	.70
	18	6	5½	24	.78
	20	6	5½	24	.86
No Brace {	12	7	6	24	.60
	14	7	6	24	.68
	16	7	6	24	.80
	18	7	6	24	.88
	20	7	6	24	.96
No Brace {	12	8	7	24	.80
	14	8	7	24	.88
	16	8	7	24	1.04
	18	8	7	24	1.12
	20	8	7	24	1.20

Buckets 14 inches and under in length made without brace, unless specially ordered. Buckets made with two braces when desired at an advanced price.

STANDARD SALEM STEEL ELEVATOR BUCKETS.

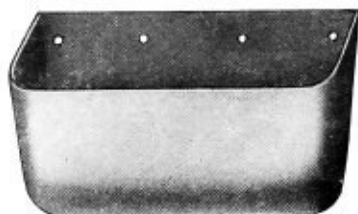


Fig. 106.

PRICE LIST.

Capacity— Bushels per hour, 200 ft. per min., 12 in. a part.	SIZE OF BUCKET		Regular Gauge Buckets for Mill and Elevator Work		Ear Corn and Similar Heavy Substances.	
	Width	Projection, Inch.	Gauge of Steel, No.	Price, Each.	Gauge of Steel, No.	Price, Each.
21	2	x 2	25	\$0.04	18	\$0.16
40	2½	x 2½	24	.05	18	.18
59	3	x 2½	24	.06	18	.19
69	3½	x 2½	24	.07	18	.20
87	3	x 3	23	.09	16	.28
102	3½	x 3	23	.10	16	.29
116	4	x 3	23	.11	16	.30
131	4½	x 3	23	.12	16	.31
159	4	x 3½	22	.12	16	.33
179	4½	x 3½	22	.13	16	.34
199	5	x 3½	22	.14	16	.35
229	5	x 4	22	.18	16	.39
251	5½	x 4	21	.19	16	.40
274	6	x 4	21	.20	16	.41
500	7	x 4½	20	.30	16	.49
670	8	x 5	19	.41	16	.59
754	9	x 5	19	.43	16	.63
973	10	x 5½	19	.54	16	.76
1220	10	x 6	18	.62	16	.81
1342	11	x 6	18	.65	16	.85
1464	12	x 6	18	.68	16	.89
1708	14	x 6	18	.74	16	.97
1952	16	x 6	18	.81	16	1.05
2196	18	x 6	18	.89	16	1.13
2440	20	x 6	18	.95	16	1.21
1590	10	x 7	18	.73	16	1.01
1749	11	x 7	18	.76	16	1.05
1908	12	x 7	18	.80	16	1.09
2226	14	x 7	18	.88	16	1.17
2544	16	x 7	18	.96	16	1.25
2862	18	x 7	18	1.04	16	1.33
3180	20	x 7	18	1.12	16	1.41

For galvanizing add 65 per cent. to above list.

HEAVY SALEM STEEL ELEVATOR BUCKETS.

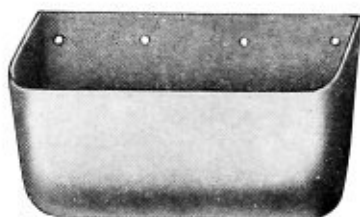


Fig. 107.

PRICE LIST.

Size of Bucket.		Suitable for Ores, Coal, Broken Stone and Extra Heavy Substances.				
Width, Inches.	Pro-jection, In.	Gauge of Steel, 14	Gauge of Steel, 12	Gauge of Steel, 10	Gauge of Steel, 8	Gauge of Steel, 6
4	3½	\$0.35	.....	.....	.....	.....
4½	3½	.36	.....	.....	.....	.....
5	3½	.37	.....	.....	.....	.....
5	4	.44	.....	.....	.....	.....
5½	4	.45	.....	.....	.....	.....
6	4	.46	.....	.....	.....	.....
7	4½	.54	\$0.67	.....	.....	.....
8	5	.66	.78	\$0.98	\$1.23	\$1.43
9	5	.70	.82	1.04	1.31	1.51
10	5½	.88	1.06	1.32	1.66	1.85
10	6	.90	1.14	1.41	1.75	2.04
11	6	.94	1.20	1.48	1.84	2.14
12	6	.98	1.26	1.55	1.93	2.24
14	6	1.06	1.38	1.69	2.11	2.44
16	6	1.15	1.50	1.85	2.29	2.65
18	6	1.25	1.61	2.01	2.47	2.87
20	6	1.35	1.73	2.17	2.65	3.09
10	7	1.10	1.36	1.72	2.18	2.46
11	7	1.15	1.43	1.81	2.28	2.58
12	7	1.20	1.50	1.89	2.38	2.70
14	7	1.30	1.64	2.04	2.58	2.94
16	7	1.40	1.78	2.22	2.78	3.18
18	7	1.50	1.92	2.41	2.98	3.42
20	7	1.62	2.06	2.61	3.18	3.66

For galvanizing add 65 per cent. to above list.

AVERY PLAIN STEEL ELEVATOR BUCKETS.



Fig. 110.

Seamless Steel. All corners round. In stock in sizes named. No other sizes made.

PRICE LIST.

Width on Belt, Inches.	Projection, Inches.	Plain.	Galvanized.	Gauge of Steel Stubs.	Elevating Bushels per hour at 200 feet per min. Can be run 500 feet.
2	2	\$0.12	\$0.15	23	28
2½	2½	.13	.17	23	50
3	3	.15	.19	23	88
3½	3	.18	.22	23	98
4	3	.20	.25	22	128
4½	3½	.22	.29	21	180
5	4	.24	.32	20	240
5½	4	.28	.37	20	281
6	4	.34	.44	20	345
7	4½	.44	.59	19	491
8	5	.54	.73	19	649
9	5½	.68	.96	18	811
10	5½	.80	1.10	18	963
11	6	.92	1.27	18	1282
12	6½	1.04	1.44	18	1567
14	6½	1.20	1.74	16	1882
16	6½	1.60	2.27	16	2227

Punched for belt or chain as wanted. If Buckets are to replace others, or to go on belt already punched, send template.

AVERY CORRUGATED STEEL ELEVATOR BUCKETS



Fig. 111.

Seamless Steel. All corners round. In stock in sizes named. No other sizes made.

PRICE LIST.

Width on Belt, In.	Projection, In.	Plain.	Galvanized.	Gauge of Steel Stub's.	Elevating Bu. per hour at 200 feet per min. Can run 500 feet.
8	5	\$0.54	\$0.73	19	649
9	5½	.68	.96	18	811
10	5½	.80	1.10	18	963
11	6	.92	1.27	18	1282
12	6½	1.04	1.44	18	1567
14	6½	1.20	1.74	16	1882
16	6½	1.60	2.27	16	2227
18	7	2.00	2.84	15	2906
20	7	2.40	3.40	15	4485

*Stub's gauge is two gauges heavier than American gauge.

AVERY EXTRA HEAVY ORE BUCKETS

Seamless Steel. All corners round. In stock in sizes named. No other sizes made.

PRICE LIST.

Width on Belt, In.	Projection, In.	Plain.	Galvanized.	Gauge of Steel, Stub's.	Capacity, Quarts.	Elevating Bu. per hour at 200 ft. per min. Can run 500 ft.
5	4	\$0.70	Prices quoted on application.	16	.64	240
6	4	.72		16	.92	345
7	4½	.84		16	1.31	491
8	5	1.00		15	1.73	649
9	5½	1.28		15	2.32	811
10	5½	1.56		14	2.57	963
11	6	1.84		14	3.42	1282
12	6½	2.12		13	4.18	1567
14	6½	2.48		13	5.02	1882
16	6½	3.00		12	5.94	2227
18	7	3.60	12	7.75	2906	

*Stub's gauge is two gauges heavier than American gauge.

Punched for belt or chain as wanted. If Buckets are to replace others, or to go on belt already punched, send template.

MALLEABLE IRON BUCKETS



Pattern "A"



Pattern "B".

These Buckets are cast in one piece and carefully annealed; are perfectly smooth, and possess all the advantages of Rounded Corners and Bottom. They are made in four patterns, as shown A, B, C and D and of the sizes given in price list.

Styles "A" and "D" are adapted to the handling of ear-corn, cement, coal, phosphate, chemicals, pulp, etc. Style "B" is used for handling ores, stone, etc. in inclined elevators. Style "C" is especially adapted for sugar, clay and sticky materials. We make no charge for punching.

PRICE LIST. STYLE A.

Length in inches.	Width or Projection in inches.	Depth in inches.	Approximate capacity in cubic inches.	Approximate capacity in quarts.	Price.
4	2 $\frac{1}{2}$	2 $\frac{1}{2}$	14	.21	\$0.20
5	3 $\frac{1}{2}$	3	25	.38	.30
6	3 $\frac{1}{2}$	3	30	.45	.35
6	4	3 $\frac{1}{2}$	42	.63	.40
7	3 $\frac{1}{2}$	3	35	.52	.40
7	4	3 $\frac{1}{2}$	50	.75	.50
7	4 $\frac{1}{2}$	4	60	.97	.55
8	4	3 $\frac{1}{2}$	60	.90	.60
8	4 $\frac{1}{2}$	4	75	1.12	.65
8	5	4	90	1.41	.75
9	5	4	95	1.57	.85
9	6	5	135	2.39	1.00
10	4 $\frac{1}{2}$	4	90	1.35	.80
10	5	4	115	1.71	.90
10	6	5	155	2.61	1.10
10	7	5 $\frac{1}{2}$	200	3.10	1.25
11	6	5	170	2.84	1.20
12	6	5	190	3.	1.30
12	7	5 $\frac{1}{2}$	250	4.	1.65
14	6	5	220	3.51	1.55
14	7	5 $\frac{1}{2}$	300	4.62	1.85
16	7	5 $\frac{1}{2}$	350	5.37	2.10
18	7	5 $\frac{1}{2}$	400	6.10	2.25
18	10	7	1050	17.5	5.90
20	7	5 $\frac{1}{2}$	450	7.	2.70

STYLE B.

6	3 $\frac{1}{2}$	2 $\frac{1}{2}$	20	.57	\$0.40
8	3 $\frac{1}{2}$	2 $\frac{1}{2}$	30	.75	.60
10	4	3	60	1.65	.95
10	5 $\frac{1}{2}$	4	80	2.25	1.00
12	5 $\frac{1}{2}$	4	95	2.40	1.25
14	5 $\frac{1}{2}$	4	110	2.80	1.30
16	5 $\frac{1}{2}$	4	125	3.	1.50
18	5 $\frac{1}{2}$	4	140	3.30	1.80

MALLEABLE IRON BUCKETS—Continued



Pattern "C."



Pattern "D."

PRICE LIST. STYLE C.

Length in inches.	Width or Projection in inches.	Depth in inches.	Approximate capacity in cubic inches.	Approximate capacity in quarts.	Price.
8	4½	4	50	1.	\$0.60
10	5	4	80	1.5	.90
12	5	4	100	2.	1.00
16	7	5½	250	6.5	2.10

STYLE D.

12	6½	5½	200	4.03	\$2.00
14	6½	5½	250	4.75	2.30
16	6½	5½	300	5.52	2.50
18	6½	5½	350	6.27	2.60
20	6½	5½	400	7.05	2.80



All thick front edge with body of Bucket $\frac{1}{8}$ inch thick.

STYLE AA.

6	4	3½	42	.63	\$0.45
7	4½	4	60	.97	.60
8	4	3½	60	.90	.65
8	4½	4	75	1.12	.75
8	5	4	90	1.42	.80
10	6	5	155	2.40	1.40
11	6	5	170	2.62	1.50
10	7	5½	200	3.13	1.45
12	6	5	190	3.	1.60
14	6	5	220	3.51	1.70
12	7	5½	250	4.	1.85
14	7	5½	300	4.63	2.00
16	7	5½	350	5.38	2.40
18	7	5½	400	6.12	2.50
20	7	5½	450	7.	3.20
12	8	6	320	5.22	2.20
14	8	6	380	6.20	2.70
16	8	6	440	7.16	2.90
18	8	6	500	8.15	3.15
20	8	6	560	9.	3.20
18	9	9	750	10.5	6.00

SPECIAL STEEL ELEVATOR BUCKETS.

The manufacture of Special Elevator Buckets, chiefly for handling broken stone, coal, ores, sand, etc., is one of the principal branches of our business and one for which we are peculiarly well equipped.

We illustrate below a few of the many styles we are prepared to make to order.



Square Shelf Bucket. Fig. 112.



V Shaped Bucket. Fig. 113.



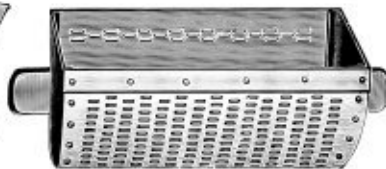
Open Pan Bucket. Fig. 114.



Square Bucket. Fig. 115.



Heavy Steel Bucket with Angle Iron Corners and Guides. Fig. 116.



Perforated Steel Bucket with Guides. Fig. 117.



Wire Cloth Bucket. Fig. 118.



Crib Bucket. Fig. 119.

Submit specifications for quotations.

ELEVATOR BUCKET BOLTS.



Favorite Slotted Head Bolts.

This Bolt is provided with ribs under the head which is slotted and enables the latter to be held by a screw driver when the nut is turned.



PRICE LIST.

$\frac{1}{2}$ x $\frac{1}{4}$ inch.....	per 100	\$1.50	$\frac{3}{4}$ x $\frac{1}{4}$ inch.....	per 100,	\$1.50
$\frac{5}{8}$ x $\frac{1}{4}$ inch.....	"	1.50	$\frac{7}{8}$ x $\frac{1}{4}$ inch.....	"	1.60
			1 x $\frac{1}{4}$ inch.....	"	1.60

NORWAY OR FLAT HEAD BOLTS.

Our Norway Bolts are made with extra large thin flat heads very carefully finished.

PRICE LIST.

$\frac{5}{8}$ x $\frac{1}{4}$ inch.....	per 100,	\$2.20
$\frac{3}{4}$ x $\frac{1}{4}$ ".....	"	2.20
$\frac{7}{8}$ x $\frac{1}{4}$ ".....	"	2.30
1 x $\frac{1}{4}$ ".....	"	2.30
1 $\frac{1}{4}$ x $\frac{1}{4}$ ".....	"	2.40
1 $\frac{1}{4}$ x $\frac{3}{8}$ ".....	"	3.20



BOLTS FOR CHAIN ATTACHMENTS.



Button Head for Light Chains.



Square Head for Heavy Chains.

PRICE LIST.

Button Head.

$\frac{5}{8}$ x $\frac{1}{4}$ inch.....	per 100,	\$1.50
$\frac{3}{4}$ x $\frac{1}{4}$ inch.....	"	1.50
$\frac{7}{8}$ x $\frac{1}{4}$ inch.....	"	1.60

PRICE LIST.

Square Head.

$\frac{3}{4}$ x $\frac{3}{8}$ inch.....	per 100,	\$2.00
1 x $\frac{3}{8}$ inch.....	"	2.00
1 x $\frac{1}{2}$ inch.....	"	2.25

Leather Washers for bolts, 25c per hundred.

MACHINE BOLTS

With Square Head, Square Nuts and Finished Points



MANUFACTURERS' STANDARD LIST—In effect October 1, 1899.

Price Per 100.

Length in Inches.	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$ & $\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
$\frac{3}{4}$ to $1\frac{1}{2}$	\$1.70	\$2.00	\$2.40	\$2.80	\$3.60	\$5.20	\$7.20	\$10.50	\$15.10	\$22.50	\$30.00
2	1.78	2.12	2.56	3.00	3.86	5.58	7.70	11.20	16.00	23.70	31.50
$2\frac{1}{2}$	1.86	2.24	2.72	3.20	4.12	5.96	8.20	11.90	16.90	24.90	33.00
3	1.94	2.36	2.88	3.40	4.38	6.34	8.70	12.60	17.80	26.10	34.50
$3\frac{1}{2}$	2.02	2.48	3.04	3.60	4.64	6.72	9.20	13.30	18.70	27.30	36.00
4	2.10	2.60	3.20	3.80	4.90	7.10	9.70	14.00	19.60	28.50	37.50
$4\frac{1}{2}$	2.18	2.72	3.36	4.00	5.16	7.48	10.20	14.70	20.50	29.70	39.00
5	2.26	2.84	3.52	4.20	5.42	7.86	10.70	15.40	21.40	30.90	40.50
$5\frac{1}{2}$	2.34	2.96	3.68	4.40	5.68	8.24	11.20	16.10	22.30	32.10	42.00
6	2.42	3.08	3.84	4.60	5.94	8.62	11.70	16.80	23.20	33.30	43.50
$6\frac{1}{2}$	2.50	3.20	4.00	4.80	6.20	9.00	12.20	17.50	24.10	34.50	45.00
7	2.58	3.32	4.16	5.00	6.46	9.38	12.70	18.20	25.00	35.70	46.50
$7\frac{1}{2}$	2.66	3.44	4.32	5.20	6.72	9.76	13.20	18.90	25.90	36.90	48.00
8	2.74	3.56	4.48	5.40	6.98	10.14	13.70	19.60	26.80	38.10	49.50
9	2.90	3.80	4.80	5.80	7.50	10.90	14.70	21.00	28.60	40.50	52.50
10	3.06	4.04	5.12	6.20	8.02	11.66	15.70	22.40	30.40	42.90	55.50
11	3.22	4.28	5.44	6.60	8.54	12.42	16.70	23.80	32.20	45.30	58.50
12	3.38	4.52	5.76	7.00	9.06	13.18	17.70	25.20	34.00	47.70	61.50
13	3.54	4.76	6.08	7.40	9.58	13.94	18.70	26.60	35.80	50.10	64.50
14	3.70	5.00	6.40	7.80	10.10	14.70	19.70	28.00	37.60	52.50	67.50
15	3.86	5.24	6.72	8.20	10.62	15.46	20.70	29.40	39.40	54.90	70.50
16	4.02	5.48	7.04	8.60	11.14	16.22	21.70	30.80	41.20	57.30	73.50
17	4.18	5.72	7.36	9.00	11.66	16.98	22.70	32.20	43.00	59.70	76.50
18	4.34	5.96	7.68	9.40	12.18	17.74	23.70	33.60	44.80	62.10	79.50
19	4.50	6.20	8.00	9.80	12.70	18.50	24.70	35.00	46.60	64.50	82.50
20	4.66	6.44	8.32	10.20	13.22	19.26	25.70	36.40	48.40	66.90	85.50
21	.....	.....	.....	.....	.....	.....	26.70	37.80	50.20	69.30	88.50
22	.....	.....	.....	.....	.....	.....	27.70	39.20	52.00	71.70	91.50
23	.....	.....	.....	.....	.....	.....	28.70	40.60	53.80	74.10	94.50
24	.....	.....	.....	.....	.....	.....	29.70	42.00	55.60	76.50	97.50
25	.....	.....	.....	.....	.....	.....	30.70	43.40	57.40	78.90	100.50
26	.....	.....	.....	.....	.....	.....	31.70	44.80	59.20	81.30	103.50
27	.....	.....	.....	.....	.....	.....	32.70	46.20	61.00	83.70	106.50
28	.....	.....	.....	.....	.....	.....	33.70	47.60	62.80	86.10	109.50
29	.....	.....	.....	.....	.....	.....	34.70	49.00	64.60	88.50	112.50
30	.....	.....	.....	.....	.....	.....	35.70	50.40	66.40	90.90	115.50

The following Extras are to be understood as a part of this list:

Bolts with Hexagon Heads or Hexagon Nuts, 10 per cent. extra.

If both Hexagon Heads and Hexagon Nuts, 20 per cent. extra.

Joint Bolts with Oblong Nuts, 10 per cent. extra.

Bolts with Tee Heads, Askew Heads and Eccentric Heads, 20 per cent extra.

Special Bolts with irregular threads and unusual dimensions of heads or nuts will be charged extra at the discretion of the manufacturer.

STAY RODS.

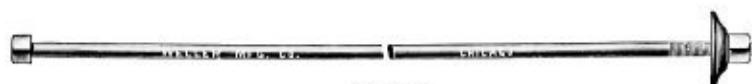
We are prepared to furnish promptly Stay Rods any length and diameter and made in any style desired; also the necessary cast and wrought iron washers. Close prices quoted upon receipt of specifications.



Style A.



Style B.



Style C.



Style D.



Style E.

SPECIAL CAST IRON WASHERS FOR STAY RODS.

Corner Washer,
For Outside Bolts.

45 deg. Washer.

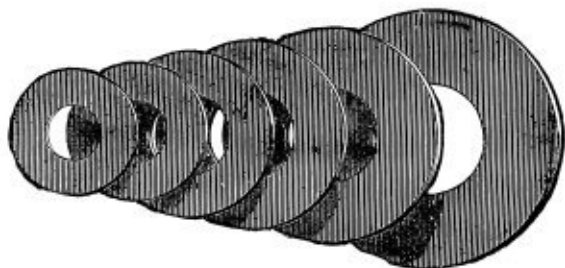


30 deg. Washer.

Corner Washer,
For Inside Bolts.

For price list of standard cast and wrought iron washers see page 166.

WROUGHT IRON WASHERS



PRICE LIST.

For Bolt.	Hole.	Width.	Gauge Number.	Price, Per Pound.
$\frac{3}{16}$	$\frac{1}{16}$	$\frac{5}{16}$	18	\$0.14
$\frac{1}{4}$	$\frac{1}{16}$	$\frac{5}{16}$	16	.12.2
$\frac{5}{16}$	$\frac{1}{16}$	$\frac{5}{16}$	16	.11.4
$\frac{3}{8}$	$\frac{1}{16}$	1	14	.10.5
$\frac{7}{16}$	$\frac{1}{16}$	1	14	.09.7
$\frac{1}{2}$	$\frac{1}{16}$	1	12	.09.2
$\frac{5}{8}$	$\frac{1}{16}$	1	12	.09.1
$\frac{3}{4}$	$\frac{1}{16}$	1	10	.09
$\frac{7}{8}$	$\frac{1}{16}$	2	10	.08.8
1	$\frac{1}{16}$	2	9	.08.8
$\frac{1}{2}$	$\frac{1}{8}$	2	9	.08.8
$\frac{3}{4}$	$\frac{1}{8}$	2	9	.08.8
$\frac{1}{2}$	$\frac{1}{8}$	3	9	.09
$\frac{3}{4}$	$\frac{1}{8}$	3	8	.09
$\frac{1}{2}$	$\frac{1}{8}$	3	8	.09.2
$\frac{3}{4}$	$\frac{1}{8}$	3	8	.09.2
1	$\frac{1}{8}$	4	8	.09.5
2	$\frac{1}{8}$	4	8	.09.5
2	$\frac{1}{4}$	4	8	.09.5

Sizes not enumerated above made to order, and charged extra in proportion to cost.

CAST IRON WASHERS



Price, per pound\$0.05

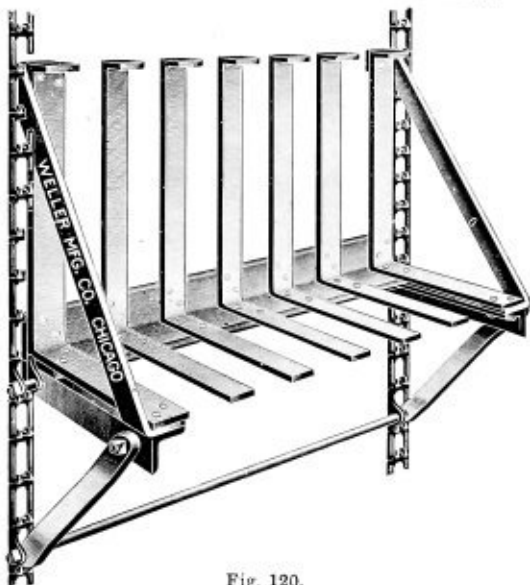
SPECIAL ELEVATOR TRAYS.

Fig. 120.

For Handling Box Shooks.

We design Elevator Trays to be used in connection with our Elevators for handling packages of every description.

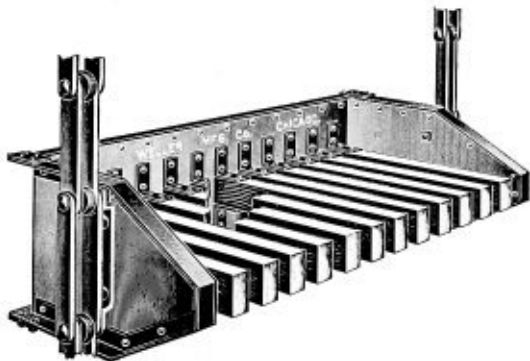


Fig. 121.

For Miscellaneous Packages.

When advised as to requirements, we will submit plans and estimates promptly.

MALLEABLE IRON ELEVATOR ARMS.



Fig. 122.
Double Arms.



Fig. 123.
Short Heavy Arms.



Fig. 124.
Toothed Arms.



Fig. 125.
Straight Elevator Arm with
Curved Tip.

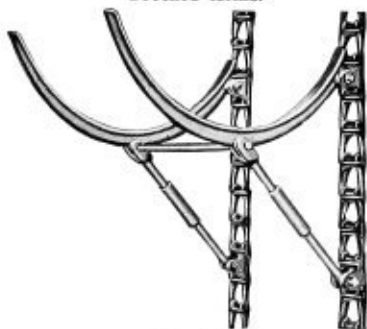


Fig. 126.
Curved Elevator Arms.



Fig. 127.
Straight Elevator Arms.

These arms are made of the very best refined malleable iron, and are used in connection with chain and sprocket wheels. All except the double and short heavy arm patterns are provided with cushion spring braces which permit an elevator to be operated at a higher rate of speed than where rigid braces are used. For price list see page. 169.

PRICE LIST OF ELEVATOR ARMS WITH CUSHION SPRING BRACES

Straight Arms for Box or Block Elevator.

EACH SET COMPLETE AS FOLLOWS:

2 Straight Arms, or 2 Straight Arms with curved tips.	}	\$7.50 per set
2 Cushioned spring braces.		
1 Cross rod with 2 nuts.		
1 Piece spacing pipe.		
4 Links M3 No. 78 or No. 83 with pins and cotters.		

Curved Elevator Arms for Kegs, Small Barrels, Sacks, Etc.

EACH SET COMPLETE AS FOLLOWS:

2 Curved Arms, 18 inches diameter.	}	\$7.50 per set
2 Cushion spring braces.		
1 Cross rod with 2 nuts.		
1 Piece spacing pipe.		
4 Links M3 No. 78 or No. 83 with pins and cotters.		

Curved Elevator Arms for Heavy Barrels, Tierces, Etc.

EACH SET COMPLETE AS FOLLOWS:

2 Curved Arms, 26 inches diameter.	}	\$8.00 per set
2 Cushion spring braces.		
1 Cross rod with 2 nuts.		
1 Piece spacing pipe.		
4 Links M3 No. 103, 320 or No. 325 with pins and cotters.		

FEED GATES FOR ELEVATOR LEGS



Fig. 128.

Ratchet and Lever.

We have patterns for both the Ratchet and Lever and Rack and Pinion Feed Gates for Elevator Legs. The former are generally used where gates of large capacity are required.

PRICE LIST.

Ratchet and Lever
with Slides and Guides,
complete.

Size of Gates.	Price.
16x20	\$ 8.00
20x26	9.00
24x30	10.00

Rack and Pinion
with Slides and Guides,
complete.

Size of Gates.	Price.
10x14	\$5.00
16x20	6.00
20x26	7.00



Fig. 129.

Rack and Pinion.

ADJUSTABLE BIN GATES

Adjustable Bin Gate.

PRICE LIST.

Size, Inches.	Price.
12x14	\$2.50
14x16	3.00
16x18	3.50
18x20	4.00
20x22	4.50
22x24	5.00

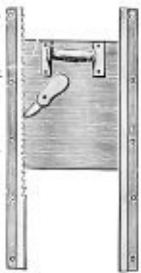


Fig. 130.

Adjustable Bin Gate
with Spout.

PRICE LIST.

Size		Price.
Width, In.	Height, In.	
10	8	\$5.00
16	10	8.00
20	18	12.00
24	20	20.00



Fig. 131.

STEEL GATES

Fig. 132.

The following table gives a few of the sizes of steel gates that we furnish. These are made with stems of any desired length. Our prices, it will be noted, include simply the gate and 3-foot stem, made of ordinary wrought iron.

Width and Length of Gate.	Price, Each.	Width and Length of Gate.	Price, Each.
8 x 10	\$0.95	14 x 18	\$1.80
8 x 12	1.00	14 x 20	1.95
8 x 14	1.10	16 x 18	2.05
10 x 12	1.15	16 x 20	2.15
10 x 14	1.20	16 x 24	2.30
10 x 16	1.25	18 x 20	2.40
12 x 14	1.40	18 x 24	2.70
12 x 16	1.50	18 x 28	3.00
12 x 18	1.60	20 x 24	3.15
14 x 16	1.70	20 x 30	3.25

CAST IRON GUIDES

Length, Inches.	Price Per Pair.	Length, Inches.	Price Per Pair.
12	\$0.55	28	\$1.05
16	.70	32	1.15
20	.80	36	1.25
24	.90	40	1.40

STANDARD INDICATOR STANDS



Fig. 133.

Our Standard Indicator Stands are of neat design and are made with a wrought steel tubular column. Complete with each stand we furnish ring, lever and figures.

PRICE LIST.

Complete with 6 to 10 figures	\$9.50
Extra Figures, each ..	.20
Indicator Ring only, with 6 to 10 figures,	4.00

INDICATOR HOOP AND ROD

We furnish with this equipment the following:

One Hoop with six bin-numbers and twelve feet of one-inch pipe with coupling.
Price



Fig. 134.

INDICATOR RODS

We are prepared to furnish Indicator Rods any desired length, also the necessary couplings.

PRICE LIST.

1 inch Indicator Rod, per foot	\$0.20
1¼ inch Indicator Rod, per foot .....	.25
1½ inch Indicator Rod, per foot .....	.30
1 inch Couplings, each .....	.30
1¼ inch Couplings, each .....	.40
1½ inch Couplings, each .....	.50

WIRE ROPE INDICATORS.



Fig. 135.

Wire Rope Indicators may be used in connection with elevator legs of almost any height as they are very positive in action. The standard outfit consists of the following:

- 1 16-inch grooved Indicator Wheel, with eight numbers.
- 1 16-inch grooved Wheel, $1\frac{1}{8}$ -inch bore, for Indicator Rod.
- 1 Lever to operate Indicator Wheel.
- 1 Idler Bracket, with two 5-inch Idler Sheaves for wire rope.
- 1 Indicator Stub Rod to connect with turnhead, 3 feet long.
- 1 Step Box Casting to receive lower end of Indicator Stub Rod.
- 2 Turnbuckles for $\frac{1}{4}$ -inch or $\frac{3}{8}$ -inch wire rope to take up slack.

Price of above outfit complete as listed, \$12.50.

Price of Wire Rope, $\frac{3}{8}$ -inch diameter, per foot, 5 cents net.

CAST IRON TURN HEADS FOR ELEVATOR HEADS.

PRICE LIST.

6 inch.....	\$ 7.00
8 inch.....	8.00
9 inch.....	10.50
10 inch.....	12.00
12 inch.....	17.00
14 inch.....	22.00
16 inch.....	30.00

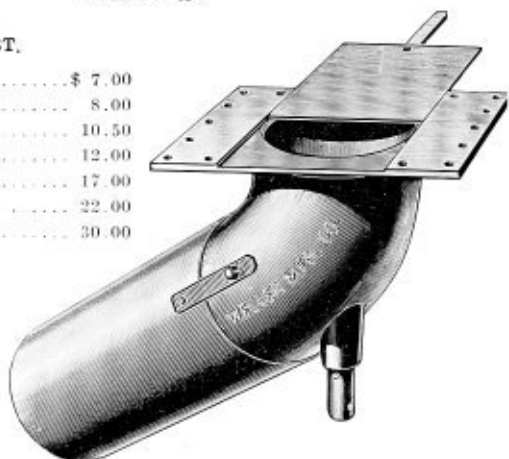


Fig. 136.

The above Turn Heads are made with wrought steel adjustable spouts and cut-offs. The former are a great improvement over the old style, permitting the grain to be discharged at any desired angle.

They are much more durable than the ordinary sheet iron spouts and for continued hard service have no equal.

CAST IRON TURN HEADS FOR BIN BOTTOMS.



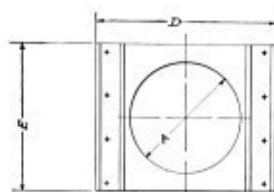
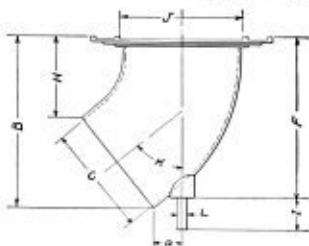
Fig. 137.

PRICE LIST.

WITH HOPPER AND SLIDE.

9-inch.....	\$10.00
10 ".....	12.00
12 ".....	15.00
14 ".....	18.00
16 ".....	22.00
18 ".....	27.00
20 ".....	35.00

CAST IRON TURN HEADS For Elevator Heads

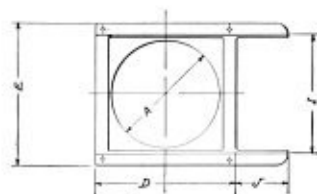
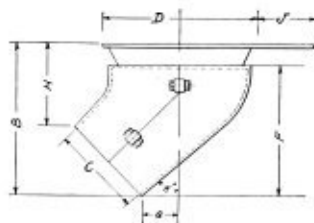


Hopper.

DIMENSIONS.

Size of Turn-Head.	A	B	C	D	E	F	G	H	I	J	K°	L
6	6	12	5 $\frac{1}{2}$	13	10	11 $\frac{1}{2}$	2 $\frac{1}{2}$	6 $\frac{1}{2}$	2 $\frac{1}{2}$	6 $\frac{3}{16}$	55°	1
8	8	12 $\frac{1}{2}$	7 $\frac{1}{2}$	15 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{2}$	2 $\frac{1}{2}$	5 $\frac{3}{8}$	2 $\frac{1}{2}$	8 $\frac{1}{16}$	55°	1
9	9	15 $\frac{1}{2}$	8 $\frac{1}{2}$	16 $\frac{1}{2}$	14	15 $\frac{1}{2}$	2 $\frac{1}{2}$	7 $\frac{1}{2}$	2 $\frac{1}{2}$	9	55°	1
10	10	16 $\frac{1}{2}$	9 $\frac{1}{2}$	17 $\frac{1}{2}$	14 $\frac{1}{2}$	15 $\frac{1}{2}$	3	7 $\frac{1}{2}$	2 $\frac{1}{2}$	10	55°	1
12	12	18 $\frac{1}{2}$	12	20	17	18	3	8 $\frac{1}{2}$	4	12 $\frac{1}{2}$	55°	1 $\frac{1}{4}$
14	14	21 $\frac{1}{2}$	13 $\frac{1}{2}$	22 $\frac{1}{2}$	19	20 $\frac{1}{2}$	3 $\frac{1}{2}$	10	4	15 $\frac{1}{2}$	55°	1 $\frac{1}{4}$
16	16	25	16	25	21 $\frac{1}{2}$	23 $\frac{1}{2}$	3 $\frac{3}{8}$	12	4	17 $\frac{1}{2}$	45°	1 $\frac{1}{4}$

SPLIT CAST IRON TURN HEADS For Bin Bottoms



Hopper.

DIMENSIONS.

Size of Turn-Head.	A	B	C	D	E	F	G	H	I	J	K°	Shape of Discharge End "C".
9	8 $\frac{7}{8}$	13 $\frac{1}{2}$	5 $\frac{1}{2}$ x 9	13	13	10 $\frac{1}{2}$	5 $\frac{1}{2}$	8 $\frac{1}{2}$	10	4 $\frac{3}{8}$	58°	Oval.
10	9 $\frac{1}{2}$	13	6 $\frac{1}{2}$ x 10	13 $\frac{1}{2}$	14	11 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	11 $\frac{1}{2}$	5	56°	Oval.
12	11 $\frac{1}{2}$	13	8 $\frac{1}{2}$ x 12 $\frac{1}{2}$	16	16	11	4 $\frac{1}{2}$	6 $\frac{1}{2}$	12 $\frac{1}{2}$	5 $\frac{1}{2}$	56°	Oval.
14	13 $\frac{1}{2}$	17	10 $\frac{1}{2}$ x 14 $\frac{1}{2}$	17 $\frac{1}{2}$	18 $\frac{1}{2}$	15 $\frac{1}{2}$	4	9 $\frac{1}{2}$	15 $\frac{1}{2}$	6 $\frac{1}{2}$	48°	Oval.
16	15 $\frac{1}{2}$	17	10 $\frac{1}{2}$ x 16 $\frac{1}{2}$	17 $\frac{1}{2}$	19 $\frac{1}{2}$	14 $\frac{1}{2}$	5 $\frac{1}{2}$	7 $\frac{1}{2}$	15 $\frac{1}{2}$	9 $\frac{1}{2}$	56°	Rectangle.

SEELEY CAST IRON TURN HEADS With Hoppers. For Elevator Heads

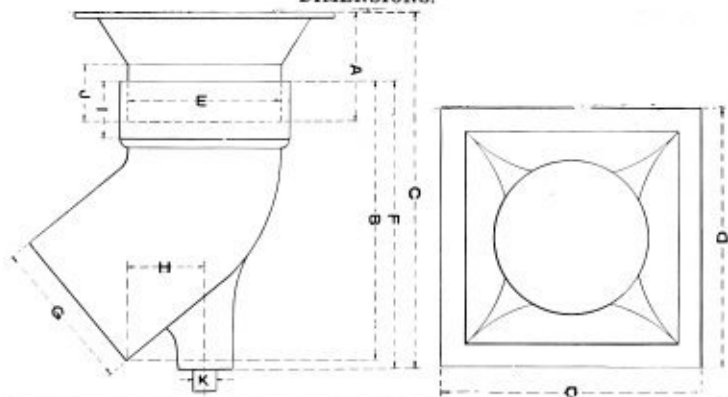


Fig. 138.

PRICE LIST. Including Hopper.

6½ inch	\$10.00
9 "	12.00
12 "	15.00
14 "	21.00
16 "	30.00

DIMENSIONS.



Size.	A	B	C	D	E	F	G	H	I	J	K
6½	4½	12½	16	11	6½	13½	6½	3½	2	2½	1
9	6½	18	20½	15	9½	17	10	6½	3½	3	1
12	7½	19½	24½	19	11½	19	12½	6	3½	3½	1½
14	9	24½	29½	23	14½	23½	14½	3½	3½	3½	1½
16	10½	17½	32½	26½	16½	26	16½	3½	4	4	1½

WROUGHT STEEL TURN HEADS FOR ELEVATOR HEADS AND BIN BOTTOMS



Fig. 139.

We manufacture all styles and sizes of Steel Turn Heads, but for heavy duty recommend our various cast iron patterns as being more durable. We list below our standard sizes:

PRICE LIST.

6-inch	.....	\$ 5.50
8 "	.....	7.00
9 "	.....	8.50
10 "	.....	10.00
12 "	.....	12.00

WROUGHT STEEL CRANE SPOUTS FOR ELEVATOR HEADS



Fig. 140.

PRICE LIST, WITH HOPPER.

8-inch	.....	\$ 9.75
10 "	.....	11.00
12 "	.....	13.75
12 "	for ear corn.....	15.75

WELER IMPROVED SELF-LOCKING DISTRIBUTOR

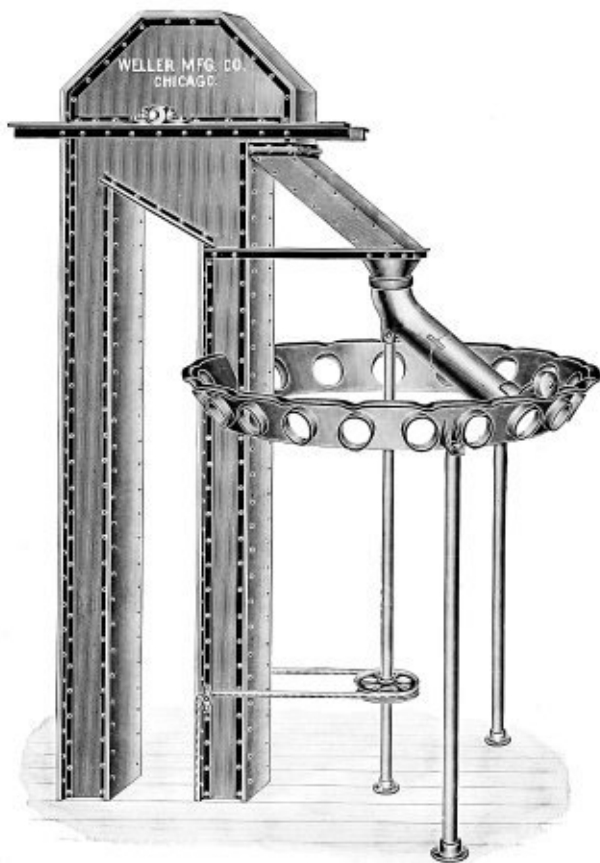


Fig. 141.

We build the above Distributor in many sizes and with any desired number of outlets.

Prices quoted upon application.

WELLER IMPROVED DISTRIBUTING SPOUTS

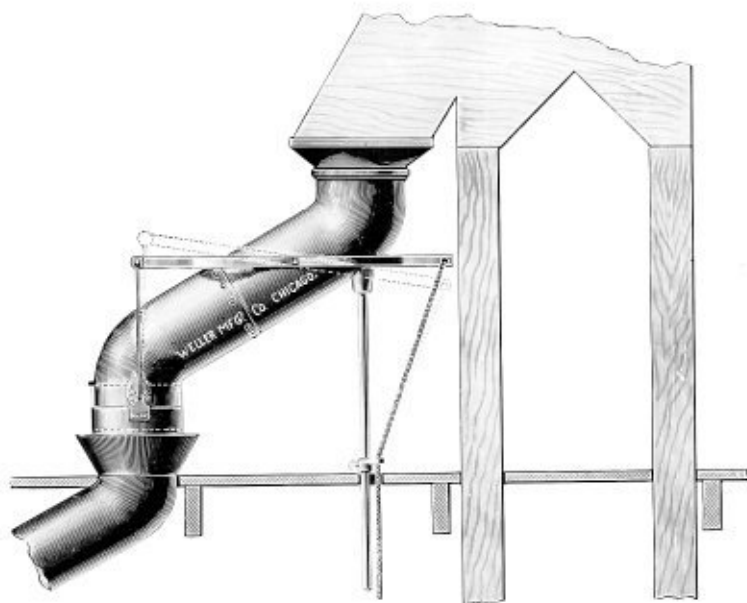


Fig. 142.

Instead of raising the entire Spout in order to clear the different bin ducts, with this Distributor only a short telescope sleeve fitted to the end of the elbow, as shown in the cut, is raised, requiring much less power to operate and dispensing with the loosely fitted extension to the Turn Head, which not only soon wears out, but allows the dust to escape without restriction.

This device may be fitted to any Turn Head or Distributing Spout at a comparatively small outlay, considering its advantages.

PRICE LIST.

Size, Inches.	Price.	Size, Inches.	Price.
6½	\$22.00	14	\$38.00
9	26.00	16	50.00
12	30.00		

THE REYNOLDS DISTRIBUTING SPOUT

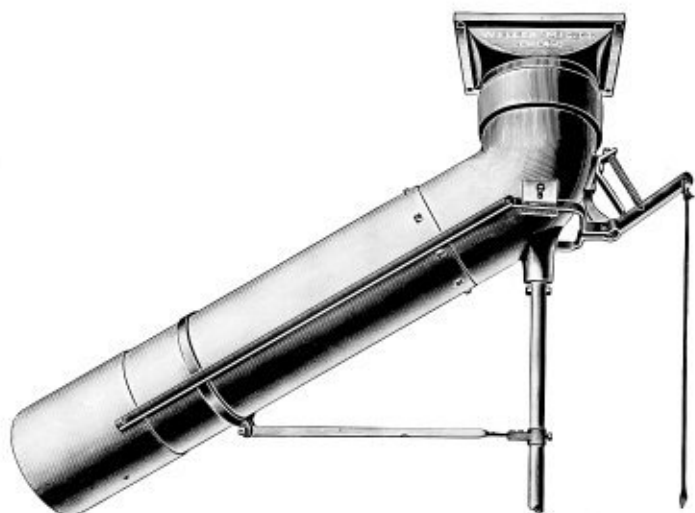


Fig. 143.

This Distributor is made with a straight discharge Spout the lower section being fitted with a telescope sleeve made to clear or enter any desired bin duct. It is very durable and easy to operate. We list below the sizes we are prepared to furnish:

PRICE LIST.

Size, Inches.	Price.	Size, Inches.	Price.
6½	22.00	14	\$38.00
9	26.00	16	50.00
12	30.00		

DISTRIBUTING SPOUTS FOR ELEVATOR HEADS

Style "A," all steel.



Fig. 144.

Style "B," with cast iron hopper and elbow.

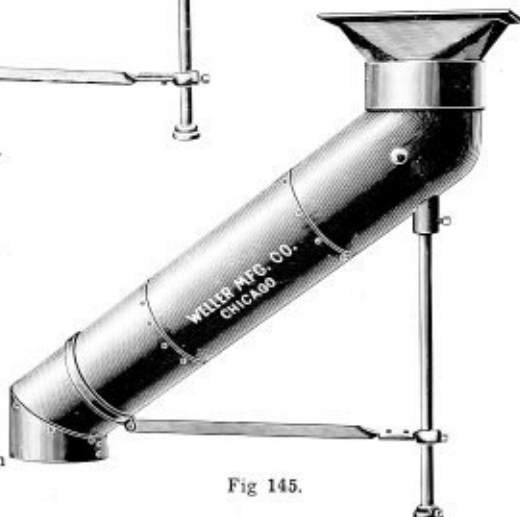


Fig. 145.

PRICE LIST AND DIMENSIONS.

Diameter of Spout Inside, Inches.	Center of Rod to Center of Discharge, Inches.	Top of Hopper to Bottom of Spout, Inches.	Price, All Steel.	Price, with Cast Iron Hopper and Elbow.
6½	30	33	\$ 9.00	\$12.00
9	36	41½	12.00	16.00
12	42	47½	16.00	20.00

The measurements from center of rod to center of discharge can be increased or decreased to suit customers, when so ordered.

HALL SIGNALING NON-MIXING DISTRIBUTOR



Fig. 146.

This device is made entirely of cast iron; and with all the parts included (which are furnished as enumerated below) makes a complete distributing system, which is unequalled in efficiency, accuracy and economy of operation.

It is operated from the working floor and locks automatically and accurately, and cannot be locked out of connection with some duct.

The operator on working floor is signaled when a bin is full, or a spout clogged.

Mixing is avoided and chokes due to back legging are prevented.

PRICE LIST.

For cups 10 x 6 and smaller.			For cups larger than 10 x 6			For filling Garners or Scales in large elevators.		
1907 No.	No. of Ducts.	Price List.	1907 No.	No. of Ducts.	Price List.	1907 No.	No. of Ducts.	Price List.
68	8	\$110.00	78	8	\$120.00	916	1	\$ 50.00
610	10	120.00	710	10	130.00	122	2	180.00
612	12	130.00	712	12	140.00	123	3	200.00
615	15	150.00	715	15	160.00	12=14	4	120.00
						99-20	20	400.00

These prices include hopper, spout, frame and frame bolts, distributing case, overflow funnel, 40 feet of operating rod (or pipe) with two special compression couplings, lever, dial board, cast elbow for overflow spout, and a set of numbered bin cards. Additional pipe and couplings extra.

THE HALL SIGNALING NON-MIXING DISTRIBUTOR

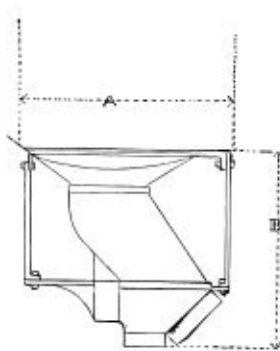


Fig. 16.

Cut showing space dimension
of gartner spout.

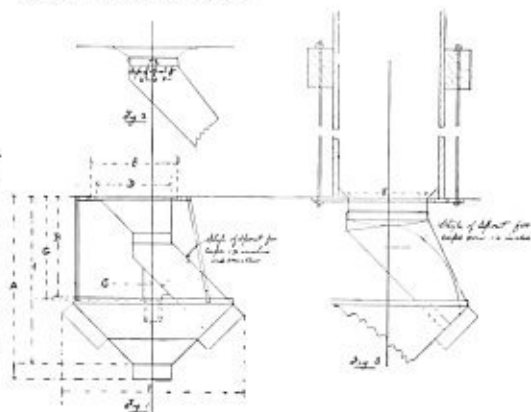


Fig. 12.

SIZES AND DIMENSIONS IN INCHES.

(See cuts—Figs. 12 and 16.)

No.	No. of Ducts.	Outside Diam. of Ducts, Inches.	Dimensions (A-K)								
			A	B	C	D	E	F	G	H	K
68 & 78	8	8½	29½	16	12½	12½	14½	29½	16½	27½	12½
610 & 710	10	8½	34½	19	16½	12½	14½	37	17½	31½	12½
612 & 712	12	8½	40½	21½	18½	12½	14½	41	17½	38	12½
615 & 715	15	8½	50½	26½	25	12½	14½	54½	17½	47½	12½
916	1	9 x 16	...	...	...	...	...	...	...	...	...
122	2	14½	44	40	Fig. 16	...	...	...	...	...	...
123	3	14½	44	40	" "	...	...	...	...	...	...
*12-14	4	12 x 14	...	...	...	...	...	...	...	...	...
99-20	20	9 x 9	92	92	42½	17	24	92	43	86	24

*Ear Corn Attachment—adds to height of the Distributor to which it is attached, 22¾ inches.

BALL BEARINGS FOR REVOLVING SPOUTS

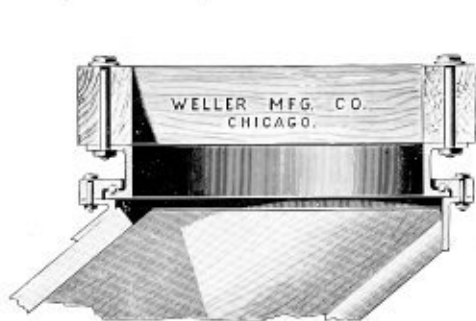


Fig. 147.

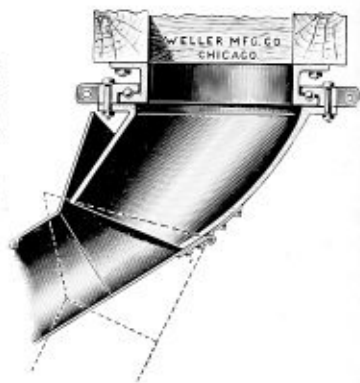


Fig. 148.

For Telescope Trolley, Dock and other heavy Revolving Spouts that are frequently handled, ball bearings are a decided improvement over the ordinary style. Spouts thus equipped may be handled more rapidly and with less power, besides the wear and tear is greatly reduced and the increased first cost is more than offset by the saving in the item of repairs.

BALL BEARING TURN HEADS

We have patterns for and are prepared to furnish our Turn Heads in the various sizes listed equipped with Ball Bearings.

PRICE LIST.



Fig. 149.

Size, Inches.	Price.
6	\$10.00
8	12.00
9	15.50
10	18.00
12	25.50
14	33.00
16	45.00

PLAIN SCALE HOPPER BOTTOMS.

Our Scale Hopper Bottoms are furnished with revolvers and slides. The accompanying illustration shows our plain standard pattern.

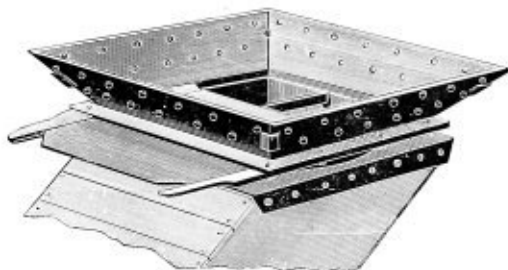


Fig. 150.

PRICE LIST.

10-inch	\$12.00	18-inch	\$22.00
12 "	14.00	20 "	30.00
14 "	16.00	24 "	42.00

BALL BEARING SCALE HOPPER BOTTOMS.

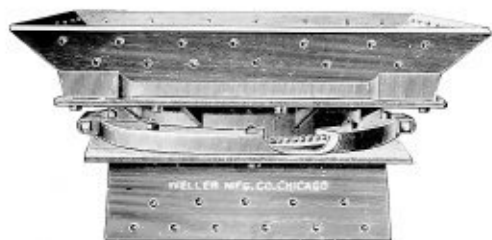


Fig. 151.

We illustrate above our Ball Bearing Scale Hopper Bottoms which are of a style very extensively used, especially in the larger sizes.

Prices quoted upon receipt of specifications.

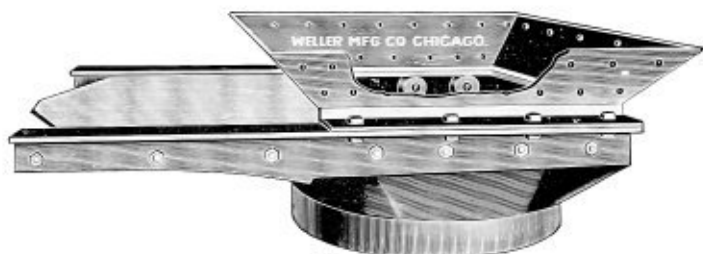
ROLLER BEARING SCALE HOPPER BOTTOM

Fig. 152.

This style of Hopper Bottom is a decided improvement over the ordinary type being easier to operate and will not leak or bind. When desired for steel construction, it can be provided with a round hopper. Turn heads can also be fitted if desired.

PRICE LIST.

Size of Round Opening, Inches.	Price with Turn Head.	Price without Turn Head.
12	\$30.00	\$25.00
16	50.00	36.00
22	80.00	50.00

**DOCK SPOUTS FOR LOADING
VESSELS**

Fig. 153.

Our Dock Spouts are of an improved, extra heavy pattern. The swivel or turn heads are made with either plain or ball bearings, as may be specified. We are also prepared to furnish the heavy steel telescope spouts and the necessary tackle for handling them that go towards making up the complete equipment.

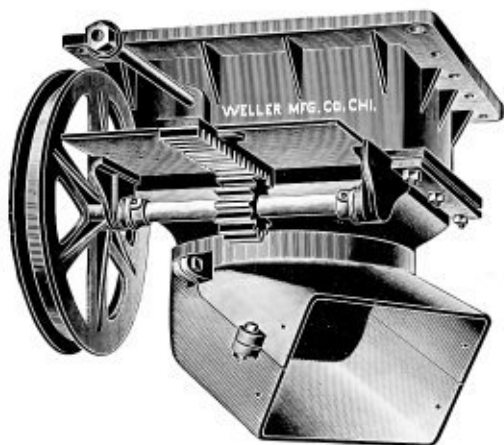
RACK AND PINION BIN BOTTOMS.

Fig. 154.

This Bin Bottom is operated by means of a rope around the flanged wheel shown in illustration, which is fastened to the pinion shaft, the pinion in turn operating the rack which is fitted to the steel slide. We furnish the above with hoppers for either wood or steel construction.

PRICE LIST.

12-inch	\$40.00
16-inch	50.00
20-inch	75.00

BIN OUTLET GATES.

Below we illustrate two styles of Steel Bin Outlet Gates intended for bins holding coal, stone, sand, etc.

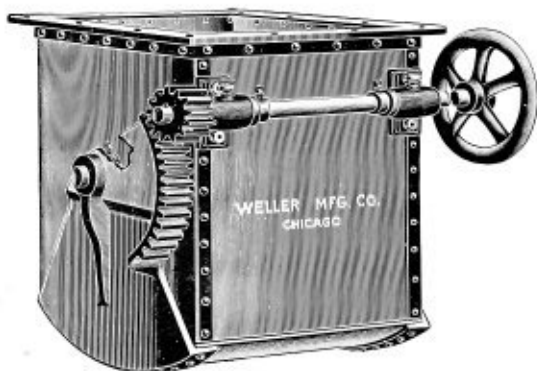


Fig. 155.

Rack and Pinion Outlet Gate.

This Gate is of heavy construction, the hopper being made of steel plates reinforced with angle iron corners.

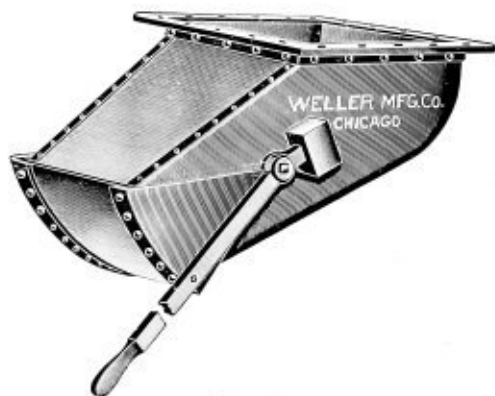


Fig. 156.

Bin Bottom Under-Cut Gate.

We are prepared to design and furnish Bin Outlet Gates for any class of service and to suit local conditions.

FOUR-WAY BIN BOTTOMS WITH SLIDES AND CONNECTIONS.



Fig. 157.

PRICE.

With four 12" x 12" Inlets and 15½" Outlet.....\$30.00

PLAIN BIN BOTTOMS.



Fig. 158.

PRICE LIST, INCLUDING SLIDE.

Size.	Price.
9-inch	\$ 7.00
10 "	8.00
12 "	10.00
14 "	12.00
18 "	16.00
20 "	20.00
24 "	28.00

IMPROVED GARNER BOTTOMS.
With Roller Bearing Slides.

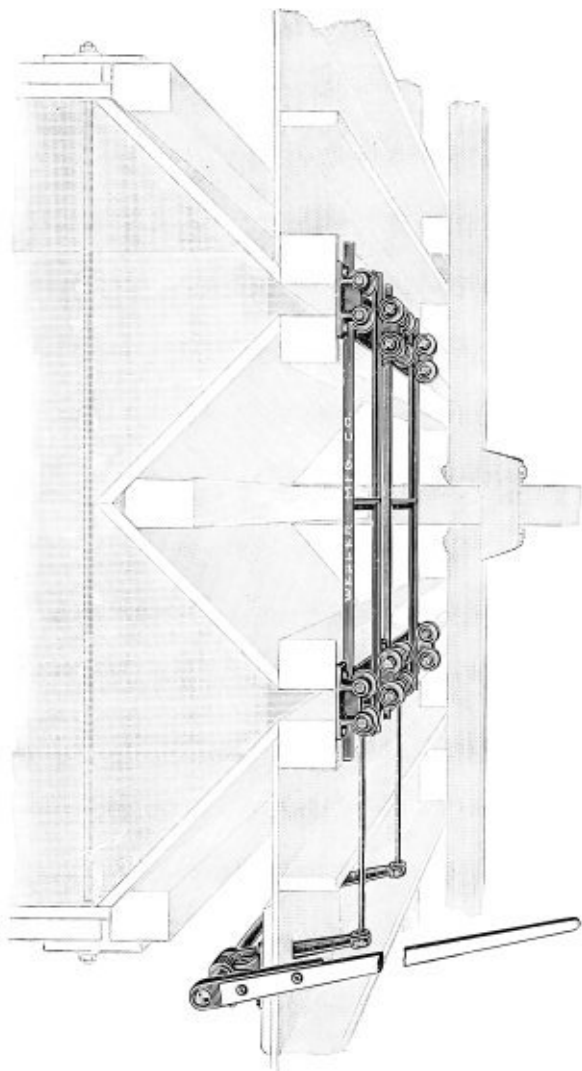


Fig. 159. Double Garner Bottom.

We have patterns for and are prepared to furnish both Single and Double Garner Bottoms, with slides of the style shown in the above illustration. The slides, running on roller bearings, operate with comparative ease and for Garners of large capacity are indispensable. Prices quoted upon receipt of specifications.

STANDARD AND TELESCOPE FLEXIBLE CAR LOADING SPOUTS

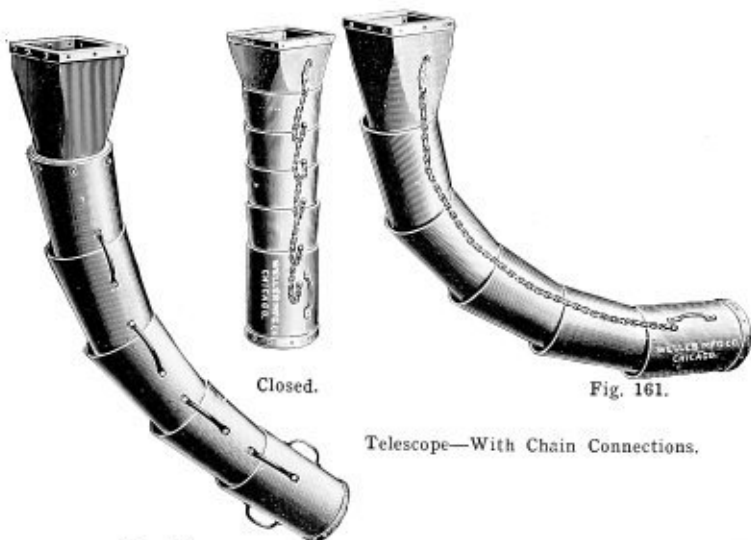


Fig. 160.

Standard—With Link Connections.

Fig. 161.

Telescope—With Chain Connections.

We furnish the above Spouts in any length, diameter or gauge of steel but list below only the standard sizes.

PRICE LIST.

Either Style.

Diameter in Inches.	Length in Feet.	Gauge of Steel.			
		No. 18.	No. 16.	No. 14.	No. 12.
6	5	\$ 8.50	\$10.00	\$13.00	\$17.00
6	6	10.20	12.00	15.60	20.40
6	8	13.60	16.00	20.80	27.20
8	6	10.50	12.00	16.00	21.00
8	8	14.00	16.00	21.35	28.00
8	10	17.50	20.00	26.70	35.00
10	6	11.60	12.85	16.35	21.40
10	7	13.50	15.00	19.00	25.00
10	8	15.45	17.15	21.75	28.55
10	10	19.30	21.45	27.20	35.70
12	8	18.50	20.00	25.00	30.00
12	10	23.10	25.00	31.30	37.50

In ordering give the size of the down spouts to which the above are to be fitted.

BIFURCATED CAR-LOADING SPOUTS WITH SQUARE OUTLETS.



Fig. 162.

We manufacture these Spouts, as illustrated above. In different downspouts there is a tendency on the part of the grain to flow in a heavier volume on one side of the spout than another. To properly regulate this so that the flow through both outlets may be uniform it is necessary to adjust the valves accordingly. When once properly adjusted, however, no further attention is necessary.

When worn out the linings may be renewed (see page 193.)

PRICE LIST.

Price, complete as shown in illustration.....\$50.00

LININGS FOR BIFURCATED CAR-LOADING SPOUTS

For Square Outlets

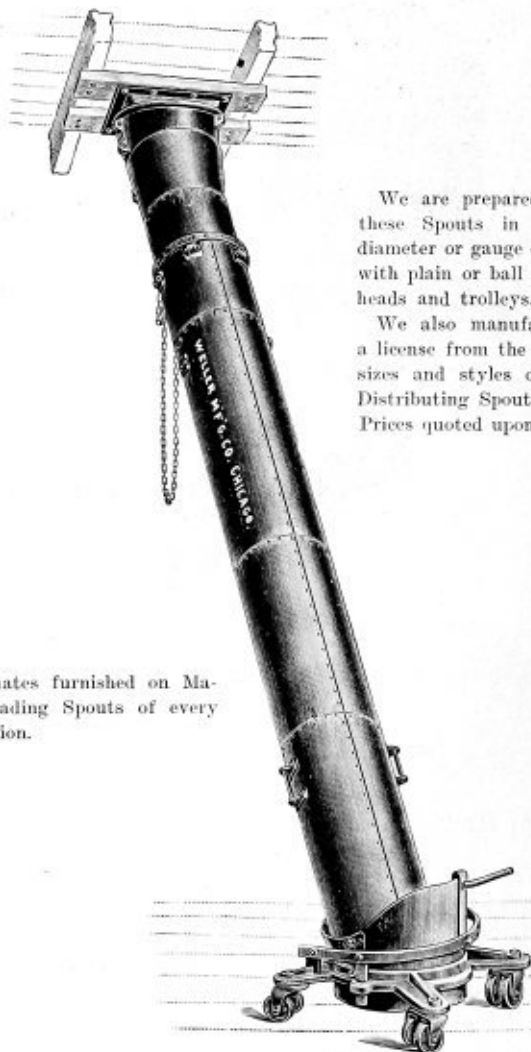


When ordering Linings always state the style of Spout for which they are intended and number of part required as shown in illustrations.

For Round Outlets

We illustrate Linings for Bifurcated Car-Loading Spouts with round outlets, which type of Spout was listed by us in former catalogues. We are still prepared to furnish the necessary Linings for these Spouts, although the latter have been practically superseded by those with square outlets.



TELESCOPE TROLLEY SPOUTS.

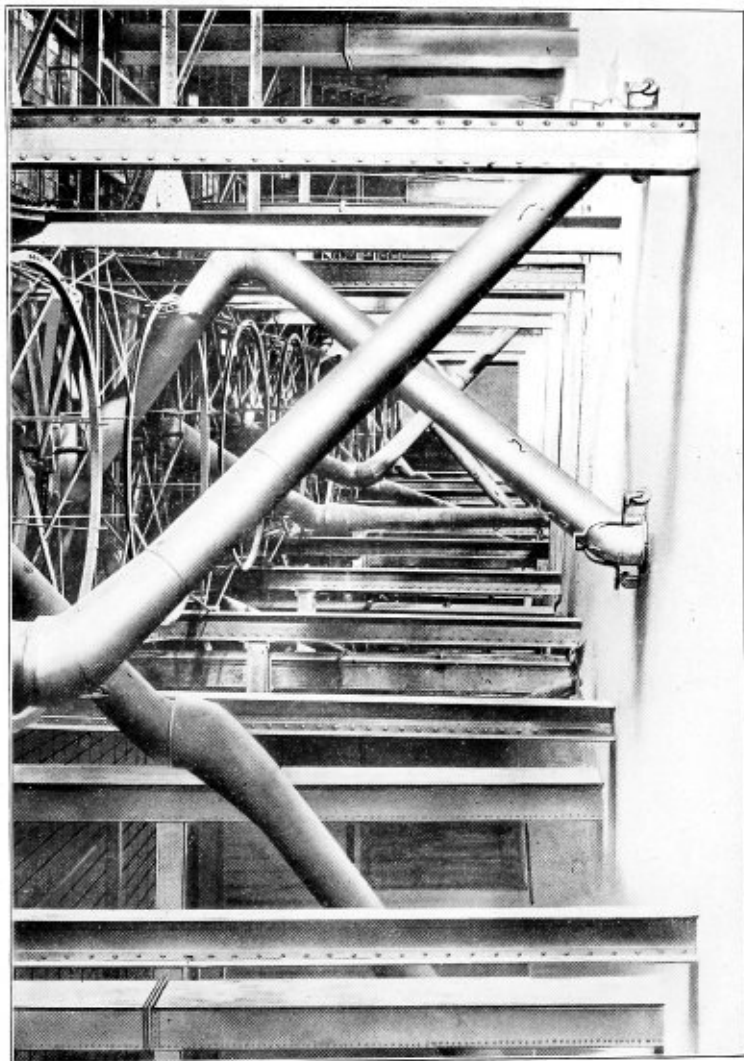
We are prepared to furnish these Spouts in any length, diameter or gauge of metal and with plain or ball bearing turn heads and trolleys.

We also manufacture under a license from the patentee, all sizes and styles of the Mayo Distributing Spout.

Prices quoted upon application.

Estimates furnished on Marine Loading Spouts of every description.

Fig. 163.

MAYO DISTRIBUTING SPOUTS

The above illustration shows a system of Mayo Distributing Spouts in position and ready to operate.

PORTABLE STEEL SPOUTS.

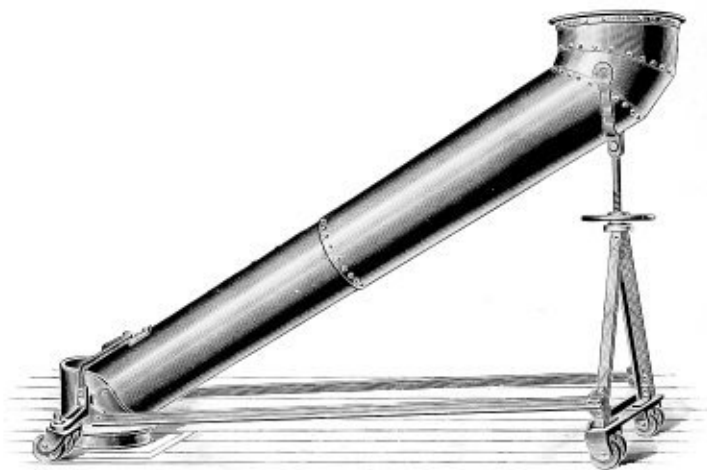


Fig. 164.

Large Portable Steel Spout Mounted on Carriage.

Conditions are frequently such in large grain elevators that a Portable Spout of this character will do the work of the more expensive Mayo or Standard Telescope Trolley Spouts.

The Spout can be handled by one man with ease being mounted on a four wheel carriage as shown in the illustration. Any desired size will be furnished to order.

Light Portable Steel Spout.



Fig. 165.

The above style of spout is furnished by us in any length or gauge of steel to suit customers' requirements. State particulars for quotations.

PLAIN RIVETED PIPE



Fig. 166.

We have special facilities for making Plain Riveted Pipe any diameter and gauge of material required. See price list below for Standard sizes and gauges.

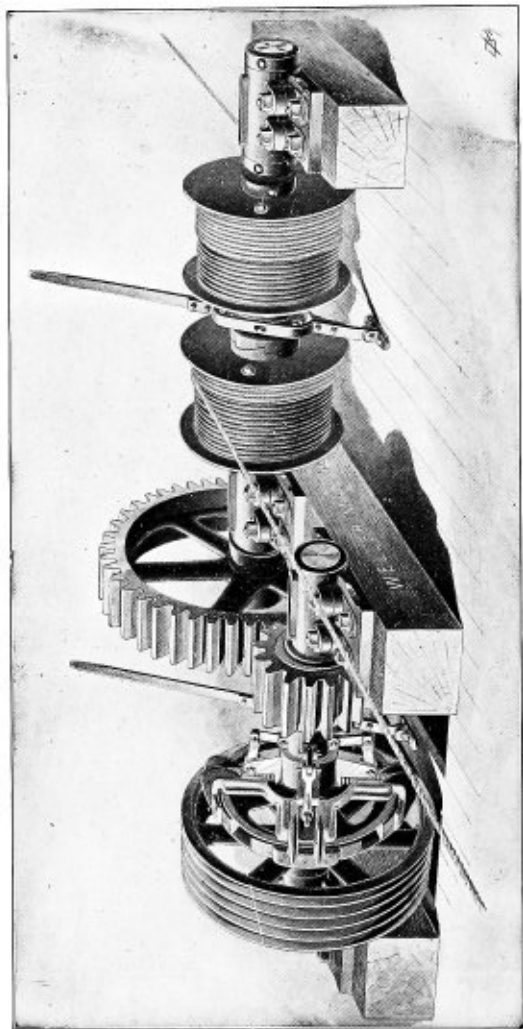
SPIRAL RIVETED PIPE

We are prepared to furnish Spiral Riveted Pipe up to 40 inches in diameter. We list below the sizes generally used. Prices of larger sizes furnished upon receipt of specifications.

PRICE LIST.
Plain and Spiral Riveted Pipe.

Size.	B. W. Gauge.	Asphalted.	Galvanized.	Approximate Weight Per Foot. Lbs.	Size.	B. W. Gauge.	Asphalted.	Galvanized.	Approximate Weight Per Foot. Lb.
3 in. Diam.	24	\$0.23	\$0.30	1.00	8 in. Diam.	22	\$0.61	\$0.75	3.00
	22	.27	.32	1.30		20	.66	.85	3.60
	20	.30	.38	1.50		18	.81	1.05	4.60
	18	.37	.46	1.85		16	1.01	1.28	6.50
4 in. Diam.	24	.29	.38	1.30	14	1.23	1.50	8.25	
	22	.34	.43	1.60	12	1.63	2.30	10.00	
	20	.39	.48	2.00	9 in. Diam.	22	.69	.90	3.40
	18	.46	.58	2.45		20	.75	.97	4.10
16	.54	.70	3.20	18		.91	1.18	5.25	
5 in. Diam.	24	.35	.45	1.60		16	1.17	1.47	7.50
	22	.42	.53	2.00	14	1.41	1.70	9.25	
	20	.45	.60	2.50	12	1.79	2.50	11.80	
	18	.55	.70	3.00	10 in. Diam.	22	.75	1.00	3.80
16	.65	.85	4.15	20		.82	1.05	5.00	
6 in. Diam.	24	.39	.50	1.85		18	1.00	1.30	5.75
	22	.46	.60	2.30		16	1.25	1.55	8.00
	20	.52	.68	3.00	14	1.50	1.80	10.25	
	18	.63	.85	3.60	12	2.00	2.75	13.00	
7 in. Diam.	16	.76	1.00	5.00	11 in. Diam.	20	.89	1.20	5.50
	14	.95	1.15	6.10		18	1.06	1.40	6.25
	12	1.31	1.90	8.00		16	1.31	1.70	8.50
	8 in. Diam.	24	.52	.65		2.60	14	1.61	1.95	11.25
20		.58	.75	3.25	12	2.36	3.00	14.25	
18		.70	.90	4.00	12 in. Diam.	20	1.02	1.35	6.00
16		.87	1.15	5.50		18	1.27	1.65	7.50
14	1.09	1.35	7.00	16		1.57	2.05	10.25	
12	1.47	2.10	9.10	14		1.92	2.35	13.25	
					12	2.62	3.25	17.00	
					10	2.94	3.99	21.00	

The above prices are for slip or plain joints and for pipe of standard lengths. Prices with flange or bolted joint connections quoted upon application.

WIRE ROPE CAR PULLER, WITH DOUBLE DRUMS.**Fig. 167.**

The above illustration shows our Wire Rope Car Puller made with double drums, the latter being arranged to operate alternately. We also build these machines with each drum provided with an independent clutch, permitting both to be operated at the same time. We have patterns for and are prepared to furnish these Car Pullers with a capacity of over sixty loaded cars. The rope drums are made either plain or grooved as may be desired. We can also build the above machines with any modifications to best suit local conditions. Prices quoted upon application.

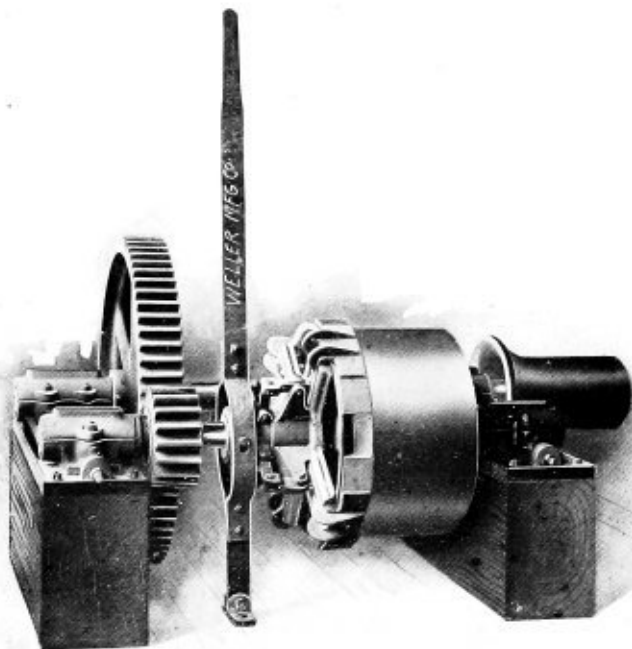
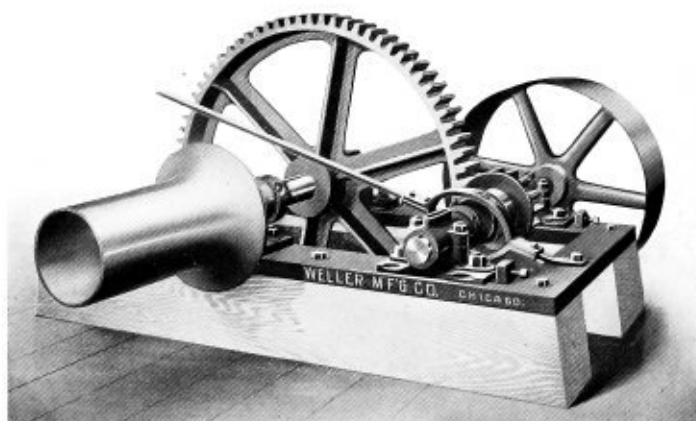
WELLER STANDARD CAR PULLER.**With Friction Clutch.**

Fig. 168.

Above we show a Weller Standard Car Puller with friction clutch attached. We also furnish this machine with jaw clutches at a lower price.

Our Car Pullers are made with extra heavy bearings and gears, and have been known to haul almost double their rated capacity. This is not to be recommended, however, and we do not guarantee them beyond the capacity specified.

For price list see page 202.

WELLER STANDARD CAR PULLER.**With Jaw Clutch.****Fig. 169.**

We build this Car Puller in several sizes as will be noticed by the price list contained on page 202. It is of modern design, powerful and durable and is very conservatively rated as to capacity.

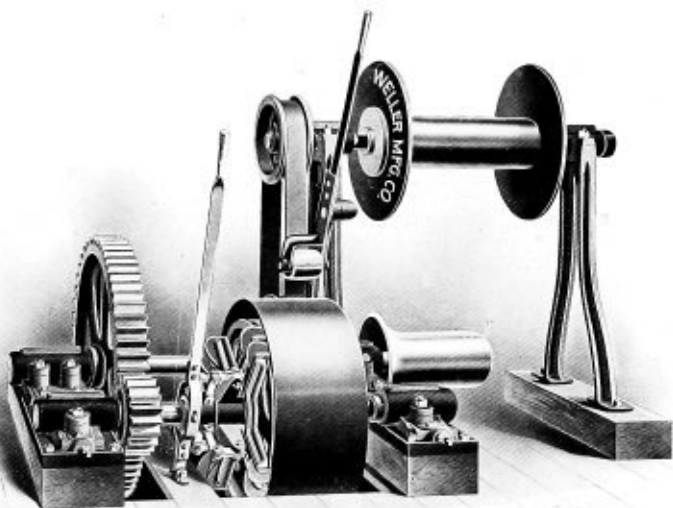
WELLER SAFETY CAR PULLER.

Fig. 170.

Weller Safety Car Puller, with self-contained drum for taking up the slack rope. When desired we can furnish the drum with hangers, permitting it to be suspended from over head and entirely independent of the Car Puller.

Safety Drum can be suspended from ceiling if desired.

In other respects this machine is similar to our Standard Car Puller.

For price list see page 202.

PRICE LIST OF
**WELER STANDARD AND SAFETY CAR
 PULLERS**

Shown on pages 199, 200 and 201.

No.	Capacity Loaded Cars	Size of Pulley on Pinion Shaft, Inches	Revolutions per minute of Pinion Shaft	Price with Jaw Clutch	Price with Safety Device attached	Price with Friction Clutch	Price with Safety Device attached
1	3	16 x 6	225	\$100.00	\$160.00	\$120.00	\$180.00
2	8	20 x 10	225	150.00	210.00	195.00	255.00
3	12	24 x 12	200	230.00	300.00	290.00	360.00
4	18	30 x 14	200	350.00	425.00	400.00	

Double Sheave Frames and Rope not included in above price lists.

The capacities given are based on straight and level track in good condition.

CAR PULLER LEAD SHEAVES
 WITH CAST IRON FRAME.



Fig. 171. Double.

Fig. 172. Single.

Groove in Sheaves made for either Manilla Rope or Wire Cable.

Style	Diameter of Sheaves, Inches	Price	Style	Diameter of Sheaves, Inches	Price
Double	12	\$25.00	Single	12	\$15.00
"	18	50.00	"	18	30.00

FRIEDLINE RADIAL CAR PULLER SHEAVE

For Wire Rope



Fig. 173.

This device is intended for use in connection with any style of wire rope car puller.

The upper sheave and housing, the latter mounted on friction rollers, revolve on the cast iron base and the sheaves are always in a direct line with the cable when pulling from any direction.

PRICE LIST.

Size, Inches	Capacity Cars	Dia. of Cable, Inches	Price
16	Up to 25	$\frac{1}{2}$ to $\frac{3}{4}$	\$100.00

FORGED CAR PULLER HOOKS



Fig. 174.

We show above our special forged Car Puller Hook. A rope-thimble is secured to the eye of hook, and if desired we can splice rope to the hook, for which an additional charge is made.

PRICE LIST OF HOOKS.

Medium size, \$7.50; Extra heavy, \$10.50.

Special sizes or shapes forged to order. Medium size is $5\frac{1}{2}$ x14 inches. Extra heavy size is 8x16 inches.

The above prices include thimbles.

WINDING DRUMS.

For Malt Shovels or Power Scrapers.

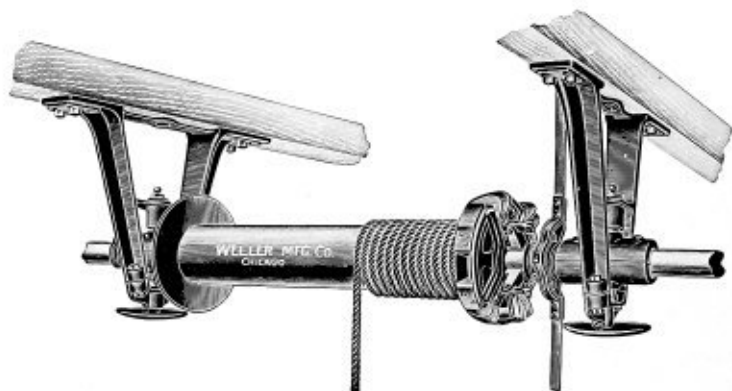


Fig. 175.

Friction Clutch Winding Drum Suspended from Ceiling.

We build these Drums in various diameters and lengths, and of wood or iron to suit requirements. They may be used in connection with ceiling, wall or floor brackets and driven by means of friction clutches, jaw clutches, paper and iron frictions or tight and loose pulleys. Simple mechanisms may be arranged to control the operation of the drum from any reasonable distance.

Although principally used for scraping malt floors, it will readily be seen that they may be applied to numerous other purposes, with possibly slight modifications, to good advantage. State requirements and prices will be promptly quoted.

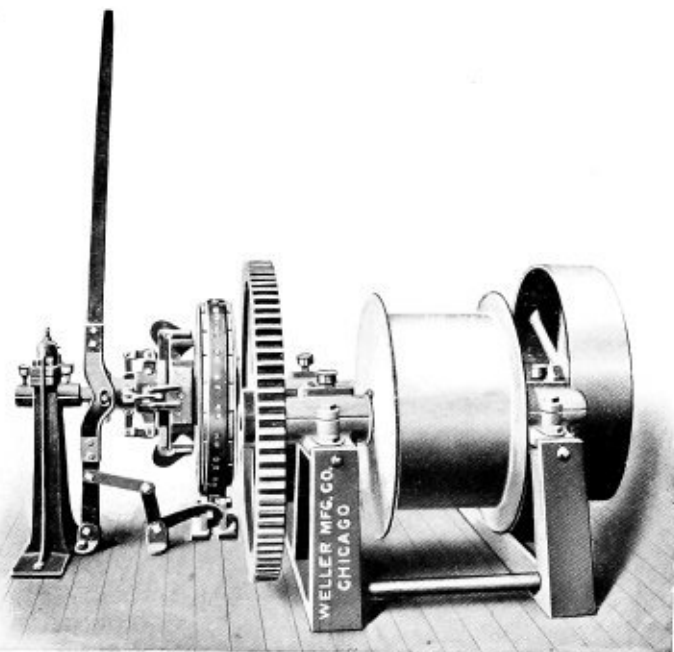
MARINE LEG HOIST.

Fig. 176.

Above we illustrate a Single Drum Marine Leg Hoist built by us for an Eastern grain elevator. This Hoist is operated by one lever, and when the leg is raised to the proper height, the friction clutch is disengaged and the band brake is set, holding the leg in position by one movement of the lever. When it is desired to lower the leg this is accomplished by throwing the lever forward far enough to release the brake sufficiently for the purpose without engaging the friction clutch. We are prepared to build Marine Leg Hoists, Ship Shovels and the necessary fittings for legs of any desired capacity.

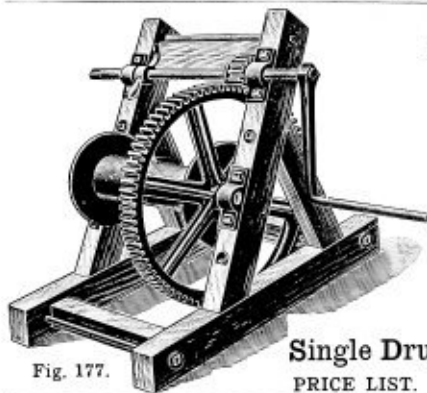


Fig. 177.

HAND AND POWER WINCHES

We are prepared to design and build Hand and Power Winches to suit special conditions. We are also prepared to furnish Standard Winches at favorable prices.

Single Drum Hand Winches

PRICE LIST.

Size.	Kind of Rope.	Diam. of Drum, Inches.	Length of Drum between Flanges, Inches.	Load for Two Men Single Line, lbs.	Load for Two Men Single Block, lbs.	Price Each.
AA	.....	5	17	1000	2000	\$28.00
A	Man.	6	21	1700	3400	35.00
B	"	6	26	1700	3400	37.00
C	"	6	30	1700	3400	38.00
D	Wire	9	16	1200	2400	35.00
E	"	9	21	1200	2400	37.00

For Brake, Brake Band and Wheel Band, add \$8.00 to above list.

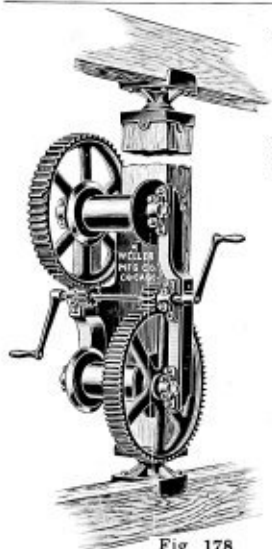


Fig. 178.

Double Drum Hand Winch. Price \$100.00.

LOCOMOTIVE JACK SCREWS



Fig. 179.

Prices quoted upon application.

WELLER SINGLE DRUM FRICTION HOIST

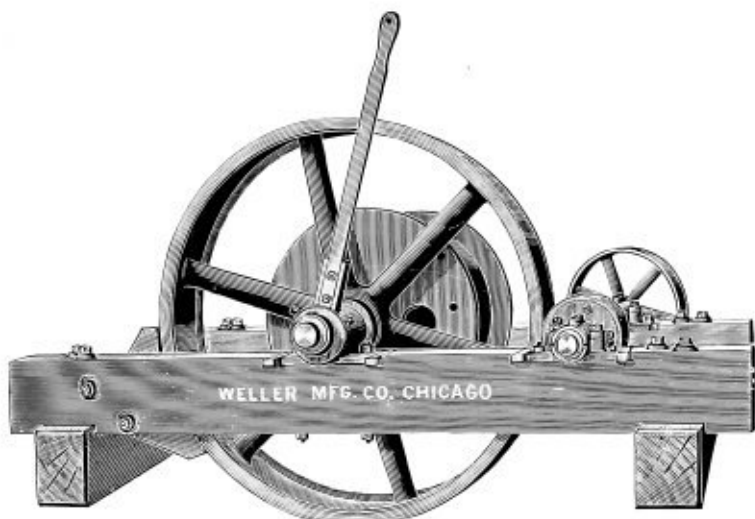


Fig. 180.

Our Single Drum Friction Hoist, as shown above, is a very efficient apparatus and is the best of its kind for use about stone-crushing plants in handling the cars loaded with material and elevating them up an incline from any part of the quarry and discharging their contents in the breakers. By releasing the lever the cars are immediately returned down the incline back to the quarry to be reloaded with stone.

We build these Hoists in several sizes and suitable for any length and size of cable.

No.	Size of Drum.	Price.	Size of Paper Friction.	Size of Iron Friction.	Weight, lbs.	Revolutions of Pinion Shaft.
1	24 x 24	\$300.00	12	54 x 8	3000	288
2	24 x 30	320.00	12	54 x 8	3200	288
3	24 x 36	340.00	12	54 x 8	3500	288
4	36 x 36	550.00	12	80 x 10	7000	285
5	36 x 42	575.00	12	80 x 10	7300	285
6	36 x 48	600.00	12	80 x 10	7700	285

WIRE ROPE DOUBLE DRUM HOIST.**Fig. 181.**

The above Hoist was built by us for the purpose of operating cars on an incline car-haul. We design special Hoists of this character to suit requirements.

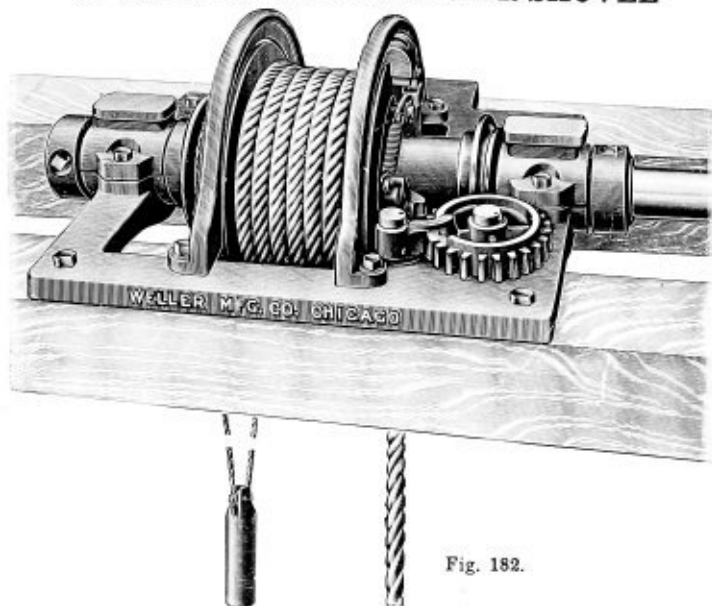
WELLER IMPROVED POWER SHOVEL

Fig. 182.

The Weller Improved Power Shovel has many points of advantage over other Shovels of this character now on the market.

In this machine, the winding drum is centrally located in the supporting frame which obviates the necessity of right and left hand shovels. It also occupies much less space than is required by others as a comparison of dimensions will divulge.

The clutch, which is located within the winding drum, is so designed that when engaged, it drives with the full area of the surface of the jaws, thus reducing the wear to a minimum. In place of a chain which is generally used with Shovels of other design to operate the clutch a worm gear actuates the stop lever and is naturally more accurate in its operation, which is essential for the successful operation of an automatic machine.

The Shovel is heavily constructed throughout, all vital parts being made of tool or cast steel and before offering it to the trade we have thoroughly tried it out in many severe tests.

We highly recommend these Shovels and shall be pleased to furnish them on trial under a full guarantee of satisfaction to any parties in the market for one or more Shovels.

PRICE LIST.

Single Shovel.....\$100.00 Double Shovel.....\$200.00

The above price list includes the following fixtures with each Single Shovel:

One scoop, 35 feet of rope, scoop chain, two horizontal sheaves, one swivel sheave and shaft with sufficient projection to receive driving pulley. An extra charge is made for the driving pulley, the amount depending upon the size required.

CLARK AUTOMATIC POWER SHOVELS.

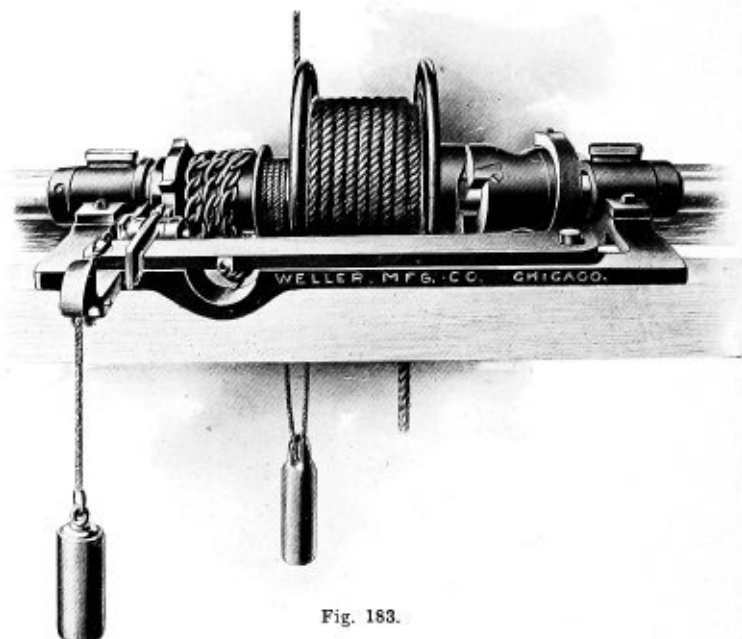


Fig. 183.

The above illustration shows one of our Single Clark Automatic Power Shovels. They are generally used in pairs, both being placed on the same shaft, side by side. They are perfectly automatic in action and may be adjusted to throw in or out of gear at any desired point. A double shovel operated by two men will unload a car in about five minutes and a single machine with one man in about fifteen minutes.

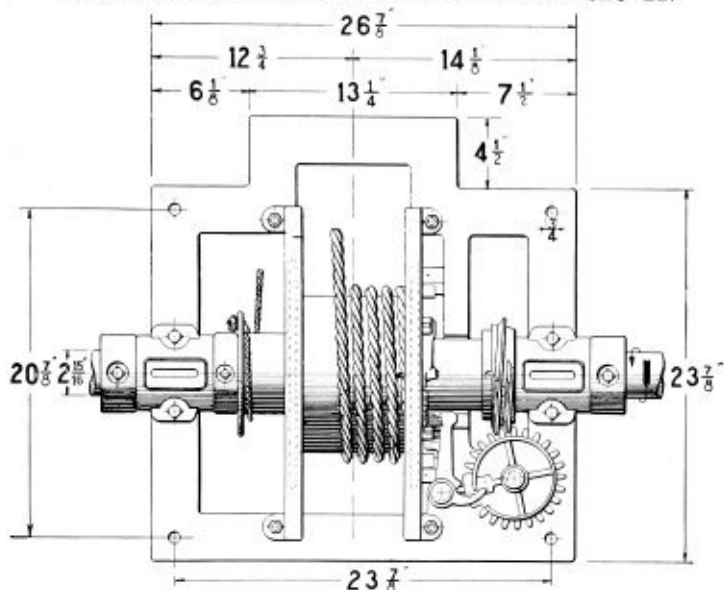
PRICE LIST.

Single Shovel.....	\$100.00	Double Shovel.....	\$200.00
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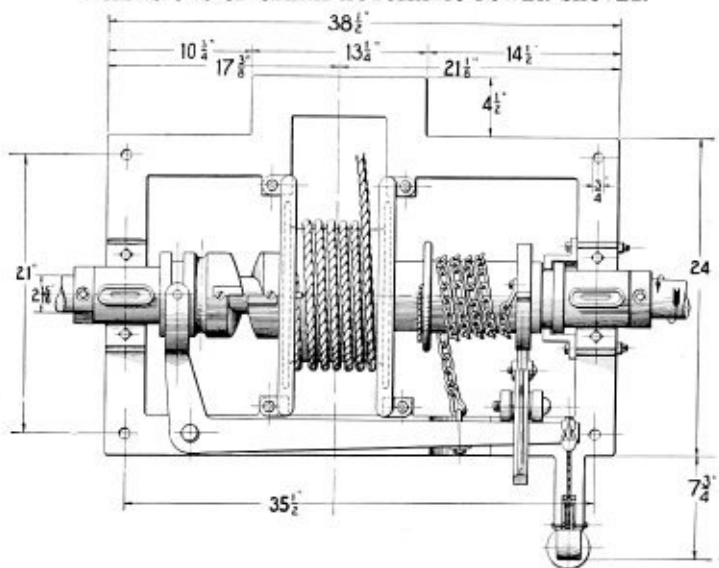
The above price list includes the following fixtures with each single shovel: One scoop, 35 feet of rope, scoop chain, two horizontal sheaves, one swivel sheave and shaft with sufficient projection to receive driving pulley. An extra charge is made for the driving pulley, the amount depending upon the size required.

We manufacture Ship Shovels, also the necessary Steel Scoops, Clamps, Chains, etc. Prices quoted on application.

DIMENSIONS OF WELLER IMPROVED POWER SHOVEL.



DIMENSIONS OF CLARK AUTOMATIC POWER SHOVEL.



DIRECTION FOR SETTING UP WELLER IMPROVED POWER SHOVEL

All shovels are tested and properly adjusted at the factory. Instructions given below should be followed in setting up the shovel, to operate satisfactorily.

Where two or more shovels are placed on the same line shaft, it is important to have all bearings in proper alignment to avoid bearings running hot and unnecessary strain on frames.

To attach machine on shaft, remove guards and bearing caps, unscrew loose flange on spool, slip the loose flange, clutch hub and spool onto shaft and place clutch hub inside of spool so that feather key will have equal clearances at each end of spool hubs. Attach loose flange to spool, place safety collar on shaft between loose flange on spool and bearing on frame, tighten set screw on collar so that shaft can not move endwise.

The shaft and spool should be placed on the frame so that the projecting lug on dog or pawl will rest against stop-lever with clutch disengaged. Have spool work freely on shaft. Attach caps and guards.

Wind shovel rope on spool so that the rope will leave spool on side opposite from stop-lever. Attach one end of counter-weight rope to flange on small spool so that it will wind in opposite direction from the shovel rope. Place counter-weight on rope and fasten other end of rope to any convenient place.

The counter-weight should hang sufficiently low so that when the shovel rope is all off the large spool, the counter-weight will be at its highest point.

Keep bearings of all moving parts well lubricated. When shovel rope is pulled into the ear the spiral gear on spool moves worm gear, which in turn moves stop-lever out of way for lug on pawl and when slack is given to the shovel rope the counter-weight gives a reverse motion to spool, causing trigger to engage one of the three lugs which are fastened in frame, and release the pawl, which instantly engages the clutch and sets the machine in motion.

The spool being reversed will cause the worm-gear to move in the opposite direction which will, at the proper time, bring the stop-lever in line to engage lug on pawl, and throw the clutch out of gear.

DIRECTIONS FOR SETTING UP CLARK POWER SHOVEL.

The frame of shovel should rest on 4 x 8 timbers, supported from the floor or suspended from the ceiling at any height desired. The shovel should be bolted to the frame.

After securing one end of the shovel rope to scoop chains, place the scoop in car door at the point where it should stop when bringing the load to the hopper. Lead the other end of the rope through the sheaves to the drum; lap all the loose rope around the drum and fasten to the link which is screwed to the drum.

Wind the chain around the smaller drum and fasten the end to hook in clutch lever. Particular attention and care should be taken to wind it so that when hooked to the lever the lead of chain is from the lower side of drum NOT FROM UPPER. Attach the larger weight to the other hook and lever, placing the rope over small sheave in shovel frame.

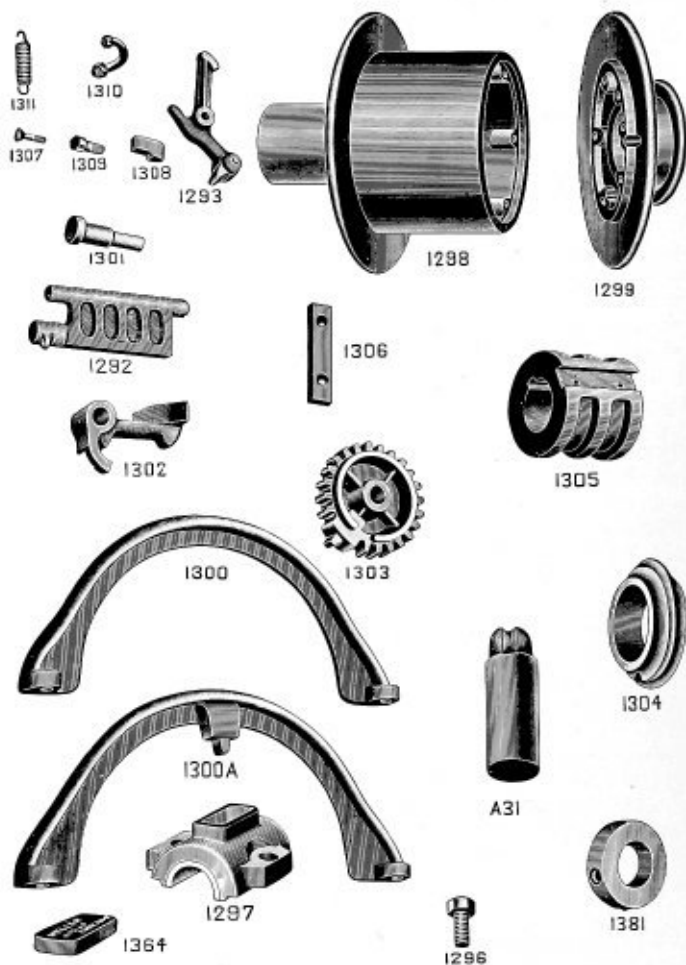
In this position the rope will be on the drum, the chain wound around the smaller drum and hooked to lever, (thus keeping the clutch out of gear) and the scoop at the car door. Attach one end of the counter-weight rope to the link on small spool from the side OPPOSITE to that on which the scoop rope leads to the large drum (so that as one winds the other unwinds). The other end of counter-weight rope is attached to any convenient place on which the weight with small sheave runs. The counter-weight should hang sufficiently low so that when the rope is all off the large drum, the counter-weight will be at its highest point.

As a new shovel rope stretches badly, thus leaving the scoop too far back in the car, it will be necessary to unscrew the link connection from the drum when the rope is all off and lap it sufficiently around it to take up the stretch and screw the link in another hole.

There is an oil hole at each end of spool. Keep well lubricated.

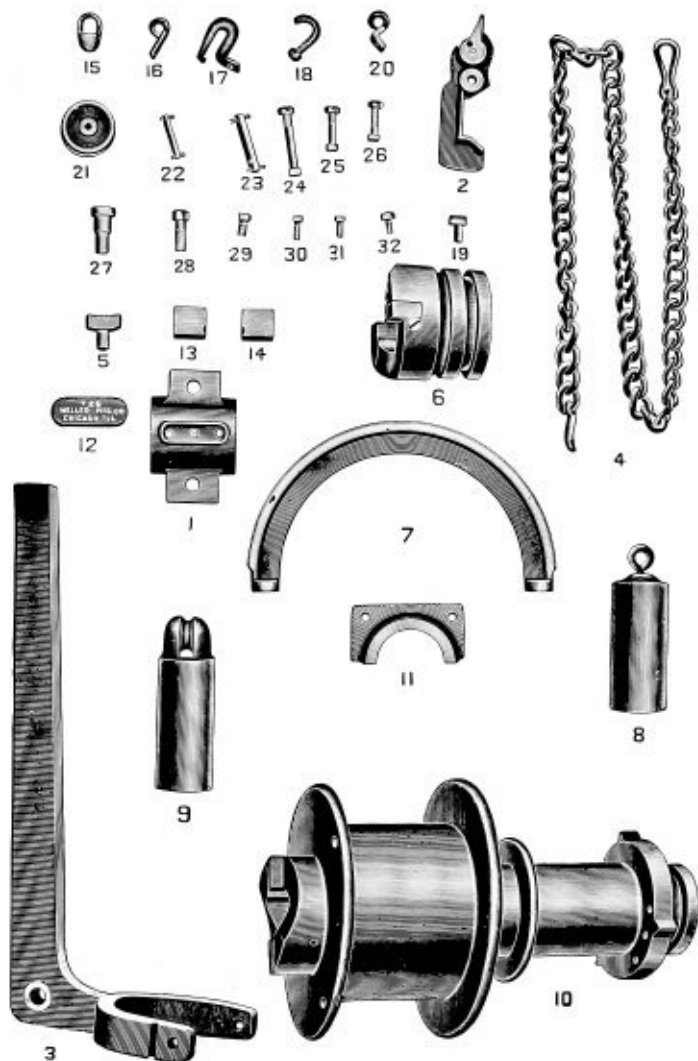
To throw the clutch into gear, the shoveler when putting the scoop into the grain should give it a sharp throw, thus giving slack to the rope which allows the counter-weight to reverse the drum, thus throwing the clutch into gear.

REPAIRS FOR WELLER IMPROVED POWER SHOVELS.



To avoid possible misunderstandings and errors in filling orders, we would request customers to ORDER REPAIRS BY NUMBER ONLY.

REPAIRS FOR CLARK POWER SHOVELS.



To avoid possible misunderstandings and errors in filling orders, we would request that customers ORDER REPAIRS BY NUMBERS ONLY.

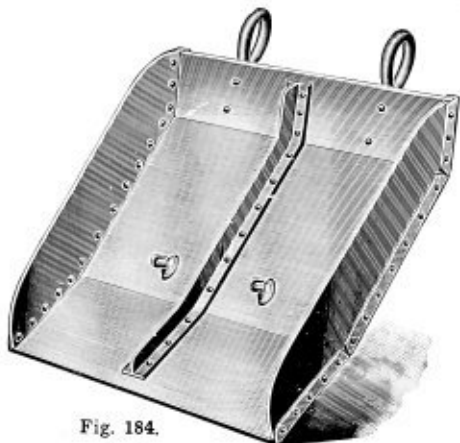
STEEL SCOOP FOR POWER SHOVELS.

Fig. 184.

Steel Scoops are used in connection with Power Shovels for handling material other than grain, chiefly coal, sand, gravel, etc. Our Scoops are made to withstand the rough usage to which they are subjected. Made in various sizes and gauges of steel.

Prices quoted upon application.

EAR CORN SCOOP FOR POWER SHOVELS.

Fig. 185.

Price each.....\$15.00

APPLIANCES USED WITH POWER SHOVELS.



Fig. 186. Wood Scoops.

Price, for Grain, each..... \$ 3.50
 Price, for Ear Corn, each..... 15.00
 Wood Handles, per pair..... .75
 Iron Handles, per pair..... 1.00



Fig. 187. Scoop Chains.
 Price, each.....\$1.50



Fig. 188. Hickory Scoop Handles.
 Per pair.....\$0.75



Fig. 189. Malleable Hooks.
 Price, each.....\$0.40



Fig. 190. Leading Sheave in Frame.
 Price, each.....\$4.00



Fig. 191. Double Leading Sheave in Frame.
 Price, each.....\$6.00



Fig. 192. Adjustable Universal Sheave.
 Price, each.....\$7.50



Fig. 193. Swivel Sheave.
 Price, each.....\$4.50

THE WELLER COMPOUND FRICTION CLUTCH.



Fig. 194. Side View.



Fig. 195. End View.

The Weller Compound Friction Clutch is designed expressly for high speeds and large powers. Although listed and offered to the general trade by us for the first time, this Clutch has been thoroughly tried out and perfected in all details.

The Clutch is made with two sets of wedge or "V" shaped wooden shoes extending around its entire circumference which gives it nearly twice the bearing surface as compared with Clutches of corresponding diameter made with flat friction surfaces and consequently, a proportional increase in power.

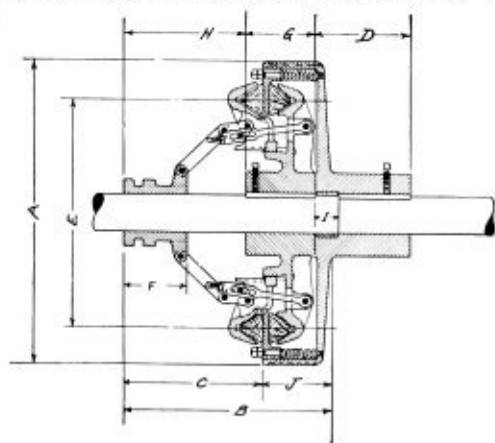
When used as a cut-off coupling, the "V" shaped construction of the wooden shoes and iron friction rings or grips which engage the latter, help to keep the shafts in line, a feature that cannot be claimed for many Clutches on the market. Furthermore, the ring or plate to which the wooden shoes are attached, is dove-tailed into the drum of the Clutch and acts as a universal joint when the shafts are out of alignment, preventing any excessive strain on the Clutch, bearings or shafting.

This Clutch may be operated successfully at any speed within reason, as owing to its design, it is not affected by centrifugal force. We have these Clutches in successful operation at speeds as high as 1200 revolutions per minute, which have been giving excellent satisfaction.

As the mechanism stands still when the Clutch is thrown out, it can be adjusted without shutting down the machinery. The method of adjustment is also very simple and is accomplished with but little loss of time, the turning of a set screw and tightening of its jam nut being all that is necessary. The Clutch is enclosed, its periphery presenting a smooth surface, being free from revolving shoes or grips and nothing projects but the portions of the links necessary for adjustment. It is, however, easy of access in case repairs are necessary. The parts are few in number, simple and quickly taken apart and put together again. The toggles or links, and in fact everything pertaining to the gripping mechanism is of steel, thus reducing possible repairs to a minimum.

The construction of this Clutch throughout is very compact and power considered, it occupies less space on the shaft than any other successful one on the market.

THE WELLER COMPOUND FRICTION CLUTCH



DIMENSIONS.

No. of Clutch	Largest Bore.	H. P. at 100 r. p. m.	A	B	C	D*	E	F	G	H	I	J
10	3 $\frac{7}{16}$	25	14 $\frac{3}{4}$	14 $\frac{5}{8}$	10 $\frac{1}{16}$	6	10	5 $\frac{1}{16}$	6 $\frac{1}{8}$	7 $\frac{3}{4}$	2	3 $\frac{1}{2}$
16	5 $\frac{7}{16}$	65	22	17 $\frac{1}{4}$	12 $\frac{1}{16}$	7	16	5 $\frac{7}{16}$	7 $\frac{9}{16}$	9	2	5 $\frac{1}{2}$
20	6 $\frac{1}{8}$	100	26 $\frac{1}{16}$	19 $\frac{1}{16}$	12 $\frac{1}{16}$	9	20	5 $\frac{5}{8}$	6 $\frac{1}{2}$	11	2 $\frac{1}{2}$	6 $\frac{3}{8}$
24	8 $\frac{1}{2}$	150	31 $\frac{1}{4}$	22 $\frac{1}{4}$	15 $\frac{1}{4}$	10	24	6 $\frac{3}{8}$	7 $\frac{1}{4}$	13	2 $\frac{1}{2}$	7 $\frac{1}{4}$
30	10	270	38 $\frac{3}{8}$	25 $\frac{1}{16}$	17 $\frac{1}{16}$	11	30	7 $\frac{1}{4}$	7 $\frac{7}{8}$	14 $\frac{3}{8}$	3	7 $\frac{3}{8}$
36	12	425	45 $\frac{1}{16}$	28 $\frac{3}{8}$	19 $\frac{1}{4}$	12	36	8	8 $\frac{5}{8}$	17 $\frac{3}{8}$	3	8 $\frac{1}{2}$

*For Clutch Coupling only.

PRICE LIST.

Friction Clutch with Extended Sleeve for Pulleys, etc.				Friction Clutch Cut-Off Coupling.			
No. of Clutch.	H. P. at 100 R.P.M.	Largest Bore.	Price.	No. of Clutch.	H. P. at 100 R.P.M.	Largest Bore.	Price.
10	25	3 $\frac{7}{16}$	\$125.00	10	25	3 $\frac{7}{16}$	\$100.00
16	65	5 $\frac{7}{16}$	235.00	16	65	5 $\frac{7}{16}$	185.00
20	100	6 $\frac{1}{8}$	290.00	20	100	6 $\frac{1}{8}$	235.00
24	150	8 $\frac{1}{2}$	350.00	24	150	8 $\frac{1}{2}$	300.00
30	270	10	475.00	30	270	10	400.00
36	425	12	800.00	36	425	12	700.00

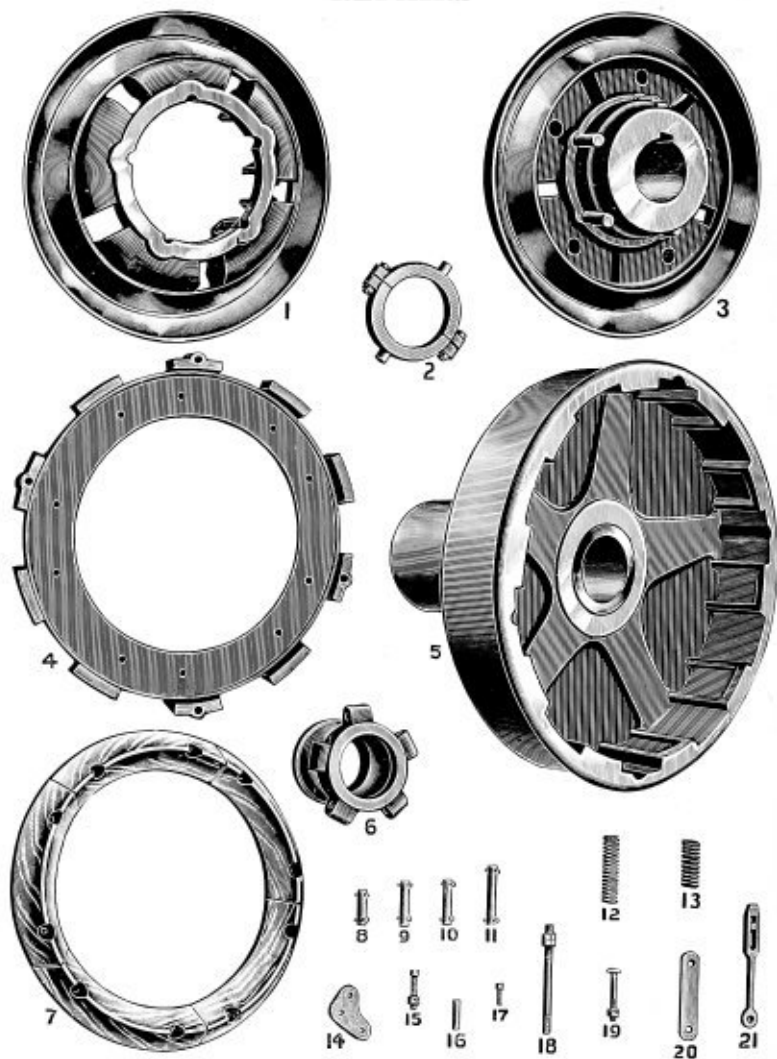
For Split Friction Clutches add 20 per cent. to above list.

The above price list includes Clutch Bands and Shifting Levers.

To ascertain price of Friction Clutch Pulley complete add net cost of Clutch with extended sleeve, the horse-power required, to that of the pulley from double belt list the desired size, at regular discount. This rule also applies to sheaves, gears and sprocket wheels.

For repairs see page 220.

WELLER COMPOUND FRICTION CLUTCH REPAIRS



Order Repairs by number only, giving size of Clutch. In addition to this information when ordering parts No. 2, 3, 5 and 6 give bore required.

Always state whether Repairs are wanted forwarded by freight or express.

THE WELLER STANDARD FRICTION CLUTCH.

Fig. 196.
Six-Arm Friction Clutch Spur Wheel.

The Weller Standard Friction Clutch has been manufactured by us too many years to require special introduction in this catalogue. Nearly eight thousand of these Clutches in successful operation throughout this and foreign countries have established a reputation for them second to none.

We have not made the mistake of many manufacturers and over-rated the power of our Clutches, as every size listed is capable of transmitting from ten to twenty per cent. more power than its guaranteed rating.

They are built strictly upon honor, by skilled and experienced workmen, and of the best and most suitable classes of material for the purpose, no expense being spared in our endeavor to furnish our customers with a satisfactory Clutch at a reasonable price.

THE WELLER STANDARD FRICTION CLUTCH APPLIED TO ROPE SHEAVES.

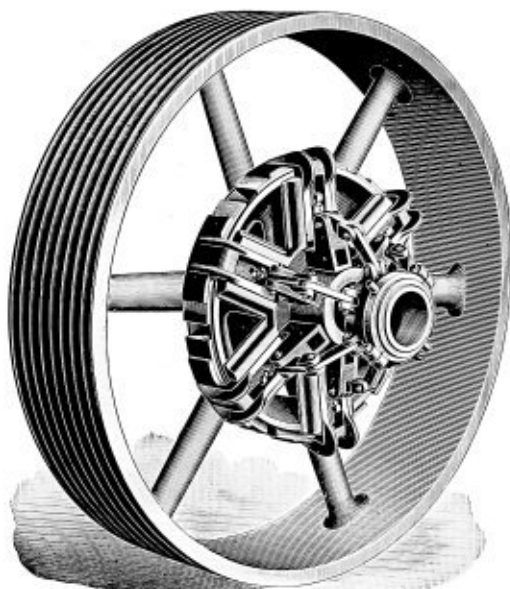


Fig. 197.

The Friction Ring is not cast or bolted to the arms of the wheel, but is cast with an extended sleeve onto which the latter is keyed, thus permitting the wheel to be easily removed and one of different diameter substituted, should it ever become necessary to change the speed. The Sleeves are furnished with brass bushings, and are provided with oil chambers, insuring perfect lubrication with ordinary care. By means of the "V" groove in the Friction Ring double the friction surface of ordinary Clutches is obtained.

THE WELLER STANDARD FRICTION CLUTCH APPLIED TO SPROCKET WHEELS.

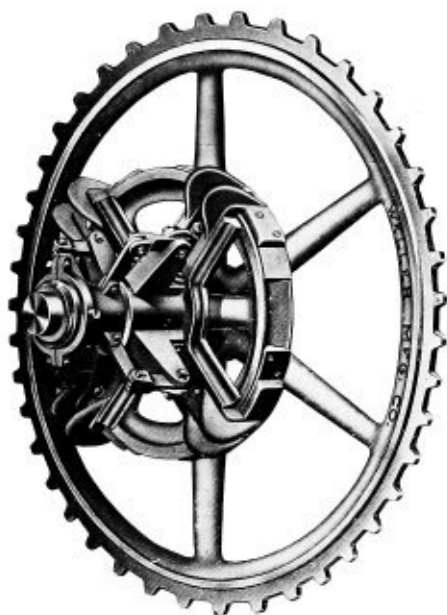


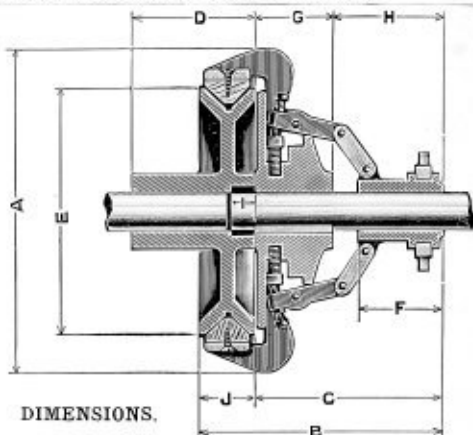
Fig. 198.

Four-Arm Friction Clutch Sprocket Wheel.

The adjustment of each arm of our Clutch is independent, a feature that will be appreciated by those who have operated Clutches made with single adjustment after the friction surfaces have become somewhat unevenly worn through imperfect alignment.

THE WELLER STANDARD FRICTION CLUTCH

To insure the best results and receive our full guarantee we should know the exact conditions under which it is proposed to operate our Friction Clutches.



DIMENSIONS.

Dia. of Clutch, Inches.	No. of Arms.	Largest Bore.	H. P. at 100 R. P. M.	A	B	C	D*	E	F	G	H	I	J
7	2	1 1/16	3	9 1/2	11 1/2	9 1/2	5 1/2	7	4 1/2	3 1/2	6	2	2 3/4
8	3	3 7/16	5	11 1/2	12	9 1/2	5 1/2	9 1/2	4 1/2	3 3/8	5 1/2	2	2 1/2
12	4	3 1/2	10	16	13 1/2	10 1/2	6 1/2	13 1/16	4 1/2	4	6 1/2	2	3
16	4	4 7/16	15	21	14 1/2	11	6 1/2	17 1/16	5 1/2	3 3/8	7 1/2	2	3 1/2
20	4	6 1/2	20	25	16 1/2	12 1/2	7	21 1/16	5 1/2	5	7 3/8	2	3 1/2
24	4	7 7/16	27	29	17 3/8	13 1/2	7	25 1/16	5 1/2	5	8 3/8	2	3 3/4
24	6	7 7/16	40	29	17 3/8	14 1/2	7	25 1/16	6 1/2	5	9 1/2	2	3 3/4
32	6	8	50	35	19 1/2	15 1/2	7 1/2	33 1/16	6 1/2	5 1/2	9 1/2	2	4 1/4

*For Clutch Couplings only.

PRICE LIST.

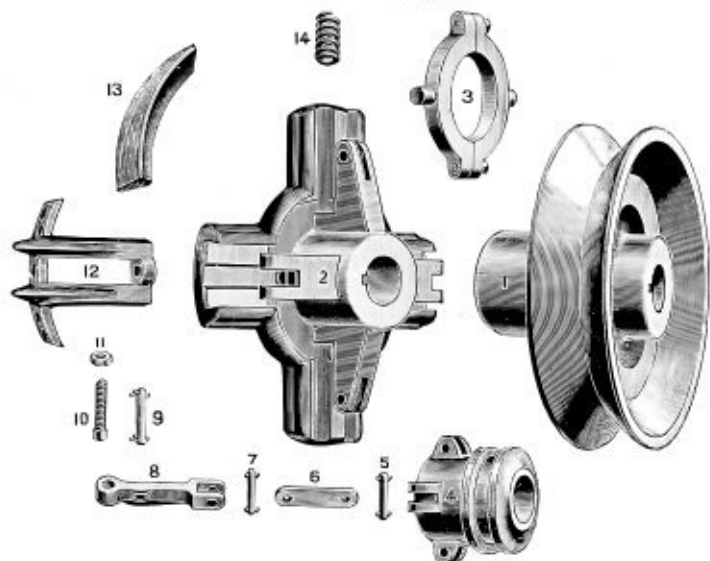
Friction Clutch with Extended Sleeve for Pulleys, Etc.				Friction Clutch Cut-Off Coupling.			
Dia. of Clutch, Inches.	Horse Power at 100 R. P. M.	Largest Bore, Inches.	Price.	Dia. of Clutch, Inches.	Horse Power at 100 R. P. M.	Largest Bore, Inches.	Price.
7	3	1 1/16	\$44.00	7	3	1 1/16	\$40.00
8	5	3 7/16	58.00	8	5	3 7/16	50.00
12	10	3 1/2	69.00	12	10	3 1/2	60.00
16	15	4 7/16	86.00	16	15	4 7/16	75.00
20	20	6 1/2	97.00	20	20	6 1/2	85.00
24-4 A	27	7 7/16	125.00	24-4 A	27	7 7/16	110.00
24-6 A	40	7 7/16	172.00	24-6 A	40	7 7/16	150.00
32	50	8	230.00	32	50	8	200.00

For Split Friction Clutches add 20 per cent to above list.

The above price list includes Clutch Bands and Shifting Levers.

To ascertain price of Friction Clutch Pulley complete add per cent of clutch, the horse power required, to that of the pulley from double belt list, the desired size at regular discount. This rule also applies to sheaves, gears and sprocket wheels. For repairs see page 225.

THE WELLER STANDARD FRICTION CLUTCH REPAIRS



Order repairs by number only, giving diameter of friction ring from center of groove, and state number of arms with which Clutch is provided. In addition to this information, when ordering parts No. 1, 2, 3 and 4, give bore required.

Always state whether repairs are wanted forwarded by freight or express.

PRICE LIST OF WELLER STANDARD FRICTION CLUTCH REPAIRS.

Name.	No.	Size of Clutch. Inches.							
		7	8	12	16	20	24-4A	24-6A	32
Cplg. Drum..	1	\$5.80	\$ 8.40	\$13.50	\$18.00	\$24.00	\$32.00	\$32.00	\$40.00
Clutch Drum	1	7.00	11.50	17.00	24.00	30.00	39.00	42.00	48.00
Spider	2	7.50	9.20	12.50	15.00	16.00	18.00	26.00	36.00
Clutch Band.	3	1.00	1.00	1.00	1.20	1.20	1.20	1.20	2.00
Slide Hub ..	4	5.00	5.00	5.50	7.00	8.00	8.00	12.00	16.00
Steel Pins ..	5	.20	.20	.20	.20	.30	.30	.30	.30
Toggle W. I.	6	.20	.20	.20	.20	.40	.40	.40	.40
Steel Pins...	7	.20	.20	.20	.20	.30	.30	.30	.30
Toggle M. I.	8	.30	.30	.50	.50	.70	.70	1.00	1.00
Steel Pins...	9	.20	.20	.20	.20	.30	.30	.30	.30
Set Screws...	10	.10	.10	.10	.10	.10	.20	.20	.20
Hex. Nut ..	11	.04	.04	.04	.04	.04	.10	.10	.10
C. I. Shoe...	12	1.00	1.00	1.30	1.60	1.80	2.00	2.00	3.00
Steel Shoe...	12	.....	.....	.....	.....	.....	3.24	3.24	.....
Wood Shoe...	13	.60	.60	.70	1.00	1.40	1.50	1.50	2.00
Spring	14	.10	.10	.10	.20	.20	.20	.20	.20

GEARED FULCRUM STANDS.

FOR OPERATING LARGE CLUTCHES WHEN NEAR THE FLOOR.



Fig. 199.

PRICE LIST.

Height from floor to center of shaft	Price
30 in.	\$48.00
32 in.	49.00
34 in.	49.50
36 in.	52.00
38 in.	52.75
40 in.	53.50

Special Fulcrum Stands.

In addition to the Fulcrum Stands illustrated, we are prepared to design and furnish special Stands to suit all conditions.

Prices quoted upon application.

PLAIN FULCRUM STANDS.

FOR OPERATING CLUTCHES WHEN NEAR THE FLOOR.

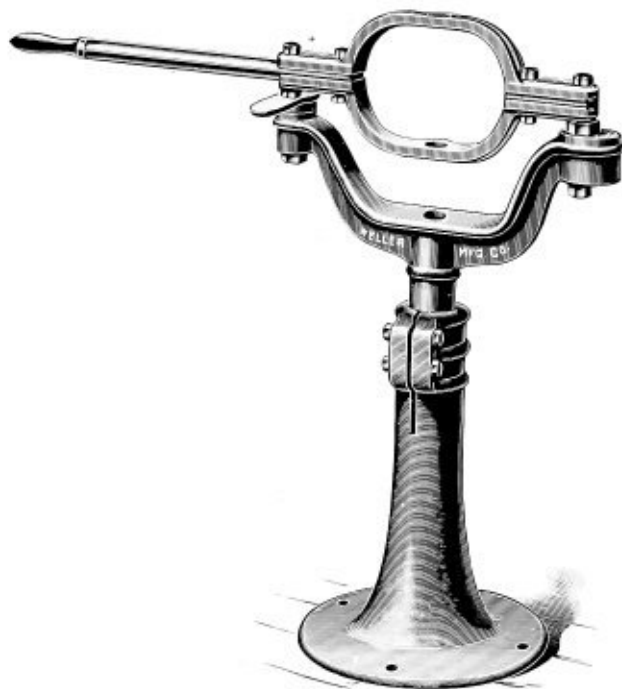


Fig. 200.

PRICE LIST.

Height from floor to center of shaft	Price	
30 in.	\$30.00
32 in.	30.50
34 in.	31.25
36 in.	32.25
38 in.	33.00
40 in.	34.25

MACHINE MOULDED CAST IRON PULLEYS.

Fig. 201. Single-Arm Solid Pulley.

Our Pulleys are all turned, bored and balanced, painted and provided with Set Screws or Keyseats, as may be desired.

For non-shifting belts Pulleys should have crown faces.

For shifting belts the Driving Pulleys should have straight faces.

Tight and Loose Pulleys should have crown faces.

In ordering state whether Single or Double Belt Pulleys are required.

When orders are received for Pulleys and no description given, crown face will be sent.

An additional charge is made for Pulleys of extra large bore. We give on page 235, the maximum bores for Standard Pulleys, also schedule of additional charges for large bores.

An extra charge is made when Pulleys are both Keyseated and Set Screwed.

At the end of the Pulley list will be found the additional prices to be added to the list price for Split, Clamp Hub, Tight and Loose and Flange Pulleys. For price list of Brass Bushings, see page 236.

MACHINE MOULDED CAST IRON PULLEYS.



Fig. 202. Double Arm Solid Pulley.

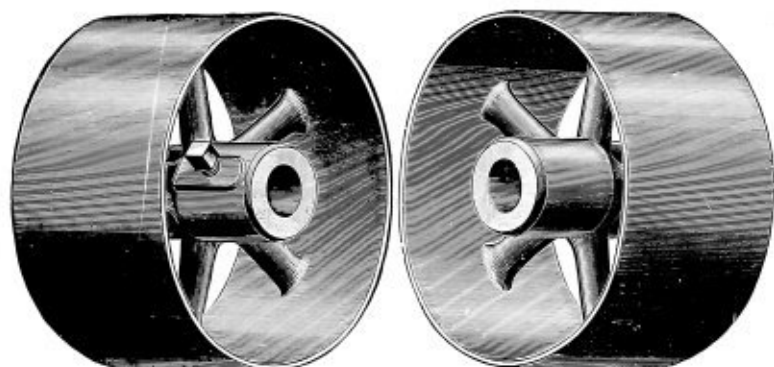


Fig. 203. Tight and Loose Pulleys.

Fig. 204.

An additional charge is made for Pulleys of extra large bore. See page 235.

MACHINE MOULDED CAST IRON PULLEYS.

Fig. 205. Split Pulley.



Fig. 206. Clamp Hub Pulley.

An additional charge is made for Split and Clamp Hub Pulleys, also for extra large bores. See page 235.

MACHINE MOULDED CAST IRON PULLEYS

Single Belt

Bored, Turned and Balanced, with Set Screws or Keyseats.

PRICE LIST.

Diameter in Inches.	Face in Inches.									
	3	4	5	6	7	8	9	10	11	12
6	\$ 1.95	\$ 2.10	\$ 2.30	\$ 2.55	\$ 2.80	\$ 3.05				
7	2.10	2.25	2.50	2.75	3.00	3.25				
8	2.25	2.45	2.70	2.95	3.20	3.45				
9	2.40	2.60	2.85	3.15	3.45	3.75				
10	2.55	2.75	3.05	3.40	3.70	4.05				
11	2.70	2.95	3.25	3.60	3.95	4.35				
12	2.85	3.15	3.50	3.85	4.20	4.55				
13	3.05	3.35	3.70	4.10	4.45	4.90				
14	3.25	3.55	3.90	4.35	4.70	5.20				
15	3.40	3.75	4.15	4.60	5.05	5.50				
16	3.60	3.95	4.40	4.90	5.35	5.85	\$ 6.30			
17	3.80	4.20	4.70	5.20	5.70	6.20	6.75	\$ 7.30		
18	4.00	4.45	4.95	5.50	6.05	6.60	7.15	7.75		
19	4.25	4.70	5.25	5.85	6.45	7.05	7.65	8.30		
20	4.45	4.95	5.55	6.20	6.85	7.50	8.15	8.85		
21	4.70	5.25	5.85	6.55	7.25	7.95	8.65	9.40		
22	4.90	5.55	6.15	6.90	7.65	8.40	9.15	9.95		
23	5.15	5.80	6.50	7.25	8.05	8.85	9.65	10.50		
24	5.40	6.10	6.85	7.65	8.45	9.30	10.20	11.10	\$12.10	\$13.15
25	5.70	6.50	7.25	8.10	8.95	9.90	10.85	11.85	12.90	14.05
26	6.00	6.90	7.65	8.60	9.45	10.55	11.50	12.60	13.75	15.00
28	6.75	7.70	8.50	9.50	10.60	11.70	12.90	14.10	15.45	16.85
30	7.60	8.55	9.45	10.55	11.75	13.00	14.30	15.75	17.15	18.60
32	8.45	9.40	10.45	11.65	12.95	14.40	15.90	17.40	19.00	20.55
34	9.40	10.40	11.50	12.90	14.35	15.85	17.55	19.10	20.85	22.50
36	10.40	11.40	12.65	14.10	15.70	17.35	19.10	20.85	22.70	24.50
38	.....	12.55	13.95	15.60	17.95	19.05	20.90	22.80	24.90	27.10
40	.....	13.70	15.30	17.10	18.90	20.80	22.75	24.75	26.80	28.80
42	.....	14.90	16.70	18.60	20.55	22.55	24.60	26.70	28.85	31.00
44	.....	16.25	18.20	20.25	22.30	24.45	26.60	28.80	31.10	33.40
46	.....	17.65	19.70	21.85	24.05	26.35	28.60	30.95	33.40	35.80
48	.....	19.00	21.20	23.50	25.85	28.25	30.65	33.15	35.70	38.20
	3	4	5	6	7	8	9	10	11	12

An additional charge is made for Pulleys of extra large bore. See page 235 for maximum bores.

For Split, Clamp Hub, Tight and Loose, and Flange Pulleys, see additional prices on pages 235 and 236.

MACHINE MOULDED CAST IRON PULLEYS**Double Belt****PRICE LIST.**

Bored, Turned and Balanced, with Set Screws or Keyseats.

Diameter in Inches.	Face in Inches.								
	5	6	7	8	9	10	11	12	14
10	\$ 4 10	\$ 4.55	\$ 5.00	\$ 5.50	\$ 6.00	\$ 6.55	\$ 7.10	\$ 7.65	.....
12	4 70	5.25	5.80	6.35	6.95	7.55	8.15	8.75	\$10.10
14	5 30	5.95	6.55	7.20	7.90	8.60	9.30	10.00	11.60
16	6 00	6.70	7.45	8.20	9.00	9.90	10.60	11.45	13.25
18	6 75	7.60	8.45	9.30	10.20	11.10	12.05	13.05	15.10
20	7.55	8.60	9.60	10.60	11.70	12.80	13.90	15.00	17.40
22	8.45	9.60	10.80	12.00	13.20	14.50	15.75	17.00	19.70
24	9.35	10.65	12.00	13.40	14.80	16.20	17.65	19.00	22.00
26	10.45	11.90	13.40	14.90	16.40	18.00	19.60	21.10	24.55
28	11.55	13.15	14.80	16.40	18.05	19.80	21.60	23.30	27.10
30	12.70	14.55	16.20	18.00	19.80	21.60	23.50	25.50	29.70
32	14.10	16.05	17.90	19.85	22.20	23.85	25.90	28.00	32.65
34	15.50	17.60	19.70	21.75	23.85	26.10	28.30	30.50	35.60
36	16.95	19.20	21.45	23.70	26.00	28.30	30.70	33.10	38.55
38	17.15	21.05	23.45	25.90	28.35	30.80	33.35	35.95	41.65
40	19.60	22.90	25.45	28.10	30.70	33.30	36.05	38.75	44.80
42	22.05	24.80	27.55	30.30	33.05	35.85	38.75	41.60	47.95
44	23.90	26.85	29.75	32.70	35.65	38.65	41.80	44.90	51.60
46	25.80	28.90	32.00	35.15	38.35	41.55	44.90	48.20	55.30
48	27.70	31.00	34.30	37.65	41.05	44.45	48.00	51.50	59.00
50	29.75	33.30	36.80	40.30	43.85	47.45	51.15	54.80	62.70
52	31.85	35.65	39.30	43.00	46.75	50.50	54.35	58.15	66.45
54	33.95	37.90	41.80	45.70	49.65	53.60	57.55	61.50	70.25
56	.....	40.65	44.50	48.50	52.55	56.60	60.75	65.00	74.35
58	.....	43.25	47.20	51.30	55.45	59.65	64.00	68.50	78.45
60	.....	46.00	50.00	54.10	58.35	62.75	67.30	72.00	82.55
62	.....	48.30	52.65	57.10	61.65	66.30	71.10	76.00	86.95
64	.....	50.60	55.35	60.10	64.95	69.90	74.90	80.00	91.35
66	.....	53.00	58.05	63.15	68.30	73.50	78.75	84.00	95.75
68	.....	55.70	60.95	66.25	71.60	77.10	82.55	88.20	100.25
70	.....	58.40	63.85	69.25	75.00	80.70	86.40	92.40	104.85
72	.....	61.00	66.75	72.55	78.40	84.30	90.30	96.50	109.45
74	.....	.....	.....	75.75	81.90	88.50	94.80	101.00	114.45
76	.....	.....	.....	79.05	85.50	92.70	99.30	105.50	119.45
78	.....	.....	.....	82.35	89.10	95.90	102.85	110.00	124.50
80	.....	.....	.....	85.95	92.90	99.85	106.95	114.30	129.50
82	.....	.....	.....	89.55	96.70	103.85	111.15	118.65	134.50
84	.....	.....	.....	93.25	100.50	107.85	115.35	123.00	139.60
90	.....	.....	.....	.....	.....	121.00	129.40	138.00	155.60
96	.....	.....	.....	.....	.....	134.75	143.85	153.00	172.10
102	.....	.....	.....	.....	.....	150.75	160.85	171.00	192.00
108	.....	.....	.....	.....	.....	165.35	176.10	187.00	209.50
114	.....	.....	.....	.....	.....	182.10	193.50	205.00	228.40
120	.....	.....	.....	.....	.....	196.55	208.65	221.00	246.10
	5	6	7	8	9	10	11	12	14

An additional charge is made for Pulleys of extra large bore. See page 235 for maximum bores.

For Split, Clamp Hub, Tight and Loose and Flange Pulleys, see additional prices on pages 235 and 236.

MACHINE MOULDED CAST IRON PULLEYS

Double Belt—Continued

PRICE LIST.

Bored, Turned and Balanced, with Set Screws or Keyseats.

Diameter in Inches.	Face in Inches.							
	16	18	20	22	24	26	28	30
16	\$ 15.15	\$ 17.15	\$ 19.15					
18	17.20	19.40	21.70					
20	19.80	22.40	25.00	\$ 27.70	\$ 30.60			
22	22.40	25.40	28.30	31.50	34.80			
24	25.10	28.40	31.70	35.40	39.00			
26	28.10	31.80	35.55	39.75	43.45			
28	31.10	35.25	39.45	43.75	47.90			
30	34.20	38.70	43.25	47.80	52.40			
32	37.45	42.30	47.45	52.00	56.85			
34	40.70	45.90	51.65	56.20	61.30			
36	44.00	49.50	55.90	60.40	65.80			
38	49.15	53.50	59.80	65.05	70.85			
40	52.65	57.50	63.70	69.70	75.90			
42	54.40	61.00	67.60	74.30	81.00			
44	58.50	65.50	72.50	79.50	86.65			
46	62.60	70.00	77.40	84.80	92.30			
48	66.70	74.50	82.30	90.10	98.00			
50	70.85	79.15	87.40	95.70	104.10	\$112.60	\$121.25	\$129.90
52	75.05	83.80	92.50	101.30	110.30	119.30	128.40	137.65
54	79.25	88.50	97.70	107.00	116.50	126.00	135.60	145.30
56	83.55	93.50	103.25	113.10	123.15	133.20	143.20	153.50
58	87.85	98.50	108.85	119.25	129.80	140.40	150.90	161.70
60	92.15	103.50	114.45	125.45	136.50	147.65	158.80	169.90
62	97.25	108.70	120.35	131.85	143.20	155.15	166.85	178.50
64	102.35	113.85	126.25	138.30	150.90	162.65	174.90	187.10
66	107.55	119.50	132.15	144.80	157.50	170.20	182.95	195.70
68	112.55	125.10	138.35	151.50	165.00	178.05	191.35	204.60
70	117.65	130.80	144.55	158.25	172.50	185.95	199.75	213.60
72	122.75	136.50	150.60	165.00	179.50	193.85	208.20	222.60
74	128.25	142.50	157.10	172.00	187.00	201.85	216.75	231.70
76	133.75	148.45	163.70	179.00	194.50	209.85	225.35	240.80
78	139.25	154.50	170.30	186.10	202.00	217.95	233.95	249.95
80	144.95	160.80	177.10	193.40	210.00	226.25	242.85	259.35
82	150.65	167.10	183.90	200.70	218.00	234.65	251.75	268.80
84	156.40	173.50	190.75	208.10	225.50	243.05	260.65	278.30
90	173.40	191.50	210.70	230.05	249.50	268.95	288.45	307.95
96	191.75	212.50	233.00	254.50	276.00	297.00	318.00	339.50
102	213.40	233.50	256.25	279.05	302.00	324.95	347.95	370.95
108	232.50	256.00	280.20	304.55	329.00	353.35	377.80	402.35
114	252.45	277.00	303.00	329.50	356.00	382.30	408.70	435.30
120	271.75	298.00	325.90	353.80	382.50	410.80	439.20	467.60
	16	18	20	22	24	26	28	30

An additional charge is made for Pulleys of extra large bore. See page 235 for maximum bores.

For Split, Clamp Hub, Tight and Loose and Flange Pulleys, see additional prices on pages 235 and 236.

MACHINE MOULDED CAST IRON PULLEYS

Double Arm and Double Belt

PRICE LIST.

Bored, Turned and Balanced, with Set Screws or Keyseats.

Dia. in In.	Face in Inches.										
	20	22	24	26	28	30	32	34	36	38	40
20	\$28.75	\$31.85	\$35.20	\$38.60	\$42.15	\$47.10					
21	30.65	34.05	37.60	41.15	44.95	49.05					
22	32.55	36.25	40.00	43.85	47.85	52.00					
23	34.45	38.45	42.45	46.45	50.75	55.20					
24	36.45	40.70	44.95	49.10	53.60	58.37					
26	40.85	45.70	50.00	54.50	59.25	63.87					
28	45.35	50.30	55.10	60.00	65.00	70.05					
30	49.75	54.95	60.25	65.45	70.70	76.00					
32	54.50	59.80	65.35	70.90	76.65	81.55					
34	59.40	64.60	70.50	76.45	82.55	88.20					
36	64.50	69.45	75.70	82.00	88.45	94.95					
38	68.75	74.80	81.45	88.25	95.15	102.05	\$109.00	\$115.95	\$123.00	\$130.05	\$137.10
40	73.25	80.15	87.30	94.55	101.90	109.10	116.60	124.00	131.35	138.80	146.20
42	77.75	85.45	93.15	100.85	108.60	116.40	124.20	131.95	139.70	147.50	155.25
44	83.45	91.40	99.65	107.85	115.10	124.45	132.80	141.10	149.40	157.80	166.15
46	89.00	97.50	106.15	114.90	123.70	132.50	141.45	150.30	159.15	168.10	177.00
48	94.65	103.60	112.70	121.90	131.25	140.65	150.05	159.50	168.95	178.35	187.80
50	100.50	110.50	119.70	129.50	139.45	149.40	158.80	169.50	179.50	189.65	199.85
52	106.40	116.50	126.85	137.20	147.65	158.20	168.80	179.50	190.10	200.90	211.70
54	112.35	123.05	133.95	144.90	155.95	167.10	178.25	189.40	200.65	212.05	223.35
56	119.75	130.05	141.60	153.20	164.70	176.50	188.25	199.85	211.60	223.45	235.30
58	125.20	137.15	149.25	161.45	173.55	185.95	198.25	210.35	222.50	234.95	247.25
60	131.60	144.25	157.00	169.80	182.60	195.40	208.15	220.90	233.60	246.55	259.20
62	138.40	150.60	164.70	178.40	191.85	205.30	218.50	232.00	245.50	258.55	272.30
64	145.20	159.05	173.55	187.05	201.15	215.20	228.55	243.25	257.35	271.30	285.30
66	152.05	166.50	181.10	195.70	210.40	225.05	239.80	254.50	269.20	283.95	298.65
68	159.10	174.25	189.75	204.75	220.05	235.30	250.70	266.00	281.30	296.70	312.00
70	166.25	182.00	198.40	213.85	229.70	245.65	261.60	277.50	293.40	309.45	325.35
72	173.20	189.75	206.40	222.90	239.45	256.00	272.55	289.10	305.65	322.25	338.80
74	180.65	197.80	215.05	232.10	249.25	266.45	283.60	300.85	317.95	335.10	352.10
76	188.25	205.85	223.70	241.30	259.15	276.90	294.75	312.55	330.30	348.00	366.00
78	195.85	214.00	232.30	250.65	269.05	287.45	305.90	324.30	342.70	361.10	379.50
80	203.65	222.40	241.50	260.20	279.30	298.25	317.40	336.35	355.45	374.55	383.55
82	211.45	230.80	250.70	269.85	289.50	309.10	328.90	348.55	368.20	388.00	407.45
84	219.35	239.30	259.30	279.50	299.75	320.05	340.40	360.75	381.10	401.45	421.80
90	242.30	264.55	286.95	309.30	331.70	354.15	376.65	389.05	421.50	443.90	466.30
96	267.95	292.70	317.40	341.55	365.70	390.45	415.15	439.65	464.15	488.65	513.15
102	294.70	320.90	347.30	373.70	400.15	426.60	453.10	479.65	506.25	532.80	559.35
108	322.25	350.25	378.35	406.35	434.45	462.70	491.05	519.35	547.65	575.90	604.20
114	348.50	379.40	409.40	439.60	470.00	501.60	531.30	562.00	592.50	623.10	653.70
120	374.80	406.90	439.90	473.40	505.10	537.75	575.40	603.10	635.70	668.40	701.00
	20	22	24	26	28	30	32	34	36	38	40

An additional charge is made for Pulleys of extra large bore. See page 235 for maximum bores.

For Split, Clamp Hub, Tight and Loose and Flange Pulleys, see additional prices on pages 235 and 236.

MACHINE MOULDED CAST IRON PULLEYS

Additional Price to be added to the List Price for Split and Clamp Hub Pulleys.

Dia. in Inches.	Face in Inches.	Price.	Dia. in Inches.	Face in Inches.	Price.	
8 to 10	2 to 3	\$1.30	37 to 47	3 to 4	\$6.50	
	4 to 6	1.75		5 to 6	7.50	
	7 to 10	2.15		7 to 10	9.90	
	11 to 14	3.10		11 to 10	13.50	
	15 to 20	4.00		15 to 24	18.00	
11 to 18	2 to 3	1.50		21 to 30	27.00	
	4 to 6	2.20		31 to 40	37.00	
	7 to 10	2.85		48 to 60	5 to 6	10.00
	11 to 14	4.00			7 to 10	13.00
	15 to 20	5.25			11 to 14	18.00
19 to 23	3 to 4	2.65	15 to 20		25.00	
	5 to 6	3.40	21 to 30		34.50	
	7 to 10	4.05	31 to 40	48.00		
	11 to 14	5.60	61 to 84	7 to 10	20.00	
	15 to 20	7.30		11 to 14	26.00	
21 to 30	11.00	15 to 20		35.00		
24 to 30	3 to 4	3.60		21 to 30	48.00	
	5 to 6	4.40		31 to 40	64.00	
	7 to 10	5.40	85 to 120	11 to 14	38.00	
	11 to 14	7.25		15 to 20	53.50	
	15 to 20	10.00		21 to 30	70.00	
21 to 30	14.00	31 to 40		90.00		
31 to 36	3 to 4	4.50		121 to 144	11 to 14	52.00
	5 to 6	5.60	15 to 20		72.00	
	7 to 10	6.75	21 to 30		96.00	
	11 to 14	9.80	31 to 40		124.00	
	15 to 20	13.00				
21 to 30	19.00					

MAXIMUM BORES AND ADDITIONAL PRICES FOR THOSE LARGER THAN STANDARD.

Dia. of Pulley, Inches.	Maximum Bore, Inches.	Additional Charge for each $\frac{1}{8}$ In. larger Bore or fraction thereof.
6 to 9	$2\frac{7}{16}$	10 per cent.
10 to 15	$2\frac{13}{16}$	10 per cent.
16 to 20	$3\frac{1}{16}$	10 per cent.
21 to 30	$3\frac{13}{16}$	10 per cent.
31 to 42	$4\frac{7}{16}$	5 per cent.
43 to 48	$4\frac{13}{16}$	5 per cent.
49 to 60	$5\frac{13}{16}$	5 per cent.

MACHINE MOULDED CAST IRON PULLEYS

Additional Price to be Added to the List Price for Tight and Loose Pulleys per pair, and Finished Flange Pulleys each.

Diameter in Inches.	Price Tight and Loose Pulleys.	Price Flanged Pulleys.	Diameter in Inches	Price Tight and Loose Pulleys.	Price Flanged Pulleys.
6 to 8	\$1.60	\$4.65	49 to 52	\$9.30	\$33.00
9 to 10	1.95	5.20	53 to 56	10.00	36.30
11 to 12	2.30	5.75	57 to 60	10.70	40.70
13 to 14	2.65	6.30	61 to 66	11.70	46.20
15 to 16	3.00	7.15	67 to 72	12.70	51.70
17 to 18	3.30	8.00	73 to 78	13.70	57.20
19 to 20	3.70	8.80	79 to 84	14.70	62.70
21 to 22	4.05	9.90	85 to 90	15.70	68.20
23 to 24	4.40	11.60	91 to 96	16.70	73.70
25 to 26	4.75	12.10	97 to 102	17.70	79.70
27 to 28	5.10	13.75	103 to 108	18.70	85.80
29 to 30	5.45	15.40	109 to 114	19.70	91.30
31 to 32	5.80	17.05	115 to 120	20.70	96.80
33 to 34	6.15	18.70	121 to 126	21.70	102.30
35 to 36	6.50	20.35	127 to 132	22.70	107.80
37 to 40	7.20	23.10	133 to 138	23.70	113.80
41 to 44	7.90	26.40	139 to 144	24.70	119.80
45 to 48	8.60	29.70			

BRASS BUSHINGS

For Pulleys, Rope Sheaves, Gears, Sprocket Wheels, Etc.

PRICE LIST.—Fitted.

Price	Inside Diameter in Inches.									
	1 $\frac{1}{16}$	1 $\frac{1}{8}$	1 $\frac{1}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	3 $\frac{1}{2}$
Per Inch . . .	\$0.75	\$0.80	\$0.85	\$0.90	\$0.95	\$1.00	\$1.05	\$1.10	\$1.15	\$1.20
Price	Inside Diameter in Inches.									
	3 $\frac{1}{4}$	4 $\frac{1}{8}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	5 $\frac{1}{4}$	6 $\frac{1}{2}$	7	8	
Per Inch . . .	\$1.30	\$1.45	\$1.60	\$1.95	\$2.20	\$2.50	\$2.85	\$3.50	\$4.00	

Fractions of an inch charged as full inch.

FITTING IRON PULLEYS AND ROPE SHEAVES TO SHAFTING

We are prepared to fit Pulleys and Rope Sheaves to Shafting at the prices given below. These prices include Keyseating Shafting and Keys.

PRICE LIST.

Size of Shaft, Inches.	Width of Face of Pulley.							
	3 to 6 in.	7 to 9 in.	10 to 12 in.	13 to 16 in.	17 to 20 in.	21 to 24 in.	25 to 30 in.	31 to 36 in.
1 1/2 to 2	\$2.90	\$2.90	\$2.90	.....	.....	.....	.....	.....
2 to 2 1/2	2.90	3.05	3.30	\$3.75	\$4.00	.....	.....	.....
2 to 3	3.05	3.30	3.65	4.00	4.50	\$5.00	\$5.80	\$6.65
3 to 3 1/2	3.25	3.50	3.80	4.15	4.80	5.30	6.15	7.05
3 to 4	3.30	3.65	4.00	4.50	5.25	6.40	7.50	8.30
4 to 4 1/2	3.95	4.50	5.00	5.55	7.00	8.30	9.75	11.15
4 to 5	5.00	5.55	6.40	7.25	8.30	9.75	11.10	12.50

KEYS FOR PULLEYS AND ROPE SHEAVES

PRICE LIST.—Not Fitted.

Size of Shaft, Inches.	Width of Face of Pulley.							
	3 to 6 in.	7 to 9 in.	10 to 12 in.	13 to 16 in.	17 to 20 in.	21 to 24 in.	25 to 30 in.	31 to 36 in.
1 1/2 to 2	\$0.35	\$0.50	\$0.60	.....	.....	.....	.....	.....
2 to 2 1/2	.50	.60	.70	\$0.85	\$1.00	.....	.....	.....
2 to 3	.55	.70	.85	1.00	1.20	\$1.70	\$2.00	\$2.35
3 to 3 1/2	.85	1.00	1.20	1.45	1.70	2.00	2.35	2.85
3 to 4	1.15	1.30	1.45	1.65	1.85	2.15	2.50	3.20
4 to 4 1/2	1.25	1.40	1.55	1.75	2.00	2.25	2.75	3.35
4 to 5	1.40	1.55	1.75	2.00	2.25	2.50	2.85	3.35

STEEL SPLIT PULLEYS



Fig. 207.

We are prepared to furnish these Pulleys up to 100 inches in diameter and 40 inch face. Prices of sizes not listed furnished upon application.

PRICE LIST.

Dia. in inches.	Width of Face in Inches.										
	3-in.	4-in.	5-in.	6-in.	8-in.	10-in.	12-in.	14-in.	16-in.	18-in.	20-in.
6	\$3.30	\$3.45	\$3.75	\$4.05	.....	.....	.....	.....	.....	.....	.....
7	3.38	3.60	3.90	4.20	.....	.....	.....	.....	.....	.....	.....
8	3.45	3.75	4.05	4.35	\$4.95	\$5.60	.....	.....	.....	.....	.....
9	3.60	3.90	4.20	4.50	5.10	5.75	.....	.....	.....	.....	.....
10	3.75	4.05	4.35	4.65	5.25	5.90	\$6.45	.....	.....	.....	.....
11	3.90	4.20	4.50	4.80	5.40	6.00	6.90	.....	.....	.....	.....
12	4.20	4.65	4.80	5.33	5.78	6.45	7.65	.....	.....	.....	.....
13	4.35	4.80	5.20	5.62	6.43	7.20	8.40	.....	.....	.....	.....
14	4.50	5.20	5.65	6.15	7.05	8.03	9.00	.....	.....	.....	.....
15	4.65	5.45	5.80	6.55	7.65	8.80	9.75	.....	.....	.....	.....
16	4.95	5.75	6.10	6.90	8.25	9.45	10.50	.....	.....	.....	.....
17	5.25	6.00	6.50	7.28	8.78	10.05	11.25	.....	.....	.....	.....
18	5.55	6.38	7.00	7.65	9.30	10.65	12.00	.....	.....	.....	.....
19	5.80	6.75	7.50	8.25	10.15	11.25	12.90	.....	.....	.....	.....
20	6.00	7.50	8.10	9.00	10.75	12.00	14.25	.....	.....	.....	.....
21	6.25	8.00	8.90	9.60	11.25	12.98	15.60	\$18.00	\$20.75	.....	.....
22	6.50	8.55	9.50	10.28	12.00	14.10	16.80	19.30	22.20	.....	.....
23	7.00	8.70	9.90	10.58	12.60	14.75	18.00	20.70	24.75	.....	.....
24	7.50	8.90	10.00	10.95	13.20	15.68	19.05	22.80	27.30	\$32.75	\$37.00
26	.....	9.55	10.50	11.95	14.40	17.10	21.30	26.25	31.20	37.50	42.00
28	.....	10.80	11.70	12.90	15.45	18.15	22.90	28.50	34.50	41.50	46.00
30	.....	12.00	12.90	14.10	17.25	19.90	24.75	31.50	38.10	45.75	50.00
32	.....	13.20	14.10	15.45	19.35	22.50	26.85	35.15	41.65	50.00	54.50
34	.....	14.40	15.75	17.25	21.75	25.50	30.00	36.75	45.00	54.00	59.00
36	.....	15.90	17.85	19.50	24.00	28.65	33.75	39.75	48.60	55.50	62.00

STEEL SPLIT PULLEYS

PRICE LIST.—Concluded.

Diam. in inches	Width of Face in Inches.												
	3-in.	4 in.	5-in.	6-in.	8-in.	10-in.	12-in.	14-in.	16-in.	18-in.	20-in.		
38	19.50	20.65	21.75	26.40	31.05	37.15	42.75	51.75	58.85	65.50		
40	21.00	22.75	24.00	28.50	33.75	40.15	46.50	55.15	62.25	69.50		
42			26.25	32.25	37.50	43.50	50.25	57.75	65.65	74.50		
44			30.20	37.10	43.15	50.00	57.80	66.40	75.50	85.00		
46			34.70	42.63	49.60	57.50	66.35	76.35	86.85	97.00		
48			39.91	49.00	57.05	66.15	76.29	87.80	99.90	113.00		
50			45.45	55.95	63.45	76.45	84.75	100.65	109.35	131.75		
52			49.10	60.20	68.25	81.85	90.80	107.55	116.95	141.25		
54			52.70	64.55	73.25	87.45	97.00	114.65	124.85	151.00		
56			55.70	67.65	76.55	91.30	101.60	119.55	130.35	159.20		
58			58.55	70.75	79.90	95.15	106.10	124.70	135.85	165.20		
60				61.60	73.80	83.30	99.00	110.60	129.30	141.35	172.25	
62					84.80	94.95	112.20	123.85	145.45	158.00	190.75	
64					88.10	98.90	116.60	129.10	151.10	163.75	198.20	
66					91.45	102.85	121.00	133.90	156.80	169.95	205.75	
68					94.85	106.80	125.60	138.85	162.30	176.10	213.50	
70						98.15	110.75	130.25	143.95	167.90	182.40	221.35
72						101.80	114.70	134.75	149.00	173.50	188.65	229.00
74						105.30	116.00	139.70	154.50	179.55	195.25	237.20
76						108.95	123.95	144.65	160.00	185.60	201.80	245.55
78						112.50	127.50	149.60	165.55	191.65	208.45	253.95
80						116.55	131.85	154.35	171.00	197.95	215.40	262.50
82						120.50	136.25	159.10	176.55	204.20	220.00	271.15
84						124.55	140.65	163.90	182.15	210.55	229.35	279.80

Odd Size Diameter—Pulleys above 24 inches add 10 per cent. to the next higher list.

Width of Face—Only even inches are made above 5-inch face.

Extra Bushing—To avoid mistakes in ordering be sure to give size of Pulley, also length of hub.

Bushings—3 inch long x 2 7-16 inch outside diameter, called.....F

3½ inch long x 3½ inch outside diameter, called.....G

6¼ inch long x 3½ inch outside diameter, called.....H

6½ inch long x 4 7-16 inch outside diameter, called.....I

6½ inch long x 6½ inch outside diameter, called.....J

7¼ inch long x 8½ inch outside diameter, called.....K

Pulleys 6 inch and 7 inch Diameter have 2 7-16 inch bore and F Bushing.

Pulleys 8 inch to 11 inch Diameter inclusive have 3½ inch bore and G Bushing.

Pulleys 12 inch to 19 inch Diameter inclusive have 3½ inch bore and G or H Bushing, according to width of face.

Pulleys 20 inch to 24 inch Diameter inclusive have 3½ inch bore and G or H Bushing, according to width of face.

Pulleys 26 inch to 30 inch Diameter inclusive have 3½ inch bore and G or H Bushing, according to width of face. These sizes with faces 4 inch, 5 inch, 6 inch or 8 inch wide can be fitted with 4 7-16 inch bore with I Bushing at an extra charge of 10 per cent. Wider faces fitted with 4 7-16 inch bore and I Bushing without extra charge.

Pulleys 32 inch to 48 inch in Diameter have 3½ inch bore G or H Bushing, according to width of face or 4 7-16 inch bore and I Bushing without extra charge.

Pulleys 50 inch to 60 inch Diameter Inclusive has 4 7-16 inch bore and I Bushing.

Pulleys 62 inch Diameter and larger take 4 7-16, 6½, or 8½ inch bore with I, J or K Bushing without extra charge.

Pulleys 20 inches in diameter and larger may take 4 7-16 inch bore, 6½ inch bore or 8½ inch bore at extra charge with the exceptions mentioned above.

WOOD SPLIT PULLEYS

We carry a complete stock of Wood Split Pulleys and can fill all orders for regular sizes without delay.

PRICE LIST.

Diam. in in.	WIDTH OF FACE IN INCHES.								
	3	4	5	6	7	8	9	10	11
3	\$1.90	\$2.00	\$2.10	\$2.25	\$2.40	\$2.60	\$2.85	\$3.10	\$3.35
4	2.00	2.10	2.20	2.40	2.60	2.85	3.10	3.35	3.60
5	2.10	2.20	2.40	2.60	2.85	3.10	3.35	3.60	3.85
6	2.20	2.35	2.55	2.75	3.00	3.25	3.50	3.75	4.00
7	2.30	2.45	2.65	2.85	3.10	3.35	3.60	3.85	4.15
8	2.45	2.60	2.80	3.00	3.25	3.50	3.75	4.00	4.30
9	2.60	2.80	3.00	3.25	3.50	3.75	4.00	4.30	4.65
10	2.80	3.00	3.25	3.50	3.75	4.00	4.30	4.65	5.00
11	3.00	3.25	3.50	3.75	4.00	4.30	4.65	5.00	5.40
12	3.15	3.40	3.65	3.90	4.20	4.55	4.90	5.30	5.70
13	3.30	3.55	3.80	4.10	4.45	4.80	5.20	5.60	6.00
14	3.45	3.70	4.00	4.35	4.70	5.10	5.55	6.00	6.45
15	3.60	3.90	4.25	4.60	5.00	5.45	5.90	6.35	6.80
16	3.80	4.15	4.50	5.00	5.50	6.00	6.50	7.00	7.50
17	4.00	4.40	4.90	5.40	5.90	6.40	6.90	7.40	7.90
18	4.20	4.70	5.20	5.70	6.20	6.70	7.20	7.80	8.40
19	4.40	4.90	5.40	5.90	6.50	7.10	7.70	8.30	8.90
20	4.60	5.20	5.80	6.40	7.00	7.60	8.30	9.00	9.70
21	4.80	5.40	6.00	6.60	7.30	8.00	8.70	9.40	10.20
22	5.00	5.60	6.30	7.00	7.70	8.40	9.20	10.00	10.80
23	5.20	5.80	6.50	7.20	8.00	8.80	9.70	10.60	11.50
24	5.50	6.20	7.00	7.80	8.60	9.40	10.30	11.20	12.10
25	5.90	6.60	7.50	8.10	9.00	10.00	11.00	12.00	13.00
26	6.20	7.00	7.80	8.60	9.50	10.50	11.50	12.60	13.75
27	6.60	7.40	8.20	9.00	10.00	11.10	12.20	13.40	14.60
28	7.00	7.80	8.60	9.50	10.50	11.60	12.80	14.00	15.20
29	7.30	8.20	9.10	10.00	11.10	12.30	13.50	14.75	16.00
30	7.70	8.60	9.50	10.60	11.80	13.00	14.30	15.60	17.00
31	8.00	9.00	10.00	11.10	12.35	13.60	15.00	16.50	18.00
32	8.50	9.50	10.50	11.60	12.85	14.10	15.50	17.00	18.60
33	9.00	10.00	11.15	12.35	13.65	15.00	16.45	18.00	19.65
34	9.40	10.60	11.80	13.10	14.45	15.90	17.40	19.00	20.70
35	9.85	11.15	12.45	13.85	15.25	16.80	18.35	20.00	21.70
36	10.30	11.70	13.10	14.60	16.10	17.70	19.30	21.00	22.60
38	12.80	14.40	16.00	18.00	19.70	21.50	23.20	25.00	26.50
40	13.90	15.70	17.50	19.60	21.70	23.60	25.40	27.00	28.50
42	15.00	17.00	19.00	21.00	23.00	25.00	27.00	29.00	31.00
44	17.00	19.00	21.00	23.00	25.00	27.00	29.00	31.00	33.00
46	19.00	21.00	23.00	25.00	27.00	29.00	31.00	33.00	36.00
48	21.00	23.00	25.00	27.00	29.00	31.00	33.00	36.00	39.00
50	25.00	27.00	29.00	30.00	32.00	34.00	36.00	38.50	41.00
52	28.00	30.00	32.00	33.00	35.00	37.00	39.00	41.00	43.00
54	30.00	32.00	34.00	35.00	37.00	39.00	41.00	43.00	46.00
56	32.00	34.00	36.00	37.00	39.00	41.00	43.00	46.00	49.00
58	38.00	40.00	42.00	43.00	45.00	47.00	49.00	52.00	55.00
60	41.00	43.00	45.00	46.00	48.00	50.00	52.00	55.00	58.00
62	44.00	46.00	48.00	49.00	51.00	53.00	55.00	58.00	61.00
64	46.00	48.00	50.00	51.00	53.00	55.00	57.00	60.00	64.00
66	48.00	50.00	52.00	53.00	55.00	57.00	59.00	63.00	67.00
68	50.00	52.00	54.00	55.00	57.00	59.00	62.00	66.00	70.00
70	52.00	54.00	56.00	57.00	59.00	62.00	66.00	70.00	75.00
72	54.00	56.00	58.00	60.00	62.00	66.00	70.00	75.00	80.00
74	58.00	60.00	62.00	64.00	66.00	71.00	75.00	80.00	85.00
76	62.00	64.00	66.00	68.00	71.00	75.00	80.00	85.00	90.00
78	71.00	75.00	80.00	85.00	90.00	95.00	100.00	107.00	114.00
80	75.00	80.00	85.00	90.00	95.00	100.00	107.00	114.00	121.00
82	80.00	85.00	90.00	95.00	100.00	107.00	114.00	121.00	130.00
84	85.00	90.00	95.00	100.00	107.00	114.00	121.00	130.00	140.00
90	100.00	107.00	114.00	121.00	130.00	140.00	150.00	160.00	170.00
96	115.00	123.00	132.00	140.00	150.00	160.00	170.00	180.00	190.00

Standard Revised Wood Split Pulley Price List—Effective Dec. 1, 1908.

WIDTH OF FACE

WIDTH OF FACE

Diam. Inches	WIDTH OF FACE						
	3	4	5	6	8	10	12
4	2.80	2.90	3.10	3.30	3.70	4.10	4.50
5	2.85	2.95	3.20	3.40	3.85	4.30	4.75
6	2.90	3.00	3.25	3.50	4.00	4.50	5.00
7	2.95	3.05	3.35	3.60	4.15	4.70	5.25
8	3.00	3.10	3.40	3.70	4.30	4.90	5.50
9	3.10	3.25	3.50	3.90	4.55	5.20	5.85
10	3.25	3.40	3.75	4.10	4.80	5.50	6.20
11	3.50	3.70	4.10	4.50	5.30	6.10	6.90
12	3.75	4.00	4.45	4.90	5.80	6.70	7.60
13	4.00	4.30	4.80	5.30	6.30	7.30	8.30
14	4.25	4.60	5.15	5.70	6.80	7.90	9.00
15	4.50	4.90	5.50	6.10	7.30	8.50	9.70
16	4.75	5.20	5.85	6.50	7.80	9.10	10.40
17	5.00	5.50	6.20	6.90	8.30	9.70	11.10
18	5.25	5.80	6.55	7.30	8.80	10.30	11.80
19	5.50	6.10	6.90	7.70	9.30	10.90	12.50
20	5.75	6.40	7.25	8.10	9.80	11.50	13.20
22	6.25	7.00	7.95	8.90	10.80	12.50	14.50
24	6.75	7.60	8.60	9.60	11.70	13.80	15.80
26	7.25	8.20	9.25	10.30	12.70	15.10	17.10
28	7.75	8.80	9.95	11.10	13.70	16.40	18.40
30	8.25	9.40	10.65	12.00	14.70	17.70	19.70
32	8.75	10.00	11.35	12.90	15.80	19.00	21.00
34	9.25	10.60	12.00	13.80	17.00	20.30	22.30
36	9.75	11.20	12.70	14.80	18.20	21.60	23.60
38	10.25	11.80	13.40	15.80	19.50	22.90	24.90
40	10.75	12.40	14.10	16.80	20.80	24.20	26.20
42	11.25	13.00	14.80	17.80	22.10	25.50	27.50
44	11.75	13.60	15.50	18.80	23.40	26.80	28.80
46	12.25	14.20	16.20	19.80	24.70	28.10	30.10
48	12.75	14.80	16.90	20.80	26.00	29.40	31.40
50	13.25	15.40	17.60	21.80	27.30	30.70	32.70
52	13.75	16.00	18.30	22.80	28.60	32.00	34.00
54	14.25	16.60	19.00	23.80	29.90	33.30	35.30
56	14.75	17.20	19.70	24.80	31.20	34.60	36.60
58	15.25	17.80	20.40	25.80	32.50	35.90	37.90
60	15.75	18.40	21.10	26.80	33.80	37.20	39.20
62	16.25	19.00	21.80	27.80	35.10	38.50	40.50
64	16.75	19.60	22.50	28.80	36.40	39.80	41.80
66	17.25	20.20	23.20	29.80	37.70	41.10	43.10
68	17.75	20.80	23.90	30.80	39.00	42.40	44.40
70	18.25	21.40	24.60	31.80	40.30	43.70	45.70
72	18.75	22.00	25.30	32.80	41.60	45.00	47.00
74	19.25	22.60	26.00	33.80	42.90	46.30	48.30
76	19.75	23.20	26.70	34.80	44.20	47.60	49.60
78	20.25	23.80	27.40	35.80	45.50	48.90	50.90
80	20.75	24.40	28.10	36.80	46.80	50.20	52.20
82	21.25	25.00	28.80	37.80	48.10	51.50	53.50
84	21.75	25.60	29.50	38.80	49.40	52.80	54.80
86	22.25	26.20	30.20	39.80	50.70	54.10	56.10
88	22.75	26.80	30.90	40.80	52.00	55.40	57.40
90	23.25	27.40	31.60	41.80	53.30	56.70	58.70
92	23.75	28.00	32.30	42.80	54.60	58.00	60.00
94	24.25	28.60	33.00	43.80	55.90	59.30	61.30
96	24.75	29.20	33.70	44.80	57.20	60.60	62.60
98	25.25	29.80	34.40	45.80	58.50	61.90	63.90
100	25.75	30.40	35.10	46.80	59.80	63.20	65.20
102	26.25	31.00	35.80	47.80	61.10	64.50	66.50
104	26.75	31.60	36.50	48.80	62.40	65.80	67.80
106	27.25	32.20	37.20	49.80	63.70	67.10	69.10
108	27.75	32.80	37.90	50.80	65.00	68.40	70.40
110	28.25	33.40	38.60	51.80	66.30	69.70	71.70
112	28.75	34.00	39.30	52.80	67.60	71.00	73.00
114	29.25	34.60	40.00	53.80	68.90	72.30	74.30
116	29.75	35.20	40.70	54.80	70.20	73.60	75.60
118	30.25	35.80	41.40	55.80	71.50	74.90	76.90
120	30.75	36.40	42.10	56.80	72.80	76.20	78.20

Diam. Inches	WIDTH OF FACE					
	14	16	18	20	22	24
4	.....	.....	.....	.....	.....	.....
5	.....	.....	.....	.....	.....	.....
6	.....	.....	.....	.....	.....	.....
7	5.80	.....	.....	.....	.....	.....
8	6.10	.....	.....	.....	.....	.....
9	6.50	.....	.....	.....	.....	.....
10	6.90	7.00	.....	.....	.....	.....
11	7.70	8.50	.....	.....	.....	.....
12	8.50	9.40	10.30	.....	.....	.....
13	9.30	10.30	11.30	.....	.....	.....
14	10.10	11.20	12.20	13.40	.....	.....
15	10.90	12.10	13.30	14.60	.....	.....
16	11.70	13.00	14.30	15.60	16.90	.....
17	12.50	13.90	15.30	16.70	18.10	.....
18	13.30	14.80	16.30	17.80	19.30	20.80
19	14.10	15.70	17.30	18.90	20.50	22.10
20	14.90	16.60	18.30	20.00	21.70	23.40
22	16.50	18.40	20.30	22.20	24.10	26.00
24	18.70	20.50	22.10	25.30	27.50	29.70
26	20.90	23.40	25.90	28.40	30.90	33.40
28	23.10	25.90	28.70	31.60	34.30	37.10
30	25.30	28.40	31.50	34.60	37.70	40.80
32	27.50	30.90	34.30	37.70	41.10	44.50
34	29.80	33.50	37.20	40.90	44.60	48.30
36	32.10	36.10	40.10	44.10	48.10	52.10
38	34.40	38.70	43.00	47.30	51.60	55.90
40	36.70	41.30	45.90	50.50	55.10	59.70
42	39.00	44.00	49.80	54.90	59.60	64.60
44	42.50	47.90	53.90	59.70	64.10	69.50
46	45.50	51.30	57.10	62.90	68.70	74.50
48	48.60	54.80	61.00	67.20	73.40	79.60
50	51.80	58.40	65.00	71.60	78.20	84.80
52	55.10	62.10	69.10	76.10	83.10	90.10
54	58.50	65.90	73.30	80.70	88.10	95.50
56	62.00	69.80	77.60	85.40	93.20	101.00
58	65.60	73.80	82.00	90.20	98.40	106.60
60	69.30	77.90	86.50	95.10	103.70	112.30
62	73.10	82.10	91.10	100.10	109.10	118.10
64	77.00	86.40	96.30	105.20	114.60	124.00
66	81.00	91.40	101.30	111.20	121.10	131.00
68	85.10	96.50	106.60	117.30	127.70	138.10
70	90.80	101.70	112.60	123.50	134.40	145.30
72	96.60	107.00	118.40	129.80	141.20	152.60
74	110.80	123.50	136.40	149.80	162.20	175.10
76	128.50	140.90	155.30	169.70	184.10	198.50
78	143.30	159.20	175.10	191.00	206.90	222.80
80	161.50	179.00	198.50	214.90	231.50	249.00
82	181.00	200.80	220.20	239.80	258.60	278.10
84	202.60	223.70	244.80	265.90	287.00	308.10
86	225.50	247.40	270.50	293.20	316.10	339.00
88	247.30	272.00	296.70	321.40	346.10	370.80

Pulleys
Not
Listed
Take
Next
Higher
List

Weller Manufacturing Company Chicago, Illinois

Substitute above list for list on pages 240 and 241 Catalog 19

WOOD SPLIT PULLEYS

PRICE LIST—Continued.

Dia. in In.	Width of Face in Inches.								
	12	13	14	15	16	17	18	19	20
3	\$ 3.60	\$ 3.85	\$ 4.10						
4	3.85	4.10	4.40						
5	4.10	4.40	4.75						
6	4.30	4.65	5.00						
7	4.50	4.85	5.20						
8	4.65	5.00	5.40						
9	5.00	5.40	5.80						
10	5.40	5.80	6.20						
11	5.80	6.20	6.60						
12	6.10	6.50	6.90						
13	6.40	6.80	7.30						
14	6.90	7.40	7.90						
15	7.30	7.80	8.40						
16	8.00	8.50	9.00						
17	8.40	8.90	9.50						
18	9.00	9.60	10.30						
19	9.50	10.20	11.00						
20	10.40	11.20	12.00						
21	11.00	11.80	12.70	\$13.60	\$14.50	\$15.50	\$16.50	\$17.50	\$18.60
22	11.70	12.60	13.50	14.50	15.50	16.60	17.70	18.80	20.00
23	12.50	13.60	14.70	15.80	17.00	18.20	19.40	20.60	21.80
24	13.00	14.10	15.20	16.50	17.70	18.90	20.20	21.50	22.80
25	14.00	15.20	16.40	17.70	19.00	20.40	21.80	23.20	24.60
26	15.00	16.30	17.60	19.00	20.40	21.80	23.30	24.80	26.30
27	15.80	17.10	18.50	20.00	21.50	23.00	24.50	26.10	27.70
28	16.50	17.90	19.40	20.90	22.40	24.00	25.60	27.20	28.80
29	17.50	19.00	20.50	22.10	23.70	25.30	27.00	28.70	30.40
30	18.50	20.00	21.50	23.25	25.00	26.75	28.50	30.25	32.00
31	19.60	21.20	22.80	24.60	26.40	28.20	30.00	31.80	33.60
32	20.30	22.00	23.80	25.60	27.40	29.20	31.00	33.00	35.00
33	21.40	23.10	24.95	26.75	28.60	30.40	32.30	34.35	36.40
34	22.50	24.20	26.10	27.90	29.80	31.70	33.60	35.70	37.80
35	23.50	25.30	27.20	29.10	31.00	32.90	34.90	37.00	39.20
36	24.00	26.00	28.00	30.00	32.00	34.00	36.00	38.00	40.00
38	26.00	28.00	30.00	32.00	34.00	36.00	38.00	41.00	43.00
40	28.00	30.00	32.00	34.00	36.00	39.00	41.00	43.00	46.00
42	31.00	33.00	35.00	37.00	39.00	41.00	44.00	46.00	49.00
44	33.00	35.00	37.00	40.00	42.00	44.00	47.00	50.00	53.00
46	36.00	38.00	40.00	43.00	45.00	48.00	51.00	54.00	57.00
48	38.50	40.00	43.00	46.00	48.00	51.00	54.00	58.00	61.00
50	41.00	43.00	46.00	49.00	51.00	54.00	58.00	62.00	65.00
52	43.50	46.00	49.00	52.00	55.00	58.00	62.00	66.00	70.00
54	46.00	49.00	52.00	55.00	59.00	62.00	66.00	70.00	75.00
56	49.00	52.00	55.00	59.00	63.00	66.00	71.00	75.00	80.00
58	52.00	55.00	59.00	62.00	67.00	71.00	75.00	80.00	85.00
60	55.00	58.00	62.00	66.00	71.00	75.00	80.00	85.00	90.00
62	58.00	62.00	66.00	70.00	75.00	80.00	85.00	90.00	95.00
64	61.00	65.00	69.00	74.00	79.00	84.00	89.00	94.00	99.00
66	64.00	69.00	73.00	78.00	83.00	88.00	93.00	98.00	103.00
68	68.00	72.00	77.00	82.00	87.00	92.00	97.00	102.00	108.00
70	71.00	76.00	81.00	86.00	91.00	96.00	101.00	106.00	112.00
72	75.00	80.00	85.00	90.00	95.00	100.00	105.00	111.00	117.00
74	80.00	85.00	90.00	95.00	100.00	105.00	110.00	116.00	122.00
76	85.00	90.00	95.00	100.00	105.00	110.00	116.00	122.00	128.00
78	90.00	95.00	100.00	105.00	110.00	116.00	121.00	127.00	133.00
80	95.00	100.00	105.00	110.00	115.00	121.00	127.00	133.00	139.00
82	100.00	105.00	110.00	115.00	121.00	127.00	133.00	139.00	145.00
84	107.00	112.00	118.00	123.00	130.00	136.00	143.00	149.00	156.00
90	128.00	135.00	142.00	149.00	157.00	165.00	173.00	181.00	189.00
96	149.00	157.00	166.00	174.00	184.00	193.00	203.00	212.00	222.00

Prices of larger sizes given upon application.

Rules for Determining Size and Speed of Pulleys, Gears or Sprocket Wheels.

The driving Pulley is called the Driver, and the driven Pulley the Driven.

If the number of teeth in gears or sprocket wheels are used instead of diameter in these calculations, number of teeth must be substituted whenever diameter occurs.

To determine the Diameter of Driver, the diameter of the Driven and its revolutions, and also revolutions of Driver being given.

$$\frac{\text{Diam. of Driven} \times \text{revolutions of Driven}}{\text{Revolutions of Driver.}} = \text{Diam. of Driver.}$$

To determine the diameter of Driven, the revolutions of the Driven and diameter and revolutions of the Driver being given.

$$\frac{\text{Diam. of Driver} \times \text{revolutions of Driver}}{\text{Revolutions of Driven.}} = \text{Diam. of Driven.}$$

To determine the revolutions of the Driver, the diameter and revolutions of the Driven, and diameter of the Driver being given.

$$\frac{\text{Diam. of Driven} \times \text{revolutions of Driven}}{\text{Diameter of Driver.}} = \text{Rev. of Driver.}$$

To determine the revolutions of the Driven, the diameter and revolutions of the Driver, and diameter of the Driven being given.

$$\frac{\text{Diam. of Driver} \times \text{revolutions of Driver}}{\text{Diameter of Driven.}} = \text{Rev. of Driven.}$$

RUBBER BELTING



We carry three grades of Rubber Belting. Our best grade is a heavy Belt, fully guaranteed, made from a superior quality of rubber and cotton duck and is especially adapted for transmission purposes, elevator and conveyor Belts of large capacity. The second quality is a somewhat lighter Belt, but will be found a good serviceable one for general work. We have sold thousands of feet of this

grade throughout the country, from which we are receiving the most favorable reports. Our third grade is intended only for light work and is not recommended for transmission of power, though it has been used to some extent for this purpose. It is not guaranteed, but is a good Belt for the price at which it is offered.

PRICE LIST.

Width, Inches.	2 Ply.	3 Ply.	4 Ply.	5 Ply.	6 Ply.	7 Ply.	8 Ply.
1	\$0.07	\$0.09	\$0.11				
1 1/2	.09	.11	.13				
1 3/4	.11	.13	.15	\$0.19			
2	.13	.15	.17	.21			
2 1/2	.15	.17	.21	.26	\$0.31		
3	.18	.22	.26	.32	.39		
3 1/2	.22	.26	.31	.38	.46		
4	.26	.30	.37	.46	.55		
4 1/2	.30	.34	.42	.52	.63	\$0.73	
5	.33	.39	.47	.58	.70	.82	
5 1/2	.36	.43	.52	.65	.78	.91	
6	.43	.52	.62	.77	.93	1.08	\$1.24
7	.51	.60	.73	.91	1.09	1.27	1.46
8	.59	.70	.84	1.05	1.26	1.47	1.68
9	.67	.80	.95	1.18	1.42	1.66	1.90
10	.75	.90	1.07	1.33	1.60	1.87	2.14
11	.83	1.00	1.18	1.47	1.77	2.06	2.36
12	.91	1.08	1.30	1.62	1.95	2.27	2.60
13	1.00	1.18	1.42	1.77	2.13	2.48	2.84
14	1.08	1.28	1.54	1.92	2.31	2.69	3.08
15	1.16	1.38	1.66	2.07	2.49	2.90	3.32
16	1.25	1.50	1.78	2.22	2.67	3.11	3.56
18	1.41	1.70	2.02	2.52	3.03	3.53	4.04
20	1.58	1.90	2.26	2.82	3.39	3.95	4.52
22	1.76	2.12	2.52	3.15	3.78	4.41	5.04
24	1.96	2.36	2.80	3.50	4.20	4.90	5.60
26	2.16	2.60	3.08	3.85	4.62	5.29	6.16
28	2.36	2.84	3.36	4.20	5.04	5.88	6.72
30			3.64	4.55	5.46	6.37	7.28
32			3.92	4.90	5.88	6.86	7.84
34			4.20	5.25	6.30	7.35	8.40
36			4.48	5.60	6.72	7.84	8.96
38			4.76	5.95	7.14	8.33	9.52
40			5.04	6.30	7.56	8.82	10.08

ENDLESS BELTS.—A charge of three extra feet will be made for the material used in the splice.

LEATHER BELTING

The widely different kinds of work for which leather belting is used, has resulted in the introduction of numerous classes, each possessing special advantages for the particular duty it is called upon to perform. When ordering it is therefore advisable to state the nature of the work for which the belting is intended.

PRICE LIST.

As adopted by Leather Belting Manufacturers Association, November 21, 1906.

Width, In.	Price per Foot.		W'th, In.	Price per Foot.		W'th, In.	Price per Foot.	
	Doub.	Sing.		Doub.	Sing.		Doub.	Sing.
1½	\$0.24	\$ 0.12	6½	\$ 3.12	\$ 1.56	27	\$12.96	\$ 6.48
5/8	.30	.15	7	3.36	1.68	28	13.44	6.72
¾	.36	.18	8	3.84	1.92	29	13.92	6.96
7/8	.42	.21	9	4.32	2.16	30	14.40	7.20
1	.48	.24	10	4.80	2.40	32	15.36	7.68
1¼	.60	.30	11	5.28	2.64	34	16.32	8.16
1½	.72	.36	12	5.76	2.88	36	17.28	8.64
1¾	.84	.42	13	6.24	3.12	38	18.24	9.12
2	.96	.48	14	6.72	3.36	40	19.20	9.60
2¼	1.08	.54	15	7.20	3.60	42	20.16	10.08
2½	1.20	.60	16	7.68	3.84	44	21.12	10.56
2¾	1.32	.66	17	8.16	4.08	46	22.08	11.04
3	1.44	.72	18	8.64	4.32	48	23.04	11.52
3½	1.56	.78	19	9.12	4.56	50	24.00	12.00
3¾	1.68	.84	20	9.60	4.80	52	24.96	12.48
4	1.80	.90	21	10.08	5.04	54	25.92	12.96
4½	1.92	.96	22	10.56	5.28	56	26.88	13.44
5	2.16	1.08	23	11.04	5.52	60	28.80	14.40
5½	2.40	1.20	24	11.52	5.76	64	30.72	15.36
6	2.64	1.32	25	12.00	6.00	68	32.64	16.32
	2.88	1.44	26	12.48	6.24	72	34.56	17.28

Round Leather Belting

Size, Inches.	Per Foot, Twist.	Per Foot, Solid.	Size, Inches.	Per Foot, Twist.	Per Foot, Solid.
1½	\$0.06	\$0.05	1½	\$0.30	....
1¾	.10	.07	5/8	.36	....
2	.14	.10	¾	.46	....
2½	.18	.14	7/8	.60	....
3	.22	.18	1	.72	....

Raw Hide Lace

Our lace leather is finding firm friends wherever used. It is made from selected hides, and so prepared that it does not become hard or brittle with age.

Lace Leather, in full sides.....30c per square foot.

Machine Cut Lacing

¼ inch wide per 100 ft.	\$1.25	½ inch wide ... per 100 ft.	\$2.25
⅜ " " " " " " " " " "	1.50	5/8 " " " " " " " " " "	3.00
¾ " " " " " " " " " "	1.75	¾ " " " " " " " " " "	3.75

SOLID WHITE WOVEN COTTON BELTING

This Belting is largely used for elevating and conveying purposes and for the transmission of power where the work required is of a light character. It is formed by weaving successive layers of duck solid in one body and is thoroughly stretched. It is not affected by extremes of temperature or the action of acids. We handle the very best grade on the market.

PRICE LIST, PER LINEAL FOOT.

Width, Inches.	2-Ply.	3-Ply.	4-Ply.	5-Ply.	6-Ply.	8-Ply.
1	\$0.04	.....	.....	.....	.....	.....
1½	.05	\$0.06	.....	.....	.....	.....
2	.06	.08	\$0.12	.....	.....	.....
2½	.06½	.10	.14	.....	.....	.....
3	.07	.12	.16	.....	.....	.....
3½	.08	.14	.18	.....	.....	.....
4	.09	.15	.21	\$0.34	.....	.....
4½	.11	.17	.24	.36	.....	.....
5	.13	.19	.26	.38	.....	.....
5½	.15	.21	.28	.40	.....	.....
6	.17	.23	.30	.42	\$0.46	\$0.75
7	.19	.27	.34	.45	.51	.83
8	.21	.31	.38	.50	.57	.91
9	.23	.35	.44	.56	.66	1.03
10	.26	.39	.50	.63	.75	1.15
11	.30	.45	.55	.69	.85	1.30
12	.33	.48	.60	.75	.90	1.35
14	.41	.60	.75	.94	1.12	1.65
16	.49	.72	.90	1.12	1.35	1.95
18	.57	.82	1.00	1.28	1.50	2.13
20	.61	.90	1.15	1.44	1.72	2.33
22	.65	1.00	1.35	1.62	1.94	2.60
24	.69	1.10	1.55	1.80	2.16	2.85
26	.....	.....	1.75	2.00	2.36	3.15
28	.....	.....	1.90	2.15	2.60	3.35
30	.....	.....	2.10	2.35	2.85	3.60

RED STITCHED CANVAS BELTING

This Belting is well adapted for heavy work in wet or hot places where leather or rubber Belting will not last.

Width, Inch.	4-Ply.	5-Ply.	6-Ply.	8-Ply.	10-Ply.
1	\$0.10	.....	.....	.....	.....
1½	.15	.....	.....	.....	.....
2	.20	\$0.25	\$0.29	.....	.....
2½	.25	.31	.36	.....	.....
3	.30	.38	.44	.....	.....
3½	.35	.44	.51	.....	.....
4	.40	.50	.58	\$0.76	.....
4½	.45	.56	.65	.85	.....
5	.50	.63	.73	.95	.....
6	.60	.75	.87	1.14	.....
7	.70	.88	1.02	1.33	.....
8	.80	1.00	1.16	1.52	.....
9	.90	1.13	1.31	1.71	.....
10	1.00	1.25	1.45	1.90	.....
11	1.10	1.38	1.60	2.09	.....
12	1.20	1.50	1.74	2.28	\$2.82
13	1.37	1.71	1.99	2.60	3.22
14	1.47	1.84	2.13	2.79	3.45
15	1.58	1.98	2.29	3.00	3.71
16	1.68	2.10	2.44	3.19	3.95
18	1.89	2.36	2.74	3.59	4.44
20	2.10	2.63	3.05	3.99	4.94
22	2.31	2.89	3.35	4.39	5.43
24	2.52	3.15	3.65	4.79	5.92
26	.....	.....	4.15	5.43	6.72
28	.....	.....	4.47	5.85	7.24
30	.....	.....	4.79	6.27	7.76
32	.....	.....	5.10	6.69	8.27
34	.....	.....	5.42	7.11	8.79
36	.....	.....	5.74	7.52	9.31

Endless Red Stitched Canvas Thresher Belts

We carry the following sizes in stock during the season and are prepared to quote interesting prices.

60 feet 6 inch 4-ply.	80 feet 7 inch 4-ply.	70 feet 8 inch 4-ply.
80 " 6 " 4 "	100 " 7 " 4 "	80 " 8 " 4 "
100 " 6 " 4 "	120 " 7 " 4 "	100 " 8 " 4 "
120 " 6 " 4 "	130 " 7 " 4 "	120 " 8 " 4 "
130 " 6 " 4 "	140 " 7 " 4 "	130 " 8 " 4 "
140 " 6 " 4 "	150 " 7 " 4 "	140 " 8 " 4 "
150 " 6 " 4 "	160 " 7 " 4 "	150 " 8 " 4 "
160 " 6 " 4 "		160 " 8 " 4 "

All other Belts ordered endless will be made to order, which will necessitate a delay of fully two weeks.

Three feet extra charged for splice on endless belts other than thresher belts.

BELT CLAMPS.

Iron Screw Belt Clamp.

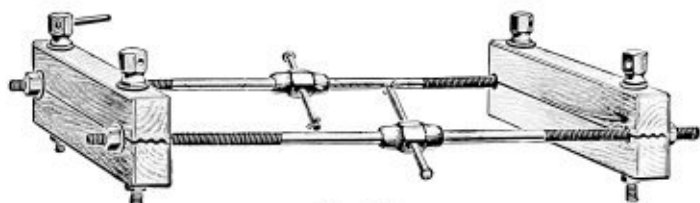


Fig. 208.

PRICE LIST.

	Each.
No. 270. For 6 to 14 inch belts	\$ 8.00
No. 271. " 12 " 18 " "	10.00
No. 272. " 18 " 24 " "	12.00
No. 273. " 24 " 36 " "	18.00

The frames of the above clamps are made of rock maple and the screws of the best wrought iron, with square head and rapid pitch.

Ainsworth's Improved Steel Belt Clamps.

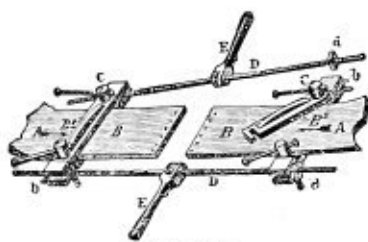


Fig. 209.

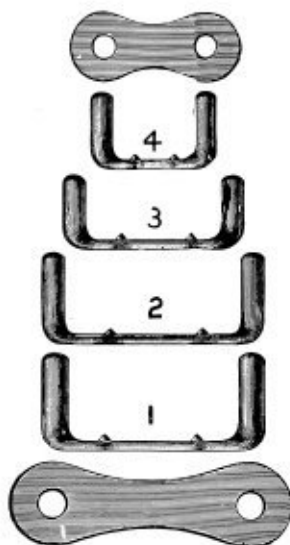
PRICE LIST.

Size.	Each.
8 inch clamp	\$20.00
12 " "	24.00
16 " "	30.00
20 " "	35.00
24 " "	40.00
26 " "	44.00
30 " "	48.00
32 " "	52.00
36 " "	56.00
40 " "	60.00
44 " "	64.00
48 " "	68.00

SMITH'S PATENT BELT FASTENERS.

PRICE LIST.

No. 1.	Per box of 100	.....	\$2.00
No. 2.	" 100	.....	1.75
No. 3.	" 100, for thin and single belt'g	.....	1.50
No. 3.	" 100, " thick and double "	.....	1.50
No. 4.	" 100, " thin and single "	.....	1.25
No. 4.	" 100, " thick and double "	.....	1.25



BRISTOL'S STEEL BELT LACING



In ordering this Belt Lacing state kind, width and ply of belting for which it is intended.

PRICE LIST.

Size No. 00.	100 inches	.....	\$1.00	Size No. 100.	100 inches	.....	\$1.10
" "	0. 100 "	.....	1.00	" "	10. 100 "	.....	1.10
" "	1. 100 "	.....	1.50	" "	11. 100 "	.....	1.65
" "	2. 100 "	.....	2.00	" "	12. 100 "	.....	2.20
" "	3. 100 "	.....	2.50	" "	13. 100 "	.....	2.75
" "	4. 100 "	.....	3.00	" "	14. 100 "	.....	3.30
" "	5. 100 "	.....	3.50	" "	15. 100 "	.....	3.85

Lacing packed in boxes of 100 inches and in assorted lengths.

BUFFALO BELT FASTENERS**PRICE LIST.**

No. 15—1,000 in a box.....\$1.50 per 1,000
(For light single and very small belts.)

No. 13—1,000 in a box.....\$2.00 per 1,000
(For ordinary single belts and general use.)

No. 10—1,000 in a box.....\$2.50 per 1,000
(Extra heavy and wide single belts and small and light double ones.)

No. 8— 500 in a box.....\$3.50 per 1,000
(Ordinary double belts and wide 4-ply rubber and cotton.)

No. 7— 250 in a box.....\$4.00 per 1,000
(For extra heavy and wide double leather and rubber belts.)

No. 6— 250 in a box.....\$5.00 per 1,000
(For extra heavy and wide double leather and rubber belts.)

Pliers for Clinching, 40c per pair.

**LATHROP'S PATENT BELT AWL**

A Great Convenience for Lacing Belting.



Per dozen\$9.00

ROUND PUNCHES

No. 0. Per doz.....	\$6.00	No. 11 and 12. Per doz.....	\$5.75
No. 1 to 6. Per doz.....	4.25	No. 13 " 14. " ".....	6.75
No. 7 to 10. " ".....	4.75	No. 15 " 16. " ".....	7.75

MISCELLANEOUS**Copper Rivets and Burrs**

No. 7. Per lb.	\$0.49	No. 11. Per lb.	\$0.56
No. 8. " ".....	.50	No. 12. " ".....	.58
No. 9. " ".....	.52	No. 13. " ".....	.60
No. 10. " ".....	.54	No. 14. " ".....	.65

Blake's Belt Studs

No. 00. Per box.....	\$2.50	No. 3. Per box.....	\$0.90
No. 0. " ".....	2.00	No. 4. " ".....	.80
No. 1. " ".....	1.65	No. 5. " ".....	.70
No. 2. " ".....	1.25	No. 6. " ".....	.60

Elliot's Lacc Cutters.....each, \$0.50 | Rivet Setseach, \$0.50

MANILA ROPE TRANSMISSION

We desire to call prospective buyers' attention to our superior facilities for the manufacture of Manila Rope Sheaves and other appliances used in connection with Rope Transmission. We have designed and furnished hundreds of drives throughout the country that are giving the best of satisfaction, ranging in capacity from one to a thousand horse power. We have also introduced many improvements in this branch of power transmission and our system enjoys a most enviable reputation.

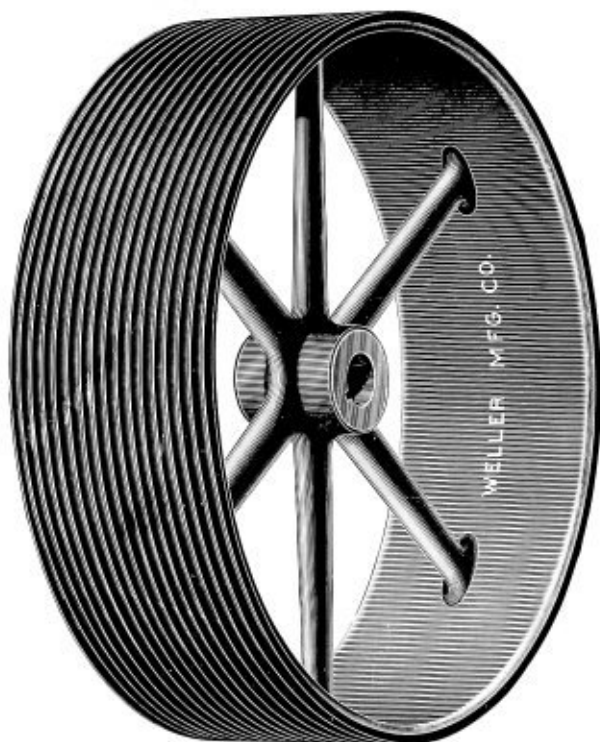


Fig. 210.

We have given much attention to the design of our Sheaves. They are heavy and well proportioned, the grooves being accurately turned and polished. The pitch of the grooves is greater for a rope of corresponding diameter than in Sheaves furnished by many manufacturers.

HORSE POWER, MANILA ROPE

Diameter of Rope.	Velocity, Feet per Minute.										
	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000
$\frac{3}{8}$	2.3	3.3	4.3	5.2	6.0	6.6	7.2	7.3	7.4	7.3	6.9
$\frac{7}{16}$	3.0	4.5	5.9	7.0	8.2	9.0	9.6	9.8	10.0	9.6	9.0
1	4.0	5.9	7.7	9.2	10.6	11.8	12.7	12.9	13.0	12.7	12.0
$1\frac{1}{8}$	5.0	7.5	9.7	11.6	13.5	14.9	16.0	16.3	16.7	16.5	15.3
$1\frac{1}{4}$	6.3	9.1	12.0	14.3	16.7	18.5	20.0	20.2	20.7	20.1	18.9
$1\frac{3}{8}$	9.0	13.5	17.4	20.7	23.0	26.3	28.7	29.0	29.5	28.6	26.7
$1\frac{1}{2}$	12.3	18.0	23.6	28.2	32.7	36.4	38.5	39.4	40.5	38.7	36.0
2	16.0	23.2	30.6	36.8	42.5	46.7	50.0	51.7	52.8	50.6	47.3
$2\frac{1}{8}$	20.0	29.6	38.6	46.6	53.6	59.2	63.6	65.8	66.3	64.4	60.3
$2\frac{1}{4}$	25.0	36.6	47.7	57.5	66.0	71.2	78.0	80.0	81.0	79.0	73.8

SPLICING OF MANILA ROPE

The splice in a transmission rope is not only the weakest part of the rope, but it is the first to fail when the rope is worn out. If the joint is not strong the rope will fail by breakage or pulling out of the splice, the projecting parts will wear on the sheaves, and the rope will fail from the cutting off of the threads. Formerly much trouble was experienced in this way on account of improper splicing. One form of joint was made by pressing the ropes firmly together and winding about with stout small rope. The spliced part is taken as long as possible in order to bend properly over the pulleys and give the required strength. As this form of joint made the rope larger in diameter at the splice, the effect produced was to run faster when passing over the driving-sheave and slower over the follower; the resulting motion was very irregular, and the wear at the splice rapidly destroyed the rope.

A very simple splice is sometimes used with rope-driving formed by opening out the ends of the rope for 12 or 15 inches and tying together the individual rope-yarns one by one, allowing the ends to lie straight, and serving the whole with spun yarn.

Similar joints wrapped with raw-hide belt-lacing give a very smooth splice which lasts well.

Some engineers favor a short splice, in that it is easily made and holds well, and offers a lesser length of enlarged portion for surface contact with the sheaves.

If properly made, however, there need be no enlarged portion, and since a long splice is stronger we find such joints preferred in most cases.

There are several kinds of long splices varying in length from 60 to 80 diameters of the rope, but the one which seems to give the best results in practice is the "English splice."

ENGLISH SPLICE

For Manila Transmission Rope

The successive operations for splicing a $1\frac{1}{4}$ -inch rope by this method are as follows:

1. Tie a piece of twine, 9 and 10, around the rope to be spliced about six feet from each end. Then unlay the strands of each end back to the twine.

2. Butt the ropes together and twist each corresponding pair of strands loosely, to keep them from being tangled, as shown at (a).

3. The twine 10 is now cut, and the strand 8 unlaied and strand 7 carefully laid in its place for a distance of four and a half feet from the junction.

4. The strand 6 is next unlaied about one and a half feet and strand 5 laid in its place.

5. The ends of the cores are now cut off so they just meet.

6. Unlay strand 1 four and a half feet, laying strand 2 in its place.

7. Unlay strand 3 one and a half feet, laying in strand 4.

8. Cut all the strands off to a length of about twenty inches, for convenience in manipulation. The rope now assumes the form shown in (b), with the meeting-points of the strands three feet apart.

Each pair of strands is now successfully subjected to the following operations:

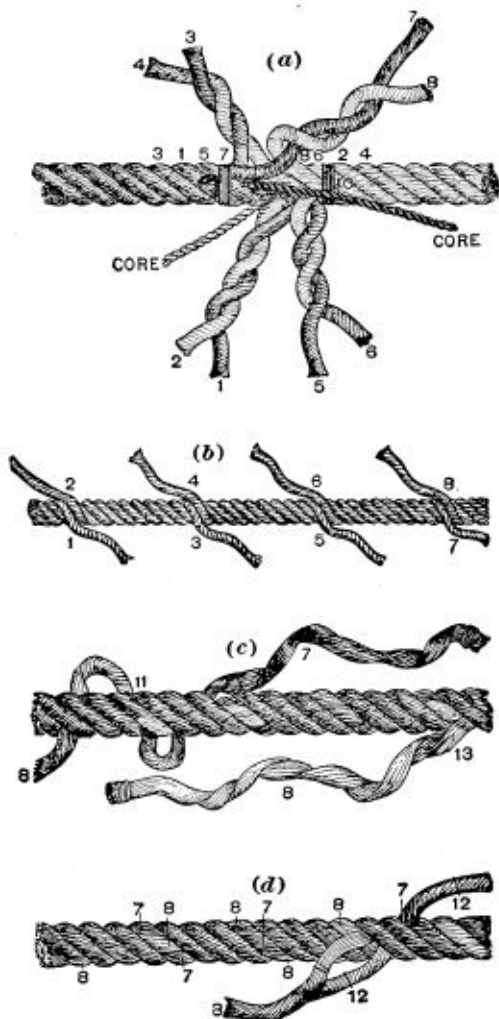
9. From the point of meeting of the strands 8 and 7 unlay each one three turns; split both the strand 8 and the strand 7 in halves, as far back as they are now unlaied, and the end of each half strand "whipped" with a small piece of twine.

10. The half of the strand 7 is now laid in three turns, and the half of 8 also laid in three turns. The half strands now meet and are tied in a simple knot 11 (c), making the rope at this point its original size.

11. The rope is now opened with a marlinspike, and the half strand of 7 worked around the half strand of 8 by passing the end of the half strand through the rope, as shown, drawn taut, and again worked around this half strand until it reaches the half strand 13 that was not laid in. This half strand 13 is now split, and the half strand 7 drawn through the opening thus made, and then tucked under the two adjacent strands, as shown in (d).

12. The other half of the strand 8 is now wound around the other half of strand 7 in the same way. After each pair of strands has been treated in this manner, the ends are cut off at 12, leaving them about four inches long. After a few days' wear they will draw into the body of the rope or wear off, so that the locality of the splice can scarcely be detected.

SPLICING ROPES



Splice for $1\frac{1}{4}$ Inch Four-Strand Rope
 Fig. 6, from Flather's "Rope Driving"

CAST IRON SHEAVES FOR MANILA ROPE TRANSMISSION

With Turned Grooves

For $\frac{3}{4}$, $\frac{7}{8}$, 1 and $1\frac{1}{8}$ Inch Rope.

PRICE LIST.

Diam. in Inches	Number of Grooves.									
	1	2	3	4	5	6	7	8	9	10
12	\$ 9.00	\$12.00	\$15.00	\$21.75	\$25.50	\$28.75	\$32.00	\$36.00	\$40.50	\$45.50
14	9.50	13.00	17.50	22.50	26.50	30.00	33.50	37.50	41.50	47.00
16	10.00	14.00	20.50	23.50	27.50	31.00	35.00	39.00	43.00	49.00
18	11.75	15.00	21.00	27.00	32.00	37.00	41.00	45.00	50.00	56.00
20	12.70	17.00	26.50	30.50	36.75	42.00	47.00	52.00	58.00	64.00
22	13.00	18.50	27.00	35.00	41.50	47.00	53.00	59.00	66.00	71.00
24	14.75	20.50	29.00	37.00	44.00	50.00	56.00	62.00	69.00	75.00
26	15.75	22.50	31.50	41.00	48.00	55.00	63.00	69.00	77.00	84.00
28	16.50	23.50	32.50	42.00	49.00	57.00	65.00	71.00	79.00	86.00
30	18.00	25.50	34.00	43.00	51.00	58.00	67.00	73.00	82.00	89.00
32	20.50	29.50	38.00	48.00	58.00	64.00	72.00	80.00	89.00	97.00
34	22.50	30.00	39.00	49.00	59.00	65.00	74.00	82.00	91.00	100.00
36	23.00	31.00	41.00	51.00	61.00	68.00	77.00	86.00	95.00	105.00
40	26.50	35.00	46.00	57.00	70.00	85.00	96.00	103.00	111.00	119.00
44	29.00	38.00	49.00	61.00	74.00	89.00	100.00	108.00	116.00	125.00
48	33.00	46.00	54.00	70.00	85.00	96.00	110.00	120.00	128.00	137.00
52	41.00	54.00	68.00	79.00	93.00	107.00	119.00	129.00	137.00	146.00
56	44.00	57.00	71.00	83.00	98.00	112.00	124.00	134.00	143.00	152.00
60	50.00	63.00	76.00	98.00	111.00	128.00	144.00	155.00	172.00	185.00
64	55.00	67.00	87.00	102.00	115.00	133.00	150.00	161.00	179.00	193.00
68	64.00	77.00	98.00	113.00	127.00	144.00	161.00	173.00	190.00	205.00
72	74.00	87.00	104.00	121.00	135.00	154.00	172.00	185.00	203.00	219.00
76	77.00	91.00	118.00	132.00	149.00	170.00	189.00	205.00	220.00	237.00
80	83.00	103.00	121.00	136.00	154.00	175.00	195.00	211.00	227.00	244.00
84	90.00	111.00	130.00	146.00	165.00	187.00	208.00	225.00	242.00	260.00
88	94.00	118.00	140.00	159.00	180.00	203.00	225.00	244.00	262.00	279.00
92	113.00	133.00	156.00	175.00	196.00	220.00	242.00	262.00	281.00	298.00
* 96	118.00	139.00	162.00	228.00	255.00	287.00	315.00	341.00	365.00	383.00
* 102	135.00	164.00	236.00	262.00	297.00	335.00	368.00	400.00	427.00	472.00
* 108	151.00	176.00	252.00	280.00	315.00	355.00	389.00	422.00	450.00	476.00
* 114	171.00	196.00	281.00	312.00	347.00	389.00	442.00	475.00	506.00	533.00
* 120	189.00	216.00	308.00	349.00	391.00	438.00	481.00	520.00	566.00	604.00

*All Sheaves 96 inches and over are made split unless otherwise specified.

For List Price of Split Sheaves under 96 inches diameter add 30 per cent. to the above list. Prices of Sheaves for Ropes of larger diameter furnished upon receipt of specifications.

CAST IRON SHEAVES FOR MANILA ROPE TRANSMISSION—CONCLUDED

With Turned Grooves

For $\frac{3}{4}$, $\frac{7}{8}$, 1 and $1\frac{1}{8}$ Inch Rope.

PRICE LIST.

Diam. in Ins.	Number of Grooves,									
	11	12	13	14	15	16	17	18		20
12	\$50.00	\$55.00	.....	.....	.....	.....	.....	.....	.....	.....
14	52.00	57.00	.....	.....	.....	.....	.....	.....	.....	.....
16	54.00	59.00	.....	.....	.....	.....	.....	.....	.....	.....
18	61.00	66.00	.....	.....	.....	.....	.....	.....	.....	.....
20	70.00	76.00	\$81.00	\$86.00	\$91.00	\$97.00	\$103.00	\$109.00	\$115.00	\$121.00
22	76.00	82.00	87.00	91.00	96.00	102.00	108.00	114.00	121.00	127.00
24	80.00	86.00	91.00	96.00	101.00	107.00	114.00	120.00	127.00	133.00
26	89.00	96.00	102.00	107.00	114.00	121.00	128.00	136.00	143.00	150.00
28	92.00	98.00	104.00	110.00	117.00	124.00	132.00	139.00	147.00	154.00
30	94.00	101.00	108.00	114.00	120.00	128.00	136.00	143.00	151.00	159.00
32	104.00	111.00	117.00	124.00	131.00	139.00	147.00	156.00	164.00	172.00
34	107.00	114.00	120.00	127.00	134.00	143.00	151.00	159.00	168.00	176.00
36	112.00	119.00	126.00	134.00	142.00	150.00	159.00	168.00	177.00	186.00
40	127.00	135.00	144.00	151.00	162.00	172.00	182.00	192.00	202.00	212.00
44	133.00	142.00	151.00	159.00	169.00	180.00	190.00	201.00	211.00	221.00
48	146.00	158.00	171.00	184.00	196.00	208.00	220.00	233.00	245.00	257.00
52	155.00	168.00	181.00	194.00	206.00	218.00	231.00	243.00	255.00	267.00
56	162.00	175.00	188.00	202.00	214.00	227.00	239.00	252.00	264.00	277.00
60	197.00	216.00	230.00	244.00	256.00	272.00	287.00	303.00	318.00	334.00
64	205.00	224.00	239.00	253.00	266.00	282.00	298.00	314.00	330.00	346.00
68	218.00	237.00	252.00	266.00	280.00	296.00	312.00	328.00	344.00	360.00
72	233.00	253.00	269.00	284.00	299.00	316.00	334.00	351.00	368.00	385.00
76	251.00	267.00	283.00	298.00	319.00	337.00	356.00	374.00	393.00	411.00
80	259.00	275.00	292.00	307.00	328.00	347.00	366.00	385.00	404.00	423.00
84	276.00	293.00	311.00	327.00	350.00	370.00	389.00	409.00	429.00	449.00
88	296.00	314.00	332.00	351.00	372.00	393.00	414.00	435.00	456.00	477.00
92	316.00	334.00	353.00	372.00	394.00	416.00	437.00	459.00	480.00	502.00
*96	411.00	434.00	459.00	484.00	512.00	540.00	568.00	599.00	624.00	652.00
*102	480.00	507.00	536.00	564.00	596.00	630.00	662.00	695.00	727.00	760.00
*108	505.00	533.00	564.00	592.00	626.00	660.00	694.00	728.00	762.00	795.00
*114	566.00	596.00	630.00	667.00	711.00	751.00	788.00	826.00	858.00	902.00
*120	642.00	677.00	721.00	759.00	802.00	846.00	889.00	925.00	967.00	1011.00

*All Sheaves 96 inches and over are made split unless otherwise specified.

For List Price of Split Sheaves under 96 inches diameter add 30 per cent. to the above list. Prices of Sheaves for Ropes of larger diameter furnished upon receipt of specifications.

HORIZONTAL DOUBLE YOKE SIDE TENSION CARRIAGES



Fig. 112.

We recommend this style of Tension Carriage where it is desirable to economize space at the sides of the drive.

PRICE LIST.

For $\frac{3}{4}$ to $1\frac{1}{2}$ Inch Rope.

Diameter of Sheave, Inches.	Length of Track.			
	12 ft.	16 ft.	20 ft.	24 ft.
24	\$ 83.00	\$ 88.50	\$ 94.00	\$100.00
30	86.00	91.50	97.00	104.00
36	90.00	95.50	101.00	108.00
42	93.00	98.50	105.00	110.00
48	100.00	105.50	111.00	117.00

The above prices include 10 feet of Wire Cable, plus length of Travel, 2 Wire Rope Clips. Track the length specified, with Bracket Hangers. Pull Back Sheave and 150 lbs. of Weights.

VERTICAL TENSION CARRIAGES WITH GUIDES

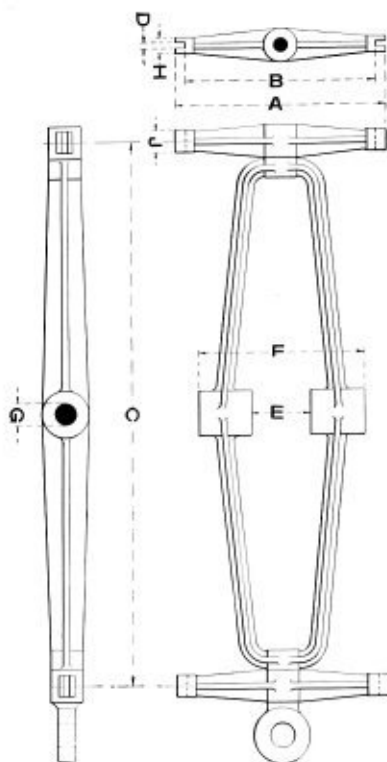


Fig. 113.

This Tension Carriage is provided with an adjustable yoke in which the Sheave runs. The guides are made of T iron the lengths contained in price list on page 261.

DIMENSIONS.

Number of Carriage.	Diam. of Sheave.	A	B	C	D	E	F	G	H	J
00	18-24	19	17 $\frac{1}{2}$	36 $\frac{5}{8}$	12 $\frac{1}{2}$	3 $\frac{1}{2}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$	13	21 $\frac{1}{4}$
0	26-30	19	17 $\frac{1}{2}$	42 $\frac{1}{2}$	12 $\frac{1}{2}$	4	12 $\frac{1}{2}$	11 $\frac{1}{2}$	13	21 $\frac{1}{4}$
1	32-36	19	17 $\frac{1}{2}$	49 $\frac{1}{2}$	12 $\frac{1}{2}$	4	14 $\frac{1}{2}$	11 $\frac{1}{2}$	13	21 $\frac{1}{4}$
2	38-42	19	17 $\frac{1}{2}$	55 $\frac{1}{2}$	12 $\frac{1}{2}$	4	14 $\frac{1}{2}$	11 $\frac{1}{2}$	13	21 $\frac{1}{4}$
3	44-48	23 $\frac{1}{2}$	21 $\frac{1}{2}$	62	15 $\frac{1}{2}$	5	15 $\frac{1}{2}$	2 $\frac{3}{8}$	13	21 $\frac{1}{4}$
4	50-60	23 $\frac{1}{2}$	21 $\frac{1}{2}$	72 $\frac{1}{2}$	15 $\frac{1}{2}$	6	17 $\frac{1}{2}$	2 $\frac{3}{8}$	13	21 $\frac{1}{4}$

PRICE LIST OF VERTICAL TENSION CARRIAGES WITH GUIDES

Fig. 113.

For $\frac{3}{4}$, $\frac{7}{8}$, and 1 Inch Rope.

Diameter of Sheave, Inches.	Length of Guides.							
	8 ft.	12 ft.	16 ft.	20 ft.	24 ft.	30 ft.	36 ft.	42 ft.
24	\$ 58.00	\$ 64.00	\$ 70.00	\$ 76.00	\$ 82.00	\$ 91.00	\$100.00	\$109.00
30	63.00	69.00	75.00	81.00	87.00	96.00	105.00	114.00
36	72.00	78.00	84.00	90.00	96.00	105.00	114.00	123.00
42	78.00	84.00	90.00	96.00	102.00	111.00	120.00	129.00
48	84.00	90.00	96.00	102.00	108.00	117.00	126.00	135.00
54	93.00	99.00	105.00	111.00	117.00	126.00	135.00	144.00
60	111.00	117.00	123.00	129.00	135.00	144.00	153.00	162.00

Above includes 100 lbs. weight. Additional weights charged extra.

For $1\frac{1}{4}$ Inch Rope.

Diameter of Sheave Inches	Length of Guides.							
	8 ft.	12 ft.	16 ft.	20 ft.	24 ft.	30 ft.	36 ft.	42 ft.
24	\$ 60.00	\$ 66.00	\$ 72.00	\$ 78.00	\$ 84.00	\$ 93.00	\$102.00	\$111.00
30	66.00	72.00	78.00	84.00	90.00	99.00	108.00	117.00
36	78.00	84.00	90.00	96.00	102.00	111.00	120.00	129.00
42	87.00	93.00	99.00	105.00	111.00	120.00	129.00	138.00
48	96.00	102.00	108.00	114.00	120.00	129.00	138.00	147.00
54	102.00	108.00	114.00	120.00	126.00	135.00	144.00	153.00
60	117.00	123.00	129.00	135.00	141.00	150.00	159.00	168.00

Above includes 100 lbs. weight. Additional weights charged extra.

For $1\frac{1}{2}$ Inch Rope.

Diameter of Sheave, Inches.	Length of Guides.							
	8 ft.	12 ft.	16 ft.	20 ft.	24 ft.	30 ft.	36 ft.	42 ft.
24	\$ 66.00	\$ 72.00	\$ 78.00	\$ 84.00	\$ 90.00	\$ 99.00	\$108.00	\$117.00
30	72.00	78.00	84.00	90.00	96.00	105.00	114.00	123.00
36	85.00	91.00	97.00	103.00	109.00	118.00	127.00	136.00
42	93.00	99.00	105.00	111.00	117.00	126.00	135.00	144.00
48	102.00	108.00	114.00	120.00	126.00	135.00	144.00	153.00
54	111.00	117.00	123.00	129.00	135.00	144.00	153.00	162.00
60	126.00	132.00	138.00	144.00	150.00	159.00	168.00	177.00

Above includes 100 lbs. weight. Additional weights charged extra.



Fig. 114.

PLAIN SWINGING TENSIONS

PRICE LIST.

For $\frac{3}{4}$ to $1\frac{1}{8}$ Inch Rope.

DIAMETER OF SHEAVE, Inches.	Price.
18.....	\$20.00
24.....	25.00
30.....	30.00
36.....	35.00
40.....	40.00

The above prices include Yokes, Sheaves and 100 lbs. of Weights.

PLAIN TIED DOWN TENSIONS

PRICE LIST.

For $\frac{3}{4}$ to $1\frac{1}{8}$ Inch Rope.

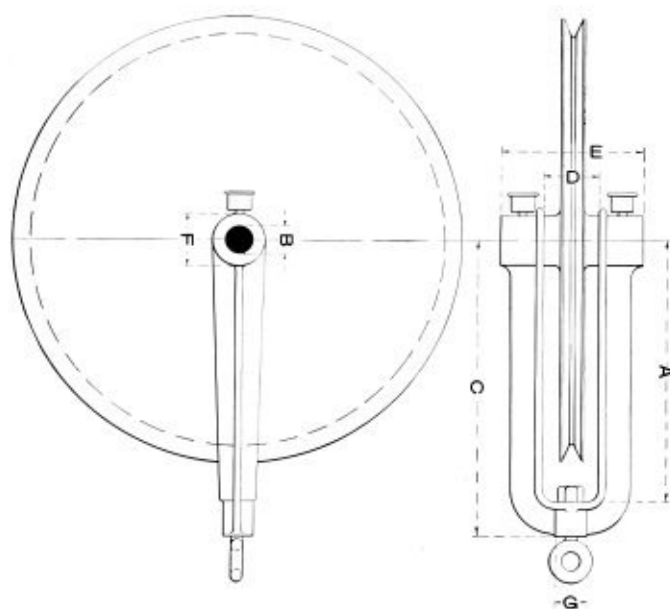
DIAMETER OF SHEAVE, Inches.	Price.
18.....	\$25.00
24.....	30.00
30.....	35.00
36.....	40.00
40.....	45.00

The above prices include Yokes, Sheaves, two Well Sheaves, 20 feet of Wire Cable and 100 lbs. of Weights.



Fig. 115.

PLAIN SWINGING TENSION CARRIAGE



DIMENSIONS.

No.	Diameter of Sheave.	A	B	C	D	E	F	G
00	12-16	12	$1\frac{7}{16}$	14	3	9	3	$2\frac{1}{8}$
0	18-22	13 $\frac{1}{2}$	$1\frac{11}{16}$	$15\frac{1}{2}$	$3\frac{1}{2}$	$11\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{4}$
1	24-34	20	$1\frac{13}{16}$	22	4	$12\frac{3}{4}$	4	$2\frac{1}{8}$
2	36-42	$23\frac{1}{2}$	$1\frac{15}{16}$	26	4	$14\frac{1}{2}$	$4\frac{1}{2}$	$2\frac{1}{4}$
3	44-50	29	$2\frac{3}{16}$	32	5	$15\frac{1}{2}$	$4\frac{1}{2}$	3
4	52-66	36	$2\frac{7}{16}$	40	6	$17\frac{1}{2}$	5	4

TRACK HANGERS AND FLOOR STANDS

For Horizontal Tension Carriages.



Fig. 116.
Drop Hanger.



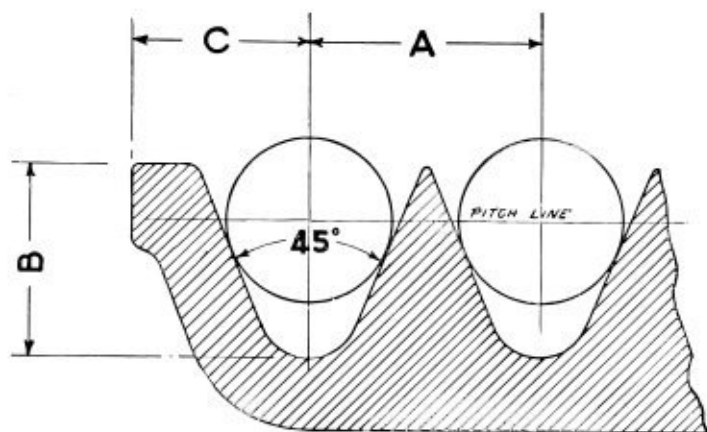
Fig. 117.
Floor Stand.

PRICE LIST.

Of Track Drop Hangers or Floor Stands.

Size.	Price, Each.			
	12 inch.	18 inch.	24 inch.	30 inch.
For 18 inch to 36 inch Sheaves.	\$6.00	\$7.00	\$ 8.00	\$ 9.50
For 42 inch to 60 inch Sheaves.	7.00	8.50	10.00	12.00

DIMENSIONS OF MANILA ROPE SHEAVE GROOVES



DIMENSIONS.

Diameter of Rope Inches.	A	B	C	Diameter of Rope Inches.	A	B	C
$\frac{3}{8}$	$1\frac{1}{4}$	1	$\frac{3}{8}$	1 $\frac{1}{4}$	$2\frac{1}{4}$	$1\frac{7}{16}$	$1\frac{5}{16}$
$\frac{7}{8}$	$1\frac{1}{4}$	1	$\frac{3}{8}$	1 $\frac{1}{2}$	$2\frac{1}{8}$	$1\frac{3}{4}$	$1\frac{1}{2}$
$\frac{1}{2}$	$1\frac{1}{4}$	1	1	1 $\frac{1}{4}$	$2\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{11}{16}$
1	$1\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{1}{8}$	2	$2\frac{1}{2}$	$2\frac{1}{4}$	$1\frac{3}{8}$
1 $\frac{1}{2}$	$1\frac{3}{8}$	$1\frac{7}{16}$	$1\frac{1}{4}$				

TENSION CARRIAGE FIXTURES



Fig. 118.

Swivel Pull-Back Sheaves, price, \$2.75



Fig. 119.

Swinging Pull-Back Sheaves
price\$2.75

WIRE ROPE CLIPS



Fig. 120.



Fig. 121.

PULL BACK ROPES



Fig. 122.

For Pull-Back Ropes we recommend Iron or Steel Hoisting Rope made with 19 wires to the strand.

PRICE LIST.

DIAMETER OF ROPE, Inches.	Price, Each.
1/4	\$0.25
5/16	.25
3/8	.25
7/16	.30
1/2	.35
5/8	.40
3/4	.45
7/8	.50

TENSION WEIGHT RODS

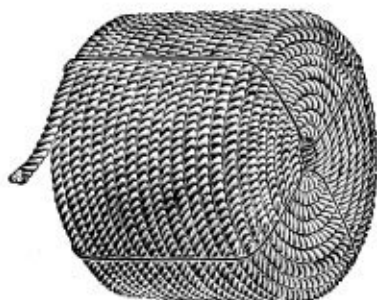


Fig. 123.

Price, 24 inches long, 3/4 inch diameter, each\$1.25
Tension Weights, per lb.03

TALLOW-LAID MANILA ROPE

For Transmission of Power



We carry a large stock of specially selected extra long fibre Manila Rope carefully laid up in a lubricant which prevents its wearing and chafing. It is especially adapted for power transmission and we guarantee it superior to any on the market for the purpose.

CIRCUMFERENCE.	APPROXIMATE WEIGHT AND STRENGTH OF MANILA TRANSMISSION ROPE.			
	Diameter, Inches.	Weight of 100 feet in lbs.	Strength of New Rope in lbs.	Length of Rope in 1 lb. Ft. In.
1 $\frac{1}{2}$	$\frac{1}{2}$	11	2,250	9 2
2	$\frac{3}{4}$	15	4,000	6 8
2 $\frac{1}{2}$	1	20	5,000	5
3	1 $\frac{1}{8}$	26	7,500	4
3 $\frac{1}{2}$	1 $\frac{1}{4}$	34	9,000	3
4	1 $\frac{1}{2}$	43	12,250	2 6
4 $\frac{1}{2}$	1 $\frac{3}{4}$	53	14,000	2
5	1 $\frac{7}{8}$	65	18,062	1 8
5 $\frac{1}{2}$	1 $\frac{7}{8}$	77	20,250	1 3
6	2	95	25,000	1 1
		115	30,250	10 $\frac{1}{2}$
		142	36,000	9 $\frac{1}{2}$

Price, per lb. \$0.25

MANILA ROPE DRESSING

An occasional application of a good Rope Dressing will add to the life of any transmission rope as it keeps it soft and pliable and protects it from external and internal friction, moisture or heat. For this purpose, we recommend the "Magnolia" Rope Dressing which is sold in the following size packages:

In 5 and 10 pound tin cans per lb. \$0.40
 In 25, 40 and 75 pound wooden kits..... " .35
 In half and full barrels..... " .25

WIRE ROPE TRANSMISSION SHEAVES



Fig. 124.

PRICE LIST. Rubber Lined.

Diameter in inches.	Price.
18	\$ 12.00
24	15.00
30	20.00
36	25.00
42	28.00
48	34.00
54	42.00
60	50.00
72	64.00
84	80.00
96	100.00
108 Split.	140.00
120 "	200.00
132 "	250.00
144 "	280.00

Rubber Lining for Transmission Sheaves. Price, per lb. \$0.50

HEAVY HOISTING SHEAVES

WITH TURNED GROOVES.



Fig. 125.



Fig. 126.

36 inch diametereach, \$26.00 | 60 inch diametereach, \$50.00
 48 inch diametereach, 34.00 | 72 inch diametereach, 75.00

Special Prices of Sheaves with Wrought Iron Arms and Grooves Turned, Wood or Rubber Lined, quoted on application.



TRANSMISSION AND STANDING ROPE

7 wires to the Strand.

PRICE LIST.

Diam. in Inches.	List per Foot.				Diam. in Inches.	List per Foot.			
	Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.		Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.
1 1/8	\$0.51	\$0.60	\$0.75	\$0.90	5/16	\$0.10	\$0.11	\$0.14	\$0.17
1 1/4	.43	.51	.64	.75	3/8	.08	.09	.11 1/2	.14
1 1/2	.36	.43	.53	.61	1/2	.06 1/2	.07 1/2	.09 1/2	.11
1 3/4	.29	.36	.44	.51	5/8	.05 1/2	.06 1/2	.07 1/4	.08
2	.23	.28	.34	.41	3/4	.04 1/2	.05 1/2	.06	.06 1/2
2 1/4	.17 1/2	.22	.26	.32	7/8	.03 1/2	.04 1/2	.05 1/2	.06
2 1/2	.14	.16	.20	.25	1	.03 1/4	.04	.05	.05 1/2
2 3/4	.12	.13 1/2	.17	.20					

STANDARD HOISTING ROPE.

19 wires to the Strand.

PRICE LIST.

Diam. in Inches.	List per Foot.				Diam. in Inches.	List per Foot.			
	Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.		Iron.	Cast steel.	Extra strong crucible steel.	Plough steel.
2 1/4	\$1.17	\$1.42	\$1.70	\$2.00	1 1/8	\$0.20	\$0.23	\$0.28	\$0.34
2	.92	1.11	1.34	1.56	1 1/4	.16	.18	.22	.26
1 3/4	.80	.93	1.15	1.35	1 1/2	.12	.14	.16 1/2	.19
1 1/2	.63	.74	.91	1.08	1 3/4	.10	.12	.14	.16
1 1/4	.57	.66	.80	.93	1 5/8	.08	.11	.12 1/2	.14
1 1/2	.48	.56	.67	.77	1 7/8	.07 1/2	.10	.11 1/2	.13
1 1/4	.40	.46	.55	.63	2	.07	.09 1/2	.11	.12 1/2
1 1/2	.33	.38	.45	.52	2 1/8	.06 1/2	.09 1/4	.10 3/4	.12 1/4
1	.26	.30	.36	.43	2 1/4	.06 1/2	.09	.10 1/2	.12

For table of horse power transmitted by Wire Rope see page 497.

HORSE POWER TRANSMITTED BY STEEL SHAFTING

The table given below is for ordinary line Shafting running under favorable conditions and supported by bearings at intervals of about 8 feet. We do not guarantee the correctness of this table as the conditions under which Shafting is operated differ too radically for it to be satisfactorily applied in all cases.

Diam. of shaft in in.	REVOLUTIONS PER MINUTE.										
	1	100	125	150	175	200	225	250	275	300	350
1	.02232	2.23	2.79	3.35	3.91	4.46	5.02	5.58	6.14	6.70	7.81
1 1	.0396	3.96	4.95	5.94	6.93	7.92	8.91	9.90	10.89	11.88	13.86
1 1 1	.06407	6.41	8.01	9.61	11.21	12.81	14.41	16.02	17.61	19.22	22.42
1 1 1 1	.09697	9.70	12.12	14.55	16.97	19.39	21.82	24.24	26.66	29.09	33.94
1 1 1 1 1	.13956	13.96	17.45	20.93	24.42	27.91	31.40	34.89	38.38	41.87	48.85
1 1 1 1 1 1	.19309	19.31	24.14	28.96	33.79	38.62	43.44	48.27	53.10	57.93	67.58
1 1 1 1 1 1 1	.2588	25.88	32.35	38.82	45.29	51.76	58.23	64.70	71.17	77.64	90.58
1 1 1 1 1 1 1 1	.33796	33.80	42.25	50.69	59.14	67.59	76.04	84.49	92.94	101.4	118.3
1 1 1 1 1 1 1 1 1	.4318	43.18	53.98	64.77	75.57	86.36	97.16	108.	118.7	129.5	151.1
1 1 1 1 1 1 1 1 1 1	.54156	54.16	67.70	81.23	94.77	108.3	121.9	135.4	148.9	162.5	189.5
1 1 1 1 1 1 1 1 1 1 1	.66851	66.85	83.56	100.3	117.	133.7	150.4	167.1	183.8	200.5	234.
1 1 1 1 1 1 1 1 1 1 1 1	.8139	81.39	101.7	122.1	142.4	162.8	183.1	203.5	223.8	244.2	284.9
1 1 1 1 1 1 1 1 1 1 1 1 1	1.1650	116.5	145.6	174.8	203.9	233.	262.1	291.3	320.4	349.5	407.8
1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.6048	160.5	200.6	240.7	280.8	321.	361.	401.2	441.3	481.4	561.7
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2.2183	221.8	277.3	332.7	388.2	443.7	499.1	554.6	610.	665.5	776.4
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2.88	288.	360.	432.	504.	576.	648.	720.	792.	864.	

To find the H. P. at speeds not given in the table, multiply the H. P. at 1 r. p. m. by the desired speed.

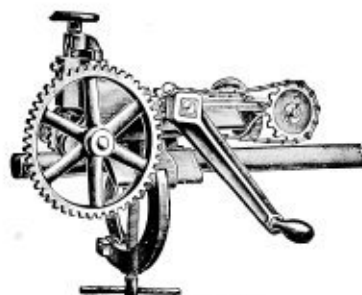


Fig. 127.

PORTABLE SHAFT KEY SEATER

PRICE LIST.

- No. 1 cuts shafts $1\frac{1}{4}$ to 5 inches diameter \$40.00
 No. 2 cuts shafts to 8 inches diameter 75.00

QUILLS OR HOLLOW SHAFTS.

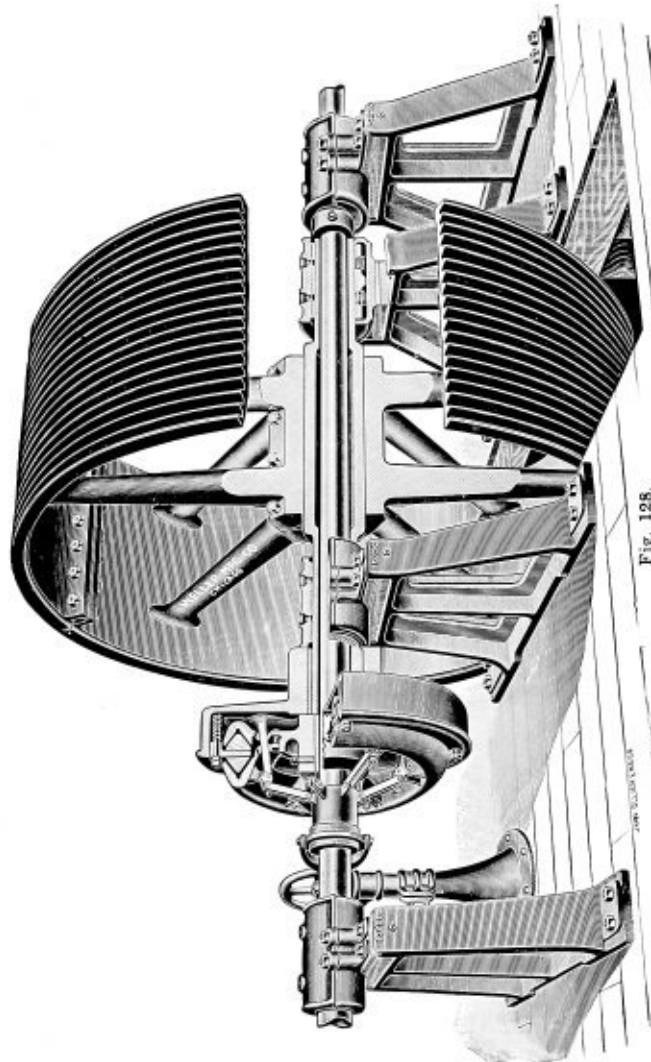


Fig. 128.

Quill Equipped with 30-inch Weller Compound Friction Clutch, Manila Rope

Sheave and Standard Self Oiling Floor Stands.

We are prepared to furnish complete Quill equipments of the most approved design and of any desired capacity. Our Quills are made of cast iron, forged or cast steel as may be desired.

Prices and designs furnished upon application.

COLD DRAWN AND TURNED SHAFTING

We are prepared to furnish either Cold Drawn or Turned Shafting up to and including $3\frac{1}{2}$ inches in diameter. Above this size we recommend Turned Shafting, and fill all orders accordingly unless otherwise specified. Prices of larger sizes made from hammered stock furnished upon application.

PRICE LIST.

Diameter, Inches.	Weight per ft., lbs.	Price, per lb.	Price, per ft.	Diameter, Inches.	Weight per ft., lbs.	Price, per lb.	Price, per ft.
$\frac{1}{16}$	2.35	\$0.05 $\frac{1}{2}$	\$0.13	$2\frac{1}{16}$	23.06	\$0.05	\$1.16
1	2.68	.05 $\frac{1}{2}$	.15	3	24.05	.05	1.21
$1\frac{1}{16}$	3.77	.05 $\frac{1}{2}$	.21	$3\frac{3}{16}$	27.16	.05 $\frac{1}{2}$	1.43
$1\frac{1}{8}$	5.52	.05 $\frac{1}{2}$	.31	$3\frac{1}{2}$	31.58	.05 $\frac{1}{2}$	1.66
$1\frac{1}{4}$	6.01	.05	.31	$3\frac{3}{4}$	36.40	.05 $\frac{1}{2}$	2.01
$1\frac{3}{8}$	7.61	.05	.38	$3\frac{1}{2}$	41.25	.05 $\frac{1}{2}$	2.26
$1\frac{1}{2}$	10.03	.05	.50	$4\frac{1}{8}$	52.62	.06	3.16
2	10.69	.05	.54	$4\frac{1}{4}$	65.50	.06 $\frac{1}{2}$	4.26
$2\frac{1}{8}$	12.80	.05	.64	$5\frac{1}{8}$	78.95	.07	5.52
$2\frac{1}{4}$	15.89	.05	.80	$5\frac{1}{4}$	94.14	.07 $\frac{1}{2}$	7.06
$2\frac{3}{8}$	19.31	.05	.97	6	96.14	.08	7.70

Extras for Short and Long Lengths

For Shafts 6 to $11\frac{1}{2}$ inches long, $\frac{1}{2}$ cent per pound net extra.

For Shafts 3 to $5\frac{1}{2}$ inches long, 1 cent per pound net extra.

For Shafts shorter than 3 inches, special prices will be quoted.

For Shafts over 24 feet long and less than 30 feet, $\frac{1}{2}$ cent per pound net extra.

For Shafts 30 feet long and less than 35 feet, 1 cent per pound net extra.

For Shafts 35 feet long and less than 40 feet, $1\frac{1}{2}$ cents per pound net extra.

For Shafts 40 feet long and less than 45 feet, 2 cents per pound net extra.

For Shafts 45 feet long and over, $2\frac{1}{2}$ cents per pound net extra.

Hammered Shafting of Iron or Steel

ACCURATELY FINISHED TO GAUGE.

Diameter, Inches.	Weight per ft., lbs.	Price per lb.	Diameter, Inches.	Weight per ft., lbs.	Price per lb.
6	96.22	Prices upon Application.	9	216.49	Prices upon Application.
$6\frac{1}{2}$	112.92		10	267.16	
7	130.97		11	323.39	
$7\frac{1}{2}$	150.34		12	384.54	
8	171.04				

KEYSEATING OF SHAFTING

Location of pulley and other special Keyseats should be plainly shown by sketch, and orders should designate which Shafts are to be Keyseated upon both ends for couplings and which upon one end only.

All Shafts containing pulley or other special Keyseats are tested after the Keyseating has been finished, and re-straightened if necessary. This applies alike to turned and drawn Shafts.

DIMENSIONS OF STANDARD KEYSEATS.

Diameter of Shaft. Inches.	Keyseat in Hub of Pulley.		Keyseat in Shaft.		Diameter of Shaft. Inches.	Keyseat in Hub of Pulley.		Keyseat in Shaft.	
	Width Inches	Depth Inches	Width Inches	Depth Inches		Width Inches	Depth Inches	Width Inches	Depth Inches
$\frac{3}{8}$ to $1\frac{1}{8}$	1	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{12}$	$4\frac{7}{16}$ to $4\frac{7}{8}$	$1\frac{1}{2}$ x $\frac{1}{2}$	$\frac{7}{8}$	$1\frac{1}{2}$ x $\frac{5}{16}$	$\frac{9}{16}$
$1\frac{1}{16}$ to $1\frac{1}{2}$	$\frac{1}{4}$ x $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{4}$ x $\frac{1}{8}$	$\frac{1}{12}$	$4\frac{1}{2}$ to $5\frac{1}{2}$	$1\frac{1}{2}$ x $\frac{7}{16}$	$\frac{7}{8}$	$1\frac{1}{2}$ x $\frac{1}{4}$	$\frac{5}{8}$
$1\frac{1}{2}$ to $2\frac{3}{8}$	$\frac{1}{2}$ x $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{2}$ x $\frac{1}{8}$	$\frac{1}{12}$	$5\frac{1}{4}$ to $5\frac{3}{4}$	$1\frac{3}{4}$ x $\frac{5}{8}$	$\frac{7}{8}$	$1\frac{3}{4}$ x $\frac{1}{2}$	$\frac{3}{4}$
$2\frac{1}{16}$ to $2\frac{3}{8}$	$\frac{1}{2}$ x $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{2}$ x $\frac{1}{8}$	$\frac{1}{12}$	$5\frac{1}{2}$ to $6\frac{1}{2}$	$1\frac{1}{2}$ x $\frac{1}{2}$	$\frac{7}{8}$	$1\frac{1}{2}$ x $\frac{3}{8}$	$\frac{3}{4}$
$2\frac{1}{8}$ to $3\frac{3}{8}$	$\frac{1}{2}$ x $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{2}$ x $\frac{1}{8}$	$\frac{1}{12}$	7 to $8\frac{1}{2}$	$1\frac{3}{4}$ x $\frac{1}{2}$	$\frac{7}{8}$	$1\frac{3}{4}$ x $\frac{1}{4}$	$\frac{3}{4}$
$3\frac{1}{16}$ to $3\frac{7}{8}$	$\frac{1}{2}$ x $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{2}$ x $\frac{1}{8}$	$\frac{1}{12}$	$8\frac{1}{4}$ to $9\frac{1}{2}$	$1\frac{3}{4}$ x $\frac{1}{2}$	$\frac{7}{8}$	$1\frac{3}{4}$ x $\frac{1}{2}$	$\frac{3}{4}$
$3\frac{1}{2}$ to $4\frac{3}{8}$	1 x $\frac{1}{16}$	$\frac{1}{16}$	1 x $\frac{1}{8}$	$\frac{1}{12}$					

PRICE LIST FOR KEYSEATING SHAFTING.

Diameter of Shaft.	$1\frac{3}{16}$	$1\frac{7}{16}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{1}{16}$	$2\frac{5}{16}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{5}{16}$	$3\frac{7}{16}$
Keyseat for Coupling each end . . .	\$0.45	.45	.50	.50	.55	.60	.65	.70	.75	.80
Keyseats, One Foot Long or Less . . .	\$0.55	.55	.60	.70	.80	.90	1.00	1.10	1.20	1.25
For each additional foot or fraction of ft.	\$0.30	.30	.35	.40	.40	.45	.50	.60	.70	.80

Diameter of Shaft.	$3\frac{1}{16}$	$3\frac{1}{8}$	$4\frac{3}{16}$	$4\frac{7}{16}$	$4\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{16}$	$5\frac{7}{16}$	$5\frac{1}{2}$	$5\frac{1}{2}$
Keyseat for Coupling each end . . .	\$0.90	1.00	1.00	1.10	1.10	1.30	1.45	1.70	1.90	2.10
Keyseats, One Foot Long or Less . . .	\$1.30	1.40	1.50	1.70	1.80	2.00	2.40	2.65	2.90	3.30
For each additional foot or fraction of ft.	\$0.90	1.00	1.10	1.20	1.30	1.50	1.70	1.90	2.10	2.30

Prices for Keyseating Shafts of larger diameter given upon application.

FLANGED FACE COUPLINGS



Fig. 129.

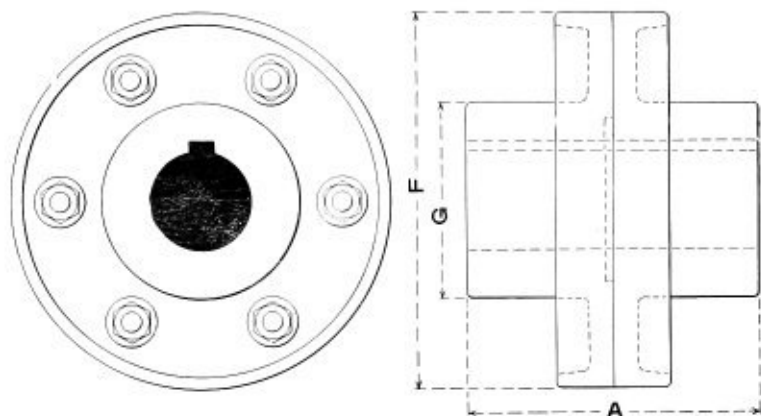
Our Flanged Face Couplings are of heavy design and are made male and female, being carefully and accurately finished. When ordered fitted each half is forced on to the shaft under pressure, keyed and afterwards turned in a lathe, thus insuring an absolutely true running line.

PRICE LIST.

Size of Shaft.	Price per Pair.	Price for Fitting.	Size of Shaft.	Price per Pair.	Price for Fitting.
1 $\frac{7}{8}$	8.00	\$2.50	4 $\frac{7}{8}$	\$ 43.25	\$13.00
1 $\frac{1}{2}$	8.50	2.60	4 $\frac{1}{2}$	54.75	18.25
1 $\frac{3}{8}$	9.50	2.75	5 $\frac{7}{8}$	67.00	20.50
2 $\frac{3}{8}$	10.50	2.85	5 $\frac{1}{2}$	81.00	22.00
2 $\frac{7}{8}$	12.50	3.00	6 $\frac{7}{8}$	95.50	24.50
2 $\frac{1}{2}$	15.25	3.25	6 $\frac{1}{2}$	110.00	26.50
2 $\frac{3}{4}$	18.25	3.50	7 $\frac{7}{8}$	126.00	28.50
3 $\frac{3}{8}$	21.75	4.00	7 $\frac{1}{2}$	142.00	30.00
3 $\frac{7}{8}$	25.25	4.50	8 $\frac{7}{8}$	160.00	32.50
3 $\frac{1}{2}$	29.25	5.00	8 $\frac{1}{2}$	179.00	35.00
3 $\frac{3}{4}$	33.25	6.00	9 $\frac{7}{8}$	200.00	37.50

For Reducing Flanged Face Couplings take the list price of the larger half.

FLANGED FACE COUPLINGS



DIMENSIONS.

Diam. of Shaft.	A	F	G	Bolts.		Diam. of Shaft.	A	F	G	Bolts.	
				No.	Dia.					No.	Dia.
$1\frac{7}{16}$	$6\frac{1}{2}$	$7\frac{1}{16}$	$3\frac{3}{8}$	4	$\frac{1}{2}$	$4\frac{3}{16}-4\frac{7}{16}$	13	15	$8\frac{1}{2}$	6	$\frac{7}{8}$
$1\frac{11}{16}$	$6\frac{3}{4}$	$8\frac{3}{8}$	$3\frac{1}{2}$	4	$\frac{1}{2}$	$4\frac{11}{16}-4\frac{13}{16}$	$14\frac{1}{2}$	16	$9\frac{3}{8}$	6	1
$1\frac{15}{16}$	$7\frac{1}{4}$	$9\frac{1}{2}$	$4\frac{1}{8}$	4	$\frac{3}{8}$	$5\frac{3}{16}-5\frac{7}{16}$	$16\frac{1}{2}$	17	10	8	1
$2\frac{3}{16}$	$7\frac{3}{4}$	$9\frac{3}{4}$	$4\frac{3}{8}$	6	$\frac{3}{8}$	$5\frac{11}{16}-5\frac{13}{16}$	$17\frac{1}{2}$	$18\frac{1}{2}$	11	8	$1\frac{1}{8}$
$2\frac{7}{16}-2\frac{11}{16}$	$8\frac{1}{2}$	$10\frac{1}{2}$	$5\frac{1}{8}$	6	$\frac{3}{8}$	$6\frac{1}{16}$	18	$20\frac{1}{2}$	$12\frac{1}{2}$	10	$1\frac{1}{8}$
$2\frac{15}{16}$	$9\frac{1}{4}$	$11\frac{1}{2}$	$5\frac{3}{4}$	6	$\frac{3}{4}$	$6\frac{11}{16}-6\frac{13}{16}$	18	$21\frac{3}{8}$	$13\frac{1}{2}$	10	$1\frac{1}{4}$
$3\frac{3}{16}$	$9\frac{3}{4}$	$12\frac{1}{8}$	$5\frac{3}{4}$	6	$\frac{3}{4}$	$7\frac{7}{16}$	$19\frac{1}{2}$	$22\frac{1}{2}$	$14\frac{1}{2}$	10	$1\frac{1}{4}$
$3\frac{7}{16}$	$9\frac{1}{2}$	13	$6\frac{1}{2}$	6	$\frac{3}{4}$	8	21	$22\frac{1}{2}$	15	10	$1\frac{3}{8}$
$3\frac{11}{16}-3\frac{15}{16}$	$10\frac{1}{2}$	13	$7\frac{1}{8}$	6	$\frac{7}{8}$	$8\frac{1}{2}$	$23\frac{1}{2}$	26	17	10	$1\frac{3}{8}$

RIBBED COMPRESSION COUPLINGS

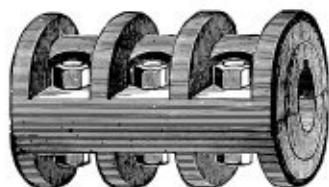


Fig. 130. Plain.



Fig. 131. With Shell.

PRICE LIST.

Size.	Plain.	With Shell.	Size.	Plain.	With Shell.
1 $\frac{3}{16}$	\$5.50	\$7.70	2 $\frac{1}{2}$	\$16.50	\$23.10
1 $\frac{1}{2}$	6.00	8.20	3 $\frac{3}{16}$	20.00	27.50
1 $\frac{1}{4}$	7.00	10.00	3 $\frac{1}{2}$	24.00	34.50
1 $\frac{1}{8}$	8.00	11.30	3 $\frac{11}{16}$	28.00	41.00
2 $\frac{3}{16}$	9.00	12.30	3 $\frac{13}{16}$	32.00	46.00
2 $\frac{1}{2}$	10.75	14.00	4 $\frac{1}{16}$	42.00	57.00
2 $\frac{1}{4}$	13.00	17.40			

For Reducing Compression Couplings take the list price of larger bore.

WRENCHES

For Adjusting Compression Coupling Bolts.

PRICE LIST.

Size of Bolt.	$\frac{1}{2}$ inch.	$\frac{3}{4}$ inch.	$1 \frac{1}{4}$ inch.	$1 \frac{1}{2}$ inch.
Price each	\$0.60	\$0.70	\$0.85	\$1.00

UNIVERSAL COUPLINGS



Fig. 132. Ring.



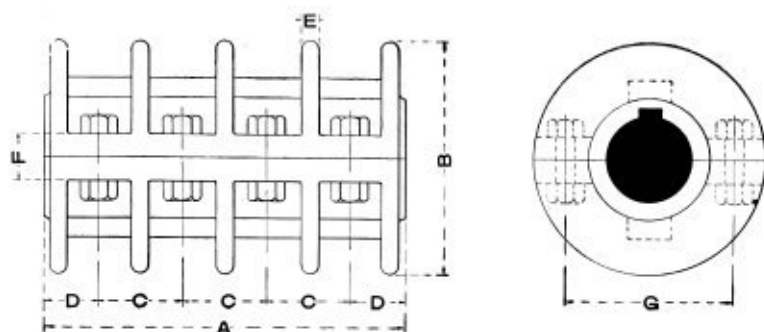
Fig. 133. Knuckle.

We have patterns for both the Ring and Knuckle types of Universal Couplings, but unless otherwise specified fill all orders with the latter style.

PRICE LIST.

Bore.	Price.	Bore.	Price.	Bore.	Price.
1 $\frac{3}{16}$	\$6.00	1 $\frac{1}{4}$	\$8.00	2 $\frac{7}{16}$	\$11.00
1 $\frac{1}{2}$	6.50	2	8.00	2 $\frac{1}{2}$	12.75
1 $\frac{1}{4}$	6.50	2 $\frac{3}{8}$	9.50	2 $\frac{1}{2}$	15.00
1 $\frac{1}{8}$	7.00				

COMPRESSION COUPLINGS



DIMENSIONS.

Size of Shaft.	A	B	C	D	E	F	G	BOLTS	
								No.	Diam.
1	4½	3½	1½	1½	½	1	2½	4	¾
1½	4½	4	1½	1½	¾	1½	2½	4	¾
1¾	5½	4½	2½	1½	¾	1½	3	4	¾
1½	5½	5	2½	1½	¾	1½	3	4	¾
1½	6½	5½	2½	1½	¾	1½	3½	4	¾
2	8½	6	2½	1½	¾	2	3½	6	¾
2	9½	6½	2½	2	¾	2	4½	6	¾
2½	11½	7½	2½	2	¾	1½	5½	8	¾
2½	12½	7½	3½	2½	¾	1½	5½	8	¾
3	13	9	3	2	¾	2½	6½	8	¾
3½	14½	9½	3½	2½	¾	2½	7½	8	¾
4	15	10½	3½	2½	¾	2½	7½	8	1
5	20½	12	3½	2½	¾	2½	9½	12	1

LEVALLEY STEEL CINCH COUPLINGS



Fig. 134.



Fig. 135.



Fig. 136.



Fig. 137.

A flanged Compression Coupling made of special steel, strong, very light in weight, durable and thoroughly efficient. The grip on the shaft is perfect when Coupling is properly put on and drawn thoroughly tight and is far beyond the limit of power designated for the respective sizes of shafts. The tapering sleeve is slotted its full length for standard keys, thus permitting the ready use of a key if thought advisable in the larger sizes.

Special bushings are used for reducing couplings. The list price of reducing Couplings is the list of the larger size shaft plus 15%.

PRICE LIST.

Size.	Price.	Size.	Price.
1 $\frac{3}{16}$	\$4.75	2 $\frac{7}{16}$	\$10.75
1 $\frac{1}{2}$	5.50	2 $\frac{1}{2}$	13.00
1 $\frac{1}{4}$	6.25	2 $\frac{3}{4}$	21.00
1 $\frac{3}{8}$	8.00	3 $\frac{1}{8}$	25.00
2 $\frac{3}{16}$	9.00	3 $\frac{1}{2}$	33.00

Prices of other sizes upon application.

Directions for Using Levalley Steel Cinch Couplings

To couple securely, the shafts should be straight and of uniform size, and in good line. Clean the sleeve and inside holes of the coupling. For a cleaner, use kerosene oil and clean till dry, or a little vinegar or mild acid, or a weak solution of blue vitriol, applied to clean the ends of the shafts and inside of the sleeve is good, and forms an excellent bond. Make the parts clean. Carefully insert the ends of the shafts to the middle of the sleeve. Lightly oil the outside of the sleeve with clean thin-bodied oil, but do not permit oil to get in the keyway, nor into the inside of the sleeve. Pass the outer parts over the sleeve—put in the bolts, turning the nuts, each a little, till they are all fairly evenly tight. Set the outer parts of the Coupling home on the sleeve by a few blows with a hammer and soft metal set on the hubs of the Coupling. Draw the nuts evenly and strong and again use the soft metal set and hammer, and draw the nuts hard tight. Repeat this operation till the bolts are drawn firmly home and the Coupling is solidly on. It must be given a hard solid vise grip. If a stronger hold than this is needed, a suitable key can be used for which a keyway is provided in the sleeve; but even without a key, it will transmit more than twice the horse power given in the standard accepted lists for the respective sizes of shafts if put on properly, hard and solid. Do it right and there will be no slip. A short time thus employed will be of great value.

SQUARE AND SPIRAL JAW CLUTCHES

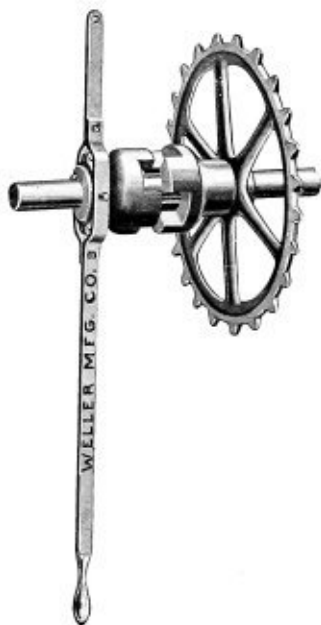


Fig. 138. Square Jaw Clutch attached to Sprocket Wheel.

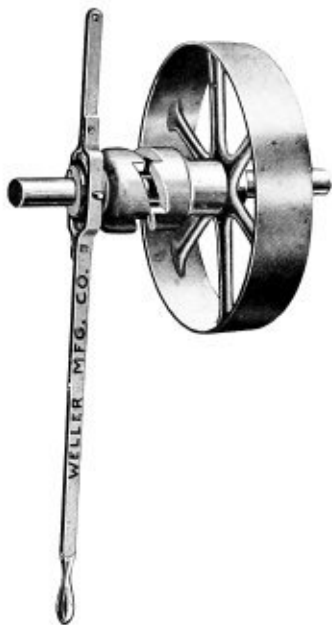


Fig. 139. Spiral Jaw Clutch attached to Pulley.

Jaw Clutches may be used in connection with Pulleys, Sheaves, Sprocket Wheels, Gears, Drums, etc. To arrive at the price add the cost of the clutch, and lever if desired, to that of the pulley, etc., at regular discounts.

In ordering state whether wheel or clutch is to drive, also send sketch showing arrangement of clutch and direction shaft revolves.

For price list see page 280.

SQUARE AND SPIRAL JAW CLUTCH COUPLINGS

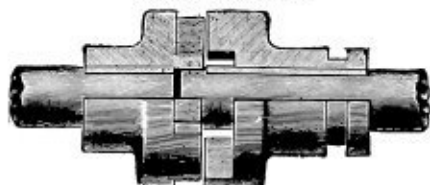


Fig. 140. Square Jaw.



Fig. 141. Spiral Jaw—Right Hand



Fig. 142. Spiral Jaw—Left Hand

PRICE LIST.

Square and Spiral Jaw Clutch Couplings.

Diameter of Shaft.	Price per pair fitted to Shaft.	Price per pair not fitted to Shaft.	Diameter of Shaft.	Price per pair fitted to Shaft.	Price per pair not fitted to Shaft.
$1\frac{1}{2}$	\$ 9.50	\$ 6.50	$2\frac{1}{16}$	\$ 23.25	\$ 18.50
$1\frac{3}{8}$	10.00	7.00	$2\frac{3}{16}$	27.75	22.75
$1\frac{1}{4}$	11.00	7.50	$3\frac{1}{16}$	37.50	30.00
$1\frac{7}{16}$	12.00	8.00	$3\frac{1}{8}$	48.75	39.00
$1\frac{1}{2}$	12.75	8.50	$4\frac{1}{16}$	65.50	52.00
$1\frac{3}{4}$	13.50	9.00	$4\frac{1}{8}$	87.00	70.00
$2\frac{1}{8}$	15.75	11.25	$5\frac{1}{16}$	115.00	95.00
$2\frac{1}{4}$	18.75	14.25	$5\frac{1}{8}$	155.00	130.00

When intended for plain instead of cut-off couplings both halves are key-seated or set-screwed and the sliding half is made without the groove for the clutch band.

The above prices do not include levers.

For levers see page 281.

For dimensions of square and spiral jaw clutches see pages 282 and 283.

SHIFTING LEVERS AND CLUTCH BANDS



A



B

These styles of Shifting Levers are intended for throwing Spiral and Square Jaw Clutches in and out of gear. They are made of wrought iron and of standard length, according to size of Clutch.

Style A is used when the fulcrum is between the handle of the lever and the clutch, and Style B when the fulcrum is on opposite side of the clutch from the handle.

In ordering levers, state whether style A or B is desired. Our Clutch Bands are cast iron, bored, turned and split.

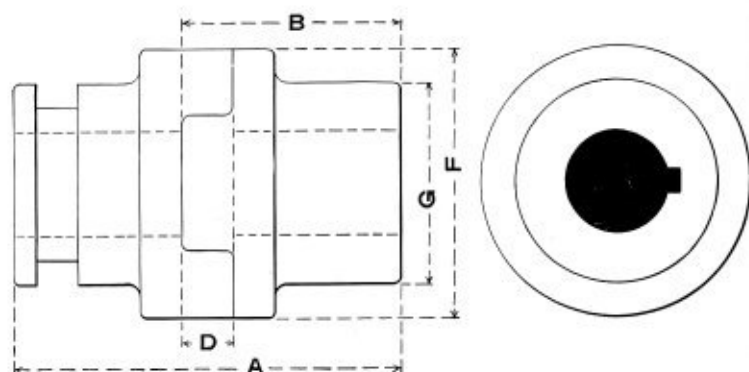


PRICE LIST.

Clutch Band.

Size of Shaft.	Clutch Band.	Style A, Lever including Band.	Style B, Lever including Band.
1 $\frac{15}{16}$	\$0.40	\$ 2.50	\$ 3.50
1 $\frac{7}{16}$	.45	2.75	4.00
1 $\frac{1}{2}$	.50	3.00	4.50
1 $\frac{11}{16}$	.55	3.25	5.00
1 $\frac{13}{16}$	.60	3.25	5.00
2 $\frac{1}{8}$	.65	3.50	5.50
2 $\frac{3}{16}$	.70	4.00	6.00
2 $\frac{1}{4}$	.75	4.00	6.00
2 $\frac{5}{16}$	.85	4.50	7.00
3 $\frac{3}{16}$	.95	4.50	7.00
3 $\frac{1}{2}$	1.00	5.00	7.50
3 $\frac{11}{16}$	1.20	5.00	8.00
3 $\frac{13}{16}$	1.30	5.50	8.00
4 $\frac{1}{8}$	1.50	6.25	9.00
4 $\frac{11}{16}$	1.75	7.00	11.00
5 $\frac{1}{8}$	2.00	8.50	14.00
5 $\frac{13}{16}$	2.50	10.00	16.00

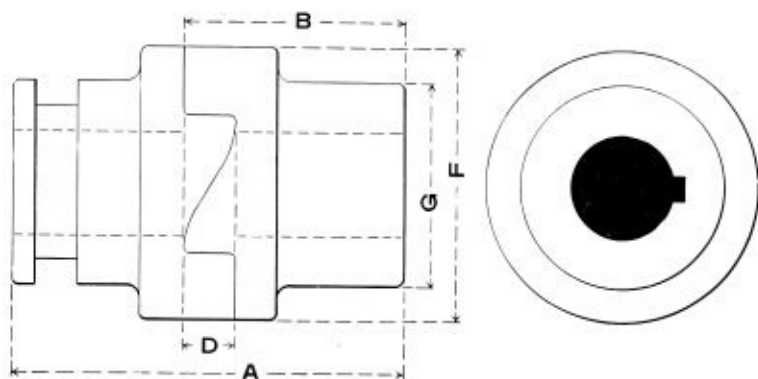
SQUARE JAW CLUTCH COUPLINGS



DIMENSIONS.

Diameter of Shaft.	G	F	D	A	B
1 $\frac{7}{8}$	3 $\frac{1}{4}$	4 $\frac{1}{4}$	1 $\frac{1}{8}$	8 $\frac{1}{2}$	4 $\frac{3}{8}$
1 $\frac{11}{16}$	3 $\frac{3}{4}$	4 $\frac{3}{4}$	1 $\frac{1}{8}$	8 $\frac{1}{2}$	4 $\frac{3}{8}$
1 $\frac{13}{16}$	4	5 $\frac{1}{4}$	1 $\frac{1}{4}$	8 $\frac{1}{2}$	4 $\frac{3}{4}$
2 $\frac{3}{8}$	4 $\frac{1}{4}$	5 $\frac{1}{4}$	1 $\frac{1}{4}$	8 $\frac{1}{2}$	4 $\frac{3}{4}$
2 $\frac{7}{8}$	5 $\frac{1}{4}$	6 $\frac{1}{4}$	1 $\frac{3}{8}$	9 $\frac{1}{4}$	5 $\frac{3}{8}$
2 $\frac{11}{16}$	5 $\frac{1}{4}$	7 $\frac{1}{4}$	1 $\frac{3}{8}$	9 $\frac{1}{4}$	5 $\frac{3}{8}$
2 $\frac{13}{16}$	6 $\frac{1}{4}$	8	1 $\frac{1}{2}$	11 $\frac{1}{2}$	6 $\frac{1}{2}$
3 $\frac{3}{16}$ -3 $\frac{7}{16}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	1 $\frac{1}{2}$	11 $\frac{1}{2}$	6 $\frac{1}{2}$
3 $\frac{11}{16}$ -3 $\frac{13}{16}$	6 $\frac{3}{4}$	10	1 $\frac{3}{8}$	11 $\frac{3}{8}$	7 $\frac{3}{8}$
4 $\frac{3}{16}$ -4 $\frac{7}{16}$	7 $\frac{3}{4}$	11 $\frac{1}{4}$	1 $\frac{1}{4}$	14 $\frac{1}{4}$	8 $\frac{1}{4}$
4 $\frac{11}{16}$ -4 $\frac{13}{16}$	9	12 $\frac{1}{2}$	1 $\frac{3}{8}$	14 $\frac{3}{8}$	9 $\frac{1}{2}$
5 $\frac{3}{16}$ -5 $\frac{7}{16}$	9 $\frac{1}{4}$	13 $\frac{3}{4}$	2	18 $\frac{1}{4}$	10 $\frac{1}{4}$
5 $\frac{11}{16}$ -5 $\frac{13}{16}$	10 $\frac{1}{4}$	15	2 $\frac{1}{4}$	18 $\frac{3}{8}$	10 $\frac{1}{4}$

SPIRAL JAW CLUTCH COUPLINGS



DIMENSIONS.

Right or Left Hand.

Diameter of Shaft.	G	F	D	A	B
1 $\frac{7}{16}$ - 1 $\frac{11}{16}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	1 $\frac{1}{2}$	8 $\frac{1}{2}$	4 $\frac{3}{4}$
1 $\frac{13}{16}$ - 2 $\frac{1}{16}$	4	5 $\frac{1}{2}$	1 $\frac{1}{2}$	8 $\frac{1}{2}$	4 $\frac{1}{2}$
2 $\frac{1}{16}$ - 2 $\frac{13}{16}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	1 $\frac{3}{4}$	9 $\frac{1}{2}$	5 $\frac{1}{2}$
2 $\frac{15}{16}$ - 3 $\frac{1}{16}$ - 3 $\frac{7}{16}$	6 $\frac{1}{2}$	8	1 $\frac{1}{2}$	11 $\frac{1}{2}$	6 $\frac{1}{2}$
3 $\frac{13}{16}$ - 3 $\frac{15}{16}$	6 $\frac{3}{4}$	10	1 $\frac{3}{4}$	11 $\frac{3}{4}$	7 $\frac{1}{4}$
4 $\frac{1}{16}$ - 4 $\frac{7}{16}$	7 $\frac{1}{2}$	11 $\frac{1}{2}$	1 $\frac{3}{4}$	14 $\frac{1}{2}$	8 $\frac{1}{2}$
4 $\frac{13}{16}$ - 4 $\frac{15}{16}$	9	12 $\frac{1}{2}$	1 $\frac{3}{4}$	14 $\frac{3}{4}$	9 $\frac{1}{2}$
5 $\frac{3}{16}$ - 5 $\frac{7}{16}$	9 $\frac{1}{2}$	13 $\frac{1}{2}$	2	18 $\frac{1}{2}$	10 $\frac{1}{2}$
5 $\frac{13}{16}$ - 5 $\frac{15}{16}$	10 $\frac{1}{2}$	15	2 $\frac{1}{2}$	18 $\frac{3}{4}$	10 $\frac{1}{2}$

SAFETY SET COLLARS



Fig. 143.

PRICE LIST.

Size.	Price, each.	Size.	Price, each.	Size.	Price, each.
$\frac{1}{4}$	\$0.62	$3\frac{1}{8}$	\$3.60	$6\frac{7}{8}$	\$10.10
1	.65	4		$6\frac{1}{2}$	10.30
$1\frac{1}{16}$	.80	$4\frac{3}{16}$	4.15	$6\frac{1}{8}$	10.90
$1\frac{1}{8}$	1.00	$4\frac{1}{2}$	4.70	$6\frac{1}{4}$	11.70
$1\frac{1}{2}$	1.05	$4\frac{1}{4}$	4.85	7	
$1\frac{3}{4}$	1.20	$4\frac{3}{4}$	5.30	$7\frac{3}{16}$	12.75
$1\frac{1}{2}$	1.40	$4\frac{1}{2}$	5.90	$7\frac{1}{2}$	13.80
2		5		$7\frac{1}{2}$	14.00
$2\frac{1}{16}$	1.60	$5\frac{1}{16}$	6.55	$7\frac{1}{8}$	14.85
$2\frac{1}{8}$	1.80	$5\frac{1}{4}$	7.20	$7\frac{1}{4}$	15.90
$2\frac{1}{4}$	2.10	$5\frac{1}{2}$	7.35	8	
$2\frac{3}{8}$	2.40	$5\frac{3}{4}$	7.90	$8\frac{1}{2}$	18.40
3		$5\frac{1}{2}$	8.60	9	20.70
$3\frac{1}{16}$	2.70	6		$9\frac{1}{2}$	23.00
$3\frac{1}{8}$	3.00	$6\frac{1}{8}$	9.35	10	25.75
$3\frac{1}{4}$	3.30	...	.....	...	.....

For prices of Split Collars add 50 per cent. to list price.
Special quotations to the trade on quantity orders.

BEARINGS

We manufacture four styles of Bearings—Plain, Self Oiling, Chain and Ring Oiling. For ordinary service where the speed is not excessive, the former style will be found satisfactory; for high speed or heavy duty we recommend either Chain, Ring Oiling or Self Oiling Bearings of the improved pattern that we manufacture.

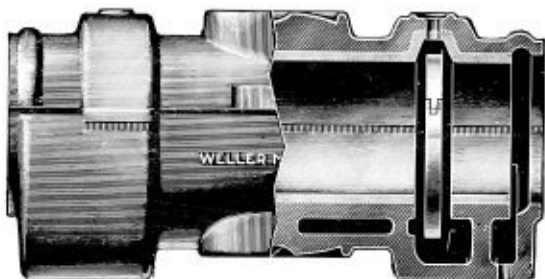


Fig. 144. Ring Oiling Bearing.



Fig. 145. Chain Oiling Bearing.

We illustrate above our Ring and Chain Oiling Bearings which have met with great success. The principle will be seen at a glance. The rings or chains running loosely on the shaft draw the oil from the reservoir located below, distributing it to all parts of the Bearing and finally flowing back to the reservoir, the operation is repeated.



Fig. 146. Self Oiling Bearing.

Our Self Oiling Bearings are heavier and have oil chambers of greater capacity than are generally provided for bearings of this class.

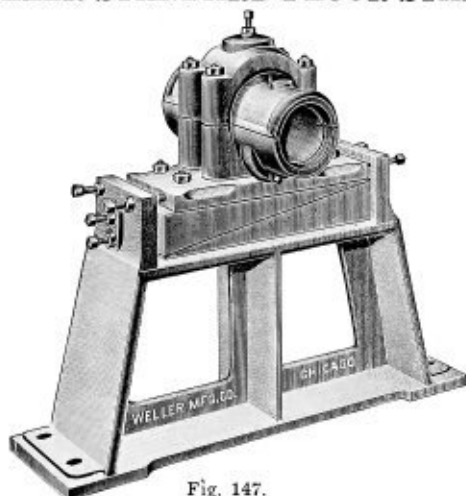
WELER STANDARD FLOOR STAND

Fig. 147.

Weller Standard Floor Stand fitted with Ball and Socket Ring Oiling Pillow Block and Adjustable Wedge Base. Prices and dimensions furnished upon application.

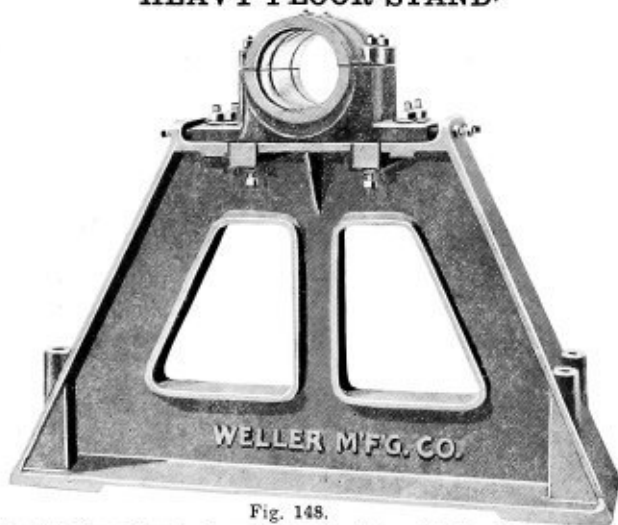
HEAVY FLOOR STAND.

Fig. 148.

Special Floor Stand of extra heavy design fitted with Ball and Socket Ring Oiling Pillow Block.

Prices and dimensions furnished upon application.

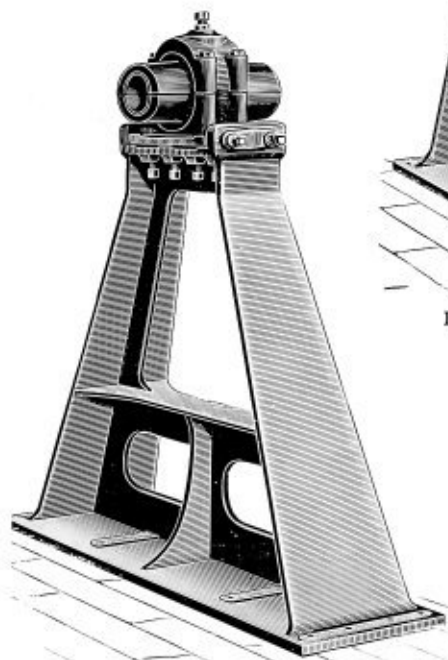
SPECIAL FLOOR STANDS

Fig. 149. Single Bearing.

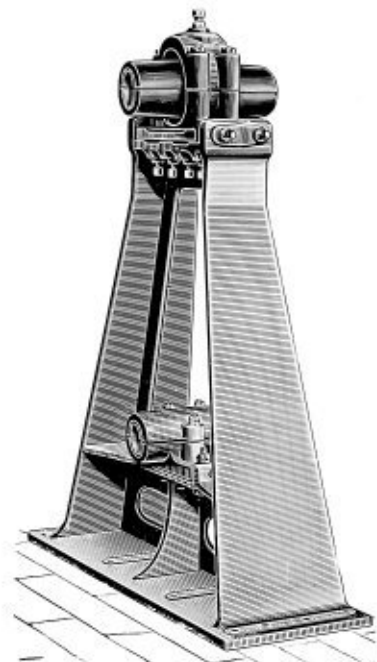


Fig. 150. Double Bearing.

In connection with these Special Floor Stands, ball and socket or rigid pillow blocks, with plain or adjustable base plates, may be used.

Our Special Floor Stands with double bearings are especially adapted for large elevator head shafts, when the latter are driven by gears, the pinion shaft running in the lower bearings.

Give general dimensions required and prices will be furnished upon request.

ADJUSTABLE BALL AND SOCKET FLOOR STANDS

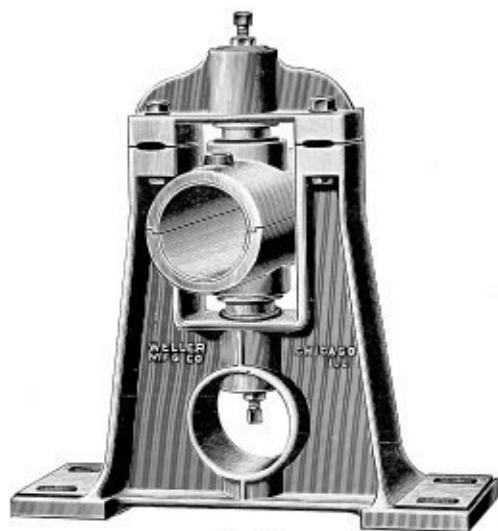


Fig. 151.

The above illustration shows our Adjustable Ball and Socket Floor Stand fitted with a plain or standard bearing. We are also prepared to furnish chain, ring or self oiling bearings, when required. This style is not as expensive as our Standard Floor Stand, but is preferred by many owing to its having greater vertical adjustment.

Prices quoted upon receipt of specifications.

SPECIAL HEAD SHAFT ADJUSTABLE DROP HANGERS



Fig. 152.

While our regular Drop Hangers are of a far heavier pattern than are furnished by most manufacturers and are amply strong for the class of work to which they are generally subjected, special conditions such as extraordinary long and heavy line shafts running at unusually high speeds renders desirable the use of a specially heavy hanger like the above on each side of the main receiving pulley. For ordinary work, however, there is no object in using a hanger of this class.

We are prepared to furnish these hangers with plain, chain, ring or self oiling bearings.

Prices quoted upon receipt of specifications.

ADJUSTABLE BALL AND SOCKET DROP HANGERS

Double Brace

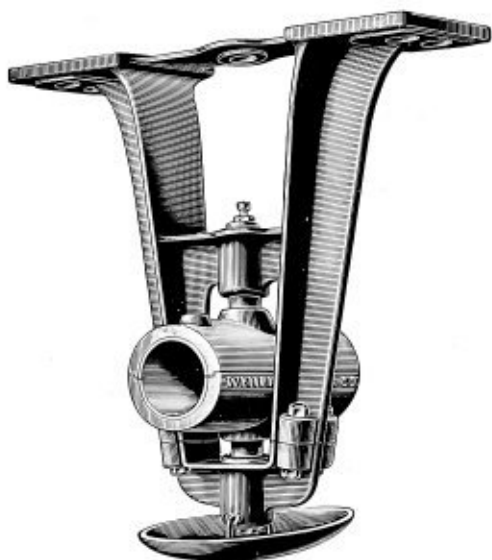


Fig. 153.

Wick and Plain Oiling Bearing.

We desire to call particular attention to our latest improved Double Brace Drop Hanger. The frame is first cast solid, after which the lower portion upon which rests the bearing is split in much the same manner as a cast iron split pulley. This insures a perfect joint which cannot be distinguished when bolted together. It is far superior to the method of casting the frames in two parts and depending upon filing or grinding them to a fit afterwards, as it will readily be seen that a far more perfect alignment of the upper and lower adjusting plungers is assured. Competition, particularly in the West, has caused the introduction of many makeshift double brace hangers of a design that a few years ago would not have been tolerated. By offering a strictly high grade hanger at a moderate price we have succeeded in creating a demand that has at times exceeded the capacity of our hanger department. These hangers are highly finished and are furnished with either standard, chain or self oiling bearings, price lists of which will be found in the succeeding pages.

For Dimensions see pages 296 and 297.

ADJUSTABLE BALL AND SOCKET DROP HANGERS

WITH WICK OR PLAIN OILING BEARINGS.

Double Brace

PRICE LIST.

Size of Shaft.	DROP IN INCHES.									
	8	10	12	14	16	18	20	24	30	36
1 $\frac{3}{16}$ & 1 $\frac{1}{2}$	\$4.40	\$ 4.55	\$ 4.75	\$ 5.00	\$ 5.10	\$ 5.50	\$ 5.95	.....	.....	.....
1 $\frac{7}{16}$ & 1 $\frac{1}{2}$	4.95	5.10	5.30	5.55	5.65	6.05	6.50	.....	.....	.....
1 $\frac{11}{16}$ & 1 $\frac{3}{4}$	5.05	5.20	5.40	5.65	5.75	6.15	6.60	.....	.....	.....
1 $\frac{15}{16}$ & 2	6.85	7.35	7.50	7.80	8.25	8.30	8.80	\$ 9.65	.....	.....
2 $\frac{3}{16}$ & 2 $\frac{1}{4}$	8.70	9.05	9.20	9.70	10.30	10.75	11.65	13.35	\$15.70	.....
2 $\frac{7}{16}$ & 2 $\frac{1}{2}$	9.35	9.65	9.85	10.35	10.95	11.40	12.30	14.00	16.35	.....
2 $\frac{11}{16}$ & 2 $\frac{3}{4}$	10.85	11.35	11.95	12.05	13.35	14.45	15.50	17.75	19.80	\$20.55
2 $\frac{15}{16}$ & 3	12.80	13.30	13.90	14.00	15.30	16.40	17.45	19.70	21.75	22.50
3 $\frac{3}{16}$ & 3 $\frac{1}{4}$	.....	.....	16.95	17.70	18.20	19.60	21.50	24.70	27.80	29.70
3 $\frac{7}{16}$ & 3 $\frac{1}{2}$	.....	.....	17.40	18.15	18.65	20.05	21.95	25.15	28.25	30.15
3 $\frac{11}{16}$ & 3 $\frac{3}{4}$	.....	.....	23.40	25.90	26.05	26.80	28.70	33.95	37.40	41.95
3 $\frac{15}{16}$ & 4	.....	.....	26.65	27.15	29.30	30.05	31.95	37.20	40.60	45.20
4 $\frac{3}{16}$ & 4 $\frac{1}{4}$	.....	.....	.....	.....	32.70	34.95	37.20	42.45	45.25	51.20
4 $\frac{7}{16}$ & 4 $\frac{1}{2}$	.....	.....	.....	.....	33.95	36.20	38.45	43.70	46.50	52.45
4 $\frac{11}{16}$ & 4 $\frac{3}{4}$	.....	.....	.....	.....	39.35	43.05	45.30	48.90	53.10	61.20
4 $\frac{15}{16}$ & 5	.....	.....	.....	.....	42.40	46.10	48.35	51.95	56.15	64.25

ADJUSTABLE BALL AND SOCKET DROP HANGERS

With Self Oiling Bearings

DOUBLE BRACE.

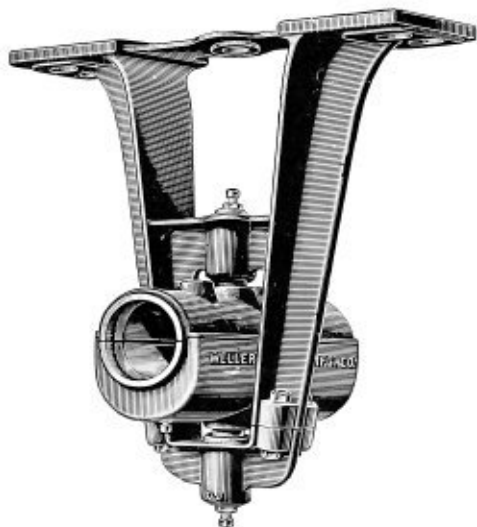


Fig. 154.

When Self Oiling Bearings are required we recommend this pattern as the simplest and most practical on the market. This style of Bearing used in connection with our improved Double Brace Drop Hanger frame previously described, combines to make a most complete and satisfactory Hanger. The oil is fed from a reservoir of liberal proportions located beneath the Bearings by means of a heavy felt wick. One filling of the reservoir with oil is sufficient to last several months.

For Dimensions see pages 296 and 297.

ADJUSTABLE BALL AND SOCKET DROP HANGERS.

WITH SELF OILING BEARINGS.

Double Brace

PRICE LIST.

Size of Shaft.	DROP IN INCHES.									
	8	10	12	14	16	18	20	24	30	36
1 $\frac{1}{16}$ & 1 $\frac{1}{2}$	\$5.40	\$ 5.55	\$ 5.75	\$ 6.00	\$ 6.10	\$ 6.50	\$ 6.95	.....	.....	.....
1 $\frac{1}{16}$ & 1 $\frac{3}{4}$	5.65	5.90	6.10	6.35	6.45	6.85	7.30	.....	.....	.....
1 $\frac{1}{8}$ & 1 $\frac{3}{4}$	6.00	6.15	6.35	6.60	6.70	7.10	7.55	.....	.....	.....
1 $\frac{1}{8}$ & 2	8.75	9.25	9.40	9.70	10.15	10.20	10.70	\$11.55	.....	.....
2 $\frac{1}{16}$ & 2 $\frac{1}{2}$	10.70	11.05	11.20	11.70	12.30	12.75	13.65	15.35	\$17.70	.....
2 $\frac{1}{16}$ & 2 $\frac{3}{4}$	11.30	11.65	11.80	12.30	12.90	13.35	14.25	15.95	18.30	.....
2 $\frac{1}{8}$ & 2 $\frac{1}{2}$	13.45	14.05	14.55	14.65	15.95	17.05	18.10	20.35	22.40	\$23.15
2 $\frac{1}{8}$ & 3	16.20	16.70	17.30	17.40	18.70	19.80	20.85	23.10	25.15	25.90
3 $\frac{1}{16}$ & 3 $\frac{1}{2}$	.....	.....	25.25	26.00	26.50	27.90	29.80	33.00	36.10	38.60
3 $\frac{1}{16}$ & 3 $\frac{3}{4}$	.....	.....	27.60	28.35	28.85	30.25	32.15	35.35	38.45	40.95
3 $\frac{1}{8}$ & 3 $\frac{1}{2}$	.....	.....	32.00	32.50	34.65	35.40	37.30	42.55	46.00	50.55
3 $\frac{1}{8}$ & 4	.....	.....	33.75	34.25	36.40	37.15	39.05	44.30	47.75	52.30
4 $\frac{1}{16}$ & 4 $\frac{1}{2}$	.....	.....	.....	.....	39.40	41.65	43.90	49.15	51.95	57.90
4 $\frac{1}{16}$ & 4 $\frac{3}{4}$	.....	.....	.....	.....	42.05	44.30	46.55	51.80	54.60	60.55
4 $\frac{1}{8}$ & 4 $\frac{1}{2}$	.....	.....	.....	.....	49.70	53.40	55.65	59.25	63.45	71.55
4 $\frac{1}{8}$ & 5	.....	.....	.....	.....	54.80	58.50	60.75	64.35	68.55	76.65

ADJUSTABLE BALL AND SOCKET DROP HANGERS

With Chain or Ring Oiling Bearings

DOUBLE BRACE.



Fig. 155.

Chain or Ring Oiling Bearings are now considered indispensable for high speed work. These Bearings are of a design that have eliminated many of the objectionable features found in those of other manufacture.

For Dimensions see pages 296 and 297.

ADJUSTABLE BALL AND SOCKET DROP HANGERS

WITH CHAIN OR RING OILING BEARINGS.

Double Brace

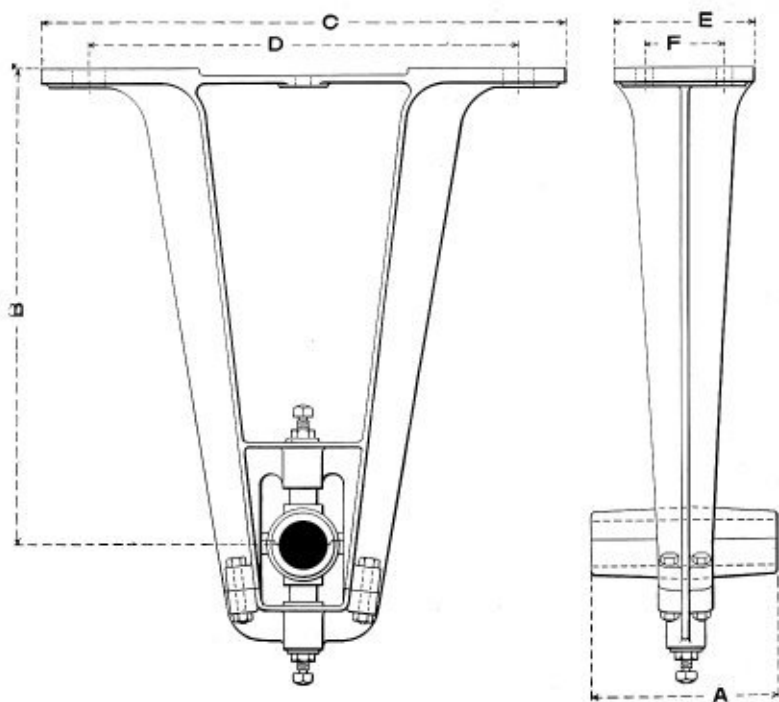
PRICE LIST.

Size of Shaft.	DROP IN INCHES.									
	8	10	12	14	16	18	20	24	30	36
1 $\frac{1}{16}$ & 1 $\frac{1}{2}$	\$5.60	\$ 5.75	\$ 5.95	\$ 6.20	\$6.30	\$ 6.70	\$ 7.15	.....	.....	.....
1 $\frac{7}{16}$ & 1 $\frac{1}{2}$	5.85	6.10	6.30	6.55	6.65	7.05	7.50	.....	.....	.....
1 $\frac{1}{2}$ & 1 $\frac{3}{4}$	6.20	6.35	6.55	6.80	6.90	7.30	7.75	.....	.....	.....
1 $\frac{5}{8}$ & 2	9.00	9.45	9.60	9.90	10.35	10.40	10.90	\$11.75	.....	.....
2 $\frac{3}{16}$ & 2 $\frac{1}{2}$	10.95	11.30	11.45	11.95	12.55	13.00	13.90	15.60	\$17.95	.....
2 $\frac{7}{16}$ & 2 $\frac{1}{2}$	11.60	11.95	12.10	12.65	13.20	13.65	14.55	16.25	18.60	.....
2 $\frac{1}{2}$ & 2 $\frac{1}{2}$	13.80	14.40	14.85	14.95	16.25	17.35	18.40	20.65	22.70	\$23.45
2 $\frac{5}{8}$ & 3	16.55	17.05	17.65	17.75	19.05	20.15	21.20	23.45	25.50	26.25
3 $\frac{3}{16}$ & 3 $\frac{1}{2}$	.....	.....	25.65	26.40	26.90	28.30	30.20	33.40	36.50	39.00
3 $\frac{7}{16}$ & 3 $\frac{1}{2}$	.....	.....	28.10	28.85	29.35	30.75	32.65	35.85	38.95	41.45
3 $\frac{1}{2}$ & 3 $\frac{3}{4}$	.....	.....	32.55	33.05	35.20	35.95	37.85	43.10	46.55	51.10
3 $\frac{5}{8}$ & 4	.....	.....	34.35	34.85	37.00	37.75	39.65	44.90	48.35	52.90
4 $\frac{3}{16}$ & 4 $\frac{1}{2}$	.....	.....	.....	.....	40.15	42.40	44.65	49.90	52.70	58.65
4 $\frac{7}{16}$ & 4 $\frac{1}{2}$	.....	.....	.....	.....	42.90	45.15	47.40	52.65	55.45	61.40
4 $\frac{1}{2}$ & 4 $\frac{1}{2}$	.....	.....	.....	.....	50.60	54.30	56.55	60.15	64.35	72.45
4 $\frac{3}{4}$ & 5	.....	.....	.....	.....	55.75	59.45	61.70	65.30	69.50	77.60

BALL AND SOCKET DROP HANGERS

PLAIN, SELF, RING AND CHAIN OILING BEARINGS.

Double Brace



DIMENSIONS.

Diam. of Bearing	A	B	C	D	E	F	Foot Bolts		Diam. of Bearing	A	B	C	D	E	F	Foot Bolts	
							No.	Dia.								No.	Dia.
1 3/16	4 3/8	8	16 1/2	13 1/2	4		2	1	1 7/16	5 3/8	8	17 1/2	14 1/2	4 1/2		2	1
		10	17	14	4 1/2		2	1			10	17 1/2	15	4 1/2		2	1
		12	17	14 1/2	4 1/2		2	1			12	18	15 1/2	4 1/2		2	1
		14	18 1/2	15 1/2	4 1/2		2	1			14	18	15 1/2	4 1/2		2	1
		16	18 1/2	16	4 1/2		2	1			16	19	15 1/2	4 1/2		2	1
		18	19 1/2	16 1/2	4 1/2		2	1			18	20	16 1/2	5 1/2		2	1
		20	20	17	4 1/2		2	1			20	20 1/2	17 1/2	5 1/2		2	1

BALL AND SOCKET DROP HANGERS—Continued

DIMENSIONS.

Diam. of Bearing	A	B	C	D	E	F	Foot Bolts.		Diam. of Bearing	A	B	C	D	E	F	Foot Bolts.					
							No.	Dia.								No.	Dia.				
1 $\frac{11}{16}$	6 $\frac{1}{2}$	8	17 $\frac{1}{2}$	15	4 $\frac{1}{2}$		12		3 $\frac{3}{16}$	12 $\frac{1}{8}$	12	23	19 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4					
		10	18 $\frac{1}{2}$	15 $\frac{1}{2}$	4 $\frac{1}{2}$		12				14	24	20 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4					
		12	18 $\frac{1}{2}$	15 $\frac{1}{2}$	4 $\frac{1}{2}$		12				16	24	20 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4					
		14	18 $\frac{1}{2}$	15 $\frac{1}{2}$	4 $\frac{1}{2}$		12				18	24 $\frac{1}{2}$	21	7 $\frac{1}{2}$	4	4					
		16	19 $\frac{1}{2}$	16	4 $\frac{1}{2}$		12				20	25	21 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4					
		18	20	17	5 $\frac{1}{2}$		12				24	26 $\frac{1}{2}$	23	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	4				
		20	21 $\frac{1}{2}$	18	6		12				30	34	30	9 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4	1			
																				1	
																					1
																					1
1 $\frac{13}{16}$	7 $\frac{1}{4}$	8	18 $\frac{1}{2}$	15 $\frac{1}{2}$	5		12		3 $\frac{7}{16}$	13 $\frac{1}{4}$	12	23 $\frac{1}{2}$	19 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4					
		10	18 $\frac{1}{2}$	15 $\frac{1}{2}$	5		12				14	23 $\frac{1}{2}$	20	6 $\frac{1}{2}$	4	4					
		12	19	16	5 $\frac{1}{2}$		12				16	24	20 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4					
		14	18 $\frac{1}{2}$	15 $\frac{1}{2}$	5 $\frac{1}{2}$		12				18	25	21	7 $\frac{1}{2}$	4	4					
		16	20	16 $\frac{1}{2}$	5 $\frac{1}{2}$		12				20	25 $\frac{1}{2}$	21 $\frac{1}{2}$	7 $\frac{1}{2}$	5	4					
		18	21	17 $\frac{1}{2}$	6		12				24	26 $\frac{1}{2}$	22	8	5 $\frac{1}{2}$	4	4				
		20	21 $\frac{1}{2}$	17 $\frac{1}{2}$	6 $\frac{1}{2}$		12				30	35	31 $\frac{1}{2}$	9 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4	1			
		24	22	19	6 $\frac{1}{2}$		12													1	
		30	28 $\frac{1}{2}$	25 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4	4													
		36	31	27 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	4													
2 $\frac{1}{16}$	8 $\frac{1}{4}$	8	18 $\frac{1}{2}$	15 $\frac{1}{2}$	5 $\frac{1}{2}$		12		3 $\frac{11}{16}$	14 $\frac{1}{4}$	12	25 $\frac{1}{2}$	21 $\frac{1}{2}$	7	4 $\frac{1}{2}$	4					
		10	19	15 $\frac{1}{2}$	5 $\frac{1}{2}$		12				14	25 $\frac{1}{2}$	21 $\frac{1}{2}$	7	4 $\frac{1}{2}$	4					
		12	19 $\frac{1}{2}$	16 $\frac{1}{2}$	5 $\frac{1}{2}$		12				16	25 $\frac{1}{2}$	21 $\frac{1}{2}$	7	4 $\frac{1}{2}$	4					
		14	19 $\frac{1}{2}$	16 $\frac{1}{2}$	5 $\frac{1}{2}$		12				18	27	22 $\frac{1}{2}$	7 $\frac{1}{2}$	4 $\frac{1}{2}$	4					
		16	20 $\frac{1}{2}$	16 $\frac{1}{2}$	5 $\frac{1}{2}$		12				20	27 $\frac{1}{2}$	23 $\frac{1}{2}$	7 $\frac{1}{2}$	4 $\frac{1}{2}$	4	1				
		18	21	17 $\frac{1}{2}$	6		12				24	29	24 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	4	1			
		20	21 $\frac{1}{2}$	18	6 $\frac{1}{2}$		12				30	33 $\frac{1}{2}$	29	10	6 $\frac{1}{2}$	4	4	1			
		24	23	19 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4	4													
		30	29 $\frac{1}{2}$	25 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	4													
		36	31 $\frac{1}{2}$	27 $\frac{1}{2}$	8 $\frac{1}{2}$	6	4	4													
2 $\frac{3}{16}$	9 $\frac{1}{4}$	10	20	17	5 $\frac{1}{2}$		12		4 $\frac{3}{16}$	16 $\frac{1}{8}$	16	28	24	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	1				
		12	20 $\frac{1}{2}$	17	5 $\frac{1}{2}$		12				18	28 $\frac{1}{2}$	24 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	1				
		14	20	16 $\frac{1}{2}$	5 $\frac{1}{2}$		12				20	29	25	9	5 $\frac{1}{2}$	4	1				
		16	21 $\frac{1}{2}$	18	5 $\frac{1}{2}$		12				24	30	26	9	5 $\frac{1}{2}$	4	1				
		18	22	18 $\frac{1}{2}$	6 $\frac{1}{2}$		12				30	39	34 $\frac{1}{2}$	10 $\frac{1}{2}$	7 $\frac{1}{2}$	4	1				
		20	22 $\frac{1}{2}$	18 $\frac{1}{2}$	6 $\frac{1}{2}$	4	4	4													
		24	25 $\frac{1}{2}$	21 $\frac{1}{2}$	7 $\frac{1}{2}$	5	5	4													
		30	29 $\frac{1}{2}$	25	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	4													
		36	32 $\frac{1}{2}$	28	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	4													
		2 $\frac{1}{8}$	10 $\frac{1}{4}$	10	20 $\frac{1}{2}$	16 $\frac{1}{2}$	6				12		4 $\frac{11}{16}$	18	16	29	25	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	1 $\frac{1}{2}$
14	21 $\frac{1}{2}$			18 $\frac{1}{2}$	6 $\frac{1}{2}$		12		18	30 $\frac{1}{2}$	26	8 $\frac{1}{2}$			5 $\frac{1}{2}$	4	1 $\frac{1}{2}$				
16	22 $\frac{1}{2}$			18 $\frac{1}{2}$	6 $\frac{1}{2}$	3 $\frac{1}{2}$	4	4													
18	23			19 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4	4													
20	23 $\frac{1}{2}$			19 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4	4													
24	25 $\frac{1}{2}$			21 $\frac{1}{2}$	8	5	5	4													
2 $\frac{3}{8}$	11 $\frac{1}{4}$	12	20 $\frac{1}{2}$	17 $\frac{1}{2}$	6		12		4 $\frac{13}{16}$		18	30 $\frac{1}{2}$	26	8 $\frac{1}{2}$	5 $\frac{1}{2}$	4	1 $\frac{1}{2}$				
		14	21 $\frac{1}{2}$	18 $\frac{1}{2}$	6 $\frac{1}{2}$		12				20	31 $\frac{1}{2}$	27 $\frac{1}{2}$	9 $\frac{1}{2}$	6 $\frac{1}{2}$	4	1 $\frac{1}{2}$				
		16	22 $\frac{1}{2}$	18 $\frac{1}{2}$	6 $\frac{1}{2}$	3 $\frac{1}{2}$	4	4													
		18	23	19 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4	4													
20	23 $\frac{1}{2}$	19 $\frac{1}{2}$	7 $\frac{1}{2}$	4	4	4															
24	25 $\frac{1}{2}$	21 $\frac{1}{2}$	8	5	5	4															
30	30 $\frac{1}{2}$	26	9 $\frac{1}{2}$	6	4	4	1														
36	34 $\frac{1}{2}$	29 $\frac{1}{2}$	9 $\frac{1}{2}$	6	4	4	1														

ADJUSTABLE BALL AND SOCKET DROP HANGERS

WITH WICK OR PLAIN OILING BEARINGS.
Single Brace



Fig. 156.

Our Single Brace Drop Hanger is of heavy design and made with liberal adjustment. In this as well as in all our hangers we have preserved the true ball and socket principle, not having discarded it on account of its greater cost as many manufacturers have done, for the ordinary adjusting screws. The Bearings are faced and the bases of the frames are finished true. We make this Hanger with standard wick and plain oiling Bearings only.

PRICE LIST.

Size of Shaft.	Drop in Inches.									
	8	10	12	14	16	18	20	24	30	36
1 1/2" & 1 1/2"	\$4.00	\$4.15	\$4.35	\$4.60	\$4.70	\$5.10	\$5.55	.....	.....	.....
1 1/2" & 1 1/4"	4.55	4.70	4.90	5.15	5.25	5.65	6.10	.....	.....	.....
1 1/2" & 1 1/8"	4.65	4.80	5.00	5.25	5.45	5.75	6.20	.....	.....	.....
1 1/2" & 2"	6.35	6.85	7.00	7.30	7.75	7.80	8.30	\$9.15	.....	.....
2" & 2"	8.15	8.50	8.65	9.15	9.75	10.20	11.10	12.80	\$15.15	.....
2" & 2 1/2"	8.80	9.10	9.30	9.80	10.40	10.85	11.75	13.45	15.80	.....
2 1/2" & 2 1/2"	10.05	10.55	11.15	11.25	12.55	13.65	14.70	16.95	19.00	\$19.75
2 1/2" & 3"	12.00	12.50	13.10	13.20	14.50	15.60	16.65	18.90	20.95	21.70
3" & 3"	.....	.....	15.90	16.65	17.15	18.55	20.45	23.65	26.75	28.65
3" & 3 1/2"	.....	.....	16.35	17.10	17.60	19.00	20.90	24.10	27.20	29.10
3" & 3"	.....	.....	22.20	24.70	24.85	25.60	27.50	32.75	36.20	40.75
3 1/2" & 4"	.....	.....	25.45	25.95	28.10	28.85	30.75	36.00	39.45	44.00
4" & 4"	.....	.....	.....	.....	31.15	33.40	35.65	40.90	43.70	49.65
4" & 4 1/2"	.....	.....	.....	.....	32.40	34.65	36.90	42.15	44.95	50.90
4" & 4"	.....	.....	.....	.....	37.40	41.10	43.35	46.95	51.15	59.25
4 1/2" & 5"	.....	.....	.....	.....	40.45	44.15	46.40	50.00	54.20	62.30

ADJUSTABLE BALL AND SOCKET COUNTER-SHAFT DROP HANGERS



Fig. 157.

We are prepared to furnish Counter-Shaft Drop Hangers with Wick or Plain Oiling Bearings for the single brace. The double brace pattern we can furnish with Self Oiling, Chain, Ring and Wick or Plain Oiling Bearings.

The frame and shifter-arm are cast in one piece.

Any length of shifter-arm can be furnished, and in ordering give distance from center of shaft to center of shifter-rod.

Unless otherwise ordered, shifter-arm will be furnished the same length as drop of hanger.

For prices see price lists of regular Drop Hangers of the style of frame and bearings required.

ADJUSTABLE BALL AND SOCKET POST HANGERS

WITH WICK OR PLAIN OILING BEARINGS.

Double Brace

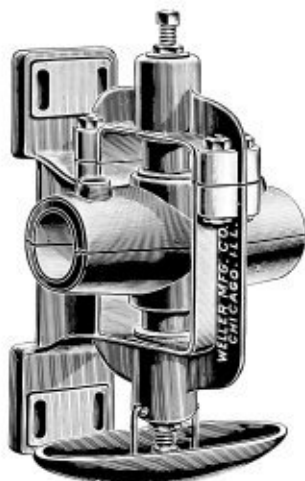


Fig. 158.

These Hangers are designed on the same principle as our double brace drop Hanger, the frame being cast solid to insure perfect alignment of the upper and lower adjusting plungers, after which the parting link is split and fastened to the frame by means of bolts. The frames are so designed that they may be inverted, the bearings resting upon the parting link, which is a decided advantage in erecting heavy shafting. They are strong, well finished Hangers with liberal adjustment and long bearings.

PRICE LIST.

Size.	Price.	Size.	Price.	Size.	Price.	Size.	Price.
1 $\frac{3}{16}$	\$4.50	2 $\frac{7}{16}$	\$10.40	3 $\frac{11}{16}$	\$25.45	4 $\frac{13}{16}$	\$43.35
1 $\frac{7}{16}$	5.50	2 $\frac{11}{16}$	13.00	3 $\frac{15}{16}$	28.70	4 $\frac{17}{16}$	46.40
1 $\frac{11}{16}$	5.60	2 $\frac{15}{16}$	14.95	4 $\frac{3}{8}$	32.85	5 $\frac{7}{16}$	67.00
1 $\frac{15}{16}$	7.15	3 $\frac{3}{8}$	19.00	4 $\frac{7}{16}$	34.10	5 $\frac{11}{16}$	84.00
2 $\frac{3}{16}$	9.75	3 $\frac{7}{16}$	19.45	.....	.....	.....	.....

Prices of larger sizes given upon application.
For Dimensions see page 303.

ADJUSTABLE BALL AND SOCKET POST HANGERS.

WITH SELF OILING BEARINGS.

Double Brace



Fig. 159.

PRICE LIST.

Size.	Price.	Size.	Price.	Size.	Price.	Size.	Price.
1 $\frac{1}{16}$	85.50	2 $\frac{3}{16}$	\$11.75	3 $\frac{3}{16}$	\$27.30	4 $\frac{3}{16}$	\$40.00
1 $\frac{7}{16}$	6.30	2 $\frac{7}{16}$	12.35	3 $\frac{7}{16}$	29.65	4 $\frac{7}{16}$	42.70
1 $\frac{11}{16}$	6.55	2 $\frac{11}{16}$	15.60	3 $\frac{11}{16}$	34.05	4 $\frac{11}{16}$	54.50
1 $\frac{13}{16}$	9.05	2 $\frac{13}{16}$	18.35	3 $\frac{13}{16}$	35.80	4 $\frac{13}{16}$	59.75
						5 $\frac{7}{16}$	80.00
						5 $\frac{13}{16}$	93.50

Prices of larger sizes given upon application.

For Dimensions see page 303.

ADJUSTABLE BALL AND SOCKET POST HANGERS

WITH CHAIN OR RING OILING BEARINGS.

Double Brace

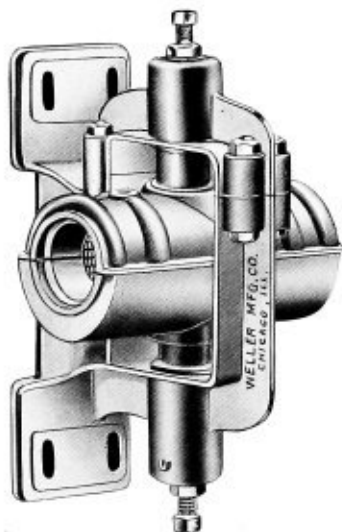


Fig. 160.

PRICE LIST.

Size.	Price.	Size.	Price.	Size.	Price.	Size.	Price.
1 $\frac{7}{16}$	\$6.50	2 $\frac{7}{16}$	\$12.65	3 $\frac{7}{16}$	\$30.15	4 $\frac{7}{16}$	\$43.05
1 $\frac{11}{16}$	6.75	2 $\frac{11}{16}$	15.95	3 $\frac{11}{16}$	34.60	4 $\frac{11}{16}$	54.60
1 $\frac{13}{16}$	9.30	2 $\frac{13}{16}$	18.70	3 $\frac{13}{16}$	36.40	4 $\frac{13}{16}$	59.75
2 $\frac{3}{16}$	12.00	3 $\frac{3}{16}$	27.70	4 $\frac{3}{16}$	40.30	5 $\frac{7}{16}$	82.00
						5 $\frac{13}{16}$	97.00

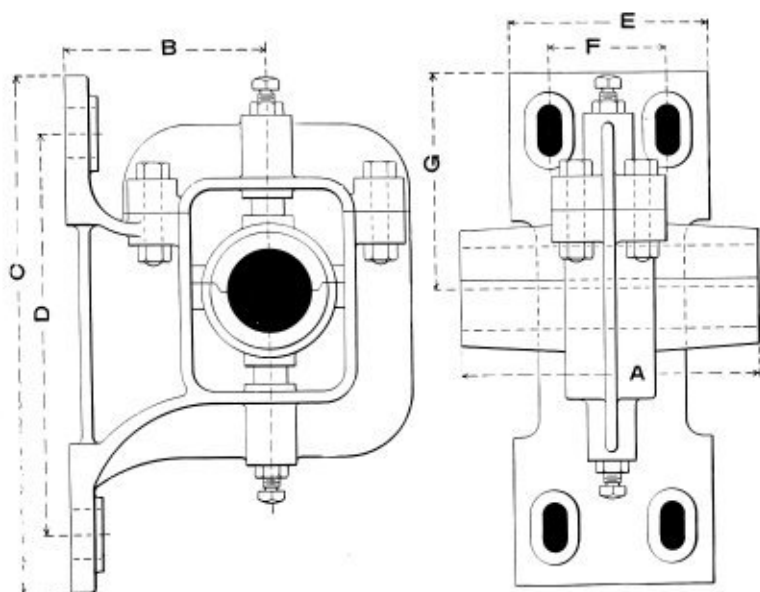
Prices of larger sizes given upon application.

For Dimensions see page 303.

BALL AND SOCKET POST HANGERS

PLAIN, SELF, RING AND CHAIN OILING BEARINGS.

Double Brace



DIMENSIONS.

Dia. of B'r'g.	A	B	C	D	E	F	G	H	Foot Bolts.	
									Number	Dia.
1 $\frac{7}{16}$	5 $\frac{1}{2}$	4 $\frac{1}{2}$	14 $\frac{1}{2}$	11 $\frac{1}{2}$	4 $\frac{1}{2}$		4 $\frac{1}{2}$		2	WELLER PATENT
1 $\frac{11}{16}$	6 $\frac{1}{2}$	5 $\frac{1}{2}$	14 $\frac{1}{2}$	11 $\frac{1}{2}$	4 $\frac{1}{2}$		5 $\frac{1}{2}$		2	
1 $\frac{13}{16}$	7 $\frac{1}{2}$	5 $\frac{1}{2}$	15 $\frac{1}{2}$	12 $\frac{1}{2}$	5		5 $\frac{1}{2}$		2	
2 $\frac{1}{8}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	16 $\frac{1}{2}$	13	5		6		2	
2 $\frac{1}{4}$	9 $\frac{1}{2}$	5 $\frac{1}{2}$	17	13 $\frac{1}{2}$	5 $\frac{1}{2}$		6		2	
2 $\frac{3}{8}$	10	6 $\frac{1}{2}$	17 $\frac{1}{2}$	14 $\frac{1}{2}$	5 $\frac{1}{2}$		6 $\frac{1}{2}$		2	
2 $\frac{1}{2}$	11	6 $\frac{1}{2}$	18	15	6	3 $\frac{1}{2}$	6 $\frac{1}{2}$		4	
3 $\frac{1}{8}$	12	7 $\frac{1}{2}$	18 $\frac{1}{2}$	15 $\frac{1}{2}$	6	3 $\frac{1}{2}$	7		4	
3 $\frac{1}{4}$	13	7 $\frac{1}{2}$	20	16	6 $\frac{1}{2}$	4 $\frac{1}{2}$	7 $\frac{1}{2}$		4	
3 $\frac{3}{8}$	15	7 $\frac{1}{2}$	21	17	7 $\frac{1}{2}$	4 $\frac{1}{2}$	8		4	
3 $\frac{1}{2}$	15	7 $\frac{1}{2}$	21	17	7 $\frac{1}{2}$	4 $\frac{1}{2}$	8		4	
4 $\frac{1}{8}$	17	8	23	19	7 $\frac{1}{2}$	4 $\frac{1}{2}$	8 $\frac{1}{2}$		4	
4 $\frac{1}{4}$	17	8	23	19	7 $\frac{1}{2}$	4 $\frac{1}{2}$	8 $\frac{1}{2}$		4	
4 $\frac{3}{8}$	18	9	25	20	8	4 $\frac{1}{2}$	9		4	
4 $\frac{1}{2}$	20	10 $\frac{1}{2}$	27 $\frac{1}{2}$	23	8 $\frac{1}{2}$	5 $\frac{1}{2}$			4	
5 $\frac{1}{8}$	21	10 $\frac{1}{2}$	29	24 $\frac{1}{2}$	9 $\frac{1}{2}$	5 $\frac{1}{2}$			4	

RIGID POST OR BRACKET BOXES

We are prepared to furnish this style of Post Box with plain, chain, ring and self oiling bearings. They are of exceedingly strong design and are well finished. We recommend them particularly for heavy work.

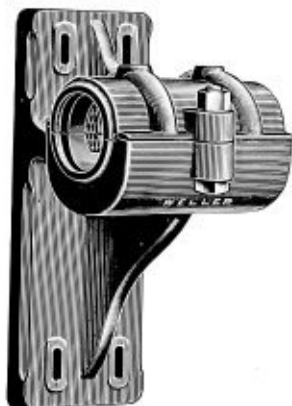


Fig. 161. Chain Oiling.

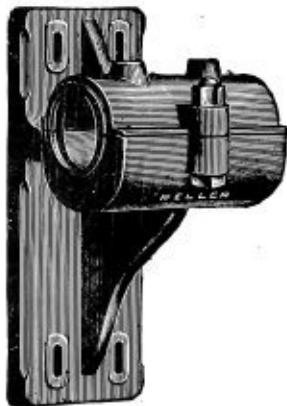


Fig. 162. Self Oiling.

PRICE LIST.



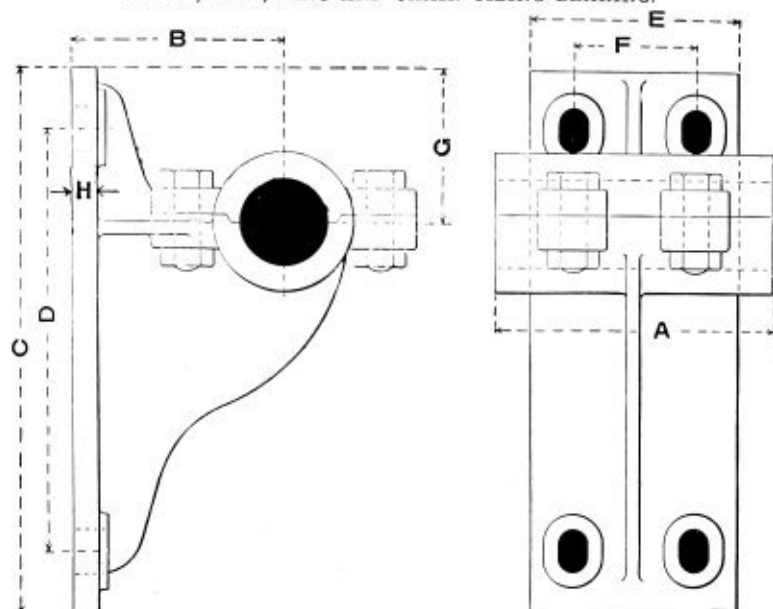
Plain. Fig. 163.

Size.	Style of Bearing.		
	Plain.	Self-Oiling.	Chain or Ring Oiling
1 $\frac{7}{16}$	\$ 3.70	\$ 4.50	\$ 4.80
1 $\frac{9}{16}$	4.00	4.95	5.25
1 $\frac{11}{16}$	5.10	6.50	6.80
2 $\frac{3}{16}$	6.15	8.15	8.45
2 $\frac{7}{16}$	7.00	9.60	9.90
2 $\frac{11}{16}$	8.50	11.10	11.45
2 $\frac{15}{16}$	10.15	13.55	13.90
3 $\frac{3}{16}$	11.50	19.80	20.20
3 $\frac{7}{16}$	15.60	25.80	26.30
3 $\frac{11}{16}$	19.70	29.30	29.85
3 $\frac{15}{16}$	23.80	32.90	33.50
4 $\frac{3}{16}$	28.50	36.60	37.45
4 $\frac{11}{16}$	33.50	43.85	44.75
4 $\frac{15}{16}$	39.75	50.15	51.10
5 $\frac{7}{16}$	51.00	65.00	66.00

Prices of larger sizes given upon application.
For Dimensions see page 305.

RIGID POST OR BRACKET BOXES

PLAIN, SELF, RING AND CHAIN OILING BEARING.



DIMENSIONS.

Size of Shaft.	A	B	C	D	E	F	G	H	Foot Bolts.	
									Number	Dia.
1 $\frac{3}{16}$	4 $\frac{1}{4}$	6	12	9 $\frac{1}{2}$	3 $\frac{1}{2}$		3 $\frac{1}{2}$	5 $\frac{1}{8}$	2	3
1 $\frac{1}{2}$	5	6	12 $\frac{1}{2}$	9 $\frac{3}{4}$	3 $\frac{3}{8}$		3 $\frac{3}{8}$	5 $\frac{1}{8}$	2	3
1 $\frac{3}{8}$	5 $\frac{1}{2}$	6	13	10 $\frac{1}{2}$	4		3 $\frac{3}{8}$	5 $\frac{1}{8}$	2	3
1 $\frac{1}{2}$	6	6	13 $\frac{1}{2}$	10 $\frac{3}{4}$	4 $\frac{1}{2}$		4	5 $\frac{1}{8}$	2	3
2 $\frac{3}{16}$	7	6	13	10 $\frac{1}{2}$	5		4	5 $\frac{1}{8}$	2	3
2 $\frac{1}{2}$	7 $\frac{1}{2}$	6	15	12 $\frac{3}{8}$	5 $\frac{1}{2}$		4 $\frac{1}{2}$	5 $\frac{1}{8}$	2	3
2 $\frac{3}{8}$	8	6	16	13	5 $\frac{1}{2}$		5	1	2	3
2 $\frac{1}{2}$	9	6	17	13 $\frac{3}{8}$	5 $\frac{3}{4}$	3 $\frac{1}{8}$	5	1	4	3
3 $\frac{3}{16}$	10	6	18 $\frac{1}{2}$	14	6 $\frac{1}{2}$	4	5 $\frac{1}{2}$	1	4	3
3 $\frac{1}{2}$	10 $\frac{1}{2}$	6	19	14 $\frac{1}{2}$	6 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{3}{8}$	1 $\frac{1}{2}$	4	3
3 $\frac{3}{8}$	11 $\frac{1}{2}$	6	19 $\frac{1}{2}$	15 $\frac{1}{2}$	6 $\frac{3}{4}$	4 $\frac{3}{8}$	5 $\frac{3}{8}$	1 $\frac{3}{16}$	4	3
3 $\frac{1}{2}$	12	6	20	16 $\frac{1}{2}$	7 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	1 $\frac{1}{2}$	4	3
4 $\frac{3}{16}$	12 $\frac{1}{2}$	6	21	16 $\frac{3}{4}$	7 $\frac{3}{8}$	4 $\frac{3}{8}$	6	1 $\frac{1}{2}$	4	3
4 $\frac{1}{2}$	13 $\frac{1}{2}$	6	22	17 $\frac{3}{8}$	7 $\frac{1}{2}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	1 $\frac{5}{16}$	4	1
4 $\frac{3}{8}$	14	6	22	18	8	5	6 $\frac{1}{2}$	1 $\frac{5}{16}$	4	1
4 $\frac{1}{2}$	15	6	23	18 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{3}{8}$	1 $\frac{1}{2}$	4	1
5 $\frac{3}{16}$	15 $\frac{1}{2}$	8	24 $\frac{1}{2}$	19	8 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	1 $\frac{1}{16}$	4	1 $\frac{1}{2}$
5 $\frac{1}{2}$	16 $\frac{1}{2}$	8	25 $\frac{1}{2}$	19 $\frac{1}{2}$	9	5 $\frac{1}{2}$	7	1 $\frac{1}{2}$	4	1 $\frac{1}{2}$
5 $\frac{3}{8}$	17 $\frac{1}{2}$	8	25 $\frac{1}{2}$	20 $\frac{1}{2}$	9 $\frac{3}{8}$	5 $\frac{3}{8}$	7 $\frac{1}{2}$	1 $\frac{1}{2}$	4	1 $\frac{1}{2}$
5 $\frac{1}{2}$	18	8	26 $\frac{1}{2}$	21 $\frac{1}{2}$	9 $\frac{3}{8}$	5 $\frac{1}{2}$	7 $\frac{3}{8}$	1 $\frac{1}{2}$	4	1 $\frac{1}{2}$

PIVOTED SEMI-RIGID POST HANGERS

WITH WICK OR PLAIN OILING BEARINGS.

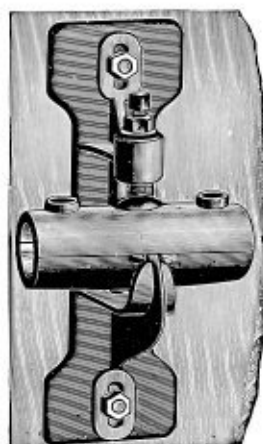


Fig. 164.

This pattern of Post Hanger has a liberal adjustment in the back plate, and also a pivoted adjustment which is equal to many other makers' so-called "Ball and Socket" Bearings. A very desirable hanger for light work. It is furnished with wick or plain Bearings only.

PRICE LIST.

Size.	Price.	Size.	Price.	Size.	Price.
1 $\frac{3}{16}$	\$2.60	2 $\frac{3}{16}$	\$5.25	3 $\frac{3}{16}$	\$11.50
1 $\frac{7}{16}$	3.15	2 $\frac{7}{16}$	6.40	3 $\frac{7}{16}$	13.30
1 $\frac{11}{16}$	3.35	2 $\frac{11}{16}$	7.55	3 $\frac{11}{16}$	15.10
1 $\frac{15}{16}$	4.15	2 $\frac{15}{16}$	9.70	3 $\frac{15}{16}$	17.00

BALL AND SOCKET PILLOW BLOCKS

WITH WICK OR PLAIN OILING BEARINGS.

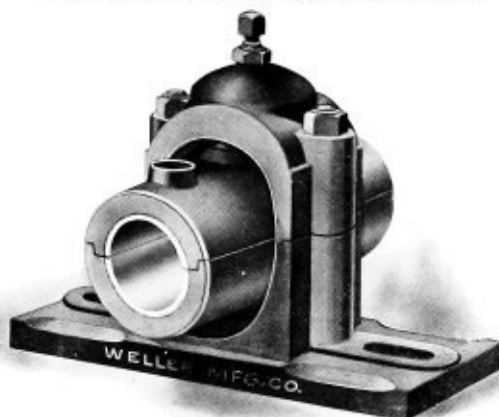


Fig. 165.

This Pillow Block is constructed after the latest approved designs, and is both strong and convenient.

The Bearings in frame are perfect "Ball and Socket," and free in every direction.

PRICE LIST.

Size.	Price.	Size.	Price.
$1\frac{1}{8}$	\$ 4.70	$3\frac{1}{8}$	\$ 28.75
$1\frac{1}{16}$	4.80	$3\frac{1}{16}$	38.25
$1\frac{1}{4}$	5.10	$4\frac{1}{16}$	46.50
$1\frac{1}{2}$	5.60	$4\frac{1}{8}$	54.00
$1\frac{3}{8}$	6.30	$5\frac{1}{16}$	63.00
$2\frac{1}{16}$	7.50	$5\frac{1}{8}$	73.50
$2\frac{1}{4}$	9.10	$6\frac{1}{16}$	84.75
$2\frac{1}{2}$	11.75	$6\frac{1}{8}$	95.00
$2\frac{3}{8}$	14.00	$7\frac{1}{16}$	106.00
$3\frac{1}{16}$	16.75	$7\frac{1}{8}$	118.00
$3\frac{1}{4}$	19.50	$8\frac{1}{16}$	131.00

Prices of larger sizes given upon application.

For Dimensions see page 310.

BALL AND SOCKET PILLOW BLOCKS

WITH SELF OILING BEARINGS.



Fig. 166.

This is of the same general design as our plain oiling Ball and Socket Pillow Block, with the addition of our Self Oiling Bearing. Like all our bearings it is of a neat, heavy design, efficiency not having been destroyed in an endeavor to save a few pounds of metal.

PRICE LIST.

Size.	Price.	Size.	Price.
1 $\frac{11}{16}$	\$ 8.00	4 $\frac{7}{16}$	\$ 63.00
2 $\frac{3}{4}$	9.50	4 $\frac{11}{16}$	75.00
2 $\frac{7}{8}$	13.00	5 $\frac{7}{16}$	86.00
2 $\frac{11}{8}$	16.00	5 $\frac{11}{16}$	96.00
2 $\frac{13}{8}$	18.50	6 $\frac{7}{16}$	110.00
3 $\frac{3}{16}$	22.00	6 $\frac{11}{16}$	122.00
3 $\frac{7}{16}$	25.50	7 $\frac{7}{16}$	135.00
3 $\frac{11}{16}$	38.50	7 $\frac{11}{16}$	150.00
3 $\frac{13}{16}$	52.00	8 $\frac{7}{16}$	165.00

Prices of larger sizes given upon application.

For Dimensions see page 310.

BALL AND SOCKET PILLOW BLOCKS

WITH CHAIN OR RING OILING BEARINGS.

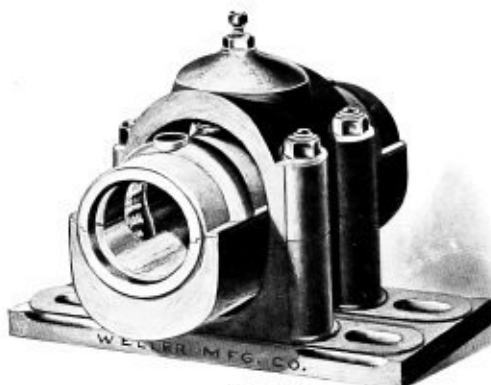


Fig. 167.

As Chain Oiling Pillow Blocks are intended essentially for high speed and heavy work, strength and accuracy of finish are the principal features sought in the construction of a Bearing of this class. We have embodied both in this style of Pillow Block and offer it with the guarantee that it is superior to any of its class on the market.

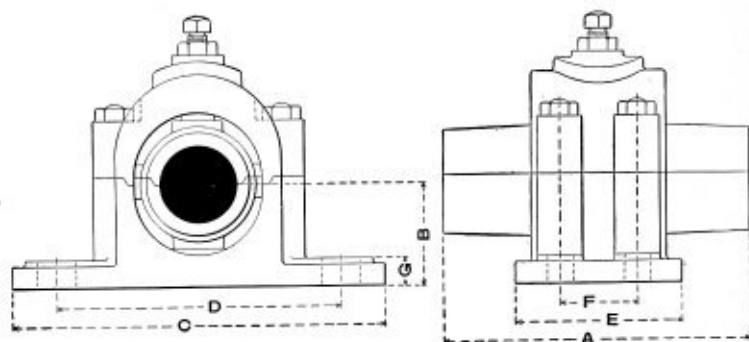
PRICE LIST.

Size.	Price.	Size.	Price.
1 $\frac{1}{16}$	\$ 8.50	4 $\frac{1}{16}$	\$ 65.00
2 $\frac{1}{16}$	10.10	4 $\frac{1}{8}$	77.00
2 $\frac{1}{8}$	13.60	5 $\frac{1}{16}$	80.00
2 $\frac{1}{4}$	17.00	5 $\frac{1}{8}$	100.75
2 $\frac{3}{8}$	19.55	6 $\frac{1}{16}$	114.00
3 $\frac{1}{16}$	23.00	6 $\frac{1}{8}$	127.00
3 $\frac{1}{8}$	26.60	7 $\frac{1}{16}$	141.00
3 $\frac{1}{4}$	39.85	7 $\frac{1}{8}$	156.00
3 $\frac{1}{2}$	53.10	8 $\frac{1}{16}$	172.00

Prices of larger sizes given upon application.
For Dimensions see page 310.

BALL AND SOCKET PILLOW BLOCKS

PLAIN, SELF, RING AND CHAIN OILING BEARINGS.



DIMENSIONS.

Diameter of Bearing.	A	B	C	D	E	F	G	FOOT BOLTS	
								Number.	Diam.
1 $\frac{7}{16}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{2}$	7	3		5	2	1/2" OR MORE FOR THE 1" DIA. OR MORE BEARING
1 $\frac{11}{16}$	6 $\frac{1}{2}$	2 $\frac{3}{4}$	10 $\frac{1}{2}$	7 $\frac{3}{4}$	3 $\frac{1}{2}$		5	2	
1 $\frac{13}{16}$	7 $\frac{1}{4}$	2 $\frac{3}{4}$	12 $\frac{1}{2}$	9	4		5	2	
2 $\frac{1}{8}$	8 $\frac{1}{4}$	3 $\frac{1}{4}$	12 $\frac{1}{2}$	9 $\frac{1}{2}$	4 $\frac{1}{2}$		5	2	
2 $\frac{3}{16}$	9	3 $\frac{1}{4}$	13	9 $\frac{1}{2}$	4 $\frac{1}{2}$		1	2	
2 $\frac{1}{2}$	10	3 $\frac{3}{4}$	13 $\frac{3}{4}$	10 $\frac{1}{2}$	4 $\frac{3}{4}$		1 $\frac{1}{16}$	2	
2 $\frac{5}{8}$	11 $\frac{1}{2}$	4	14 $\frac{1}{2}$	11 $\frac{1}{2}$	5		1 $\frac{1}{8}$	2	
3 $\frac{3}{8}$	12 $\frac{1}{2}$	4 $\frac{3}{4}$	16	12 $\frac{1}{2}$	5 $\frac{1}{2}$		1 $\frac{1}{2}$	2	
3 $\frac{7}{8}$	13 $\frac{1}{2}$	4 $\frac{3}{4}$	16 $\frac{1}{2}$	12 $\frac{1}{2}$	6 $\frac{1}{2}$	3 $\frac{1}{8}$	1 $\frac{3}{8}$	4	
3 $\frac{11}{16}$	14 $\frac{1}{2}$	5	17 $\frac{1}{2}$	13 $\frac{1}{2}$	6 $\frac{1}{2}$	3 $\frac{7}{16}$	1 $\frac{1}{2}$	4	
3 $\frac{15}{16}$	15 $\frac{1}{2}$	5	17 $\frac{1}{2}$	13 $\frac{1}{2}$	7	3 $\frac{7}{16}$	1 $\frac{1}{2}$	4	
4 $\frac{1}{8}$	16	5 $\frac{3}{4}$	18 $\frac{1}{2}$	14 $\frac{1}{2}$	7 $\frac{1}{2}$	3 $\frac{7}{8}$	1 $\frac{5}{8}$	4	
4 $\frac{1}{4}$	17	5 $\frac{3}{4}$	18 $\frac{1}{2}$	14 $\frac{1}{2}$	7 $\frac{1}{2}$	3 $\frac{7}{8}$	1 $\frac{5}{8}$	4	
4 $\frac{3}{8}$	17	5 $\frac{3}{4}$	18 $\frac{1}{2}$	14 $\frac{1}{2}$	7 $\frac{1}{2}$	3 $\frac{7}{8}$	1 $\frac{5}{8}$	4	
4 $\frac{1}{2}$	18	6 $\frac{1}{4}$	20 $\frac{1}{8}$	16	8	4	1 $\frac{11}{16}$	4	
5 $\frac{1}{8}$	20	6 $\frac{1}{2}$	22	17	8 $\frac{1}{2}$	4 $\frac{1}{2}$	1 $\frac{1}{2}$	4	
5 $\frac{1}{4}$	21	7 $\frac{1}{4}$	22 $\frac{3}{4}$	17 $\frac{1}{2}$	8 $\frac{1}{2}$	4 $\frac{1}{2}$	1 $\frac{3}{8}$	4	
6 $\frac{1}{8}$	22	7 $\frac{3}{4}$	23 $\frac{1}{2}$	19	9 $\frac{1}{2}$	5 $\frac{1}{8}$	2	4	
6 $\frac{1}{4}$	22	8 $\frac{1}{4}$	24 $\frac{1}{2}$	19 $\frac{1}{2}$	9 $\frac{1}{2}$	5 $\frac{1}{8}$	2 $\frac{1}{4}$	4	

RIGID PILLOW BLOCKS

WITH WICK OR PLAIN OILING BEARINGS.



Fig. 168.

Our Rigid Pillow Blocks are constructed on lines combining strength and beauty of design. The Bearings are of standard length, and lined with good grade of babbit. These boxes can be furnished with grease reservoirs, fitted for the ordinary oiling system, or tapped for compression grease cups.

The base is fitted with oblong holes allowing a liberal lateral adjustment.

PRICE LIST.

Size.	Price.	Size.	Price.
$\frac{1}{2}$	\$1.30	$3 \frac{7}{16}$	\$11.00
$1 \frac{3}{16}$	1.60	$3 \frac{1}{2}$	13.30
$1 \frac{7}{16}$	2.10	$3 \frac{1}{2}$	16.60
$1 \frac{1}{2}$	2.65	$4 \frac{7}{16}$	21.80
$1 \frac{1}{2}$	3.40	$4 \frac{1}{2}$	26.40
$2 \frac{3}{16}$	4.00	$5 \frac{7}{16}$	33.60
$2 \frac{7}{16}$	4.90	$5 \frac{1}{2}$	48.40
$2 \frac{1}{2}$	6.10	$6 \frac{7}{16}$	56.50
$2 \frac{1}{2}$	7.80	$6 \frac{1}{2}$	63.80
$3 \frac{3}{16}$	9.40	$7 \frac{1}{2}$	80.00

All Rigid Pillow Blocks of larger diameter than $3 \frac{7}{16}$ inches are made with Double Ears. Prices of larger sizes given upon application.

For Dimensions see page 315.

RIGID SELF-OILING PILLOW BLOCKS



Fig. 169.

PRICE LIST.

Size.	Price.	Size.	Price.
1 $\frac{1}{8}$	\$ 8.00	5 $\frac{1}{8}$	\$ 86.00
2 $\frac{3}{16}$	9.75	6 $\frac{1}{8}$	96.00
2 $\frac{1}{4}$	12.00	6 $\frac{3}{16}$	105.00
2 $\frac{1}{2}$	14.75	7 $\frac{1}{8}$	118.00
2 $\frac{3}{8}$	17.50	7 $\frac{3}{16}$	132.00
3 $\frac{1}{8}$	20.50	8 $\frac{1}{8}$	146.00
3 $\frac{1}{4}$	23.50	8 $\frac{3}{16}$	160.00
3 $\frac{1}{2}$	27.25	9 $\frac{1}{8}$	175.00
3 $\frac{3}{8}$	32.25	9 $\frac{3}{16}$	187.00
4 $\frac{1}{8}$	38.25	10 $\frac{1}{8}$	202.00
4 $\frac{1}{4}$	45.00	10 $\frac{3}{16}$	218.00
4 $\frac{1}{2}$	53.00	11 $\frac{1}{8}$	235.00
4 $\frac{3}{8}$	61.00	11 $\frac{3}{16}$	255.00
5 $\frac{1}{8}$	73.00		

All Rigid Pillow Blocks of larger diameter than 3 $\frac{3}{16}$ inches are made with Double Ears.

For Dimensions see page 315.

SPECIAL RIGID CHAIN AND RING OILING PILLOW BLOCK FOR HEAVY DUTY.



Fig. 170.

The above illustration shows one of our extra heavy Rigid Chain or Ring Oiling Pillow Blocks mounted on an Adjustable Wedge Base Plate. We have a complete line of patterns for Pillow Blocks of large sizes intended for service in Cement Works, Rolling Mills, Paper Mills and similar plants where the requirements are of a severe character.

Prices quoted upon receipt of specifications.

RIGID CHAIN AND RING OILING PILLOW BLOCKS



Fig. 171.

Like all our other Pillow Blocks these are made extra strong and are highly and accurately finished. The Bearings are long and are furnished with a good quality of babbitt.

PRICE LIST.

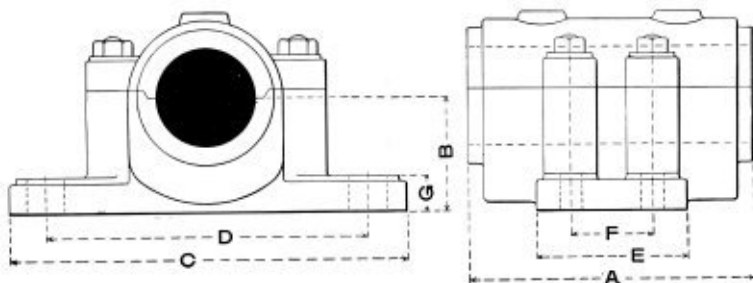
Size.	Price.	Size.	Price.
1 $\frac{1}{16}$	\$ 8.50	5 $\frac{1}{16}$	\$ 88.00
2 $\frac{1}{16}$	10.25	6 $\frac{1}{16}$	100.00
2 $\frac{7}{16}$	12.50	6 $\frac{1}{8}$	112.00
2 $\frac{1}{4}$	15.25	7 $\frac{1}{16}$	125.00
2 $\frac{3}{8}$	18.00	7 $\frac{1}{8}$	139.00
3 $\frac{1}{8}$	21.00	8 $\frac{1}{16}$	153.00
3 $\frac{1}{16}$	24.00	8 $\frac{1}{8}$	167.00
3 $\frac{1}{4}$	28.00	9 $\frac{1}{16}$	181.00
3 $\frac{3}{8}$	33.00	9 $\frac{1}{4}$	195.00
4 $\frac{1}{16}$	39.00	10 $\frac{1}{16}$	210.00
4 $\frac{1}{8}$	46.00	10 $\frac{1}{4}$	226.00
4 $\frac{1}{4}$	54.00	11 $\frac{1}{16}$	244.00
4 $\frac{3}{8}$	62.00	11 $\frac{1}{4}$	264.00
5 $\frac{1}{16}$	75.00		

All Rigid Pillow Blocks of larger diameter than 3 $\frac{1}{16}$ inches are made with Double Ears.

For Dimensions see page 315.

RIGID PILLOW BLOCKS

PLAIN, SELF, RING AND CHAIN OILING BEARINGS.



DIMENSIONS.

Size of Shaft	A	B	C	D	E	F	G	FOOT BOLTS	
								Number.	Diam.
1 $\frac{15}{16}$	3	1	5 $\frac{1}{8}$	4	2		3 $\frac{1}{16}$	2	1 $\frac{1}{16}$
1 $\frac{1}{16}$	4 $\frac{1}{2}$	1 $\frac{3}{8}$	7 $\frac{1}{8}$	5 $\frac{1}{8}$	2 $\frac{1}{8}$		3 $\frac{1}{16}$	2	
1 $\frac{1}{16}$	5	1 $\frac{1}{2}$	8	6	2 $\frac{1}{8}$		3 $\frac{1}{16}$	2	
1 $\frac{1}{16}$	5 $\frac{3}{4}$	2	8 $\frac{1}{2}$	6 $\frac{1}{2}$	2 $\frac{1}{8}$		3 $\frac{1}{16}$	2	
1 $\frac{1}{16}$	6 $\frac{1}{4}$	2 $\frac{1}{16}$	9 $\frac{1}{2}$	7	2 $\frac{1}{8}$		3 $\frac{1}{16}$	2	
2 $\frac{3}{16}$	7 $\frac{1}{8}$	2 $\frac{1}{2}$	10	7 $\frac{1}{2}$	3		3 $\frac{1}{16}$	2	
2 $\frac{1}{16}$	7 $\frac{1}{2}$	2 $\frac{1}{16}$	10 $\frac{1}{2}$	8	3 $\frac{1}{8}$		3 $\frac{1}{16}$	2	
2 $\frac{1}{16}$	8 $\frac{1}{2}$	2 $\frac{7}{8}$	11 $\frac{1}{2}$	8 $\frac{1}{2}$	4		3 $\frac{1}{16}$	2	
2 $\frac{1}{16}$	9	3 $\frac{1}{8}$	12	9	4 $\frac{3}{8}$		3 $\frac{1}{16}$	2	
3 $\frac{1}{8}$	10	3 $\frac{3}{8}$	12 $\frac{1}{2}$	9 $\frac{1}{2}$	4		3 $\frac{1}{16}$	2	
3 $\frac{1}{8}$	10 $\frac{1}{2}$	3 $\frac{7}{8}$	13 $\frac{1}{2}$	10	5	2 $\frac{7}{8}$	1	4	
3 $\frac{1}{8}$	11 $\frac{1}{2}$	3 $\frac{1}{2}$	14	11	5 $\frac{1}{2}$	3	1 $\frac{1}{16}$	4	
3 $\frac{1}{8}$	12	4	14 $\frac{1}{2}$	11 $\frac{1}{2}$	5 $\frac{1}{2}$	3 $\frac{1}{2}$	1 $\frac{1}{16}$	4	
4 $\frac{1}{4}$	12 $\frac{1}{2}$	4 $\frac{1}{4}$	15 $\frac{1}{2}$	12	6	3 $\frac{1}{2}$	1 $\frac{1}{16}$	4	
4 $\frac{1}{4}$	13	4 $\frac{1}{2}$	16	12	6 $\frac{1}{2}$	3 $\frac{3}{4}$	1 $\frac{1}{16}$	4	
4 $\frac{1}{4}$	15	4 $\frac{3}{4}$	17 $\frac{1}{2}$	13	7	4	1 $\frac{1}{16}$	4	
4 $\frac{1}{4}$	15	4 $\frac{3}{4}$	17 $\frac{1}{2}$	13	7	4 $\frac{1}{2}$	1 $\frac{1}{16}$	4	
5 $\frac{1}{2}$	16 $\frac{1}{2}$	5 $\frac{1}{16}$	18 $\frac{1}{2}$	15	7 $\frac{1}{2}$	4 $\frac{1}{2}$	1 $\frac{1}{16}$	4	
5 $\frac{1}{2}$	18	5 $\frac{1}{2}$	20	16	8	5	1 $\frac{1}{16}$	4	
6 $\frac{1}{2}$	19	6 $\frac{1}{8}$	21 $\frac{1}{2}$	17	9	5 $\frac{1}{2}$	1 $\frac{1}{16}$	4	
6 $\frac{1}{2}$	20	6 $\frac{1}{4}$	22 $\frac{1}{2}$	18	9 $\frac{1}{2}$	5 $\frac{1}{2}$	1 $\frac{1}{16}$	4	
7 $\frac{1}{2}$	23	7 $\frac{1}{2}$	25 $\frac{1}{2}$	20	11	6 $\frac{1}{2}$	2	4	
8 $\frac{1}{2}$	26 $\frac{1}{2}$	8 $\frac{1}{4}$	28	23	12 $\frac{1}{2}$	7 $\frac{1}{2}$	2 $\frac{3}{8}$	4	
9 $\frac{1}{2}$	29 $\frac{1}{2}$	9	30 $\frac{1}{2}$	25 $\frac{1}{2}$	13 $\frac{1}{2}$	8 $\frac{1}{2}$	2 $\frac{3}{8}$	4	

COMMON FLAT BOXES

BABBITTED BEARINGS.



Fig. 172.

PRICE LIST

Size.	Price.	Size.	Price.
1 $\frac{3}{16}$	\$1.50	2 $\frac{3}{16}$	\$3.00
1 $\frac{7}{16}$	1.80	2 $\frac{7}{16}$	3.45
1 $\frac{11}{16}$	2.15	2 $\frac{11}{16}$	4.10
1 $\frac{15}{16}$	2.50	2 $\frac{15}{16}$	4.80

For Dimensions see page 317.

SOLID JOURNAL BOXES

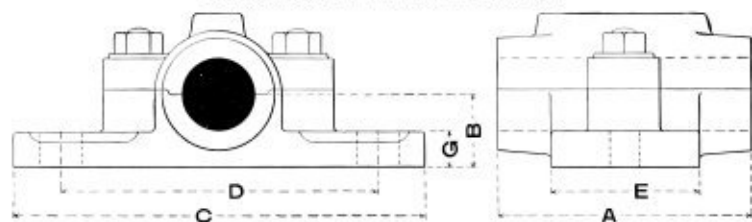
Fig. 173.

PRICE LIST.

SIZE	Solid Journal Boxes Bored	Solid Journal Boxes Babbitted	SIZE	Solid Journal Boxes Bored	Solid Journal Boxes Babbitted
$\frac{11}{16}$	\$0.75	\$0.85	2 $\frac{11}{16}$	\$ 4.00	\$ 4.40
1 $\frac{3}{16}$	.90	1.00	2 $\frac{15}{16}$	5.00	5.50
1 $\frac{7}{16}$	1.25	1.35	3 $\frac{3}{16}$	6.00	6.60
1 $\frac{11}{16}$	1.60	1.75	3 $\frac{7}{16}$	7.25	8.00
1 $\frac{15}{16}$	2.00	2.20	3 $\frac{11}{16}$	8.50	9.50
2 $\frac{3}{16}$	2.60	2.90	3 $\frac{15}{16}$	10.00	11.00
2 $\frac{7}{16}$	3.25	3.60			

For Dimensions see page 317.

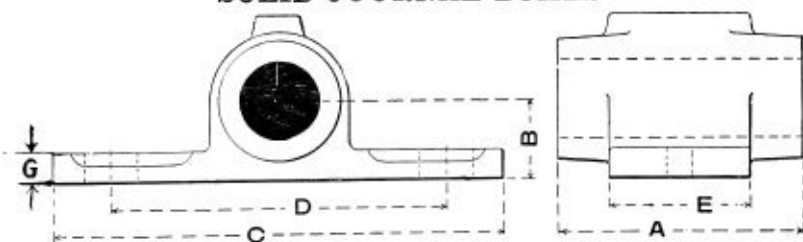
COMMON FLAT BOXES



DIMENSIONS.

Diam. of Bearing.	A	B	C	D	E	G	Foot Bolts.	
							No.	Diam.
1 $\frac{15}{16}$	3	1	5 $\frac{1}{2}$	4	2	1	2	8
1 $\frac{1}{2}$	3	1 $\frac{1}{2}$	6	4 $\frac{1}{2}$	2 $\frac{1}{2}$	1	2	8
1 $\frac{7}{16}$	3 $\frac{1}{2}$	1 $\frac{1}{2}$	6 $\frac{1}{2}$	5	2 $\frac{1}{2}$	1	2	8
1 $\frac{11}{16}$	3 $\frac{1}{2}$	1 $\frac{1}{2}$	7	5 $\frac{1}{2}$	3	1	2	8
1 $\frac{13}{16}$	3 $\frac{1}{2}$	1 $\frac{1}{2}$	7 $\frac{1}{2}$	6	3 $\frac{1}{2}$	1	2	8
2 $\frac{3}{16}$	4	1 $\frac{1}{2}$	8	6 $\frac{1}{2}$	3	1	2	8
2 $\frac{7}{16}$	4 $\frac{1}{2}$	1 $\frac{1}{2}$	8 $\frac{1}{2}$	7	3 $\frac{1}{2}$	1	2	8
2 $\frac{11}{16}$	4 $\frac{1}{2}$	1 $\frac{1}{2}$	10	8	3 $\frac{1}{2}$	1	2	8
2 $\frac{13}{16}$	4 $\frac{1}{2}$	1 $\frac{1}{2}$	10 $\frac{1}{2}$	8 $\frac{1}{2}$	4	1	2	8
2	4 $\frac{1}{2}$	2	11	9	4 $\frac{1}{2}$	1	2	8

SOLID JOURNAL BOXES



DIMENSIONS.

Diam. of Bearing.	A	B	C	D	E	G	Foot Bolts.	
							No.	Diam.
1 $\frac{15}{16}$	3	1	5	3 $\frac{1}{2}$	2	1	2	8
1 $\frac{1}{2}$	3 $\frac{1}{2}$	1 $\frac{1}{2}$	5 $\frac{1}{2}$	4	2 $\frac{1}{2}$	1	2	8
1 $\frac{7}{16}$	4	1 $\frac{1}{2}$	6	4 $\frac{1}{2}$	2 $\frac{1}{2}$	1	2	8
1 $\frac{11}{16}$	4	1 $\frac{1}{2}$	6 $\frac{1}{2}$	4 $\frac{1}{2}$	3	1	2	8
1 $\frac{13}{16}$	4	1 $\frac{1}{2}$	7	5	3	1	2	8
2 $\frac{3}{16}$	4 $\frac{1}{2}$	2	8	5 $\frac{1}{2}$	3 $\frac{1}{2}$	1	2	8
2 $\frac{7}{16}$	4 $\frac{1}{2}$	2	8 $\frac{1}{2}$	6	3 $\frac{1}{2}$	1	2	8
2 $\frac{11}{16}$	5	2	9	6 $\frac{1}{2}$	3 $\frac{1}{2}$	1	2	8
2 $\frac{13}{16}$	5 $\frac{1}{2}$	2	9 $\frac{1}{2}$	7	3 $\frac{1}{2}$	1	2	8
2	7	4	10	7 $\frac{1}{2}$	4 $\frac{1}{2}$	1	2	8

BASE PLATES FOR PILLOW BLOCKS

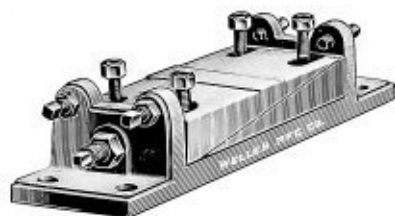


Fig. 174. Adjustable.



Fig. 175. Plain.

We have patterns for both Adjustable and Plain Base Plates for Pillow Blocks of all sizes. The Adjustable Base Plates are furnished with planed cast iron adjusting wedges and have liberal vertical and lateral adjustment.

PRICE LIST.

Size. Inches.	Price.		Size. Inches.	Price.	
	Adjustable.	Plain		Adjustable.	Plain.
2 $\frac{1}{16}$	\$33.00	\$10.00	6 $\frac{15}{16}$	\$88.00	\$36.00
3 $\frac{7}{16}$	40.00	12.00	7 $\frac{1}{16}$	92.00	39.00
3 $\frac{13}{16}$	44.00	14.00	8	96.00	42.00
3 $\frac{15}{16}$	48.00	16.00	8 $\frac{1}{2}$	100.00	45.00
4 $\frac{7}{16}$	56.00	18.00	9	110.00	50.00
4 $\frac{13}{16}$	66.00	22.50	9 $\frac{1}{2}$	120.00	.....
5 $\frac{7}{16}$	72.00	27.00	10 $\frac{1}{2}$	132.00	.....
5 $\frac{13}{16}$	78.00	31.50	12	146.00	.....
6 $\frac{7}{16}$	82.00	33.75			

WALL BRACKETS AND BOX FRAMES

FOR PILLOW BLOCKS OF ALL STYLES.



Fig. 176. Wall Bracket.

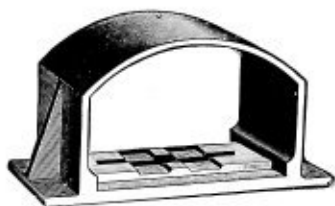


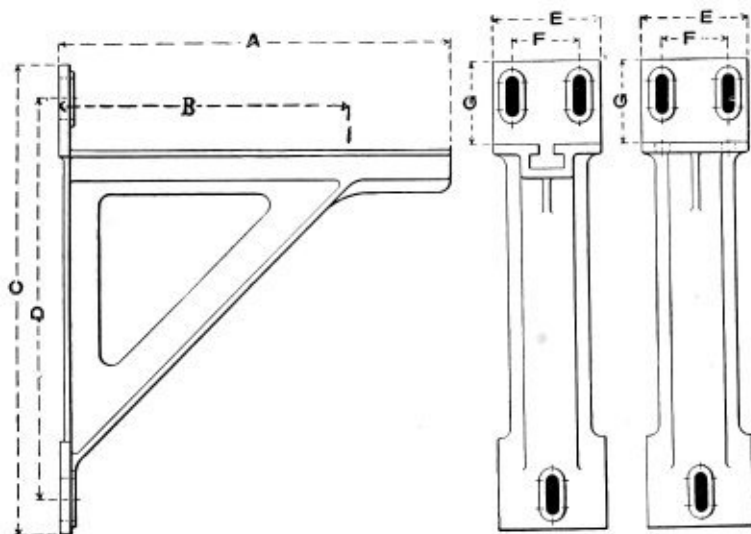
Fig. 177. Wall Box Frame.

PRICE LIST.

Size of Pillow Block, Inches.	Wall Brackets. Projection from Wall to center of Shaft.			Wall Box Frames.
	Price.			Price.
	18 inches.	24 inches.	30 Inches.	
1 $\frac{11}{16}$	\$ 5.50	\$ 8.25	\$11.00	\$ 8.00
1 $\frac{1}{2}$	6.00	9.00	12.00	8.50
2 $\frac{1}{16}$	6.50	9.75	13.00	9.00
2 $\frac{1}{8}$	7.25	10.75	14.00	9.00
2 $\frac{1}{4}$	8.00	11.75	15.50	12.00
2 $\frac{3}{8}$	9.00	13.00	17.00	12.00
3 $\frac{1}{2}$	10.00	15.00	19.50	16.00
3 $\frac{3}{4}$	11.00	17.00	22.50	16.00
3 $1\frac{1}{8}$	12.25	19.00	25.50	20.00
3 $1\frac{1}{4}$	13.50	21.50	28.50	20.00
4 $1\frac{3}{8}$	16.00	24.50	33.00	34.00
4 $1\frac{1}{2}$	18.50	27.50	35.50	34.00
5 $1\frac{3}{4}$	22.00	33.00	44.50	50.00
6 $1\frac{7}{8}$	30.00	40.00	52.00	70.00

For dimensions of Wall Brackets see page 320.

WALL BRACKETS



DIMENSIONS.

Size of Shaft Inches.	A	B	C	D	E	F	G	Foot Bolts.	
								Number	Diam.
1 $\frac{3}{16}$ —1 $\frac{1}{16}$	24	18	23 $\frac{1}{2}$	20 $\frac{1}{2}$	5 $\frac{1}{2}$	...	3 $\frac{1}{2}$	2	$\frac{3}{8}$
1 $\frac{1}{8}$ —2 $\frac{3}{16}$	31	24	30	26 $\frac{1}{4}$	6 $\frac{1}{4}$	...	4	2	$\frac{1}{2}$
2 $\frac{7}{16}$ —2 $\frac{1}{8}$	38	30	37	33 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{4}$	4 $\frac{3}{4}$	3	$\frac{3}{4}$
2 $\frac{1}{8}$ —3 $\frac{3}{16}$	39	30	38	34 $\frac{1}{2}$	9	6	4 $\frac{1}{4}$	3	$\frac{3}{4}$
3 $\frac{7}{16}$ —3 $\frac{1}{8}$	40	30	39	34 $\frac{1}{4}$	9 $\frac{1}{2}$	6 $\frac{1}{2}$	5 $\frac{1}{8}$	3	$\frac{7}{8}$
4 $\frac{7}{16}$ —4 $\frac{1}{8}$	41 $\frac{1}{2}$	30	40 $\frac{1}{4}$	35 $\frac{1}{4}$	10 $\frac{1}{2}$	7 $\frac{1}{4}$	6	3	1
5 $\frac{7}{16}$ —5 $\frac{1}{8}$	42 $\frac{1}{2}$	30	41 $\frac{1}{2}$	36	11 $\frac{1}{2}$	8	6 $\frac{1}{4}$	3	1 $\frac{1}{8}$

ADJUSTABLE STEP BEARINGS

WITH OIL POT.

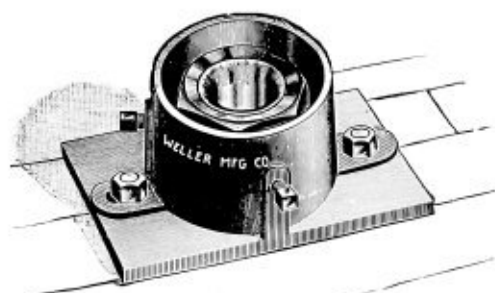


Fig. 178.

Adjustable in any direction, with tempered steel step. When desired brass bushed an additional charge is made.

PRICE LIST.

Size.	Price.	Size.	Price.	Size.	Price.
1 $\frac{3}{16}$	\$6.00	2 $\frac{7}{16}$	\$11.00	3 $\frac{7}{16}$	\$22.80
1 $\frac{7}{16}$	6.75	2 $\frac{9}{16}$	13.00	3 $\frac{9}{16}$	26.20
1 $\frac{9}{16}$	7.80	2 $\frac{11}{16}$	16.00	3 $\frac{11}{16}$	29.90
1 $\frac{11}{16}$	9.20	2 $\frac{13}{16}$	20.00	3 $\frac{13}{16}$	36.00

RIGID VERTICAL BEARINGS

Fig. 179.

For upright shaft, babbitted and provided with grease or oil reservoir at top and arranged with parting cover to prevent accumulation of dirt or grit.

PRICE LIST.

Diam. shaft.	Price.	Diam. shaft.	Price.
1 $\frac{7}{16}$	\$3.25	2 $\frac{11}{16}$	\$ 9.00
1 $\frac{9}{16}$	3.75	2 $\frac{13}{16}$	11.25
1 $\frac{11}{16}$	5.00	3 $\frac{7}{16}$	13.00
2 $\frac{3}{16}$	6.25	3 $\frac{9}{16}$	16.00
2 $\frac{7}{16}$	7.50	3 $\frac{11}{16}$	22.00

ADJUSTABLE BALL AND SOCKET VERTICAL BEARINGS

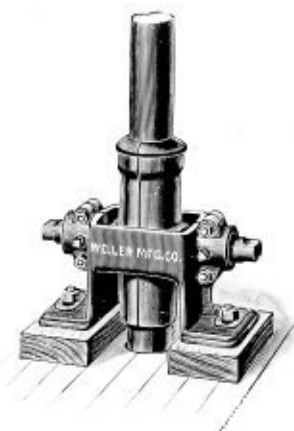


Fig. 180.

In these Bearings the alignment is maintained by means of adjusting plungers with set screws bearing on them.

The Bearing is made with ample provision for lubricating.

PRICE LIST.

Size in inches.	Price.	Size in inches.	Price.
$1 \frac{1}{8}$	\$ 3.95	$2 \frac{1}{2}$	\$13.00
$1 \frac{1}{4}$	5.00	$3 \frac{1}{8}$	15.00
$1 \frac{3}{8}$	6.00	$3 \frac{1}{4}$	20.00
$2 \frac{1}{8}$	7.00	$3 \frac{1}{2}$	32.50
$2 \frac{1}{4}$	9.00	$3 \frac{3}{8}$	40.00
$2 \frac{1}{2}$	11.00		

WELLER SCREW BELT TIGHTENER, Style A

MADE EITHER VERTICAL OR HORIZONTAL.

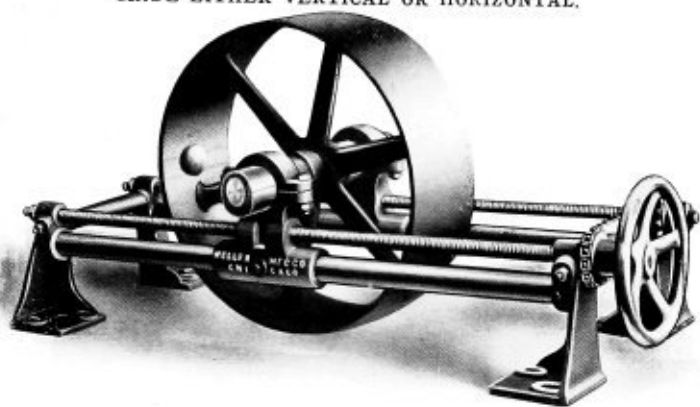
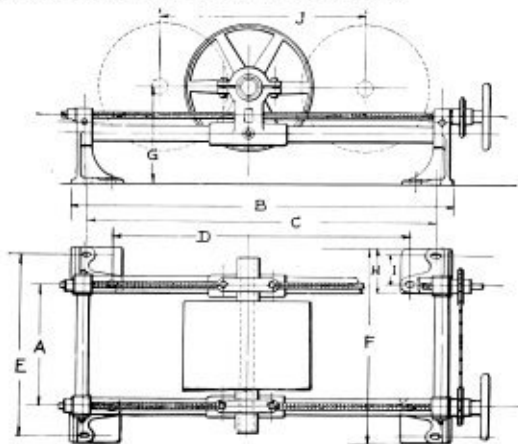


Fig. 181.

We list below our Standard sizes of the above Tightener but are prepared to furnish them in any length of adjustment.



PRICE LIST AND DIMENSIONS.

No.	Size of Pulley	Price.	A	B	C	D	E	F	G	H	I	J	Bolts.	
													Size.	No
1	16 x 8	\$50.00	14	48	44	38 $\frac{1}{2}$	21 $\frac{1}{2}$	23	12 $\frac{1}{2}$	5 $\frac{1}{2}$	3 $\frac{1}{2}$	24	8	8
2	20 x 12	76.00	19	60	55	47	28	30 $\frac{1}{2}$	15 $\frac{1}{2}$	7	4 $\frac{1}{2}$	32	8	8
3	24 x 16	125.00	24	72	66 $\frac{1}{2}$	57 $\frac{1}{2}$	34	36	17 $\frac{1}{2}$	7 $\frac{1}{2}$	4 $\frac{1}{2}$	38	8	8

WELER SCREW BELT TIGHTENER Style D

MADE EITHER VERTICAL OR HORIZONTAL.

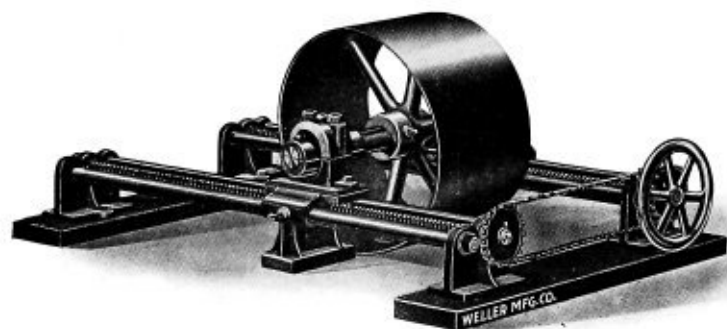


Fig. 182.

This Tightener is intended particularly for heavy work. The shaft runs in Ball and Socket Bearings, which renders it universal and adjustable in every direction. Unless otherwise specified we provide plain oiling Bearings, but are prepared to furnish self oiling of any desired type at an advanced price. We can also furnish this style of Tightener with any modifications that may be desired.

PRICE LIST.

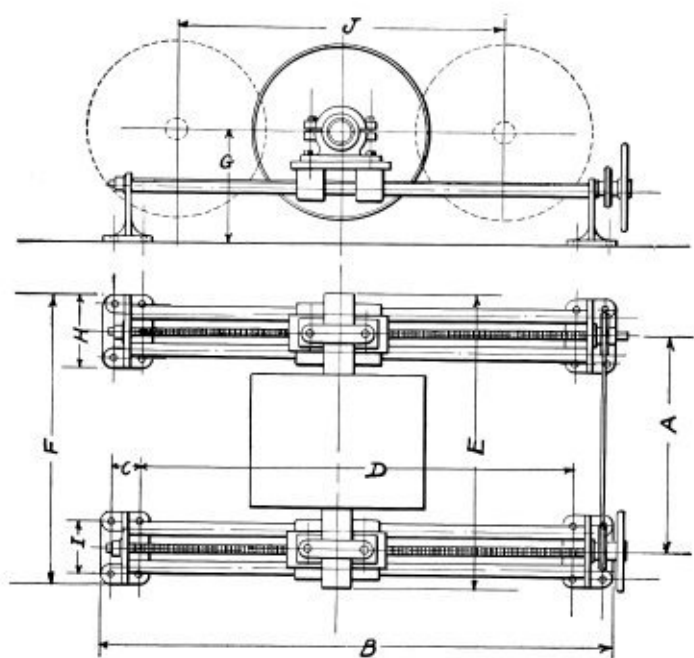
With Plain Oiling Bearings.

Length of Adjustment, Inches.	Size of Pulley, Inches.	Price.
24	16 x 12	\$ 80.00
36	20 x 16	100.00
48	26 x 20	140.00
60	36 x 30	190.00

Prices of intermediate or larger sizes given upon receipt of specifications.

For Dimensions see page 325.

WELLER SCREW BELT TIGHTENER Style D



DIMENSIONS.

No.	Size of Pulley	A	B	C	D	E	F	G	H	I	J	Bolts.	
												Size	No.
1	16 x 12	23	47½	3¼	36½	33	32½	12½	9½	6½	24	½	16
2	26 x 20	32	75½	4½	63½	44	42½	16½	10½	7½	48	¾	16

Adjustment (J) can be any length desired.

WELLER CHANNEL IRON SCREW BELT TIGHTENER, Style B

FOR EXTREMELY HEAVY SERVICE.

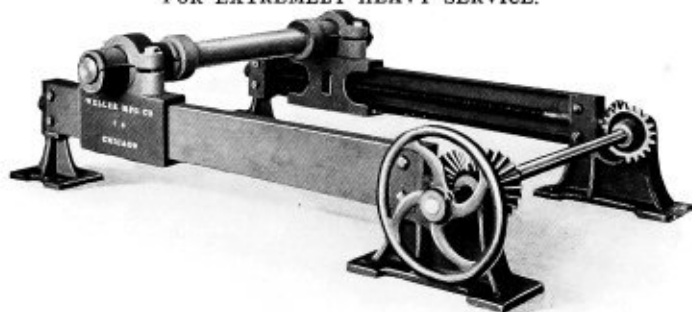
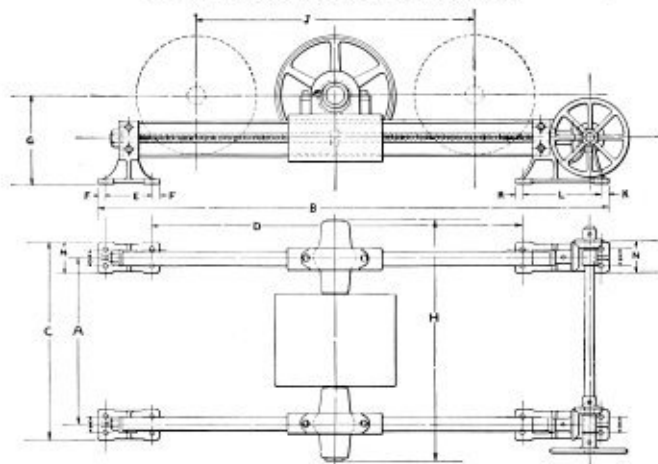


Fig. 183.

This Tightener is intended for service of the severest character, the channel iron frame being very rigid and the bearings of extra heavy pattern. Any length of adjustment furnished to order.

Prices quoted upon application.

DIMENSIONS OF STANDARD SIZES.



No.	Size of Pulley	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Bolts.	
																Size.	No.
4	28 x 20	32½	71	40	46½	7½	1½	15½	44	4½	36	1½	14½	7½	7½	16	16
5	30 x 20	33½	76½	43	49½	8½	1 7/16	17½	48	6½	36	1 7/16	14½	9½	9½	16	16

Adjustment (J) can be any length desired.

WELLER FLOOR BELT TIGHTENER

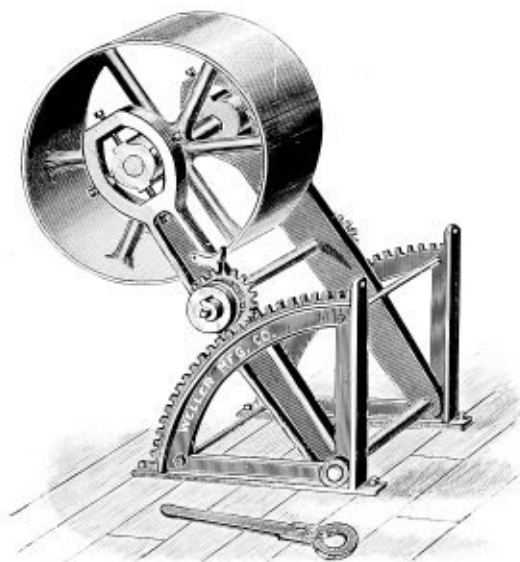


Fig. 184.

The above is especially designed for a Floor Tightener and can be used for either a Vertical or Horizontal Belt. It is heavy and well finished and is provided with an accurately balanced pulley.

PRICE LIST.

Motion.	Size of Pulley.	Price.	Motion.	Size of Pulley.	Price.
2 feet.	12 x 8	\$55.00	3 feet.	24 x 16	\$ 90.00
2 feet.	16 x 10	60.00	4 feet.	28 x 20	120.00
3 feet.	20 x 14	80.00	4 feet.	30 x 26	150.00

WELER RACK AND PINION BELT TIGHTENER



Fig. 184.

This Tightener is made with Ball and Socket Bearings and to operate either horizontally or vertically. It is furnished with cast iron guides and an accurately balanced pulley.

PRICE LIST.
With Rigid Plain Oiling Bearings.

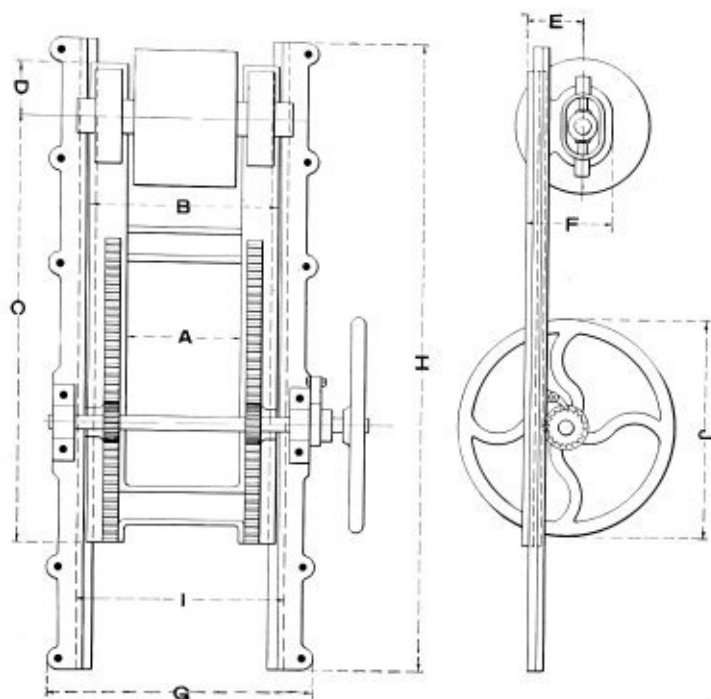
No.	Length of Adjustment, Inches	Size of Pulley.		Diameter of Shaft.	Price.
		Dia.	Face.		
1	27	12	9	1 $\frac{1}{4}$	\$ 30.00
1	24	18	12	1 $\frac{1}{4}$	40.00
2	34	24	14	2 $\frac{3}{16}$	66.00
2	32	28	20	2 $\frac{3}{16}$	82.00
3	39	30	26	2 $\frac{7}{16}$	150.00
3	33	42	38	2 $\frac{7}{16}$	250.00

For dimensions see page 329.

We are prepared to furnish special Belt Tighteners of any design. Prices quoted upon receipt of specifications.

WELLER RACK AND PINION

Belt Tighteners



DIMENSIONS.

No.	Size of Pulley	Size of Shaft.	Length of Adj.	A	B	C	D	E	F	G	H	I	J
1	12 x 9	1 $\frac{1}{8}$	27	10 $\frac{1}{2}$	17 $\frac{1}{2}$	37 $\frac{1}{2}$	5 $\frac{1}{2}$	4 $\frac{3}{8}$	7 $\frac{1}{2}$	21 $\frac{1}{2}$	56	18 $\frac{1}{2}$	11
1	18 x 12	1 $\frac{1}{8}$	24	13 $\frac{1}{2}$	20 $\frac{1}{2}$	37 $\frac{1}{2}$	5 $\frac{1}{2}$	4 $\frac{3}{8}$	7 $\frac{1}{2}$	24 $\frac{1}{2}$	56	21 $\frac{1}{2}$	11
2	24 x 14	2 $\frac{3}{16}$	34	15 $\frac{1}{2}$	23	50 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	8 $\frac{1}{2}$	28 $\frac{1}{2}$	68 $\frac{1}{2}$	24 $\frac{1}{2}$	11
2	28 x 20	2 $\frac{3}{16}$	32	21 $\frac{1}{2}$	29	50 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	8 $\frac{1}{2}$	34 $\frac{1}{2}$	68 $\frac{1}{2}$	30 $\frac{1}{2}$	11
3	30 x 26	2 $\frac{7}{16}$	39	28	36 $\frac{1}{2}$	60	6	6	9 $\frac{1}{2}$	44	78 $\frac{1}{2}$	38	20
3	42 x 38	2 $\frac{7}{16}$	33	40	48 $\frac{1}{2}$	60	6	6	9 $\frac{1}{2}$	56	78 $\frac{1}{2}$	50	20

WELLER FLOOR STAND BELT TIGHTENER Style F

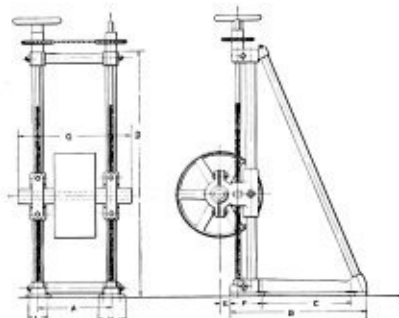


Fig. 185. PRICE LIST AND DIMENSIONS.

No.	Size of Pulley.	Price without Pulley	A	B	C	D	E	F	G	H	I	Bolts.	
												Size.	No.
1	13 x 8	\$60.00	14	25 $\frac{1}{2}$	16 $\frac{1}{2}$	46 $\frac{1}{2}$	2	5 $\frac{1}{2}$	21 $\frac{1}{2}$	5	3	WELLER MFG. CO. CHICAGO	8
2	20 x 12	85.00	19	29 $\frac{1}{2}$	19	58 $\frac{3}{8}$	2 $\frac{1}{2}$	6 $\frac{1}{2}$	28	6	4		8
3	24 x 16	110.00	24	32 $\frac{1}{2}$	21	69 $\frac{1}{2}$	2 $\frac{1}{4}$	8	34	7	4 $\frac{1}{2}$		8

The above prices do not include pulleys.

WELLER ROLL BELT TIGHTENER. Style G



WELLER ANGLE IRON TIGHTENER. Style E

Fig. 186.

For use where a small Tightener is needed on belts not over 6 inches wide.

The price quoted below does not include pulley.

Price\$25.00



Fig. 187.

The price quoted below does not include pulley as various sizes can be used in connection with the frame.

Price\$37.50

WELLER SWINGING BELT TIGHTENER

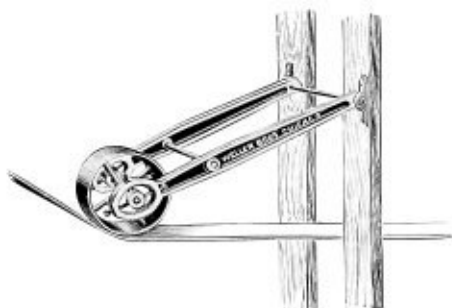


Fig. 188.

PRICE LIST.

Motion.	Size of Pulley.	Price.	Motion.	Size of Pulley.	Price.
3 feet.	12 x 8	\$30.00	4 feet.	24 x 16	\$45.00
3 feet.	12 x 10	35.00	5 feet.	28 x 20	50.00
4 feet.	20 x 14	40.00	5 feet.	30 x 26	55.00

WELLER ADJUSTABLE IDLER



Fig. 189.

Size of Pulley.....12"x8" Price\$23.00

This Idler is swiveled and may be adjusted to any desired angle.

It may be placed either upon the floor or in hanging position as may be required.



Fig. 190.

PLAIN MULE PULLEY STANDS

FOR CARRYING POWER
AROUND CORNERS.

Each Mule Stand includes the following:

- One shaft four feet long;
- Two pulleys;
- Four set collars;
- Top plate;
- Two guy rods with turn buckles.

We can furnish these Mule
Stands with any length of shaft and
size of pulleys desired.

PRICE LIST.

Width of Belt, Inches.	Diam. of Shaft.	Size of Pulleys. Inches.	Price.
3	1 $\frac{3}{16}$	10 x 4	\$19.25
4	1 $\frac{7}{16}$	10 x 5	21.50
5	1 $\frac{11}{16}$	12 x 6	25.50
6	1 $\frac{13}{16}$	14 x 7	29.00
7	1 $\frac{15}{16}$	14 x 8	30.00
8	1 $\frac{15}{16}$	16 x 9	34.50
9	1 $\frac{15}{16}$	16 x 10	36.00
10	2 $\frac{3}{16}$	18 x 11	41.50
12	2 $\frac{3}{16}$	20 x 13	54.00

ADJUSTABLE BALL JOINT MULE PULLEY STANDS.



Fig. 191.

This type of Mule Pulley Stand is made adjustable in every direction. The line shafts may be at any angle, may not be in the same plane, the pulleys may differ in diameter, and the belt may be crossed.

Locate the stand so that its shaft will be about 10 times the width of the belt from the shafts.

We make these stands to be in hanging position as shown in above cut, or provided with brackets to be bolted to a post or wall.

PRICE LIST.

Complete with shaft four feet long.

No. 1, for 3 to 5 inch Belt.....	\$ 60.00
No. 2, for 6 to 9 inch Belt.....	75.00
No. 3, for 10 to 12 inch Belt.....	95.00
No. 4, for 13 to 15 inch Belt.....	125.00

We can furnish the above with any length of shaft and size of pulleys desired.

GEARS

Explanation of System of Numbering Gears

The *number* of a gear in this list indicates the pitch and number of teeth in any particular wheel.

The first three (3) figures indicate the pitch in inches and fractions of an inch, and the last three (3) figures the number of teeth. Thus: A gear $2\frac{1}{4}$ -inch pitch 75 teeth would read 214075, or if $1\frac{1}{2}$ -inch pitch 112075. Either *Spurs*, *Bevels* or *Miters*, as specified.

All *Spur Gears* of the same pitch will interchange with each other.

Bevel Gears are made to run only in pairs and at right angles. We make special Angle Gearing when shafts are at any other angle.

The letters A, B, C, etc., following the number of a gear, indicate that there is more than one wheel of same pitch, and same number of teeth, and must always be noted if they occur after the number of the wheel or wheels wanted.

PLAIN SPUR GEARS

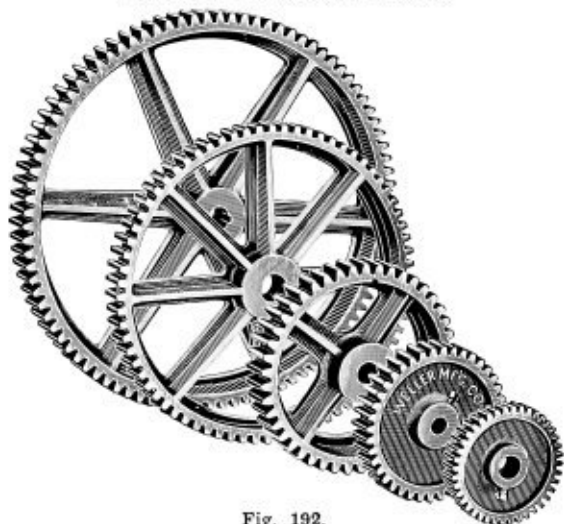


Fig. 192.

PLAIN SPUR GEARS $\frac{1}{16}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
716016	16	1½	2.23	2.5	.22	\$ 1.30

PLAIN SPUR GEARS $\frac{1}{8}$ " PITCH.

12012	12	1½	1.91	2½	.2	1.35
12024	24	1½	3.82	2½	.4	2.10
12026	26	1½	4.14	2½	.6	2.75

PLAIN SPUR GEARS $\frac{3}{16}$ " PITCH.

34010	10	1½	2.42	1½	.4	1.45
34011	11	1½	2.66	1½	.4	1.60
34012	12	1½	2.89	1½	.5	1.75
*34012b	12	1½	2.89	2	.6	2.00
34013	13	1½	3.12	1½	.6	1.90
34014	14	1½	3.37	1½	.6	2.05
*34014b	14	1½	3.34	2	.56	1.95
34015	15	1½	3.60	1½	.7	2.20
34018	18	1½	4.32	1½	.8	2.50
34020	20	1½	4.80	1½	.9	2.85
34022	22	1½	5.28	1½	1.0	3.10
34025	25	1½	6.00	2	1.1	3.50
*34025b	25	1½	5.97	2	1.3	3.70
34026	26	1½	6.24	2	1.2	3.70
34034	34	1½	8.16	2	1.5	4.75
*34038	38	1½	9.07	2	2.0	5.60
34040	40	1½	9.56	2	1.7	5.85
34050	50	1½	12.00	2½	2.2	7.20
*34053	53	1½	12.65	2½	2.0	7.10

PLAIN SPUR GEARS $\frac{3}{4}$ " PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
34055	55	1½	13.20	2½	2.4	\$ 7.85
34060	60	1½	14.40	2½	2.6	8.60
34067	67	1½	16.08	2½	2.9	9.50
34070	70	1½	16.80	2½	3.1	9.90
34084	84	1½	20.16	2½	3.7	11.90
34100	100	1½	24.00	2½	4.4	14.00
34116	116	1½	27.69	2½	4.6	16.10

PLAIN SPUR GEARS $\frac{7}{8}$ " PITCH.

*78010	10	2	2.80	2½	.7	1.95
78011	11	2	3.10	2½	.9	2.10
78012	12	2	3.36	2½	1.0	2.25
78013	13	2	3.65	2½	1.0	2.45
*78014b	14	1½	3.90	2½	1.0	2.50
*78014	14	2	3.92	2½	1.10	2.65
*78014c	14	2½	3.90	2½	1.37	3.00
78015	15	2	4.20	2½	1.2	2.75
78016	16	2	4.48	2½	1.3	3.00
78018	18	2	5.00	2½	1.5	3.40
*78021	21	2½	5.85	2½	2.3	4.00
78022	22	2	6.16	2½	1.8	4.10
78025	25	2	7.00	2½	2.1	4.65
78030	30	2	8.37	2½	2.4	5.25
78037	37	2	10.25	2½	3.1	6.45
78044	44	2	12.25	2½	3.6	7.55
78050	50	2	14.00	3	4.1	8.60
78057	57	2	15.96	3	4.7	9.80
78064	64	2	17.92	3	5.3	11.00
78073	73	2	20.50	3	6.0	12.50
78086	86	2	23.88	3	7.1	14.50
78107	107	2	29.76	3	8.9	18.00
78123	123	2	34.25	3	10.0	20.75
78135	135	2	37.50	3	11.0	22.75

SPUR GEARS 1" PITCH.

*100008	8	2½	2.55	2½	1.	2.40
100010	10	2½	3.20	2½	1.3	2.50
100011	11	2½	3.55	2½	1.4	2.65
100012	12	2½	3.84	2½	1.5	2.85
*100012	12	2½	4.67	2½	1.5	2.85
*100012	12	3	4.67	3½	2.	4.25
100013	13	2½	4.16	3½	1.7	3.05
100014	14	2½	4.48	3½	1.8	3.25
100015	15	2½	4.80	3½	1.9	3.40
100016	16	2½	5.12	3½	2.1	3.55
100017	17	2½	5.44	3½	2.2	3.75
100018	18	2½	5.76	3½	2.3	3.95
100019	19	2½	6.08	3½	2.5	4.15
100020	20	2½	6.40	3½	2.6	4.30
100022	22	2½	7.04	3½	2.9	4.70
100024	24	2½	7.66	3	3.1	5.10
100025	25	2½	8.00	3	3.2	5.30
100026	26	2½	8.30	3	3.4	5.50
100027	27	2½	8.64	3	3.5	5.65
100028	28	2½	8.96	3	3.6	5.85

SPUR GEARS 1" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R P M.	Price Bored, With K S. or S S.
100029	29	2½	9.25	3	3.8	\$ 6.05
100030	30	2½	9.60	3	3.9	6.25
100035	35	2½	11.20	3	4.6	7.20
100036	36	2½	11.47	3	4.7	7.40
100038	38	2½	12.16	3½	4.9	7.80
100040	40	2½	12.75	3½	5.2	8.20
100042	42	2½	13.44	3½	5.5	8.55
100045	45	2½	14.40	3½	5.9	9.15
100050	50	2½	16.00	3½	6.5	10.15
100062	62	2½	19.84	3½	8.1	12.50
100066	66	2½	21.12	3½	8.6	13.30
*100072	72	2½	23.04	3½	9.4	14.50
100084	84	2½	26.88	4	11.0	16.90
100096	96	2½	30.72	4	12.6	19.30
100100	100	2½	32.00	4	13.1	20.15
100124	124	2½	39.68	4	16.2	25.25
100144	144	2½	46.08	4	18.8	30.00
100150	150	2½	48.00	4	19.6	31.50

SPUR GEARS 1½" PITCH.

118010	10	2½	3.64	2½	1.3	4.10
118011	11	2½	3.96	2½	1.5	4.30
118012	12	2½	4.32	2½	1.6	4.55
118013	13	2½	4.70	2½	1.8	4.75
118014	14	2½	5.04	2½	1.9	5.00
118015	15	2½	5.40	2½	2.0	5.25
118018	18	2½	6.48	2½	2.4	6.00
118020	20	2½	7.20	2½	2.7	6.50
118022	22	2½	7.92	2½	3.0	7.00
118025	25	2½	9.00	3	3.4	7.75
118026	26	2½	9.36	3	3.6	7.90
118030	30	2½	10.80	3	4.1	8.95
118036	36	2½	12.96	3	4.9	10.40
118045	45	2½	16.20	3½	6.1	12.70
118051	51	2½	18.36	3½	6.9	14.25
118056	56	2½	20.16	3½	7.6	15.35
118067	67	2½	24.12	4	9.1	18.10
118078	78	2½	28.08	4	10.6	21.10
118084	84	2½	30.24	4	11.5	22.70
118095	95	2½	34.20	4	13.0	25.50
118100	100	2½	36.00	4	13.7	27.05
118118	118	2½	42.48	4	16.1	31.80

SPUR GEARS 1¼" Pitch.

*114008	8	3½	3.18	4	2.0	5.40
114010	10	3	4.00	3½	2.4	5.50
114011	11	3	4.40	3½	2.7	5.80
*114012b	12	2½	4.78	3½	2.5	5.90
114012	12	3	4.80	3½	2.9	6.10
114013	13	3	5.20	3½	3.2	6.40
114014	14	3	5.61	3½	3.4	6.70
114015	15	3	6.00	3½	3.7	7.00
114016	16	3	6.41	3½	3.9	7.25
114017	17	3	6.80	3½	4.2	7.55
114018	18	3	7.20	3½	4.4	7.85

PLAIN SPUR GEARS 1 $\frac{1}{4}$ " PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
*114018b	18	2 $\frac{1}{2}$	7.16	3 $\frac{1}{2}$	3.27	\$ 7.60
*114018c	18	5 $\frac{1}{4}$	7.16	5 $\frac{1}{2}$	6.6	15.00
*114019b	19	2 $\frac{1}{4}$	7.66	3 $\frac{1}{2}$	4.0	7.95
114019	19	3	7.60	3 $\frac{1}{2}$	4.6	8.15
*114020	20	3	8.00	3 $\frac{1}{2}$	4.9	8.45
114021	21	3	8.38	3 $\frac{1}{2}$	5.0	8.75
114022	22	3	8.80	3 $\frac{1}{2}$	5.4	9.05
114023	23	3	9.20	3 $\frac{1}{2}$	5.6	9.35
114024	24	3	9.60	3 $\frac{1}{2}$	5.9	9.60
114025	25	3	10.00	3 $\frac{1}{2}$	6.1	9.90
114026	26	3	10.40	3 $\frac{1}{2}$	6.4	10.15
114028	28	3	11.20	3 $\frac{1}{2}$	6.9	10.70
114030	30	3	12.00	3 $\frac{1}{2}$	7.4	11.30
114032	32	3	12.80	3 $\frac{1}{2}$	7.8	11.90
114035	35	3	14.00	4	8.6	12.75
114036	36	3	14.40	4	8.8	13.05
114038	38	3	15.20	4	9.3	13.65
114042	42	3	16.80	4	10.3	14.80
114046	46	3	18.40	4	11.3	16.05
114050	50	3	20.00	4	12.3	17.25
114056	56	3	22.40	4	13.7	19.10
*114060	60	3	23.88	4 $\frac{1}{2}$	14.7	20.30
114062	62	3	24.80	4 $\frac{1}{2}$	15.2	20.95
114068	68	3	27.20	4 $\frac{1}{2}$	16.7	22.90
114075	75	3	30.00	4 $\frac{1}{2}$	18.4	25.15
*114080b	80	2 $\frac{1}{2}$	31.83	4 $\frac{1}{2}$	16.3	25.00
114080	80	3	32.00	4 $\frac{1}{2}$	19.6	26.80
114084	84	3	33.60	4 $\frac{1}{2}$	20.6	28.05
114090	90	3	36.00	4 $\frac{1}{2}$	22.1	30.10
114095	95	3	38.00	4 $\frac{1}{2}$	23.4	31.80
114100	100	3	40.00	4 $\frac{1}{2}$	24.6	33.50
114126	126	3	50.40	5	31.0	44.60
114135	135	3	54.00	5	33.2	49.00

PLAIN SPUR GEARS 1 $\frac{3}{8}$ " PITCH.

*138014	14	4	6.13	4 $\frac{1}{2}$	4.5	10.00
*138028	28	4	12.35	5	9.5	15.90
*138098	98	4	42.83	5 $\frac{1}{2}$	42.0	48.75

PLAIN SPUR GEARS 1 $\frac{1}{2}$ " PITCH.

*112010b	10	3 $\frac{1}{2}$	4.78	4	4.2	8.30
112010	10	4	4.80	4 $\frac{1}{2}$	4.8	8.80
*112011	11	4	5.23	4 $\frac{1}{2}$	5.2	9.25
112012	12	4	5.76	4 $\frac{1}{2}$	5.6	9.70
112013	13	4	6.24	4 $\frac{1}{2}$	6.1	10.15
112014	14	4	6.72	4 $\frac{1}{2}$	6.6	10.60
*112014b	14	4 $\frac{1}{2}$	6.68	4 $\frac{1}{2}$	6.6	10.30
*112015	15	4	7.20	4 $\frac{1}{2}$	7.1	11.00
112016	16	4	7.68	4 $\frac{1}{2}$	7.6	11.45
112017	17	4	8.16	4 $\frac{1}{2}$	8.0	11.90
*112017b	17	2 $\frac{1}{2}$	8.12	3	5.	9.00
112018	18	4	8.64	4 $\frac{1}{2}$	8.5	12.35
112019	19	4	9.11	4 $\frac{1}{2}$	9.0	12.80
112020	20	4	9.60	4 $\frac{1}{2}$	9.4	13.25
112021	21	4	10.08	4 $\frac{1}{2}$	9.9	13.70
112023	23	4	11.04	4 $\frac{1}{2}$	10.8	14.60
112024	24	4	11.52	4 $\frac{1}{2}$	11.3	15.05

PLAIN SPUR GEARS 1½" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
*112025	25	4	11.95	4½	11.8	\$15.50
112027	27	4	12.96	4½	12.8	16.30
112029	29	4	13.92	4½	13.7	17.20
112030	30	4	14.40	4½	14.2	17.60
112033	33	4	15.78	4½	15.6	18.95
112034	34	4	16.32	5	16.1	19.40
112037	37	4	17.67	5	17.5	20.75
112038	38	4	18.24	5	18.0	21.20
112039	39	4	18.72	5	18.5	21.60
112042	42	4	20.07	5	19.9	23.00
112043	43	4	20.64	5	20.3	23.45
112045	45	4	21.60	5	21.3	24.35
112048	48	4	23.04	5	22.7	25.75
112050	50	4	24.00	5	23.6	26.65
112053	53	4	25.44	5	25.0	28.10
112055	55	4	26.40	5	26.0	29.05
112057	57	4	27.22	5	26.9	29.95
112062	62	4	29.76	5	29.3	32.35
112065	65	4	31.20	5	30.7	33.75
112069	69	4	33.12	5	32.6	35.75
112070	70	4	33.60	5	33.1	36.20
112077	77	4	36.96	5½	36.4	39.75
*112078	78	4	37.24	5½	36.4	40.25
112080	80	4	38.40	5½	37.8	41.30
112082	82	4	39.16	5½	38.8	42.35
112083	83	4	39.75	5½	39.2	42.90
112087	87	4	41.52	5½	41.0	44.90
112095	95	4	45.60	5½	44.9	49.15
112104	104	4	49.66	6	49.2	55.45
112108	108	4	51.57	6	51.1	58.40
112111	111	4	53.28	6	52.5	60.60
112120	120	4	57.60	6	56.7	67.00
112125a	125	4½	59.68	6½	66.5	70.75
112132	132	4	63.36	6	62.4	76.30
112140	140	4	67.20	6	66.2	84.00

PLAIN SPUR GEARS 1¾" PITCH.

134010	10	5	5.66	5½	8.0	\$12.30
134011	11	5	6.16	5½	8.8	12.90
134012	12	5	6.76	5½	9.6	13.50
*134012b	12	5½	6.87	5½	9.7	14.50
134013	13	5	7.31	5½	10.4	14.10
134014	14	5	7.84	5½	11.2	14.70
134015	15	5	8.42	5½	12.1	15.30
134016	16	5	8.96	5½	12.9	15.90
134017	17	5	9.50	5½	13.7	16.55
134018	18	5	10.08	5½	14.5	17.20
*134018b	18	5½	10.02	5½	14.6	18.00
134019	19	5	10.63	5½	15.2	17.80
134020	20	5	11.20	5½	16.1	18.40
134022	22	5	12.32	5½	17.7	19.60
*134023	23	5	12.81	5½	18.5	20.25
134024	24	5	13.44	5½	19.3	20.90
134025	25	5	13.96	5½	20.1	21.50
134026	26	5	14.56	5½	20.9	22.15
*134027	27	4½	15.00	5	19.4	21.90

PLAIN SPUR GEARS 1½" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lrth. Thro Hub	H. P. At 100 R. P. M	Price Bored, With K. S. or S. S.
134028	28	5	15.68	5½	22.5	\$23.45
134029	29	5	16.24	5½	23.4	24.05
134031	31	5	17.36	5½	25.0	25.30
134033	33	5	18.41	5½	26.6	26.65
134036	36	5	20.16	5½	29.0	28.60
134042	42	5	23.52	6	33.8	32.45
134048	48	5	26.76	6	38.6	36.40
134050	50	5	28.00	6	40.3	37.75
134053	53	5	29.68	6	42.7	39.80
134057	57	5	31.76	6	45.6	42.55
134063	63	5	35.25	6	50.7	46.60
134065	65	5	36.40	6½	52.4	48.10
134071	71	5	39.56	6½	57.2	52.50
*134072	72	5	40.32	6½	58.0	53.20
134080	80	5	44.57	6½	64.5	59.50
134084	84	5	47.04	6½	67.7	62.40
134090	90	5	50.14	6½	72.0	68.60
134100	100	5	56.00	6½	80.6	78.20
134110	110	5	61.25	7	88.6	88.70
134120	120	5	66.85	7	96.7	100.70
134129	129	5	72.24	7	103.9	112.00

PLAIN SPUR GEARS 2" PITCH.

200010	10	6	6.47	6½	11.5	16.10
200011	11	6	7.04	6½	12.6	16.95
*200011b	11	6½	7.00	6½	12.6	19.00
200012	12	6	7.72	6½	12.8	17.80
200013	13	6	8.36	6½	14.9	18.65
*200013b	13	6½	8.28	6½	15.6	19.90
200014	14	6	8.96	6½	16.1	19.45
*200014b	14	6½	8.91	6½	16.2	20.25
200015	15	6	9.60	6½	17.2	20.30
*200016	16	6	10.24	6½	18.4	21.15
200019	19	6	12.16	6½	21.8	23.85
200020	20	6	12.80	6½	23.0	24.75
200021	21	6	13.44	6½	24.1	25.65
200022	22	6	14.08	6½	25.3	26.50
200023	23	6	14.68	6½	26.4	27.35
200024	24	6	15.36	6½	27.6	28.25
*200024b	24	7½	15.28	8	34.5	34.00
*200025	25	7½	15.92	8	35.2	34.90
200026	26	6	16.59	6½	29.9	30.00
200027	27	6	17.28	6½	31.0	30.85
200028	28	6	17.92	6½	32.2	31.70
200029	29	6	18.56	6½	33.3	32.50
200032	32	6	20.48	6½	36.8	35.15
200033	33	6	21.04	6½	37.9	36.00
200035	35	6	22.40	6½	40.2	37.75
200038	38	6	24.32	6½	43.0	40.40
200040	40	6	25.49	7	46.0	42.20
200045	45	6	28.80	7	51.8	46.65
200045a	45	5	28.80	6	43.1	45.50
200046	46	6	29.44	7	52.9	47.55
200047	47	6	30.00	7	54.1	48.40

PLAIN SPUR GEARS 2" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M	Price Bored With K. S. or S. S.
200048	48	6	30.58	7	55.2	\$49.25
200052	52	6	33.28	7	59.8	52.90
200056	56	6	35.65	7	64.4	56.60
200057	57	6	36.38	7½	65.6	57.55
200059	59	6	37.76	7½	67.9	59.45
200060	60	6	38.40	7½	69.0	60.40
200064	64	6	40.96	7½	73.6	64.20
200068	68	6	43.52	8	78.2	68.20
200070	70	6	44.80	8	80.5	70.20
*200075	75	6	48.00	8	86.0	75.20
200076	76	6	48.64	8½	87.4	76.35
200078	78	6	49.66	8½	89.7	78.55
200080	80	6	51.20	8½	92.0	80.75
200088	88	7	56.02	8½	100.0	110.00
200090	90	6	57.30	8½	103.6	92.20
200094	94	6	60.16	9	108.2	96.95
200100	100	6	63.76	9	115.1	104.50
200110	110	6	70.04	9	126.6	117.95
200118	118	6	75.12	9½	135.8	130.00
200120	120	6	76.40	9½	138.1	132.90
200128	128	6	81.92	9½	147.3	156.36

PLAIN SPUR GEARS 2¼" PITCH.

214010	10	7	7.28	7½	17.5	19.80
214011	11	7	7.98	7½	19.2	20.90
214012	12	7	8.64	7½	21.0	22.00
214013	13	7½	9.36	7½	24.3	24.20
214014	14	7	10.08	7½	24.5	24.20
214015	15	7	10.82	7½	26.2	25.25
214016	16	7	11.53	7½	28.0	26.35
214017	17	7	12.24	7½	29.7	27.40
214020	20	7	14.35	7½	35.0	30.70
214022	22	7	15.80	7½	41.2	32.85
214023	23	7	16.56	7½	40.2	33.75
214025	25	7	17.95	7½	43.7	36.00
214028	28	7	20.16	7½	49.0	39.40
214031	31	7	22.20	7½	54.2	42.70
214032	32	7	23.04	7½	56.0	43.80
214036	36	7	25.80	7½	63.0	48.25
214038	38	7	27.25	7½	66.5	50.50
214042	42	7	30.24	8	73.5	55.00
214050	50	7	35.83	8	87.5	64.60
214050a	50	8	35.83	9	100.0	70.00
214059	59	7	42.30	8	103.2	75.85
214060	60	7	42.99	8	105.0	77.15
214072	72	7	51.58	8½	126.0	93.83
214074a	74	8	53.01	9½	148.0	100.00
214084	84	7	60.48	9	147.0	112.25
214085a	85	6	61.00	8	127.5	112.00
214092	92	7	66.24	9	161.0	125.20
214097	97	7	69.84	9	169.7	134.05
214100b	100	6	71.63	8	150.0	136.00
214108	108	7	77.35	9½	189.0	153.40
214130a	130	6	93.11	8½	195.0	185.00

PLAIN SPUR GEARS $2\frac{3}{8}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K S. or S. S.
*238013	13	4	9.82	5	22.0	\$20.00
*238032	32	4	24.24	5½	45.0	45.00
*238048	48	4	36.28	6	63.0	60.00

PLAIN SPUR GEARS $2\frac{1}{2}$ " PITCH.

212010	10	7½	8.00	7½	22.5	23.85
212011	11	7½	8.87	7½	24.7	25.32
212012	12	7½	9.66	7½	27.0	26.80
212013	13	7½	10.45	7½	29.2	28.35
212014	14	7½	11.20	7½	31.5	29.90
212015	15	7½	12.02	7½	33.7	31.45
212016	16	7½	12.80	7½	36.0	33.00
212017	17	7½	13.53	7½	47.1	34.50
212018	18	7½	14.40	7½	40.5	36.05
212019	19	7½	15.15	7½	42.7	37.55
212020	20	7½	16.00	7½	45.0	39.10
212020a	20	8	16.00	8½	48.0	41.05
212020b	20	9	16.00	9½	54.0	45.00
212021	21	7½	16.80	7½	47.2	40.65
212023a	23	7	18.36	7½	48.3	40.60
212024	24	7	19.20	7½	50.4	43.15
212025a	25	6½	20.00	7	48.7	42.35
212026a	26	5	20.74	5½	39.0	40.00
212028	28	7½	22.40	8	63.0	51.95
212030a	30	8½	23.92	9	79.0	60.00
212032	32	7½	25.60	8	72.0	58.25
212032a	32	8	25.60	8½	76.8	61.00
212032b	32	8½	25.60	9	81.6	63.00
212034	34	7½	27.09	8	76.5	61.50
212035a	35	6	28.00	6½	63.0	59.00
212036a	36	8	28.80	8½	86.4	66.65
212039a	39	8	31.20	8½	93.6	71.75
212040a	40	8	31.86	8½	96.0	74.20
212042	42	7½	33.60	8½	94.5	74.60
212048	48	7½	38.40	8½	108.0	84.30
212053	53	7½	42.20	9	119.2	92.70
212062	62	7½	49.60	9½	139.5	108.75
212065a	65	7	51.75	9	136.5	113.00
212066	66	7½	52.54	9½	148.5	115.65
212066a	66	8	52.80	10	158.4	118.00
212074	74	7½	59.20	9½	166.5	130.05
212078	78	7½	62.09	10	175.5	137.82
212083	83	7½	66.05	10	187.7	147.31
212085	85	7½	67.66	10	191.2	151.40
212120a	120	8½	96.00	12	316.0	245.00

PLAIN SPUR GEARS 3" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
300010	10	9	9.71	9½	40.5	\$33.90
300011	11	9	10.65	9½	44.5	36.75
300012	12	9	11.59	9½	48.6	39.75
300013	13	9	12.54	9½	52.6	42.65
300013b	13	9½	12.54	10	55.5	43.90
300014	14	9	13.44	9½	56.7	45.55
300014a	14	12½	13.44	13½	81.9	52.00
300016a	16	7	15.36	7½	50.4	48.50
300017	17	9	16.32	9½	68.8	53.80
300018a	18	7	17.28	7½	56.7	55.00
300020	20	9	19.18	9½	81.0	62.00
300020a	20	9½	19.18	10	85.4	63.85
300030a	30	12	28.68	13	162.0	98.00
300031	31	9	29.76	10	125.5	93.65
300036a	36	10	34.56	11	162.0	115.00
300041	41	9	39.36	10	166.0	123.25
300043	43	9	41.09	10	174.1	129.25
300048	48	9	45.87	11	194.4	146.75
300048a	48	12	45.87	14	259.2	190.00
300049a	49	12	46.77	14	264.6	193.00
300060	60	9	57.32	11½	243.0	186.00
300064a	64	7	61.14	9½	201.6	170.00
300066	66	9	63.05	11½	267.3	205.00
300070a	70	10	67.20	12½	315.0	227.00
300075a	75	7	72.00	10	236.2	205.00
300082a	82	8	78.32	11	295.2	235.00
300100	100	9	95.51	13	405.0	328.00
300106a	106	12	101.18	16	572.4	450.00

PLAIN SPUR GEARS 3¼" PITCH.

314041	41	9½	42.45	11½	200.9
314091	91	9½	94.15	14½	445.1

PLAIN SPUR GEARS 3½" PITCH.

312011a	11	12	12.42	12½	81
312014a	14	12	15.72	12½	102
312015a	15	11¼	16.83	12	103
312021a	21	11	23.48	12	141
312027a	27	10½	30.14	11½	177
312062	62	10½	69.10	13	397
312065a	65	14¼	72.40	15	565
312096	96	10½	106.97	14½	615

PLAIN SPUR GEARS 4" PITCH.

400020a	20	12¼	25.46	13½	205
400037	37	12	47.12	12½	357
400040	40	12	50.94	12½	386
400063	63	12	80.24	13	608

PLAIN SPUR GEARS 4½" PITCH.

412017	17	14	24.48	16	256
412050a	50	13½	71.66	16	724

PLAIN BEVEL GEARS



Fig. 193.

PLAIN BEVEL GEARS $\frac{3}{4}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thru Hub	Motion	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
34021	21	$1\frac{1}{2}$	4.75	$1\frac{1}{2}$	2	1.61	.5	\$3.30
34013	13	$1\frac{1}{2}$	3.00	$1\frac{1}{2}$	$1\frac{1}{2}$		.3	2.50
34034	34	$1\frac{1}{2}$	8.16	$1\frac{1}{2}$	$2\frac{1}{4}$	1.70	1.0	4.00
34020	20	$1\frac{1}{2}$	4.80	1	$2\frac{1}{4}$		.6	2.75
34033	33	$1\frac{3}{4}$	7.88	$1\frac{1}{2}$	2	1.94	1.2	4.00
34017	17	$1\frac{1}{2}$	4.00	$1\frac{1}{2}$	3		.6	2.65
34034a	34	2	8.16	$1\frac{1}{2}$	$2\frac{1}{2}$	1.70	1.3	4.80
34020a	20	2	4.80	$1\frac{1}{2}$	2		.8	3.20

PLAIN BEVEL GEARS $\frac{7}{8}$ " PITCH.

78030	30	2	8.40	$1\frac{1}{2}$	$2\frac{1}{4}$	1.87	1.6	5.10
78016	16	2	4.48	$1\frac{1}{2}$	$2\frac{1}{4}$		.8	3.00
78025	25	$1\frac{1}{2}$	6.96	1	2	1.25	.9	4.00
78020	20	$1\frac{1}{2}$	5.57	1	2		.8	3.75
78075	75	$1\frac{1}{2}$	21.00	$2\frac{1}{2}$	$2\frac{1}{2}$	5.00	3.0	11.75
78015	15	$1\frac{1}{2}$	4.20	$1\frac{1}{2}$	2		.4	2.80

PLAIN BEVEL GEARS 1" PITCH.

100030	30	2	9.60	$1\frac{1}{4}$	$2\frac{1}{2}$	1.66	2.0	5.75
100018	18	2	5.76	1	$2\frac{1}{2}$		1.2	3.00
100040	40	2	12.80	$2\frac{1}{4}$	3	2.66	2.7	7.25
100015	15	2	4.80	$1\frac{1}{2}$	2		1.0	2.75
100040a	40	2	12.80	2	$2\frac{3}{4}$	1.54	2.7	7.25
100026	26	2	8.32	$1\frac{1}{2}$	$3\frac{1}{4}$		1.7	4.00
100044	44	2	14.08	$1\frac{1}{2}$	$2\frac{1}{2}$	1.13	3.0	8.00
100039	39	2	12.48	$1\frac{1}{2}$	$2\frac{1}{2}$		2.5	7.10
100047	47	2	15.04	2	$2\frac{1}{2}$	1.34	3.4	8.25
100035	35	2	11.20	$1\frac{1}{2}$	$2\frac{1}{2}$		2.3	6.50
100050a	50	$1\frac{1}{2}$	16.00	2	$2\frac{1}{2}$	2.94	2.5	8.00
100017a	17	$1\frac{1}{2}$	5.44	$1\frac{1}{2}$	$2\frac{1}{4}$		8.6	5.00
100054a	54	$2\frac{1}{2}$	17.28	$2\frac{1}{2}$	3	3.37	4.6	10.70
100016a	16	$2\frac{1}{2}$	5.12	$1\frac{1}{2}$	$2\frac{3}{4}$		1.3	3.35
100060c	60	2	19.20	$2\frac{1}{2}$	3	2.00	4.0	12.00
100030a	30	2	9.60	$1\frac{1}{4}$	$3\frac{1}{4}$		2.0	5.75
100067a	67	$2\frac{1}{2}$	21.44	2	$3\frac{1}{2}$	1.34	6.2	14.00
100050b	50	$2\frac{1}{2}$	16.00	$1\frac{1}{2}$	$3\frac{1}{2}$		4.6	9.00
100076a	76	3	24.32	$3\frac{1}{2}$	$4\frac{1}{2}$	5.43	7.7	16.00
100014a	14	3	4.48	$1\frac{1}{2}$	$3\frac{1}{2}$		1.4	4.00

PLAIN BEVEL GEARS 1" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Bored, With K. S or S. S.
100096	96	2	30.56	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4.17	6.5	\$18.00
100023	23	2	7.34	1 $\frac{1}{2}$	2 $\frac{1}{2}$		1.5	4.00
100104a	104	2 $\frac{1}{2}$	33.28	3 $\frac{1}{2}$	3 $\frac{1}{2}$	7.43	8.8	20.00
100014b	14	2 $\frac{1}{2}$	4.48	1 $\frac{1}{2}$	2 $\frac{1}{2}$		1.2	3.15

PLAIN BEVEL GEARS 1 $\frac{1}{8}$ " PITCH.

118033	33	2 $\frac{1}{4}$	11.88	1 $\frac{1}{2}$	3	1.50	3.3	8.25
118022	22	2 $\frac{1}{4}$	7.92	1 $\frac{1}{2}$	3		2.2	5.25
118040	40	2 $\frac{1}{4}$	14.40	2 $\frac{1}{4}$	3	2.00	4.1	10.25
118020	20	2 $\frac{1}{4}$	7.20	1 $\frac{1}{4}$	2 $\frac{1}{2}$		2.0	5.00
118045	45	2 $\frac{1}{4}$	16.20	2 $\frac{1}{4}$	3 $\frac{1}{4}$	1.50	4.6	12.00
118030	30	2 $\frac{1}{4}$	10.80	1 $\frac{1}{2}$	3 $\frac{1}{4}$		3.0	7.00
118060	60	2 $\frac{1}{4}$	21.60	2 $\frac{1}{4}$	3 $\frac{3}{4}$	3.00	6.1	15.50
118020a	20	2 $\frac{1}{4}$	7.20	1 $\frac{1}{4}$	2 $\frac{1}{2}$		2.0	5.00
118070a	70	3	25.20	2 $\frac{1}{2}$	3 $\frac{3}{4}$	1.75	9.5	20.30
118040a	40	3	14.40	1 $\frac{1}{2}$	3 $\frac{3}{4}$		5.4	10.90
118072a	72	3	25.90	2 $\frac{1}{2}$	3 $\frac{3}{4}$	2.25	9.8	18.30
118032a	32	3	11.50	1	3 $\frac{1}{2}$		4.3	8.50

PLAIN BEVEL GEARS 1 $\frac{1}{4}$ " PITCH.

114033	33	3	13.20	2 $\frac{1}{2}$	3 $\frac{1}{2}$	1.65	6.1	10.50
114020	20	3	8.00	1	3 $\frac{1}{2}$		3.7	6.25
114045	45	3	18.00	3	3 $\frac{3}{2}$	3.00	8.4	14.00
114015	15	3	6.00	3	3 $\frac{1}{2}$		2.8	5.00
114048	48	3	19.20	3	4	2.00	9.0	14.75
114024	24	3	9.60	1	3 $\frac{3}{2}$		4.5	7.40
114050	50	3	20.00	3	3 $\frac{3}{2}$	2.50	9.3	15.25
114020b	20	3	8.00	3	3 $\frac{1}{2}$		3.2	6.70
114051	51	3	20.40	2 $\frac{3}{8}$	4	1.50	9.5	15.50
114034	34	3	13.60	1 $\frac{3}{8}$	4		8.3	10.00
114052	52	3	20.80	2 $\frac{3}{8}$	3 $\frac{3}{2}$	2.08	9.7	15.75
114025	25	3	10.00	1 $\frac{3}{8}$	4 $\frac{1}{2}$		4.6	7.60
114052a	52	3	20.80	2 $\frac{3}{8}$	4	1.73	9.7	15.75
114030	30	3	12.00	1 $\frac{3}{8}$	4 $\frac{1}{2}$		5.6	9.00
114055a	55	2 $\frac{3}{4}$	22.00	2 $\frac{3}{8}$	3 $\frac{3}{2}$	1.31	9.4	16.80
114042a	42	2 $\frac{3}{4}$	16.80	1 $\frac{1}{2}$	3 $\frac{3}{2}$		7.1	12.00
114055b	55	2 $\frac{3}{4}$	22.00	2 $\frac{3}{4}$	3 $\frac{3}{2}$	1.22	8.5	16.50
114045a	45	2 $\frac{3}{4}$	18.00	2	3 $\frac{3}{8}$		7.0	12.75
114060	60	3	24.00	3 $\frac{1}{2}$	4	4.00	11.1	18.00
114015b	15	3	6.00	3	3 $\frac{1}{2}$		2.9	5.00
114060b	60	2 $\frac{1}{2}$	24.00	3 $\frac{1}{2}$	4 $\frac{1}{2}$	3.00	9.3	17.75
114020a	20	2 $\frac{1}{2}$	8.00	1 $\frac{1}{2}$	3 $\frac{1}{2}$		3.1	6.00
114060c	60	2 $\frac{1}{2}$	23.88	2 $\frac{1}{2}$	4 $\frac{1}{2}$	1.94	9.3	17.75
114031a	31	2 $\frac{1}{2}$	12.35	1 $\frac{1}{2}$	3 $\frac{1}{2}$		4.8	9.00
114062	62	3	24.80	2 $\frac{3}{4}$	3 $\frac{3}{2}$	1.55	11.6	21.15
114040	40	3	16.00	1 $\frac{1}{2}$	3 $\frac{1}{2}$		7.5	11.50
114070	70	3	28.00	3 $\frac{1}{2}$	4 $\frac{1}{2}$	2.00	13.1	23.75
114035	35	3	14.00	1 $\frac{1}{2}$	3 $\frac{1}{2}$		6.5	10.25
114072a	72	3 $\frac{1}{2}$	28.65	4	4 $\frac{1}{2}$	4.50	15.6	24.90
114016a	16	3 $\frac{1}{2}$	6.40	3 $\frac{1}{2}$	3 $\frac{1}{2}$		3.5	5.70
114076	76	3	30.40	3 $\frac{3}{4}$	4	4.00	14.2	27.20
114019	19	3	7.60	3	3 $\frac{1}{2}$		3.5	6.00
114076a	76	3	30.40	3	4	2.37	14.2	27.20
114032a	32	3	12.80	1 $\frac{1}{2}$	4		6.0	10.00

PLAIN BEVEL GEARS 1¼" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. at 100 R. P. M.	Price Bored, with K. S. or S. S.
114080	80	3	32.00	3½	4½	3.33	15.0	\$31.50
114024a	24	3	9.60	3½	3½		4.5	7.40
114085	85	3	34.00	3½	3½		15.9	28.25
114032	32	3	12.80	1½	4½	2.65	6.0	10.00
114090	90	3	36.00	3½	4½		16.8	29.50
114018	18	3	7.20	¾	3½	5.00	3.3	5.75

PLAIN BEVEL GEARS 1½" PITCH.

112036	36	4	17.28	3	4½	2.00	12.9	18.30
112018	18	4	8.64	1	4½		6.5	9.70
112037	37	4	17.76	3½	5	2.46	13.3	18.70
112015	15	4	7.20	¾	4½		5.4	8.35
112040	40	4	19.50	3	5	1.33	14.4	20.00
112030	30	4	14.35	1½	4½		10.8	14.50
112040a	40	4½	19.20	3½	5½	1.33	16.2	20.50
112030a	30	4½	14.40	1½	4½		12.1	15.00
112040b	40	3	19.20	2½	4	1.33	10.8	19.50
112030b	30	3	14.40	2	3½		8.1	14.00
112044a	44	4½	21.12	2½	4½	1.83	17.8	23.85
112024a	24	4½	11.52	2	6		9.7	13.00
112045a	45	3	21.60	3½	4	3.00	12.1	23.00
112015a	15	3	7.20	¾	3½		4.0	8.00
112050	50	4	24.00	3½	4½	2.94	18.0	24.20
112017	17	4	8.16	¾	4½		6.1	9.30
112050a	50	4	24.00	4½	5½	2.50	18.0	24.20
112020a	20	4	9.60	1	4½		7.2	10.60
112050c	50	4	24.00	3½	5½	2.00	18.0	24.20
112025	25	4	12.00	1½	4½		9.0	13.50
112050b	50	3½	24.00	2½	4½	1.19	15.7	23.75
112042b	42	3½	20.16	1½	4½		13.2	20.00
112051b	51	3½	24.48	2½	4½	1.46	16.0	24.10
112035b	35	3½	16.80	1½	4½		11.0	12.00
112051	51	4	24.36	2½	4½	1.46	18.3	24.60
112035	35	4	16.73	1½	4½		12.6	12.75
112054	54	4	25.79	3	5	1.42	19.4	27.75
112038	38	4	18.16	2	5		13.6	14.00
112055	55	4	26.40	4	5½	2.04	19.8	28.10
112027	27	4	12.96	1½	5		9.7	13.40
112063a	63	3½	30.24	3½	4½	3.00	19.8	29.00
112021a	21	3½	10.08	1½	4½		6.6	10.25
112065a	65	4½	31.02	1½	4	2.60	26.3	31.20
112025a	25	4½	11.95	1	4½		10.1	13.40
112068	68	4	32.64	4½	5	4.00	24.4	33.75
112017a	17	4	8.16	¾	4½		6.1	9.30
112069a	69	3½	32.95	3½	4½	2.55	21.7	33.40
112027a	27	3½	12.92	¾	4½		8.5	13.00
112072a	72	5	34.38	5½	6	4.23	24.4	45.00
112017b	17	5	8.16	¾	5½		7.6	10.00
112075	75	4	36.00	4½	5½	3.57	27.0	41.60
112021	21	4	10.08	1	4½		7.5	10.90
*112076	76	4	36.28	..	2	5.43	27.0	42.75
*112014	14	4	6.68	..	2		4.8	9.00

PLAIN BEVEL GEARS 1½" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back-ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Bored, With K S. or S. S.
112076	76	4	36.28	4½	4	6.33	2.7	\$42.10
112012	12	4	5.79	½	4		4.3	7.00
112084a	84	3½	40.32	4½	4½	2.47	26.4	45.00
112034a	34	3½	16.32	1	4½		10.7	11.60
112090	90	4	43.20	5½	5½	5.00	32.4	47.80
112018a	18	4	8.64	4	4		6.4	9.70
112096	96	4	47.98	6	6½	8.00	34.5	50.85
112012a	12	4	6.06	2	5½		4.3	7.00
112117	117	4	56.16	5½	6½	2.78	42.1	65.50
112042a	42	4	20.16	1½	5		15.1	21.00

BEVEL PLAIN GEARS 1¾" PITCH.

134036d	36	5	20.16	3½	5½	2.00	19.8	28.50
134018a	18	5	10.08	1	5		9.9	15.00
134036b	36	6	20.16	3	6½	1.12	23.4	30.00
134032b	32	6	17.92	2½	6½		21.1	27.00
134045	45	5	25.20	3½	6½	1.45	24.7	37.00
134031	31	5	17.36	1½	5½		17.0	23.30
134045a	45	5	25.20	3½	6½	1.25	24.7	37.00
134036c	36	5	20.16	2½	6		19.8	26.35
134048	48	5	26.88	3½	6	1.33	26.4	39.00
134036	36	5	20.16	2½	6		19.8	26.35
134050	50	5	27.86	5½	6	3.33	27.5	43.25
134015	15	5	8.40	½	5½		8.2	13.00
134054a	54	4	30.24	4	5½	1.80	23.7	40.00
134030a	30	4	16.80	1½	4½		13.2	21.65
134060a	60	4	33.60	5½	6½	3.00	26.4	44.50
134020a	20	4	11.20	1	4½		8.8	15.50
134060	60	5	33.60	3	5	2.00	33.0	45.50
134030	30	5	16.80	1½	5½		16.5	22.50
134065	65	5	36.40	5½	6½	2.50	35.7	46.50
134026	26	5	14.56	1½	5½		14.3	20.00
134066a	66	4½	36.96	5	5½	3.00	32.6	48.50
134022a	22	4½	12.32	½	5½		10.9	17.00
134072	72	5	40.32	5½	6½	2.00	39.6	61.90
134036a	36	5	20.16	1½	6½		19.8	26.35
134078	78	5	43.46	5½	6½	3.55	42.9	69.40
134022	22	5	12.30	1	5½		12.1	17.40
134080	80	5	44.57	5½	6½	3.33	44.0	63.45
134024	24	5	13.41	1	5½		13.2	18.75
134096	96	5	53.76	6	6½	4.00	52.8	79.70
134024a	24	5	13.44	1	5½		13.2	18.75
134108a	108	5	60.17	7½	7½	9.00	59.4	94.00
134012	12	5	6.75	½	5½		6.6	11.00
134108	108	5	60.17	7	7½	6.00	59.4	94.00
134018	18	5	10.08	½	5½		9.9	15.00

PLAIN BEVEL GEARS 2" PITCH.

200036	36	5½	23.04	4½	6½	1.80	28.7	38.60
200020	20	5½	12.80	1½	6		15.9	22.00
200035a	35	5	22.40	2½	5½	1.58	24.3	37.50
200022a	22	5	14.08	1½	5½		15.9	23.25
200041a	41	5	26.12	4	5½	1.86	29.7	42.00
200022d	22	5	14.08	1½	5½		15.9	23.25
200042	42	5½	26.88	4¾	6½	1.75	33.4	43.60
200024	24	5½	15.36	1½	6½		19.1	25.90

PLAIN BEVEL GEARS 2" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
200048a	48	6½	30.72	4½	7½	1.50	45.2	50.00
200032a	32	6½	20.48	2½	7½		30.1	33.00
200050a	50	7	32.00	3½	5½	2.27	50.7	53.50
200022b	22	7	14.08	1½	5½		22.3	25.00
200050b	50	4½	31.85	4½	5½	2.63	32.6	48.00
200019b	19	4½	12.15	1	5		12.3	20.00
200057a	57	6	36.48	4½	7½	1.50	49.6	62.70
200038a	38	6	24.32	2½	7		33.0	38.00
200060a	60	7	38.40	5½	7½	1.94	60.9	65.00
200031a	31	7	19.84	1½	7½		31.4	34.00
200060	60	5½	38.40	5½	7	2.14	47.8	62.30
200028	28	5½	17.92	1½	6½		22.3	29.20
200062a	62	5	39.48	5	5½	3.65	44.9	59.00
200017a	17	5	10.88	1	5½		12.3	18.00
200065a	65	6	41.38	4½	6½	1.96	56.5	67.50
200033a	33	6	21.00	1½	6½		28.7	35.00
200069	69	5½	44.16	5½	7	3.00	55.0	70.10
200023	23	5½	14.72	1½	6½		18.3	25.15
200071a	71	5	45.20	5½	6½	3.72	51.4	64.00
200019a	19	5	12.15	1½	6		13.7	21.00
200072	72	5	45.85	6	5½	5.53	52.2	65.00
200013	13	5	8.36	¾	5½		9.4	15.15
200075a	75	5	48.00	4½	6	3.41	54.3	73.30
200022c	22	5	14.08	1½	5½		15.9	23.25
200078	78	5½	49.92	6	7½	2.51	62.1	76.75
200031	31	5½	19.84	1½	6½		24.7	31.90
200090	90	5½	57.60	6½	7½	3.46	71.7	91.00
200026	26	5½	16.64	1	6½		20.7	27.60
200095a	95	5	60.80	6½	6½	6.33	68.8	95.00
200015a	15	5	9.60	¾	5½		10.8	17.65
200108	108	5½	68.76	6½	7½	3.00	86.0	114.00
200036a	36	5½	22.94	1½	6½		28.7	35.60
200130	130	5½	82.77	8	8½	5.90	103.5	150.90
200022	22	5½	14.05	1	6½		17.5	24.15

PLAIN BEVEL GEARS 2¼" PITCH.

214042	42	8	30.10	2½	8	1.10	63.8	62.50
214038	38	8	27.24	2½	8½		57.7	57.50
214048	48	6½	34.40	4½	7½	1.33	59.2	65.50
214036	36	6½	25.80	2½	7½		44.4	47.75
214048a	48	9	34.56	6	9½	1.20	82.0	75.00
214040a	40	9	28.80	1½	8½		68.4	57.00
214050	50	6½	36.00	6½	7½	2.50	61.7	67.55
214020	20	6½	14.40	1½	7½		24.7	29.40
214050a	50	6½	35.83	5	7½	1.56	61.7	67.55
214032	32	6½	22.96	2½	7½		39.5	43.55
214056	56	6½	40.13	5½	8	1.64	69.1	74.10
214034a	34	6½	24.39	2½	7½		42.0	34.20
214056a	56	6	40.32	4½	7½	1.51	63.8	71.80
214037a	37	6	26.64	2½	7½		42.1	47.50
214060	60	6½	43.00	6½	8	2.60	74.1	85.00
214023	23	6½	16.52	1½	7½		28.4	33.25
214060a	60	8	43.20	3½	8½	1.18	91.2	95.00
214051a	51	8	36.72	2½	8½		77.5	85.00
214064a	64	6	45.34	5½	6½	3.55	72.9	79.70
214018	18	6	12.96				20.5	26.40
214065	65	6½	46.57	4	7½	2.24	80.2	83.25
214029	29	6½	20.81	2½	8		35.8	40.40

PLAIN BEVEL GEARS 2¼" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Bored, With K.S. or S.S.
214068a	68	8½	48.96	6½	8½	2.51	109.8	\$105.65
214027a	27	8½	19.44	1	8½		43.6	43.75
214068	68	6½	48.71	6	8	2.00	84.0	87.00
214034	34	6½	24.39	2½	7½		42.0	45.60
214072	72	6½	51.84	6½	7½	3.00	89.0	99.25
214024	24	6½	17.28	1½	7½		29.6	34.75
214092a	92	7	65.90	8	8½	5.41	122.3	145.00
214017a	17	7	12.24	¾	7½		22.6	28.00

PLAIN BEVEL GEARS 2½" PITCH.

212042a	42	8	33.45	5½	8½	3.00	77.2	\$ 73.75
212014a	14	8	11.20	1½	8½		25.7	26.85
212051a	51	9	40.80	5½	10½	1.34	105.5	89.75
212038b	38	9	30.40	3½	10½		78.6	64.15
212053a	53	9	42.40	3½	9	1.10	109.7	91.85
212048a	48	9	38.40	2½	9		99.3	85.00
212060a	60	8	48.00	5½	9½	1.33	110.4	109.15
212045a	45	8	36.00	3½	9½		82.8	81.00
212073a	73	10	58.40	8½	12½	1.82	167.9	143.50
212040a	40	10	32.00	2½	11½		92.0	79.65
212075	75	7	59.70	8½	9	5.00	120.7	129.30
212015	15	7	12.02	1	8½		24.1	27.50
212076a	76	8	60.80	7	9½	2.00	139.8	133.25
212038a	38	8	30.40	2	8½		69.9	68.50
212084	84	7	66.85	8	10	2.80	135.2	153.10
212030	30	7	23.91	1½	7½		48.3	50.90

PLAIN BEVEL GEARS 2¾" PITCH.

234040a	40	8	35.05	6½	8½	3.07	86.4	\$ 90.00
234013a	13	8	11.48	1½	8½		28.0	35.00
234050	50	7½	44.00	6½	8½	2.50	101.2	107.85
234020	20	7½	17.60	1½	8½		40.5	46.80
234056	56	7½	49.28	6½	8½	2.00	113.4	123.00
234028	28	7½	24.64	2	8½		56.7	62.40
234072	72	7½	63.36	8	9	3.00	145.8	137.15
234024	24	7½	21.12	1½	8½		48.6	57.00

PLAIN BEVEL GEARS 3" PITCH.

300042	42	8½	40.14	5½	10	1.50	110.6	\$125.00
300028	28	8½	26.79	1½	8½		73.7	80.00
300048	48	8½	45.87	7	8½	3.00	126.4	153.00
300016	16	8½	15.37	1	8½		42.1	50.00
300048	48	8½	45.87	6	10½	1.29	126.4	153.00
300037	37	8½	35.37	4	10		97.4	102.50
300050	50	8½	47.77	6½	9½	1.66	131.6	160.00
300030	30	8½	28.69	2½	9½		79.0	85.25
300050b	50	9	47.75	5	12	1.13	139.5	165.00
300044b	44	9	42.01	2½	11		122.7	130.00
300050a	50	9	47.75	5	12	1.04	139.5	165.00
300048	48	9	45.88	2½	11		133.9	138.00
300054	54	8½	51.84	4½	10½	2.25	142.2	170.00
300024	24	8½	23.04	2	10½		63.2	72.00
300054a	54	10	51.60	6½	12	1.22	167.4	175.00
300044a	44	10	42.05	4½	12		136.4	135.00
300070	70	8½	66.84	8	11	3.33	184.4	215.00
300021	21	8½	20.13	1½	9½		55.3	64.00
300072	72	8½	68.78	8½	11½	2.00	189.7	220.00
300036	36	8½	34.42	3	10		94.8	100.00

PLAIN BEVEL GEARS 3¼" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Bored, With K.S. or S. S.
314067a	67	10½	69.68	9¼	11½	3.04	260.9	
314022a	22	10½	22.88	2	11½		85.7	
314070	70	9	72.43	9¼	11½	2.41	239.4	
314029	29	9	30.06	2¼	10½		99.1	

PLAIN BEVEL GEARS 3½" PITCH.

312046	46	10	51.29	7½	11	2.00	203.3	
312023	23	10	25.70	2¼	11¼		101.6	
312048	48	10	53.52	7½	11¼	1.50	212.1	
312032	32	10	35.71	3¼	11¼		141.4	

PLAIN BEVEL GEARS 4" PITCH.

400042a	42	12	53.63	3¼	10¼	1.13	302.4	
400037a	37	12	47.25	5½	13½		266.4	
400040a	40	16	51.20	4	13½	1.21	384.0	
400033a	33	16	42.24	4	15¼		316.8	

PLAIN MITER GEARS



Fig. 194.

PLAIN MITER GEARS $\frac{3}{4}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back-ing	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
*34020	20	1½	4.77	1½	2½	.6	\$ 3.75

PLAIN MITER GEARS 1" PITCH.

100018a	18	1½	6.00	½	1½	.9	3.50
*100019	19	2¼	6.04	1½	3	1.2	4.00
*100020	20	1½	6.37	1½	2½	1.0	3.90
100022	22	2	7.04	1	2	1.6	4.45
*100025	25	2	7.95	1½	2½	1.7	6.00
*100025b	25	2¼	7.95	1½	3	1.7	6.25
100030	30	2	9.60	1½	2½	2.2	5.00
*100033	33	2¼	10.50	1½	3½	2.5	7.50
100037	37	2	11.84	1½	3	2.7	6.25
100038	38	2	12.16	1½	2½	2.8	6.50
*100038b	38	2¼	12.08	1	2½	2.8	8.50
100043	43	2	13.70	1½	2½	3.2	7.20
*100043b	43	2¼	13.70	2¼	4	4.0	8.75
*100044	44	3	14.00	2	5½	5.0	10.50
*100044b	44	2½	14.06	2½	4	4.0	9.00

PLAIN MITER GEARS 1½" PITCH.

118025	25	2¼	9.00	1½	2½	2.0	6.50
118030	30	2½	10.80	1½	3½	2.4	7.40
118031	31	2¼	11.20	1½	3½	2.5	7.60
118036	36	2¼	12.96	1½	3½	2.9	8.75
118045	45	2¼	16.20	1½	3½	3.6	10.50
118045a	45	2½	16.20	2	4	4.5	10.50
118050	50	2¼	18.00	2¼	3½	4.0	11.55
118055a	55	3	19.80	1½	3½	6.7	12.50

PLAIN MITER GEARS 1 $\frac{1}{4}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
*114020	20	2 $\frac{5}{8}$	7.96	1 $\frac{1}{2}$	3	2.3	\$6.00
*114020b	20	3	7.96	1 $\frac{1}{2}$	3	2.6	6.95
114022	22	3	8.80	1 $\frac{1}{4}$	3	3.8	7.40
*114025	25	3	9.94	2	4	4.3	8.20
114026	26	3	10.40	1 $\frac{1}{2}$	3 $\frac{1}{2}$	4.5	8.50
114030	30	3	12.00	1 $\frac{3}{4}$	3 $\frac{3}{4}$	5.2	9.20
114031	31	3	12.40	1 $\frac{3}{4}$	3 $\frac{3}{4}$	5.3	9.50
114035a	35	3 $\frac{1}{4}$	14.00	2	4 $\frac{1}{4}$	6.5	10.95
114037	37	3	14.80	2	4	6.4	11.35
114038	38	3	15.20	2 $\frac{1}{4}$	4 $\frac{1}{2}$	6.6	11.70
*114040	40	2 $\frac{1}{2}$	15.92	1 $\frac{3}{8}$	3 $\frac{1}{2}$	6.3	11.00
114045	45	3	18.00	2	4	7.8	13.00
114055a	55	2 $\frac{1}{2}$	22.00	2	3 $\frac{3}{8}$	7.9	15.50

PLAIN MITER GEARS 1 $\frac{3}{8}$ " PITCH.

138050	50	3 $\frac{1}{2}$	22.00	1 $\frac{3}{4}$	4 $\frac{1}{2}$	11.2	18.00
138065a	65	4	28.60	2 $\frac{1}{4}$	5 $\frac{1}{4}$	16.5	21.00

PLAIN MITER GEARS 1 $\frac{1}{2}$ " PITCH.

*112016	16	3 $\frac{1}{2}$	7.64	1 $\frac{1}{2}$	3 $\frac{1}{4}$	4.0	9.00
*112019	19	2 $\frac{1}{2}$	9.07	1 $\frac{5}{8}$	3	3.4	7.75
112024	24	4	11.52	1 $\frac{1}{2}$	3 $\frac{1}{2}$	7.2	12.15
112025a	25	3 $\frac{1}{2}$	12.00	3 $\frac{1}{4}$	5 $\frac{1}{4}$	6.5	12.40
112027	27	4	12.96	1 $\frac{3}{4}$	4 $\frac{1}{2}$	8.1	13.40
112030a	30	3 $\frac{1}{2}$	14.40	2 $\frac{1}{4}$	4 $\frac{3}{4}$	7.8	14.25
112036	36	4	17.28	2 $\frac{1}{2}$	4 $\frac{3}{4}$	11.0	17.00
112038	38	4	18.24	2 $\frac{3}{4}$	5 $\frac{3}{8}$	11.4	17.80
112050	50	4	24.00	2 $\frac{1}{4}$	4 $\frac{1}{2}$	15.0	22.40
112062	62	4	29.76	2 $\frac{3}{4}$	5 $\frac{1}{2}$	18.6	26.85

PLAIN MITER GEARS 1 $\frac{3}{4}$ " PITCH.

*134018	18	3 $\frac{1}{2}$	10.00	1 $\frac{1}{2}$	4 $\frac{1}{4}$	.6	12.50
134024	24	3 $\frac{1}{2}$	13.37	2	4	7.4	15.00
134028	28	5	15.68	2 $\frac{1}{4}$	5 $\frac{1}{4}$	14.5	21.25
134036	36	5	20.16	2 $\frac{1}{2}$	5 $\frac{3}{4}$	18.7	26.35
134042	42	5	23.52	2 $\frac{3}{4}$	6	21.8	30.00
134045	45	5	25.09	2 $\frac{3}{4}$	6	23.4	31.70
134050a	50	4 $\frac{1}{2}$	28.00	2 $\frac{1}{2}$	5 $\frac{1}{4}$	23.4	34.75

PLAIN MITER GEARS 2" PITCH.

200022	22	3 $\frac{1}{2}$	14.08	3 $\frac{1}{4}$	6	13.4	23.75
200026	26	5 $\frac{1}{2}$	16.64	2 $\frac{3}{4}$	6 $\frac{1}{2}$	19.4	27.60
200036	36	5 $\frac{1}{2}$	22.95	3 $\frac{1}{4}$	6 $\frac{3}{4}$	26.9	35.25
200036a	36	6	23.04	3 $\frac{3}{4}$	7 $\frac{1}{4}$	28.2	35.90
200038	38	5 $\frac{1}{2}$	24.32	2 $\frac{3}{4}$	6 $\frac{1}{2}$	28.4	37.20
200039a	39	6	24.62	3 $\frac{1}{4}$	7	31.8	38.00
200041a	41	6	26.12	2 $\frac{1}{2}$	7	33.4	39.80
200047a	47	6	29.97	3 $\frac{1}{2}$	7 $\frac{1}{2}$	38.3	44.00
200048a	48	5	30.72	3	5 $\frac{1}{2}$	32.6	47.75
200050a	50	6	32.00	2 $\frac{1}{2}$	6 $\frac{1}{2}$	40.8	47.95
200063a	63	6 $\frac{1}{2}$	40.32	4	8	55.7	57.50

PLAIN MITER GEARS 2¼" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Bored, With K. S. or S. S.
214024	24	6½	17.28	3	7	26.8	\$34.20
214040	40	6½	28.80	3½	7½	44.7	52.00
214041	41	6½	29.52	3½	7½	45.8	53.00
214045a	45	9	32.40	3	8½	69.7	57.55
214050a	50	8	36.00	3½	8½	68.8	62.45

PLAIN MITER GEARS 2½" PITCH.

212032	32	7	25.60	3½	8	47.3	53.00
212038	38	7	30.40	3½	8½	56.2	61.40
212049	49	7	39.02	4½	8½	72.5	76.95
212050	50	7	40.00	4½	8½	74.0	78.55
212050a	50	10	40.00	4½	11½	106.0	92.00
212054a	54	9	43.20	3½	9½	102.0	87.00
212070a	70	10	55.70	5½	11½	148.4	140.00

PLAIN MITER GEARS 3" PITCH.

300028	28	8½	26.88	4	9½	73.6	80.80
300034	34	8½	32.64	4½	9½	89.4	94.75
300042	42	8½	40.32	4½	10	110.4	114.00
300054	54	8½	51.60	5	10	142.2	142.00
300064a	64	10	61.14	8	14½	198.0	165.00
300064b	64	10	61.14	6½	12½	198.0	165.00

PLAIN MITER GEARS 3½" PITCH.

312032	32	10	35.84	5	11½	133	
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PLAIN MITER GEARS 4" PITCH.

400030	30	11	38.25	5½	12½	180.0	
400042	42	11	53.53	6½	13	252.0	

SPUR MORTISE GEARS



Fig. 195.

SPUR MORTISE WHEELS 1½" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Finished
112042	42	5	20.16	6½	10.9	\$ 77.00
112048	48	5	23.04	6½	12.5	86.00
112050a	50	4	23.87	5½	10.4	86.00
112054	54	5	25.92	6½	14.0	95.00
112068a	68	4½	32.64	6½	16.8	117.00
112072	72	5	34.56	6½	18.7	123.00
112075a	75	3	36.00	4½	11.7	115.00
112084	84	5	40.32	6½	21.9	141.00
112108	108	5	51.84	6½	28.1	180.00

PINIONS FOR SPUR MORTISE WHEELS 1½" PITCH.

112015	15	5½	7.21	6	3.8	25.00
112018	18	5	8.64	5½	4.7	30.00
112021	21	5½	10.08	5½	5.7	34.25
112021a	21	3½	10.08	4½	4.1	30.00
112023	23	5	11.04	5½	6.0	37.25
112025	25	5	12.00	5½	6.5	40.25
112025a	25	4	11.93	4½	5.2	35.00
112031	31	5	14.88	5½	8.0	46.00
112034	34	5	16.26	5½	8.8	52.50
112040	40	5½	19.12	5½	10.8	60.00
112042	42	5	20.07	5½	10.9	63.00
112048	48	5	23.04	5½	12.5	71.50

SPUR MORTISE WHEELS 1 3/4" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Finished
134032	32	6	17.92	8	13.7	\$ 71.00
134036a	36	5	20.08	7	12.9	77.00
134048	48	6	26.88	8	20.6	100.00
134054	54	6	30.24	8	23.2	120.00
134054a	54	8 1/2	30.10	10 1/2	32.8	140.00
134060	60	6	33.60	8	25.7	122.00
134066	66	6	36.96	8	28.3	133.00
134071	71	6	39.76	8	30.5	142.00
134084	84	6	46.80	8	36.1	166.00
134090	90	6	50.13	8	38.6	178.00
134096a	96	6 1/2	53.76	8 1/2	44.6	192.00
134104a	104	8	57.93	10	59.3	233.75
134108	108	6	60.17	8	46.4	212.00
134108a	108	4	60.17	6	31.0	200.00
134108b	108	4 1/2	60.17	6 1/2	34.8	205.00
134115	115	6	64.05	8	49.4	226.00
134128	128	6	71.68	8 1/2	54.9	252.00
134128a	128	5	71.31	7 1/2	45.8	245.00
134128b	128	8	71.31	10 1/2	73.3	270.00
134152	152	6	85.12	8 1/2	65.3	300.00

PINIONS FOR SPUR MORTISE WHEELS 1 3/4" PITCH.

134016	16	6 1/2	8.97	6 1/2	7.1	33.00
134018	18	6	10.08	6 1/2	7.7	35.00
134018a	18	6 1/2	10.08	7	8.4	36.50
134020	20	6	11.20	6 1/2	8.6	39.75
134020a	20	5	11.20	5 1/2	7.1	36.00
134021a	21	6 1/2	11.76	7 1/2	9.9	41.50
134022	22	6 1/2	12.32	6 1/2	9.8	43.50
134023	23	6 1/2	12.88	6 1/2	10.3	45.00
134023a	23	7	12.88	7 1/2	11.5	47.00
134025	25	6 1/2	14.00	6 1/2	11.2	48.75
134027a	27	4 1/2	15.12	4 1/2	8.7	45.00
134028	28	6	15.68	6 1/2	12.0	54.00
134028a	28	7	15.68	7 1/2	14.0	55.00
134029a	29	5 1/2	16.19	5 1/2	10.9	53.00
134029b	29	8	16.19	8 1/2	16.6	61.00
134032a	32	7	17.92	7 1/2	16.0	62.00
134036a	36	7	20.16	7 1/2	18.0	69.00
134038a	38	5 1/2	21.19	6	14.9	70.00
134042	42	6 1/2	23.52	6 1/2	18.8	78.00
134042a	42	7	23.52	7 1/2	21.0	82.00
134048	48	6	26.88	6 1/2	20.6	92.50
134053	53	6 1/2	29.68	6 1/2	23.7	98.25
134053a	53	4 1/2	29.68	5	17.0	95.00
134053b	53	6 1/2	29.68	5	25.2	99.00
134054a	54	8 1/2	30.10	9 1/2	33.8	110.00
134060	60	6 1/2	33.60	6 1/2	26.8	110.00
134072	72	6	40.32	6 1/2	30.9	130.00
134088a	88	8	49.28	8 1/2	50.4	152.00

SPUR MORTISE WHEELS 2" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M	Price Finished
200028a	28	5	17.92	7½	12.8	\$ 50.00
200031a	31	5½	19.84	8	15.6	75.00
200035	35	7	22.40	9½	22.4	90.00
200035a	35	6½	22.40	9	20.8	85.00
200040	40	7	25.60	9½	25.6	102.00
200045	45	7	28.80	9½	28.8	115.00
200046a	46	10	29.44	12½	42.1	150.00
200050a	50	6½	32.00	9	29.7	120.00
200050b	50	8	32.00	10½	36.6	140.00
200055a	55	6½	35.20	9	32.7	131.00
200059	59	7	37.76	9½	37.8	140.00
200063a	63	6½	40.32	9	37.4	149.00
200066	66	7	42.03	9½	42.2	155.00
200067a	67	6	42.67	8½	36.8	155.00
200072a	72	6	46.08	8½	39.5	165.00
200072b	72	8	46.08	10½	52.7	180.00
200080a	80	6½	51.20	9	47.5	186.00
200084	84	7	53.76	9½	53.8	194.00
200096	96	7	61.44	9½	61.4	222.00
200096a	96	7½	61.44	10	68.6	228.00
200105	105	5	66.85	8	48.5	206.25
200107	107	7	68.48	9½	68.5	255.00
200108	108	10	68.76	12½	98.8	300.00
200112a	112	4½	71.31	7	46.1	230.00
200112b	112	5	71.31	7½	51.2	255.00
200112c	112	8	71.31	10½	80.0	300.00
200114b	114	6	72.58	9	63.5	265.00
200120	120	7	76.80	9½	76.8	310.00
200122	122	7	78.08	9½	78.1	315.00
200128a	128	8	81.50	10½	93.7	348.00
200129	129	7	82.13	9½	82.5	325.00
200129a	129	9	82.13	11½	106.1	380.00
200136a	136	5	86.60	8	62.2	290.00
200136	136	7	86.60	11	86.8	360.00
200140a	140	8	89.13	11	106.0	420.00
200140b	140	9	89.13	12	120.0	472.00

PINIONS FOR SPUR MORTISE WHEELS 2" PITCH.

200018	18	7	11.52	7½	11.5	46.75
200020	20	7	12.80	7½	12.8	50.75
200021	21	5½	13.41	6½	10.5	40.75
200021a	21	5	13.41	5½	9.6	38.75
200022	22	7½	14.08	8½	14.6	51.25
200022a	22	8½	14.08	8½	16.6	58.50
200024	24	7	15.36	7½	15.3	58.50
200025	25	8½	15.95	9½	18.2	66.00
200027	27	7	17.28	7½	17.2	70.00
200029	29	8½	18.50	9½	21.6	80.00

PINIONS FOR SPUR MORTISE WHEELS 2" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hubs	H. P. At 100 R P. M.	Price Finished
200030	30	7	19.20	7 $\frac{1}{2}$	18.2	\$ 71.00
200032	32	7	20.48	7 $\frac{1}{2}$	20.5	75.00
200032a	32	10	20.48	10 $\frac{1}{2}$	29.2	95.00
200033	33	7 $\frac{1}{2}$	21.04	7 $\frac{1}{2}$	21.8	77.50
200034	34	7	21.76	7 $\frac{1}{2}$	21.7	80.00
200036	36	7	23.04	7 $\frac{1}{2}$	23.0	83.00
200037	37	7	23.68	7 $\frac{1}{2}$	23.7	85.50
200039a	39	12 $\frac{1}{2}$	24.96	13	44.6	147.50
200040	40	7	25.60	7 $\frac{1}{2}$	25.6	91.00
200044a	44	9	28.01	9 $\frac{1}{2}$	36.2	115.00
200046	46	7	29.44	7 $\frac{1}{2}$	29.4	105.00
200046a	46	10 $\frac{1}{2}$	29.44	10 $\frac{1}{2}$	43.1	120.00
200053	53	7	33.76	7 $\frac{1}{2}$	33.9	118.00
200055b	55	6	35.20	6 $\frac{1}{2}$	30.2	116.00
200072a	72	8	46.08	8 $\frac{1}{2}$	52.7	165.00
200085	85	7	54.40	7 $\frac{1}{2}$	54.4	190.00
200136	136	7	86.60	7 $\frac{1}{2}$	87.1	303.50

SPUR MORTISE WHEELS 2 $\frac{1}{4}$ " PITCH.

214030a	30	7	21.53	9 $\frac{1}{2}$	24.1	84.00
214042a	42	7	30.24	9 $\frac{1}{2}$	33.8	120.00
214050	50	8	36.00	10 $\frac{1}{2}$	46.0	150.00
214066a	66	7 $\frac{1}{2}$	47.52	10	56.9	194.00
214066b	66	5 $\frac{1}{2}$	47.52	8 $\frac{1}{2}$	43.6	175.00
214067	67	8	48.00	10 $\frac{1}{2}$	61.6	199.00
214067a	67	10	48.24	12 $\frac{1}{2}$	77.0	225.00
214067b	67	13	48.24	15 $\frac{1}{2}$	100.0	296.25
214072	72	8	51.84	10 $\frac{1}{2}$	66.2	214.00
214084	84	8	60.17	10 $\frac{1}{2}$	77.2	250.00
214102	102	8	73.06	10 $\frac{1}{2}$	93.8	312.00

PINIONS FOR SPUR MORTISE WHEELS 2 $\frac{1}{4}$ " PITCH.

214018a	18	8 $\frac{1}{2}$	12.96	9	17.6	57.00
214022a	22	12	15.84	12 $\frac{1}{2}$	30.3	90.00
214025	25	8	18.00	8 $\frac{1}{2}$	23.0	73.00
214027	27	8	19.44	8 $\frac{1}{2}$	24.8	78.00
214027a	27	6	19.44	6 $\frac{1}{2}$	18.6	60.00
214030	30	8	21.52	8 $\frac{1}{2}$	27.6	85.00
214034	34	8	24.48	8 $\frac{1}{2}$	31.2	94.00
214034a	34	7	24.48	7 $\frac{1}{2}$	27.3	84.00
214034b	34	7 $\frac{1}{2}$	24.48	8	29.3	90.00
214038a	38	7	27.36	7 $\frac{1}{2}$	30.6	100.00
214041a	41	7	29.38	7 $\frac{1}{2}$	33.0	108.00
214043	43	8	30.82	8 $\frac{1}{2}$	39.5	115.00
214043a	43	7	30.96	7 $\frac{1}{2}$	34.6	111.00
214045	45	8	32.25	8 $\frac{1}{2}$	41.4	121.00
214046	46	8	32.97	8 $\frac{1}{2}$	42.3	122.00

PINIONS FOR SPUR MORTISE WHEELS $2\frac{1}{4}$ " PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Luth. Thro Hub	H. P. At 100 R. P. M.	Price Finished
214050	50	8	36.00	8 $\frac{1}{2}$	46.0	\$132.00
214056	56	8 $\frac{1}{2}$	40.32	8 $\frac{3}{4}$	53.1	147.00
214057a	57	5 $\frac{1}{2}$	41.07	6	63.2	125.00
214102	102	8 $\frac{1}{2}$	73.06	8 $\frac{3}{4}$	96.7	267.50

SPUR MORTISE WHEELS $2\frac{1}{2}$ " PITCH.

212031a	31	6 $\frac{1}{2}$	24.80	9	28.4	85.00
212050	50	9	40.00	11 $\frac{1}{2}$	63.4	187.00
212050a	50	8	40.00	10 $\frac{1}{2}$	56.4	168.00
212063a	63	8	50.15	10 $\frac{1}{2}$	71.0	220.00
212087a	87	6	69.24	8 $\frac{3}{4}$	73.6	260.00
212098a	98	8	78.40	10 $\frac{1}{2}$	110.5	341.00
212098b	98	10	78.40	12 $\frac{1}{2}$	138.0	425.00
212098c	98	12	78.40	14 $\frac{1}{2}$	165.8	467.00
212108	108	9	83.00	11 $\frac{1}{2}$	137.0	426.00

PINIONS FOR SPUR MORTISE WHEELS $2\frac{1}{2}$ " PITCH.

212015a	15	8	12.00	8 $\frac{1}{2}$	16.9	57.00
212015b	15	7	12.00	7 $\frac{1}{2}$	14.8	50.00
212019	19	9	15.20	9 $\frac{1}{2}$	24.1	73.00
212020a	20	8 $\frac{1}{2}$	16.00	9	23.9	72.00
212021a	21	8	16.80	8 $\frac{1}{2}$	23.6	72.00
212023	23	9	18.40	9 $\frac{1}{2}$	24.2	86.00
212024b	24	12	19.15	12 $\frac{1}{2}$	40.6	100.00
212027	27	9	21.60	9 $\frac{1}{2}$	34.2	95.00
212031a	31	6 $\frac{1}{2}$	24.80	7	28.4	80.00
212049a	49	10	39.20	10 $\frac{1}{2}$	69.1	196.25
212049b	49	12	39.20	12 $\frac{1}{2}$	83.0	235.00
212100a	100	8	79.55	8 $\frac{1}{2}$	112.8	315.00

SPUR MORTISE WHEELS $2\frac{3}{4}$ " PITCH.

234030	30	10	26.31	13	52.5	127.00
234042	42	10	36.80	13	73.5	187.00
234060	60	10	52.54	13	105.0	277.00
234062	62	10	54.29	13	108.5	287.00
234072	72	10	63.04	13	126.0	337.00
234981	81	10	71.28	13	141.7	385.00
234102a	102	12	89.30	15	204.0	575.00

PINIONS FOR SPUR MORTISE WHEELS $2\frac{3}{4}$ " PITCH.

234017	17	10	14.96	10 $\frac{1}{2}$	29.7	77.00
234024	24	10	21.12	10 $\frac{1}{2}$	42.0	102.00
234026a	26	12	22.77	12 $\frac{1}{2}$	52.0	134.00
234027	27	10	23.69	10 $\frac{1}{2}$	47.2	113.00
234034	34	8	29.87	8 $\frac{3}{4}$	47.6	116.75
234042	42	10	36.80	10 $\frac{1}{2}$	73.5	167.00
234052	52	10	45.55	10 $\frac{1}{2}$	91.0	223.75
234052a	52	12	45.76	12 $\frac{1}{2}$	104.0	268.00
234060	60	10	52.54	10 $\frac{1}{2}$	105.0	258.50

SPUR MORTISE WHEELS 3" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Finished
300030	30	11	28.70	14½	67.6	\$147.00
300034	34	11	32.64	14½	76.6	171.00
300040	40	11	38.24	14½	90.2	207.00
300040a	40	10	38.24	13½	82.0	186.00
300050	50	11	47.76	14½	112.7	267.00
300050a	50	12	47.76	15½	123.0	291.00
300052a	52	10	49.92	13½	106.6	276.00
300060	60	11	57.60	14½	135.3	327.00
300072	72	11	69.12	14½	162.3	432.00
300084a	84	10	80.64	13½	172.2	458.00
300092	92	11	87.75	14½	210.0	532.00
300100a	100	10	96.00	13½	205.0	580.00

PINIONS FOR SPUR MORTISE WHEELS 3" PITCH.

300015a	15	10½	14.43	11½	35.10	75.00
300018	18	11¼	17.25	12	41.67	91.00
300019	19	11	18.24	11½	42.8	96.00
300022	22	11	21.12	11½	49.6	108.00
300023	23	11	22.02	11½	51.8	113.00
300025a	25	12	23.94	12½	61.5	125.00
300031a	31	10	29.76	10½	63.5	155.00
300038	38	11	36.48	11½	85.7	185.00
300039	39	11	37.28	11½	87.9	190.00
300039a	39	10½	37.28	11	81.9	185.00
300043	43	11	41.10	11½	96.9	215.00
300050	50	11	48.00	11½	112.7	250.00

SPUR MORTISE WHEELS 3¼" PITCH.

314051	51	12	52.78	16	153.0	
314093	93	12	96.23	16	279.0	

PINIONS FOR SPUR MORTISE WHEELS 3¼" PITCH.

314048	48	12	49.60	13	144.0	
314093	93	12	96.23	13	279.0	

SPUR MORTISE WHEELS 3½" PITCH.

312042	42	13	46.84	17½	158.0	
312043a	43	14	47.95	18½	174.6	
312046	46	13	51.28	17½	173.4	
312064a	64	14	71.33	18½	259.8	
312064b	64	18	71.33	22½	334.0	
312069a	69	12	77.28	16½	240.0	
312072	72	13	80.24	17½	271.4	
312094	94	13	104.72	17½	354.0	

PINIONS FOR SPUR MORTISE WHEELS $3\frac{1}{2}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Std. Lgth. Thro Hub	H. P. At 100 R. P. M.	Price Finished
312018	18	13	20.15	14 $\frac{1}{2}$	67.7	
312025a	25	14	27.92	15 $\frac{1}{2}$	101.5	
312025b	25	18	27.92	19 $\frac{1}{2}$	130.5	
312028	28	13	31.36	14 $\frac{1}{2}$	105.5	
312030	30	13	33.48	14 $\frac{1}{2}$	113.1	
312033	33	13	36.82	14 $\frac{1}{2}$	124.4	
312037a	37	12	41.44	13 $\frac{1}{2}$	128.7	
312042	42	13	46.84	14 $\frac{1}{2}$	158.3	
312043a	43	14	47.95	15 $\frac{1}{2}$	174.6	

SPUR MORTISE WHEELS AND PINIONS $3\frac{3}{4}$ ", 4" $4\frac{1}{2}$ " PITCH.

334045a	45	16	53.70	20 $\frac{1}{2}$	234.0	Mortise
334030a	30	16	35.80	17 $\frac{1}{4}$	156.0	Pinion
400028	28	15	35.84	19 $\frac{1}{2}$	158.0	Mortise
400052a	52	18	66.24	22 $\frac{1}{2}$	352.0	Mortise
400053	53	15	67.84	19 $\frac{1}{2}$	299.0	Mortise
400028	28	15	35.84	16 $\frac{1}{4}$	158.0	Pinion
400038a	38	18	48.44	19	257.0	Pinion
400045a	45	18	57.32	19	305.0	Pinion
412067a	67	18	96.00	23	577.0	Mortise
412067a	67	18	96.00	19	577.0	Pinion

BEVEL MORTISE GEARS

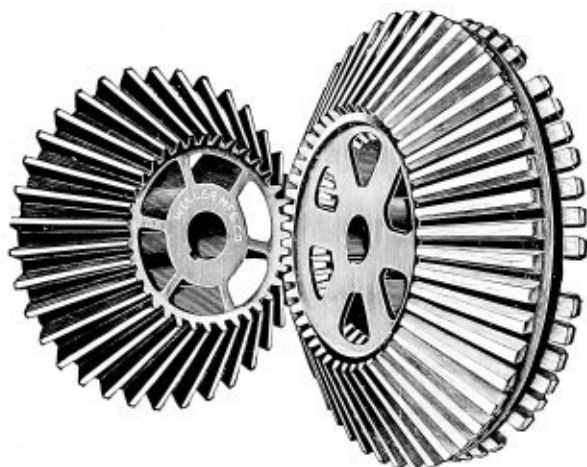


Fig. 196.

BEVEL MORTISE WHEELS AND PINIONS $1\frac{1}{2}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M	Price Finished
112036	36	5	17.28	$3\frac{1}{2}$	$6\frac{1}{4}$	1.12	6.6	\$ 66.00
112032	32	5	15.36	2	$5\frac{1}{2}$		5.9	45.00
112040	40	5	19.20	$4\frac{1}{2}$	$6\frac{3}{8}$	1.33	7.4	72.00
112030	30	5	14.40	$1\frac{1}{2}$	$5\frac{1}{8}$		5.5	42.00
112042	42	5	20.07	$3\frac{3}{4}$	$5\frac{1}{4}$	1.20	7.7	75.00
112035	35	5	16.71	2	$5\frac{1}{4}$		6.4	48.00
112048a	48	$5\frac{1}{4}$	23.04	$3\frac{3}{4}$	6	1.50	10.2	84.00
112032a	32	$5\frac{1}{4}$	15.36	$1\frac{1}{2}$	$6\frac{1}{2}$		6.9	45.00
112054	54	5	25.92	$5\frac{1}{2}$	$6\frac{1}{2}$	2.00	10.0	94.00
112027	27	5	12.96	$1\frac{1}{2}$	$5\frac{1}{2}$		5.0	38.00
112054a	54	5	25.92	$4\frac{1}{2}$	$6\frac{1}{2}$	1.80	10.0	94.00
112030a	30	5	14.40	$1\frac{1}{2}$	$5\frac{1}{2}$		5.5	42.00
112060	60	5	28.80	$5\frac{1}{2}$	$6\frac{3}{8}$	2.50	11.1	103.00
112024	24	5	11.52	1	$5\frac{1}{4}$		4.4	35.00
112072a	72	5	34.39	6	$6\frac{1}{2}$	3.00	13.3	122.00
112024a	24	5	11.49	$1\frac{1}{2}$	$5\frac{1}{4}$		4.4	35.00
112072	72	5	34.39	$5\frac{1}{2}$	$5\frac{1}{2}$	3.31	13.3	122.00
112022	22	5	10.56	$1\frac{1}{2}$	$5\frac{1}{4}$		4.1	32.00

BEVEL MORTISE WHEELS AND PINIONS 1 $\frac{3}{4}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R P M	Price Finished
134036a	36	4 $\frac{1}{2}$	20.16	2 $\frac{1}{2}$	5 $\frac{1}{4}$	1.33	8.1	\$ 68.50
134027a	27	4 $\frac{1}{2}$	15.12	1 $\frac{3}{4}$	5		6.0	50.00
134039a	39	3 $\frac{1}{2}$	21.84	3 $\frac{1}{2}$	4 $\frac{1}{2}$	1.70	6.8	73.00
134023a	23	3 $\frac{1}{2}$	12.88	1 $\frac{1}{2}$	4 $\frac{1}{2}$		4.0	35.00
134042a	42	4 $\frac{1}{2}$	23.52	3	5	2.00	9.4	75.70
134021a	21	4 $\frac{1}{2}$	11.76	1	5		4.7	38.50
134042b	42	4 $\frac{1}{2}$	23.52	2	5 $\frac{3}{8}$	1.02	9.4	75.70
134041a	41	4 $\frac{1}{2}$	22.96	1 $\frac{7}{8}$	4 $\frac{1}{2}$		9.2	68.50
134043	43	6	24.08	2 $\frac{1}{2}$	6 $\frac{1}{2}$	1.26	12.9	80.00
134034	34	6	19.04	2 $\frac{3}{8}$	7 $\frac{1}{8}$		10.2	60.00
134043a	43	6	23.97	3 $\frac{1}{2}$	7 $\frac{1}{8}$	.89	12.9	80.00
134048	48	6	26.76	3 $\frac{3}{8}$	7		14.4	82.00
134045	45	6	25.20	4 $\frac{1}{2}$	6 $\frac{1}{8}$	1.33	13.5	83.00
134033	33	6	18.48	1 $\frac{5}{8}$	6 $\frac{1}{2}$		9.9	58.00
134047	47	6	26.20	4	7	1.27	14.1	85.00
134037	37	6	20.61	2 $\frac{5}{8}$	7 $\frac{1}{4}$		11.1	64.00
134051a	51	4	28.42	3 $\frac{3}{8}$	5	2.04	10.2	91.42
134025a	25	4	13.96	2	6		5.0	45.70
134054a	54	4 $\frac{1}{2}$	30.24	3 $\frac{1}{2}$	6	1.22	11.5	85.70
134044a	44	4 $\frac{1}{2}$	24.64	2 $\frac{3}{8}$	5 $\frac{1}{2}$		9.3	74.25
134055a	55	4 $\frac{1}{2}$	30.80	3 $\frac{1}{2}$	5	1.97	12.4	100.00
134028a	28	4 $\frac{1}{2}$	15.68	1 $\frac{3}{8}$	5		6.3	51.40
134056b	56	5 $\frac{1}{2}$	31.36	4	6 $\frac{1}{2}$	2.00	15.4	112.00
134028b	28	5 $\frac{1}{2}$	15.68	1 $\frac{1}{2}$	6 $\frac{1}{2}$		7.7	51.00
134059	59	6	33.04	3 $\frac{3}{4}$	6 $\frac{1}{2}$	1.70	17.7	118.00
134035	35	6	19.60	1 $\frac{1}{2}$	6 $\frac{1}{2}$		10.5	61.00
134059a	59	6	33.04	3 $\frac{1}{4}$	6 $\frac{1}{2}$	1.37	17.7	118.00
134043a	43	6	24.08	2	6 $\frac{1}{2}$		12.9	74.00
134060	60	6	33.60	6 $\frac{1}{4}$	6 $\frac{3}{8}$	3.00	18.0	120.00
134020	20	6	11.20	1	6 $\frac{1}{2}$		6.0	38.00
134060a	60	4 $\frac{1}{2}$	33.60	5 $\frac{3}{8}$	6 $\frac{1}{2}$	2.50	13.5	111.45
134024a	24	4 $\frac{1}{2}$	13.44	1 $\frac{1}{2}$	5 $\frac{3}{8}$		5.4	51.42
134060b	60	6	33.43	4	7 $\frac{1}{2}$	1.15	18.0	120.00
134052	52	6	28.98	3	7 $\frac{1}{2}$		15.6	80.00
134064	64	6	35.67	5 $\frac{7}{8}$	7 $\frac{5}{8}$	1.77	19.2	127.00
134036	36	6	20.00	1 $\frac{1}{2}$	7		10.3	63.00
134066a	66	5 $\frac{1}{2}$	36.96	4	6 $\frac{3}{4}$	2.00	18.1	130.00
134033b	33	5 $\frac{1}{2}$	18.48	1 $\frac{3}{4}$	6 $\frac{1}{2}$		9.0	58.00
134068	68	6	37.89	6	7	2.42	20.4	133.00
134028	28	6	15.63	1 $\frac{1}{4}$	6 $\frac{1}{2}$		8.4	51.00
134069	69	6	38.64	3 $\frac{1}{2}$	6	1.97	20.7	135.00
134035a	35	6	19.60	2 $\frac{1}{2}$	7 $\frac{1}{2}$		10.5	62.00
134075	75	6	42.00	7 $\frac{1}{2}$	6 $\frac{1}{2}$	5.00	22.5	145.00
134015	15	6	8.40	1	6 $\frac{1}{2}$		4.5	31.00
134075a	75	6 $\frac{3}{4}$	42.00	6 $\frac{1}{2}$	7 $\frac{5}{8}$	2.08	25.3	145.00
134036b	36	6 $\frac{1}{2}$	20.00	..	..		12.1	63.00
134080a	80	6	44.57	6 $\frac{1}{2}$	7	2.66	24.0	154.00
134030	30	6	16.72	1 $\frac{1}{4}$	6 $\frac{3}{8}$		9.0	54.00
134080	80	6	44.80	5 $\frac{1}{2}$	7	2.35	24.0	154.00
134034a	34	6	19.04	2	7 $\frac{1}{2}$		10.2	60.00

BEVEL MORTISE WHEELS AND PINIONS 2" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Finished
200040	40	7	25.49	4 $\frac{1}{2}$	7 $\frac{3}{4}$		17.9	\$ 95.00
200030c	30	7	19.13	2 $\frac{1}{4}$	7 $\frac{3}{4}$	1.33	13.4	66.00
200045	45	7	28.67	4	8		20.2	109.00
200038	38	7	24.32	2 $\frac{3}{4}$	8	1.18	17.0	80.00
200048	48	7	30.72	4 $\frac{1}{2}$	8		21.5	116.00
200036	36	7	23.04	2 $\frac{3}{8}$	8	1.33	16.1	76.00
200054b	54	6	34.39	6 $\frac{1}{4}$	7 $\frac{1}{2}$		20.5	121.00
200022a	22	6	14.08	1 $\frac{1}{4}$	7	2.45	8.4	48.00
200054a	54	6	34.39	3 $\frac{1}{2}$	6 $\frac{1}{2}$		20.5	121.00
200036a	36	6	23.04	1 $\frac{1}{2}$	6 $\frac{1}{2}$	1.50	13.8	73.00
200054	54	7	34.39	4 $\frac{1}{4}$	8		25.2	131.40
200045	45	7	28.67	3	8	1.20	20.2	104.25
200056a	56	7	35.66	6 $\frac{1}{2}$	8		25.1	132.00
200028	28	7	17.86	1 $\frac{3}{4}$	8	2.00	12.5	62.00
200056	56	7	35.66	4 $\frac{5}{8}$	9		25.1	132.00
200055	55	7	35.02	4	8 $\frac{5}{8}$	1.01	24.6	111.00
200060a	60	6	38.40	5 $\frac{1}{2}$	7 $\frac{1}{2}$		23.0	136.00
200034a	34	6	21.76	1 $\frac{3}{8}$	6 $\frac{3}{4}$	1.73	13.0	70.00
200060b	60	6 $\frac{1}{2}$	38.40	3 $\frac{3}{4}$	7 $\frac{1}{2}$		24.9	140.00
200045a	45	6 $\frac{1}{2}$	28.67	3 $\frac{3}{4}$	8 $\frac{1}{2}$	1.33	18.5	93.00
200061	61	7	39.04	4	7 $\frac{1}{2}$		27.3	142.00
200040	40	7	25.60	2 $\frac{7}{8}$	8 $\frac{3}{4}$	1.52	17.9	84.00
200062a	62	6 $\frac{1}{2}$	39.68	4 $\frac{1}{2}$	8		18.7	144.00
200041a	41	6 $\frac{1}{2}$	26.24	2 $\frac{1}{2}$	8	1.51	17.0	84.00
200068	68	7	43.52	6 $\frac{1}{2}$	8 $\frac{1}{2}$		30.4	157.00
200035	35	7	22.40	1 $\frac{5}{8}$	7 $\frac{1}{2}$	1.95	15.7	74.00
200066	66	7	42.04	4 $\frac{3}{4}$	9		29.5	153.00
200060	60	7	38.22	4	8 $\frac{1}{4}$	1.10	26.8	120.00
200071 a	71	6 $\frac{1}{2}$	45.44	7 $\frac{1}{2}$	8 $\frac{1}{2}$		29.5	160.00
200030a	30	6 $\frac{1}{2}$	19.20	1 $\frac{1}{2}$	7 $\frac{1}{2}$	2.37	12.5	64.00
200072	72	7	46.08	7 $\frac{3}{8}$	8 $\frac{3}{8}$		32.2	165.00
200024	24	7	15.36	1 $\frac{1}{4}$	7 $\frac{1}{2}$	3.00	10.7	54.00
200075	75	7	48.00	7 $\frac{1}{2}$	8 $\frac{1}{2}$		33.6	171.00
200026 a	26	7	16.64	1	7 $\frac{3}{4}$	2.88	11.0	58.00
200076a	76	6 $\frac{1}{2}$	48.64	5	7 $\frac{3}{4}$		31.6	170.00
200030a	30	6 $\frac{1}{2}$	19.20	2	8 $\frac{1}{4}$	2.53	12.5	64.00
200076b	76	6	48.39	5 $\frac{1}{2}$	7 $\frac{1}{2}$		29.1	168.00
200045b	45	6	28.65	2 $\frac{1}{4}$	7 $\frac{1}{4}$	1.68	17.2	90.00
200092	92	7	58.88	7	9		41.2	205.00
200026	26	7	16.64	1 $\frac{1}{4}$	8 $\frac{1}{2}$	3.54	11.6	58.00
200092a	92	7	58.88	6	8 $\frac{1}{2}$		41.2	205.00
200030	30	7	19.20	1 $\frac{1}{2}$	8 $\frac{1}{2}$	3.06	13.4	66.00
200092b	92	6 $\frac{1}{2}$	58.88	6	7 $\frac{1}{2}$		38.2	200.00
200036b	36	6 $\frac{1}{2}$	23.04	1 $\frac{3}{8}$	7 $\frac{1}{2}$	2.55	14.9	64.00
200096	96	7	61.12	8 $\frac{1}{2}$	8 $\frac{1}{2}$		43.0	213.00
200024a	24	7	15.32	$\frac{3}{8}$	7 $\frac{1}{2}$	4.00	10.7	54.00

BEVEL MORTISE WHEELS AND PINIONS 2 $\frac{1}{4}$ " PITCH.

214042	42	8	30.11	6	8 $\frac{1}{4}$	2.00	27.5	132.00
214021	21	8	15.09	1 $\frac{1}{2}$	8 $\frac{1}{4}$		13.7	59.00
214046a	46	8	32.97	7 $\frac{3}{8}$	8 $\frac{1}{4}$		30.1	143.00
214013	13	8	9.40	$\frac{3}{4}$	8 $\frac{1}{2}$	3.53	8.5	41.00
214048	48	8	34.40	5 $\frac{1}{2}$	9		31.5	148.00
214036	36	8	25.82	2 $\frac{3}{8}$	9	1.33	23.6	95.00

BEVEL MORTISE WHEELS AND PINIONS 2¼" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thru Hub	Motion	H. P. At 100 R. P. M.	Price Finished
214048a	48	9	34.56	4½	10½	1.20	35.4	\$157.15
214040a	40	9	28.80	2½	9½		29.5	128.50
214054	54	8	38.88	5½	9½	1.35	35.4	163.00
214040	40	8	28.80	3	9½		26.2	103.00
214056	56	8	40.13	8	9	2.94	36.7	170.00
214019	19	8	13.63	1½	9½		12.4	54.00
214060	60	8	42.98	8½	9½	2.50	39.3	180.00
214024	24	8	17.19	1½	9		15.7	66.00
214062	62	8	44.64	5½	10	1.35	40.6	185.00
214046	46	8	33.12	2½	8½		30.1	118.00
214068	68	8	48.91	5½	9½	1.54	44.6	200.00
214044	44	8	31.68	2½	9½		28.8	120.00
214070	70	8	50.40	5½	8½	1.75	54.9	205.00
214040b	40	8	28.80	1½	8½		26.2	103.00
214072d	72	8	51.84	8½	10	2.57	47.2	210.00
214028a	28	8	20.16	1½	8½		18.4	76.00
214072	72	8	51.84	5½	8½	2.18	47.2	210.00
214033	33	8	23.76	1½	9		21.6	88.00
214072a	72	6	51.84	...	...	2.00	35.4	200.00
214036	36	6	25.92	...	...		17.7	94.25
214072b	72	8	51.84	9	9½	3.27	47.2	210.00
214022	22	8	15.84	2½	9½		14.4	61.00
214078a	78	6½	55.88	7½	8½	2.60	41.6	217.10
214030a	30	6½	21.52	2½	8		16.0	80.00
214080	80	8	57.31	6½	7½	3.21	52.4	230.00
214028	28	8	20.16	1½	9		13.1	57.00
214088	88	8	63.36	8½	9½	2.75	57.7	250.00
214032b	32	8	23.04	1½	8½		21.0	85.00
214094a	94	7	67.68	9½	9½	3.48	54.0	265.00
214027a	27	7	19.38	2½	9½		15.5	74.00

BEVEL MORTISE WHEELS AND PINIONS 2½" PITCH.

212043	43	9	34.40	3½	8½	1.07	38.7	166.00
212040	40	9	32.00	3½	9½		36.0	121.00
212044a	44	8	35.04	4½	9½	1.04	35.2	171.40
212042a	42	8	33.45	3½	8½		33.6	160.00
212048	48	9	38.40	6½	11	1.33	43.2	184.00
212036	36	9	28.80	3½	10		32.4	110.00
212050a	50	8	40.00	5½	9½	1.08	40.0	200.00
212046a	46	8	36.80	2½	7½		36.8	171.50
212060	60	9	48.00	7½	10½	2.00	54.0	224.00
212030	30	9	24.00	1½	9½		27.0	94.00
212060a	60	9	47.77	7	10½	1.50	54.0	224.00
212040a	40	9	31.86	2½	10		36.0	121.00
212064a	64	8	50.93	6	9½	1.28	51.2	226.00
212050a	50	8½	39.79	3½	9½		40.0	145.00
212066a	66	6	52.80	7½	8½	2.20	39.6	214.25
212030a	30	6	24.00	1½	7½		18.0	100.00
212070c	70	8	55.72	7½	9½	2.00	56.0	250.00
212035a	35	8	27.89	2½	9½		68.0	108.00

BEVEL MORTISE WHEELS AND PINIONS 2½" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Finished
212070b	70	10	56.00	3½	10½		70.0	\$285.00
212069b	69	10	55.20	3	10½	1.02	69.0	225.00
212075b	75	8	60.00	8½	8½		60.0	260.00
212025b	25	8	20.00	1½	9	3.00	20.0	80.00
212075	75	9	60.00	8½	10½		67.5	275.00
212033	33	9	26.40	1¼	9¼	2.27	29.7	104.00
212078	78	9	62.08	6½	10		70.2	284.00
212031	31	9	24.71	2	10½	2.51	27.9	97.00
212083	83	9	66.40	8½	9¼		74.7	300.00
212028	28	9	22.40	1½	10½	2.97	25.2	88.00
212088b	88	7	70.40	8½	9¼		61.0	300.00
212036b	36	7	28.80	2	8½	2.45	25.2	122.85

BEVEL MORTISE WHEELS AND PINIONS 2¼" PITCH.

234042b	42	8	36.96	5	9½		41.0	\$171.50
234038a	38	8	33.44	3½	9½	1.10	37.0	154.25
234035	35	10	30.68	5	10¼		42.7	160.00
234030	30	10	26.31	3½	10¼	1.16	36.6	120.00
234054a	54	9	47.52	.....	.....		59.3	234.25
234042a	42	9	36.96	3½	10½	1.28	46.1	177.00
234054	54	10	47.52	6½	12		65.9	247.00
234045	45	10	39.60	4¼	11½	1.20	54.9	168.00
234055	55	10	48.40	6	11½		67.1	251.00
234048	48	10	42.24	4	11	1.14	58.5	174.00
234060	60	10	52.54	7½	11¼		73.2	273.00
234039	39	10	34.18	3	11	1.54	47.5	147.00
234068	68	10	59.51	8½	12		82.9	308.00
234037	37	10	32.40	2½	11	1.83	45.1	140.00
234072	72	10	63.04	9	11¼		87.8	324.00
234035	35	10	30.68	2¼	11	2.05	42.7	132.00
234072a	72	10	63.04	11¼	12		87.8	324.00
234016	16	10	14.10	1	10½	4.50	19.5	67.50
234075	75	10	65.67	10½	13		91.5	336.00
234031	31	10	27.17	2¾	13	2.41	37.8	118.00
234080	80	10	70.04	10¼	11¼		97.6	357.00
234030a	30	10	26.32	1½	10½	2.66	36.6	114.00
234090	90	10	78.80	10½	11¼		109.8	400.00
234026	26	10	22.81	10¼	10½	3.46	31.7	114.25

BEVEL MORTISE WHEELS AND PINIONS 3" PITCH.

300048	48	11	45.87	8	12½		76.0	\$269.00
300030	30	11	28.69	3¼	12½	1.60	47.5	140.00
300050a	50	8	47.78	6½	10		57.7	238.00
300038a	38	8	36.33	3½	9	1.31	43.9	157.00
300051a	51	9	48.72	7½	10¼		66.2	250.00
300028a	28	9	26.76	2½	10¼	1.82	36.3	125.00
300054a	54	11	51.84	7¾	12¾		85.5	300.00
300038	38	11	36.48	3¾	12¾	1.42	60.2	174.00
300054	54	11	51.84	7¾	12¾		85.5	300.00
300042	42	11	40.32	4	12½	1.29	66.5	190.00

BEVEL MORTISE WHEELS AND PINIONS 3" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Finished
300054b	54	11	51.60	6 $\frac{1}{4}$	12 $\frac{1}{2}$	1.12	85.5	\$300.00
300048	48	11	45.87	4 $\frac{1}{2}$	12		76.4	214.00
300060	60	11	57.32	10 $\frac{1}{2}$	12 $\frac{1}{2}$	2.00	95.0	331.00
300030a	30	11	28.69	2 $\frac{3}{4}$	12 $\frac{1}{4}$		47.5	140.00
300060a	60	10	57.32	8 $\frac{1}{2}$	12		86.6	305.00
300034a	34	10	32.51	2 $\frac{3}{4}$	11	1.76	49.1	145.00
300060b	60	11	57.32	9	12 $\frac{3}{4}$		95.0	331.00
300034	34	11	32.51	2 $\frac{3}{4}$	12	1.76	53.8	157.00
300060c	60	12	57.32	7 $\frac{1}{2}$	13		103.9	357.00
300042c	42	12	40.14	2 $\frac{3}{4}$	12 $\frac{1}{2}$	1.43	72.7	205.00
300062	62	10	59.23	10 $\frac{3}{4}$	11 $\frac{3}{4}$		89.5	314.00
300020	20	10	19.17	1 $\frac{1}{4}$	10 $\frac{3}{8}$	3.10	28.8	100.00
300063b	63	10	60.19	10 $\frac{3}{8}$	11 $\frac{3}{8}$		90.9	320.00
300023b	23	10	22.03	1 $\frac{1}{2}$	11	2.73	33.2	110.00
300063a	63	10	60.19	8 $\frac{1}{8}$	11		90.9	320.00
300027a	27	10	25.92	2	11 $\frac{1}{2}$	2.33	39.0	121.00
300066	66	10	63.05	7 $\frac{1}{2}$	13		95.5	334.00
300054	54	10	51.59	4 $\frac{1}{2}$	12	1.22	77.9	225.00
300066b	66	10	63.05	7 $\frac{1}{2}$	11		95.5	334.00
300028b	28	10	26.79	1 $\frac{1}{8}$	11	2.35	40.3	126.00
300070a	70	10	67.20	8 $\frac{1}{2}$	11 $\frac{1}{2}$		101.0	352.00
300037a	37	10	35.52	2 $\frac{3}{8}$	11	1.89	53.4	157.00
300072	72	11	69.12	10 $\frac{1}{8}$	11 $\frac{1}{8}$		113.7	393.00
300025	25	11	24.00	1 $\frac{1}{2}$	11 $\frac{1}{2}$	2.88	58.4	120.00
300076a	76	9	72.96	9 $\frac{1}{8}$	10 $\frac{3}{8}$		98.5	360.00
300041a	41	9	39.36	3	10 $\frac{1}{4}$	1.85	53.1	177.00
300080	80	11	76.42	10 $\frac{1}{2}$	12 $\frac{1}{2}$		126.4	430.00
300030b	30	11	28.70	1 $\frac{1}{2}$	12	2.66	47.4	145.00
300082	82	10	78.30	10 $\frac{1}{2}$	11 $\frac{1}{2}$		132.0	428.50
300027	27	10	25.78	1 $\frac{1}{2}$	10 $\frac{1}{2}$	3.03	45.0	142.75
300084a	84	9	80.64	10 $\frac{1}{2}$	10		108.8	400.00
300023a	23	9	22.08	1 $\frac{1}{4}$	10	3.65	29.9	105.00
300084	84	11	80.64	11 $\frac{1}{2}$	12 $\frac{1}{4}$		132.7	454.00
300024	24	11	23.04	1 $\frac{1}{4}$	12	3.50	37.9	116.00

BEVEL MORTISE WHEELS AND PINIONS 3 $\frac{1}{8}$ " PITCH.

318066a	66	9	66.00	9	11 $\frac{1}{2}$	2.00	94.0	
318033a	33	9	33.00	2 $\frac{1}{2}$	9 $\frac{1}{2}$		47.0	

BEVEL MORTISE WHEELS AND PINIONS 3 $\frac{1}{4}$ " PITCH.

314050	50	12	51.76	7 $\frac{1}{4}$	13 $\frac{1}{2}$	1.35	103.2	
314037	37	12	38.28	4	13		76.3	
314060	60	12	62.10	7 $\frac{1}{2}$	14		123.8	
314054	54	12	55.90	5 $\frac{1}{2}$	13 $\frac{1}{2}$	1.11	111.4	
314072	72	12	74.50	11 $\frac{1}{2}$	14		148.6	
314033	33	12	34.19	3 $\frac{1}{2}$	14	2.18	68.1	
314078a	78	11	80.71	13 $\frac{1}{2}$	15 $\frac{1}{2}$		147.5	
314034a	34	11	35.22	2 $\frac{1}{2}$	12	2.29	64.3	
314080b	80	13	82.78	10 $\frac{1}{2}$	14 $\frac{1}{2}$		178.8	
314032b	32	13	33.15	5	16 $\frac{1}{2}$	2.50	71.5	
314080a	80	10	82.78	11	12 $\frac{1}{2}$		137.6	
314034b	34	10	35.22	.....	.....	2.35	58.5	
314082	82	12	84.83	10 $\frac{1}{2}$	12 $\frac{1}{2}$		169.2	
314034	34	12	35.22	2 $\frac{1}{2}$	13 $\frac{1}{2}$	2.41	70.1	
314097a	97	13	100.36	12	15		216.9	
314032c	32	13	33.15	1	12 $\frac{3}{8}$	3.03	71.5	

BEVEL MORTISE WHEELS AND PINIONS $3\frac{1}{2}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std Lgth Thro Hub	Motion	H. P. At 100 R. P. M.	Price Finished
312043a	43	12	48.16	7	14 $\frac{1}{4}$			
312042a	42	12	47.04	5 $\frac{1}{2}$	13	1.02	103.2	
312048a	48	10	53.52	7 $\frac{1}{2}$	11 $\frac{1}{2}$		100.8	
312032a	32	10	35.71	3 $\frac{1}{4}$	11	1.50	96.0	
312050a	50	12	55.74	8	12 $\frac{1}{2}$		64.0	
312030b	30	12	33.48	2 $\frac{1}{2}$	12 $\frac{1}{2}$	1.66	120.0	
312052	52	13	57.93	9 $\frac{1}{4}$	14 $\frac{1}{4}$		72.0	
312033	33	13	36.76	3 $\frac{1}{2}$	14	1.57	135.2	
312054	54	13	60.20	10 $\frac{1}{2}$	14 $\frac{1}{2}$		85.8	
312027	27	13	30.15	3	14 $\frac{1}{2}$	2.00	140.4	
312056a	56	9	62.42	8 $\frac{1}{2}$	11		70.2	
312031a	31	9	34.53	3	10 $\frac{1}{2}$	1.80	100.8	
312056b	56	9	62.42	9	11		55.8	
312028b	28	9	31.26	2 $\frac{3}{4}$	10 $\frac{1}{2}$	2.00	100.8	
312056c	56	9	62.42	9 $\frac{1}{2}$	11		50.4	
312025c	25	9	27.85	2 $\frac{1}{2}$	10 $\frac{1}{2}$	2.24	100.8	
312056d	56	9	62.42	8 $\frac{1}{4}$	11		45.0	
312033d	33	9	36.77	3	10 $\frac{1}{2}$	1.69	100.8	
312060a	60	12	66.88	9	12 $\frac{1}{2}$		59.4	
312030a	30	12	33.48	2 $\frac{1}{2}$	12 $\frac{1}{2}$	2.00	144.0	
312060b	60	14	67.20	6 $\frac{1}{2}$	14 $\frac{1}{2}$		72.0	
312050b	50	14	56.00	3 $\frac{1}{2}$	14	1.20	168.0	
312060c	60	13	66.88	8 $\frac{5}{8}$	13 $\frac{1}{4}$		140.0	
312034	34	13	37.93	3	14	1.76	156.0	
312062	62	13	69.10	10 $\frac{1}{2}$	13		88.4	
312021a	21	13	23.48	1 $\frac{1}{2}$	13 $\frac{3}{4}$	2.95	161.2	
312062a	62	12	69.10	8	15		54.6	
312055a	55	12	61.25	6	14 $\frac{1}{2}$	1.12	148.8	
312064a	64	12	71.33	12	14		132.0	
312024b	24	12	26.81	1 $\frac{1}{2}$	12 $\frac{1}{2}$	2.66	153.6	
312064b	64	13	71.33	17 $\frac{1}{2}$	14		57.6	
312050c	50	13	55.74	4 $\frac{1}{2}$	14	1.28	166.4	
312072	72	13	80.24	12 $\frac{5}{8}$	14		130.0	
312024	24	13	26.82	1 $\frac{1}{2}$	14	3.00	187.2	
312072a	72	12	80.24	10	13 $\frac{1}{4}$		62.4	
312035a	35	12	38.99	2 $\frac{3}{4}$	13	2.05	172.8	
312075a	75	14	83.58	13	15 $\frac{1}{2}$		84.0	
312030c	30	14	33.48	2	14 $\frac{1}{2}$	2.50	210.0	
							84.0	

BEVEL MORTISE WHEELS AND PINIONS 4" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std Lgth Thro Hub	Motion	H. P. At 100 R. P. M.	Price Finished
400042	42	15	53.52	8	19 $\frac{1}{2}$		166.9	Mortise Pinion
400053	53	15	67.52	8 $\frac{1}{2}$	17	1.26	210.6	
400048b	48	11	61.16	9	12 $\frac{1}{2}$	1.84	139.9	
400026a	26	11	33.18	2 $\frac{1}{2}$	12		75.8	
400048a	48	12	61.16	10 $\frac{1}{2}$	16		152.6	
400041a	41	12	52.25	6 $\frac{1}{2}$	15	1.17	130.4	
400052a	52	14	66.25	10 $\frac{1}{2}$	16 $\frac{1}{2}$		192.9	
400035a	35	14	44.62	4 $\frac{1}{2}$	15 $\frac{1}{2}$	1.48	129.8	
400052	52	15	66.25	5 $\frac{1}{2}$			206.7	
400045	45	15	57.34	5 $\frac{1}{2}$		1.15	178.8	

BEVEL MORTISE WHEELS AND PINIONS 4" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thro Hub	Motion	H. P. At 100 R. P. M.	Price Finished
400054a	54	14	68.79	12 $\frac{3}{4}$	16 $\frac{1}{2}$	1.74	200.3	
400031a	31	14	39.53	4 $\frac{1}{4}$	16		115.0	
400056a	56	14	71.34	12	15 $\frac{1}{4}$	2.24	207.7	
400025a	25	14	31.92	2 $\frac{3}{4}$	15 $\frac{1}{4}$		92.7	
400058	58	15	73.88	12	18	1.70	230.5	
400034	34	15	43.35	4	16 $\frac{1}{2}$		135.1	
400060	60	15	76.80	12	16 $\frac{1}{2}$	2.00	238.0	
400030	30	15	38.40	3	16		119.2	
400065	65	15	82.79	12	17 $\frac{1}{4}$	1.80	258.3	
400036	36	15	45.90	3 $\frac{3}{4}$	16 $\frac{1}{2}$		143.1	
400066a	66	16	84.06	14 $\frac{1}{4}$	17 $\frac{1}{2}$	2.64	279.2	
400025b	25	16	31.92	2	16 $\frac{3}{4}$		105.7	
400067a	67	14	85.33	13 $\frac{1}{2}$	16 $\frac{1}{2}$	2.57	248.6	
400026b	26	14	33.18	2 $\frac{1}{4}$	15 $\frac{1}{2}$		96.4	
400068a	68	14	86.60	14 $\frac{1}{2}$	17 $\frac{3}{8}$	2.26	252.3	
400030a	30	14	38.26	3 $\frac{1}{4}$	15 $\frac{1}{2}$		111.3	
400070	70	15	89.12	13 $\frac{3}{4}$	16	2.91	278.2	
400024	24	15	30.64	1 $\frac{3}{8}$	15 $\frac{3}{4}$		119.2	
400072a	72	14	91.70	13	16	2.40	267.1	
400030b	30	14	38.26	2 $\frac{5}{8}$	15		111.3	
400078a	78	14	99.33	13 $\frac{3}{4}$	16 $\frac{3}{4}$	2.60	289.5	
400030b	30	14	38.26	2 $\frac{1}{4}$	15 $\frac{1}{4}$		111.3	
400082	82	15	104.40	19 $\frac{1}{2}$	18	2.41	325.9	
400034	34	15	43.28	1	14		135.1	

BEVEL MORTISE WHEELS AND PINIONS 4 $\frac{1}{2}$ " PITCH.

412060a	60	18	85.98	10	19	1.42	354.2	
412042a	42	18	60.22	4	17 $\frac{1}{4}$		247.9	
412068a	68	18	97.50	15	21 $\frac{1}{2}$	1.78	401.4	
412038a	38	18	54.50	4 $\frac{1}{2}$	20		224.3	

BEVEL MORTISE WHEELS AND PINIONS 5" PITCH.

500056	56	18	89.17	13	22 $\frac{1}{2}$	1.43	410.0	
500039	39	18	62.14	7 $\frac{1}{2}$	21 $\frac{1}{2}$		285.5	

MITER AND HUNTING COG MORTISE GEARS

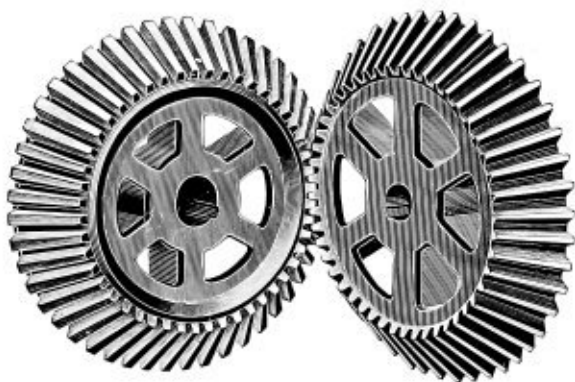


Fig. 197.

MITER AND HUNTING COG MORTISE GEARS $1\frac{1}{2}$ " PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Leth Thro Hub	Remarks	H. P. At 100 R. P. M	Price Finished
112038a	38	4	18.24	2	5½	Mortise	5.2	\$ 68.00
112038a	38	4	18.24	2	5	Pinion	5.2	48.00
112042	42	5	20.16	3½	6½	Mortise	7.2	75.00
112042	42	5	20.16	2½	6	Pinion	7.2	56.00
112054	54	5	25.92	3½	6½	Mortise	9.3	94.00
112053	53	5	25.44	2½	6	Pinion	9.1	70.00
112060	60	5	28.80	3½	6½	Mortise	10.4	104.00
112060	60	5	28.80	2½	6	Pinion	10.4	80.00

MITER AND HUNTING COG MORTISE GEARS 1 1/4" PITCH.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lgth. Thru Hub	Remarks	H. P. At 100 R. P. M.	Price Finished
134028a	28	4	15.68	3	5 1/2	Mortise	5.2	\$ 64.00
134028a	28	4	15.68	2	4 5/8	Pinion	5.2	46.00
134030	30	6	16.74	3	6 1/2	Mortise	8.4	68.00
134031	31	6	17.29	2	6	Pinion	8.7	54.00
134042b	42	4 1/2	23.52	3	5 1/2	Mortise	8.8	82.00
134041a	41	4 1/2	22.96	2 1/2	5 1/2	Pinion	8.6	61.00
134045a	45	5	25.20	2 1/2	5 1/2	Mortise	10.5	90.00
134045a	45	5	25.20	2 1/2	5 1/2	Pinion	10.5	75.00
134046	46	6	25.64	3 1/2	7 1/2	Mortise	12.9	95.00
134045	45	6	25.09	2 7/8	7	Pinion	12.6	77.00
134060	60	6	33.60	4	7 1/2	Mortise	16.8	120.00
134060	60	6	33.60	3 1/2	7 1/2	Pinion	16.8	102.00

MITER AND HUNTING COG MORTISE GEARS 2" PITCH.

200036	36	7	23.04	3 1/2	7 1/2	Mortise	15.1	90.00
200035	35	7	22.40	3	7 1/2	Pinion	14.7	77.00
200043a	43	6	27.52	2 1/2	6 1/2	Mortise	15.5	100.00
200043a	43	6	27.52	2 1/2	6 1/2	Pinion	15.5	85.00
200047a	47	6 1/2	30.08	4	7 1/2	Mortise	18.3	112.00
200047a	47	6 1/2	30.08	3 1/2	7 1/2	Pinion	18.3	98.00
200056	56	7	35.71	4 5/8	9	Mortise	23.5	132.00
200055	55	7	35.02	4	8 5/8	Pinion	23.1	112.00
200060	60	7	38.40	4 3/4	9 1/2	Mortise	25.2	140.00
200060	60	7	38.40	3 3/4	8 1/2	Pinion	25.2	122.00

MITER AND HUNTING COG MORTISE GEARS 2 1/4" PITCH.

214028a	28	7	20.10	4 1/2	8 1/2	Mortise	15.1	88.00
214029a	29	7	20.81	2 1/2	7 1/2	Pinion	15.6	74.00
214033	33	8	23.76	4	9	Mortise	20.3	108.00
214033	33	8	23.76	2 3/8	7 1/2	Pinion	20.3	88.00
214038a	38	7	27.25	4	8 1/2	Mortise	20.4	118.00
214038a	38	7	27.25	3 1/2	8	Pinion	20.4	95.00
214042	42	8	30.24	4	9 1/2	Mortise	25.8	132.00
214041	41	8	29.52	3 1/2	9	Pinion	25.2	106.00
214048a	48	7 1/2	34.56	4	8 1/2	Mortise	27.7	137.00
214048a	48	7 1/2	34.56	2 1/2	7 1/2	Pinion	27.7	125.00
214054	54	8	38.88	4 1/4	9 1/2	Mortise	33.2	165.00
214054	54	8	38.88	3	8	Pinion	33.2	135.00
214060	60	8	43.20	4 1/2	9 5/8	Mortise	36.9	180.00
214060	60	8	43.20	4	9	Pinion	36.9	148.00

MITER AND HUNTING COG MORTISE GEARS 2 1/2" PITCH.

212036	36	9	28.68	4 1/2	10 1/2	Mortise	30.4	142.00
212036	36	9	28.68	4	9 1/2	Pinion	30.4	111.00
212040	40	9	32.00	4 3/8	10 1/2	Mortise	33.8	156.00
212040	40	9	32.00	3 1/2	9 1/2	Pinion	33.8	121.00
212045	45	9	36.00	4 1/2	10 1/2	Mortise	38.0	174.00
212045	45	9	36.00	4 1/2	10 1/2	Pinion	38.0	135.00
212050	50	9	39.80	5	10 1/2	Mortise	43.1	191.00
212049	49	9	39.00	4 1/2	10 1/2	Pinion	42.2	145.00
212054a	54	10	43.20	5	11 1/2	Mortise	50.7	210.00
212054a	54	10	43.20	3 1/2	10	Pinion	50.7	168.00

MITER AND HUNTING COG MORTISE GEARS 2½" PITCH—Cont'd.

Pattern Number	Teeth	Face	Pitch Diameter	Back- ing	Std. Lath Thro Hub	Remarks	H P At 100 R. P. M.	Price Finished
212060	60	9	48.00	5½	11	Mortise	50.7	\$225.00
212059	59	9	47.20	4½	10½	Pinion	49.8	171.00
212070b	70	10	56.00	3½	10½	Mortise	65.7	270.00
212069b	69	10	55.20	3	10½	Mortise	64.7	257.00
212070a	70	10½	56.00	4	11½	Mortise	69.0	285.70
212070a	70	10½	56.00	4½	11	Pinion	69.0	270.00

MITER AND HUNTING COG MORTISE GEARS 2¾" PITCH.

234057	57	10	50.16	5	11½	Mortise	65.0	260.00
234057	57	10	50.16	5	11½	Pinion	65.0	204.00

MITER AND HUNTING COG MORTISE GEARS 3" PITCH.

300040	40	11	38.40	5½	12½	Mortise	59.5	\$235.00
300040	40	11	38.40	5	12½	Pinion	59.5	190.00
300054	54	11	51.60	6	13	Mortise	80.3	300.00
300053	53	11	50.64	5	12½	Pinion	78.8	230.00

MITER AND HUNTING COG MORTISE GEARS 3¼" PITCH.

314058	58	14	60.02	5½	14½	Mortise	130.7	
314057	57	14	58.99	5½	14½	Pinion	127.5	

MITER AND HUNTING COG MORTISE GEARS 3½" PITCH.

312043a	43	12	48.16	7½	14½	Mortise	97.5	
312042a	42	12	47.04	5½	13	Pinion	95.2	
312054	54	13	60.16	7	15½	Mortise	132.6	
312054	54	13	60.16	7	15½	Pinion	132.6	

MITER AND HUNTING COG MORTISE GEARS 4" PITCH.

400048a	48	14	61.16	7½	17	Mortise	166.6	
400047a	47	14	59.88	6½	16½	Pinion	163.1	

ANGLE PLATE FOR BEVEL AND MITER GEARS

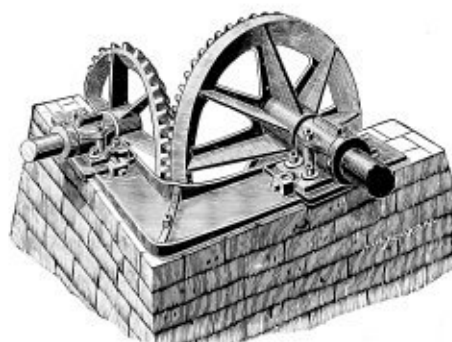


Fig. 198

Prices quoted upon application.

PRICE LIST OF HARD MAPLE COGS, WOOD KEYS, FILLING AND DRESSING MORTISE WHEELS, AND PLANING IRON PINION TEETH.

Pitch.	Standard Face.	Price of Hard Maple Cogs Shanked to Order.	Price of Hard Maple Cogs Shanked and Dressed to Order.	Price of Wood Keys.	Price per Tooth for Filling and Dressing Mortise Wheels.	Price per Tooth for Dressing Iron Pinion Teeth, Both Sides.
1 $\frac{1}{2}$	5	\$0.10	\$0.15	\$0.03	\$0.42	\$0.45
1 $\frac{3}{4}$	6	.12	.18	.03	.45	.53
2	7	.14	.21	.03	.50	.58
2 $\frac{1}{4}$	8	.16	.24	.04	.60	.68
2 $\frac{1}{2}$	9	.20	.30	.04	.75	.85
2 $\frac{3}{4}$	10	.25	.38	.05	.90	1.00
3	11	.30	.45	.05	1.00	1.10
3 $\frac{1}{4}$	12	.36	.54	.06	1.10	1.20
3 $\frac{1}{2}$	13	.40	.60	.06	1.20	1.35
4	15	.50	.75	.07	1.50	1.65
4 $\frac{1}{4}$	17	.60	.90	.08	1.70	1.85
4 $\frac{1}{2}$	18	.70	1.05	.08	1.90	2.05

Cogs requiring thicker lumber than standard pitch and face will be charged extra.

In ordering cogs shanked and dressed, send diagram showing shape of pinion teeth. This can be made by placing a piece of stiff paper or cardboard at ends of two or three teeth and marking the outline with a sharp pencil.

For bevel gears it is necessary to have a diagram of both the large and small ends of teeth.

SPUR RACK AND PINION



Fig. 199.

PRICE LIST.

Number of Teeth.	Pitch.	Face.	Backing.	Length.	No. of Lugs on each side	Face of Bolts.	Price.
61	1	1 1/2	1 1/4	30	.....	.....	\$ 1.40
38	1	1 1/2	1 1/4	23 1/2	.....	.....	1.55
32	1	1 1/2	1 1/4	24 1/2	.....	.....	1.10
32	1	1 1/2	1 1/4	24 1/2	.....	.....	1.65
37	1	1 1/2	1 1/4	32 1/2	.....	.....	2.25
38	1	1 1/2	1 1/4	33 1/2	.....	.....	1.80
37	1	2 1/2	1	37	.....	.....	2.95
16	1	1 1/2	1 1/4	16	.....	.....	1.00
24	1	2	1 1/4	23 1/2	.....	.....	2.40
26	1	2	1	26 1/2	4	1	3.20
30	1	2 1/2	1	30 1/2	4	1	2.25
48	1	2 1/2	1	48	5	1	4.05
31	1	2 1/2	1	30 1/2	2	1	3.10
46	1	3	1	46 1/2	3	.....	4.75
21	1 1/2	2 1/2	1 1/4	23 1/2	2	.....	2.50
35	1 1/2	3 1/4	1 1/4	29 1/2	3	.....	6.15
24	1 1/2	2	1 1/4	30	2	.....	2.25
23	1 1/2	2 1/2	1	28 1/2	.....	.....	2.65
25	1 1/2	2 1/2	1 1/4	31	.....	.....	4.90
29	1 1/2	2 1/2	1	36	.....	.....	3.90
29	1 1/2	2 1/2	1 1/4	36 1/2	3	.....	3.65
25	1 1/2	3	1 1/4	31 1/2	3	.....	4.50
20	1 1/2	3 1/2	1 1/4	24 1/2	3	.....	3.65
24	1 1/2	4	1 1/4	30 1/2	3	.....	4.90
18	1 1/2	2 1/2	1 1/4	24 1/2	2	.....	2.65
20	1 1/2	3	1 1/4	30 1/2	2	.....	4.20
20	1 1/2	3 1/2	1 1/4	30 1/2	2	.....	5.90
48	1 1/2	4	1 1/4	72	4	.....	12.90

For Pinions to run on Racks see Plain Spur Gears.

Any Plain Spur Gear will mesh with a rack of corresponding pitch.

In ordering Spur Racks state the Number of Teeth, Pitch and Face, also Number of lugs on a side as well as the Backing, if desired otherwise than shown in the catalogue.

PLAIN CAST IRON WORMS AND WORM WHEELS



Fig. 200.
PRICE LIST.

Pattern No.	No. Teeth.	Pitch.	Face.	Pitch Diameter.	Length of Worm, inches.	R.H. or L. H.	H. P. Worm at 100 Rev.	Price.
311	20	1½	2½	9.60		Right	1.15	\$ 6.20
312	Worm			4.50	4½			6.00
E79	23	1½	2½	10.98				6.50
F93	Worm	1½		3.27	6	Right	1.08	3.50
123	25	1½	3	11.97		Right	1.38	6.75
25	Worm			4.25	4½			5.50
31	36	¾	1½	10.03		Right	2.74	3.50
32	Worm			3.00	3			3.30
J97	45	1½	2	17.80				15.00
J96	Worm	1½		3.75	5½	Right	.76	4.50
W15	50	1½	3¼	23.87				20.00
W16	Worm	1½		4.75	5½	Right	2.24	5.00

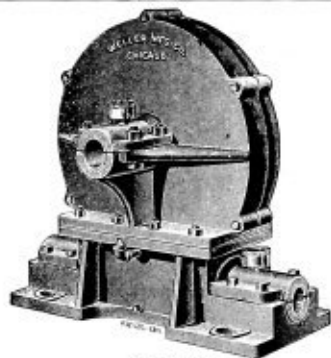


Fig. 200½.

WORM GEAR HOUSING.

Prices Quoted on Application.



Fig. 201.

Spur Paper Friction (with flanges.)

PAPER FRICTIONS

Our Paper Frictions are made solid, bored and turned perfectly true to any desired size or shape, spur, bevel or mitre face. Bolt holes in Rolls or Fillers drilled to specifications.

When ordering Spur Paper Frictions with flanges, state diameter and face of paper, bore of hub and size of keyseat. For Bevel or Miter state large diameter, width of face and degree of angle of paper, bore of hub and size of keyseat. The angle to be measured is that formed by the large diameter and face of the paper filler.

When inconvenient to measure the angle, give also the small diameter and thickness of paper between the flanges.

PRICE LIST OF SPUR PAPER FRICTIONS.

Diam.	Face	Friet. Wheel Comp., with Flanges	Diam.	Face.	Friet. Wheel Comp., with Flanges	Dia.	Face.	Friet. Wheel Comp., with Flanges	Dia.	Face.	Friet. Wheel Comp., with Flanges
4	3	\$2.12	9	5	\$6.22	14	4	\$10.74	18	12	\$31.78
	4	2.60		6	7.06		5	12.27		14	35.98
	5	3.02		7	7.86		6	13.84	20	16	40.16
	6	3.42		8	8.70		7	15.38		5	21.36
	7	3.84		9	9.54		8	16.96		6	23.76
	8	4.26		10	10.36		9	18.58		7	26.16
	9	4.68	10	4	6.62		10	20.16		8	28.54
	10	5.10		5	7.60		12	23.26		9	31.06
5	3	2.38		6	8.60		14	26.38	10	10	33.46
	4	2.84		7	9.58	15	4	11.10		12	38.24
	5	3.30		8	10.58		5	12.76		14	43.04
	6	3.76		9	11.66		6	14.42		16	47.82
	7	4.20		10	12.64		7	16.08	22	5	26.60
	8	4.66		12	14.62		8	17.78		6	29.34
	9	5.02		14	16.60		9	19.50		7	32.06
	10	5.48	11	4	7.44		10	21.20		8	34.78
6	3	2.80		5	8.56		12	24.52		9	37.66
	4	3.28		6	9.66		14	27.90		10	40.44
	5	3.78		7	10.78		4	12.77		12	45.88
	6	4.30		8	11.88		5	14.58		14	51.34
	7	4.80		9	13.08		6	16.42		16	56.88
	8	5.32		10	14.20		7	18.24		5	30.58
	9	5.82		12	16.42		8	20.06	24	6	33.64
	10	6.30		14	18.64		9	22.02		7	36.70
7	3	3.38	12	4	8.28		10	23.84		8	39.74
	4	4.00		5	9.50		12	27.50		9	43.00
	5	4.62		6	10.72		14	31.44		10	46.04
	6	5.28		7	11.96		4	13.82		12	52.14
	7	5.90		8	13.20		5	15.78		14	58.24
	8	6.58		9	14.52		6	17.74		16	64.14
	9	7.22		10	15.74		7	19.70		5	33.72
	10	7.88		12	18.20		8	21.66		6	36.98
8	3	3.82		14	20.68		9	23.74		7	40.16
	4	4.58	13	4	9.70		10	25.70		8	43.48
	5	5.28		5	11.08		12	29.60		9	46.94
	6	6.04		6	12.50		14	33.30		10	50.18
	7	6.76		7	14.00		5	16.98		12	56.68
	8	7.52		8	15.30		6	19.08		14	63.16
	9	8.28		9	16.78		7	21.18		16	69.68
	10	9.10		10	18.20		8	23.26		5	39.12
9	3	4.68		12	21.00		9	25.48		6	42.98
	4	5.40		14	23.80		10	27.58		7	46.84

Prices of larger sizes, and also of Bevel and Miter Frictions furnished upon application.

When ordering Paper Friction Rolls or Fillers, give dimensions, and state number and size of bolts, also radius or circle on which bolt holes are to be drilled. Send paper pattern when the holes in flanges have not been accurately spaced.

CAST IRON FRICTION WHEELS

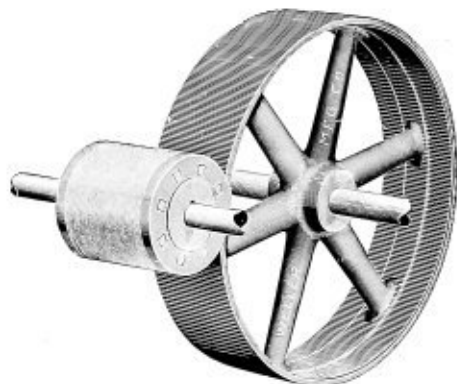


Fig. 202. Spur Friction Wheel.

We are prepared to furnish Cast Iron Spur and Bevel Friction wheels in any diameter and width of face.

Prices given upon application.

RULES FOR CALCULATING HORSE POWER AND DIMENSIONS OF FRICTIONS.

D=diameter in inches.

F=width of face in inches.

N=number of revolutions per minute.

H. P.=horse power.

Given D, F and N to find H. P.

$$D \times F \times N \times .000238 = \text{H. P.}$$

Given F, N and H. P. to find D.

$$\frac{\text{H. P.}}{F \times N \times .000238} = D.$$

Given N, H. P. and D to find F.

$$\frac{\text{H. P.}}{N \times D \times .000238} = F.$$

Given H. P., D and F to find N.

$$\frac{\text{H. P.}}{D \times F \times .000238} = N.$$

When figuring the dimensions or power of Bevel Frictions use the mean diameter (the sum of the large and small diameter divided by 2.)

STANDARD ECCENTRIC BOXES

USED FOR ENGAGING AND DISENGAGING SPUR FRICTION GEARING



Fig. 203.

PRICE LIST.

Diameter of Shaft.	1 $\frac{3}{16}$	1 $\frac{5}{16}$	1 $\frac{7}{16}$	1 $\frac{9}{16}$	2 $\frac{1}{16}$	2 $\frac{3}{16}$	2 $\frac{5}{16}$	2 $\frac{7}{16}$	2 $\frac{9}{16}$
Price each.	\$7.00	\$8.25	\$9.50	\$11.00	\$12.90	\$14.50	\$16.60	\$18.75	

QUICK ACTING END THRUST BOXES

FOR ADJUSTING PRESSURE AND TAKING UP THE WEAR OF BEVEL AND MITER FRICTIONS.



Fig. 204.

PRICE LIST.

Dia. of Shaft.	Price.	Dia. of Shaft.	Price.	Dia. of Shaft.	Price.
1 $\frac{3}{16}$	\$9.00	1 $\frac{5}{16}$	\$13.85	2 $\frac{1}{16}$	\$23.20
1 $\frac{7}{16}$	10.60	2 $\frac{3}{16}$	15.75	3 $\frac{1}{16}$	30.35
1 $\frac{1}{2}$	12.15	2 $\frac{7}{16}$	17.90	3 $\frac{1}{2}$	39.80

DETACHABLE LINK BELTING

Horse Power

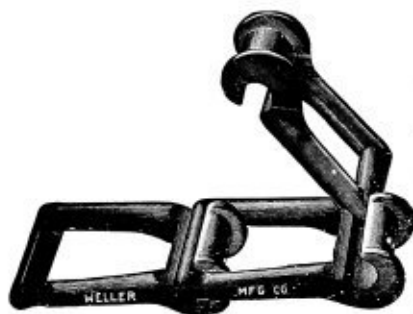
The following table gives the approximate horse power developed by the respective sizes of Link Belting running at 100 to 1000 feet per minute under safe conditions. These estimates are carefully made but as conditions vary so widely we do not in any way guarantee such safe results. The mechanical engineer must be the judge. If the resistance is uniform and all conditions good, possibly higher results might be obtained. If, however, the motion or working strain are uneven and subject to sudden starts or shocks or any unfavorable conditions, some allowance must be made.

APPROXIMATE HORSE POWER OF STANDARD DETACHABLE LINK BELTING.

Size.	Approximate links Per 10 Feet	Breaking Strain, Pounds	Factor of Safety.									
			6	7	8	10	12	14	16	20	30	45
			Speed in Feet per Minute.									
			100	200	300	400	500	600	700	800	900	1000
25	133	500	.25	.43	.57	.60	.63	.65	.65	.56	.45	.33
32	104	750	.37	.64	.85	.90	.94	.97	.97	.90	.68	.50
33	86	1000	.50	.86	1.14	1.20	1.26	1.30	1.30	1.12	.90	.66
34	86	1100	.55	.94	1.25	1.32	1.38	1.43	1.43	1.23	.99	.73
35	74	1350	.67	1.16	1.54	1.62	1.70	1.75	1.75	1.63	1.22	.90
42	88	1500	.75	1.30	1.70	1.81	1.90	1.95	1.95	1.80	1.36	1.00
45	74	1600	.80	1.38	1.81	1.93	2.02	2.07	2.07	1.81	1.45	1.06
47	74	1800	.90	1.56	2.04	2.16	2.27	2.34	2.34	2.18	1.63	1.20
51	104	1500	.75	1.30	1.70	1.81	1.90	1.95	1.95	1.80	1.36	1.00
52	80	2000	1.00	1.73	2.26	2.40	2.54	2.60	2.60	2.26	1.81	1.33
55	74	1600	.80	1.38	1.81	1.93	2.02	2.07	2.07	1.81	1.45	1.06
57	52	2400	1.20	2.08	2.73	2.90	3.04	3.10	3.18	2.90	2.20	1.61
62	73	2500	1.26	2.10	2.75	3.02	3.07	3.15	3.20	2.95	2.20	1.64
66	60	2800	1.42	2.42	3.20	3.40	3.55	3.62	3.70	3.40	2.55	1.90
67	52	2800	1.42	2.42	3.20	3.40	3.55	3.62	3.70	3.40	2.55	1.90
75	46	3000	1.52	2.60	3.40	3.64	3.70	3.80	3.96	3.64	2.72	2.05
77	52	3200	1.62	2.78	3.65	3.90	4.05	4.15	4.25	3.88	2.90	2.15
77½	52	3400	1.72	2.95	3.85	4.12	4.30	4.40	4.50	4.12	3.10	2.30
78	46	4000	2.00	3.45	4.55	4.85	5.00	5.18	5.30	4.85	3.64	2.70
83	30	4800	2.42	4.15	5.48	5.82	6.05	6.25	6.40	.....	.....	.....
85	30	5000	2.55	4.35	5.70	6.05	6.35	6.51	6.70	.....	.....	.....
88	46	4800	2.42	4.15	5.48	5.82	6.05	6.25	6.40	.....	.....	.....
95	30	6000	3.04	5.20	6.81	7.30	7.60	.....	.....	.....	.....	.....
103	39	8000	4.05	6.95	9.30	9.75	.....	.....	.....	.....	.....	.....
105	20	6000	3.04	5.20	6.81	7.30	7.60	.....	.....	.....	.....	.....
108	25½	8000	4.05	6.95	9.30	9.75	.....	.....	.....	.....	.....	.....
114	36½	9000	4.60	7.80	10.30	11.00	.....	.....	.....	.....	.....	.....
115	37	8200	4.12	7.10	9.30	9.70	.....	.....	.....	.....	.....	.....
122	20	12000	6.05	10.40	13.60	.....	.....	.....	.....	.....	.....	.....
124	30	10000	5.20	8.70	11.50	.....	.....	.....	.....	.....	.....	.....
146	20	12000	6.05	10.40	13.60	.....	.....	.....	.....	.....	.....	.....

For Sprocket Wheels see pages 421 to 425.

DETACHABLE LINK BELTING



All of our Link Belting is made of the very best refined Malleable Iron. The Links are drop hammered and accurately pitched to length and subjected to severe stationary and operative tests and proved to far higher speed than should ever be required in practical operation and finally are tested to fully double the working strain given in the list, to insure as perfect goods as it is possible to produce. It is not best to overstrain Link Belting in working, nor run it too fast.

REVISED PRICE LIST. IN EFFECT MAY 1, 1906.

Number.	Plain Links per Foot.	Couplers per Pair.	Approximate Links per 10 Feet.	Maximum Power in Pounds.
25	\$0.11	\$0.11	133	75
32	.11	.14	104	150
33	.11	.13	86	200
34	.11	.13	86	225
35	.11	.16	74	250
42	.12	.16	88	300
45	.11	.16	74	350
47	.14	...	74	400
51	.17	.16	104	375
52	.18	.16	80	500
55	.16	.16	74	450
57	.18	.19	52	600
62	.22	.22	73	650
66	.23	.22	60	700
67	.23	.22	52	700
75	.24	.19	46	750
77	.25	.22	52	800
77½	.36	...	52	1100
78	.34	.25	46	1000
83	.35	.32	30	1200
85	.44	.44	30	1300
88	.43	.28	46	1200
95	.53	.54	30	1600
103	.67	.58	39	1800
105	.49	...	20	1500
108	.63	.79	25	2000
114	.85	.84	37	2000
122	1.13	1.58	20	2200
124	1.03	1.19	30	2200
146	1.02	...	20	2800

For attachments at intervals, add 10 per cent to proportional list.

PRICE LIST OF ATTACHMENT LINKS

For Standard Detachable Link Belting

No. 25.		*A3 21	No. 34.		*S3½ 71
*A1 \$0.21	*A12 27	*A1 \$0.21	*A1 \$0.21	*Scrap. No. 2 6c	
*A3 22	A12½ 37	A2 27	A2 27	each	
*A4 19	*C1 32	*C1 33	*C1 33	*Scrap. No. 6 5c	
A39 20	C5 38	*C2 37	*C2 37	each	
A50 60	*D3 27	*C21 46	*C21 46	No. 45.	
A399 18	D46 16	*E0 43	*E0 43	*A1 \$0.20	
*C¼ 21	*E1 21	*E1 24	*E1 24	A2 25	
*C½ 23	ED 59	*K1 29	*K1 29	*A3 28	
*C1 29	*G1 25	*K6 39	*K6 39	A10 20	
C26 43	*I3 30	K37 49	K37 49	*A12 25	
10-C-66 25	*K0 43	K37½ 49	K37½ 49	*A13 25	
*D3 26	*K1 30	K38½ 53	K38½ 53	*A14 31	
D8 72	*K3 39	L1 24	L1 24	A15 26	
D28 17	*K5 23	No. 35.		A29 22	
D34 24	*K6 38	*A1 \$0.23	*A1 \$0.23	A33 39	
D46 25	K36 32	*A2 32	*A2 32	A37-LA 31	
*E1 21	*K40 62	*A13 27	*A13 27	*Strap 18	
*E3 36	L1 27	A14 27	A14 27	*C1 27	
E16 28	*L2 23	A29 27	A29 27	*C15 34	
*G1 28	*M1 32	*AM 33	*AM 33	*C20 38	
G13 50	*O1 21	*C1 32	*C1 32	*C22 52	
*H2 28	*O2 25	*DK Roller.. 1.65	*DK Roller.. 1.65	C27 38	
H16 41	*O3 28	*E1 25	*E1 25	*C28 42	
H22 24	*R9 34	*K1 32	*K1 32	D1 58	
HO2 42	*S9 41	*K¾ 39	*K¾ 39	*D3 34	
HO5 34	*U 18	*K5 30	*K5 30	*D5 32	
HHH 23	*U1 19	*S1 25	*S1 25	D6 32	
I3 34	Hookless 09	Scrap. No.1	Scrap. No.1	D17 43	
*IK 25	No. 33.		9c each	D42 25	
*K1 26	*A1 \$0.17	No. 42.		D43 30	
*K5 23	*A3 20	*A1 \$0.21	*A1 \$0.21	*D45 18	
*K6 29	*A6 22	A1 C'pler pr. 26	A1 C'pler pr. 26	DK with	
*L1 21	A13 22	*A3 32	*A3 32	Roller 1.20	
*L2 20	A14 27	A3 C'pler pr. 32	A3 C'pler pr. 32	*E1 21	
M1 27	*A14 27	A6 21	A6 21	E2 24	
*O1 23	A29 26	A14 34	A14 34	E4 18	
*O2 27	*C1 26	A15 29	A15 29	*E12 14	
*R4 26	*D3 39	A29 25	A29 25	*F2 27	
*R16 30	D5 20	*C1 20	*C1 20	*FK 39	
*R26 18	D16 72	DK Roller.. 1.39	DK Roller.. 1.39	*G1 23	
*R27 22	*D33 25	*D3 42	*D3 42	G27 32	
*R28 28	*E1 18	*E1 20	*E1 20	H1 32	
R29 22	G1 21	I13 22	I13 22	*H2 35	
*S1 27	*I3 33	*K1 26	*K1 26	*I3 30	
*S9 62	*K1 25	*K3 37	*K3 37	I12 28	
*U 20	*K3 39	*K¾ 70	*K¾ 70	*I15 28	
*U1 23	*K5 25	*K5 24	*K5 24	I16 25	
*W3 24	*K6 35	*K6 37	*K6 37	*K1 26	
*W30 19	K11 41	*K6½ 88	*K6½ 88	*K3 34	
Hookless 09	*K12 25	*K10 22	*K10 22	*K5 25	
No. 32.		*L2 23	*L6 71	K34 26	
*A1 \$0.24	*M1 29	*R9 32	*R9 32	*K40 43	
A2 25	*S1 25	*S1 25	*S1 25	*K40½ 45	

Attachments marked * are usually in stock, others made to order.
For Attachments at intervals, add 10 per cent. to proportional list.

PRICE LIST OF ATTACHMENT LINKS— For Standard Detachable Link Belting CONTINUED.

No. 45—Cont.		*D12	.37	*M1	.28	A7 C'pler pr.	.48
K44	\$.07	D13	.49	M5	.55	A11	.34
K45½	.80	DK Roller	1.15	*S1	.25	A72	.51
K48	.34	*E1	.33	*S5	.30	*D5	.43
*L2	.22	E3	.31	Scraper	.11c each	*D26	.45
*L3	.24	*F2	.43	Hookless	.11	E1	.37
L4	.19	*G1	.32	A3 Hookless	.28	EM	.41
*M0	.26	I20	.33	No. 57.			
*M1	.25	K½	.33	A1	\$.030	F1	.39
M5	.35	*K1	.35	A3	.33	*F2	.48
*P4	.39	K5	.32	C1	.30	FF	.49
*P4½	.35	*K50	1.27	C4	.21	*FF½	.50
*R18	.25	*R20	.31	D5	.37	G1	.50
*S1	.23	*S1	.32	D25	.25	H1	.50
*S5	.24	*S2½	.43	EA1	.39	*K1	.40
S6	.24	Scraper 18c each		EA2	.33	K2	.53
Scraper	Each	Scraper, 1½x7½.26c each		E1	.27	*S3	.35
*No. 1.	\$.08	No. 55.				*Tube	.6c each
No. 2, 4 in.	.07	A1	\$.025	E2	.27	Scraper, 2x7½.27c each	
No. 2, 5 in.	.08	A2	.32	F1	.44	No. 75.	
No. 2, 6 in.	.09	A3	.32	F2	.43	C4	\$.029
*No. 2, 6½	.10	A12½	.45	H1	.41	E1	.36
No. 3.	.06	*A14	.35	H2	.44	F2	.52
No. 4.	.10	A15	.29	K1	.35	G1	.52
No. 6.	.11	*A41	.42	*K1 C'pler pr.	.44	H1	.45
Picker	.44	AD5	.45	M3	.41	H1 3¼	.54
K1 C'pler pr.	.31	*C1	.31	M5	.41	H2	.45
Tube	.5c each	C5	.43	*S2	.32	H3	.51
No. 47.		*C8	.45	*Tube	.5c each	H4	.62
*L2	\$.025	C17	.57	No. 62.			
*L3	.24	C18	.42	A½	\$.034	H4½	1.13
*L4	.37	C20	.56	A1	.32	H4¾	1.32
No. 51.		CH	.32	A2	.33	K1	.39
*A1	\$.025	D3	.53	A3	.34	KB1	.67
C1	.41	D5	.35	A12	.39	R1	.29
C14	.52	D41	.66	A33	.38	R2	.29
D4	.69	DK Roller	1.07	*C1	.39	*R8	.34
*I5	.42	E1	.25	*D5	.45	No. 77.	
I6	.32	ES	.34	I3	.43	A1	\$.037
*K1	.32	*F2	.35	K½	.35	A12	.55
*K5	.33	*G27	.35	*K1	.35	A23	.49
K7	.43	*G Double	.88	K5	.33	D5¾	.54
*R18	.32	I51	.39	K40	.42	DK Roller	.84
*S1	.28	KS3	.34	*L4½	.43	E1	.38
No. 52.		*K1	.28	S1	.32	E2	.33
AA	\$.033	*K5	.30	S2½	.48	F1	.50
*A1	.28	K40 4½	.52	Loop	.6c each	F2	.64
A3	.34	K40 5¼	.56	No. 66.			
A14	.59	K52	.32	C1	\$.040	G1	.48
*C1	.33	*L2	.25	K1	.42	G6	.51
D3	.39	*L2½	.28	No. 67.			
D4	.63	M0	.30	A1	\$.032	G19	.51
D5	.45			A7	.37	H1	.48
						H9	.58
						K1	.42
						K1 C'pler pr.	.44

Attachments marked * are usually in stock, others made to order.
For Attachments at intervals, add 10 per cent. to proportional list.

PRICE LIST OF ATTACHMENT LINKS— For Standard Detachable Link Belting CONCLUDED.

No. 77—Cont.		K1	.63	H9	.64	W2	1.10
K3	.54	*M3	.75	H14	.83	*Scraper .61c each	
K8	.45	M4	.83	*H15	1.17	No. 105.	
M1	.68	*M11	.76	*H16	.72	*F1	\$0.69
*M3	.54	No. 85.		*K1	.61	H4—8-in.	1.55
R1	.32	*EO	\$0.96	*K1 C'pler pr.	.61	H22	1.72
*R3	.36	*E1	.69	K5	.91	H24	1.52
*S2	.39	*E2	.72	*K8	.75	*K2	.97
No. 78.		F1	.98	*M3	.86	*M3	1.14
*A1	\$0.46	*F2	.92	*R1	.51	R1	.87
*A3	.59	*F5	.92	*R2	.51	No. 108.	
*A11	.50	FF	.81	*R8	.54	*F2	\$1.18
A11½	.56	*FF½	.89	*R30	.53	FF	1.12
*A16	.85	F8	1.06	*S2	.62	G1	.97
A33	.62	*G6	.71	*S2½	.59	H2	.95
A63	.61	*H1	.72	*Scraper .32c each		*K2	1.62
*C4½	.39	H2	.78	No. 95.		K2 C'pler pr.	1.32
*D5	.65	*K2	.72	*F2	\$1.10	K5	1.40
D12	.87	K3	.85	H1	.86	*R2	.83
*E1	.47	*K4	.80	*H2	.96	No. 114.	
*F2	.70	*K7	.73	*K2	.84	*A2	\$1.20
*F4	.71	M3	.78	No. 103.		*A11	1.06
F8	.67	S1	.89	A1	\$0.91	*DD	1.55
FF	.73	S2	.64	*A4	.94	F2	1.35
*G1	.59	S5	.90	A4 C'pler pr.	.97	*F8	1.33
*G6	.68	*K2 C'pler pr.	.70	*A11	.91	F12	1.65
*G19	.66	No. 88.		*A11½	1.11	G6	1.66
G60	.60	A1	\$0.70	*A24	.98	*K1	1.21
*H1	.66	*A3	.70	*D5	1.02	L2	1.47
*H2	.70	*A7	.63	*D26	1.10	*M1	1.41
*H6	1.01	*A11	.60	DD	1.40	N1	1.28
H22	1.03	C1	.77	DDM3	1.72	No. 122.	
*K1	.47	D5	.67	*E1	.94	*F2	\$1.58
*K3	.66	*D11	1.30	*F2	1.11	*K2	1.66
K111	.86	*DF12 Roller	1.45	*F3	1.42	No. 121.	
*M3	.70	*DF14 Roller	1.37	*F8	1.26	*A4	\$1.40
*R1	.42	*DK Roller	1.38	F20	1.28	A4 C'pler pr.	1.58
R1½	.44	*E1	.64	*G6	1.13	*A11	1.45
R3	.50	F1	.60	*G10	1.13	*D5	1.73
*R8	.45	*F2	.80	*G19	1.09	*F2	1.54
*R20	.62	*F4	.71	G22	1.67	*F8	1.84
*R30	.46	*F8	.89	*H1	.95	*G1	1.47
*RR	.61	*F12	.87	*H2	1.02	*G6	1.58
*S2	.52	*F14	.77	*H3	1.23	*K1	1.56
No. 83.		GX	.90	H14	1.35	KM3	2.05
A11	\$0.55	*G1	.66	*K1	.95	*M3	1.59
*D5	.67	*G6	.73	K1 C'pler pr.	.97	R1	1.21
*E1	.57	*G8	.72	*K8	.96	No. 126.	
E2	.57	G10	1.23	L2	1.26	*E2	\$1.37
FF	.88	G19	.81	*M3	1.16	*F2	1.49
*F2	.92	*H1	.76	M11	.97	*F5	1.46
F15	.66	*H2	.78	*R1	.82	*K2	1.76
*G1	.74	H5	.92	W1	1.10	K4	1.46
G24	.74	*H6	1.13				

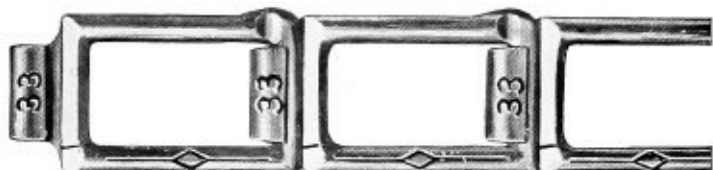
Attachments marked * are usually in stock, others made to order.
For Attachments at intervals, add 10 per cent. to proportional list.



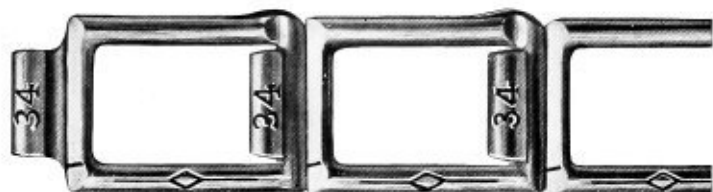
No. 25—FULL SIZE. Working Strain 75 lbs.



No. 32—FULL SIZE. Working Strain 150 lbs.



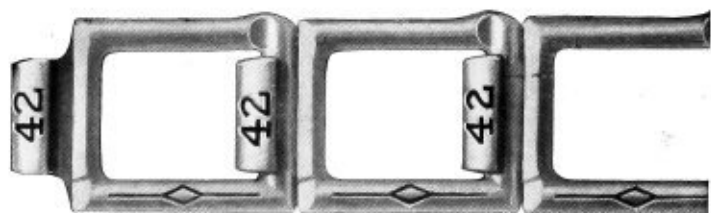
No. 33—FULL SIZE. Working Strain 200 lbs.



No. 34—FULL SIZE. Working Strain 225 lbs.



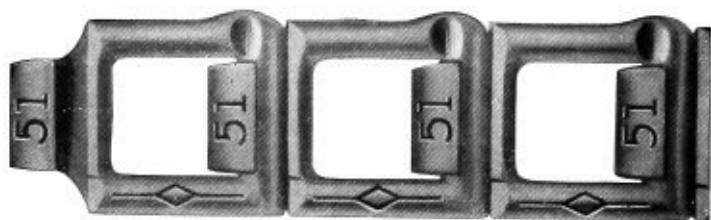
No. 35—FULL SIZE. Working Strain 250 lbs.



No. 42—FULL SIZE. Working Strain 300 lbs.



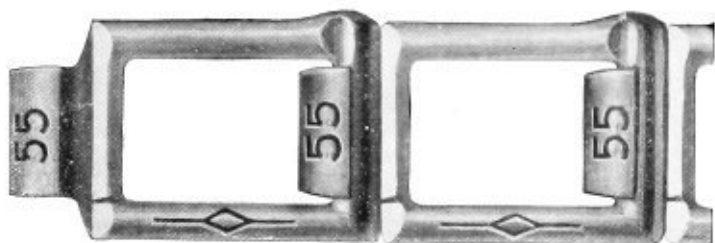
No. 45—FULL SIZE. Working Strain 350 lbs.



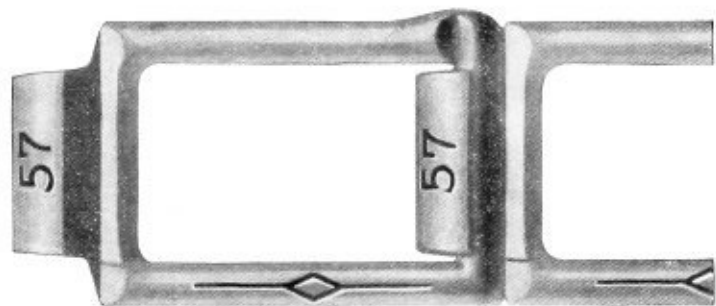
No. 51—FULL SIZE. Working Strain 375 lbs.



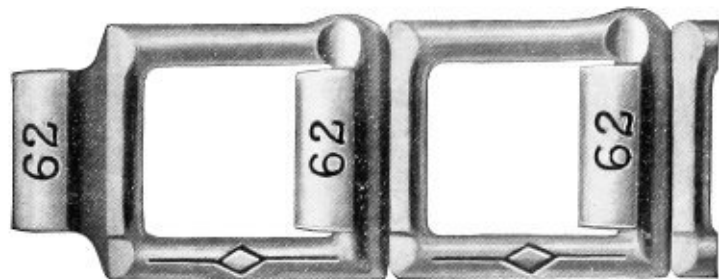
No. 52—RIBBED SIDE BAR—FULL SIZE. Working Strain 500 lbs.



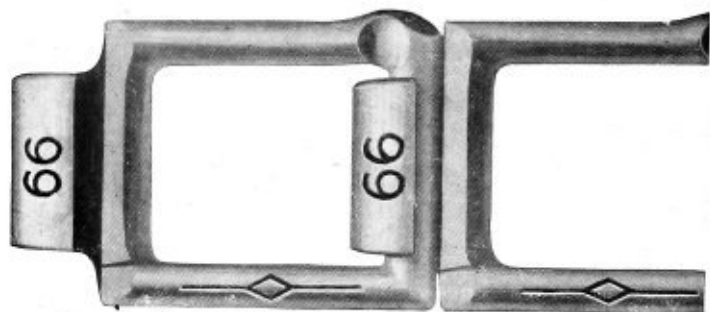
No. 55—FULL SIZE. Working Strain 450 lbs



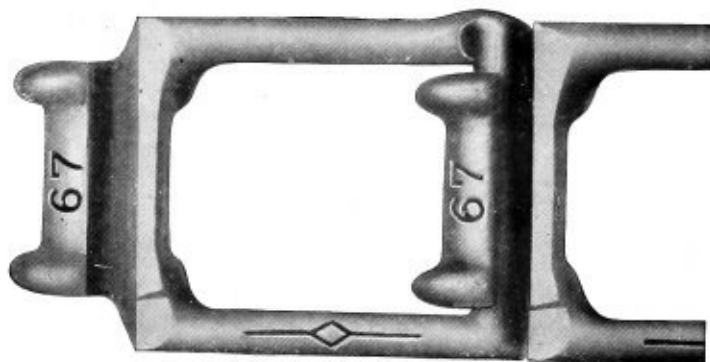
No. 57—FULL SIZE. Working Strain 600 lbs.



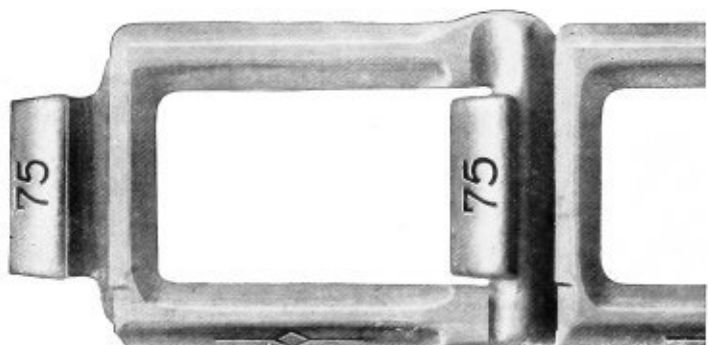
No. 62—FULL SIZE. Working Strain 650 lbs.



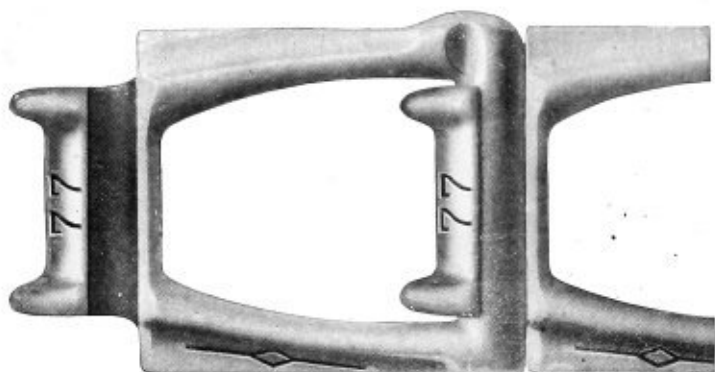
No. 66—FULL SIZE. Working Strain 700 lbs.



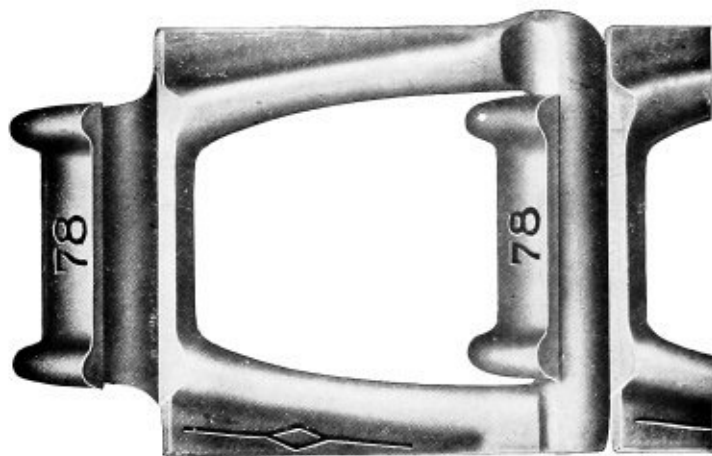
No. 67—FULL SIZE. Working Strain 700 lbs.



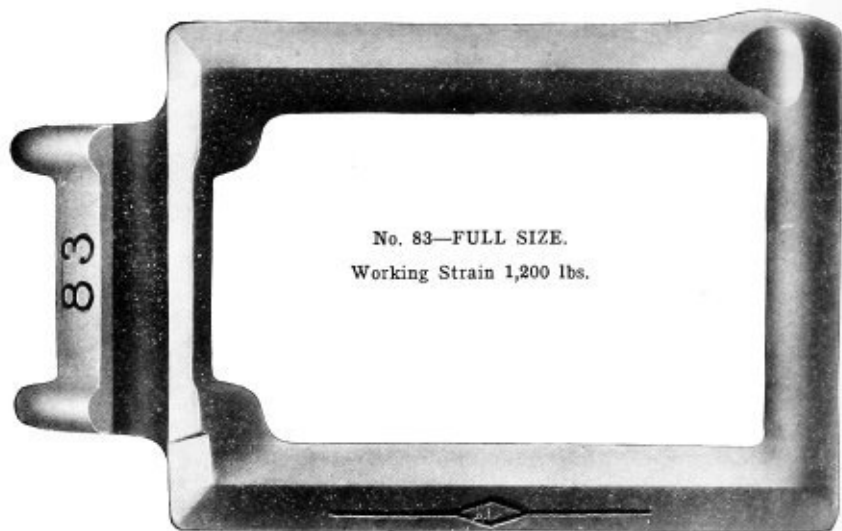
No. 75—FULL SIZE. Working Strain 750 lbs.



No. 77—FULL SIZE. Working Strain 800 lbs.

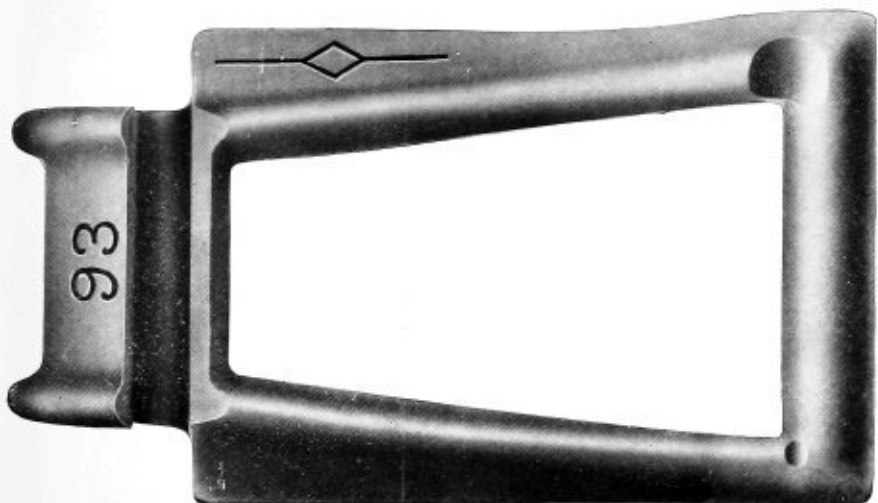


No. 78—FULL SIZE. Working Strain 1,000 lbs.

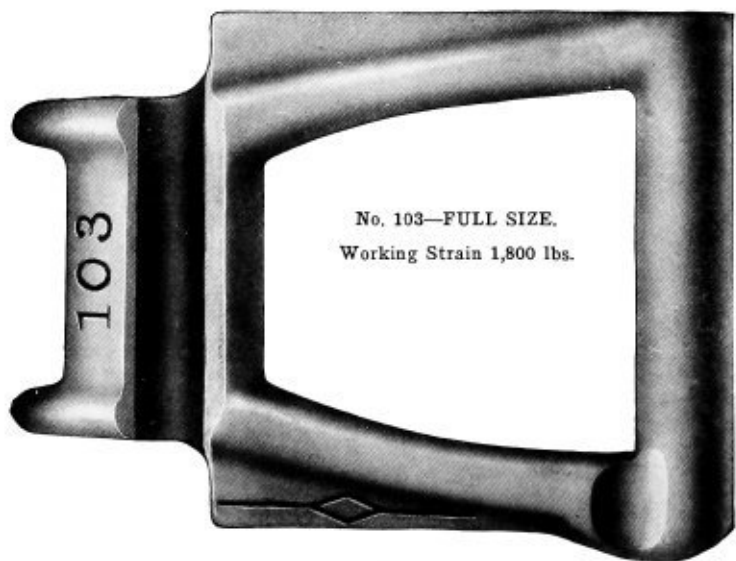


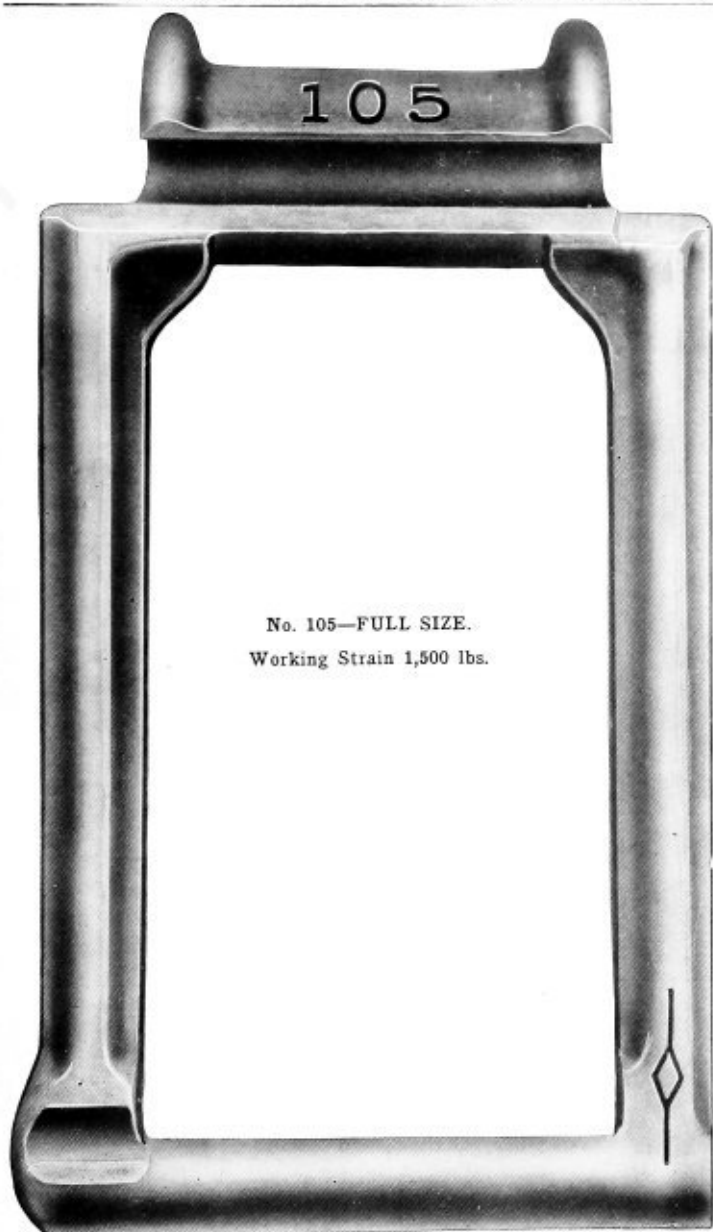


No. 88—FULL SIZE. Working Strain 1,200 lbs.



No. 93—FULL SIZE. Working Strain 1,600 lbs.



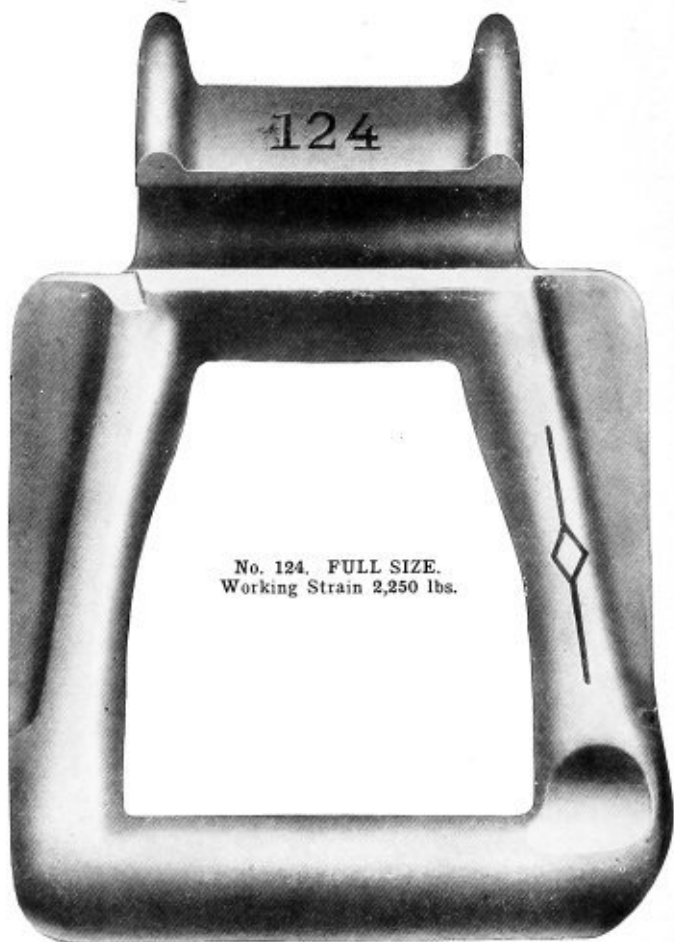




No. 108—FULL SIZE. Working Strain 2,000 lbs.



No. 110—FULL SIZE. Working Strain 2,000 lbs.





122

No. 122—FULL SIZE.
Working Strain 2,200 lbs.



No. 146—FULL SIZE.
Working Strain 2,800 lbs.

ATTACHMENT LINKS FOR DETACHABLE LINK BELTING

The following cuts show in a reduced size various styles of Attachment Links. Other styles than these shown can be furnished and prices quoted on application.

These Links are only carried in stock as shown in the lists on pages 380 to 382.



A Strap



A 1 Right.



A 1 Left.



A 2.



No. 78 A 3.



A 4.



A 7.



A 10.



A 11.



A 12.



A 13.



A 13½.



A 14.



A 37.



C 1.

ATTACHMENT LINKS FOR DETACHABLE LINK BELTING



C 2.



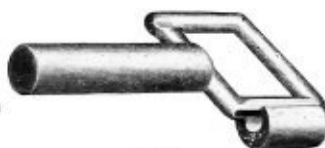
C 8.



C 15.



C 20.



D 3.



D 3 1/2.



D 5.



DF 12.



DF 14.



DK.



E 2.



FF 1/2.



F 1.



F 3.



F 4.

**ATTACHMENT LINKS FOR DETACHABLE LINK
BELTING**

F 5.



F 12.



F 14.



G 1.



G 6.



G 8.



H 1.



H 2.



H 3.



H 4.



H 6.



H 9.



I 3.

ATTACHMENT LINKS FOR DETACHABLE LINK BELTING



I 12.



I 13.



K 1.



K 2.



K 3.



K 5.



K 6.



K 7.



M 1.



M 3.



R 1.



S 1.



S 2.



S 2½.



Coupler.

RIVETED PINTLE CHAIN

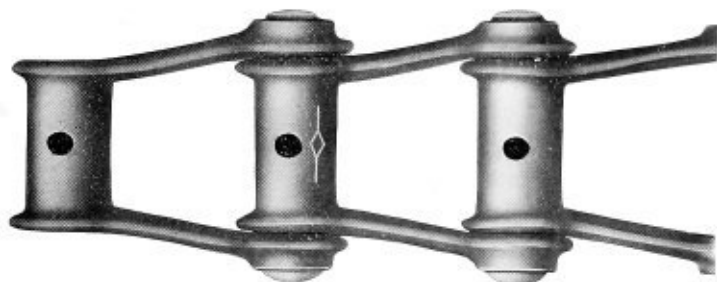


Fig. 206.

On account of the demand for Chains capable of standing greater strain than Standard Detachable Link Belting, we have made a few sizes of riveted Chains, which can be used on Standard sprocket wheels.

DIMENSIONS.

Number.	Approximate Links in 10 Feet.	Breaking Strain.	Diam. of Rivet, Inches.	Work on Sprocket Wheels.
2	73	8000	7 1 1 3 8 1 5 1 5 1 3 8 1 3 8 1 3 8 1 3 8	62
145	74	4000		45
150	55	9000		To order.
151	74	6000		151
158	59	6000		To order
162	73	6800		62
N285	88	3900		42
K303	73	7000		To order
O321 $\frac{1}{2}$	46	18000		0321
337	30	20000		337
567	56	7200		To order

PRICE LIST.

No.	Plain	A-2D	A-3	A-7	D-U	E-1	E-13	F-2	K-1	N-284 Box Link
2	\$0.47									
145	.29		\$0.39		\$0.31	\$0.40	\$0.44	\$0.51	\$0.37	
150	.45									
151	.33									
158	.33									
162	.37									
N285	.36									\$1.44
K303	.49									
O321 $\frac{1}{2}$	.76			\$0.97		.98				
337	.81	\$ 1.75								
567	.36									

For Sprocket Wheels see pages 422, 423, 426 and 427.

DETACHABLE LOCK PINTLE CHAIN BELTING WITH SIDE KEEPERS AND INTERLOCKING JOINTS.

These Lock Pintle and Side Keeper Chains are in every way superior to any other make of their class and much stronger and with better wearing surface than the open hook class of chains for their respective sizes.

Each will run on the standard sprocket wheels for their respective sizes given in our lists. A few styles of special links are made and other styles can be made to order.



PRICE LIST.

Number or Size of Chain.	Plain.	F-2	F-2½	K-1	K-2	R-1	Approx. Links in 10 Feet.	Maximum working strain in lbs
67 X	.33	.56	.59	.....	.....	.....	52	900
77 X	.38	.63	.66	.....	.....	46	52	1000
85 X	.60	.....	.....	.....	.95	.....	30	1800
88 X	.48	.88	.....	.68	.....	.....	46	1300

For Sprocket Wheels see page 423.

MALLEABLE PIN CHAIN



Malleable Pin Chain is used for transmission of power also elevating and conveying purposes where gritty material is to be handled and a closed joint type of heavy duty chain is required.

Several styles of attachments are made for this type of Chain.

DIMENSIONS.

Number.	Approximate links 10 feet.	Breaking Strain.	Diameter of Pin, Inches.	Work on Sprocket Wheels.
243	24	25000	$\frac{33}{32} \times 3\frac{3}{8}$	243
245	24	44000	$\frac{21}{16} \times 3\frac{15}{16}$	620
620	24	40000	$\frac{29}{32} \times 3\frac{15}{16}$	620
631	20	40000	$\frac{33}{32} \times 3\frac{15}{16}$	631
635	20	60000	$1\frac{1}{8} \times 5\frac{7}{16}$	635
730	20	30000	$\frac{3}{4} \times 3\frac{3}{8}$	730
910	30	10000	$\frac{7}{16} \times 2\frac{3}{16}$	910

PRICE LIST.

No.	Plain.	A-3	A-3 D (Complete with roller)	P-2	G-60 with track wheel	G-60	K-2	M-5
243	\$1.19	.....	.....	.....	.....	.....	.....	\$1.53
245	1.52	.....	.....	.....	.....	.....	.....	1.96
620	1.62	.....	.....	.....	.....	.....	.....	1.91
631	1.45	.....	.....	.....	\$6.00	\$2.26	\$2.20	2.22
635	2.32	.....	.....	.....	7.44	3.85	3.45	.....
730	1.19	.....	.....	\$1.69	.....	2.01	1.61	.....
910	.....	\$0.59	\$1.14	.....	.....	.....	.....	.....

For Sprocket Wheels see pages 426 and 428.

INTERLOCKING BOLTED PINTLE CHAIN



The construction and design of this style of Chain obtains the greatest wearing surface and strength with minimum weight. The wearing surface is large and entirely on the cross bar and interlocking socket joints which are practically dust proof.

PRICE LIST OF PLAIN CHAIN.

No.	Price per Foot, Plain.	Approximate Links in Ten Feet.	Maximum Power in Pounds.
315	\$0.46	52	1500
320	.58	46	2200
325	.78	39	3000
330	.95	36.5	3500
335	.71	30	4000
342	1.26	36.5	4500
345	1.01	24	5000
0146	1.00	20	7000
0160	1.39	11.5	10000
475	1.11	20	20000

PRICE LIST OF ATTACHMENT LINKS.

No.	All	D3	DE	E1	F4	FG	G1	G6 pivot	G6 Rigid
315	\$0.75	\$0.81	.....	.....	\$1.01
320	\$0.90	.95	1.08	.....	\$1.05	.89
325	\$1.02	\$1.07	\$1.64	.....	1.30	1.38	\$1.24	1.33	1.32
330
335	1.27	.....	1.57	1.40	1.76
342
345
0146
0160
475

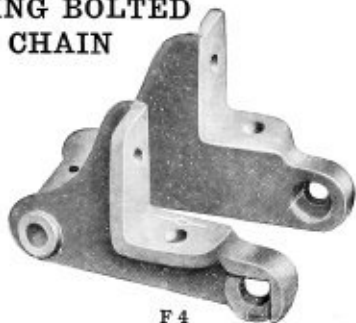
No.	G7	K1	K2	K6	K6½	M1	M3	Rake	Rake No. 2
315	\$0.63	.....	\$0.71	\$0.68	.....	.....	.....	.....
32080	.....	.....	.....	\$0.87	.....	.....	.....
325	\$1.42	1.04	\$1.07	.....	.....	1.13	.....	.....	.....
330	1.36	1.42	.....	.....	.....	.....	.....	.....
335	1.24	.....	.....	.....	\$1.20	\$1.25	\$1.48
342	1.83	.....	.....	.....	.....	.....	.....
345	1.47	.....	.....	.....	.....	.....	.....
0146	1.49	.....	.....	.....	.....	.....	.....
0160
475	1.61	.....	.....	.....	.....	.....	.....

For Sprocket Wheels see pages 426 and 427.

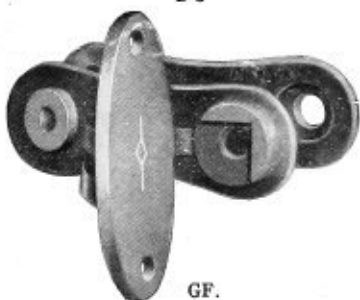
**VARIOUS STYLES OF ATTACHMENTS FOR
INTERLOCKING BOLTED
PINTLE CHAIN**



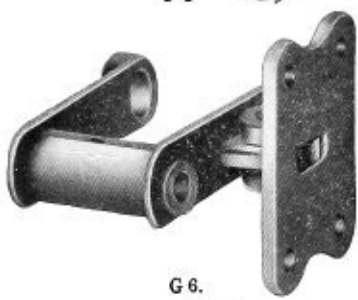
D3



F4



GF.



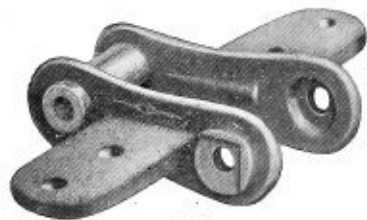
G6.



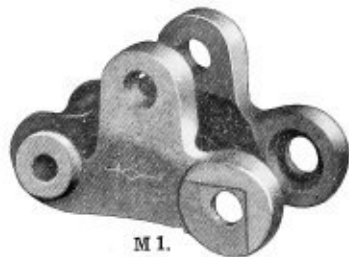
K1.



K2.



K6.



M1.

INTERLOCKING BOLTED ROLLER CHAIN

PRICE LIST.

No.	Price per Foot, Plain.	Approximate Links in 10 Feet.	Working Strain.	Work on Sprocket Wheels.	Size and Style of Roller, Inches.
180	\$0.71	54	1600	180	1½ x 1½ malleable
181	1.00	54	1600	181	1½ x 1½ turned
182	.63	40	1800	182	1½ x 1½ malleable
183	.86	40	1800	183	1½ x 1½ turned
185	.79	48	2000	185	1½ x 1½ malleable
187	.60	30	2200	187	1½ x 1½ malleable
188	.80	30	2200	188	1½ x 1½ turned
189	.73	24	2200	189	1½ x 1½ turned
190	.93	40	2500	190	1½ x 1 malleable
192	.78	30	2500	192	1½ x 1 malleable
193	.79	30	2500	193	1½ x 1 1/8 rough
194	.96	30	2500	194	2 x 2 turned
194½	1.16	30	3200	194	2 x 2 turned
*0194	1.30	30	3200	194	2 x 1 1/8 turned
195	.66	20	3500	195	1½ x 1 malleable
196	.77	20	3500	196	2 x 2 turned
197	1.12	20	4500	197	2½ x 1½ turned
205	1.53	20	6000	205	3 x 1½ turned
210	1.29	15	6000	210	3 x 1½ turned
*240	3.43	24	12000	240	2½ x 2 malleable

*Malleable pin roller chains.

Sizes bracketed use same side bars and bolts, but different size rollers.

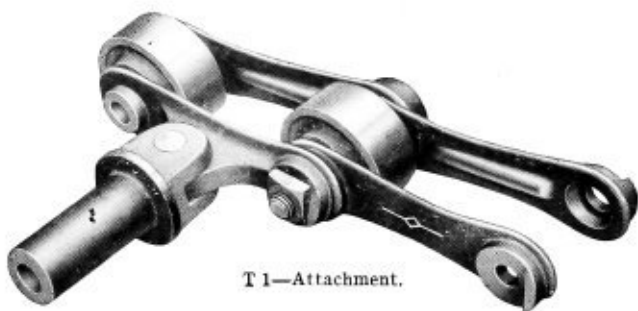
INTERLOCKING BOLTED ROLLER CHAIN
ATTACHMENTS

PRICE LIST.

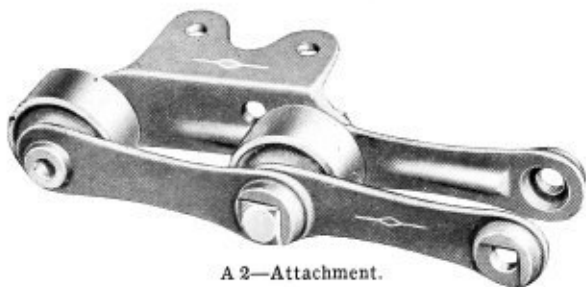
No.	A1	A2	D5	F2	F8	F8½	GF	G3	G6	G7	G19	G19½	G60	J	K1	K2	M5	T1
80	\$0.85						\$1.16											\$1.56
81	1.15						1.30											1.85
82	.72						.95											1.21
83	.94		\$0.76				1.26						\$0.96	\$0.96				1.44
85	.90		.97				1.26						1.26	1.26				1.44
87	.69				\$1.17	\$1.17	1.00		\$0.96									1.00
88	.89						1.20	\$0.88	1.16									.76
89																		.96
90	1.05	\$1.10														1.17	\$1.25	
92	.90	.96					1.36		1.32	\$1.39						1.02	1.13	1.46
93	.90	.97					1.36		1.31	1.39					1.06	1.02	1.14	1.47
94	1.07	1.15					1.49		1.48						1.22	1.17	1.30	1.19
94½	1.27																	1.60
94																		
95		.85					1.06		1.03	1.08								1.02
96		.96					1.17		1.06									1.13
97		1.42					1.65		1.56									1.68
105		1.84											\$2.20					2.14
110	1.46	1.00		\$2.00			2.01						1.50		1.58			1.87
140																		

For Sprocket Wheels see page 426.

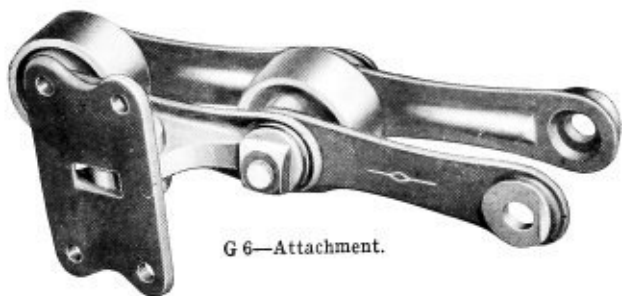
ATTACHMENTS FOR INTERLOCKING BOLTED ROLLER CHAIN



T 1—Attachment.



A 2—Attachment.



G 6—Attachment.

For Sprocket Wheels see page 426.

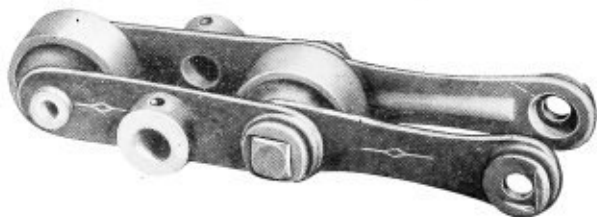
ATTACHMENTS FOR INTERLOCKING BOLTED ROLLER CHAIN



K 1—Attachment.



K 2—Attachment.



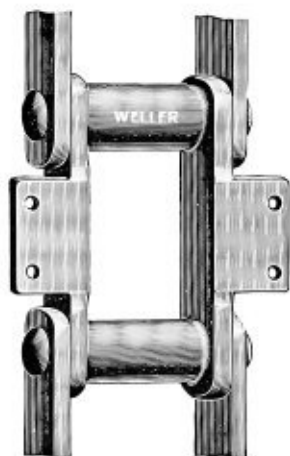
M 5—Attachment.

For Sprocket Wheels see page 426.

COMBINATION STEEL AND MALLEABLE CHAIN



Plain Links.



K 2. Attachment Link.

This Chain is made of malleable iron links and wrought steel side bars and pins. The attachment links are of malleable iron.

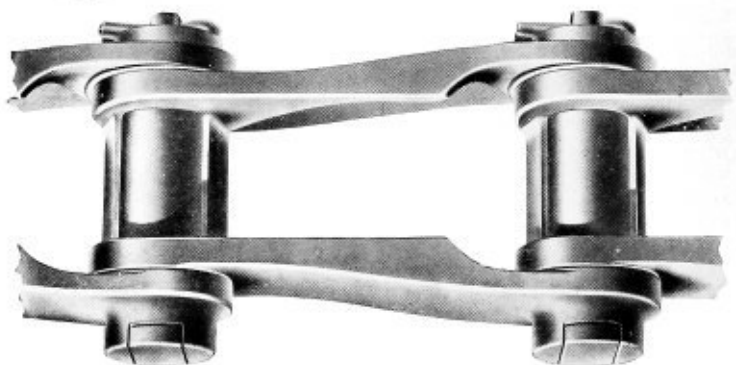
It is used extensively for elevators in cement mills and in the handling of abrasive and other materials where strength and durability is essential.

PRICE LIST.

Chain No.	Diameter of Pin, Inches.	Pitch of Chain, Inches.	Working Strain.	Price.
102	$\frac{31}{64}$	4	2000	\$0.70
102 $\frac{1}{2}$	$\frac{7}{16}$	4	3500	1.35
110	$\frac{5}{8}$	6	3000	.80
111	$\frac{3}{4}$	4.7	3000	1.00
131	$\frac{37}{64}$	3	2500	.90
132	1	6	6500	1.75
188	$\frac{31}{64}$	2.6	2000	.65

For Sprocket Wheels see page 428.

CASE HARDENED STEEL BUSHED CHAIN



K2



F2

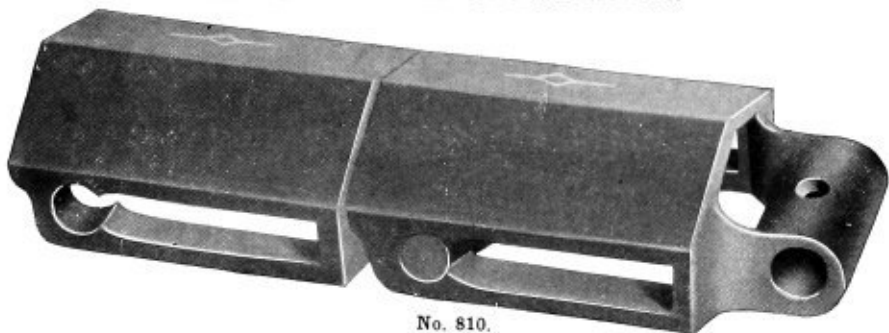
A desirable Chain for elevating or conveying gritty materials on account of the case hardened steel bushing which bears on the sprocket wheel.

PRICE LIST.

No.	Price Per Foot.					Pitch, Ins.	Break- ing Strain.	Diam. Pin, Inches.	Attach- ments.
	Plain.	A-G	F-2	G-6	K-2				
600	\$1.50	.....	.....	.....	\$1.65	6	30000	$\frac{11}{16}$	K-2
823	.90	.....	\$1.30	.....	1.00	4	18000	$\frac{11}{16}$	F-2 K-2
825	1.30	\$1.90	.....	\$2.10	2.00	4	28000	$\frac{11}{16}$	A-G G-6 K-2
830	1.00	.....	.....	.....	1.60	6	30000	$\frac{11}{16}$	K-2
844	1.50	.....	2.50	.....	1.65	6	32000	$\frac{11}{16}$	F-2 K-2

For Sprocket Wheels see page 428.

ROOF TOP TRANSFER CHAINS



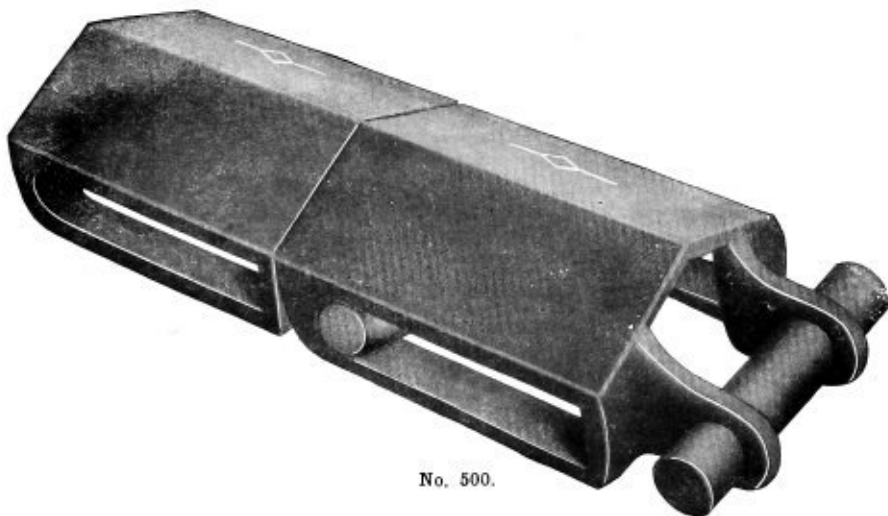
No. 810.

Cut about one-half size.

This Chain is superior to any made for lumber transfer. It is made in coupler form, the links being coupled with malleable pins, and is detachable at every joint.

30 links in 10 feet. Working strain 5,000 lbs.

List price, per foot\$0.80



No. 500.

Cut about one-half size.

30 links in 10 feet. Working strain 2,000 lbs.

List price, per foot\$0.65

For Sprocket Wheels see page 428.

INTERLOCKING DRAG CONVEYOR CHAIN

These Drag Conveyor Chains are formed of links cast in one piece, having a specially devised interlocking joint with a cross bolt and nut lock to hold the nut and bolt from turning, but at same time the nut can be forced off with a wrench whenever necessary to separate the links.

The joints can be sprung apart after removing the bolt. The bolt seats in the end bar are bored to a good fit with the bolt and all is combined to make the joints practically dirt proof. The interlocking joints largely sustain the operating strain, so that but little stress comes directly upon the cross bolt. They should be run in the direction indicated by the arrow.

These Chains are all provided with a large lubricant chamber into which graphite grease is forced at high pressure before chain leaves the factory. This is sufficient in quantity to insure lubrication under ordinary conditions for at least six months.

No.	Description.	List Price per Foot.	Pitch or Leng., Ins.	Width over all, Ins.	Depth of Side Bar, Ins.	Working Strain, lbs.
410	Shoe Link.....	\$0.95	6	6	1½	5000
415	Shoe Link.....	.84	6	9	1½	5000
425	Wing.....	.70	6	7	1½	4000
430	Wing.....	.70	6	10	1½	4000
450	Plain.....	1.04	6	8	1½	6000
450	Spur, R. & L.....	1.18	6	8	1½	6000
					(Spur 2½ high)	
450	C-½.....	1.14	6	8	1½	6000
450	Single C-1.....	1.42	6	8	1½	6000
					(Spur 2½ high)	
450	C-1 & C-2.....	1.48	6	12	1½	6000
					(Spur 2½ high)	
*452	Wing.....	1.13	6	12	1½	6000
452	Wing & Spur, R. & L.....	1.32	6	12	1½	6000
					(Spur 2½ high)	
455	Plain.....	1.24	6	10	1½	6000
460	Plain.....	1.31	6	12	1½	6000
460	C-½.....	1.35	6	12	1½	6000
460	Spur, R. & L.....	1.34	6	12	1½	6000
					(Spur 2½ high)	
465	Wing.....	1.35	6	14	1½	6000
465	Spur.....	1.50	6	14	1½	6000
480	Plain.....	1.84	8	16	2	10000
480	C-½.....	1.89	8	16	2	10000
480	C-1.....	2.28	8	16	2	10000
485	Wing.....	2.50	8	20	2	10000

INTERLOCKING RIVETED CONVEYOR CHAIN BELT

380	Plain.....	\$1.04	5	7½	1½	3500
382	Wing.....	1.13	6	12	1½	3500
395	Wing.....	1.04	6	12	1½	3500
468	Plain.....	1.17	6	12	1½	3500

*This chain was formerly called No. 450 Wing.
For Sprocket Wheels, see pages 427 and 428.

INTERLOCKING DRAG CONVEYOR CHAIN



Plain Link.



Wing Link.



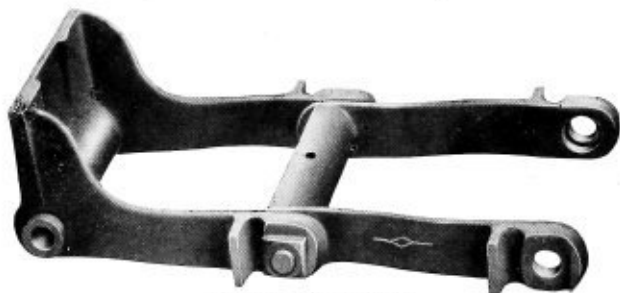
Spur Link.

For Sprocket Wheels see pages 427 and 428.

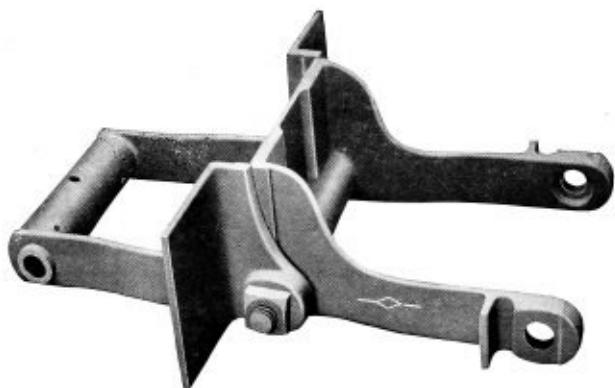
INTERLOCKING CONVEYOR CHAIN BELT



Spur Link—Style No. 1 and 2.



C1 Attachment Link.

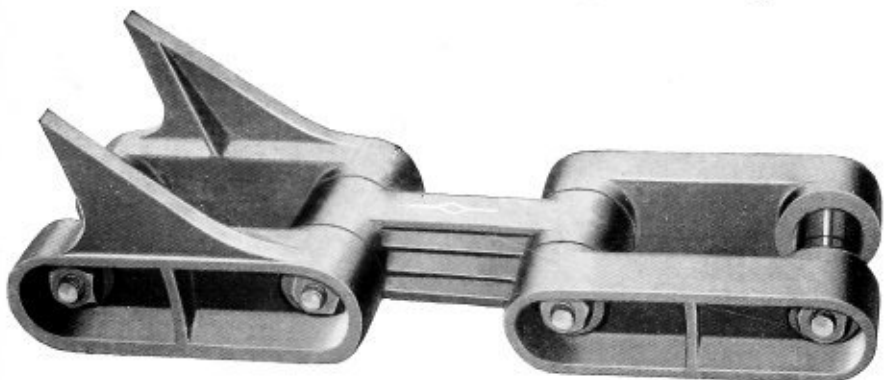


C1 and C2 Attachment Link.

For Sprocket Wheels see pages 427 and 428.

No. 1050 MAMMOTH CHAIN

For Log Haul, Ice Elevators and Heavy Conveying and Transmitting.

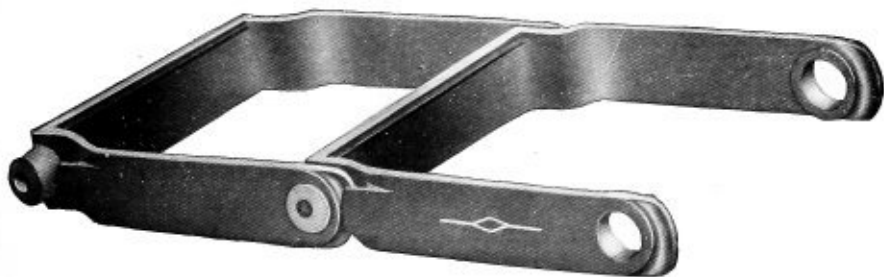


Detachable at every link. Large wearing joints. The sections are held securely together by strong bolts riveted over the nuts. The nuts can be turned off with wrench and the Chain disconnected without any slack. Can be coupled together tight around the sprocket wheels without slack.

Price per foot\$1.40

For Sprocket Wheels see page 428.

**No. 550 MALLEABLE DETACHABLE DRAG
CHAIN**



6" pitch, 7" wide. Working strain 2,000 lbs.

For Sprocket Wheels see page 428.

Price per foot\$0.50

WELLER STANDARD STEEL CHAIN

For heavy duty this style of Chain is one of the most popular on the market, especially for coal handling and sugar house work, thousands of feet being used in the latter on cane carriers. For general elevator and conveyor work where great strength is required it is unequaled.

Standard Steel Chain

PRICE LIST.

No.	Pitch Ins.	Size of Steel in inches.		Working Strain in lbs.	Price Plain Chain, per foot.
		Round. Link.	Flat. Link.		
1	4	1 x 3/16	1 x 3/16	1000	\$0.50
2	6	1 1/4 x 1/4	1 1/4 x 1/4	2000	.60
3	6	1 1/2 x 1/2	1 1/2 x 1/2	4000	.80
4	8	2 x 1/2	2 x 1/2	6000	1.10
5	8	2 1/2 x 1	2 1/2 x 1	8000	1.20

The Working Strain of the above Chains represents but a small portion of the breaking strain, thus insuring a large margin for safety and wear.

Attachments for Standard Steel Chain

PRICE LIST.

Chain	A 1	K 2	E—with Two Holes	K1—with Four Holes	Coupler Including Link
1	.....	\$0.32	\$0.20	\$0.32	\$0.50
2	.....	.32	.32	.32	.60
3	.....	.48	.48	.48	.80
4	\$0.78	.85	.85	.85	1.20

Other Attachments and prices given upon application.

E Attachment made of malleable iron.

K 1 Attachment made of wrought iron.

Prices of special Steel Chain furnished upon receipt of specifications.

For price list of Sprocket Wheels see page 430.

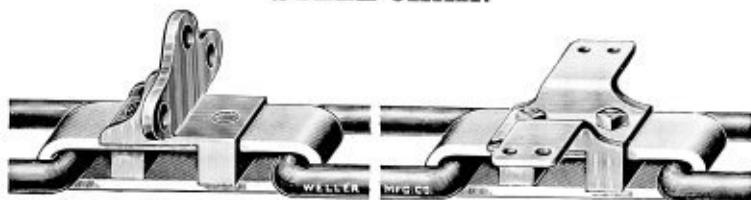


Fig. 112.
Standard
Links.



Fig. 113.
Special Links

ATTACHMENTS FOR WELLER STANDARD STEEL CHAIN



A1

K2.

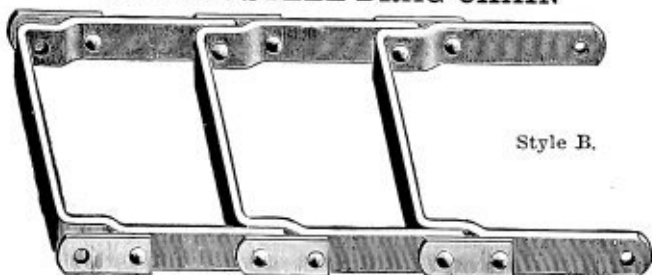


Coupling Link.

E1. } When made with two
holes it is called E.

For price list of Attachments see page 416. We are prepared to design and furnish Attachments to suit all conditions.

WELLER STEEL DRAG CHAIN



Style B.

In style "A" the Reinforced Side Bar is omitted.

This Chain is designed for handling shavings, sawdust, broken stone, coal, etc., and for the purpose is one of the most satisfactory on the market.

PRICE LIST.

No. Chain.	Pitch, Inches.	Width Over All, Inches.	Dimensions of Material.	Price per foot. Style A.	Price per foot. Style B.
560	6	7½	1½ x ¼	\$0.50	\$0.65
565	8	9	1¾ x ¼	.65	.75
566	8	9	1½ x ¼	.60	.70
570	10	12½	1½ x ¼	.80	.90

For Sprocket Wheels see page 431.

WELLER STEEL COIL CHAIN



Fig. 205.

This Chain is made to pitch and will therefore work successfully on sprocket wheels, differing in this respect from ordinary coil chains.

Coil Chain Attachments



Fig. 206.



K1. Also used as E1.



FF



T2.



T.



Log Tooth.



Fig. 207.

PRICE LIST.

No. of Chain.	Length of Link inside, Inches.	Size Steel, Inches.	Price per Ft.	No. of Chain.	Length of Link inside, Inches.	Size Steel, Inches.	Price per Ft.
1	4	$\frac{1}{2}$	\$0.24	5	7	1	\$0.60
2	5	$\frac{3}{4}$	.28	6	8	1 $\frac{1}{4}$	.83
3	6	1	.35	7	8	1 $\frac{1}{2}$	1.00
4	7	1 $\frac{1}{4}$	.46				

For Sprocket Wheels see page 431.

HERCULES STEEL CHAIN

In addition to the standard styles and sizes listed we are prepared to quote bottom prices on any special form of Chain that may be required.



Fig. 208.

PRICE LIST.

With Straight Links.

Size.	Pitch.	Size of Links.	Diam. of Pin.	Working Strain in lbs.	Price per Foot.
204	4	$1\frac{1}{2} \times \frac{1}{4}$	$\frac{3}{16}$	1500	\$0.60
205	5	$1\frac{1}{2} \times \frac{1}{8}$	$\frac{7}{16}$	2000	.70
206	6	$1\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2}$	2500	.80
207	7	$1\frac{1}{2} \times \frac{7}{16}$	$\frac{3}{8}$	3500	.90
208	8	$2 \times \frac{1}{2}$	$\frac{1}{2}$	4500	1.00



Fig. 209.

PRICE LIST.

Size.	Pitch.	Size of Links.	Diam. of Pin.	Working Strain in lbs.	Price per Foot.
214	4	$1\frac{1}{2} \times \frac{1}{4}$	$\frac{3}{16}$	1500	\$0.70
215	5	$1\frac{1}{2} \times \frac{1}{8}$	$\frac{7}{16}$	2000	.80
216	6	$1\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2}$	2500	.90
217	7	$1\frac{1}{2} \times \frac{7}{16}$	$\frac{3}{8}$	3500	1.00
218	8	$2 \times \frac{1}{2}$	$\frac{1}{2}$	4500	1.10



Fig. 212.

PRICE LIST.

Size	Pitch.	Size of Link.	Diameter of Pin.	Working Strain in lbs.	Price per Foot.
54	4	$1\frac{1}{2} \times \frac{1}{4}$	$\frac{3}{16}$	1200	\$0.80
55	5	$1\frac{1}{2} \times \frac{1}{8}$	$\frac{7}{16}$	1800	.90
56	6	$1\frac{1}{2} \times \frac{3}{8}$	$\frac{1}{2}$	2500	1.10
57	7	$1\frac{1}{2} \times \frac{7}{16}$	$\frac{3}{8}$	3200	1.20
58	8	$2 \times \frac{1}{2}$	$\frac{1}{2}$	4000	1.50

We design and furnish Special Attachment Links to suit the various duties for which the Chains are intended.

For Sprocket Wheels See page 430.



Fig. 210



Fig. 211.

WELLER STEEL ROLLER CHAINS

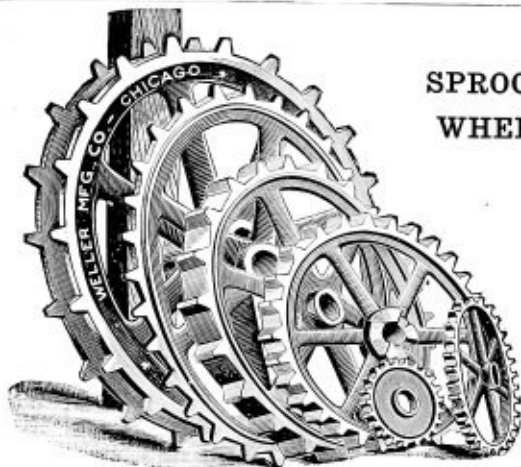
Fig. 213.
Plain Rollers.



Fig. 214.
Self Oiling Rollers.

Any size made to order with straight or offset links.
Furnished with rivets or detachable pins and with or without thimbles.
The Self Oiling Rollers are made hollow and filled with waste and oil.
Are also made dust proof.

Submit specifications for bids on special Chains of any description.
Special Attachment Links furnished to suit requirements.



SPROCKET WHEELS

In ordering, always state the number of teeth in a wheel.

Wheels can be bored to almost any size and can be made to order to vary from our regular standard wheels with shorter or longer hub on one side, or both sides, or be made with a clutch of any preferred pattern at special prices. See page 280 for price list of jaw clutches.

Wheels are bored, set-screwed or key-seated as ordered, but in absence of any full directions we usually fit them with set screws. Sometimes they are fitted with both key seat and set screw, to prevent any movement sideways upon the shaft, at extra charge.

Keyseats are cut tapering, unless otherwise ordered.

Chilled Teeth Sprocket Wheels



Fig. 215.

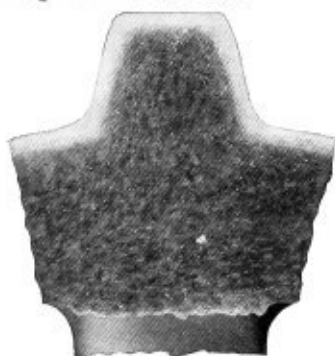


Fig. 216.

We furnish Wheels with chilled teeth and rims in sizes not exceeding 24" in diameter. These Wheels are superior to steel in quality and cost less. The hubs and web centers are of the usual soft character of cast iron for machining.

Wheels with chilled teeth and rim will be furnished at an advance of 50 per cent. over the price of regular Sprocket Wheels.

SPROCKET WHEELS FOR DETACHABLE LINK BELTING

REVISED PRICE LIST IN EFFECT JULY 1st, 1907.

Bored and Key-seated or Set-screwed.

Prices cover wheels bored to sizes specified under each heading and smaller (see foot note).

NO. 25—Also used for No. 31—Bore $1\frac{1}{4}$ in. and Smaller			NO. 32—Continued			NO. 42—Bore $1\frac{1}{4}$ in. and Smaller			NO. 45—Continued		
Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.
2 02	7	\$1.15	7 08	19	\$2.00				14 31	27	\$3.70
2 31	8	1.20	7 45	20	2.05	2 80	6	\$1.60	14 84	28	3.80
2 61	9	1.20	7 83	21	2.10	3 23	7	1.70	15 37	29	3.90
2 90	10	1.25	8 20	22	2.15	3 67	8	1.80	15 90	30	4.00
3 20	11	1.30	8 58	23	2.20	4 10	9	1.90	16 43	31	4.10
3 50	12	1.35	8 95	24	2.25	4 54	10	1.95	18 55	35	4.60
3 79	13	1.40	9 33	25	2.30	4 97	11	1.95	19 08	36	4.70
4 08	14	1.45	9 70	26	2.35	5 41	12	2.00	20 67	39	5.10
4 38	15	1.50	10 08	27	2.40	5 84	13	2.05	21 20	40	5.20
4 68	16	1.50	10 45	28	2.45	6 28	14	2.10	22 26	42	5.40
4 97	17	1.55	10 85	29	2.50	6 71	15	2.15	23 32	44	5.80
5 27	18	1.55	11 20	30	2.55	7 15	16	2.20	24 85	45	6.00
5 56	19	1.60	11 55	32	2.70	7 58	17	2.25	25 44	48	6.50
5 86	20	1.65	12 33	33	2.80	8 02	18	2.30	26 50	50	6.80
6 15	21	1.70	13 08	35	2.90	8 45	19	2.35	28 62	54	7.50
6 44	22	1.70	14 20	38	3.00	9 76	22	2.50	30 74	58	8.30
7 03	24	1.75	16 83	45	3.40	10 63	24	2.60	36 57	69	11.00
7 33	25	1.80	24 33	65	4.40	11 93	27	2.80	43 48	82	11.60
7 62	26	1.80				12 37	28	2.90			
7 91	27	1.80	NO. 33—Use No. 34			14 11	32	3.20			
8 21	28	1.85				15 85	36	3.60			
8 50	29	1.88	NO. 34—Also used for No. 33—Bore $1\frac{1}{4}$ in. and Smaller			17 15	39	3.90			
8 80	30	1.90	2 79	6	\$1.30	18 02	41	4.00	NO. 51—Bore $1\frac{1}{4}$ in. and Smaller (See foot note)		
9 98	34	2.05	3 24	7	1.35	20 19	46	4.50	1 98	5	\$1.40
10 27	35	2.10	3 69	8	1.40	24 11	55	5.50	2 72	7	1.50
10 57	36	2.15	4 11	9	1.45				3 09	8	1.55
12 34	42	2.40	4 59	10	1.50	NO. 45—Also used for Nos. 35 and 55—Bore $1\frac{1}{2}$ in. and Smaller			3 46	9	1.60
12 93	44	2.55	5 04	11	1.60	2 65	5	\$1.50	3 83	10	1.65
14 11	48	2.60	5 49	12	1.70	3 18	6	1.60	4 20	11	1.70
15 29	52	2.80	5 91	13	1.75	4 24	8	1.80	4 57	12	1.75
16 47	56	3.00	6 39	14	1.80	4 77	9	1.90	5 31	14	1.85
17 65	60	3.25	6 84	15	1.90	5 30	10	2.00	5 68	15	1.90
18 83	64	3.50	7 29	16	2.00	5 83	11	2.10	6 05	16	1.95
24 73	84	4.00	8 19	18	2.10	6 36	12	2.20	6 42	17	2.00
			8 64	19	2.20	6 80	13	2.30	6 79	18	2.05
			9 00	20	2.30	7 42	14	2.40	7 16	19	2.10
			9 90	22	2.40	7 95	15	2.50	7 53	20	2.15
			12 24	27	2.70	8 48	16	2.60	7 90	21	2.20
			12 69	28	2.80	9 01	17	2.70	8 27	22	2.25
			13 59	30	2.90	9 54	18	2.80	8 64	23	2.30
			14 49	32	3.00	10 07	19	2.90	9 01	24	2.35
			15 39	34	3.20	10 60	20	3.00	9 38	25	2.40
			16 29	36	3.30	11 13	21	3.10	9 75	26	2.45
			18 54	41	3.65	11 66	22	3.20	10 12	27	2.50
			18 99	42	3.70	12 19	23	3.30	11 23	30	2.70
			21 39	54	4.90	12 72	24	3.40	11 97	32	2.85
			28 44	63	5.85	13 25	25	3.50	12 34	33	2.90
						13 78	26	3.60	12 71	34	2.95
									13 45	36	3.05
									14 56	39	3.20
									16 78	45	3.70
									18 63	50	4.10

NOTE—These prices cover Wheels with bores as specified above. For Wheels having hubs and bores larger than standard, or otherwise special, additional charge will be made on account of additional weight and labor.

For larger than maximum bore specified in list add 10% for each quarter inch or fraction thereof.

SPROCKET WHEELS FOR DETACHABLE LINK BELTING—Continued

PRICE LIST.

NO. 52—Bore 1 1/4 in. and Smaller			NO. 62—Continued			NO. 67—Continued			NO. 78—Continued		
Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.
2.88	6	\$1.50	12.84	24	\$4.15	30.68	41	\$ 9.50	36.38	43	\$15.40
3.37	7	1.60	13.90	26	4.45	32.17	43	10.10	37.22	44	15.90
3.86	8	1.70	14.96	28	4.70	32.92	44	10.40	38.94	46	17.10
4.35	9	1.80	16.02	30	5.10	35.90	48	11.80	41.45	49	19.00
4.84	10	1.90	17.08	32	5.35	36.64	49	12.20	42.29	50	19.70
5.33	11	2.00	18.14	34	5.60	38.88	52	13.20	43.98	52	20.50
5.82	12	2.10	19.20	36	5.90	40.37	54	13.90	49.05	58	24.80
6.31	13	2.20	20.26	38	6.20	41.86	56	14.60	50.74	60	26.00
6.80	14	2.30	22.91	43	7.00	44.84	60	16.50	54.97	65	28.00
7.29	15	2.40	26.09	49	8.30	47.82	64	18.50	65.11	77	32.80
7.78	16	2.50	30.86	58	10.20	55.27	74	21.10			
8.27	17	2.60	36.16	68	12.20						
8.76	18	2.70									
9.25	19	2.75	NO. 66—Bore 2 1/8 in. and Smaller						NO. 83—All Double Teeth Bore 2 1/4 in. and Smaller		
9.74	20	2.80	5.32	8	\$1.90				10.65	16	\$ 4.00
10.23	21	2.90	5.97	9	2.00				11.93	18	4.80
10.72	22	3.00	7.27	11	2.20				14.49	22	5.85
11.70	24	3.15	7.92	12	2.30				17.05	26	6.90
12.19	25	3.20	8.57	13	2.50				20.89	32	8.30
12.68	26	3.30	10.52	16	2.80				24.73	38	10.20
13.17	27	3.40	11.82	18	3.00				28.57	44	12.50
13.66	28	3.45	12.47	19	3.20				31.93	48	14.20
14.64	30	3.60	16.37	25	4.00				34.97	54	16.50
15.62	32	3.80				4.28	5	\$ 2.40	41.37	64	21.50
16.60	34	4.00				5.13	6	2.60			
18.07	37	4.20	NO. 67—Also used for Nos. 57 and 77—Bore 2 1/8 in. and Smaller			5.97	7	2.80			
18.56	38	4.30	3.86	5	\$1.80	6.82	8	3.00			
19.05	39	4.45	4.61	6	1.90	7.66	9	3.20			
19.54	40	4.60	5.35	7	2.20	8.51	10	3.45	NO. 85—Also used for Nos. 94, 95, 102—Bore 2 1/4 in. and Smaller		
20.52	42	4.80	6.10	8	2.40	9.35	11	3.70	7.85	6	\$ 4.00
22.48	46	5.20	6.84	9	2.60	10.20	12	3.95	9.12	7	4.50
23.95	49	5.60	7.59	10	2.80	11.04	13	4.20	10.40	8	5.00
24.93	51	5.80	8.33	11	2.90	11.88	14	4.50	12.95	10	6.05
26.89	55	6.40	9.08	12	3.10	12.72	15	4.80	14.22	11	6.50
28.36	58	6.75	9.82	13	3.25	14.41	17	5.60	15.70	12	6.95
31.31	64	7.20	10.57	14	3.40	15.25	18	6.20	16.77	13	7.40
			11.31	15	3.55	16.10	19	6.90	18.05	14	7.85
			12.06	16	3.70	16.94	20	6.60	19.32	15	8.35
			12.80	17	3.85	17.79	21	6.90	20.60	16	8.80
			13.55	18	4.00	18.63	22	7.30	23.15	18	10.25
			14.29	19	4.20	19.48	23	7.65	24.42	19	11.00
			15.04	20	4.40	20.33	24	8.00	28.25	22	13.60
			15.78	21	4.60	21.17	25	8.40	30.80	24	15.40
			16.53	22	4.80	22.86	27	8.90	33.35	26	17.15
			17.27	23	5.00	23.71	28	9.20	34.62	27	18.25
			18.02	24	5.20	24.55	29	9.50	35.90	28	20.40
			18.76	25	5.40	25.40	30	9.80	41.00	32	24.40
			19.51	26	5.60	26.24	31	9.90	60.12	47	45.00
			20.25	27	5.85	27.09	32	10.10			
			21.00	28	6.10	27.93	33	10.70			
			21.75	29	6.30	28.77	34	11.10			
			22.49	30	6.50	29.61	35	11.50			
			23.24	32	7.00	30.46	36	11.90			
			24.72	33	7.25	31.30	37	12.40			
			25.47	34	7.50	32.15	38	12.90			
			26.96	36	8.00	32.99	39	13.40			
			28.45	38	8.60	33.84	40	13.90			
			29.94	40	9.20	35.53	42	14.90			

NOTE—These prices cover Wheels with bores as specified above. For Wheels having hubs and bores larger than standard, or otherwise special, additional charge will be made on account of additional weight and labor.

For larger than maximum bore specified in list add 10% for each quarter inch or fraction thereof.

SPROCKET WHEELS FOR DETACHABLE LINK BELTING—Concluded

PRICE LIST.

NO. 103—Bore 3 1/4 in. and Smaller			NO. 103—Continued			NO. 114—Continued			NO. 124—Bore 3 1/2 in. and Smaller		
Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.
5.05	5	\$ 3.20	54.55	55	\$35.85	9.62	9	\$4.85	10.70	8	\$ 5.50
6.04	6	3.60	60.49	61	40.95	10.67	10	5.20	10.70	8	6.20
7.03	7	4.00	65.44	66	45.50	11.72	11	5.65	12.01	9	6.90
8.02	8	4.40	67.42	68	47.40	12.77	12	6.10	13.31	10	7.70
9.01	9	4.80	80.29	81	59.10	13.82	13	6.55	14.62	11	8.50
10.00	10	5.25	NO. 105—Bore 3 1/4 in. and Smaller			14.87	14	7.00	16.00	12	9.40
10.99	11	5.65	12.15	6	\$ 5.40	16.97	16	8.00	15.93	13	10.20
11.98	12	6.05	16.05	8	8.00	18.02	17	8.60	17.23	13	10.20
12.97	13	6.45	19.95	10	10.60	19.07	18	9.20	18.54	14	11.00
13.96	14	6.85	23.85	12	13.20	20.12	19	9.80	19.84	15	12.00
14.95	15	7.25	25.80	13	16.00	22.22	21	11.10	21.15	16	13.00
15.94	16	7.65	27.75	14	18.00	24.32	23	12.45	22.45	17	14.20
16.93	17	8.05	31.65	16	19.20	25.37	24	13.10	23.76	18	15.20
17.92	18	8.45	37.50	19	22.40	31.67	30	17.50	25.06	19	16.20
18.91	19	8.90	49.20	25	33.60	33.77	32	19.30	26.37	20	17.30
19.90	20	9.40	NO. 108—Also used for Nos. 110 and 111			36.92	35	22.00	28.98	22	19.50
21.88	22	10.35	Bore 3 1/4 in. and Smaller			37.97	36	23.00	30.28	23	20.60
22.87	23	11.20	9.64	6	\$ 5.20	39.02	37	24.00	31.59	24	21.70
23.86	24	11.75	11.13	7	5.70	40.07	38	25.00	32.89	25	22.80
24.85	25	12.25	12.66	8	6.20	44.27	42	29.10	36.81	28	26.10
25.84	26	12.75	14.11	9	7.25	49.52	47	34.90	42.03	32	30.80
26.83	27	13.25	15.60	10	8.10	60.02	57	44.75	44.64	34	33.00
27.82	28	13.50	17.09	11	9.00	NO. 122—Bore 3 1/2 in. and Smaller			49.86	38	38.00
28.81	29	13.85	18.58	12	9.90	16.07	8	\$ 9.75	60.30	46	48.80
29.80	30	14.40	20.07	13	10.90	18.03	9	10.80	62.91	48	52.00
30.79	31	15.20	21.56	14	11.80	20.00	10	12.80	NO. 146—Bore 3 1/2 in. and Smaller		
31.78	32	16.00	24.54	16	14.00	21.96	11	14.60	16.62	8	\$12.00
32.77	33	16.80	30.50	20	18.50	23.93	12	16.50	18.59	9	12.65
33.76	34	17.60	36.46	24	24.00	25.89	13	18.25	20.96	10	13.70
34.75	35	18.40	48.38	32	37.00	29.82	15	21.80	24.50	12	15.70
35.74	36	19.25	NO. 114—Bore 3 1/2 in. and Smaller			31.79	16	23.60	30.41	15	18.50
36.73	37	20.25	7.52	7	\$ 4.15	37.68	19	30.00	36.32	18	24.00
37.72	38	21.20	8.57	8	4.50	41.61	21	34.00	41.78	26	35.00
39.70	40	23.10				43.57	22	36.00			
40.69	41	23.95									
41.68	42	24.80									
43.64	46	28.20									
45.61	49	30.75									

ADDITIONAL PRICE TO BE ADDED TO THE LIST PRICE FOR SPLIT SPROCKET WHEELS—Detachable Link Belting.

No. of Chain.	NUMBER OF TEETH.															
	4-7	8-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80
23-024-025-25-31	\$.....	\$1.15	\$1.15	\$1.20	\$1.20	\$1.25	\$1.25	\$1.30	\$1.35	\$1.40	\$1.45	\$1.50	\$1.55	\$1.60	\$1.70	\$1.75
32	.....	1.20	1.25	1.30	1.40	1.45	1.50	1.55	1.65	1.70	1.80	1.90	2.00	2.05	2.15	2.25
33-34-42	.....	1.30	1.35	1.40	1.50	1.55	1.65	1.75	1.85	1.95	2.05	2.20	2.35	2.50	2.65	2.80
35-37-38-45-55	.....	1.40	1.50	1.60	1.75	1.90	2.00	2.15	2.35	2.60	2.85	3.10	3.35	3.60	3.85	4.15
48-51	.....	1.20	1.25	1.30	1.40	1.45	1.50	1.55	1.65	1.75	1.90	2.00	2.10	2.25	2.40	2.50
52	.....	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.25	2.45	2.60	2.80	3.00	3.20	3.40
57-67-77-87-77x	.....	1.55	1.70	1.95	2.20	2.45	2.75	3.10	3.50	3.90	4.30	4.75	5.15	5.60	6.00	6.45
62	.....	1.50	1.60	1.75	1.90	2.10	2.25	2.45	2.65	2.95	3.25	3.55	3.85	4.15	4.45	4.75
65-66	.....	1.45	1.55	1.65	1.80	1.95	2.10	2.30	2.50	2.75	3.05	3.35	3.60	3.90	4.20	4.50
75-78-88	.....	1.70	2.00	2.45	2.90	3.40	3.90	4.40	4.95	5.50	6.05	6.60	7.15	7.70	8.25	8.80
83-93	1.65	2.05	2.70	3.50	4.30	5.10	5.90	6.80								
85-94-95-102	2.05	2.35	3.05	3.90	4.80	5.70	6.60	7.50								
103-105	1.90	2.20	2.70	3.30	4.00	4.70	5.40	6.10								
108-110-111	2.20	3.00	3.85	5.10	6.40	7.70	9.00	10.35								
114	1.65	2.05	2.70	3.50	4.30	5.15	6.05	6.95								
122	3.50	4.50	5.70	7.25	8.80											
124	2.10	2.70	3.50	4.40	5.40	6.40	7.40	8.40	9.45	10.45	11.50	12.55	13.60	14.70		
146	3.50	4.20	5.00	6.00												

TRACTION WHEELS

For Detachable Link Belting

PRICE LIST.

No.	Diameter.	Price.	No.	Diameter.	Price.
77	10	Bore $2\frac{7}{16}$ inches and Smaller. \$3.00 4.50 5.00	108	12	Bore $3\frac{7}{16}$ inches and Smaller. \$6.25 7.00 9.80 11.00 12.00 13.00 16.00 18.00 20.50 26.00
	12 $\frac{1}{2}$			15	
	14			17	
88	10	Bore $2\frac{11}{16}$ inches and Smaller. 4.00 5.00 5.50 6.20 8.00 10.00 12.00	108	19	12.00
	12			21	13.00
	14			22 $\frac{1}{2}$	16.00
	16			25	18.00
	20			28 $\frac{1}{2}$	20.50
	24			30	26.00
	30 $\frac{1}{2}$			35 $\frac{1}{2}$	
85	12	Bore $3\frac{7}{16}$ inches and Smaller. 6.00 8.00 9.00 9.80 11.50 14.50 21.00	146	12	Bore $3\frac{11}{16}$ inches and Smaller. 9.00 18.00 20.00 30.00 34.00
	15			19 $\frac{1}{2}$	
	17			25 $\frac{1}{2}$	
	19			30	
	21 $\frac{1}{2}$			35 $\frac{1}{2}$	
	25 $\frac{1}{2}$				
31 $\frac{1}{2}$					
103	21 $\frac{1}{2}$	Bore $3\frac{11}{16}$ inches and Smaller. 9.00 16.00	122	16	Bore $3\frac{11}{16}$ inches and Smaller. 11.00 13.00 15.00 20.00
	31 $\frac{1}{2}$			19 $\frac{1}{2}$	
				21 $\frac{1}{2}$	
				32	

DETACHABLE LINK BELTING TIGHTENERS AND IDLERS



Fig. 217.

SPROCKET TIGHTENERS. Price.

No. 1, for No. 62 link belt and under, \$5.00
No. 2, for link belt larger than No. 62, 7.50



Fig. 218.

CHAIN ROLLER IDLER.

Price, \$3.00.



Fig. 219.

FLOOR SPROCKET TIGHTENER.

Price, \$8.00.

SPROCKET WHEELS FOR VARIOUS SPECIAL MALLEABLE IRON CHAINS

PRICE LIST.

NO. 0146 —Bore 3 1/2 in. and Smaller			NO. 183 —Bore 2 1/2 in. and Smaller			NO. 193 —Bore 2 1/2 in. and Smaller			NO. 210 —Bore 3 1/2 in. and Smaller		
Pitch Dia. Ins.	No. of Teeth	Price.	Pitch Dia. Ins.	No. of Teeth	Price.	Pitch Dia. Ins.	No. of Teeth	Price.	Pitch Dia. Ins.	No. of Teeth	Price.
16 62	8	\$12.00	5 92	6	\$ 3.60	9 09	7	\$ 5.50	23 72	9	\$32.55
18 59	9	12 65	8 83	9	4 80	18 12	14	12 10	26 32	10	35 05
20 56	10	13 70	9 80	10	5 25	19 41	15	13 65	28 92	11	39 75
24 50	12	15 70	10 77	11	5 65	21 99	17	17 85	31 52	12	39 90
30 41	15	18 50	12 71	13	6 45	24 57	19	20 00			
36 32	18	24 00	14 65	15	7 25	28 44	22	24 00	NO. 240 —Bore 4 1/2 in. and Smaller		
71 78	36	45 00	16 59	17	8 05	40 05	31	42 03	17 79	11	\$23 80
NO. 151 —Also used for No. 145—Bore 1 1/2 in. and Smaller			NO. 185 —Bore 2 1/2 in. and Smaller			NO. 194 —Bore 2 1/2 in. and Smaller			NO. 243 —Bore 3 3/4 in. and Smaller		
5 20	10	\$2 40	6 62	8	\$4 40	9 09	7	\$ 5 70	21 84	16	\$31 00
6 26	12	2 65	8 21	10	5 25	12 96	10	7 70	45 18	28	51 60
6 79	13	2 75	9 80	12	6 05	14 25	11	9 90	NO. 245 —(See No. 620)		
12 62	24	4 10	12 71	13	6 45	15 54	12	11 90	NO. 315 —Also used for No. 0316—Bore 2 1/2 in. and Smaller		
17 92	34	5 35	14 57	15	7 25	18 12	14	13 65	3 87	5	\$1 80
18 98	36	5 65	16 16	20	9 40	19 41	15	16 00	4 62	6	1 90
23 75	45	7 20	24 35	25	11 70	20 70	16	17 85	5 36	7	2 20
NO. 0160 —Bore 3 1/2 in. and Smaller			NO. 187 —Bore 2 1/2 in. and Smaller			NO. 0194 —(Use No. 194)			NO. 194 —(Use No. 194)		
30 00	9	\$35 00	15 11	10	7 05	10 99	8	\$11 55	9 09	12	3 10
40 00	12	45 00	14 41	11	7 90	12 96	10	13 65	9 83	13	4 00
NO. 162 —Bore 2 3/4 in. and Smaller			NO. 188 —Bore 2 1/2 in. and Smaller			NO. 195 —Bore 2 1/2 in. and Smaller			NO. 196 —Bore 2 1/2 in. and Smaller		
10 74	20	\$4 20	19 61	15	11 50	16 00	8	\$11 55	15 83	8	\$10 10
NO. 180 —Bore 2 1/2 in. and Smaller			NO. 190 —Bore 2 1/2 in. and Smaller			NO. 197 —Bore 3 1/2 in. and Smaller			NO. 205 —Bore 3 1/2 in. and Smaller		
8 71	12	\$4 00	24 81	19	14 80	17 57	9	13 65	25 52	13	\$40 00
10 13	14	5 00	27 47	21	15 30	19 41	12	23 00	37 12	19	52 80
12 26	17	5 65	28 71	22	16 15	21 99	15	27 10			
15 81	22	7 40	NO. 189 —Bore 2 1/2 in. and Smaller			NO. 198 —Bore 3 1/2 in. and Smaller			NO. 209 —Bore 3 1/2 in. and Smaller		
20 07	28	7 85	13 17	8	\$8 15	19 56	10	\$16 00			
20 78	29	8 80	NO. 191 —Bore 2 1/2 in. and Smaller			NO. 199 —Bore 2 1/2 in. and Smaller			NO. 211 —Bore 3 1/2 in. and Smaller		
23 62	33	11 00	11 71	12	\$ 9 90	23 46	12	23 00			
29 30	41	14 00	16 47	17	15 40	29 31	15	27 10			
30 72	43	15 20	20 29	21	19 80	35 16	18	38 95			
NO. 181 —Bore 2 1/2 in. and Smaller			NO. 192 —Bore 3 1/2 in. and Smaller			NO. 201 —Bore 2 1/2 in. and Smaller			NO. 212 —Bore 3 1/2 in. and Smaller		
8 71	12	\$4 00	9 09	7	\$ 4 85	25 52	13	\$40 00			
10 13	14	5 00	12 96	10	7 70	37 12	19	52 80			
12 26	17	5 65	15 54	12	9 45						
14 39	20	6 50	21 99	17	14 70						
15 81	22	7 40	24 57	19	16 00						
20 78	29	8 80	28 44	22	19 60						
23 62	33	11 00									
29 30	41	14 00									
30 72	43	15 20									
NO. 182 —Bore 2 1/2 in. and Smaller			NO. 193 —Bore 2 1/2 in. and Smaller			NO. 202 —Bore 2 1/2 in. and Smaller			NO. 213 —Bore 3 1/2 in. and Smaller		
9 80	10	\$ 5 25	NO. 194 —Bore 2 1/2 in. and Smaller			NO. 203 —Bore 2 1/2 in. and Smaller			NO. 214 —Bore 3 1/2 in. and Smaller		
12 71	13	6 45	NO. 195 —Bore 2 1/2 in. and Smaller			NO. 204 —Bore 2 1/2 in. and Smaller			NO. 215 —Bore 3 1/2 in. and Smaller		
14 65	15	7 25	NO. 196 —Bore 2 1/2 in. and Smaller			NO. 205 —Bore 2 1/2 in. and Smaller			NO. 216 —Bore 3 1/2 in. and Smaller		
24 35	25	11 70	NO. 197 —Bore 2 1/2 in. and Smaller			NO. 206 —Bore 2 1/2 in. and Smaller			NO. 217 —Bore 3 1/2 in. and Smaller		
28 33	29	13 85	NO. 198 —Bore 2 1/2 in. and Smaller			NO. 207 —Bore 2 1/2 in. and Smaller			NO. 218 —Bore 3 1/2 in. and Smaller		

NOTE—These prices cover Wheels with bores as specified above. For Wheels having hubs and bores larger than standard, or otherwise special, additional charge will be made on account of additional weight and labor.

For larger than maximum bore specified in list add 10% for each quarter inch or fraction thereof.

SPROCKET WHEELS FOR VARIOUS SPECIAL MALLEABLE IRON CHAINS—Continued

PRICE LIST.

NO. 315—Also used for Nos. 0316—Bore 2 1/4 in. and Smaller			NO. 325—Also used for Nos. 0326 and 1030—Bore 3 1/4 in. and Smaller			NO. 330—Continued			NO. 450—Also used for Nos. 395, 475 and 550—Bore 3 1/4 in. and Smaller		
Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.
41.86	56	\$22.50	7.01	7	\$ 5.00	22.46	21	\$15.55	10.76	5	\$ 8.80
44.84	60	24.75	8.00	8	5.25	24.55	23	17.45	12.65	6	10.10
47.82	64	26.25	8.99	9	5.25	25.60	24	18.35	14.54	7	11.50
55.27	74	28.50	9.98	10	6.00	31.87	30	24.50	16.43	8	13.00
			10.97	11	6.50	33.96	32	27.00	18.32	9	14.60
			11.96	12	8.30	37.09	35	30.80	20.21	10	16.40
			12.95	13	9.20	38.14	36	32.20	22.10	11	18.30
			13.94	14	9.65	39.18	37	33.60	25.88	13	24.00
			14.93	15	9.90	40.23	38	35.00	29.66	15	29.00
			15.92	16	11.55	44.41	42	40.75	31.55	16	32.00
			16.91	17	12.00	48.63	47	48.85	37.22	19	37.00
			17.90	18	13.00	60.08	57	62.65	46.67	24	41.60
			18.89	19	13.30	NO. 335—Also used for Nos. 850—Bore 3 1/2 in. and Smaller			NO. 455—Bore 3 1/2 in. and Smaller		
			19.88	20	13.50	9.18	7	\$ 6.25	16.43	8	\$21.20
			20.87	21	14.45	10.48	8	7.90	18.32	9	22.70
			21.86	22	15.30	13.08	10	8.25	20.21	10	24.15
			22.85	23	16.00	15.68	12	11.90	22.10	11	26.00
			23.84	24	16.80	16.98	13	13.20	25.88	13	30.00
			24.83	25	16.80	18.28	14	13.85	29.66	15	34.00
			25.82	26	16.50	19.58	15	14.95	31.55	16	36.00
			26.81	27	16.45	20.88	16	15.40	37.22	19	41.00
			27.80	28	16.80	23.48	18	19.35	46.67	24	48.50
			28.79	29	18.40	24.78	19	20.70	16.08	8	\$24.00
			29.78	30	20.00	26.08	20	21.15	18.05	9	26.00
			30.77	31	21.60	28.68	22	22.00	20.02	10	28.50
			31.76	32	23.20	31.28	24	26.00	21.99	11	31.50
			32.75	33	24.00	33.88	26	30.00	25.93	13	38.50
			33.74	34	25.60	36.48	28	33.00	27.90	14	42.50
			34.73	35	27.20	41.68	32	40.00	NO. 465—(Use No. 460)		
			35.72	36	29.00	NO. 0340—(Use No. 1240)			NO. 468—(Use No. 460)		
			36.71	37	30.40	NO. 342—(Use No. 330)			NO. 475—(Use No. 450)		
			37.70	38	32.00	NO. 345—Bore 3 1/2 in. and Smaller			NO. 480—Bore 3 1/2 in. and Smaller		
			38.69	39	33.20	14.48	9	\$14.50	16.73	6	\$51.30
			39.68	40	35.20	17.76	11	17.50	19.17	7	54.00
			40.67	41	37.60	24.32	15	23.50	21.61	8	56.10
			41.66	42	40.00	27.60	17	26.50	24.05	9	58.50
			42.65	43	42.80	32.52	20	33.00	30.84	11	63.30
			43.64	44	44.80	39.08	24	45.00	NO. 500—Bore 3 1/4 in. and Smaller		
			44.80	45	48.30	40.72	25	47.50	7.91	6	\$ 4.40
			45.53	46	55.30	NO. 395—(Use No. 450)			10.38	8	5.60
			46.27	47	54.75	NO. 410—(Use No. 425)			11.61	9	6.00
			47.00	48	57.00	NO. 415—(Use No. 425)			12.85	10	6.75
			47.73	49	65.70	NO. 425—Also used for Nos. 410, 415 and 430—Bore 3 1/2 in. and Smaller			14.08	11	7.50
			48.46	50	78.75	NO. 395—(Use No. 450)			15.32	12	8.00
			49.19	51		NO. 410—(Use No. 425)			NO. 550—(Use No. 450)		
			49.92	52		NO. 415—(Use No. 425)			NO. 567—Bore 2 1/4 in. and Smaller		
			50.65	53		12.24	6	\$ 7.35	5.94	8	\$ 2.50
			51.38	54		14.12	7	8.55	7.32	10	3.25
			52.11	55		16.00	8	10.50	8.70	12	3.75
			52.84	56		17.88	9	12.25	10.08	14	4.50
			53.57	57		19.76	10	13.60	12.84	18	6.25
			54.30	58		23.52	12	16.00	15.60	22	8.00
			55.03	59		29.16	15	20.80	28.71	41	12.00
			55.76	60		NO. 430—(Use No. 425)					

NOTE—These prices cover Wheels with bores as specified above. For Wheels having hubs and bores larger than standard, or otherwise special, additional charge will be made on account of additional weight and labor.

For larger than maximum bore specified in list add 10% for each quarter inch or fraction thereof.

SPROCKET WHEELS FOR VARIOUS SPECIAL MALLEABLE IRON CHAINS—Concluded

PRICE LIST.

NO. 620—Also used for No. 245—Bore 3 1/16 in. and Smaller			NO. 635—Bore 4 1/16 in. and Smaller			NO. 823—Bore 3 1/8 in. and Smaller			Pitch Dia. Ins.	No. of Teeth.	Price.
Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.	Pitch Dia. Ins.	No. of Teeth.	Price.			
16.48	10	\$19.00	30.74	16	\$47.20	10.34	8	\$ 8.40	29.98	23	\$30.30
18.12	11	19.90	35.13	18	61.75	11.64	9	9.00	36.58	28	40.20
21.40	13	21.60	38.92	20	68.40	15.56	12	11.40	40.54	31	46.50
23.04	14	23.40	NO. 730—Bore 3 3/8 in. and Smaller			18.17	14	12.90	NO. 830—Bore 3 1/2 in. and Smaller		
26.32	16	27.20	17.66	9	\$10.40	19.47	15	13.80	19 1/2	15	\$26.10
27.96	17	29.00	19.58	10	11.70	24.69	19	18.30	23 1/2	18	30.90
32.88	20	35.55	23.42	12	14.30	26.00	20	19.00	29 1/2	23	42.00
36.16	22	39.00	25.34	13	15.70	31.22	24	24.90	36 1/2	28	55.00
41.08	25	42.00	27.26	14	17.30	35.33	27	27.00	NO. 844—Bore 3 3/4 in. and Smaller		
46.00	28	45.60	31.10	16	20.20	36.44	28	28.00	24.71	12	\$28.65
49.28	30	49.25	34.94	18	24.20	39.05	30	29.50	29.31	15	37.20
55.84	34	55.80	38.78	20	28.05	41.66	32	32.00	NO. 1050—Bore 4 1/4 in. and Smaller		
62.40	38	62.80	44.54	23	33.60	NO. 825—Bore 3 3/4 in. and Smaller			16.69	5	\$18.00
NO. 631—Bore 3 1/2 in. and Smaller			NO. 810—Bore 2 1/2 in. and Smaller			11.50	9	\$11.40	20.00	6	23.80
31.23	16	\$36.00	8.03	6	\$ 3.75	15.46	12	15.00	23.31	7	29.60
35.10	18	39.95	9.31	7	4.40	16.78	13	16.20	26.62	8	36.80
39.05	20	48.00	11.87	9	6.30	18.10	14	17.40	36.55	11	52.80
			15.71	12	8.50	19.42	15	18.60			
			20.83	16	10.20	22.06	17	20.70			
						23.38	18	22.80			

SPROCKET WHEELS FOR COMBINATION STEEL AND MALLEABLE CHAINS

Nos. 102 102 1/2	No. 110 Bore 3 1/4 inches and Smaller			No. 111.	No. 131.	No. 132.	No. 188.
	Diameter.	Teeth.	Price.				
	19 1/2	10	\$ 8.00				
Same List as 85-95 Standard	23 1/2	12	10.00	Same List as 108 Standard	Same List as 103 Standard	Same List as 122 Standard	Same List as 75-78-88 Standard
	25 1/4	13	12.00				
	31	16	14.00				
	35	18	17.00				

NOTE—These prices cover Wheels with bores as specified above. For Wheels having hubs and bores larger than standard, or otherwise special, additional charge will be made on account of additional weight and labor.

For larger than maximum bore specified in list add 10% for each quarter inch or fraction thereof.

Sprocket Wheels for Weller Steel Drag Chains

PRICE LIST.

Nos. 565, 566, Bore 2 1/2 and Smaller.				No. 560, Bore 2 1/2 and Smaller.			
Diam.	Teeth.	Price.	Kind.	Diam.	Teeth.	Price.	Kind.
14 1/2	5	\$ 8.00	A	12	6	\$ 6.00	A
16 1/2	6	9.00	A	19	10	10.00	A B
21 1/2	8	11.00	A B	24	12	14.00	A
23 1/2	9	15.00	A B	12	Plain Face Idler		
16 1/2	Plain Face	.....		19		6.00	
21 1/2	" "	.....				10.00	
23	" "	.....				

No. 570, Bore 3 1/2 and Smaller.				No. 550, Bore 2 1/2 and Smaller.			
Diam.	Teeth.	Price.	Kind.	Diam.	Teeth.	Price.	Kind.
18	5	\$12.00	A B	11 1/2	6	\$ 6.00	A
18	Plain Face	12.00		18	9	10.00	B
35 1/2	11	25.00	A B	20	10	11.00	A
				24	12	14.00	A B

Sprocket Wheels for Weller Steel Coil Chain

	Diam. Inches.	Teeth.	Price. Bore 3 7/16 and Smaller
	13	5	\$ 4.50
	18 1/2	6	5.00
No. 1. 4x 1/2 Link	20	8	8.50
	23	9	10.00
	16 1/2	5	7.50
No. 2. 5x 1/2 Link	19	6	9.50
	22	7	12.00
	29	9	20.00
No. 3. 6x 1/2 Link	19 1/2	5	11.00
	23 1/2	6	14.00
	31	8	21.00
No. 4. 7x 1/2 Link	18 1/2	4	14.00
	23	5	18.00
	31 1/2	7	23.00
	23	5	20.00
No. 5. 7x 1 Link	31 1/2	7	26.50
	26	5	25.00
No. 6. 8x 1/2 Link	30	6	30.00
	26	5	26.50
No. 7. 8x 1 Link	30	6	32.00



Fig. 220.
Sprocket Wheel.

For larger than maximum bore specified in list add 10% for each quarter inch or fraction thereof.

DRUM WHEELS FOR COIL CHAINS



Fig. 221.

Heavy Double Flanged and Grooved Idler.

Prices of Drum Wheels Furnished upon Application.



Fig. 222.

Drum Wheel, for Discharge End of
Conveyors.

THE PATULLO SWING CUT-OFF SAW

Our Improved Swing Cut-off Saw is made with a wrought steel tubular frame, and, although much stronger is far lighter than those of cast iron. The machine is carefully balanced, which combines with its lightness to make the easiest and most rapid Cut-Off Saw on the market to operate.

DIMENSIONS.

Size of Driving Pulley, 16x4½ inches.
 Size of Driven Pulley, on Mandrel, 3½x4½ inches.
 Largest Saw machine will carry, 16 inches.
 Diameter of Mandrel, 1¼ inches.
 Diameter of Head Shaft, 1½ inches.

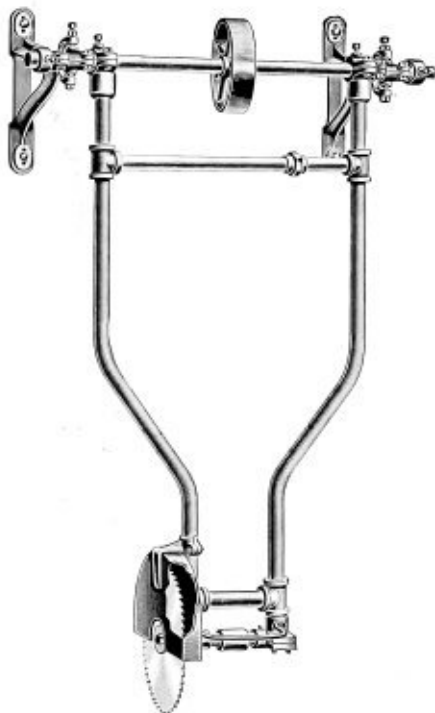


Fig. 223.

PRICE LIST.

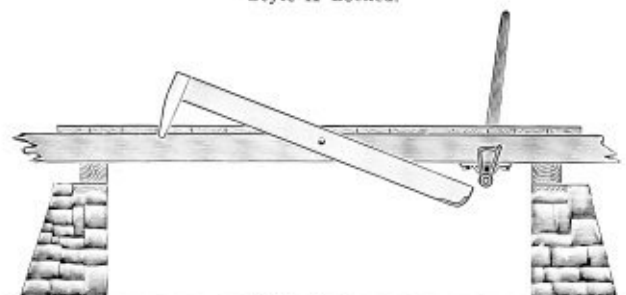
Price complete, as shown in cut, without saw or steel saw guard.....	\$100.00
Steel saw guard	10.00
Tight and loose pulleys, 16x4½, per pair	15.00

Prices of saws quoted on application.

WELLER STANDARD WAGON DUMP IRONS



Style A Locked.



Style A Open.



Style B.



We manufacture two styles of Standard Dump Irons, A and B. The former is intended to be fitted with a wooden lever for operating the dump. Style B is furnished with an iron lever and rod for this purpose. We furnish the iron-work only as the wood-work can be made to better advantage on the ground.

PRICE LIST.

Style A.....\$13.00 Style B.....\$15.00

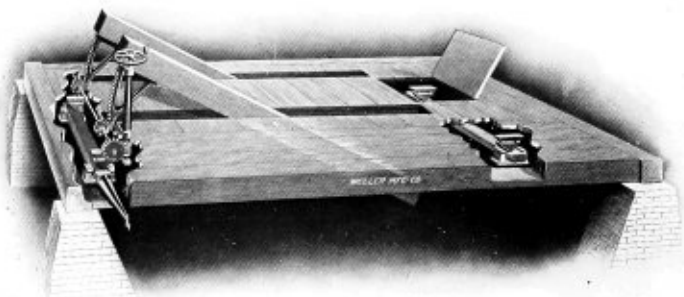


Fig. 224.

THE WELLER IMPROVED CONTROLLABLE WORM GEAR WAGON DUMP

The above illustrates the most modern wagon dump on the market. It possesses features not contained in any other and does away with the objectionable features which have kept a good many from installing the old style of dumps. Here are a few of "Weller" features:

No Chain to Break.—The motion is transmitted by a Vertical Shaft to a worm wheel on the shaft carrying the gears which mesh into the gear segments that are fast to the dump timbers. The chain used on the old styles often breaks when the load strikes the dump, sometimes injuring the horses; the "Weller" can't do that.

No Brake Used—or required on the "Weller." Every elevator man knows that once in a while the old style brake refuses to act, or the pin in the chain breaks, making lots of trouble and sometimes takes a finger with it. No such thing can happen to the "Weller." The motion is by means of a Worm and Worm Gear, the same as used in the majority of chain hoists. **It Can't Slip**—you move the hand wheel any distance whatever and the Dump moves correspondingly and it stays there.

No Wooden Parts.—Everything about the "Weller" is Iron or Steel. The old style dumps use a wooden operating stand; the "Weller" stand is Iron. It lasts longer and is better while it lasts.

The Operating Stand—can be placed several feet to one side if so desired.

Everything required for erecting the "Weller" dump is furnished, together with a timber list. They can be used with a standard Dump Scale, an ordinary Hay Scale, or without either. They cost no more than the old styles. We carry them in stock.

If desired, hangers will be furnished so mechanism can be attached to rear of dump. Unless otherwise specified, Irons for front attachment will be sent. Price, \$50.00.

IMPROVED ALL IRON OVERHEAD DUMP

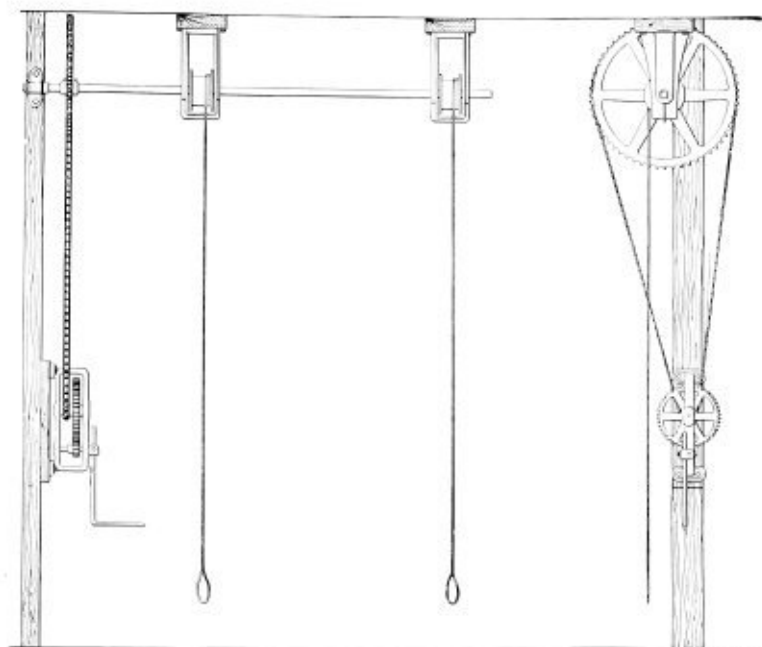


Fig. 225.

The above Dump is of neat and compact design and very easy to operate. It is also the most durable Overhead Dump on the market.

While it possesses numerous advantages over the old style Dump of this type, it is no higher in price.

Price\$35.00

THE SMITH OVERHEAD DUMP

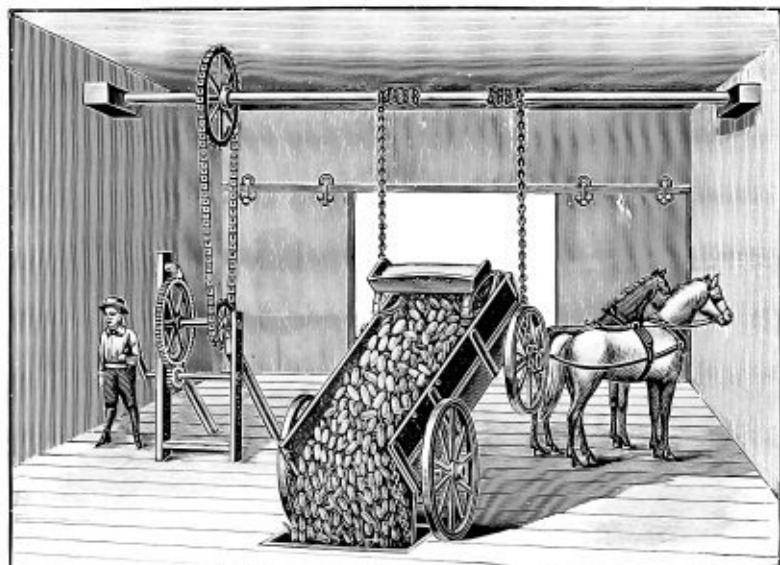


Fig. 226.

This is one of the most rapid and satisfactory Wagon Dumps on the market. It may be operated by a boy, as the power required is reduced to a minimum by means of the Jack shown in the illustration. A large number of these Dumps are in successful operation in various parts of the country.

Price, including Jack, Sprocket Wheels, 20 ft. Detachable Link Belting and Roller\$35.00

RELIANCE AUTOMATIC DUMP CONTROLLER

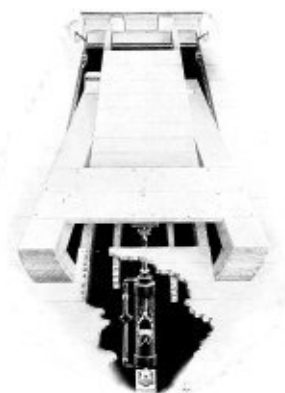


Fig. 227.

The manner in which plain wagon dumps drop has always been very objectionable to grain men, but especially so to many farmers with fractious teams.

By the use of the Reliance Automatic Dump Controller the dump is controlled from the moment the trigger is pulled, causing it to settle down easily and without the least jerk or jar.

The device is perfectly automatic in action and is located under the driveway floor taking up no room in the sink.

The cylinder is made of three-inch seamless tubing, bored true, and filled with cold tested dynamo oil, which has the same density during cold and hot weather.

The cylinder heads are substantially constructed, the top cylinder head is provided with a packing nut, through which the cold rolled polished piston rod works. To this piston rod is connected the piston head, which is provided with cast cylinder rings.

In this head is located an automatic valve, so when the piston is on the upward motion it seats itself, which forces all the oil out through a one-half inch gas pipe and then returns to the bottom of cylinder. In this half-inch pipe is located the regulating valve. In the downward motion of the piston this valve in the cylinder head releases and allows the dump to come up free.

Price, complete\$24.00

ONE MAN LIFT

This Lift operates without power, being furnished with counter balance and equalizing weights. It is provided with a safety clutch to prevent falling should the lift rope break and will be found a great convenience in mills and elevators.



Fig. 228.
Elevator even with floor.

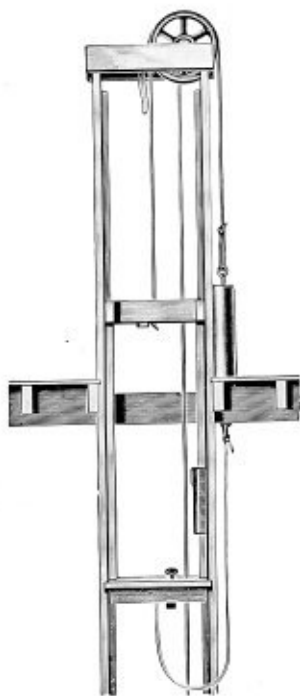


Fig. 229.
Elevator below floor.

Each outfit consists of the following:

One Elevator, made of oak timber, 7 feet high, with platform 26x29 in.

One counter balance weight and three equalizing weights.

Guide rails, 2x1½ inch pine, sufficient for a 35-foot lift.

One each of lift, guide and trail ropes.

For lifts over 35 feet an extra charge per foot is made.

Extra weights furnished to carry two men, if desired for which an additional charge is made.

PRICE LIST.

Elevator, consisting of outfit mentioned above.....	\$50.00
Elevators over 35-foot lift, 30 cents per foot additional.	

THE CONSTANT CHAIN GRAIN CONVEYOR AND FEEDER

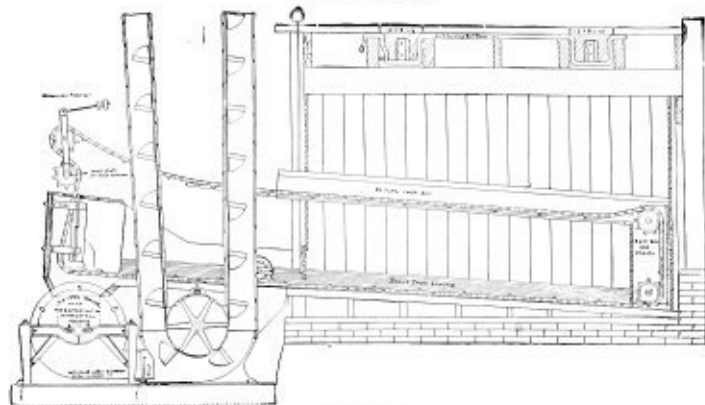


Fig. 230.

In the above cut we show the combination of a Sheller and Elevator Feeder. With this Outfit and Kick-off Attachment, both ear and shelled corn may be dumped into the same dump-sink. With the Elevator Feeder raised the ear corn passes to the sheller, the shelled grain drops through the grate bars to the boot hopper. When it is desired to elevate the ear corn, lower the Elevator Feeder, after removing the grate bars, leaving enough space for the chain to pass under.

So thoroughly does the chain clean the trough that wheat or oats may be dumped and elevated in their turn from the same sink.

This Feeder works on a level, and on inclines as high as 8 ft. in 32 ft. Not depending on gravity feed, the depth of sink may be reduced, allowing the driveway to be lowered—an important feature.

Made in different styles to suit requirements.

PRICE LIST.

Outfit including any style of feeder head, shaft, 2 pillow blocks, collar, 10-tooth head driver, back box, shafts and wheels, 14-tooth clutch sprocket, clutch hub and lever, 10 feet track, 25 feet B. S. C. chain No. 26-77 or No. 28-77 and a Universal Tightener..... \$100.00

Note.—We will furnish 10 to 24 tooth clutch sprocket, if specified.

ACCESSORIES

Feeder Head..... \$50.00 Kick-off Attachment..... \$20.00

B. S. C. DRAG CHAIN

PRICE LIST.

All plain links	\$0.35 per foot
No. 26-77 for Ear Corn .....	.38 per foot
No. 28-77 for Small Grain .....	.40 per foot
All F2 Special links .....	.48 per foot
Extra No. 77 Plain Pins	Net .01 each
Extra No. 77 Coupling Pins	Net .02 each

STEEL TRACK FOR B. S. C. DRAG CHAIN

This track is made of the best bessemer steel, consisting of one bottom piece and two side pieces, each drilled and countersunk every 8 inches.

Price, per lineal foot..... \$0.30

PEERLESS GRAIN FEEDER



Fig. 231.

The construction of the Feeder is very simple. It consists of a steel frame, shaking pan contained within frame, eccentric, eccentric rod and gate at lower end of the frame to regulate the discharge of grain. Guard plates are secured to the frame at the top so as to overlap the upper edges of the pan, and a thread adjusting device is fastened to the two side plates in the rear, thus making the machine grain-tight throughout.

The pan is connected by a rod to the eccentric; in this manner a forward and backward motion is produced, which causes a constant and uniform discharge of grain.

The Feeder works itself clean of grain immediately, so that there is no chance of different kinds of grain becoming mixed.

Not depending on gravity feed it will greatly increase the capacity of sink.

PRICE LIST.

Feeder No. 1—6 ft. long, 20 in. wide, 13 in. high.....\$120.00
 Feeder No. 2—8 ft. long, 20 in. wide, 13 in. high..... 150.00

The above are equipped with a No. 77 9-in. sprocket wheel. Speed 175 revolutions per minute.

THE RICHNER PATENT ELEVATOR AND SHELLER FEEDER

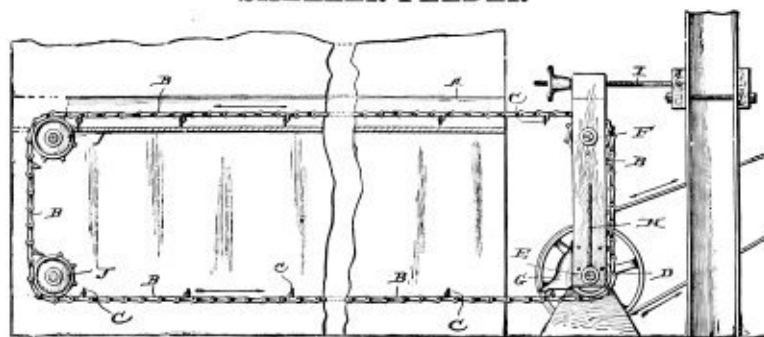


Fig. 232.

Prices and further information given upon request.

THE APPLETON HORSE POWER.

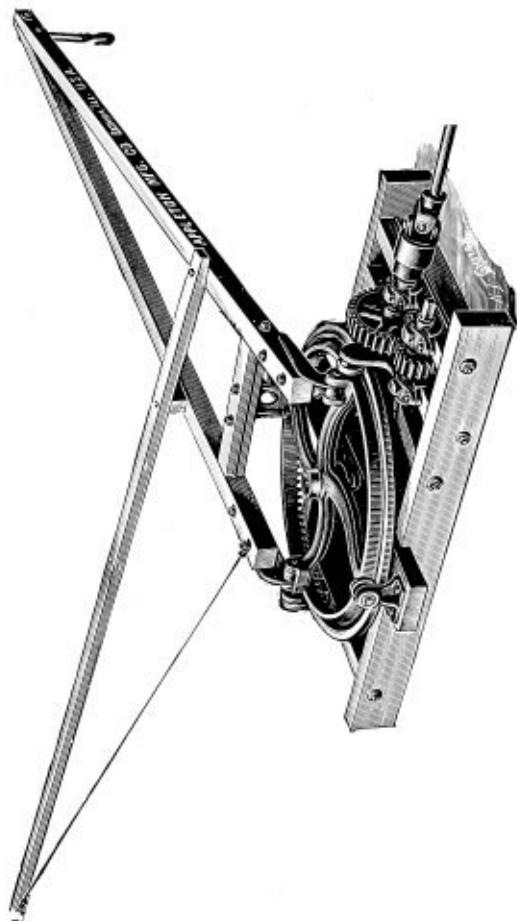


Fig. 233.

This Horse Power is a strong, durable, light-running one or two horse machine. It has a single gear for well drilling and pumping, and we can recommend it as one of the most satisfactory powers made. Speed, double gear, 28 revolutions to one turn of the horses. Speed, single gear, 10 revolutions to one turn of the horses. Price, complete, one or two horse double gear, \$40.00. Price, complete, one or two horse single gear, \$35.00.

WAGON AND HAY SCALES

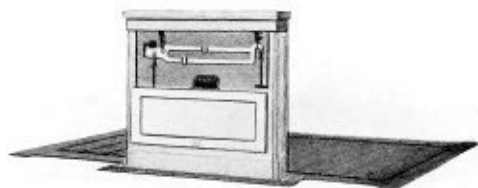


Fig. 234.

The sizes of platform of these Scales may be varied somewhat from dimensions given without increasing the cost of the scales.

Trusses for platform timbers are furnished with all Scales having platform 18 feet or longer, except Nos. 1846 and 2100.

We furnish extensions to carry the beams unusual distances from the platform at additional cost.

All prices are exclusive of the cost of timber and foundation, which is to be paid by purchaser.

Suspension Hay Scales furnished to order when required.

PRICE LIST.

No.	Capacity, Tons.	Size of Platform.	Distance from Edge of Platform to Beam Rod.	Price Single Beam.	Price Double Beam.
1800	20	22 x 10 ft. 3 $\frac{3}{8}$ in.	2 ft. 1 in.	\$570.00	\$585.00
1836	20	20 x 7 ft. 9 $\frac{1}{2}$ in.	4 ft. 1 $\frac{1}{4}$ in.	520.00	535.00
1922	20	16 x 7 ft. 10 in.	1 ft. 10 $\frac{1}{2}$ in.	450.00	465.00
1802	15	22 x 10 ft. 3 $\frac{3}{8}$ in.	2 ft. 1 in.	440.00	455.00
1838	15	18 x 8 ft. 3 in.	4 ft. 5 $\frac{1}{2}$ in.	420.00	435.00
1924	15	14 x 8 ft. 4 $\frac{1}{2}$ in.	2 ft. 1 in.	390.00	405.00
1806	10	22 x 10 ft. 3 $\frac{3}{8}$ in.	2 ft. 1 in.	365.00	380.00
1843	10	18 x 8 ft. 3 in.	4 ft. 5 $\frac{1}{2}$ in.	350.00	365.00
1928	10	14 x 8 ft. 4 $\frac{3}{8}$ in.	2 ft. $\frac{3}{4}$ in.	300.00	315.00
1845	8	20 x 7 ft. 9 $\frac{1}{2}$ in.	4 ft. 1 $\frac{1}{4}$ in.	315.00	330.00
1930	8	16 x 7 ft. 10 in.	1 ft. 10 $\frac{1}{2}$ in.	275.00	290.00
1846	6	18 x 8 ft. 3 in.	4 ft. 5 $\frac{1}{2}$ in.	275.00	290.00
2100	6	22 x 8 ft.	2 ft. 9 in.	250.00	265.00
2110	6	14 x 8 ft.	2 ft. 2 $\frac{1}{2}$ in.	225.00	240.00
2112	5	14 x 8 ft.	2 ft. 2 $\frac{1}{2}$ in.	200.00	210.00
2114	4	14 x 8 ft.	2 ft. 2 $\frac{1}{2}$ in.	170.00	180.00

DUMP SCALES

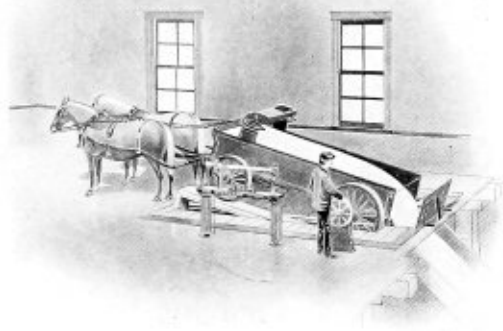


Fig. 235.

For use in elevators and grain warehouses for convenient and quick weighing and dumping of grain.

The platforms of these Scales are entirely free from levers, so that dump can be built in the platform.

Prices are exclusive of timber and foundation.

Beam fixtures when furnished, extra. (See page 450.)

Beams graduated by 2½-pound marks.

PRICE LIST.

No.	Capacity, Tons.	Size of Platform.	Distance from Edge of Platform to Beam Rod.	Price Single Beam.	Price Double Beam.
2211	4	14 x 8 ft.	2 ft. 8 in.	\$165.00	\$175.00
2213	6	14 x 8 ft.	2 ft. 8 in.	225.00	240.00
2215	6	22 x 8 ft.	3 ft. 4 in.	250.00	265.00

HOPPER SCALES FOR GRAIN

TRUSSED LEVER PATTERN.

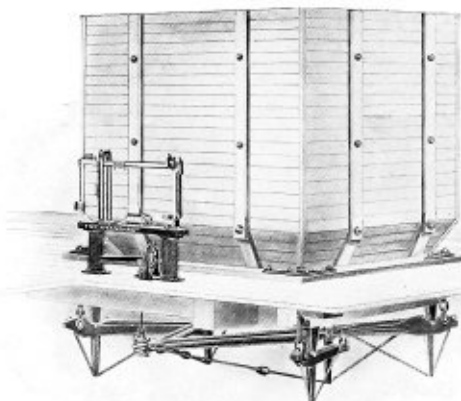


Fig. 236.

These Scales used extensively in elevators, grain warehouses, etc., and are suspended in floor.

Scales can be framed in wood or steel.

May be equipped with our patent recording beam, as illustrated, instead of regular single beam. Prices on application.

All prices are exclusive of the hopper and timber or steel, which are to be furnished by purchaser.

PRICE LIST.

No.	Capacity.		Price.
	Bushels.	Pounds.	
1750	200	12,000 x 5	\$225.00
1752	300	18,000 x 5	285.00
1754	350	21,000 x 5	300.00
1762	400	24,000 x 5	320.00
1764	500	30,000 x 5	350.00
1768	600	36,000 x 5	390.00
1770	700	42,000 x 5	430.00
1772	800	48,000 x 5	475.00
1794	1000	60,000 x 5	600.00
1796	1200	72,000 x 5	700.00
1739	1400	84,000 x 5	800.00
1741	1600	96,000 x 5	900.00

HOPPER SCALES FOR GRAIN

DORMANT PATTERN WITH
BRASS BEAM, SLIDING
POISE AND SET
SCREW.

Illustration shows 150-bushel
scale.

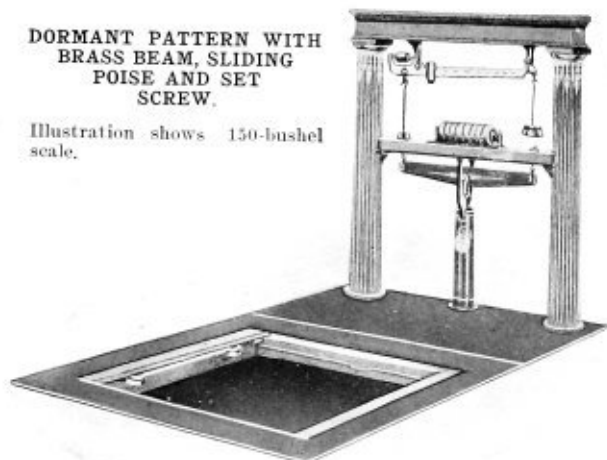


Fig. 237.

The hopper is set upon the platform and braced to relieve pressure, permitting a central discharge of grain.

The Scales are usually set upon the floor to avoid weakening of building.

Prices are exclusive of the Hopper which is to be furnished by purchaser.

PRICE LIST.

With Wood Pillar.

No.	Capacity, Bushels.	Capacity, Pounds.	Platform, Inches.	Opening for Hopper, Inches.	Price.
5600	30	1,800 x	42 x 30	14 x 14	\$85.00
5602	40	2,400 x	46 x 37	16 x 16	92.00
1606	60	3,600 x	42 x 44	16 x 16	105.00
1610	100	6,000 x	48 x 48	22 x 22	140.00
1614	125	7,500 x	48 x 48	22 x 22	160.00
1618	150	9,000 x 1	49½ x 51	36 x 36	175.00
1619	200	12,000 x 1	49½ x 51	36 x 36	195.00

With Two Iron Pillars.

5630	30	1,800 x	42 x 30	14 x 14	\$100.00
5632	40	2,400 x	46 x 37	16 x 16	105.00
1608	60	3,600 x	42 x 44	16 x 16	125.00
1612	100	6,000 x	48 x 48	22 x 22	160.00
1616	125	7,500 x	48 x 48	22 x 22	180.00
1620	150	9,000 x 1	49½ x 51	36 x 36	195.00
1621	200	12,000 x 1	49½ x 51	36 x 36	215.00

DORMANT WAREHOUSE SCALES

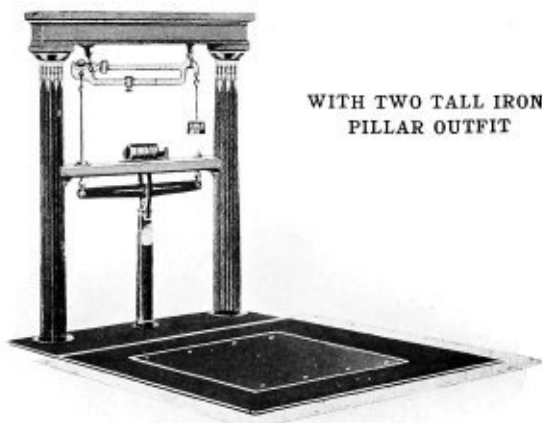
WITH TWO TALL IRON
PILLAR OUTFIT

Fig. 238.

Double brass beam, sliding poise and lower poise with set screw. Double beam is convenient to take tare of trucks or cases.

These Scales same as preceding, but are fitted with two tall iron pillars.

Short iron pillar outfit, shown on page 450 furnished if desired, at corresponding price.

When ordered with Scale, a full capacity beam to dispense with loose weights will be furnished at an additional list price of \$20.00.

Furnished with set of marginal irons to protect wood floor surrounding platform.

PRICE LIST.

No.	Capacity, Pounds.	Platform, Inches.	Platform to Pillar, Inches.	Price.
1046	5,000 x $\frac{1}{2}$	48 x 48	22	\$170.00
1048	3,500 x $\frac{1}{2}$	42 x 44	12	125.00
1050	2,500 x $\frac{1}{2}$	46 x 37	12	105.00
5054	1,500 x $\frac{1}{2}$	42 x 30	8 $\frac{1}{2}$	100.00
1052	3,500 x $\frac{1}{2}$	42 x 44 { With extra long neck }	20	135.00

DORMANT WAREHOUSE SCALES

BRACKET FIXTURES.

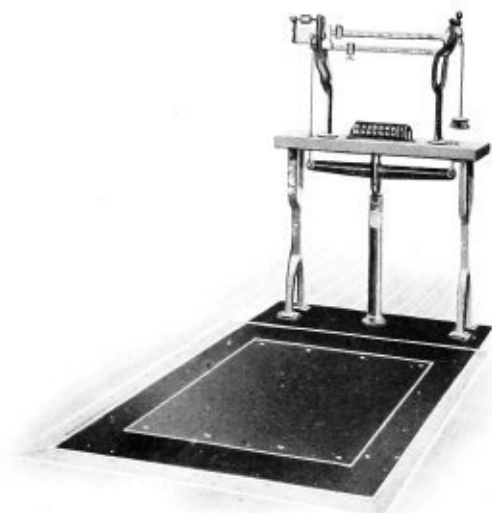


Fig. 239.

These Scales are furnished with iron brackets supporting hardwood shelf and beam stands.

This style of beam outfit is more convenient in some locations than tall pillars with beam hung under cap.

When ordered with Scale, a full capacity beam will be furnished at an additional price of \$20.00.

PRICE LIST.

No.	Capacity, Pounds.	Platform, Inches.	Price.
1025	5,000 x $\frac{1}{2}$	48 x 48	\$160.00
1027	3,500 x $\frac{1}{2}$	42 x 44	120.00
1029	3,500 x $\frac{1}{2}$	{ 42 x 44 With extra long neck }	125.00
1031	2,500 x $\frac{1}{2}$	46 x 37	100.00
5033	1,500 x $\frac{1}{2}$	42 x 30	90.00

GRAIN DEALERS SCALES

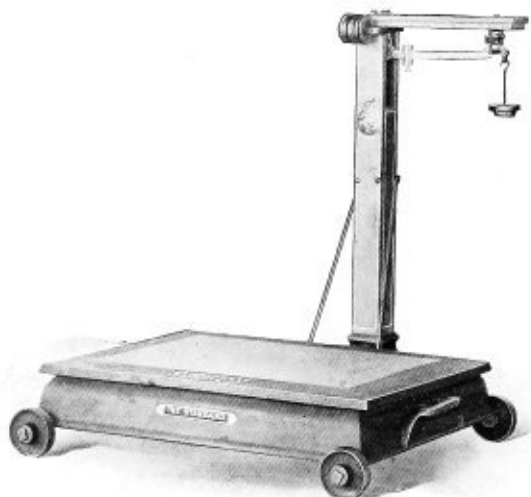


Fig. 240.

With brass beam, sliding poise and set screw graduated 100 pounds by $\frac{1}{2}$ -pound divisions.

Suited for use in packing houses, flour mills and feed stores, for weighing meats, flour, grain in bags, and all bulky materials.

Scales substantially made and have wood pillar braced with iron.

The long dimension of platform is parallel with beam. Axle attached to frame and parallel to short dimension, and scale is moved in same direction as beam, which is not the usual case.

PRICE LIST.

With Wheels.

Without Wheels.

No.	Capacity, Pounds.	Plat- form, Inches.	Price.	No.	Capacity, Pounds.	Plat- form, Inches.	Price.
1310	1,000 x $\frac{1}{2}$	42 x 30	\$73.00	1300	1,000 x $\frac{1}{2}$	42 x 30	\$68.00
1312	1,200 x $\frac{1}{2}$	42 x 30	77.00	1302	1,200 x $\frac{1}{2}$	42 x 30	72.00
5312	1,500 x $\frac{1}{2}$	42 x 30	85.00	5302	1,500 x $\frac{1}{2}$	42 x 30	80.00

Bag Rack on above scales extra list, \$5.00.

PORTABLE PLATFORM SCALE

WITH BRASS BEAM AND SLIDING POISE.



Fig 241.

Suitable for the weighing of general merchandise in all kinds of trade. Scales of 1,000 pounds capacity and larger have pillar braced with iron rods.

Beams graduated 50 pounds by $\frac{1}{4}$ -pound divisions on scale 400 pounds and 600 pounds capacity, and on larger sizes 100 pounds by $\frac{1}{2}$ -pound divisions. Panel board for platform of hard wood.

PRICE LIST.

With Wheels.

Without Wheels.

No.	Capacity Pounds.	Plat- form, Inches.	Price.	No.	Capacity, Pounds.	Plat- form, Inches.	Price.
1116	2,500 x $\frac{1}{2}$	26 x 34	\$85.00	1100	2,500 x $\frac{1}{2}$	26 x 34	\$80.00
1118	2,000 x $\frac{1}{2}$	25 x 33	75.00	1102	2,000 x $\frac{1}{2}$	25 x 33	70.00
1120	1,500 x $\frac{1}{2}$	21 x 28	56.00	1104	1,500 x $\frac{1}{2}$	21 x 28	52.00
1122	1,200 x $\frac{1}{2}$	20 x 28	49.00	1106	1,200 x $\frac{1}{2}$	20 x 28	45.00
1124	1,000 x $\frac{1}{2}$	17 x 26	43.00	1108	1,000 x $\frac{1}{2}$	17 x 26	39.00
1126	800 x $\frac{1}{2}$	17 x 26	38.00	1110	800 x $\frac{1}{2}$	17 x 26	34.00
1128	600 x $\frac{1}{2}$	16 x 25	33.00	1112	600 x $\frac{1}{2}$	16 x 25	30.00
1130	400 x $\frac{1}{2}$	15 x 21	26.00	1114	400 x $\frac{1}{2}$	15 x 21	23.00

SHORT PILLAR BEAM FIXTURES

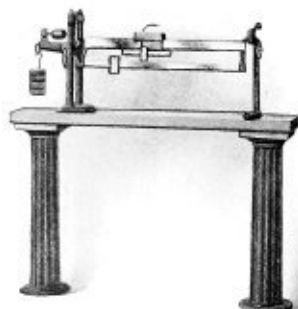


Fig. 242.

Furnished with wagon and warehouse scales.

For 6 tons and larger, extra, \$30.00.

For 5 tons and smaller, extra, \$25.00.

BRACKET BEAM FIXTURES



Fig. 243.

This is also a very neat outfit for a moderate price, and very convenient for use in offices and warehouses.

For all scales 10 tons capacity and less, extra, \$20.00.

Prices do not include beam, counterpoise or weight.

THE AMERICAN GRAIN AND MALT CLEANER

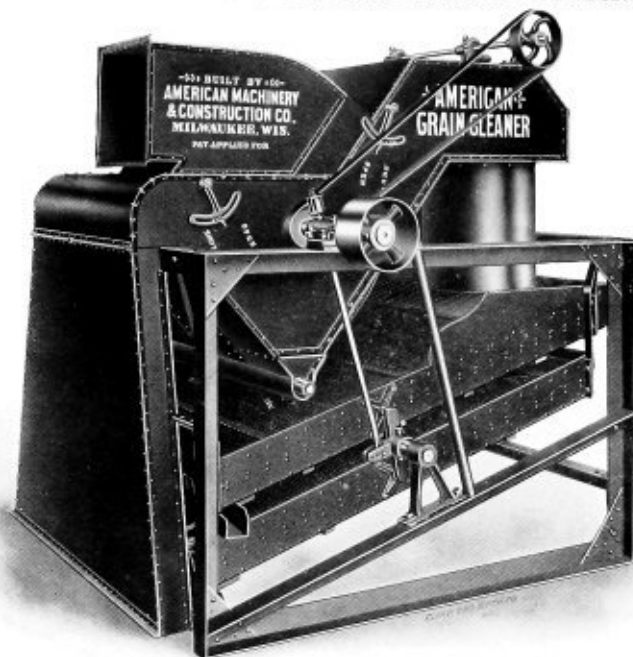


Fig. 244.

This is the machine which Pneumatically takes out about 90 per cent. of the impurities before the grain reaches the sieves. It is done by Air Separation in the two steel cylinders at the head or receiving end, and has been made a special feature of the machine.

In this system of cleaning the grain is spouted into the steel cylinders, and falls into revolving concave discs which throw it in an outward and upward direction against steel beaters. When the grain has reached the highest points of its upward course it is acted upon by air currents passing up through the cylinders. These currents of air hold the grain in momentary suspension, suck out all the light impurities, and then on account of its heavier specific gravity drop the grain upon the sieves below which take out all the remaining impurities.

Another special feature is the Double Compensating Shakers placed one above the other, and which so perfectly counter-balance that there is positively no jar or vibration, and therefore no bracing of any kind is required. By means of steel connecting rods and oscillating cross arms a single pair of solid bronze eccentrics on the fan shaft operates both shakers. On account of the general simplicity and few moving parts this machine requires a minimum of power.

The combined screening surface of the two shakers is much larger than on most machines of equal size. This increases the capacity and gives a more thorough separation.

Write for a folder giving a complete detailed description.

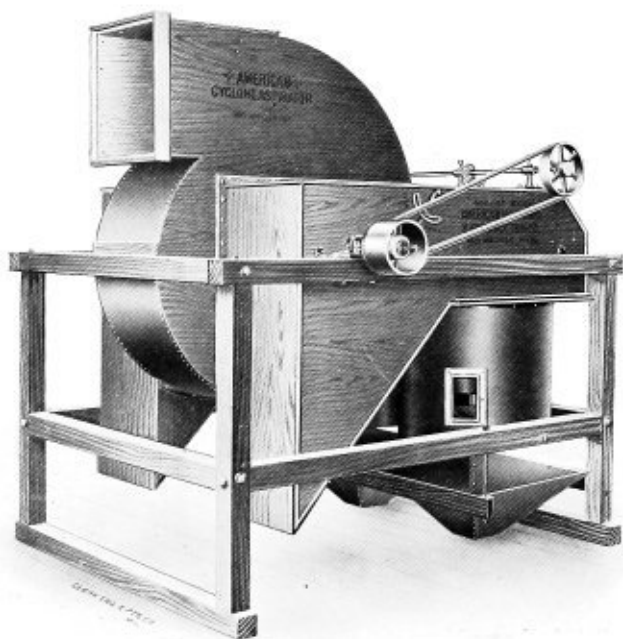
THE AMERICAN CYCLONE ASPIRATOR

Fig. 245.

This machine is built on the same principle, and the Pneumatic Cleaning is done the same as on the American Grain and Malt Cleaner, but it does not have the shaker screens.

Wherever the separation from the grain of all sprouts, chaff, dust and other impurities lighter than the material to be cleaned is the prime consideration, we would recommend the American Cyclone Aspirator.

The remarkable success of this machine is due to its enormous capacity combined with perfect work.

By means of regulating valves the air currents are at all times under the absolute and perfect control of the operator, and are easily and quickly adjusted to different conditions and kinds of grain.

It has two large screening tips into which all the heavier screenings are deposited while all dust and fine particles are blown out by the fan.

Maltsters and brewers will find this the ideal machine for separating all sprouts, chaff, and dust from the malt as it comes from the kilns.

Further particulars and prices will be sent on application.

THE "WESTERN" GYRATING CLEANER

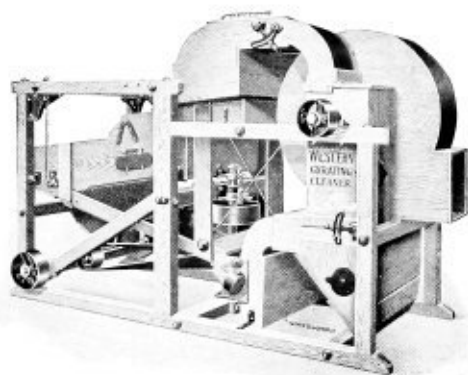


Fig. 246.

DIMENSIONS, CAPACITY, PRICE LIST. Etc.—Size Over All.

No.	Price	Capacity in Bushels			Height	Length	Width	Pulley	Speed	Weight
		Corn and Cobs	Oats	Wheat						
0	\$600.00	1500-1800	1500	1200	7'-6"	13'-2"	6'-5"	12"x8"	550	2200
1	400.00	1200-1300	1200	1000	6'-11"	11'-10"	6'-10"	12"x8"	550	1850
1½	350.00	800-1000	1000	700	6'-8"	10'-0"	5'-9"	12"x6"	550	1700
2	300.00	600-800	600	500	6'-6"	10'-5"	5'-5"	12"x6"	550	1600
2½	270.00	450-550	500	425	6'-5"	7'-1"	5'-1"	12"x6"	550	1400
4	240.00	300-400	300	200	6'-0"	9'-0"	4'-9"	10"x6"	550	1100
5	215.00	200-300	200	150	6'-0"	8'-6"	4'-5"	10"x6"	550	950

Note.—The width dimension given above includes length of drive shaft, which projects about 6 inches on each side of machine, making the actual width of machines about 12 inches less than size given.

The machine is furnished regularly with screens for handling Corn with Cob and re-cleaning Corn and Oats. The Cleaner is a most excellent Wheat machine, and screens for this purpose will be furnished by us as listed below.

PRICE LIST.

Size of Machine	0	1	1½	2	2½	4	5
Sieves for Small Grain	\$28.00	\$24.00	\$19.00	\$15.00	\$12.00	\$10.00	\$ 8.00

For complete description of the above Cleaners send for special circular.

THE CORNWALL CORN CLEANER

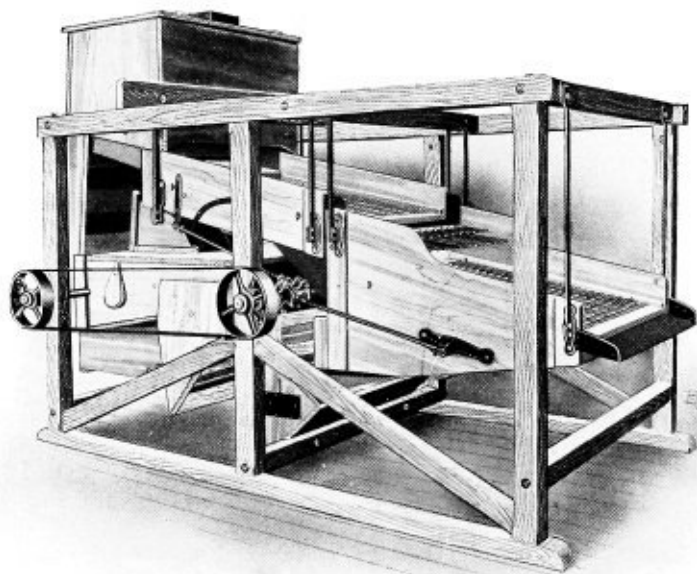


Fig. 247.

This Cleaner never clogs; once through does the work; it saves the screenings for feed; the corn never grades dirty; is dustless, runs light and is durable.

The corn and cobs pass through an air separation, which removes the chaff, silks, husks and very light pieces of cobs. It then passes onto the sieves, which remove the small pieces of cobs with the cobs and husks, if any, and the corn then passes into the large air trunk, which removes the shrunken grains and light broken pieces of corn, leaving the corn perfectly clean. The screenings drawn out by the last air separation are caught in the screen box and can be ground into feed.

DIMENSIONS, CAPACITIES, WEIGHTS AND PRICES.

Sizes	0	1	2	3	4	5	6	7	8
Extreme Height	Ft. 7 In. 3	Ft. 7 In. 8	Ft. 7 In. 11	Ft. 8 In. 1	Ft. 8 In. 5½	Ft. 8 In. 8½	Ft. 8 In. 11½	Ft. 9 In. 5	Ft. 9 In. 9
Width	6 2	6 2	6 8	7 0	7 4	7 8	8 6	9 0	9 0
Length	9 3	11 3	12 3	13 1	14 3	15 8	17 2	17 2	19 7
Height where Corn enters	7 3	7 8	7 11	8 1	8 5½	8 9½	9 5	9 9	9 11
Pulley Diameter	9	10	10	12	14	14	14	16	16
Face	5	5	5	6	6	6	6	7	7
Revolutions per min.	500	500	500	500	500	500	500	500	500
Weight in pounds	1420	1600	1900	2100	2250	2500	2800	3500	4000
Capacity, bushels per hour	200	300	500	700	1000	1200	1300	1500	1700
Price with one set sieves	\$215	\$240	\$265	\$300	\$350	\$400	\$450	\$550	\$650

THE "WESTERN" WAREHOUSE CORN SHELLERS

IMPROVED, WITH ADJUSTING LEVER.

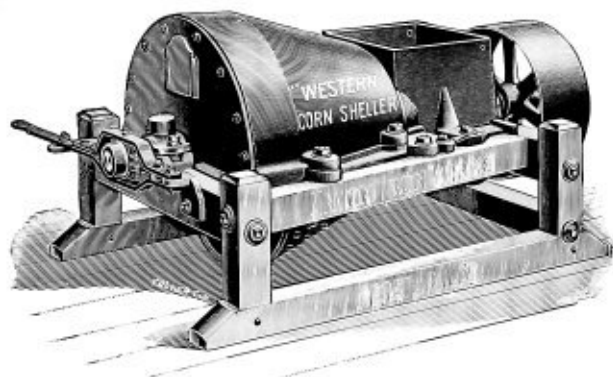


Fig. 248.

The Sheller consists of a receiving hopper, feeders, upper and lower casings, cylinder, shaft and extra heavy bearings, all mounted upon a strong frame, put together with joint-bolts and arranged and constructed as follows: The revolving cylinder is a truncated cone, keyed upon a heavy shaft, and surrounded by two casings (upper and lower), forming another cone around the revolving cylinder. These two cones are situated upon different planes, so that the space between the two shelling surfaces, at the apex of the cones (the place where the corn passes from the hopper into the Sheller), is greater than at any other point, the space gradually diminishing toward the base of the cones, where there is only room for the cobs to escape when freed from corn.

The Sheller is simple in construction, and is easily adjusted to suit the different conditions of corn by the use of our patent adjusting lever with which the shelling surfaces are opened or closed instantly and while sheller is working at full capacity.

DIMENSIONS, CAPACITY AND PRICE LIST.

Number.	Extreme Height.	Space on Floor over All.	Size Pulleys.		Rev. per Minute.	Capacity per Hour in Bushels.	Price.	Horse Power.
			Diam.	Face.				
0	3 ft. $\frac{1}{2}$	7 ft. 6 x 3 ft. 10	26	12	360	1300 to 1500	\$250.00	10 to 12
1	2 ft. 3	6 ft. 8 x 3 ft. 2	24	10	475	1000 to 1200	200.00	9 to 10
1 $\frac{1}{2}$	2 ft. 3	4 ft. 10 x 3 ft. 2	20	10	475	700 to 900	185.00	7 to 8
2	2 ft. 1 $\frac{1}{2}$	4 ft. 7 x 3 ft. 2	20	8	475	500 to 700	150.00	6 to 7
2 $\frac{1}{2}$	2 ft. $\frac{1}{2}$	4 ft. 8 x 2 ft. 9	20	7	500	400 to 500	125.00	5 to 6
4	1 ft. 8	4 ft. 4 x 2 ft. 5	16	6	500	200 to 300	100.00	4 to 5
4 $\frac{1}{2}$	1 ft. 7	4 ft. 2 x 2 ft. 3	12	6	600	150 to 200	95.00	4 to 5
5	1 ft. 6	4 ft. 1 x 2 ft. 1	12	6	600	125 to 150	90.00	4 to 5

Nos. 0 and 1 Machine Provided with Extra Bearings on Outside of Pulley.

UNITED STATES WAREHOUSE CORN SHELLER

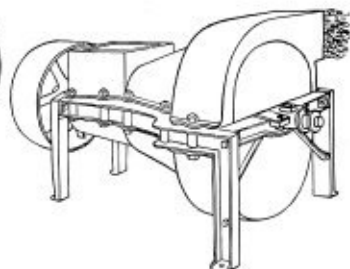


Fig. 249. Right Hand Over Discharge. Fig. 250. Left Hand Over Discharge.

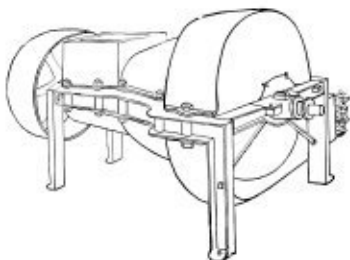


Fig. 251. Right Hand Under Discharge. Fig. 252. Left Hand Under Discharge.

This Sheller is one of the cheapest and quickest to install of any on the market. Not depending on gravity feed to the boot, the expense of a cemented pit, steel tank and lower hoppers are saved as the boot sets on a level with the Sheller where the operator can easily get at it.

Nos. 2, 3, and 4, are all heavy iron, or made on a wooden frame, if preferred. No. 1 is always made on a wood frame with chain oiling bearings, and with an extra bearing on the pulley end.

The shelling teeth are chilled, to insure durability; the bearings are filled with high speed babbit metal and have large oil cups with covers.

The feed in the hopper is of spiral form which makes it positive.

It is made right or left, discharging underneath or over, thereby accommodating any location and avoiding a cross belt drive.

PRICE LIST.

NO.	4	3	2	1
Capacity per hour in bushels. . .	300 to 500	500 to 700	700 to 1000	1000 to 1500
Price. . .	\$140.00	\$170.00	\$300.00	\$260.00
Pulley Diameter. . .	20	20	22	24
" Face. . .	8	9	10	12
Revolutions per Minute. . .	500	500	475	400
Height where Corn Enters. . .	2 ft. 1 in.	2 ft. 2 in.	2 ft. 5 in.	3 ft. 1 in.
Floor Space Over All Width. . .	2 ft. 10 in.	3 ft. 0 in.	3 ft. 7 in.	3 ft. 10 in.
" " Length. . .	4 ft. 7 in.	5 ft. 0 in.	5 ft. 5 in.	7 ft. 6 in.
Weight in Pounds. . .	900	1200	1400	2200
Horse Power. . .	5 to 6	6 to 8	9 to 10	10 to 12

VICTOR CORN SHELLER

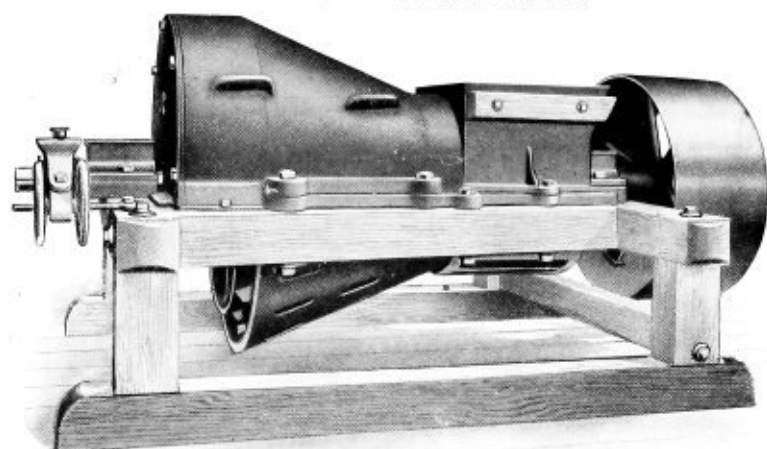


Fig. 253.

The above cut represents the Victor Corn Sheller, which is giving such splendid satisfaction. The teeth and projections of the shelling surface are chilled, thus giving greater durability. It has a patent feeder, which adjusts itself automatically, allowing the machine to be run either way, and thus avoids crossing the belt. It can be adjusted by loosening collar on one end of the shaft and pulley on the other end, and moving the shaft either forward or backward, as the condition of the corn may require. The machine is very substantially built and has but two journals and we guarantee it to be the very best sheller in the market. It will not clog and can be stopped and started, no matter how much corn may be in the hopper of dump and can be set in any manner most convenient. The Nos. 3 and 4 have an extra bearing outside the pulley, which renders them more substantial and greatly adds to their durability.

This machine is made to shell only.

DIMENSIONS, CAPACITIES, WEIGHTS AND PRICES.

Sizes.	000		00		0		1		2		3		4	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Height.....	1	10	2	1	2	1	2	4	3	7	3	2	3	4
Width.....	2	1	2	3	3	1	3	4	3	9	4	3	4	8
Length.....	4	1	4	4	6	1	8	5	0	6	8	7	6	
Pulley Dia.		10		12		16		20		22		24		26
{Face.....		5		6		7		8		10		10		12
Rev. per min. . .		800		800		500		500		500		445		450
Weight in lbs. . .		275		375		650		750		1150		1550		2000
Capacity in		60 to		125 to		200 to		300 to		500 to		800 to		1000 to
bu. per hour. . .		75		150		300		400		700		1000		1300
Price.		\$45.00		\$60.00		\$80.00		\$100.00		\$125.00		\$160.00		\$200.00

VICTOR CORN SHELLER AND CLEANER COMBINED

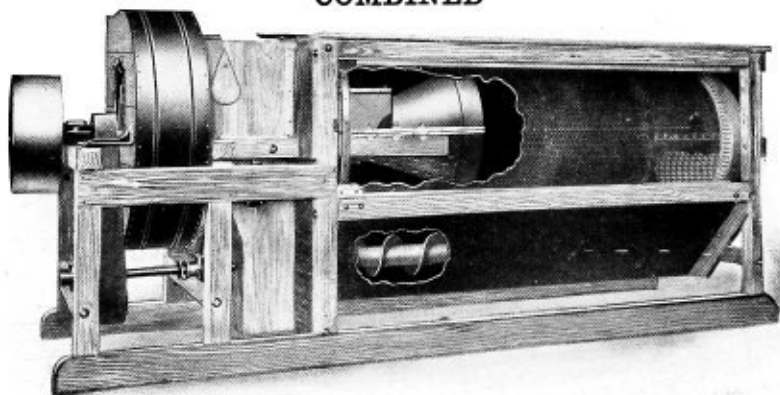


Fig. 254.

THIS machine is especially adapted for use in warehouses where it is not convenient for want of space to locate the sheller and cleaner separately. The sheller is situated inside the revolving screen; as the corn is being shelled it and the cobs fall on the moving screen, where a separation is made, the cobs passing out at the tail of the screen. In the passage of the shelled corn from the screen it is subjected to a powerful suction of air from a fan at head of screen.

It takes up no more room than the cleaner does alone, and requires but one belt to drive it. It can be located anywhere in the building that is convenient. It runs very light, will not clog, as there are no spiders in the rolling screen; cleans splendidly, and is in all respects a first-class machine. We use a rolling screen in the machine, made of heavy iron and riveted like a boiler. It has iron heads and is, in fact, all iron. The shelling irons are the same in the combined machine as we use in the Victor Sheller when built separately, and the rolling screen and suction fan are the same, and combined in the same manner as when built separately. We guarantee them to work satisfactorily.

PRICES, DIMENSIONS, WEIGHTS AND CAPACITIES.

No.	Price	Extreme Height	Height to Where Corn Enters	Space On Floor Over All	Weight	Size of Pulley		Revolutions Per Minute	Capacity Per Hour in Bushels
						Diam.	Face		
0	\$250.00	5' 0"	4' 9"	10' 10" x 3' 0"	2100	18"	8"	500	200
1	300.00	5' 0"	4' 9"	12' 0" x 3' 10"	2350	20"	8"	500	300
2	375.00	5' 5"	5' 0"	13' 2" x 4' 2"	3200	22"	10"	500	400

THE IMPROVED IDEAL CAR-LOADER

LOADS BOTH ENDS OF A CAR AT THE SAME TIME.

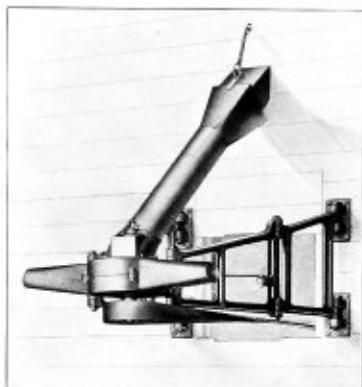


Fig. 255. Loader as it appears when in position ready to load car.

The Improved Ideal Car-Loader is attached to the elevator wall by a set of folding brackets and when not in use is folded into elevator. To put in position for operation the Loader is pushed or pulled through the opening in elevator wall; this operation causes the folding brackets to unfold, and allows the loader to come into proper position just within the car door. When in this position the Brackets are held rigid by a turnbuckle which has a hooked iron rod in each end. After placing this rod in its proper place a few turns of the turnbuckle holds the Loader and brackets perfectly rigid. After putting on the belt and placing the loading spout in position as shown, the Loader is ready for operation. While the Loader is very heavy and durable, the manner in which it is handled is so simple and easily performed that a small boy can swing it from the elevator into the car, and have it in operation in less than two minutes. Owing to the manner in which it is handled, it has the following advantages over other Loaders. It does not require a block and tackle to pull it in and out of car. It does not have to be lifted in and out of car. It is entirely independent of car for any support. Less power is required to operate the Improved Ideal Car Loader, as in its operation the principle of centrifugal force is applied to the grain, instead of the direct striking force used in other Loaders.

Capacity 2,000 bushels per hour.

Horse Power required 1 to 4, depending on amount of grain handled.

Further particulars will be furnished upon application.

List Price \$125.00

The above price includes loader brackets, jack and 20 feet of belting.

THE BOWSER FEED MILLS

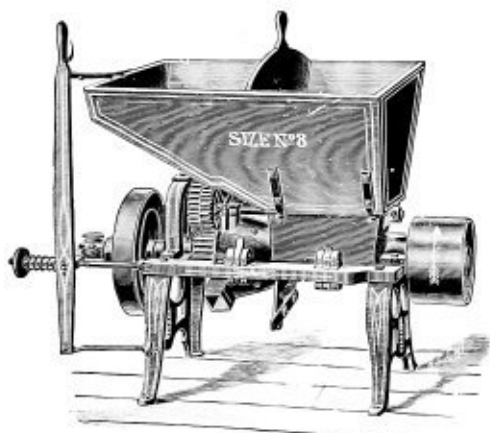


Fig. 256.

POWER, CAPACITY, SPEED, ETC.

The quantity that any mill will grind in a given time depends: First, on the fineness to which the material is reduced; second, the condition of the grain; third, the sharpness of the burrs; and, fourth, the speed at which the mill is run. It is, therefore, impossible to make any specific guaranty without knowing all the conditions.

The estimates as to the power required, quantity and quality of work, are based on fair conditions. The highest capacity can be expected only when using the greatest given power and grinding dry grain moderately coarse, for feeding purposes. Estimates are based on steam power. Weight of ear corn, 68 to 70 pounds per bushel.

We publish only the average results secured in most localities, handling the mill in the ordinary manner. However, from many of the cattle-feeding districts customers report nearly double our figures on certain kinds of work.

No. 8 mill will crush and grind per hour of **shucked** corn from 20 to 50 bushels. Of corn with **shucks on**, from 20 to 40 bushels. Of small grain, from 25 to 60 bushels. Of cotton seed, from 1,500 to 3,000 pounds per hour. Speed 1,050 revolutions; though good work can be done at a greater or less speed, say 800 to 1,200 revolutions. Requires from 10 to 12 horse-power.

No. 7 mill will crush and grind from 15 to 40 bushels per hour of **shucked** corn. Of small grain, such as shelled corn, oats, screenings, barley, etc., from 20 to 60 bushels per hour. Speed should be 1,050 revolutions per minute, but good work can be done at 800 to 1,200 revolutions per minute. Power required, 8 to 12 horse-power.

No. 4 mill will crush and grind from 12 to 30 bushels per hour of **shucked** corn. Of corn with **shuck on**, from 10 to 20 bushels per hour. Of small grain, such as shelled corn, oats, screenings, barley, etc., from 15 to 40 bushels per hour. Speed should be 1,350 revolutions per minute, but good work can be done at 800 to 1,500 revolutions per minute. Power required, 6 to 8 horse-power.

THE BOWSER FEED MILLS

POWER, CAPACITY, SPEED, etc. Continued.

No. 3 mill will crush and grind 12 to 25 bushels of shucked corn per hour, and will grind from 15 to 40 bushels of small grain per hour. Speed should be 1,350 revolutions per minute, but good work can be done at 800 to 1,600 per minute. Requires from 6 to 8 horse-power.

No. 2 mill. Capacity depends on power applied and ranges from 4 to 15 bushels of shucked corn and from 5 to 20 bushels of small grain per hour. Speed; with two horses, from 450 to 700; with 4 to 6 horses, from 600 to 1,000; with 4 to 6 horse-power engine, from 800 to 1,100 revolutions or more. For wind-mills, speed in proportion to the power of the wheel in an average wind.

Nos. 2, 3 and 7 are not specially recommended for grinding unshucked corn, and if used for that purpose a less capacity must be expected.

In the No. 8 and No. 7 sizes, the larger end of the conical-shaped grinders is but 8 inches diameter, yet has all the grinding surface of a 14-inch flat burr. In No. 4 and No. 3 sizes it is but 6 1/2 inches diameter, yet has all the surface of an 11-inch flat burr. In No. 2, it is but 6 inches diameter, yet has all the surface of a 9-inch flat burr.

Bowser's "Combination," without doubt, is adapted to the greatest variety of work, and does the most even and fine work on crushing of any mill in the market. In crushing and at the same time grinding oats and other small grain, the product is uniformly reduced and thoroughly mixed.

These mills are not sold for the manufacture of commercial table corn-meal or graham flour, yet as good a quantity can be made as on any other iron mill, and many use the mills on this class of work for themselves and customers.

Let it be remembered that, while all the "Combination" mills are provided with cob crushers, they are none the less perfectly adapted to grinding small grain alone.

PRICES, WEIGHTS AND FLOOR SPACE.

	Floor Space Occupied.	Weight, Lbs.	Price.
No. 8 mill, for belt.	2 ft. 6 in. x 4 ft. 7 in.	695	\$100.00
Same, with 4-in. sacking elevator.	5 ft. 5 in. x 4 ft. 7 in.	715	118.00
Same, with 5-in. sacking elevator.	5 ft. 5 in. x 4 ft. 7 in.	725	120.00
No. 7 mill, for belt.	2 ft. 6 in. x 4 ft. 7 in.	490	90.00
Same, with 4-in. sacking elevator.	5 ft. 5 in. x 4 ft. 7 in.	690	108.00
No. 4 mill, for belt.	2 ft. 3 in. x 3 ft. 11 in.	375	70.00
Same, with 4-in. sacking elevator.	5 ft. 2 in. x 3 ft. 11 in.	485	88.00
No. 3 mill, for belt.	2 ft. 3 in. x 3 ft. 7 in.	305	60.00
Same, with 4-in. sacking elevator.	5 ft. 2 in. x 3 ft. 7 in.	425	78.00
No. 2 mill, for belt.	1 ft. 10 in. x 3 ft. 3 in.	240	48.00
Same, with 4-in. short elevator.	3 ft. 2 in. x 3 ft. 3 in.	310	58.00
No. 2 with extra balance wheel.	2 ft. x 3 ft. 7 in.	340	53.00
Same, with 4-in. short elevator.	3 ft. 4 in. x 3 ft. 7 in.	410	63.00
4-in. Wagon-box Elevator, with swinging spout.		145	24.00
5-in. Wagon-box Elevator, with swinging spout.		155	27.00
Sacking Spout Attachment for any wagon-box elevator.		30	3.00
Gear Attachment for tumbling-rod connection, No. 8 or No. 7 mill.		55	8.00
Same, for No. 4 or No. 3 mill.		45	7.50
Same for No. 2 mill.		40	7.00

Unless otherwise understood, we send elevators with 4-inch cups. To those who use the No. 8 mill on bulky work or very coarse grinding and secure more than the rated capacity, we recommend the use of the five-inch elevator. Price of tumbling-rod attachment does not include a drive pulley; as none is needed on a mill fitted with tumbling rod connection.

All mills are tested before leaving the shop and are ready to run as soon as fastened to the floor.

"THE NEW CYCLONE 1905" DUST COLLECTOR

REGULAR TYPE CONSTRUCTION.

For indoor use Nos. "0" to "10" inclusive, are regularly built Mill Construction. When so ordered they will be furnished all steel at same List and Discounts.

If Collector is to be placed out doors please so state on order. For outside use all sizes are constructed all steel.

When ordering for use with independent Fans, give make, size and speed of Fan.



Fig. 257.

PRICE LIST.

No.	Top Section.	Center Section.	Bottom Section.	Total Height.	Outside Diameter.	No.	Price.	Shipping Weight.
0	1 ft. 2 in.		2 ft. 2½ in.	3 ft. 4½ in.	2 ft. 8½ in.	0	\$ 30.00	70 lbs.
1	1 ft. 3½ in.		2 ft. 8½ in.	4 ft.	3 ft. 2½ in.	1	40.00	100 "
2	1 ft. 6½ in.		3 ft. 1½ in.	4 ft. 8 in.	3 ft. 8½ in.	2	60.00	140 "
3	1 ft. 9 in.		3 ft. 7½ in.	5 ft. 4½ in.	4 ft. 2½ in.	3	75.00	175 "
4	1 ft. 11 in.	2 ft. 0½ in.	2 ft. 1½ in.	6 ft. 1 in.	4 ft. 8½ in.	4	85.00	245 "
5	2 ft. 2 in.	2 ft. 6½ in.	2 ft. 1½ in.	6 ft. 10 in.	5 ft. 2½ in.	5	100.00	315 "
6	2 ft. 5 in.	2 ft. 7 in.	2 ft. 6½ in.	7 ft. 6½ in.	5 ft. 8½ in.	6	120.00	395 "
7	2 ft. 8 in.	2 ft. 7 in.	3 ft. 0½ in.	8 ft. 3½ in.	6 ft. 2½ in.	7	140.00	490 "
8	2 ft. 11 in.	3 ft. 1 in.	2 ft. 11½ in.	8 ft. 11½ in.	6 ft. 11½ in.	8	160.00	575 "
9	3 ft. 2 in.	3 ft. 1 in.	3 ft. 4½ in.	9 ft. 7½ in.	7 ft. 5½ in.	9	190.00	715 "
10	3 ft. 5 in.	2 ft. 6½ in.	1 ft. 9½ in.	10 ft. 3½ in.	7 ft. 11½ in.	10	210.00	875 "
*11	3 ft. 10 in.	2 ft. 6½ in.	1 ft. 8½ in.	10 ft. 11½ in.	7 ft. 9½ in.	11	230.00	930 "
*12	3 ft. 11 in.	2 ft. 7 in.	2 ft. 1½ in.	11 ft. 4 in.	8 ft. 1½ in.	12	250.00	1000 "
*13	4 ft. 1 in.	3 ft. 0½ in.	2 ft. 1½ in.	11 ft. 10 in.	8 ft. 5½ in.	13	275.00	1095 "
*14	4 ft. 3 in.	3 ft. 4½ in.	2 ft. 1½ in.	12 ft. 4 in.	8 ft. 9½ in.	14	315.00	1455 "
*15	4 ft. 6 in.	3 ft. 2½ in.	2 ft. 6 in.	12 ft. 9½ in.	9 ft. 1½ in.	15	340.00	1600 "
*16	4 ft. 9 in.	3 ft. 6½ in.	2 ft. 6 in.	13 ft. 4½ in.	9 ft. 5½ in.	16	370.00	1700 "
*17	5 ft.	3 ft. 1 in.	2 ft. 6 in.	14 ft. 1½ in.	9 ft. 9½ in.	17	400.00	1855 "
*18	5 ft. 3 in.	3 ft. 8½ in.	2 ft. 6 in.	14 ft. 6½ in.	10 ft. 1½ in.	18	460.00	2035 "
*19	5 ft. 6 in.	4 ft. 0½ in.	2 ft. 6 in.	15 ft. 1½ in.	10 ft. 5½ in.	19	480.00	2155 "
*20	5 ft. 9 in.	3 ft. 1 in.	3 ft. 5 in.	15 ft. 7½ in.	10 ft. 9½ in.	20	515.00	2250 "
*21	6 ft.	3 ft. 4½ in.	3 ft. 5 in.	16 ft. 2½ in.	11 ft. 1½ in.	21	580.00	2420 "
*22	6 ft. 3 in.	3 ft. 8½ in.	3 ft. 5 in.	16 ft. 9½ in.	11 ft. 5½ in.	22	615.00	2555 "
*23	6 ft. 6 in.	3 ft. 9 in.	3 ft. 4 in.	17 ft. 3½ in.	11 ft. 9½ in.	23	647.00	2745 "
*24	6 ft. 9 in.	4 ft. 0½ in.	3 ft. 4 in.	17 ft. 10½ in.	12 ft. 1½ in.	24	680.00	2900 "
*25	7 ft.	4 ft. 1 in.	3 ft. 4 in.	18 ft. 5½ in.	12 ft. 5½ in.	25	707.00	3065 "
*26	7 ft. 3 in.	4 ft. 5 in.	3 ft. 4 in.	19 ft. 0½ in.	12 ft. 9½ in.	26	740.00	3235 "
*27	7 ft. 6 in.	4 ft. 4½ in.	3 ft. 4 in.	19 ft. 7½ in.	13 ft. 1½ in.	27	782.00	3395 "

*All steel.

STEEL PLATE EXHAUST FANS

FOR GRAIN ELEVATORS, MILLS, MALT HOUSES, ETC.



Fig. 258. Left Hand Fan.

These fans are of improved design and the workmanship and material entering into their construction is superior in every particular. The casings are made of wrought steel and the bearings are of improved oiling type.

PRICE LIST.

Size, Inches.	Price.	Diam. of Inlet, Inches.	Width and Height of Outlet.	Size of Pulley.	Speed Ordinary Work.	Speed Heavy Work.	Wt. in lbs.
25	\$ 40.00	10	10 x 10	6 x 4	2200	2700	300
30	44.00	12	11 x 10	6 x 4	2150	2650	350
35	55.00	14	12 x 13	7 x 5	1750	2250	400
40	70.00	15	13 x 14	8 x 6	1600	1950	600
45	90.00	17	14 x 16	8 x 7	1450	1800	740
50	115.00	19	16 x 18	10 x 7	1250	1600	1000
55	150.00	21	17 x 20	12 x 8	1100	1400	1200
60	175.00	23	18 x 23	14 x 8	1000	1300	1550
70	250.00	26	21 x 28	14 x 10	900	1150	2600
80	325.00	30	24 x 36	16 x 12	750	1000	2850
90	400.00	36	30 x 36	18 x 12	600	800	3100

Size of Fan denotes height if horizontal discharge, and length if vertical discharge.

OUR GUARANTEE—We guarantee our Fans, when properly piped, will require as little power, run as near noiseless, and will do more work than any Fan of its style of equal size. In workmanship and material they are second to no Fan on the market, and the loss in friction to be not more than 10 per cent.

THE WELER DUST COLLECTING FAN

FOR ELEVATOR HEADS.



Fig. 260.

Double Fan

This Fan is intended to be located in the elevator cupola or at any convenient point and connected by spouting to the elevator head. It collects the dust and chaff from small grain and the loose silks, shucks and snow from ear corn.

The single Fan is intended for one and the double for two stands of elevators.

Prices for triple stands of elevators quoted upon application.

PRICE LIST.**Single.**

Size of Fan.	Size of Pulley.	Speed.	Price.
36 x 8	7 x 6	850	\$48.00
36 x 10	8 x 6	850	50.00
36 x 12	8 x 6	800	52.00

Double.

22 x 8	6 x 4	900	\$56.00
36 x 12	8 x 6	850	68.00
36 x 14	8 x 6	800	70.00
36 x 16	9 x 7	750	72.00

AGITATOR ARMS AND DRIVING MECHANISM

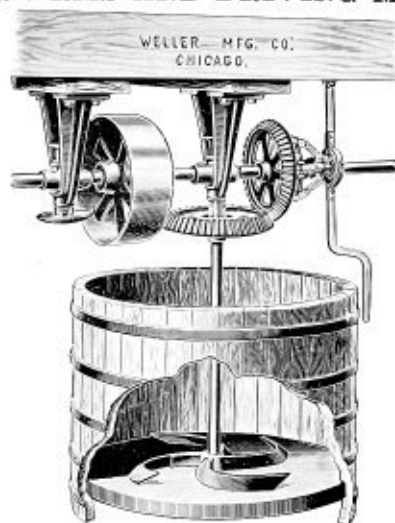


Fig. 261.

We design and manufacture Agitator Arms for all classes of work, also the necessary driving mechanism to suit all conditions.

Prices quoted upon receipt of specifications.

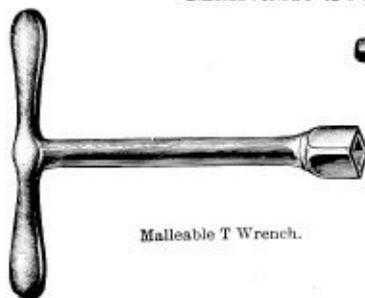
WRENCHES FOR FASTENING BUCKETS TO BELTS.



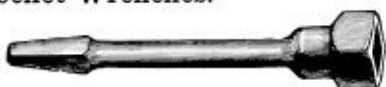
Wrought Iron Brace Wrenches.

Price\$1.00

Malleable Socket Wrenches.



Malleable T Wrench.



Socket Wrenches to Use in Ordinary Brace.

PRICE LIST.

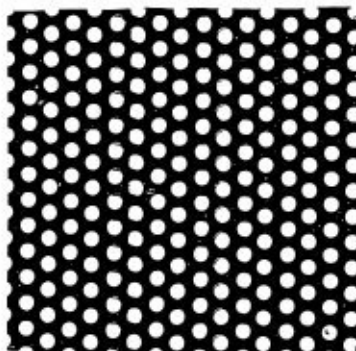
Malleable T Socket Wrenches,
each\$0.25
Malleable Socket Wrenches—for
Ordinary Brace, each..... .25
Add 15 cents if ordered sent by mail.

PERFORATED METAL

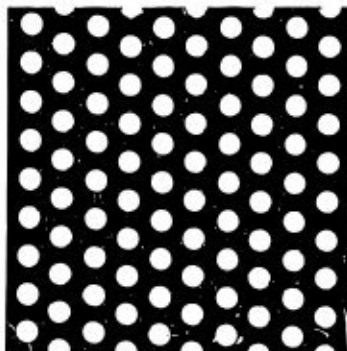
All Kinds of Perforations Suitable for Cottonseed Oil Mills, Glucose and Sugar Works, Linseed Oil Mills, Rice Mills, Breweries and Malt Houses, Corn Screens, also General and Special Uses.

We are prepared to furnish perforated metal in iron, steel, copper, zinc, brass or tin, upon short notice.

In ordering or writing for estimates please be particular to give the kind of metal and gauge or thickness wanted, size and kind of perforations, width of margins, and state if screw holes or nail holes are wanted to fasten to frame.

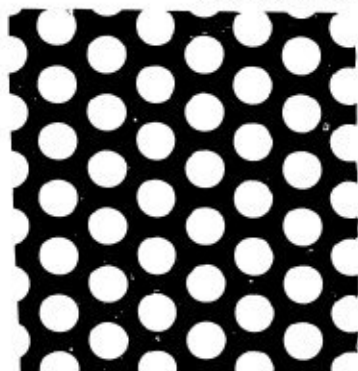
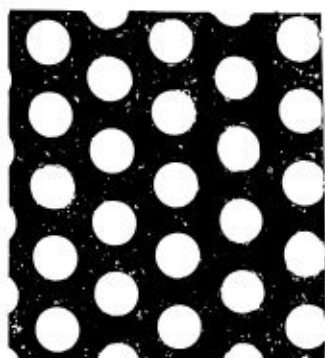
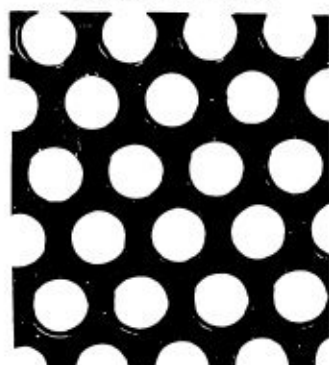
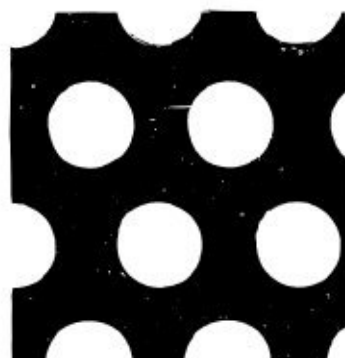


$\frac{1}{16}$ -inch Perforations.



$\frac{1}{8}$ -inch Perforations.

PERFORATED METAL

 $\frac{3}{16}$ -inch Perforations. $\frac{1}{4}$ -inch Perforations. $\frac{5}{16}$ -inch Perforations. $\frac{1}{2}$ -inch Perforations.

PRICE LIST.

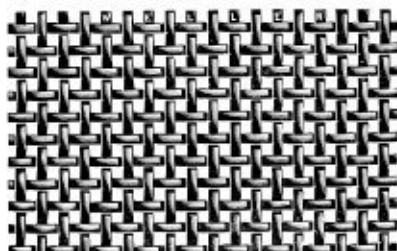
Perforated Steel and Iron. Per Square Foot.

Thickness, Birmingham Wire Gauge.	Size of Perforations (Diameter of Holes).							
	$\frac{1}{8}$ in.	5-32 in.	$\frac{3}{16}$ in.	$\frac{1}{4}$ in.	$\frac{5}{16}$ in.	$\frac{3}{8}$ in.	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.
No. 20.....	\$0.36	\$0.36	\$0.36	\$0.36	\$0.36	\$0.36	\$0.36	\$0.36
No. 18.....	.44	.44	.44	.44	.44	.44	.44	.44
No. 16.....	.50	.50	.50	.50	.50	.50	.50	.50
No. 14.....	.60	.60	.60	.60	.60	.60	.60	.60
No. 12.....	.66	.66	.66	.66	.66	.66	.66	.66
No. 10.....	.72	.72	.72	.72	.72	.72	.72	.72
No. 8.....	.80	.80	.80	.80	.80	.80	.80	.80

A minimum charge of \$3.00 is made on orders for Perforated Metal. This is due to the fact that the expense of setting the dies is as great for furnishing one sheet of metal as for a quantity order.

WIRE CLOTH

We are prepared to furnish Wire Cloth for all purposes. In addition to the plain iron and steel Wire Cloth listed, we can furnish it in copper, brass and tinned wire. The mesh in Wire Cloth is the distance from center to center of wires.



Plain Iron and Steel Wire Cloth With Square Mesh

PRICE LIST.

No length less than 100 feet shall be understood to be a roll.

Inches.	No. Wire.	Price sq. Foot.	No. of Mesh to In.	No. Wire.	Price Sq. Foot.	No. of Mesh to In.	No. Wire.	Price Sq. Foot.	
1	3	\$0.88	3	8	\$0.60	3	14	\$0.32	
1	4	.73	4	9	.48	4	15	.27	
1	5	.60	5	10	.38	5	16	.22	
1	6	.48	6	11	.32	6	17	.17	
1	7	.38	7	12	.27	7	18	.14	
1	8	.32	8	13	.22	8	19	.12	
1	9	.27	9	14	.17	9	20	.10	
1	10	.22	10	15	.14	10	21	.08	
1	11	.17	11	16	.12	4	4	12	.60
1	12	.14	12	17	.10	4	4	13	.48
1	13	.12	13	18	.08	4	4	14	.38
1	14	.10	14	9	.60	4	4	15	.32
1	15	.08	15	10	.48	4	4	16	.27
3-4	4	.88	4	11	.38	4	4	17	.22
3-4	5	.73	5	12	.32	4	4	18	.17
3-4	6	.60	6	13	.27	4	4	19	.14
3-4	7	.48	7	14	.22	4	4	20	.12
3-4	8	.38	8	15	.17	4	4	21	.10
3-4	9	.32	9	16	.14	4	4	22	.08
3-4	10	.27	10	17	.12	4	4	13	.57
3-4	11	.22	11	18	.10	4	4	14	.45
3-4	12	.17	12	19	.08	4	4	15	.35
3-4	13	.14	13	10	.60	4	4	16	.29
3-4	14	.12	14	11	.48	4	4	17	.24
3-4	15	.10	15	12	.38	4	4	18	.19
3-4	16	.08	16	13	.32	4	4	19	.15
5-8	5	.88	5	14	.27	4	4	20	.13
5-8	6	.73	6	15	.22	4	4	21	.11
5-8	7	.60	7	16	.17	4	4	22	.09
5-8	8	.48	8	17	.14	4	4	23	.07
5-8	9	.38	9	18	.12	5	5	13	.60
5-8	10	.32	10	19	.10	5	5	14	.48
5-8	11	.27	11	20	.08	5	5	15	.38
5-8	12	.22	12	11	.60	5	5	16	.32
5-8	13	.17	13	12	.48	5	5	17	.27
5-8	14	.14	14	13	.38	5	5	18	.22
5-8	15	.12							
5-8	16	.10							
5-8	17	.08							

PLAIN IRON AND STEEL WIRE CLOTH

PRICE LIST—Continued.

No. of Mesh to In.	No. Wire.	Price, Sq. Foot.	No. of Mesh to In.	No. Wire.	Price, Sq. Foot.	No. of Mesh to In.	No. Wire.	Price, Sq. Foot.
5	19	\$0.17	10	18	\$0.60	18	23	\$0.60
5	20	.14	10	19	.48	18	24	.48
5	21	.12	10	20	.38	18	25	.38
5	22	.10	10	21	.32	18	26	.32
5	23	.08	10	22	.27	18	27	.27
5	24	.07	10	23	.22	18	28	.22
6	14	.60	10	24	.17	18	29	.17
6	15	.48	10	25	.14	18	30	.15
6	16	.38	10	26	.12	18	31	.13
6	17	.32	10	27	.10	18	32	.12
6	18	.27	10	28	.08	18	33	.11
6	19	.22	10	29	.07	18	34	.10
6	20	.17	12	19	.60	18	35	.09
6	21	.14	12	20	.48	18	36	.08
6	22	.12	12	21	.38	20	24	.62
6	23	.10	12	22	.32	20	25	.52
6	24	.08	12	23	.27	20	26	.43
6	25	.07	12	24	.22	20	27	.35
7	15	.60	12	25	.17	20	28	.27
7	16	.48	12	26	.14	20	29	.24
7	17	.38	12	27	.12	20	30	.20
7	18	.32	12	28	.10	20	31	.17
7	19	.27	12	29	.08	20	32	.15
7	20	.22	12	30	.07	20	33	.13
7	21	.17	14	20	.60	20	34	.12
7	22	.14	14	21	.48	20	35	.10
7	23	.12	14	22	.38	20	36	.09
7	24	.10	14	23	.32	22	25	.65
7	25	.08	14	24	.27	22	26	.55
7	26	.07	14	25	.22	22	27	.46
8	16	.60	14	26	.17	22	28	.38
8	17	.48	14	27	.15	22	29	.30
8	18	.38	14	28	.13	22	30	.26
8	19	.32	14	29	.12	22	31	.22
8	20	.27	14	30	.11	22	32	.19
8	21	.22	14	31	.10	22	33	.17
8	22	.17	14	32	.09	22	34	.15
8	23	.14	14	33	.08	22	35	.13
8	24	.12	14	34	.07	22	36	.12
8	25	.10	16	22	.60	24	26	.65
8	26	.08	16	23	.48	24	27	.55
8	27	.07	16	24	.38	24	28	.46
9	17	.60	16	25	.32	24	29	.38
9	18	.48	16	26	.27	24	30	.30
9	19	.38	16	27	.22	24	31	.26
9	20	.32	16	28	.17	24	32	.22
9	21	.27	16	29	.15	24	33	.19
9	22	.22	16	30	.13	24	34	.17
9	23	.17	16	31	.12	24	35	.15
9	24	.14	16	32	.11			
9	25	.12	16	33	.10			
9	26	.10	16	34	.09			
9	27	.08	16	35	.08			
9	28	.07						

Prices of other sizes quoted on application.

THE CHAMPION PINCH BAR OR CAR MOVER



Fig. 262.



Fig. 263.

This bar is furnished with an adjustable hardened steel grip or knife, which can be reversed when one edge is worn smooth and replaced with a new one when all three are worn off.

Price, including one extra grip, each. \$3.50
 Price of grips, each.25
 Weight, 15 pounds; length, 5 feet.

THE ROWELL CAR MOVER

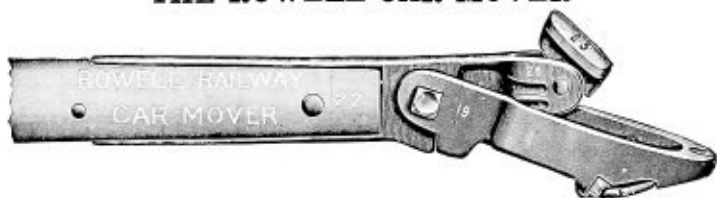


Fig. 264.

Price, with one extra set of steel spurs. \$5.00
 Tool Steel Spurs, per set.25

THE EASY CAR PUSHER

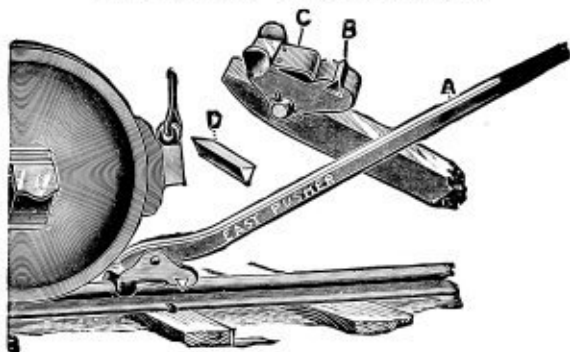


Fig. 265.

With the Easy Car Pusher two cars can be moved at the same time.
 Price, each, \$5.00. Extra steel grips, 25 cents each.
 Order repairs by letters only.

HERCULES STEEL SCOOPS

Fig. 266.

Bushel scoop, price each \$3.00
 Half-bushel scoop, price each 2.50

THE CHAMPION FLOUR SCOOPS

Fig. 267.

This scoop is made of Sheet Steel, or heavy Tin Plate.

	Tin.	Steel.	Galvanized Steel.
8 inch size, price, each	\$0.60	\$0.75	\$0.85
10 " " " "	.65	.85	1.00
12 " " " "	.75	1.00	1.10
14 " " " "	1.00	1.25	1.35

HEAVY TIN FLOUR SCOOPS

No. 2. 6½ inches long, price, each.... \$0.20
 No. 3. 7¼ " " " "25
 No. 4. 9½ " " " "30
 No. 5. 11½ " " " "40

Fig. 268.

STEEL GRAIN-TRIMMER'S SCOOPS

Fig. 269.

Size, 11x15½ inches Per doz., \$18.00

MOSHER BAG HOLDER



Fig. 270.

This bag holder is adapted to all sizes of bags, from a 48-pound flour sack to a 6-bushel gunny bag.

One man can take off and put on from fifteen to twenty bags per minute.

It does not tear the bag. It is well made, with malleable iron jaws, wrought iron pipe standards and steel spring.

Weight, 20 pounds.

Price, each.....\$5.00

GRAIN SAMPLERS



Fig. 271.

Brass Tubes and Plungers

PRICE LIST.

Wagon size, 1 $\frac{1}{4}$ in. diameter x 36 in. long, each	\$ 6.00
Car size, 1 $\frac{1}{4}$ " " " x 44 " " "	8.00
" 1 $\frac{1}{2}$ " " " x 44 " " "	9.00
" 1 $\frac{3}{4}$ " " " x 52 " " "	10.00

Special sizes for canal boats or grain bins made to order.

Steel Tubes and Wood Plungers

We also make these Samplers of extra heavy steel tubing with wood plungers.

PRICE LIST.

1 $\frac{1}{2}$ inches diameter x 48 inches long	\$10.00
1 $\frac{3}{4}$ " " " x 52 " " "	12.00

GALVANIZED WATER PAILS

PRICE LIST.—PER DOZEN.

Plain.

10 Quarts.	12 Quarts.	14 Quarts.
\$4.80	\$5.40	\$6.00

With Handles on Bottom.

\$6.00	\$6.75	\$7.50
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Fig. 271.

GRAIN TESTERS

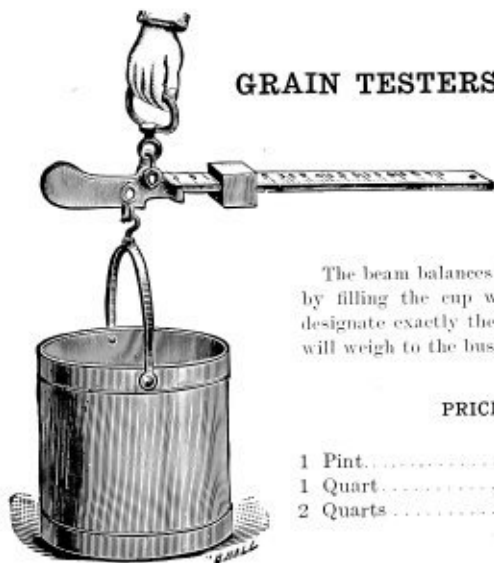


Fig. 272.

The beam balances at zero, graduated so that by filling the cup with grain, the beam will designate exactly the number of pounds that it will weigh to the bushel.

PRICE LIST.

1 Pint.....	\$13.00
1 Quart.....	14.00
2 Quarts.....	15.00

STILLSON AND TRIMO PIPE WRENCHES

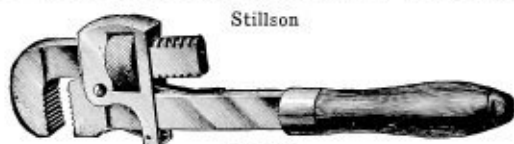


Fig. 273.



Fig. 274.

PRICE LIST.

Stillson or Trimo.	Takes from	$\frac{1}{8}$ in.	$\frac{1}{4}$ in.	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.	1 in.	1 $\frac{1}{2}$ in.	2 in.	2 $\frac{1}{2}$ in.	3 $\frac{1}{2}$ in.	5 in.
		wire to $\frac{1}{2}$ in. pipe.	wire to $\frac{3}{4}$ in. pipe.	wire to 1 in. pipe.	wire to 1 $\frac{1}{2}$ in. pipe.	wire to 2 in. pipe.	wire to 2 $\frac{1}{2}$ in. pipe.	wire to 3 $\frac{1}{2}$ in. pipe.	wire to 5 in. pipe.		
	Length open, in inches.	6	8	10	14	18	24	36	48		
	Price. each	\$2.00	\$2.00	\$2.25	\$3.00	\$4.00	\$6.00	12.00	18.00		
	Extra Frames " . . . .	.25	.25	.33	.45	.55	.65	.75	1.00		
	Extra Nuts. " . . . .	.20	.20	.27	.35	.42	.50	.65	.80		
	Extra Jaws. " . . . .	.67	.67	.75	1.00	1.33	2.00	4.00	6.00		

STAHL'S CONICAL BASE COMPRESSION
GREASE CUPS

These Cups are made with malleable iron bodies and brass or steel tops.

PRICE LIST—STEEL AND BRASS TOPS.

No. of Cup.	00	0	1	2	3
Inside Diameter, inches.	$\frac{3}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$
Inside Depth, in- ches.	$\frac{1}{4}$	$\frac{3}{8}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$
Capacity, ounces	$\frac{1}{2}$	$\frac{3}{4}$	1	2	4 $\frac{1}{2}$
Pipe Thread on Shank.	$\frac{1}{8}$	$\frac{1}{4}$ -1	$\frac{1}{4}$ -1	$\frac{1}{4}$ -2	$\frac{3}{8}$
Steel Tops, each	\$0.50	\$0.60	\$0.70	\$0.90	\$1.30
Plain Brass Tops, each. . . . .	.65	.95	1.05	1.40	1.80
Polished Brass Tops, each. . . . .	.80	1.05	1.30	1.65	2.20

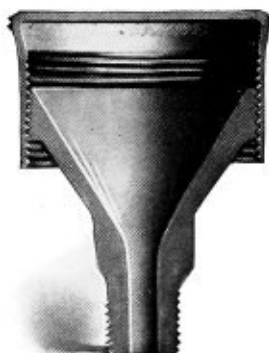


Fig. 275.

POWELL'S COMPRESSION GREASE CUPS

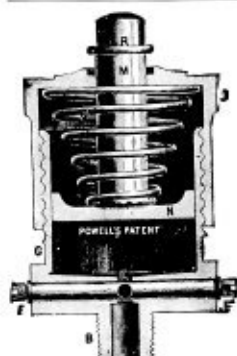


Fig. 277.

STANDARD PATTERN.



Fig. 278.

PRICE LIST.

Number of Cup.	Diam. of Cup, Inches.	Capacity in ounces.	Size of Shank Pipe Thread, Inches.	Iron, per doz.	Iron, each.	Brass, per doz.	Brass, each.
00	1	$\frac{1}{2}$	$\frac{1}{4}$	\$10.00	\$1.00	\$21.00	\$2.10
0	1 $\frac{1}{4}$	1	$\frac{1}{2}$	11.25	1.15	25.00	2.50
1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	$\frac{3}{8}$	12.00	1.20	29.00	2.90
2	2	3	$\frac{1}{2}$	12.50	1.25	33.50	3.35
3	2 $\frac{1}{2}$	7	$\frac{3}{4}$	25.00	2.50	50.00	5.00

"EMPRESS" STEEL COMPRESSION GREASE CUPS



Fig. 279.

PRICE LIST.

Number	00	0	1	2	3	4
Inside Diameter, inch.	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3
Shank Pipe Thread, inch.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$
Capacity (Grease), ounce.	$\frac{1}{2}$	$\frac{3}{4}$	1	2	3 $\frac{1}{2}$	5
Blued Steel, each.	\$0.65	\$0.80	\$0.95	\$1.25	\$1.75	\$2.50
Rough Steel, each.	.50	.65	.80	1.05	1.45	2.00

Stronger, neater and cheaper than cast iron.

When no finish is mentioned, orders for Steel Cups will be filled with Blued Steel.

THE REYNOLDS IMPROVED TRUCK

WITH PATENT BALL BEARING CASTORS.

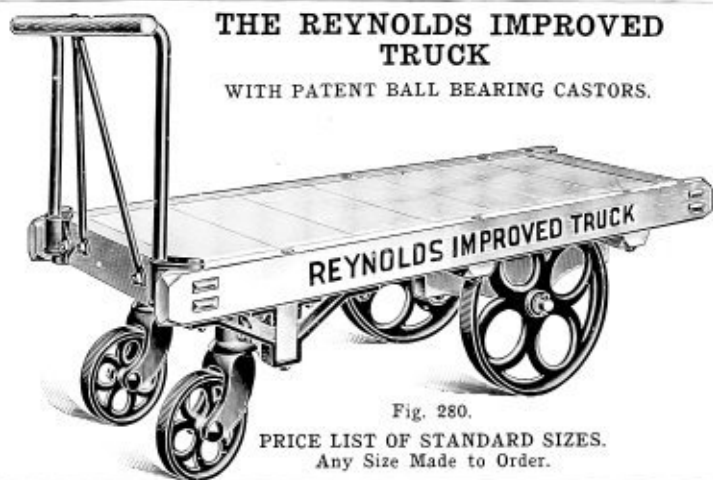


Fig. 280.

PRICE LIST OF STANDARD SIZES.
Any Size Made to Order.

No.	Size of Platform in Feet.	Size Over All, in Feet.	Diam. of Wheels, Inches.	Diam. of Casters, Inches.	Capacity, in lbs.	Weight, lbs.	Price, each.
0	2 x 3	2 x 3½	12	6	1200	115	\$24.00
1	2 x 4	2 x 4½	12	6	1200	120	25.00
3	2½ x 4	2½ x 4½	12	6	1200	130	26.10
4	2½ x 5	2½ x 5½	12	6	1200	130	26.10
5	3 x 4	3 x 4½	12	6	1200	140	27.00
6	3 x 5	3 x 5½	12	6	1200	140	27.00
8	3 x 5	3 x 5½	12	6	1200	155	29.25
9	3 x 4	3 x 4½	18	9	3000	200	30.00
11	3 x 4	3 x 4½	18	9	3000	210	31.50
13	3 x 4	3 x 4½	18	9	3000	220	32.25
15	3 x 4	3 x 4½	18	9	3000	225	33.00
16	3 x 5	3 x 5½	18	9	3000	225	33.00
18	3 x 5	3 x 5½	18	9	3000	220	32.25
19	3 x 6	3 x 6½	18	9	3000	220	33.00
20	3 x 6	3 x 6½	18	9	3000	235	34.50
21	3 x 5	3 x 5½	18	9	3000	240	35.25
22	3 x 6	3 x 6½	18	9	3000	250	36.00
23	3 x 8	3 x 8½	18	9	3000	290	40.00

For very heavy work.

REYNOLDS PATENT TRUCK WITH BOX



Fig. 281.

Boxes 20 inches high carried in stock, to fit all regular sizes of Reynolds Trucks.

Box can be removed in a moment if desired. Capacity of box on No. 16 truck, 16 to 20 bushels. This truck is designed to dump by lifting on handle.

Price, \$6.00 advance on above list prices.



Fig. 282.

BAG TRUCK

WITH STAMPED STEEL NOSE.

The ordinary Bag Truck of this style is made with nose of cast iron; as they must be light, the noses are very easily broken, being often broken in shipping.

The nose of this truck is stamped from a solid piece of steel, making it the strongest part of the truck.

Turned bearings, length, 42 inches; width at nose, 11 $\frac{1}{4}$ inches; diameter of wheels, 6 inches; weight each, 19 lbs.; packed for export measure, 6 cubic feet per dozen.

Price each, with iron wheels, \$4.50.

Price, each, with rubbered wheels, \$8.00

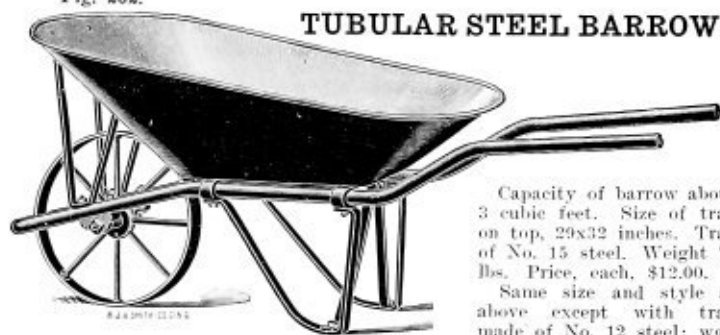


Fig. 283.

TUBULAR STEEL BARROWS

Capacity of barrow about 3 cubic feet. Size of tray on top, 29x32 inches. Tray of No. 15 steel. Weight 70 lbs. Price, each, \$12.00.

Same size and style as above except with tray made of No. 12 steel; wgt. 90 lbs. Price, each, \$15.00.

SKIDS



Fig. 284.

Made of selected oak, rock elm or hickory; ends heavily ironed; oiled and varnished.

No.	Length and Kind.	Dimensions of Side Rails. Inches.	No. of Crossbars.	Weight in lbs. Each.
1	6 ft. Light	1 $\frac{1}{2}$ x 2 $\frac{1}{4}$	2	20
2	6 ft. Heavy	1 $\frac{1}{2}$ x 3	2	34
3	7 ft. Light	1 $\frac{1}{2}$ x 2 $\frac{3}{4}$	2	24
4	7 ft. Heavy	1 $\frac{1}{2}$ x 3 $\frac{1}{4}$	2	38
5	8 ft. Light	1 $\frac{1}{2}$ x 2 $\frac{3}{4}$	3	30
6	8 ft. Heavy	1 $\frac{1}{2}$ x 3 $\frac{1}{4}$	3	40
7	9 ft. Heavy	1 $\frac{1}{2}$ x 3 $\frac{1}{2}$	3	45
8	10 ft. Heavy	1 $\frac{1}{2}$ x 3 $\frac{3}{4}$	3	50
9	12 ft. Heavy	1 $\frac{1}{2}$ x 4	4	65

Any size under 6 feet, same price as 6 feet. Light Skids, 80c per foot. Heavy Skids, \$1.00 per foot.



Fig. 285.

"MOORE" ANTI-FRICTION CHAIN HOIST

With Improved Brake.

This Hoist is now equipped with an improved brake, adding very much to its efficiency and giving it a smooth and free lowering movement.

The load is self-sustained at every point. All working parts protected from weather and dust.

The hoist always hangs plumb.

A good all around Hoist for practical use at a moderate price.

For every additional foot of lift desired, two feet extra of both main and hand chain will be necessary. Order by number.

PRICE LIST.

Capacity per ton	Price Complete with Chain	Extra Main Chain Per ft.	Extra Hand Chain Per ft.	Extra per ft. of lift	Height of Lift † Ft.	Weight Complete with Chain lbs.	Shortest Distance Between Hooks, ins.	Chain Overhauled to raise 1 foot
No. 0 — ½	\$ 25.00	\$0.40	\$0.25	\$1.30	7	39	16	38 ft.
No. 1 — 1	30.00	.44	.25	1.38	8	73	20	47 ft.
No. 1½ — 1½	40.00	.48	.25	1.46	8½	90	21	59 ft.
No. 2 — 2	50.00	.52	.25	1.54	9	128	23	65 ft.
No. 3 — 3	70.00	.60	.25	1.70	10	195	29	108 ft.
No. 4 — 4	95.00	.70	.25	1.90	11	250	32	120 ft.
No. 5 — 5	125.00	.80	.25	2.10	12	353	36	166 ft.
No. 6 — 6	150.00	.80	.25	2.10	12	400	37	168 ft.
No. 8 — 8	200.00	1.25	.25	3.00	12	580	41	240 ft.
No. 10 — 10	250.00	1.25	.25	3.50	12	625	41	258 ft.
No. 15 — 15	350.00	1.50	.25	4.00	12	780	45	366 ft.

†Figures in sixth column denote approximate height which blocks, with regular lengths of chain, will lift from level on which operator stands.

IMPROVED AMERICAN "SAFETY" MANILA ROPE HOIST

HOLDS THE LOAD AT ANY POINT.

Lock consists of only one piece which drops of its own weight on rope; two of these eccentrics in each block, one over each sheave, acting independently of each other and insuring absolute safety.

This outfit makes a cheap but efficient hoisting device which can be used to advantage in a great many places for light, occasional hoisting.

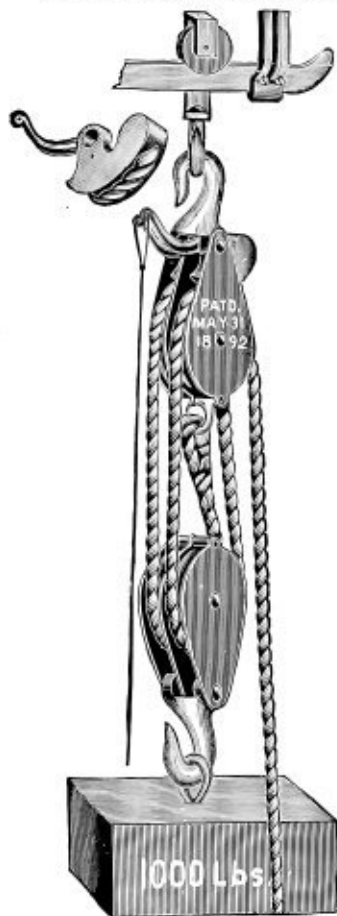


Fig. 286.

The above prices do not include Manila rope, which we will furnish if desired at the market price per pound.

Prices of Overhead Tracks, Hangers, and Trolleys quoted upon receipt of specifications.

Numbers 1 to 6 consist of two double blocks.

Numbers 7 to 10 consist of two quadruple blocks.

- 1.—To use $\frac{1}{4}$, $\frac{7}{16}$, or $\frac{3}{8}$ inch rope.
One man can lift.....300 lbs.
Weight $2\frac{1}{4}$ lbs. Capacity...600 lbs. \$ 2.50
- 2.—To use $\frac{3}{8}$, $\frac{7}{16}$, or $\frac{1}{2}$ inch rope.
One man can lift.....400 lbs.
Weight $5\frac{1}{2}$ lbs. Capacity...1,000 lbs. \$ 4.00
- 3.—To use $\frac{1}{2}$, $\frac{9}{16}$, or $\frac{5}{8}$ inch rope.
One man can lift.....500 lbs.
Weight $11\frac{1}{2}$ lbs. Capacity...1,500 lbs. \$ 6.00
- 4.—To use $\frac{5}{8}$, $1\frac{1}{16}$, or $\frac{3}{4}$ inch rope.
One man can lift.....600 lbs.
Weight 20 lbs. Capacity...2,800 lbs. \$ 9.00
- 5.—To use $\frac{3}{4}$, $1\frac{1}{8}$, or $\frac{7}{8}$ inch rope.
One man can lift.....650 lbs.
Weight 35 lbs. Capacity...4,000 lbs. \$12.00
- 6.—To use $\frac{7}{8}$, 1, or $1\frac{1}{4}$ inch rope.
One man can lift.....650 lbs.
Weight 50 lbs. Capacity...6,000 lbs. \$15.00
- 7.—To use $\frac{1}{2}$, $\frac{9}{16}$, or $\frac{5}{8}$ inch rope.
One man can lift.....1,000 lbs.
Weight $17\frac{1}{2}$ lbs. Capacity...1,700 lbs. \$11.00
- 8.—To use $\frac{5}{8}$, $1\frac{1}{16}$, or $\frac{3}{4}$ inch rope.
One man can lift.....1,100 lbs.
Weight 30 lbs. Capacity...3,000 lbs. \$14.00
- 9.—To use $\frac{3}{4}$, $1\frac{1}{8}$, or $\frac{7}{8}$ inch rope.
One man can lift.....1,100 lbs.
Weight 51 lbs. Capacity...6,000 lbs. \$18.50
- 10.—To use $\frac{7}{8}$, 1, or $1\frac{1}{4}$ inch rope.
One man can lift.....1,100 lbs.
Weight 75 lbs. Capacity...8,000 lbs. \$22.00

STEEL TACKLE BLOCKS

WITH LOOSE SIDE HOOKS.

Single.



Fig. 287.

Double.



Fig. 288.

Triple.



Fig. 289.

Dimensions.			Iron Bushed.			Improved Roller Bushed.			Phosphor Bronze or Metaline Bushed, Self-Lubricating.		
Dia. Shvs. Ins.	For Dia. Rope Ins.	Lgt. Shell Ins.	Sgl. Each.	Dbl. Each.	Trpl. Each.	Sgl. Each.	Dbl. Each.	Trpl. Each.	Sgl. Each.	Dbl. Each.	Trpl. Each.
2 1/2	3/8	4	\$0.90	\$1.75	\$2.50	\$1.40	\$2.60	\$3.75	\$1.65	\$3.25	\$4.75
3	3/8	5	1.00	1.90	2.75	1.50	2.90	4.25	1.80	3.50	5.15
3 1/2	3/8	6	1.25	2.25	3.25	1.75	3.25	4.75	2.10	4.00	5.80
4	3/8	7	1.50	2.70	4.00	2.10	3.85	5.80	2.45	4.60	6.85
4 1/2	1	8	1.85	3.20	4.75	2.55	4.60	6.85	2.90	5.30	7.90
5 1/2	1 1/4	9	2.40	4.00	5.50	3.20	5.60	7.90	3.55	6.30	9.00
6	1 1/4	10	3.10	5.10	7.00	4.05	7.00	9.85	4.40	7.70	11.00
8	1 1/2	12	5.00	8.25	11.75	6.00	10.35	14.90	6.45	11.15	16.00
9 1/2	1 3/4	14	7.50	11.75	16.50	8.75	14.25	20.25	9.10	15.00	21.30
11	2	16	13.00	21.00	32.00	14.00	24.00	35.00	15.00	25.00	38.00
12	2 1/4	18	22.00	35.00	50.00	.....	.....	.....	25.00	41.00	59.00
14	2 3/4	20	30.00	50.00	65.00	.....	.....	.....	34.00	58.00	77.00

SNATCH BLOCKS

We are prepared to furnish all sizes of Wood or Steel Shell Snatch Blocks. Prices quoted upon application.

REGULAR INSIDE IRON STRAPPED BLOCKS

FOR MANILA ROPE WITH LIGNUMVITAE OR IRON SHEAVES. LOOSE SIDE HOOKS AND BECKETS.

Single.



Fig. 291.

Double.



Fig. 292.

Triple.



Fig. 293.

We furnish Beckets in all single, one-half double and one-third triple blocks, without charge. If a greater number is wanted, an additional charge is made.

PRICE LIST.

Dimensions.			Iron Bushed.			Improved Roller Bushed.		
Size Sheave, Inches.	For Dia. Rope, Inches.	Length Shell, Inches.	Single Each.	Doub. Each.	Triple Each.	Single Each.	Doub. Each.	Triple Each.
1 1/2 x 1 1/2	1 1/2	3	\$ 0.70	\$ 1.30	\$ 1.75	\$ 1.10	\$ 2.00	\$ 2.90
2 x 2	2	3 1/2	.75	1.45	2.00	1.15	2.20	3.15
2 1/2 x 2 1/2	2 1/2	4	.85	1.60	2.15	1.20	2.25	3.25
3 x 3	3	5	.90	1.75	2.25	1.25	2.35	3.50
3 1/2 x 3 1/2	3 1/2	6	1.10	2.00	2.90	1.50	2.85	4.40
4 x 4	4	7	1.30	2.40	3.50	1.70	3.35	5.00
4 1/2 x 4 1/2	4 1/2	8	1.65	2.85	4.25	2.25	4.15	6.00
5 x 5	5	9	1.85	3.40	4.75	2.50	4.70	7.25
6 x 6	6	10	2.75	4.50	6.25	3.50	6.00	8.50
7 x 7	7	11	4.45	7.50	10.65	5.30	9.20	13.20
8 x 8	8	12	4.45	7.50	10.65	5.30	9.20	13.20
9 x 9	9	13	7.00	10.50	15.00	8.15	12.80	18.45
9 1/2 x 9 1/2	9 1/2	14	7.00	10.50	15.00	8.15	12.80	18.45
10 x 10	10	15	8.00	13.00	18.00	9.25	15.50	21.75
11 x 11	11	16	10.00	15.00	22.00	11.50	18.00	26.50

RUBBER CONDUCTING HOSE



CONDUCTING AND TANK HOSE—Two-Ply.

Intended to conduct water under light pressure.

HYDRANT HOSE—Three-Ply.

Of medium strength, suitable for hydrants, garden and pump uses, street sprinkling, washing decks and the like.

ENGINE HOSE—Four-Ply.

Recommended for all purposes where a very strong and reliable article is required, and is made to stand a pressure of from 100 to 200 lbs. to the square inch.

PRICE LIST.

Internal Diameter, Inches.	2-Ply, Per Foot.	3-Ply, Per Foot.	4-Ply, Per Foot.	5-Ply, Per Foot.	6-Ply, Per Foot.
$\frac{1}{2}$	\$0.20	\$0.25	\$0.30	\$0.37	\$0.45
$\frac{3}{4}$	.25	.30	.37	.46	.55
1	.33	.40	.50	.62	.75
1 $\frac{1}{4}$	.42	.50	.62	.77	.93
1 $\frac{1}{2}$	.50	.60	.75	.93	1.12
1 $\frac{3}{4}$	.58	.70	.87	1.08	1.30
2	.66	.80	1.00	1.25	1.50
2 $\frac{1}{4}$	.75	.90	1.12	1.40	1.68
2 $\frac{1}{2}$	.83	1.00	1.25	1.56	1.87
2 $\frac{3}{4}$	.92	1.10	1.37	1.71	2.05
3	.99	1.20	1.50	1.87	2.25
3 $\frac{1}{2}$	1.16	1.40	1.75	2.18	2.62
4	1.32	1.60	2.00	2.50	3.00
5	1.65	2.00	2.50	3.13	3.75
6	1.98	2.40	3.00	3.75	4.50

STEAM AND BREWERS' HOSE**PRICE LIST.**

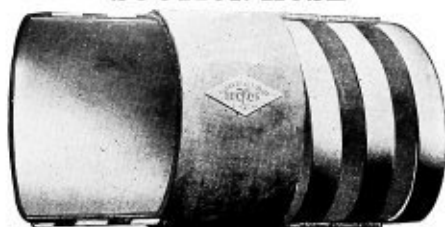
Internal Diameter, Inches.	3-Ply. For 20 lbs. Steam or less. Per Foot.	4-Ply. For 35 lbs. Steam or less. Per Foot.	5-Ply. For 50 lbs. Steam or less. Per Foot.	6-Ply. For 75 lbs. Steam or less. Per Foot.
$\frac{1}{2}$	\$0.43	\$0.51	\$0.63	\$0.76
$\frac{3}{4}$	.51	.67	.83	1.00
1	.67	.83	1.03	1.24
1 $\frac{1}{4}$	.85	1.04	1.30	1.56
1 $\frac{1}{2}$	1.02	1.25	1.56	1.87
1 $\frac{3}{4}$	1.18	1.45	1.81	2.17
2	1.34	1.66	2.07	2.49
2 $\frac{1}{4}$	1.50	1.87	2.33	2.80
2 $\frac{1}{2}$	1.66	2.08	2.60	3.12
3	2.00	2.80	3.50	4.20

Steam Hose, served with marline, at 10 per cent. advance on Price List. Canvas wrapping outside, charged as one-ply.

COTTON FIRE HOSE**PRICE LIST.**

Internal Diameter, Inches.	Unlined, Per Foot.	Rubber Lined, Per Foot.	Internal Diameter, Inches.	Unlined, Per Foot.	Rubber Lined, Per Foot.
$\frac{3}{4}$	\$0.12 $\frac{1}{2}$	\$0.20	2	\$0.26	\$0.60
1	.14	.35	2 $\frac{1}{2}$	.30	.70
1 $\frac{1}{4}$	.19	.45	3	.36	1.00
1 $\frac{1}{2}$	.22	.50			

SUCTION HOSE



Light Wire Suction Hose

PRICE LIST.

	$\frac{3}{4}$ inch, internal diameter	per foot, \$0.70
1	" " "	.90
1 $\frac{1}{4}$	" " "	1.15
1 $\frac{1}{2}$	" " "	1.50
1 $\frac{3}{4}$	" " "	1.90
2	" " "	2.30
2 $\frac{1}{2}$	" " "	3.10
3	" " "	4.00

Hard Rubber Suction Hose

PRICE LIST.

	$\frac{3}{4}$ inch, internal diameter	per foot, \$0.65
1	" " "	.75
1 $\frac{1}{4}$	" " "	.93
1 $\frac{1}{2}$	" " "	1.13
1 $\frac{3}{4}$	" " "	1.31
2	" " "	1.50
2 $\frac{1}{4}$	" " "	1.69
2 $\frac{1}{2}$	" " "	1.88
3	" " "	2.36

Prices of larger sizes quoted upon application.

HOSE CLAMPS



Fig. 298.

Size and Ply of Hose.	List Price per Doz.	Size and Ply of Hose.	List Price per Doz.
$\frac{3}{4}$ in., 2 ply	\$0.60	1 in., 4 ply	\$2.00
" " 3 "	.60	1 $\frac{1}{2}$ " 3 "	2.50
" " 4 "	.60	1 $\frac{1}{2}$ " 4 "	2.50
" " 2 "	.60	1 $\frac{3}{4}$ " 3 "	3.00
" " 3 "	.60	1 $\frac{3}{4}$ " 4 "	3.00
" " 4 "	.60	2 " 3 and 4 ply	4.00
1 " 3 "	2.00	2 $\frac{1}{2}$ " 3 and 4 ply	7.00

STEAM HOSE COUPLINGS



Fig. 294.

Size inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$
Hose Pipe Thread. Per doz.	\$15.00	\$15.00	\$18.00	\$24.00	\$30.00	\$42.00	\$72.00

STANDARD HOSE COUPLINGS



Fig. 295.

Size inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Hose Pipe Thread Per doz.	\$2.40	\$2.40	\$4.40	\$10.00	\$14.00	\$24.00	\$48.00	\$75.00
Iron " " " " " " " " " "	2.65	2.65	4.65	10.50	15.00	26.00	50.00	76.00
Size inches	$3\frac{1}{2}$	4	5	6	8			
Iron Pipe Thread. . . Per doz.	\$120.00	\$150.00	\$250.00	\$350.00	\$504.00			

Note.—Couplings with Hose Pipe Thread will always be sent if not otherwise ordered. $3\frac{1}{2}$ to 8-inch, inclusive, are made with Iron Pipe Thread unless otherwise ordered.

HOSE NIPPLES



Fig. 296. Male.



Fig. 297. Male and Female.

Size inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Male Per doz.	\$3.50	\$3.50	\$5.00	\$9.00	\$10.00	\$14.00	\$28.00	\$40.00	\$50.00	\$75.00
Male and Female " "	3.50	3.50	5.00	9.00	10.00	14.00	28.00	40.00	50.00	75.00

HOSE NOZZLES WITH COCK

Fig. 299.

PRICE LIST.

Size. inches	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Length. inches	6 $\frac{3}{4}$	8	12	8	12	12	12
Hose Pipe Thread, per doz.	\$11.00	\$13.00	\$18.00	\$15.00	\$20.00	\$40.00	\$55.00
Iron Pipe Thread, per doz.	12.20	14.20	19.20	18.00	23.00	43.00	60.00
Size. inches	2	2	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$
Length. inches	12	20	25	20	24	30	36
Hose Pipe Thread, per doz.	\$80.00	\$110.00	\$130.00	\$160.00	\$175.00	\$195.00	\$215.00
Iron Pipe Thread, per doz.	83.00	113.00	133.00	170.00	185.00	205.00	225.00

PLAIN HOSE NOZZLES

Fig. 300.

PRICE LIST.

Size. inches	$\frac{3}{4}$	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$
Length, to Screw inches	3	4	4 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$
Length, to Wind inches	5 $\frac{1}{2}$	6				
Hose Pipe Thread Per doz.	\$4.00	\$5.00	\$12.00	\$18.00	\$26.00	\$37.40
Iron Pipe Thread. Per doz.	5.00	6.25	13.75	19.75	29.00	39.50
To Wind Per doz.	4.00	5.00				

MILL BRUSHES AND DUSTERS

These Brushes are all made of the best grade of bristles and are intended for general factory service. They are far superior to the Brushes ordinarily carried in stock by dealers, and on account of their durability are the cheapest that can be used.

Extra Dusters—Russia Bristles

Fig. 301.

PRICE LIST.

Trade No.	Price, Each	Price, Per Dozen.	Trade No.	Price, Each	Price, Per Dozen.
4	\$1.70	\$17.00	6	\$2.50	\$26.00
5	2.00	21.50	7	1.00	8.00

Round

Fig. 302.

Dusters

No. 4. Price, each.....\$1.70 Price, per dozen.....\$17.00

Floor Brushes—Russia Bristles

Fig. 303.

Trade No.	Length.	Price, Each.	Price, Per Dozen.
3	12 inches	\$5.00	\$45.00
4	13 inches	6.00	60.00
6	14 inches	8.00	84.00

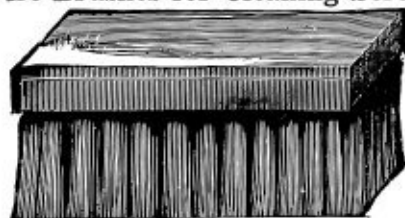
Wire Brushes for Cleaning Screens

Fig. 304.

Price, each\$1.50

COTTON WASTE.**Complete Stock.**

No. 1. White	..... per lb. Net \$	}	No. 1. Colored	..... per lb. Net. \$
No. 1s. White	..... per lb. Net		No. 2. Colored	..... per lb. Net.
No. 2. White	..... per lb. Net		No. 3. Colored	..... per lb. Net.

MILL MAGNETS.

These magnets are useful for places where a regular machine cannot be used.



Fig. 305.

10-inch, each \$1.00.

WELLER ELEVATOR PAINT

FOR EXTERIOR PAINTING ON ANY
BUILDING MATERIAL.

This paint is manufactured expressly for us according to a formula in use for twenty-five years. Thousands of gallons throughout the country attest its value. There are many buildings painted ten years ago that are still in good condition.

We carry this paint in two grades and sell it only in 5-gallon kits and 50-gallon barrels. With your first barrel order we furnish an agitator free of charge. By its use you will save paint and always have it of uniform thickness. There will be no evaporation, as the barrel is kept air tight.



PRICES AND SIZE OF PACKAGES.

Grade A.	Grade B.
5-gallon kits, per gallon 80c	5-gallon kits, per gallon 60c
50-gallon barrels, per gallon 75c	50-gallon barrels, per gallon 55c
Made only in three colors, Red, Yellow and Black.	Made only in three colors, Red, Light Brown and Drab.

This paint is not a cheap and worthless mixture, but is a high-grade paint and will give good satisfaction. It is made from the best pigments and linseed oil with the necessary dryers. It will cover from 200 to 300 square feet, two coats, per gallon, depending on the surface. It will do better work and cover more surface than any mixture of dry venetian red or mineral you can make yourself.

DIRECTIONS FOR USE.

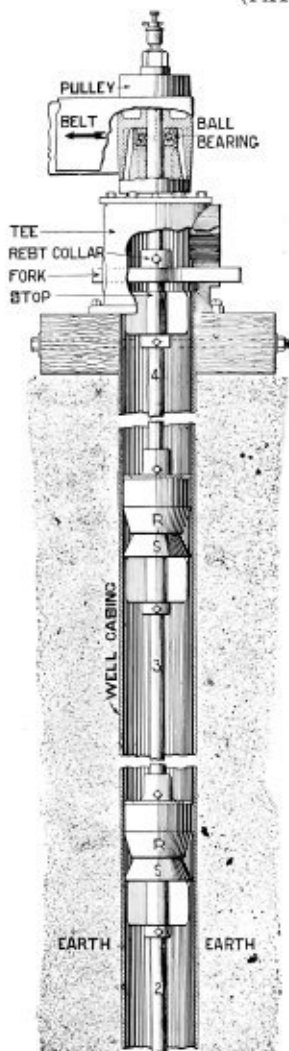
All surfaces should be dry and free from rust, grease or acid. Each coat must be allowed sufficient time to become thoroughly hard before the next is applied. (Allow 6 to 8 days.) Otherwise the undercoat will never dry thoroughly. The first coat may be thinned with Strictly Pure Boiled Linseed Oil, one gallon of oil to four gallons of paint. New wood work should be allowed to weather before painting. Sappy and knotty places should receive two coats of alcohol shellac varnish for best results.



Fig. 306.

THE HART IMPROVED CENTRIFUGAL PUMP

(PATENT APPLIED FOR.)

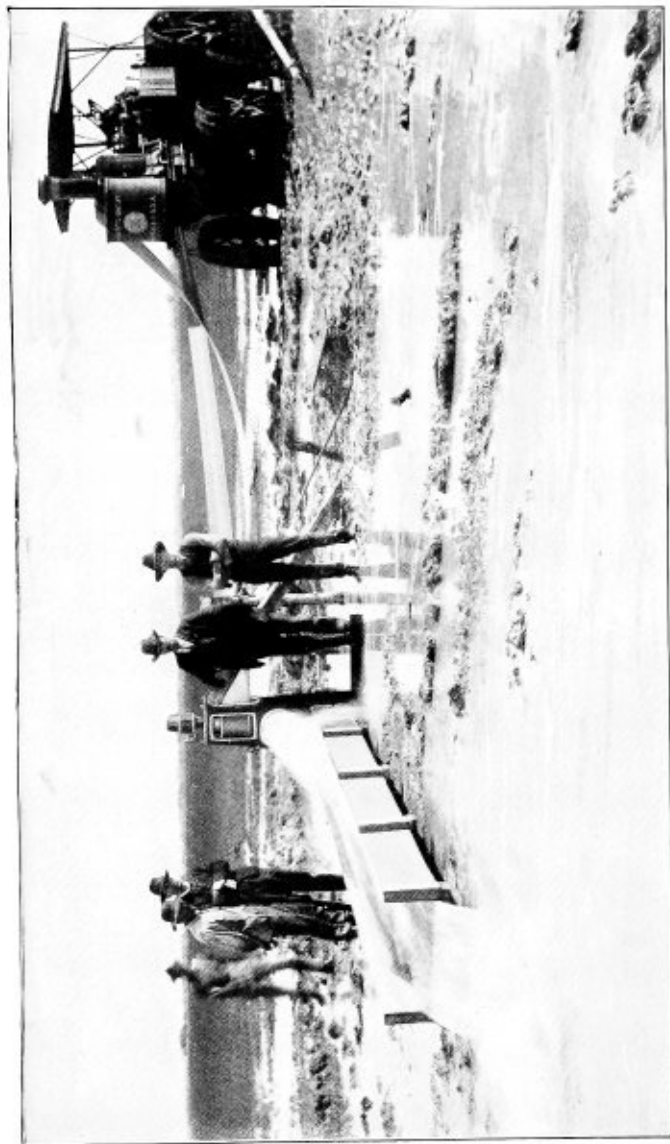


This Pump works inside of well casings over eight inches in diameter, no discharge pipe or pit being required. The Pumps or Runners ("R" in cut) are ten feet apart, the number required depending upon the lift or distance the water has to be raised. A stop ("S" in cut) is placed below each runner to prevent the water from whirling. Heretofore, the great objection to pitless Pumps has been the bearings, which, the sand would wear out allowing the Runners to rub against the well casing, but after five years of experimenting in sand wells in Louisiana, Texas and New Mexico, this objection has been overcome. The weight of the shaft and Runners is carried by ball bearings in a dust-proof chamber in the drive head.

The economical capacity of the Pump per minute at from six to eight hundred revolutions for a well casing eight and one quarter inches inside diameter is from five hundred to one thousand gallons; for a well casing nine and five-eighths inches inside diameter one thousand to one thousand five hundred gallons and for twelve inch inside diameter standard pipe, one thousand five hundred to two thousand five hundred gallons. This Pump will lift all the water that any well will supply.

Prices and further information furnished upon application.

THE HART IMPROVED CENTRIFUGAL PUMP



The above illustration shows a 9½-inch diameter Hart Centrifugal Pump, pumping 1,200 gallons of water and sand per minute from a 10-inch well, 133 feet deep. Lift, 53 feet. Speed, 800 revolutions per minute. 20 Horse-power engine. No pits. No priming. No discharge pipe. No valves. Ball-bearing above ground.

USEFUL INFORMATION

Note: Index will give pages of catalogue containing tables showing Horse Power of Leather Belting, Rope, etc., speeds of Elevators, how to figure diameter of Pulleys, Sheaves, Gears, Sprockets, etc.

WEIGHTS AND MEASURES RECOGNIZED BY THE LAWS OF THE UNITED STATES.

Articles	Wt. per Bu. lbs.	Articles	Wt. per Bu. lbs.
Wheat	60	Buckwheat	48
Shelled Corn	56	Dried Peaches.....	33
Corn in Ear.....	70	Dried Apples.....	26
Rye	56	Onions	57
Oats	32	Salt	65
Barley	48	Stone Coal.....	80
Irish Potatoes	60	Malt	38
Sweet Potatoes	55	Bran	20
White Beans.....	60	Plastering Hair.....	8
Castor Beans.....	46	Turnips	55
Clover Seed	60	Unslacked Lime.....	30
Timothy Seed	45	Corn Meal.....	48
Flax Seed	56	Fine Salt.....	55
Hemp Seed	44	Hungarian Grass Seed.....	50
Peas	60	Blue Grass Seed.....	44

USEFUL INFORMATION

TABLE SHOWING THE DIFFERENCE BETWEEN STANDARD GAUGES OF METAL.

No. of G'ge	Thickness in Decimals of an Inch.						
	Birm-ingham.	Browne & Sharpe.	United States Standard Plate, Iron and Steel.	British Imperial.	American Steel & Wire Co.	Trenton Iron Co.	Stubs Steel Wire.
7°	.....	.....	.500	.500	.....	.....	.....
6°	.....	.....	.46875	.464	.....	.....	.....
5°	.....	.....	.4375	.432	.....	.45	.....
4°	.454	.46	.40625	.400	.3938	.40	.....
3°	.425	.40964	.375	.372	.3625	.36	.....
2°	.380	.3648	.34375	.348	.3310	.33	.....
0	.340	.32486	.3125	.324	.3065	.305	.....
1	.300	.2893	.28125	.300	.2830	.285	.227
2	.284	.25763	.265625	.276	.2625	.265	.219
3	.259	.22942	.25	.252	.2437	.245	.212
4	.238	.20431	.234375	.232	.2253	.225	.207
5	.220	.18194	.21875	.212	.2070	.205	.204
6	.203	.16202	.203125	.192	.1920	.190	.201
7	.180	.14428	.1875	.176	.1770	.175	.199
8	.165	.12849	.171875	.160	.1620	.160	.197
9	.148	.11443	.15625	.144	.1483	.145	.194
10	.134	.10189	.140625	.128	.1350	.130	.191
11	.120	.090742	.125	.116	.1205	.1175	.188
12	.109	.080808	.109375	.104	.1055	.1050	.185
13	.095	.071961	.09375	.092	.0915	.0925	.182
14	.083	.064084	.078125	.080	.0800	.0800	.180
15	.072	.057068	.0703125	.072	.0720	.0700	.178
16	.065	.05082	.0625	.064	.0625	.0610	.175
17	.058	.045257	.05625	.056	.0540	.0525	.172
18	.049	.040303	.05	.048	.0475	.0450	.168
19	.042	.03589	.04375	.040	.0410	.0400	.164
20	.035	.031961	.0375	.036	.0348	.0350	.161
21	.032	.028462	.034375	.032	.03175	.0310	.157
22	.028	.025347	.03125	.028	.0286	.0280	.155
23	.025	.022571	.028125	.024	.0258	.0250	.153
24	.022	.0201	.025	.022	.0230	.0225	.151
25	.020	.0179	.021875	.020	.0204	.0200	.148
26	.018	.01594	.01875	.018	.0181	.0180	.146
27	.016	.014195	.0171875	.0164	.0173	.0170	.143
28	.014	.012641	.015625	.0148	.0162	.0160	.139
29	.013	.011257	.0140625	.0136	.0150	.0150	.134
30	.012	.010025	.0125	.0124	.0140	.0140	.127
31	.010	.008928	.0109375	.0116	.0132	.0130	.120
32	.009	.00795	.01015625	.0108	.0128	.0120	.115
33	.008	.00708	.009375	.0100	.0118	.0110	.112
34	.007	.006304	.00859375	.0092	.0104	.0100	.110
35	.005	.005614	.0078125	.0084	.0095	.0095	.108
36	.004	.005	.00703125	.0076	.0090	.0090	.106
37	.....	.004453	.006640625	.0068	.....	.0085	.103
38	.....	.003965	.00625	.0060	.....	.0080	.101
39	.....	.003531	.....	.....	.....	.0075	.099
40	.....	.003144	.....	.....	.....	.0070	.097

USEFUL INFORMATION

WEIGHT OF SQUARE AND ROUND ROLLED IRON.
ONE FOOT LONG.

Square.

Size, in Inches.	Weight, in Pounds.	Size, in Inches.	Weight, in Pounds.	Size, in Inches.	Weight, in Pounds.	Size, in Inches.	Weight, in Pounds.
$\frac{1}{8}$	.211	$2\frac{1}{8}$	21.120	$4\frac{1}{8}$	76.264	8	216.336
$\frac{1}{4}$	.475	$2\frac{1}{4}$	23.292	$4\frac{1}{4}$	80.333	$8\frac{1}{4}$	230.038
$\frac{3}{8}$	.845	$2\frac{3}{8}$	25.560	5	84.480	$8\frac{3}{8}$	244.220
$\frac{1}{2}$	1.320	$2\frac{1}{2}$	27.939	$5\frac{1}{8}$	88.784	$8\frac{1}{2}$	258.800
$\frac{5}{8}$	1.901	3	30.416	$5\frac{1}{4}$	93.168	9	273.792
$\frac{3}{4}$	2.588	$3\frac{1}{8}$	33.010	$5\frac{3}{8}$	97.656	$9\frac{1}{4}$	289.220
1	3.380	$3\frac{1}{4}$	35.704	$5\frac{1}{2}$	102.240	$9\frac{1}{2}$	305.055
$1\frac{1}{8}$	4.278	$3\frac{3}{8}$	38.503	5 $\frac{5}{8}$	106.956	$9\frac{3}{4}$	321.332
$1\frac{1}{4}$	5.280	$3\frac{1}{2}$	41.408	6	111.750	10	337.920
$1\frac{3}{8}$	6.390	$3\frac{5}{8}$	44.418	$6\frac{1}{8}$	116.671	$10\frac{1}{4}$	355.136
$1\frac{1}{2}$	7.604	$3\frac{3}{4}$	47.543	6 $\frac{1}{4}$	121.664	$10\frac{1}{2}$	372.672
$1\frac{3}{4}$	8.926	$3\frac{7}{8}$	50.756	$6\frac{3}{8}$	132.040	$10\frac{3}{4}$	390.628
2	10.352	4	54.084	$6\frac{1}{2}$	142.816	11	408.960
$2\frac{1}{8}$	11.883	$4\frac{1}{8}$	57.517	$6\frac{3}{4}$	154.012	$11\frac{1}{4}$	427.812
$2\frac{1}{4}$	13.520	$4\frac{1}{4}$	61.055	7	165.632	$11\frac{1}{2}$	447.024
$2\frac{3}{8}$	15.263	$4\frac{3}{8}$	64.700	$7\frac{1}{8}$	177.672	$11\frac{3}{4}$	466.684
$2\frac{1}{2}$	17.112	$4\frac{1}{2}$	68.488	$7\frac{1}{4}$	190.136	12	486.656
$2\frac{3}{4}$	19.066	$4\frac{3}{4}$	72.305	$7\frac{3}{8}$	203.024		

Round.

Diam. in Inches.	Weight, in Pounds.	Diam. in Inches.	Weight, in Pounds.	Diam. in Inches.	Weight, in Pounds.	Diam. in Inches.	Weight, in Pounds.
$\frac{1}{8}$	.165	$2\frac{1}{8}$	16.688	$4\frac{1}{8}$	59.900	8	169.826
$\frac{1}{4}$	.373	$2\frac{1}{4}$	18.293	$4\frac{1}{4}$	63.094	$8\frac{1}{4}$	180.696
$\frac{3}{8}$	.663	$2\frac{3}{8}$	20.076	5	66.752	$8\frac{3}{8}$	191.808
$\frac{1}{2}$	1.043	$2\frac{1}{2}$	21.944	$5\frac{1}{8}$	69.731	$8\frac{1}{2}$	203.260
$\frac{5}{8}$	1.493	3	23.888	$5\frac{1}{4}$	73.172	9	215.040
$\frac{3}{4}$	2.032	$3\frac{1}{8}$	25.926	$5\frac{3}{8}$	76.700	$9\frac{1}{4}$	227.152
1	2.654	$3\frac{1}{4}$	28.040	$5\frac{1}{2}$	81.304	$9\frac{1}{2}$	239.600
$1\frac{1}{8}$	3.360	$3\frac{3}{8}$	30.240	$5\frac{5}{8}$	84.001	$9\frac{3}{4}$	252.376
$1\frac{1}{4}$	4.172	$3\frac{1}{2}$	32.512	6	87.776	10	266.288
$1\frac{3}{8}$	5.019	$3\frac{5}{8}$	34.886	$6\frac{1}{8}$	91.634	$10\frac{1}{4}$	278.924
$1\frac{1}{2}$	5.972	$3\frac{3}{4}$	37.332	6 $\frac{1}{4}$	95.552	$10\frac{1}{2}$	292.688
$1\frac{3}{4}$	7.020	$3\frac{7}{8}$	39.864	$6\frac{3}{8}$	103.704	$10\frac{3}{4}$	306.800
2	8.128	4	42.464	$6\frac{1}{2}$	112.160	11	321.216
$2\frac{1}{8}$	9.333	$4\frac{1}{8}$	45.174	$6\frac{3}{4}$	120.960	$11\frac{1}{4}$	336.004
$2\frac{1}{4}$	10.616	$4\frac{1}{4}$	47.952	7	130.048	$11\frac{1}{2}$	351.104
$2\frac{3}{8}$	11.988	$4\frac{3}{8}$	50.815	$7\frac{1}{8}$	139.544	$11\frac{3}{4}$	366.536
$2\frac{1}{2}$	13.440	$4\frac{1}{2}$	53.760	$7\frac{1}{4}$	149.328	12	282.208
$2\frac{3}{4}$	14.975	$4\frac{3}{4}$	56.788	$7\frac{3}{8}$	159.456		

USEFUL INFORMATION

WEIGHT OF FLAT ROLLED IRON.

One Foot Long.

Breadth, Inches.	Thick- ness.	Wt.	Breadth, Inches.	Thick- ness.	Wt.	Breadth, Inches.	Thick- ness	Wt.
1		.422	1½	1	8.871	2½		5.280
		.845		1½	9.610			6.336
		1.267	2	2	.845			7.392
		2.690		2½	1.689		1	8.448
		2.112		3	2.534		1½	9.504
		2.534		3½	3.379		2	10.560
		2.956		4	4.224		2½	11.616
1½		.528		4½	5.069		3	12.672
		1.056		5	5.914		3½	13.728
		1.584		5½	6.758		4	14.784
		2.112		6	7.604		4½	15.840
		2.640		6½	8.448		5	16.896
		3.168		7	9.294		5½	17.952
		3.696		7½	10.138		6	19.008
	1	4.224		8	10.983		6½	20.064
	1½	4.752		8½	11.828	2½		2.323
1½		.633		9	12.673		7	4.617
		1.266	2½		.950			6.970
		1.900			1.900		1	9.294
		2.535			2.851		1½	11.617
		3.168			3.802		2	13.840
		3.802			4.752		2½	16.264
		4.435			5.703		3	18.587
	1	5.069			6.653		3½	20.910
	1½	5.703		1	7.604		4	23.234
	2	6.337		1½	8.554	3		2.535
	2½	6.970		2	9.505			5.069
	3	.739		2½	10.455			7.605
1½		1.479		3	11.406		1	10.138
		2.218		3½	12.356		1½	12.673
		2.957		4	13.307		2	15.208
		3.696		4½	14.257		2½	17.742
		4.435		5	15.208		3	20.277
		5.178		5½	16.158		3½	22.811
	1	5.914	2½		1.056		4	25.346
	1½	6.653			2.112		4½	27.881
	2	7.392			3.167		5	
	2½	8.132			4.224		5½	

USEFUL INFORMATION

WEIGHT OF SHEETS OF WROUGHT IRON, STEEL, COPPER AND BRASS.

Weights per Square Foot.

Thickness by Birmingham Gauge.

No. of Gauge.	Thickness, in Inches.	Iron.	Steel.	Copper.	Brass.
0000	.454	18.22	18.46	20.57	19.43
000	.425	17.05	17.28	19.25	18.19
00	.38	15.25	15.45	17.21	16.26
0	.34	13.64	13.82	15.40	14.55
1	.3	12.04	12.20	13.59	12.84
2	.284	11.40	11.55	12.87	12.16
3	.259	10.39	10.53	11.73	11.09
4	.238	9.55	9.68	10.78	10.19
5	.22	8.83	8.95	9.97	9.42
6	.203	8.15	8.25	9.20	8.69
7	.18	7.22	7.32	8.15	7.70
8	.165	6.62	6.71	7.47	7.06
9	.148	5.94	6.02	6.70	6.33
10	.134	5.38	5.45	6.07	5.74
11	.12	4.82	4.88	5.44	5.14
12	.109	4.37	4.43	4.94	4.67
13	.095	3.81	3.86	4.30	4.07
14	.083	3.33	3.37	3.76	3.55
15	.072	2.89	2.93	3.26	3.08
16	.065	2.61	2.64	2.94	2.78
17	.058	2.33	2.36	2.63	2.48
18	.049	1.97	1.99	2.22	2.10
19	.042	1.69	1.71	1.90	1.80
20	.035	1.40	1.42	1.59	1.50
21	.032	1.28	1.30	1.45	1.37
22	.028	1.12	1.14	1.27	1.20
23	.025	1.00	1.02	1.13	1.07
24	.022	.883	.895	1.00	.942
25	.02	.803	.813	.906	.856
26	.018	.722	.732	.815	.770
27	.016	.642	.651	.725	.685
28	.014	.562	.569	.634	.599
29	.013	.522	.529	.589	.556
30	.012	.482	.488	.544	.514
31	.01	.401	.407	.453	.428
32	.009	.361	.366	.408	.385
33	.008	.321	.325	.362	.342
34	.007	.281	.285	.317	.300
35	.005	.201	.203	.227	.214
Specific Gravity		7.704	7.806	8.698	8.218
Weight, Cubic Foot		481.25	487.75	543.6	513.6
Weight, Cubic Inch		.2787	.2823	.3146	.2972

USEFUL INFORMATION

HORSE-POWER TRANSMITTED BY WIRE ROPE.

Diameter of Wheel in Feet.	Number of Revolutions.	Trade No. of Rope.	Diameter of Rope.	Horse-Power.	Diameter of Wheel in Feet.	Number of Revolutions.	Trade No. of Rope.	Diameter of Rope.	Horse-Power.
4	80	23	$\frac{3}{8}$	3.3	10	80	19	$\frac{3}{8}$	55.0
4	100	23	$\frac{3}{8}$	4.1	10	100	18	$\frac{3}{8}$	58.4
4	120	23	$\frac{3}{8}$	5.0	10	120	18	$\frac{3}{8}$	68.7
4	140	23	$\frac{3}{8}$	5.8	10	140	19	$\frac{3}{8}$	73.0
5	80	22	$\frac{7}{16}$	6.9	11	80	19	$\frac{3}{8}$	82.5
5	100	22	$\frac{7}{16}$	8.6	11	100	18	$\frac{3}{8}$	87.6
5	120	22	$\frac{7}{16}$	10.3	11	120	19	$\frac{3}{8}$	96.2
5	140	22	$\frac{7}{16}$	12.1	11	140	18	$\frac{3}{8}$	102.2
6	80	21	$\frac{1}{2}$	10.7	12	80	18	$\frac{3}{8}$	64.9
6	100	21	$\frac{1}{2}$	13.4	12	100	19	$\frac{3}{8}$	75.5
6	120	21	$\frac{1}{2}$	16.1	12	120	18	$\frac{3}{8}$	81.1
6	140	21	$\frac{1}{2}$	18.7	12	140	17	$\frac{3}{8}$	94.4
7	80	20	$\frac{5}{16}$	16.9	13	80	18	$\frac{3}{8}$	97.3
7	100	20	$\frac{5}{16}$	21.1	13	100	18	$\frac{3}{8}$	113.3
7	120	20	$\frac{5}{16}$	25.3	13	120	17	$\frac{3}{8}$	113.6
7	140	20	$\frac{5}{16}$	29.6	14	80	18	$\frac{3}{8}$	132.1
8	80	19	$\frac{3}{8}$	22.0	14	100	18	$\frac{3}{8}$	93.4
8	100	19	$\frac{3}{8}$	27.5	14	120	17	$\frac{3}{8}$	99.3
8	120	19	$\frac{3}{8}$	33.0	15	80	18	$\frac{3}{8}$	116.7
8	140	19	$\frac{3}{8}$	38.5	15	100	17	$\frac{3}{8}$	124.1
9	80	20	$\frac{3}{16}$	40.0	15	120	18	$\frac{3}{8}$	140.1
9	100	20	$\frac{3}{16}$	41.5	15	140	17	$\frac{3}{8}$	148.9
9	120	19	$\frac{3}{16}$	50.0	15	160	18	$\frac{3}{8}$	163.5
9	140	19	$\frac{3}{16}$	51.9	15	180	17	$\frac{3}{8}$	173.7
9	140	20	$\frac{3}{16}$	60.0	15	200	18	$\frac{3}{8}$	112.0
9	140	19	$\frac{3}{16}$	62.2	15	220	17	$\frac{3}{8}$	122.6
9	140	18	$\frac{3}{16}$	70.0	15	240	18	$\frac{3}{8}$	140.0
9	140	17	$\frac{3}{16}$	72.6	15	260	17	$\frac{3}{8}$	153.2
9	140	16	$\frac{3}{16}$	72.6	15	280	18	$\frac{3}{8}$	168.0
9	140	15	$\frac{3}{16}$	72.6	15	300	17	$\frac{3}{8}$	183.9
9	140	14	$\frac{3}{16}$	72.6	15	320	16	$\frac{3}{8}$	198.0
9	140	13	$\frac{3}{16}$	72.6	15	340	17	$\frac{3}{8}$	217.0
9	140	12	$\frac{3}{16}$	72.6	15	360	16	$\frac{3}{8}$	237.0
9	140	11	$\frac{3}{16}$	72.6	15	380	17	$\frac{3}{8}$	259.0
9	140	10	$\frac{3}{16}$	72.6	15	400	16	$\frac{3}{8}$	283.0
9	140	9	$\frac{3}{16}$	72.6	15	420	17	$\frac{3}{8}$	300.6
9	140	8	$\frac{3}{16}$	72.6	15	440	16	$\frac{3}{8}$	300.0

USEFUL INFORMATION

HORSE-POWER TRANSMITTED BY DOUBLE LEATHER BELTS.

Belts supposed to be not overstrained, so they will last.

1-inch wide, 550 feet per minute=1 Horse Power.

Speed in Feet per Minute.	Width of Belts in Inches.													
	4	6	8	10	12	14	16	18	20	22	24	28	30	
400	H. P. 2½	H. P. 4½	H. P. 5½	H. P. 7½	H. P. 8½	H. P. 10	H. P. 11½	H. P. 13	H. P. 14½	H. P. 16	H. P. 17½	H. P. 20	H. P. 21½	
600	4½	6½	8½	11	13	15	17½	19½	22	24	26	30½	32½	
800	5½	8½	11½	14½	17½	20½	23	26	29	32	34½	40½	43½	
1000	7½	11	14½	18½	21½	25½	29	32½	36	40	43½	51	54½	
1200	8½	13	17½	22	26	30½	34½	39	44	48	52½	60½	65	
1500	10½	16½	21½	27½	32½	38	43½	49	54½	60	65½	76½	81½	
1800	13	19½	26	32½	39	45½	52	59	65½	72	78½	91½	98	
2000	14½	21½	29	36½	43½	50½	58	65½	72½	80	87	102	109	
2400	17½	26	34½	44	52½	60½	69½	78½	88	96	105	122	131	
2800	20½	30½	40½	51	61	71	81	91½	102	112	122	142	153	
3000	21½	32½	43½	54½	65½	76	87½	98	108	120	131	153	163	
3500	25½	38	50½	63½	76	89	102	114	127	140	153	178	191	
4000	29	43½	58½	72½	87	101	116	131	145	160	174	204	218	
4500	32½	49	65	82	98	114	131	147	163	180	196	229	245	
5000	36½	54½	72½	91	109	127	145	163	182	200	218	254	272	

USEFUL INFORMATION

HORSE-POWER TRANSMITTED BY SINGLE LEATHER BELTS.

Belts supposed to be not overstrained, so they will last.

1-inch wide, 800 feet per minute=1 Horse Power.

Speed in Feet per Minute.	Width of Belts in Inches.											
	2	3	4	5	6	8	10	12	14	16	18	20
400	H. P. 1	H. P. 1½	H. P. 2	H. P. 2½	H. P. 3	H. P. 4	H. P. 5	H. P. 6	H. P. 7	H. P. 8	H. P. 9	H. P. 10
600	1½	2½	3	3½	4½	6	7½	9	10½	12	13½	15
800	2	3	4	5	6	8	10	12	14	16	18	20
1000	2½	3½	5	6½	7½	10	12½	15	17½	20	22½	25
1200	3	4½	6	7½	9	12	15	18	21	24	27	30
1500	3½	5½	7½	9½	11½	15	18½	22½	26½	30	33½	37½
1800	4½	6½	9	11½	13½	18	22½	27	31½	36	40½	45
2000	5	7½	10	12½	15	20	25	30	35	40	45	50
2400	6	9	12	15	18	24	30	36	42	48	54	60
2800	7	10½	14	17½	21	28	35	42	49	56	63	70
3000	7½	11½	15	18½	22½	30	37½	45	52½	60	67½	75
3500	8½	13	17½	22	26	35	44	52½	61	70	79	88
4000	10	15	20	25	30	40	50	60	70	80	90	100
4500	11½	17	22½	28	34	45	57	69	78	90	102	114
5000	12½	19	25	31	37½	50	62½	75	87½	100	112	125

USEFUL INFORMATION

Belt Conveyors

CAPACITIES OF TROUGHED BELT CONVEYORS IN TONS FOR MATERIAL WEIGHING 100 LBS. PER CUBIC FOOT.

Width of Belt, Inches.		12	14	16	18	20	22	24	26	28	30	32	34	36
Speed of belt 200 ft. per minute	Size in inches of pieces carried	2	2½	3	3½	4	4½	5	5½	6	6½	7	8	9
	Tons per hour.	20	36	54	73	92	112	132	156	180	206	240	270	300
Speed of belt 400 ft. per minute	Size in inches of pieces carried	¾	1	1½	2	2½	3	3½	4	4½	5	5½	6	7
	Tons per hour.	40	72	108	146	184	224	264	312	360	412	480	540	600

CAPACITIES OF TROUGHED BELT CONVEYORS IN CUBIC FEET AND BUSHEL—SPEED 100 FEET PER MINUTE.

Width of Belt, Ins.	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Cu. Ft. Per Hour	243	494	625	814	1007	1198	1399	1597	1823	2062	2320	2590	2878	3180	3500	3847	4232	4662	4944
Bushels Per Hour	196	348	500	700	806	964	1116	1282	1464	1576	1657	2080	2231	2554	2811	3090	3400	3954	3971

Capacity 50 per cent less for flat Belts.

Space carriers for grain conveying belts, five to six feet apart, making each alternate carrier a regular flat belt carrier. Space return rollers ten to twelve feet apart. For material weighing over 60 lbs. per cubic foot, space carriers four to five feet apart and return rollers 8 to 10 feet apart.

FORMULA FOR HORSE-POWER REQUIRED TO DRIVE BELT CONVEYORS.

With 6 inch diameter carrying roller, well lubricated:

(Weight of material carried in lbs. per min. x .2+Width of Belt) x length of Conveyor,
33000

FORMULA FOR LENGTH OF BELT CONVEYOR TAKE-UPS.

$$\frac{\text{Length of Conveyor in feet} + 100}{100} = \text{Length of Take-up in feet.}$$

Spiral Conveyor

FORMULA FOR HORSE-POWER REQUIRED TO DRIVE SPIRAL CONVEYOR

The weight of the material carried per minute in pounds × length of the conveyor in feet × .6 ÷ 33000.

USEFUL INFORMATION

CAPACITY OF ELEVATORS IN BUSHELS OF GRAIN PER HOUR WITH PULLEYS OF USUAL SIZE AND SPEED.

Favorite Buckets.

Size of Bucket, Inches.	Cap. of Bucket in Cubic Inches.	Distance Apart C.-C. in Inches.	Dia. of Head Pulley.	Speed of Head Shaft in R. P. M.	Speed of Belt, Feet per Minute.	Capacity in Bushels per Hour.
2 x 2	3	10	16	48	200	20
2½ x 2½	6	10	16	48	200	40
3 x 3	11	10	18	46	215	79
3½ x 3	13	10	18	46	215	93
4 x 3	15	10	20	42	220	110
4 x 3½	20	12	20	42	220	122
4½ x 3½	23	12	20	42	220	140
5 x 4	39	12	20	42	220	238
5½ x 4	42	12	24	40	250	290
6 x 4	45	12	24	40	250	312
7 x 4½	70	12	24	40	250	486
8 x 5	95	12	30	39	300	791
9 x 5	110	12	30	39	300	916
10 x 5½	160	16	36	36	340	1136
11 x 6	210	16	36	36	340	1490
12 x 6	240	16	36	36	340	1705
14 x 6	275	16	36	36	340	1953

Buffalo Buckets.

Size of Bucket, Inches.	Cap. of Bucket in Cubic Inches.	Distance Apart C.-C. in Inches.	Dia. of Head Pulley.	Speed of Head Shaft in R. P. M.	Speed of Belt, Feet per Minute.	Capacity in Bushels per Hour.
12x7 x7	343	18	40	35	360	2295
12x7 x7½	375	18	40	35	360	2509
14x7 x7	400	18	40	35	360	2675
14x7 x7½	437	18	40	35	360	2924
14x7½x7½	472	18	40	35	360	3158
14x7½x8	490	18	40	35	360	3275
14x8 x8	542	18	40	35	360	3488
16x7 x7	456	18	48	32	400	3387
16x7 x7½	500	18	48	32	400	3717
16x7½x7½	540	18	48	32	400	4015
16x7½x8	560	18	48	32	400	4160
16x8 x8	620	18	48	32	400	4612
18x7 x7	513	18	60	30	470	4482
18x7 x7½	562	18	60	30	470	4909
18x7½x7½	607	18	60	30	470	5302
18x7½x8	630	18	60	30	470	5503
18x8 x8	697	18	60	30	470	6089
20x7 x7	570	18	72	28	527	5583
20x7 x7½	625	18	72	28	527	6122
20x7½x7½	675	18	72	28	527	6612
20x7½x8	700	18	72	28	527	6857
20x8 x8	775	18	72	28	527	7591

FORMULA FOR HORSE-POWER REQUIRED TO DRIVE GRAIN ELEVATORS.

(Weight of material lifted in lbs. per minute+length of bucket in inches
 ×width of bucket in inches×5)×height of elevator in feet×1.03÷33000.

USEFUL INFORMATION

SPEED OF ELEVATOR BELTS.

We give below about the correct speed Elevator Belts should run over a given size pulley in order to get a free and perfect discharge.

Speed of Belt—	200 to 250 feet	per minute	over		24-inch pulley
" " "	300 to 350	" "	" "	" "	36 " "
" " "	400 to 450	" "	" "	" "	48 " "
" " "	500 to 550	" "	" "	" "	60 " "
" " "	600 to 650	" "	" "	" "	72 " "

FORMULA FOR HORSE-POWER OF CAST IRON PULLEYS.

Let D = diameter of pulley in inches.

Let F = width of belt in inches.

Let R = revolutions per minute.

Let H. P. = horse power.

Then horse power = $\frac{D \times F \times R}{2860}$ for single belt.

Horse power = $\frac{D \times F \times R}{1720}$ for double belt.

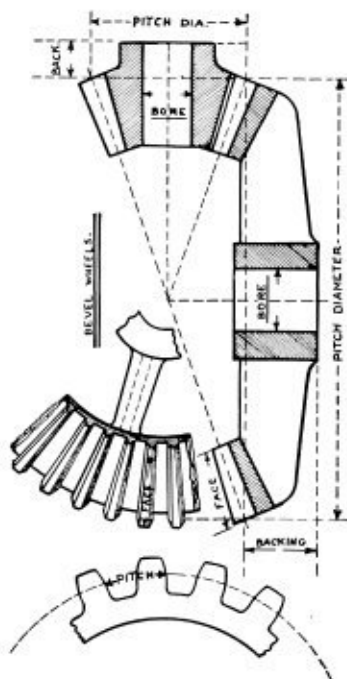
EQUIVALENTS OF RUBBER AND LEATHER BELTING.

In the following, Rubber Belting made from 32-ounce cotton duck has been taken as a basis of comparison.

- 2 Ply Rubber Belt = Light Single Leather Belt.
- 3 Ply Rubber Belt = Medium Single Leather Belt.
- 4 Ply Rubber Belt = Heavy Single Leather Belt.
- 5 Ply Rubber Belt = Light Double Leather Belt.
- 6 Ply Rubber Belt = Medium Double Leather Belt.
- 7 Ply Rubber Belt = Heavy Double Leather Belt.
- 8 Ply Rubber Belt = Triple Leather Belt.

USEFUL INFORMATION

MEASUREMENTS OF BEVEL GEARS.



The backing of Bevel Wheels is the distance the hub extends back of the pitch circle; this distance added to one-half of the diameter of the wheel, gives the distance from the intersection of the axes of the shafts to the back end of the hub. By taking the length of the hub, its location may be determined, and the position for bearings can then be readily fixed, without having the Gears at hand. The hubs may be lengthened, if necessary, and some of them shortened at the back end, if desired. Bevel Gears will work together as arranged in pairs only, and change of speed cannot be effected by changing one of a pair. To measure pitch for Bevel Wheels, measure at large end of teeth.

USEFUL INFORMATION

MENSURATION.

- Diameter of a circle $\times 3.1416 =$ circumference.
- Diameter of a circle $\times .8862 =$ side of an equal square.
- Diameter of a circle $\times .7071 =$ side of an inscribed square.
- Square of Diameter $\times .7854 =$ area of circle.
- Circumference of a circle $\times .31831 =$ diameter.
- Side of a square $\times 1.128 =$ diameter of equal circle.
- Square root of an area $\times 1.12837 =$ diameter of equal circle.
- Square of the diameter of a sphere $\times 3.1416 =$ convex surface.
- Cube of the diameter of a sphere $\times .5236 =$ solidity.
- Diameter of a sphere $\times .806 =$ dimensions of equal cube.
- Diameter of a sphere $\times .6667 =$ length of equal cylinder.
- Square inches $\times .00695 =$ square feet.
- Cubic inches $\times .00058 =$ cubic feet.
- Cubic feet $\times .03704 =$ cubic yards.
- Cylindrical inches $\times .0004546 =$ cubic feet.
- Cylindrical feet $\times .02909 =$ cubic yards.
- Cubic inches $\times .003607 =$ imperial gallons.
- Cubic feet $\times .6232 =$ imperial gallons.
- Cylindrical inches $\times .002832 =$ imperial gallons.
- Cylindrical feet $\times 4.895 =$ imperial gallons.
- 183.346 circular inches $= 1$ square foot.
- 2,200 cylindrical inches $= 1$ cubic foot.
- Avoirdupois pounds $\times .009 =$ cwts.
- Avoirdupois pounds $\times .00045 =$ tons.
- Lineal feet $\times .00019 =$ statute miles.
- Lineal yards $\times .000568 =$ statute miles.

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