

The  
**Dunning & Boschert  
Press Co., Inc.**

Syracuse, New York

Catalogue No. 54

**Cider and Wine  
Machinery**

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Catalogue No. 54

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The  
**Dunning & Boschert Press Co., Inc.**  
Syracuse, New York

Established 1872

The  
**Dunning & Boschert Press Co., Inc.**  
INCORPORATED



Factory and Home Office  
329 West Water Street  
Syracuse, N. Y.



## CIRCULAR

IN presenting our Catalogue of Cider and Wine Machinery, we wish to express our thanks for the liberal patronage of our friends in the past, and to assure them that we shall spare no pains to give them the very best service in our power in the future. We do not make extravagant claims for our machinery and hence we are able to do *more* than we claim, with corresponding satisfaction to our customers. A careful examination of the details of construction will show that our machinery is much heavier than others, and therefore less liable to get out of repairs. The large demand shows that its reputation for good work, power, capacity and durability is appreciated. For the coming season we can only promise greater effort than before to fill all orders promptly and to merit your approval.

Having two different kinds of power viz.: Screw and Hydraulic, also several sizes of each kind, together with platforms adapted to all situations, we are prepared to furnish outfits for any size mill from the smallest to the largest. Our Graters, Pumps, etc., speak for themselves in hundreds of mills all over the land.

### Prices

Quoted on application. Our net prices are as low as is consistent with good material, the best workmanship, and a fair profit. Machinery cannot be sold on any other basis and prove satisfactory to the purchaser.

### Guarantee

We guarantee all our work to be of good material and workmanship, and we will replace any part found defective from flaws or fault in manufacture within one year.

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### Main Office and Factory

329 WEST WATER STREET - - SYRACUSE, N. Y.

Phones: 2-2274 - 2-2275

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CABLE ADDRESS "PRESSCO"

Liebers Standard Code

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## No. 02 Screw Press

With Reversible Platform

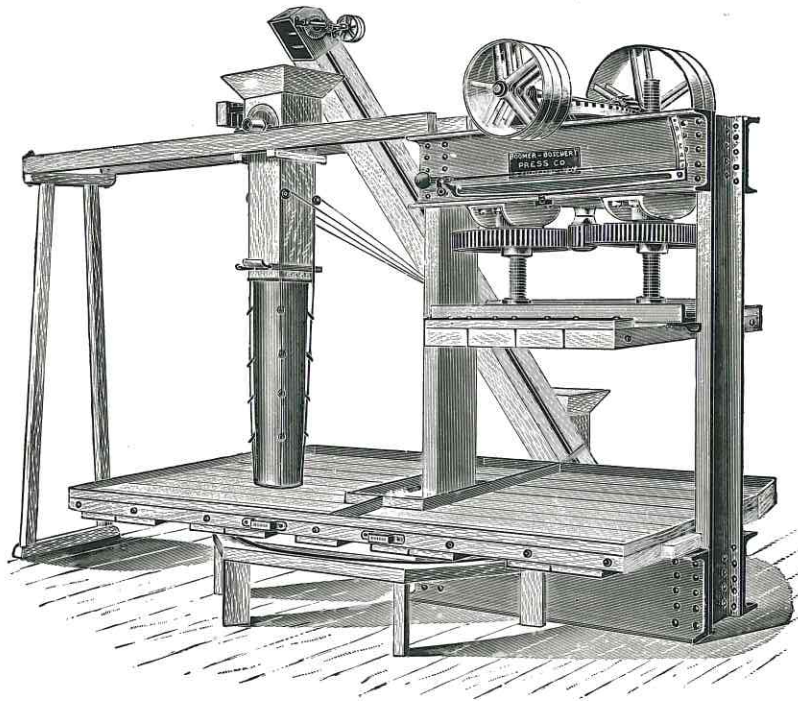


Fig. 1

The Reversible Platform shown is the best of its kind yet devised, and with the Elevator and Grater, makes it very desirable for the smaller custom mills.

It will make about three barrels of cider at a time. It will run clear down, pressing one layer if desired, and has a capacity of about 2,000 gallons of cider per day of ten hours. It can be fitted with any style of platform desired.

### Dimensions

The Racks are 42 inches square, and the Form 37 inches square inside. From floor to top of platform, about 20 inches. Frame is made of 12-inch Steel Channel Beams. Weight, about 4,000 pounds.

For Shafting and Pulleys, see page 21.  
Height to top of pulleys, 9'-2".  
Height to top of elevator, 12'-9".  
Diameter of circle described by platform, 12'-0".  
Large pulleys, run 50 rev. per min.  
Small pulleys run 250 rev. per min.

## Screw Press

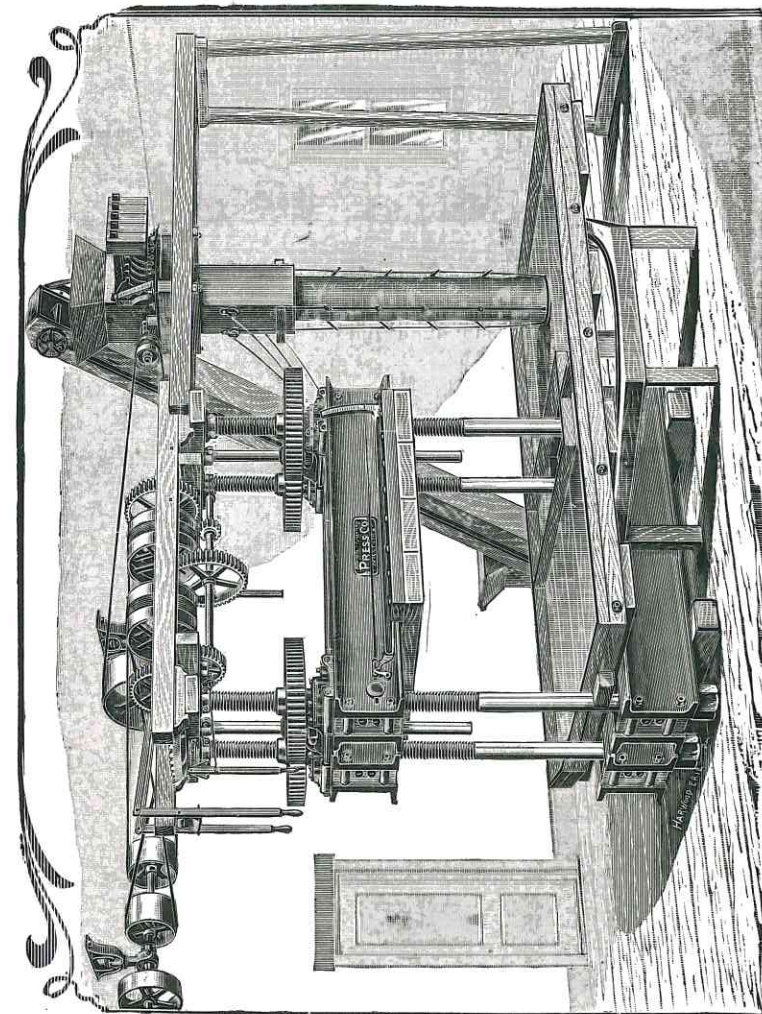


Fig. 2

with

Steel Beams

Reversible Platform



## Screw Press

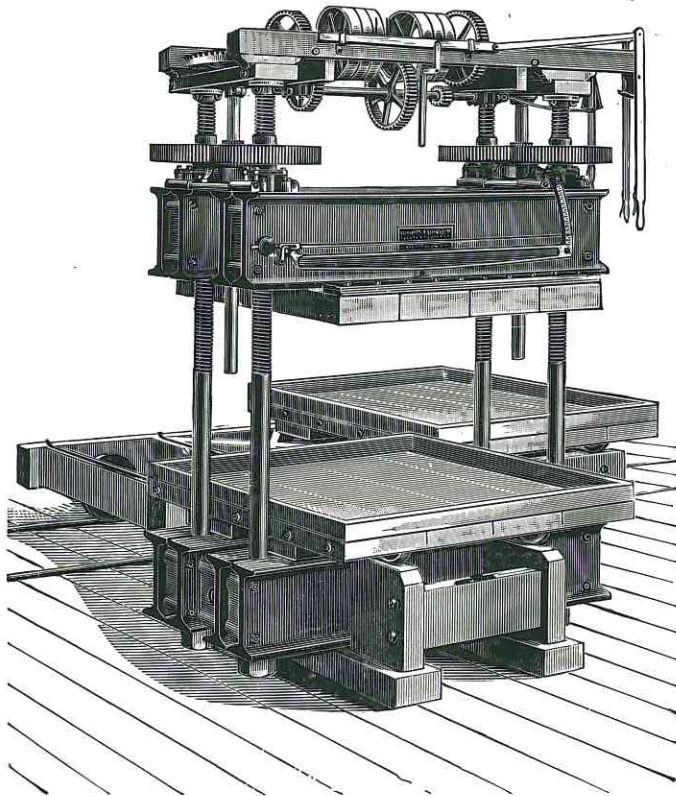


Fig. 3

With  
Steel Beams  
and  
Combination Platform

## No. 1 Screw Press

The Press and fixtures represented on page 5 were especially designed to meet the wants of custom mills where each customer's apples are made up separately and no apples are stored. The fruit is thrown from the truck into the hopper of the Elevator, which delivers them to the Grater. The Elevator, being driven from a pulley on the grater shaft, will only deliver the apples in proportion to the speed of the Grater, and thus avoids any danger of overloading it. A slide in the spout holds the pomace back while placing the Racks and Cloths. The Reversible Platform enables the operator to press one cheese while grinding another, and if our Pump is added, the cider may be put into the barrels on the truck, thus avoiding all heavy work. Any other style of platform may be used on the Press if desired.

### Dimensions

Size of Steel Screws.....	2¼ inches	Size of Cloths.....	84x84 or 72x102 in.
Width between Screws.....	5 feet	Width of Belt required.....	2 inches
Size of Racks.....	48x48 inches	Bushels in full Cheese.....	45 to 50
Size of Form.....	42x42 inches	Capacity.....	2500 to 3000 gals. per day

Extreme Height to Top of Elevator, 12 feet.

Extreme Height of Press, 8 feet 10 inches.

Distance from center of Platform to outside of Elevator, 10 feet, 8 in.

Diameter of Circle described by Platform, 13 feet.

Weight, about 6,000 pounds.

For Shafting and Pulleys, see page 21.

Pulleys on press run 300 rev. per minute.

## No. 2 Screw Press

This is an excellent Press for the ordinary custom mills, and is capable of doing a large amount of work, in fact its capacity depends almost entirely on the skill of the operators in laying up the cheese, as with three different speeds it can be handled as quickly as desired. It will press any amount from one layer to a full cheese without any handling of blocking and give full pressure at any point. It may be arranged with Reversible Platform, as on page 5 or with Combination Platform as shown on page 6.

### Dimensions

Size of Screws .....	2½ in.	Size of Cloths	96 in. x 96 in. or 84 in. x 118 in.
Extreme Height .....	9½ ft.	Bushels in Full Cheese .....	70 to 80
Size of Racks .....	4 ft. 10 inches square	Capacity .....	3,500 to 4,000 gals. per day
Weight, about . . . . .		10,000 lbs.	

For Shafting and Pulleys, see page 21.  
Pulleys on Press run 300 rev. per minute.

## No. 3 Screw Press

This Press is designed for heavy and continuous work, and with a view to avoid danger of breakage and consequent delay. The screws are of steel, three inches in diameter. The screw nuts are of the best quality of bronze. The small bevel gears on top and the sliding pinions on upright shafts are also of steel. The workmanship is the very best, and no expense is spared to make the Press strong and durable.

Fig. 3 shows the Press with the combination platform, but any other style platform desired may be used.

### Dimensions

Extreme Height .....	13 feet 1 inch	Size of Form .....	4 feet 8 inches square
Size of Steel Screws .....	3 inches	Width of Belt required .....	2½ inches
Width between Screws .....	6 feet	Bushels in Full Cheese .....	90 to 100
Size of Racks .....	5 feet 2 inches square	Capacity, 4000 to 4500 gals. per day	
Size of Cloths .....	96x126 inches	Weight, about .....	13,000 pounds

Pulleys on Press run 300 Rev. per minute.

## No. 4 Screw Press

This Press is used by the larger merchant mills mainly for repressing, and in its designing and construction we have had in view the extremely heavy service required. The Screws are of steel, 3½ inches in diameter. The screw nuts are made of special quality of hard bronze, having bearings on the screws 10 inches in length and extra depth of thread to give a large bearing surface. The bevel pinions, the spur pinions between the large gears and all the shafts are of steel. It cannot be excelled by any other press for durability and effective work. Any style of platform may be used.

### Dimensions

Extreme Height .....	13 feet 8 inches	Size of Form .....	4 feet 8 inches square
Size of Steel Screws .....	3½ inches	Width of Belt required .....	2½ inches
Size of Steel Beams .....	20 inches	Bushels in Full Cheese .....	100 to 120
Size of Racks, 5 feet 2 inches square		Capacity 4500 to 5500 gallons per day	
Size of Cloths .....	96x126 inches	Weight, about .....	17,000 pounds

Pulleys on Press run 300 Rev. per minute.



## No. 8 Hydraulic Press

Upward Pressure

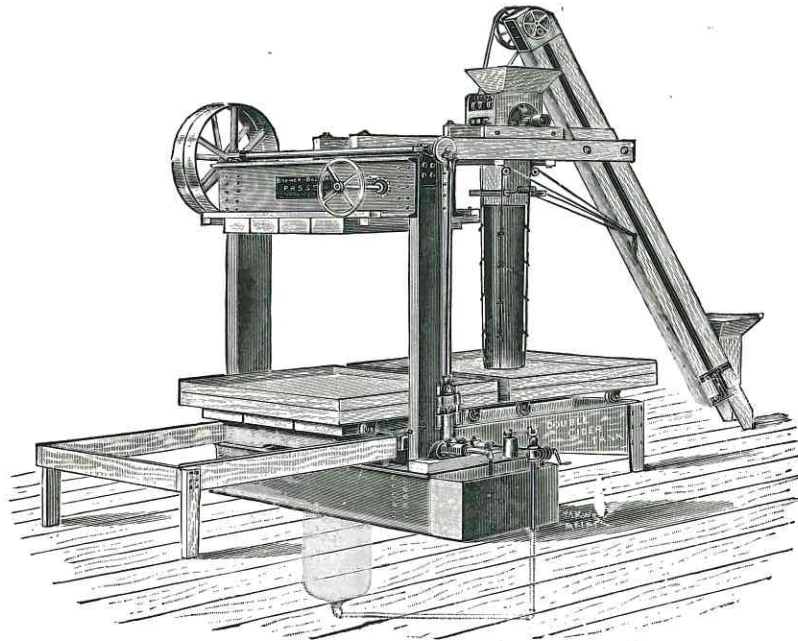


Fig. 4

The frame of this Press is made of rolled steel channel beams, securely bolted or riveted together. The ram is of cast iron, turned and polished. The *cylinder is of steel* packed in the neck. The pump is noiseless and driven by pulleys 30" in diameter for a 4" belt. The valves and plungers are of the best bronze and the water tank is of galvanized iron. The platform can be easily handled and the outlet for the cider is always over the tank when laying up or pressing, so that each customer's cider can be kept separate.

### Dimensions

Size of Steel Channel Beams	12 in.	Cheese	22 to 25 bushels
Bet. Platform and Blocking	33 in.	Capacity	2500 gallons per day
Movement of Ram	26 in.	Weight, complete, about	6,000 pounds
Size of Rack	36 in.	Height to top of Pump Pulleys	8 ft.
Size of Form (inside)	32 in.	Height to top of Elevator	10 ft. 6 in.
Size of Cloths	66 in. x 66 in.		

## No. 10 Hydraulic Press

With Rods and Steel Beams

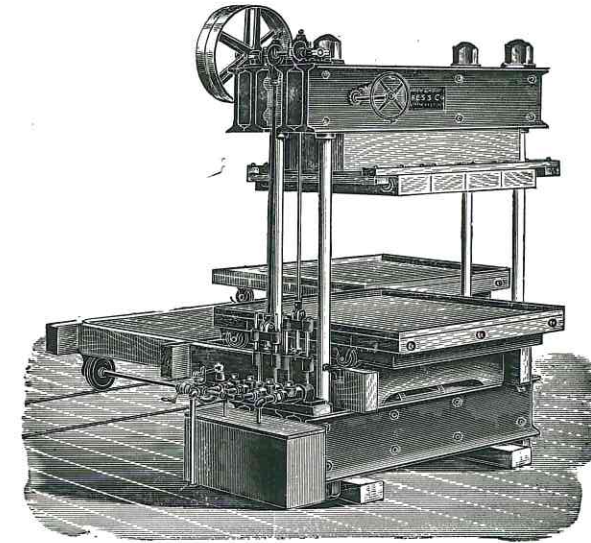


Fig. 5

This illustration shows our Hydraulic Wine or Cider Press having Head and Base made of steel beams connected by rods of large size and ample strength. Although shown with Combination Platform, we can furnish with either Single Platform or our Transfer Car System, to suit the convenience of our customers. This press has cast steel cylinder and heavy iron platen, babbitted around rods.

### Dimensions

Bet. Platform and Blocking	40 in.	Cheese	45 to 50 bushels
Movement of Ram	30 in.	Capacity	125 bbls. per day
Size of Rack	48 in.	Weight, complete, about	10,000 lbs.
Diameter of Rods	2 1/4 in.	Floor to top of rods	6 ft. 4 in.
Size of Form (inside)	42 in.	Floor to bottom of cylinder	4 ft. 6 in.
Size of Cloths	84 in. x 84 in. or 72 in. x 102 in.		

# Hydraulic Press

Downward Pressure

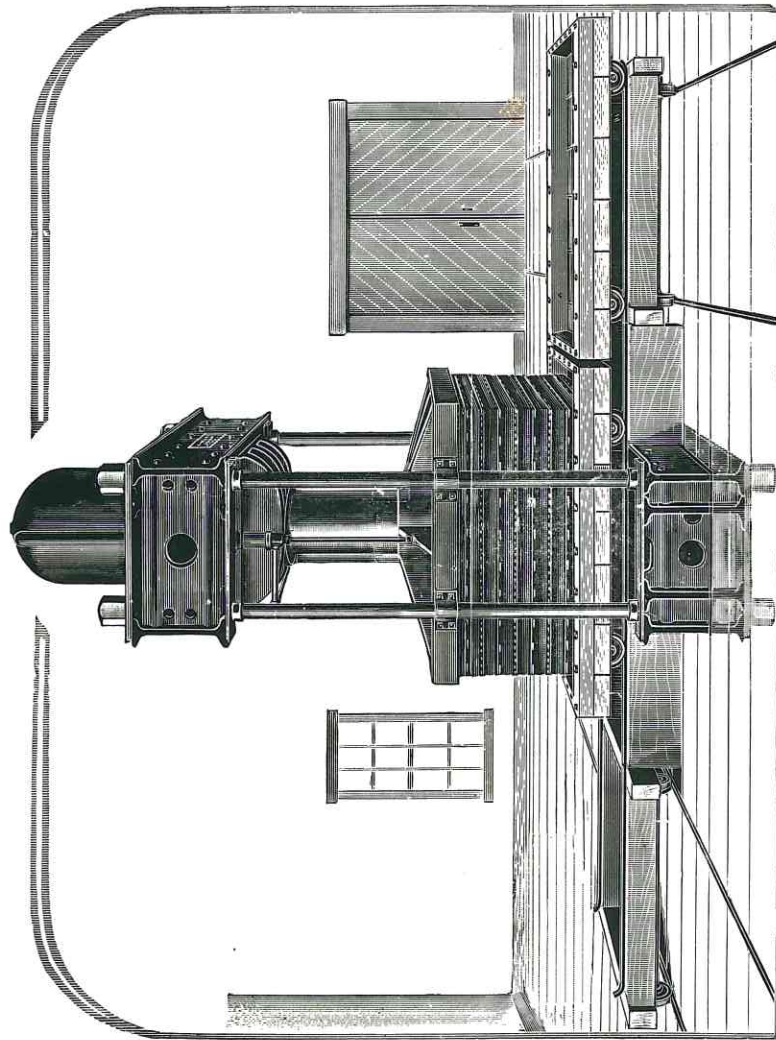


Fig. 6

With

Transfer Car System

# Hydraulic Press

Upward Pressure

With

Steel Beams

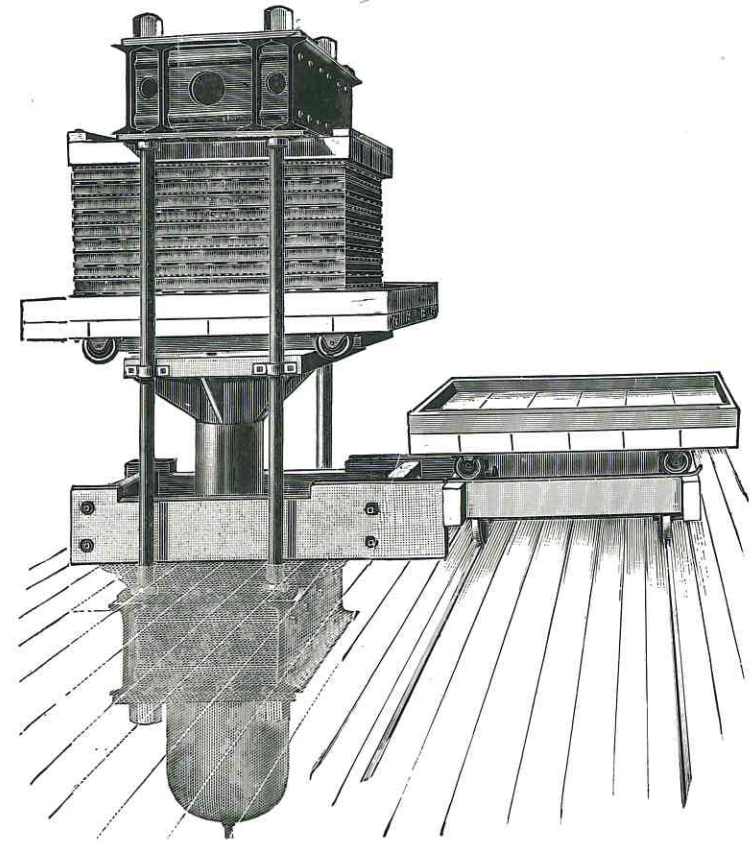


Fig. 7

Combination Platform



## No. 12 Hydraulic Press

This Press, being designed for merchant work, is heavy, and constructed with the view of giving great pressure and great durability as well. *The cylinder is of steel, packed with leather U packing. The ram is of cast iron turned and polished. The platen is a heavy iron casting extending to and babbitted around the rods. The Pump is shown in Fig. 14, and has plungers  $1\frac{5}{16}$ -inch diameter by 3-inch stroke, and pulleys 36 inches diameter for a 5-inch belt.*

### Dimensions

Diameter of Steel Rods.....	3 in.	Cheese, about .....	75 bushels
Width between Rods.....	70 in.	Capacity .....	4500 to 5500 gallons
Bet. Platform and Blocking.....	42 in.	Floor to top of rod nuts.....	7 ft.
Movement of Ram.....	36 in.	Floor to bottom of cylinder, 5 ft. 3 in.	
Size of Rack.....	58 in.	Size of Cloths .....	
Size of Form (inside) .....	52 in.	96 in. x 96 in. or 84 x 118 in.	

## No. 14 and 20 Hydraulic Presses

These Presses are generally used for repressing, and are constructed especially for heavy work. They have all the improvements contained in our other Presses, all of which have been subjected to extended use and are of practical worth and not experimental.

### No. 14 Hydraulic Press With Steel Beams, Steel Cylinder and Iron Platen

#### Dimensions

Inside Diameter of Cylinder.....	14 in.	Size of Form (inside) .....	56 in.
Diameter of Steel Rods.....	4½ in.	Size of Cloths .....	96x126 in.
Width between Rods.....	74 in.	Guaranteed pressure .....	300 tons
Bet. Platform and Blocking.....	52 in.	Weight, complete, about .....	24,000 lbs.
Movement of Ram .....	42 in.	Cheese, about .....	100 bushels
Size of Rack .....	62 in.		

### No. 20 Hydraulic Press With Steel Beams, Steel Cylinder and Iron Platen

#### Dimensions

Inside Diameter of Cylinder.....	20 in.	Size of Rack .....	62 in.
Diameter of Rods.....	5 in.	Size of Form (inside).....	56 in.
Width between Rods .....	74 in.	Size of Cloths .....	96x126 in.
Bet. Platform and Blocking .....	60 in.	Guaranteed pressure .....	350 tons
Movement of Ram .....	46 in.	Weight, complete, about.....	30,000 lbs.

## Apple Grater

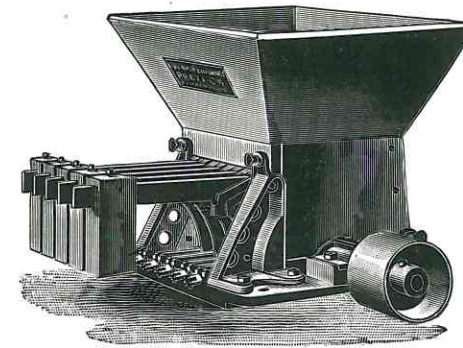


Fig. 8

The frame of our Grater is of iron, which gives a security, strength and stability which no wood frame, however well made, possesses.

Securely attached to the frame are two standards, holding the rod upon which swing the concaves, which consist of five iron levers with movable weights, allowing any stone or other hard substance to pass through without injury to the knives.

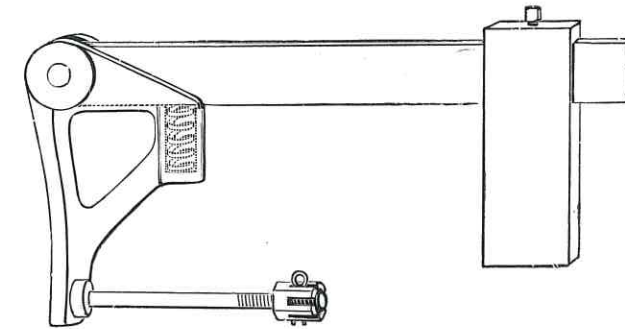


Fig. 9

The concaves are made in two parts, the lever on which the weights are hung being wrought iron, and resting on a coil spring placed in the recess in the concave proper, and which serve to break the sudden shock or concussion caused by the rapid passage of hard substance between the concaves and cylinder. (See Fig. 9). To the lower end of the concaves is rigidly attached a one-half inch bolt, upon the end of which is a pronged nut which rests against the projections on the frame.

By turning the nut, the distance between the concaves and the cylinder can be very nicely adjusted. This can be done while the Grater is in motion and without the use of a wrench. A hole is drilled through the bolt and a spring pin put through between the prongs of the nuts, which prevents them from turning by the jar and working of the concaves.

The cylinder is of iron, turned and put in accurate running balance, each Grater being tested at a speed of 2,500 revolutions per minute before leaving the factory. It has planed grooves to receive the knives—ten in number—which are adjusted by square headed set screws above and below at each end, and held firmly in their places by a heavy wrought iron band shrunk on each end of the cylinder. The heads of the cylinder being solid and close to the ends avoids the accumulation of pomace. (See Fig. 10.)

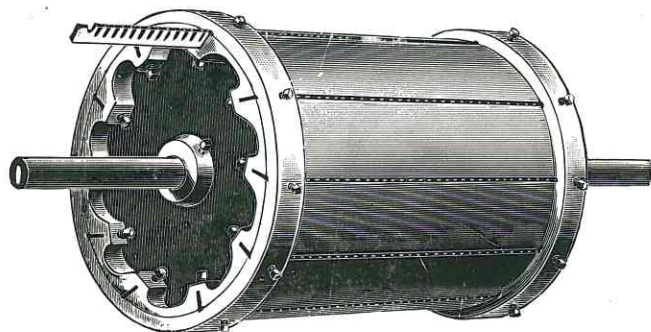


Fig. 10

The knives are made of finely tempered steel and can be driven straight out without having first to be driven down. We furnish knives corrugated as in Fig. 11.

The shaft is of steel  $1\frac{7}{16}$  inches in diameter, running in babbitted boxes  $4\frac{3}{4}$  inches long, and is of sufficient length to allow the pulleys to be put on either end. The Grater should run 2,000 revolutions per minute, but with limited horse power that speed cannot be obtained. The knives may then be set finer, and the Grater will do as good work, but not so fast. The hopper is of hard wood, oiled and varnished, and can be swung back or entirely removed while changing the knives.

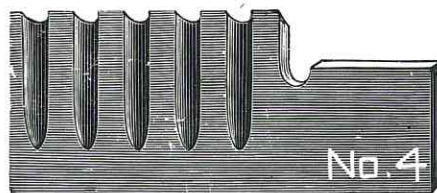


Fig. 11

### Dimensions

Diameter of Cylinder	11 inches
Length of Cylinder	12 inches
Face of Pulley	$5\frac{1}{2}$ inches
Diameter of Pulley	4, 5 or 6 inches, as ordered
Weight of Grater	350 pounds
Number of Knives—ten	1 inch wide, $\frac{5}{32}$ inch thick, and 12 inches long
Capacity	from 50 to 400 bushels per hour, according to power

## Apple Elevator

Fig. 12 shows an efficient elevator. The chain runs over a sprocket gear at the head and foot of the elevator, the one at the head being furnished with shaft and pulleys, the foot gear has take up boxes for

taking up the slack of chain as it wears, the scrapers are of wood, bolted to the lugs on projections on the chain. When run from 50 to 75 RPM it will elevate from 5 to 20 bushels per minute. It is perfectly reliable, runs easily, cannot slip, works at any inclination or carries

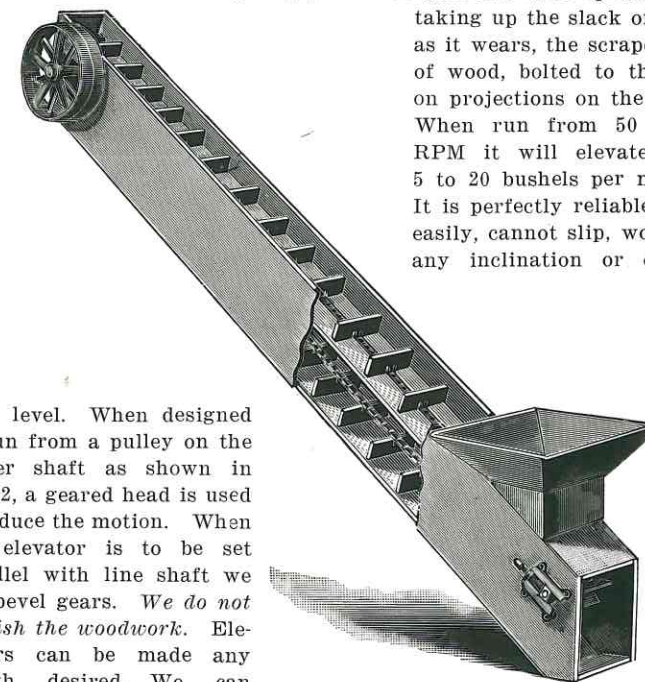


Fig. 12

on a level. When designed to run from a pulley on the grater shaft as shown in Fig. 2, a geared head is used to reduce the motion. When the elevator is to be set parallel with line shaft we use bevel gears. *We do not furnish the woodwork.* Elevators can be made any length desired. We can furnish all iron work to complete an elevator as follows

Head Gear, Plain, with two pulley 22" x 2", Fig. 12  
 Head Gear, with internal gears, Fig. 2  
 Head Gear, with bevel gears, Fig. 1  
 Foot Gear, with take up boxes  
 No. 77 Chain  
 No. 57 Chain

Should it be required to elevate more than 30 feet, we furnish in place of the pulleys 22" x 2", a pair of pulleys 24" x 4".



## Vat for Reversible Platform

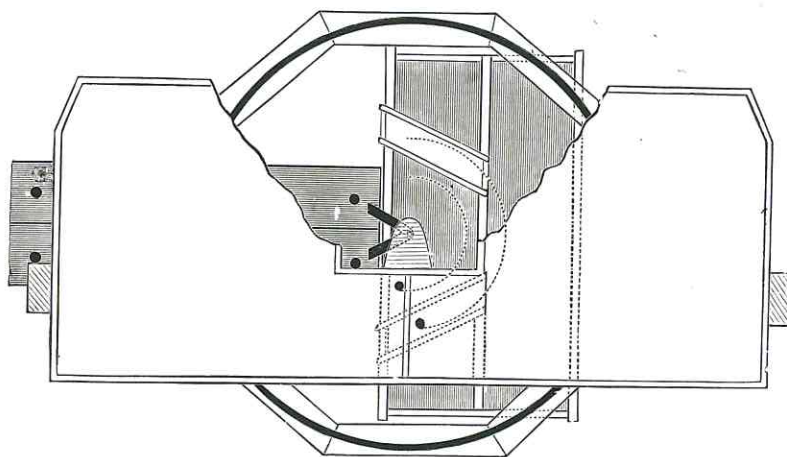


Fig. 13

The above cut shows the vat as arranged in connection with the Reversible Platform when it is desired to keep the cider from each customer's apples separate. It is simply a wooden vat with a partition placed beneath the platform and inside the circular track. As will be noticed, the inlet from each end of the platform is made so that in turning they describe different circles. Thus the outlet describing the smaller circle, (as shown by dotted lines) is over one compartment of the vat, while the outlet from the other end is over a shallow trough, which leads to the other compartment, and no matter what is the position of the platform the cider must run in its proper vat.

## Oils, Etc.

We have been frequently called upon to "Prescribe" for a press in which the screw "trembled" when under very heavy strain—or a "squeak" was heard which could not be located. In a majority of cases the trouble has disappeared at once when a good quality of oil was used. In many cases the fault (if a knuckle joint press) has been the want of proper lubrication of the ends of the arm bearings in the upper socket. These being somewhat difficult to get at, have had to do with one oiling or greasing in a season, and in some cases none at all. We have never found any oil equal to castor oil, but as it is of gummy nature the parts should be occasionally cleaned. Grease or solidified oil may be used for the gearing of our Screw Presses.

## Column Pumps

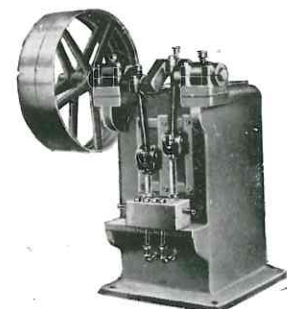


Fig. 14

and when worn out can be easily renewed. The plugs over checks are of tobin bronze; the connecting rods and cross heads are of hard cast bronze. The plungers are made of steel or bronze, according to the nature of the work. We can make with either two, three, four or six plungers, and with three inches or four inches stroke, and with all plungers of the same size for accumulator pressure, or of different sizes, to give different pressures.

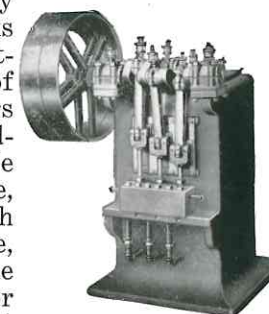


Fig. 15

## Steam Hydraulic Pump

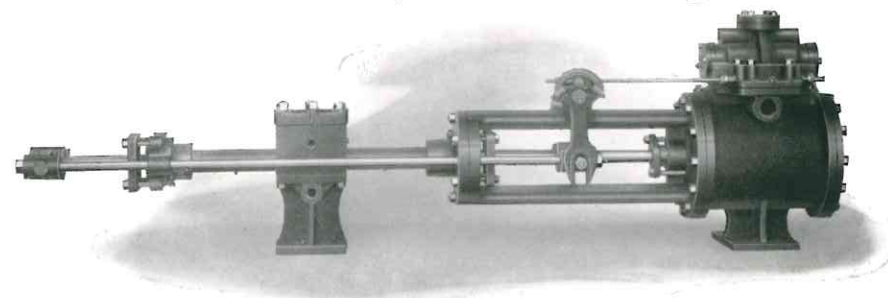


Fig. 16

In many cases the Steam Hydraulic Pump may be used to advantage as it can run without running the engine or motor, and "follow-up" without the loss of any power. The water ends are of steel, the plungers of stainless steel, and the valves are easily accessible. A safety valve is provided, and the whole set on a base in the form of a saucer which catches any drip and conducts it through a water pipe where desired. Almost any size can be furnished either single acting or duplex.

Prices will be quoted on application.

## Pump

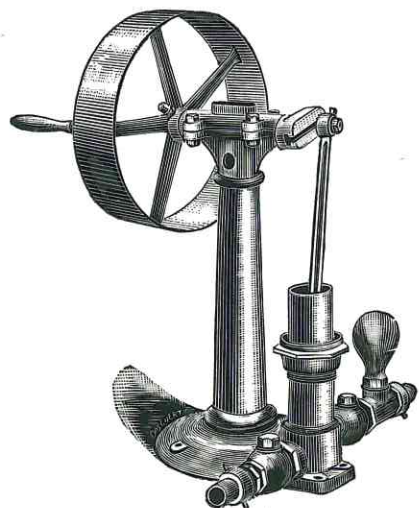


Fig. 17

The Plunger, Pump Barrel, Valves, Air Chamber and Hose Connections of this Pump are of Bronze, so that no cider can come in contact with iron. The connecting rod is of bronze with steel pin in the lower end, and babbitted split box on upper end so that the wear can be taken up. They should be run *not to exceed 80 revolutions per minute*. Handle is provided to work the Pump by hand when necessary.

No.	Size of Cylinder	Stroke	Suction	Discharge	Pulley	Capacity per Min.
1	3 in.	4½ in.	1¼ in.	1 in.	16x4	10 Gal.

Can be furnished with fast and loose pulleys

Common hose should not be used for suction, as it is not stiff enough and will collapse and prevent the Pump drawing. Four-ply steam hose may be used where the suction is short, but where over 8 or 10 feet, heavier steam hose, regular wire wound suction hose, or copper pipe should be used, with a foot valve on lower end.

## How To Lay Up A Cheese

Commence on the platform of the press and lay a rack; place thereon a form of three and one-half inches deep, and five or six inches smaller each way than the rack. Over this form spread a cloth, and fill the form even full of pomace, then turn in the sides and ends of the cloth over the pomace, the cloth being of sufficient size to cover. The form is then raised and another rack placed on the layer of pomace thus made, the form being placed on the new rack, a cloth again placed over it, and another layer of pomace put in as before. When the last layer is formed, the form is taken off and a rack placed. By placing the racks alternately across and lengthwise of the platform, the cheese will be less liable to move or cant over, and the rack to spread. A guide should be used in laying up the cheese, so as to have form come every time directly over the layer.

## Shafting, Pulleys, Etc.

In many cases shafting, pulleys, etc., can be purchased locally as cheaply as we can furnish them, the cost varying somewhat with the speed of shaft and size of driving pulley required, and this can only be determined by knowing the size of driving or engine or motor pulley and speed of same.

For No. 02 Screw Press—1 shaft 8 feet long, 2 collars, 2 hangers, 5 pulleys, to run 300 per minute

For No. 1 Screw Press—1 shaft 12 feet long, 2 collars, 3 hangers, 4 pulleys, to run 300 per minute  
" " 400 per minute

For No. 2 Screw Press—1 shaft 12 feet long, 2 collars, 3 hangers, 4 pulleys, to run 300 per minute  
" " 400 per minute

For No. 8 or 10 Hydraulic Press—1 shaft 10 feet long, 2 collars, 2 hangers, 3 pulleys, to run 300 per minute  
" " 400 per minute



## Description of the Power Screw Press

The following cuts represent our Four Screw Press, which is well adapted for custom work, as the head of the Press will run down to the base, pressing one layer as well as more.

It is run by the two belts open and crossed, and has *three rates of speed* up and down, *fast, medium and slow*. This enables the operator to run down until the head strikes the cheese; then shift to the medium motion, until the bulk of the cider is extracted, and to finish on the slow speed, the power increasing as the speed decreases.

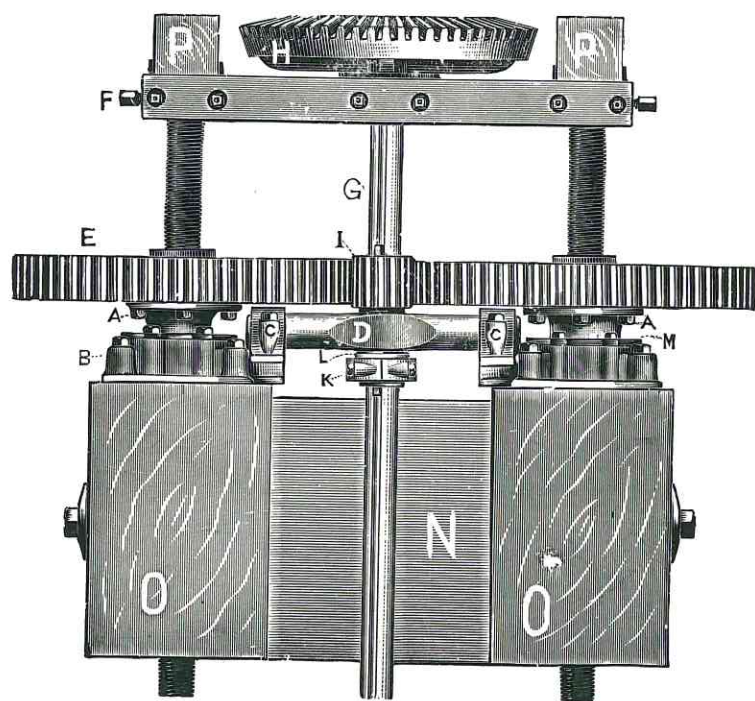


Fig. 18

Fig. 18 illustrates the manner of communicating power to the nuts on the screws. The pinion I, has on its lower end a long hub which passes through the yoke D, in which it turns freely, but is held from

drawing out by the clamp collar K. The yoke and pinion are carried up and down in connection with the head by being fastened to the washers by the boxes C. The upright shaft G, has a groove or keyway planed its entire length, in which slides the key to the pinion I. The four nuts are driven simultaneously, and the head beam moves up and down exactly even.

When the common screw presses are doing no work the head beam is straight, the base of the nuts are on a line with it, and at right angles to the perpendicular screw. When pressure is applied the head beam springs, the washers are inclined outwards, the nuts are tilted to conform to the incline of the washers and bind on the screws, producing enormous and unnecessary friction, and often breakage, as many of our customers who formerly used common screw presses will testify.

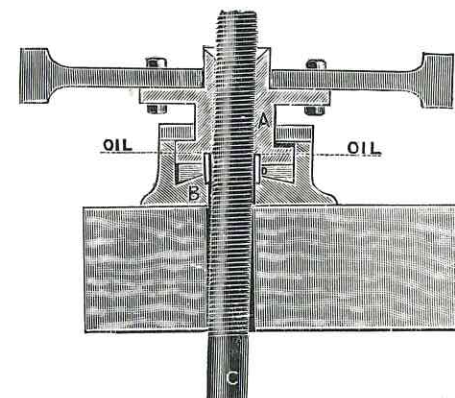


Fig. 19

Fig. 19 illustrates an invention as applied to our Screw Press, for preventing the binding of the nut on the screw when the heavy pressure bends the head beam, thus throwing the base of the nut out of its proper line at right angles with the screw.

The invention consists in giving to the nut the action to a limited extent of the universal joint. To illustrate, if the lower half of the nut A was a half globe supported in a washer made to receive it, the washer when tipped in any direction would allow the screw to retain its perpendicular position, and the nut would conform to the position of the screw; but a globular nut of sufficient radius to give a proper base outside of a large screw would generate too much friction. After trials of various devices we settled on the plan shown in Fig. 19, as the one most desirable for producing the universal joint required and experience has shown that its action is perfect.

The spur gear nut A is separated from the washer B by the self-adjusting concave washer D. The convex portion of B is the exact segment of a globe, and D turns with the nut or remains stationary, the nut turning on top of it. It is made with sufficient play to allow it to conform to any spring or warp of the head beams and still maintain the nut A in its proper position, rendering it impossible to bind or cramp on the screw.

## Indicators

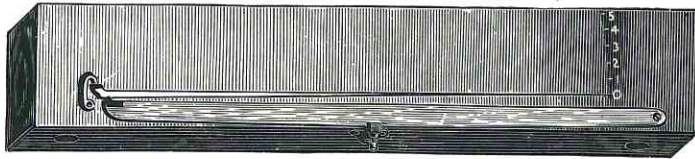


Fig. 20

The Indicator consists of two levers arranged to accurately indicate the spring of the Head Beam of the Press. It enables one to see at a glance the amount of pressure being transmitted to the material under pressure.

The advantage of this will be readily seen, especially when Presses are run by power. It greatly reduces the possibilities of breakage and enables the operator to determine when the material is sufficiently pressed. It will be furnished without extra charge on all our Knuckle Joint and Screw Presses.

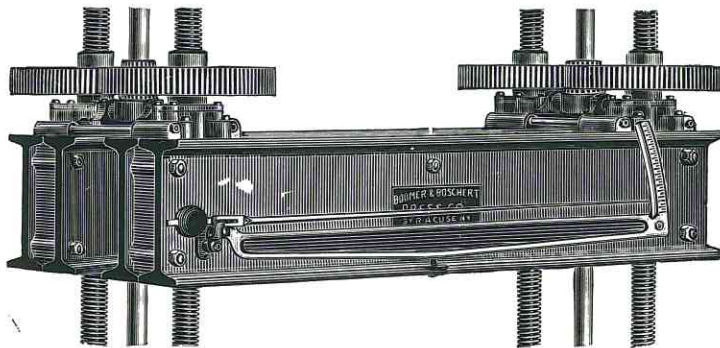


Fig. 21

The above cut illustrates the Indicator as attached to our steel Presses. The bar is fastened by a screw to one end of the head, and supported by a bolt from the center. The opposite end receives one of the bearings of the pointer, which are hardened and constructed with knife edges, like the bearings of steel-yards or scales. The weight of the pointer is nearly counterbalanced by the ball upon the outer end. A very slight spring of the head is multiplied, so as to show a considerable movement of the pointer on the scale. The pointer is adjusted to 0 by the pointed set screw in the lower end of the center bolt. The Indicator is as accurate as a pair of steel-yards or scales, and enables the operator to put more or less pressure upon the material in the Press as desired.

## "Right" and "Left" Hand Threads

As there seems to be some difficulty in understanding the above terms, we herewith present engravings which will clearly explain what is meant.

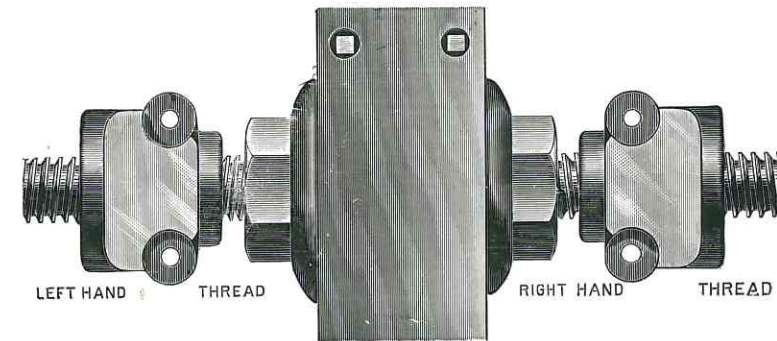


Fig. 22

The above represents a portion of the screw used in our Knuckle Joint Presses, the collar near the center being threaded the same as the nuts, screwed on and keyed in place.

RIGHT HAND THREAD  
Fig. 23LEFT HAND THREAD  
Fig. 24

Our four Screw Presses are made with two right and two left hand threaded screws. The Figs. 23 and 24 so clearly represent them that no further explanation is necessary. A comparison of the inclination of the threads in the engravings with the screws in the Press will enable any one to order correctly, if repairs should ever be found necessary.



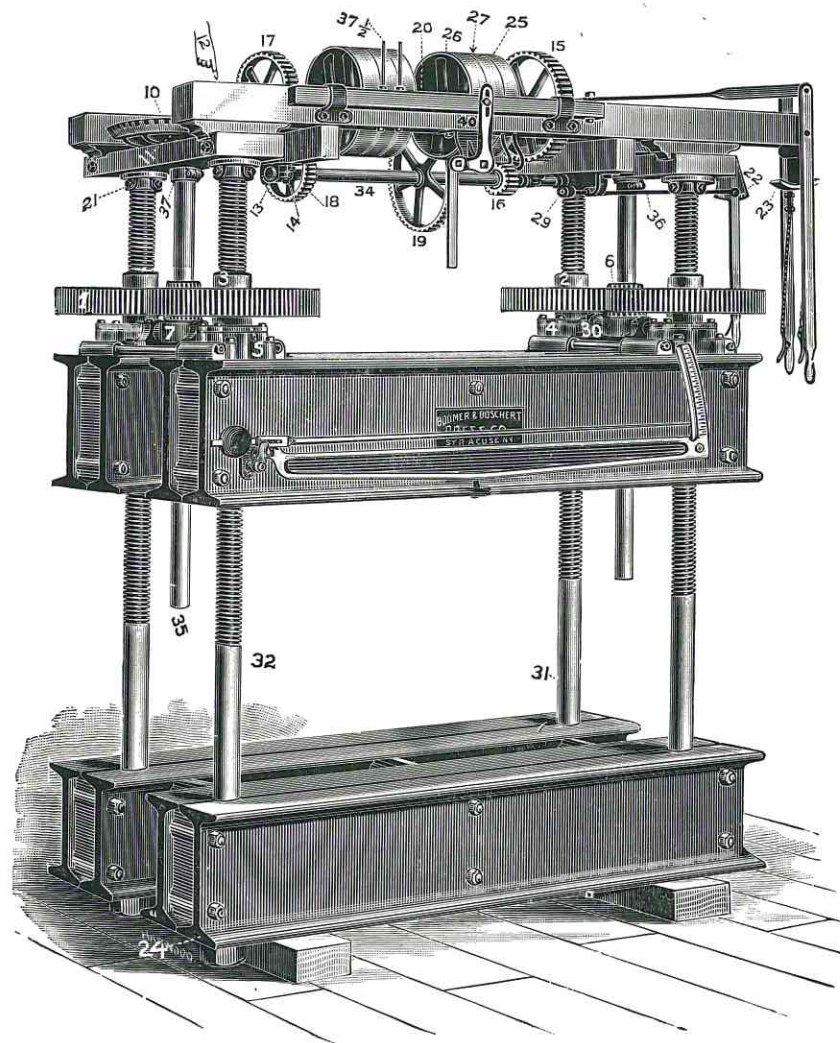


Fig. 25

For List of Parts See Page 27

## Parts of Power Screw Press

- |  |  |
|--|--|
| 1. Large spur gear on screws.                  | 23. Double lever quadrant.                 |
| 2. Right hand thread screw nut.                | 24. Lower screw washer.                    |
| 3. Left hand thread screw nut.                 | 25. Pulley, fast to shaft.                 |
| 4. Head socket washer.                         | 26. Pulley fast to long center pinion.     |
| 5. Cover for same.                             | 27. Pulley loose on shaft.                 |
| 6. Spur pinion sliding on upright (shafts.     | 28. Bronze plano concave washer under nut. |
| 7. Yoke.                                       | 29. Fork for shifting lower shaft.         |
| 8. Split collar on pinion.                     | 30. Yoke box.                              |
| 9. Brass washer between split collar and yoke. | 31. Screw—right hand thread.               |
| 10. Large bevel gear.                          | 32. Screw—left hand thread.                |
| 11. Bearing for same.                          | 33. Upper shaft.                           |
| 12. Bevel pinion.                              | 34. Lower shaft.                           |
| 13. Shaft boxes.                               | 35. Upright end shaft.                     |
| 14. Cap for same.                              | 36. Rod for shifting lower shaft.          |
| 15. Large spur driving wheel.                  | 37. Collar on end shafts.                  |
| 16. Pinion to match.                           | 37½. Finger for shifter.                   |
| 17. Medium spur gear, upper shaft.             | 38. Loop for shifter.                      |
| 18. Pinion to match, lower shaft.              | 39. Bracket for self-shifter.              |
| 19. Large center spur gear.                    | 40. Bell crank for self-shifter.           |
| 20. Long center pinion.                        | 41. Shifter bar bracket.                   |
| 21. Top casting on screws.                     |  |
| 22. Lever quadrant.                            |  |

Each size press has a letter and each part a number. In ordering repairs give both letter and number. Thus the large bevel gear on the top of the upright end shaft will be marked "A 10" on the No. 1 Press; "B 10" on the No. 2, "C 10" on the No. 3 and "D 10" on the No. 4.

On the Number One Press only, the large spur gears and nuts for on the screws are cast together. The right hand thread gear nuts are "A 2"; while the left hand thread are "A 3"

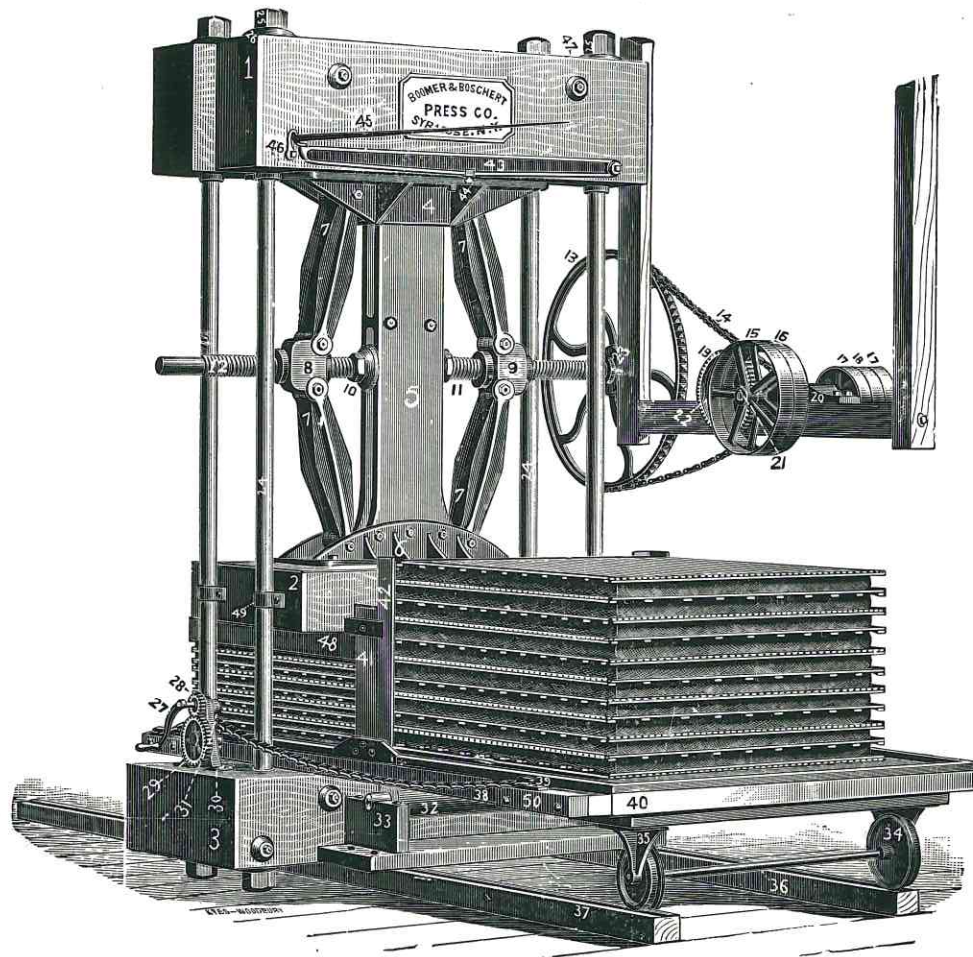


Fig. 26

For List of Parts See Page 29

## Parts of Knuckle Joint Press

- |                                       |  |
|---------------------------------------|--|
| 1. Head beam.                         | 26. Rod washers.                         |
| 2. Follower.                          | 27. Crank for platform shifter.          |
| 3. Base.                              | 28. Small gear for platform shifter.     |
| 4. Upper socket.                      | 29. Large gear for platform shifter.     |
| 5. Sliding standard.                  | 30. Frame for platform shifter.          |
| 6. Lower socket.                      | 31. Sprocket wheel for platform shifter. |
| 7. Arms.                              | 32. Platform roller. (shifter.)          |
| 8. Left hand screw nut.               | 33. Platform roller box.                 |
| 9. Right hand screw nut.              | 34. Platform wheel.                      |
| 10. Left hand screw collar.           | 35. Platform axle stand.                 |
| 11. Right hand screw collar.          | 36. Platform axle.                       |
| 12. Screw.                            | 37. Platform track.                      |
| 13. Chain wheel.                      | 38. Platform chain.                      |
| 14. Press chain. (attachment.)        | 39. Platform hook.                       |
| 15. Large loose pulley for power "    | 40. Platform.                            |
| 16. Large fast pulley for power "     | 41. Platform post.                       |
| 17. Small loose pulley for power "    | 42. Rack guide.                          |
| 18. Small fast pulley for power "     | 43. Indicator bar.                       |
| 19. Large gear for power attachment.  | 44. Indicator seat.                      |
| 20. Frame for power attachment.       | 45. Indicator pointer.                   |
| 21. Long shaft for power attachment.  | 46. Indicator hook.                      |
| 22. Short shaft for power attachment. | 47. Block between head beams.            |
| 23. Friction wheel.                   | 48. Square follower plank.               |
| 24. Press rods.                       | 49. Rod loops.                           |
| 25. Rod nuts.                         | 50. Platform Stop.                       |

## Extras

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Binders' Board,

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Glue Stock,

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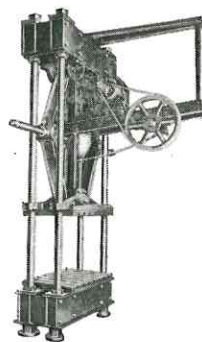
Tinctures,

Rendering,

Veneer,

Plastic Molding

and for many other purposes requiring Pressure.

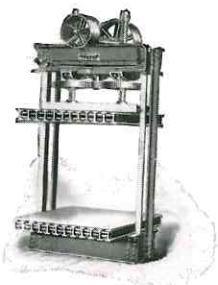


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