Latest-Improved Double Independent Crossley Stave Jointer

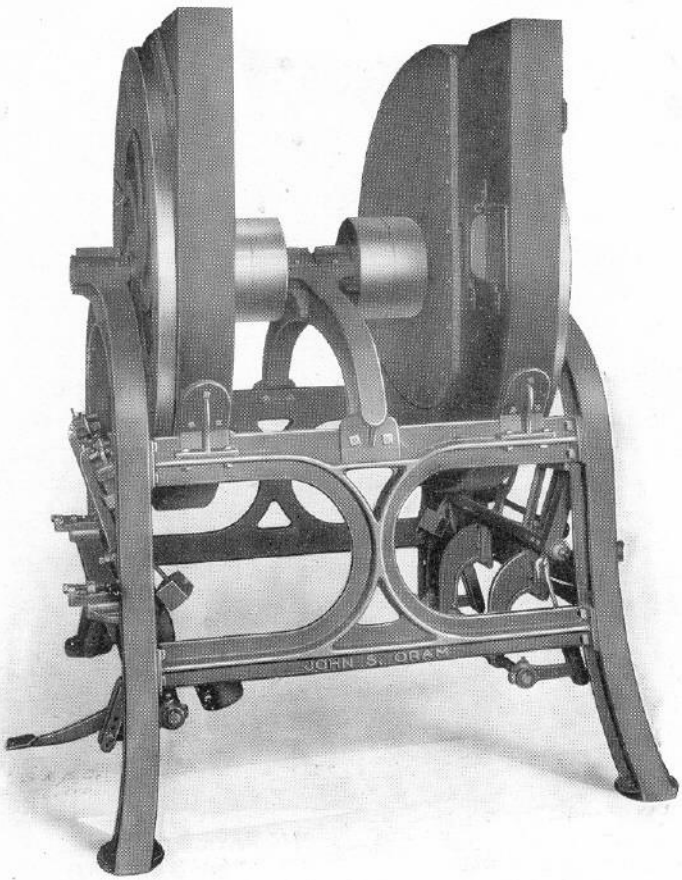


PHOTO TAKEN FROM STANDARD OIL BARREL JOINTER, DOUBLE INDEPENDENT. EQUIPPED WITH LIGHT CLAMPS.

The above cut represents the well-known Crossley Standard Stave Jointer, used in all large cooper shops in the United States, Canada and in foreign countries. Joints 30" to 36" staves.

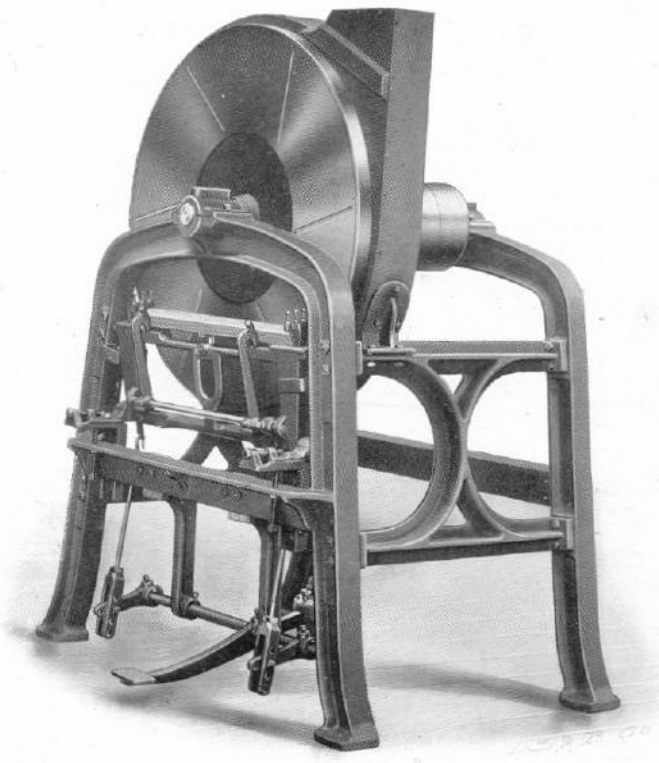
Weight, 4,200 lbs.

Pulleys 14 x 4½, tight and loose. Speed 630 revolutions per minute.

Capacity, 7,000 to 10,000 per day of 10 hours.

Single Jointer

(RIGHT HAND.)



Above cut from photo of Single Jointer, made to list beer staves 17″ to 34″. The bilge on the 34″ being 1⅛″, on shorter staves bilge is correspondingly lower.

This wheel is also used extensively for listing oil and whiskey staves, 30″ to 36″ long. The bilge being usually ½″ on 35″ stave.

Same size wheel is also made to joint beer barrel staves—finished joint ready for use.

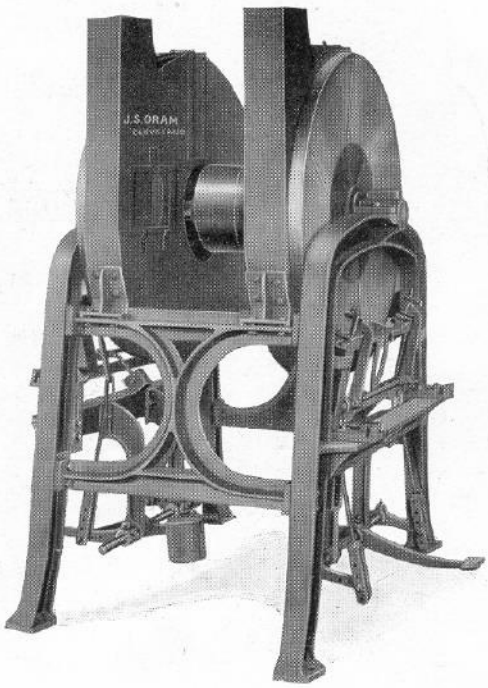
We have patterns also for same size wheel to joint slack barrel staves.

When ordering give length of staves and bilge on same.

Diameter of wheel, 47″; speed, 700 revolutions per minute; pulleys, T. & L., 12″ x 4½″; weight, 2,400 lbs.

Double Half Barrel Jointer

BOTH WHEELS ON SAME SHAFT.

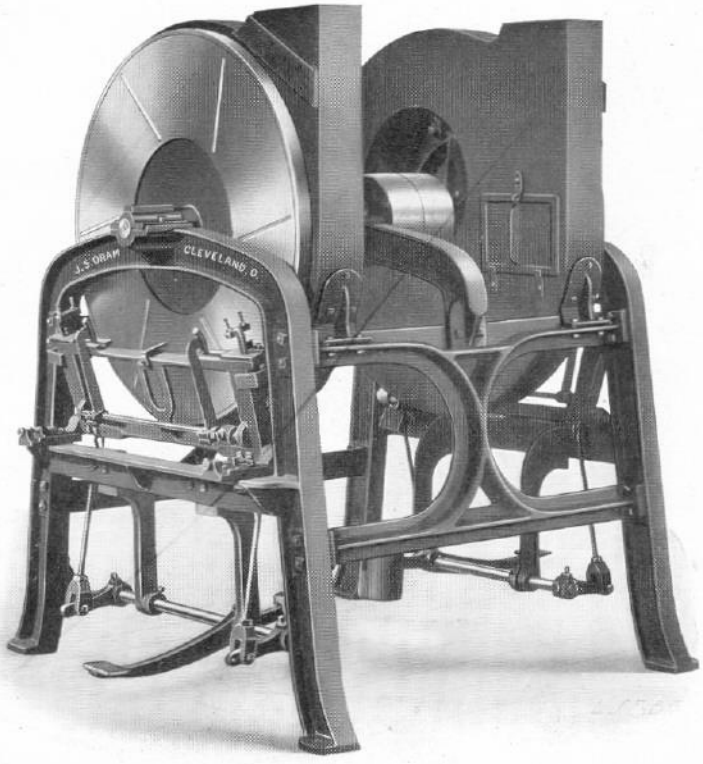


Above machine intended to joint 24 to 30-inch staves, or same style arranged for beer half and whole barrel staves. Made with Single Wheel or Double Independent.

Size of pulleys, 12 x 6, tight and loose; speed, 700; weight, 3,500 pounds.

Double Independent Stave Jointer

(Photo from Jointer to List Staves)

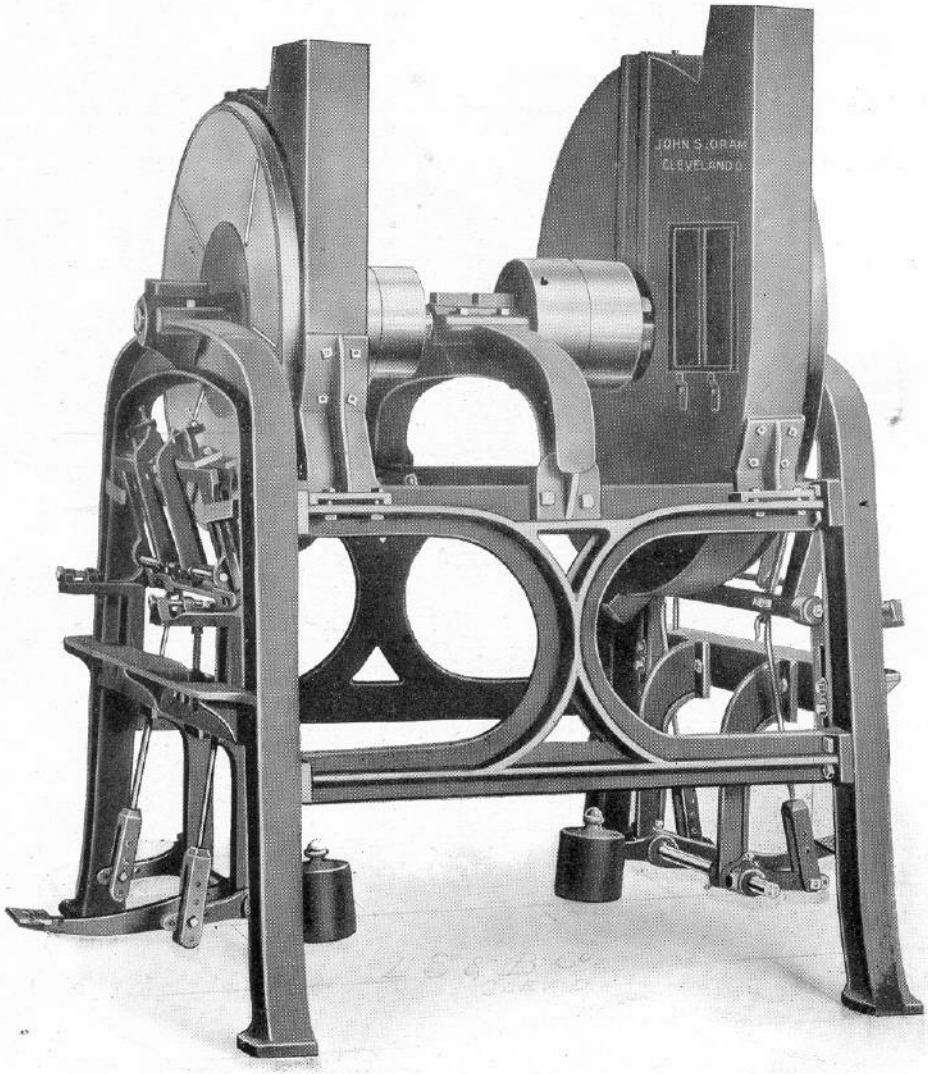


Above cut is from a photo recently taken of Double Independent Jointer, for listing staves 30″ x 36″.

Made usually to put ½″ Bilge on 35″ stave, but have pattern for wheels same size, on which bilge can be made higher or lower as ordered.

Dia. of wheels, 47″; speed, 700 rev. per min.; pulleys, T. & L. 12″ x 4½″. Weight, 3,800 lbs.; floor space, 5 x 6 feet; capacity, 7,000 to 10,000 staves per day. 6″ x 8″ high over all.

Double Independent Jointer

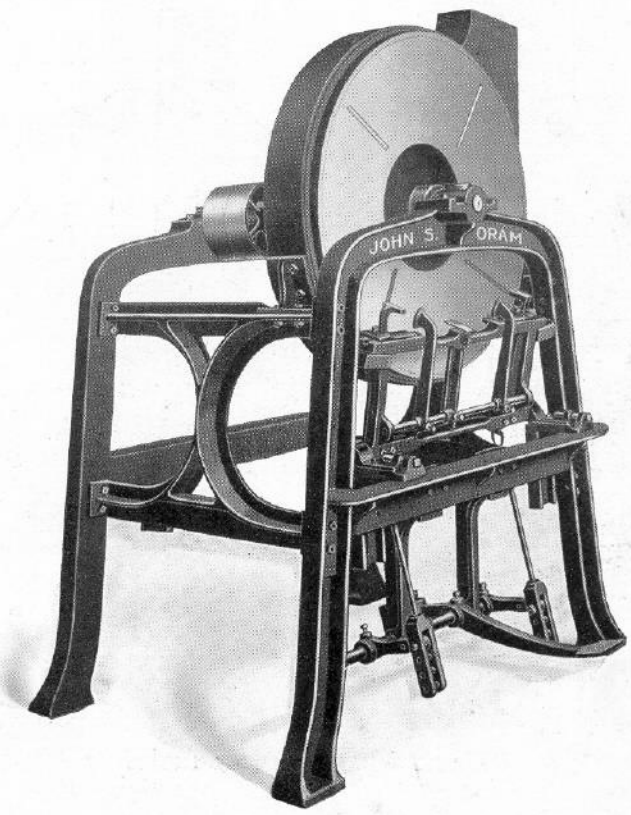


One side to joint ⅛ and ¼; the other side for ½ and 1 beer, or for whiskey and other kinds of keg and half barrel staves.

Pulleys on small wheel, 10 x 3½ inches; speed, 800 revolutions per minute. Pulleys on large wheel, 12 x 4½ inches; speed, 700 revolutions per minute. Weight, about 3,800 pounds.

Single Keg Jointer

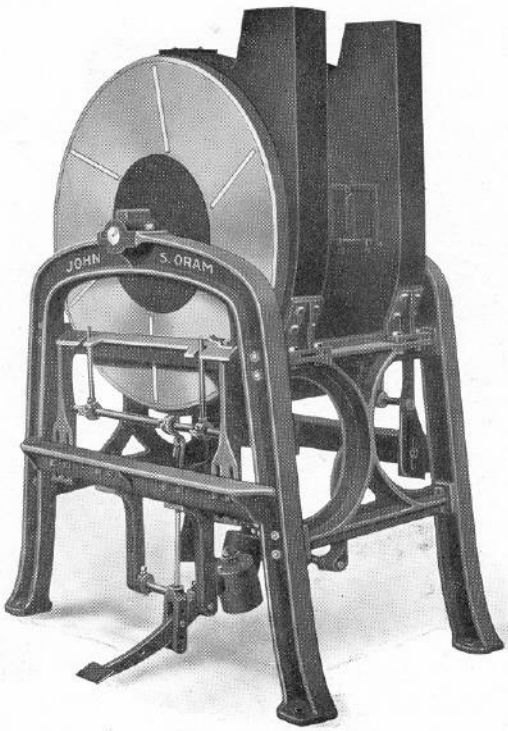
RIGHT HAND WHEEL



Our Jointers need no fan to blow away the shavings, as their construction is such that the wheels will blow the shavings any reasonable distance. Can be made Double, or Double Independent. Joints 16″ to 25″ staves.

Pulleys, 10 x 3½; speed, 800 revolutions per minute; weight, 2,000 lbs.

Double Jointer



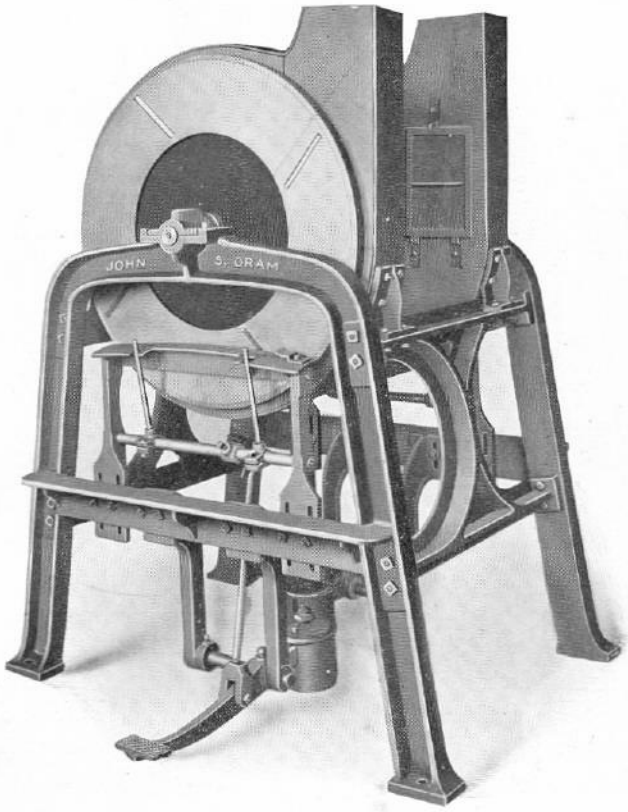
SLACK BARREL STAVE JOINTER.

Above cut taken from machine for joining slack barrel staves, such as flour and cement.

Pulleys, 12 x 6 inches; speed, 700 revolutions per minute. Weight, 3,200 pounds.

Nail Keg Stave Jointer

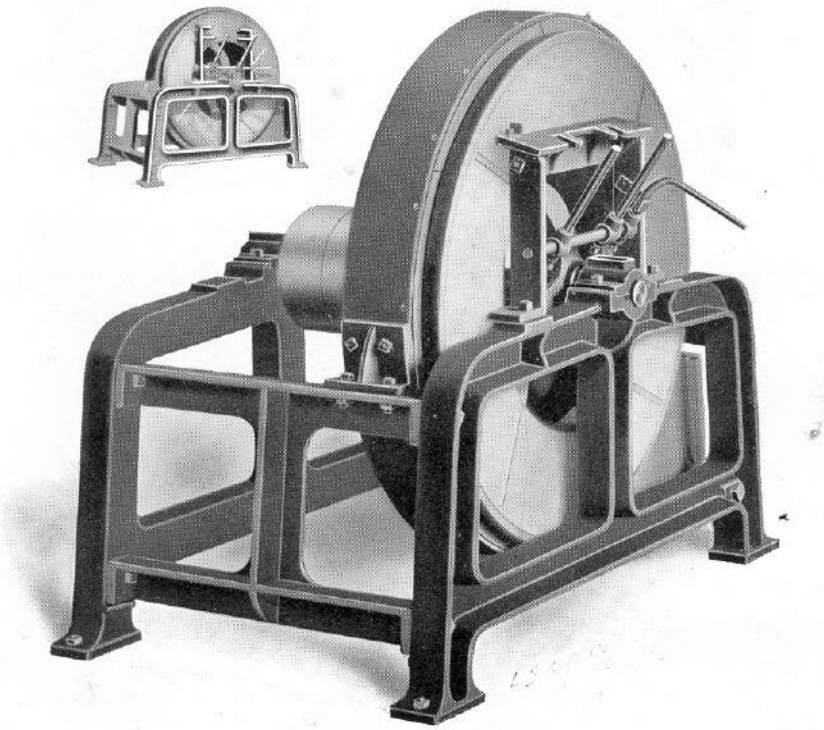
LATEST IMPROVED JOINTER



Both wheels on same shaft. Capacity, 16,000 to 20,000 per day; pulleys, 10 x 6 inches, tight and loose; speed, 800 revolutions per minute; weight, 2,300 pounds.

The largest stave makers use it. Write for prices, etc.

Butter Tub Stave Jointer



The above photo engraving represents our Latest Jointer for Butter Tub, and other staves having a straight joint. The table on which the stave rests while being jointed, is hinged so that any desired bevel can be given to the edge of the stave. A double table or rest, shown in small cut, will be furnished instead of that shown in large cut, if desired, in order that staves can be jointed with the grain on both edges. The gauge rods are adjustable, so that as in Butter Tub Staves one end of the stave may be made narrower than the other. This machine is substantially built, weighing 1,050 pounds, and is cased to blow its own shavings away.

Speed, 800; pulleys, 10 x 3 inches, tight and loose.

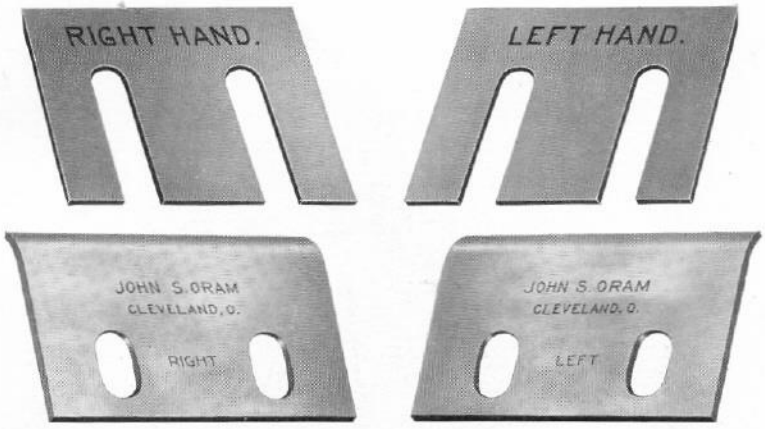
Mr. O. P. Lane, of Iowa Falls, Iowa, says: "Is just what I wanted; am very much pleased."

The Jointer works first-class.

WASECA, MINN., September 22, 1896.
Respectfully yours,
W. J. ARMSTRONG.

Jointer Knives and Caps

HOW TO GRIND



EAST BOSTON, MASS., April 6th, 1887.

MR. JOHN S. ORAM.

DEAR SIR:—The Jointer is all right now, and works well. If you had sent us the *information* in the first place in regard to grinding and setting knives and caps we should not have had any trouble. Yours truly,

HILL & WRIGHT.

On receiving the above, the thought occurred to us that it would be advisable to print and distribute among the users of our Crossley Patent Stave Jointers a card giving a little *"information"* in regard to grinding and setting knives and caps, and thus possibly help others, as well as the above mentioned firm, out of an embarrassing position:

First, as to the knife—It should be ground exactly to gauge, and all ground alike. The caps should be filed to same gauge on edge and a little hollow on the inside face when they lie on the face of the knife, so that the corners or ends will lie down close, and when the screws or nuts are tightened down the whole length of cap will take a firm and close bearing on knives. No shaving can then get under and clog the machine. The sharp edge of caps should be filed away at right angles, or nearly so, to face of knives, about 1-64 flat. It will then break up the shavings as fast as cut, prevent tearing, and thus aid in making a smooth joint. Set the caps close up to edge of knife, say about 1-32 of an inch from same, not more; a little closer when taking a light shaving and doing fine work.

Care should be taken that all knives are ground to balance, and caps also. To this end, would advise the purchase of a light, sensitive scale of some kind. (See page 85).

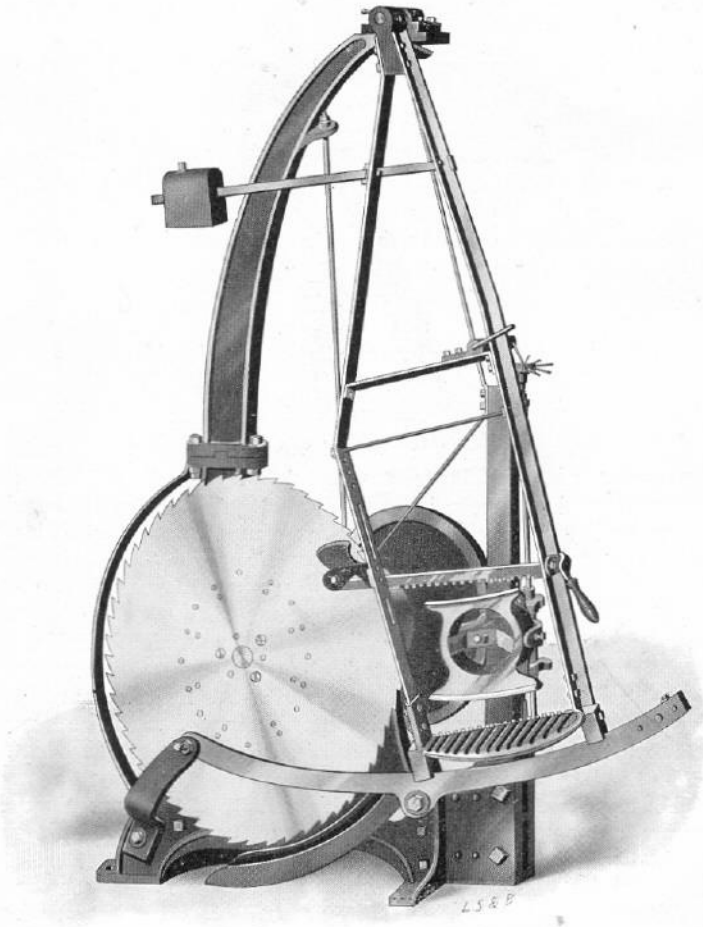
By observing the above, no trouble should be experienced in getting a perfect joint.

Should you find any trouble whatever in the working of any of our machinery, please write us at once, giving full particulars of same, and we shall be but too glad to give you all the information in our power.

Very respectfully yours,

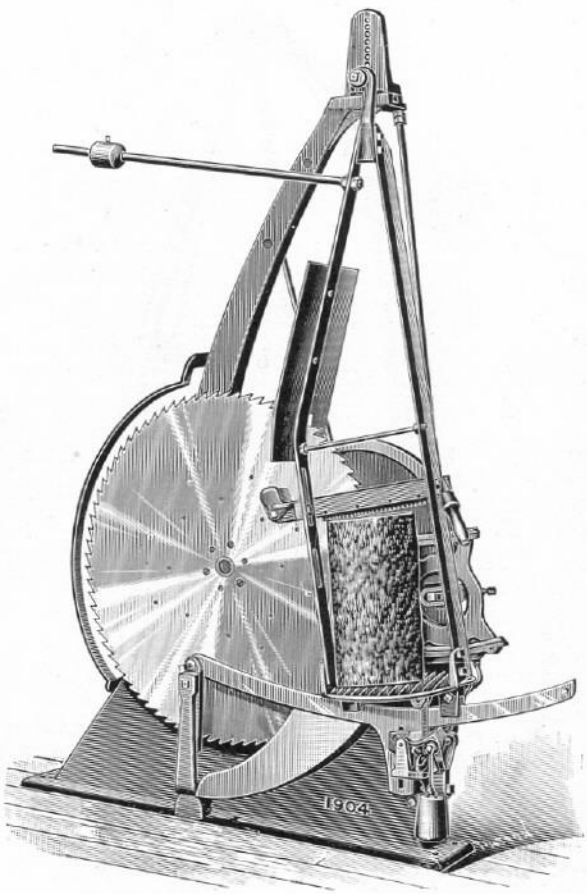
JOHN S. ORAM.

Champion Heading and Shingle Machine



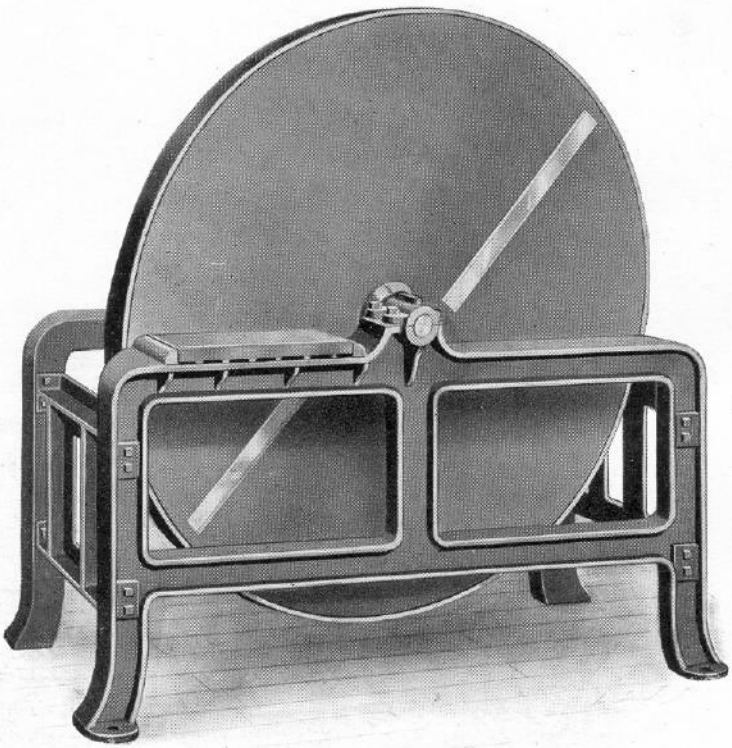
WRITE FOR PRICE, ETC.

Patent Pendulous Sawing Machine



WRITE FOR PRICE, ETC.

Heading Chipper



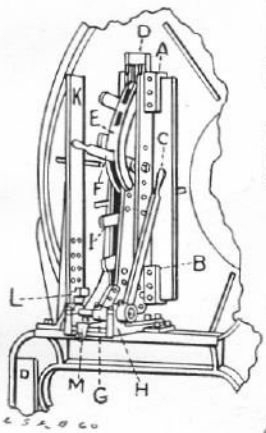
The knives are 25 inches long. The wheel is banded with wrought iron. Casing for conveying shavings can be added if desired.

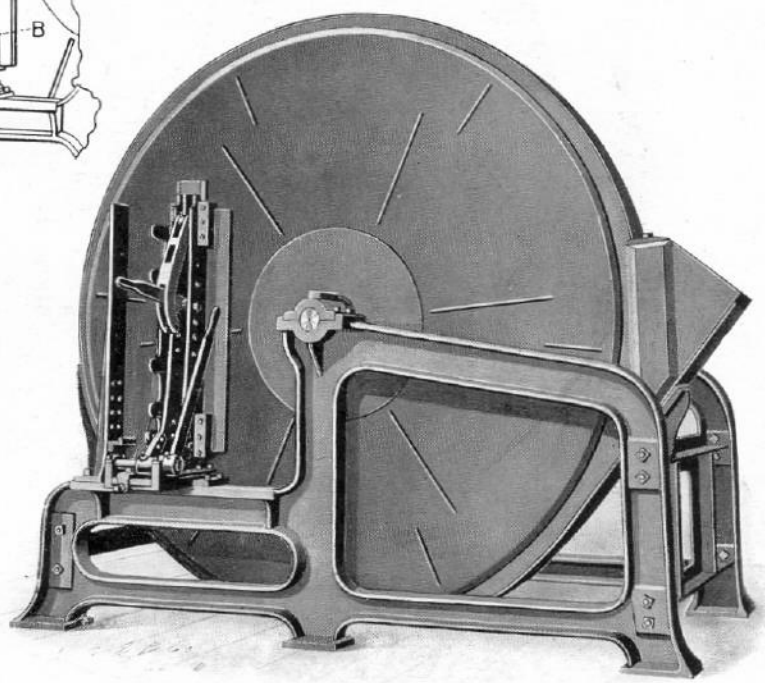
Pulleys, 18 x 6, tight and loose; speed, 400; horse power, 6 weight, 2,400 pounds; floor space, 7 x 4 feet; capacity, 3,000 pieces of heading per day. Can make wheel with four knives if desired.

Boxed for export 3,000 pounds; cubic feet, 100.

Combined Heading Chipper and Jointer

A Upper Clamp Jaw.
B Lower Clamp Jaw.
C Slide Lever.
D Main Clamp Slide or Angle.
E Slotted Connecting Rod.
F Clamp Lever.
G Short Arm and Shaft.
H Bottom Slide Plate.
I Inside Stop Bracket.
K Jointing Bracket.
L Jointing Bracket Rest.
M Gauge, for Thickness.





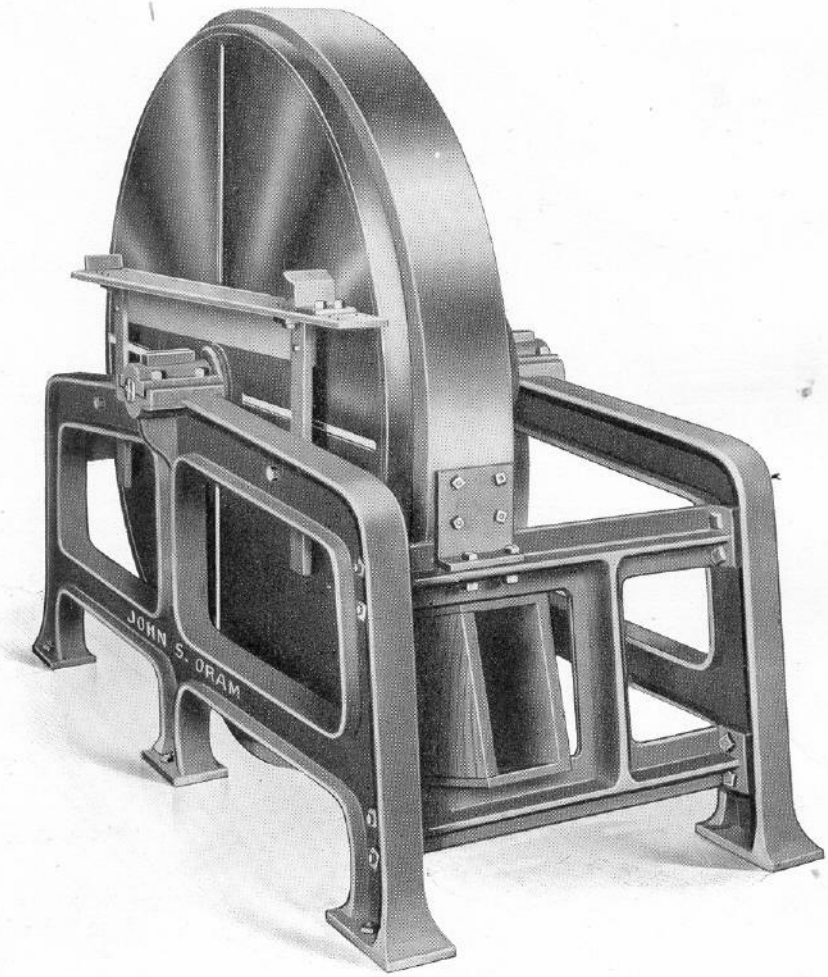
The above machine has attachment as shown in cut for chipping heading to a thickness, and substantial iron casing for conveying shavings.

Pulleys, 24 x 6, tight and loose; speed, 350; horse power, 6; weight, 4,000 pounds; floor space, 9 x 5 feet; capacity, 3,000 pieces heading per day.

Will work heading 32 x 10 inches and under; can be arranged to chip 40 inches long at slight additional cost.

Boxed for export, 6,000 pounds; cubic feet, 150.

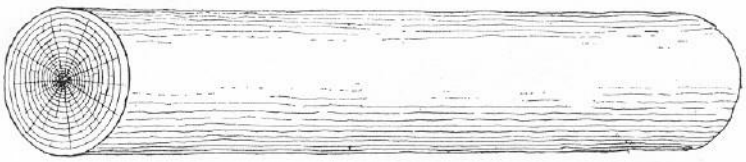
Chipper or Lister



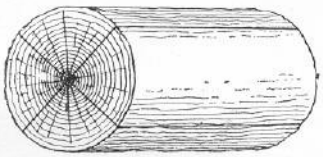
The above cut shows our new Lister or Jointer, for dressing the edges of claret staves, straight, up to 48 inches long.

Diameter of wheel, 4 feet 6 inches; pulleys, 14 x 6, tight and loose; speed, 600; weight, 2,000 pounds. Full particulars, price, etc., on application.

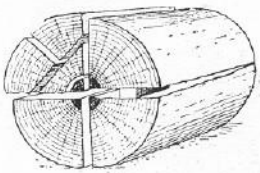
How to get out Sawed Staves and Headings



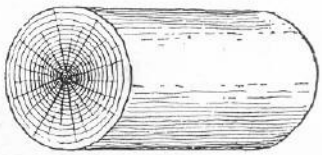
Shows the log as cut from tree.



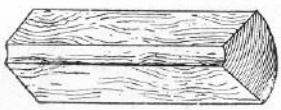
Shows manner of splitting timber into stave bolts where timber is of small diameter.



Shows manner of splitting section for timber of large diameter into stave bolts. In making staves, as well as heading bolts, for oil and other tight work, it is ever and always necessary to keep with the grain of wood.

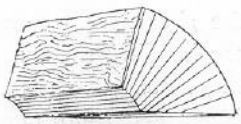


Shows section of log as cut, 3 feet long, for stave bolt.



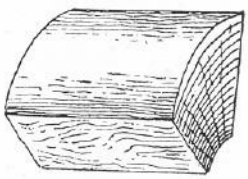
Stave bolt quartered and heart split off.

Bolt cut to uniform length on Bolt Equalizer ready for cylinder stave sawing machine.



Shows manner of sawing pieces of heading from Bolt by the Head Sawing Machine. They are cut 1 inch thick upon sap, ¾-inch thick at the heart, 24 inches long. Two or three pieces are required to form a complete head.

Shows manner of sawing staves upon a cylinder stave machine.

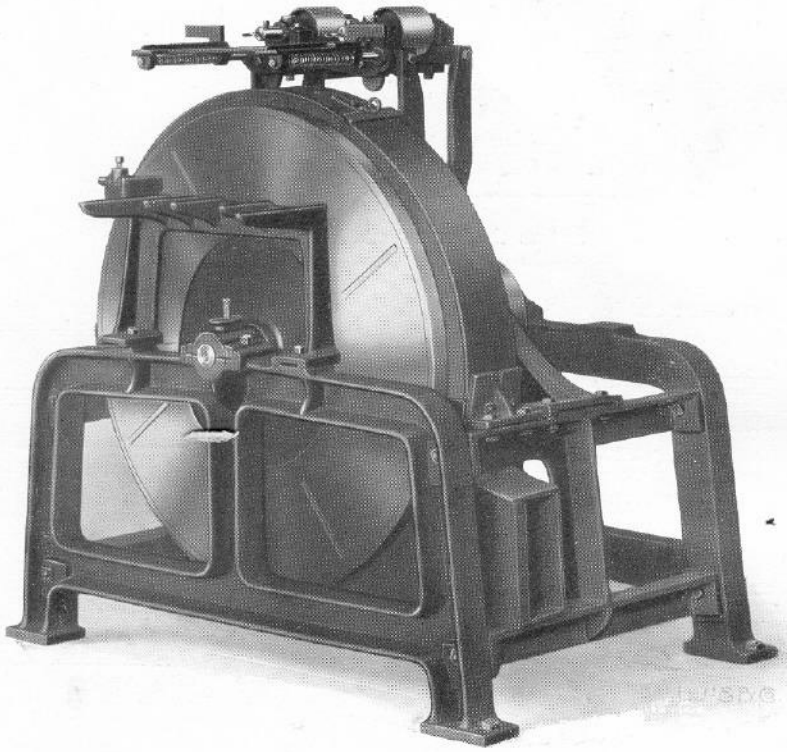


Shows heading prepared from tree same as in stave bolt.

Three hundred and thirty-five cubic feet of timber required for 1,000 complete heads. A larger class of timber is required than for stave bolts.

Two cords of Stave Timber containing 128 cubic feet each or 256 cubic feet total, are required to make 1,000 good staves.

Heading Jointer and Doweling Machine



The best, most simple and durable, and decidedly the cheapest machine of the kind manufactured in the country. Used in all large heading factories.

Unless otherwise ordered, all wheels will be faced a little convex, leaving joint open in center when pieces are put together, and making a tight joint when barrel is trussed.

Barrel Size.—Pulleys 10 x 3½, tight and loose; speed 750 to 800; horse power, 4; weight, 1,200 pounds; floor space, 4 x 3 feet; capacity, 800 to 1,000 heads per day. Above machine also made with six knives at slight additional cost.

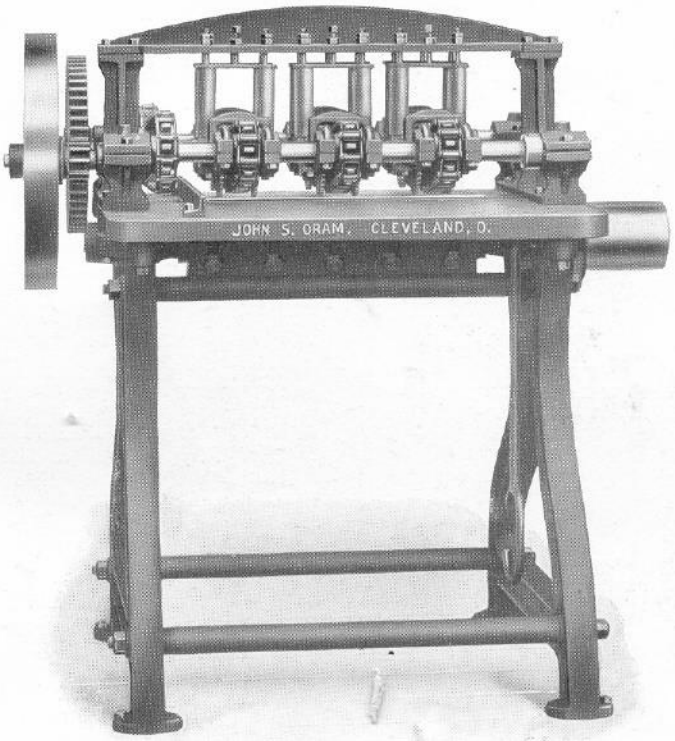
Machine to joint 28-inch and under.—Pulleys and speed same as above. Weight, 1,300 pounds.

Hogshead Size.—32-inch and under—Pulleys, 2—12½ x 4½, tight and loose; speed, 700; horse power, 4; weight, 1,700 pounds; floor space, 5 x 4 feet; capacity, 600 to 800 heads per day.

Boxed for export, 1,500 to 2,500 pounds; cubic feet, 60 to 75.

The Very Latest Improved Heading Planer

FOR TIGHT HEADING ONLY



Above machine has 6 absolutely independent feed rolls, two of which rest on the centre, and two on each of the outside pieces of the head, thus holding down firmly all parts of the head, while planing.

A new style steel riveted chain is now used on inside 6 feed rolls, tested to over 4,000 pounds., doing away with all stretching or breaking. Outside chain No. 62. Inside chain No. 1062. Can refit old style machines with the above latest style feed gear, complete.

Notice the improved Triple Feed arrangement.

Cutter Head solid steel forging.

Floor space, 33 inches by 48 inches.

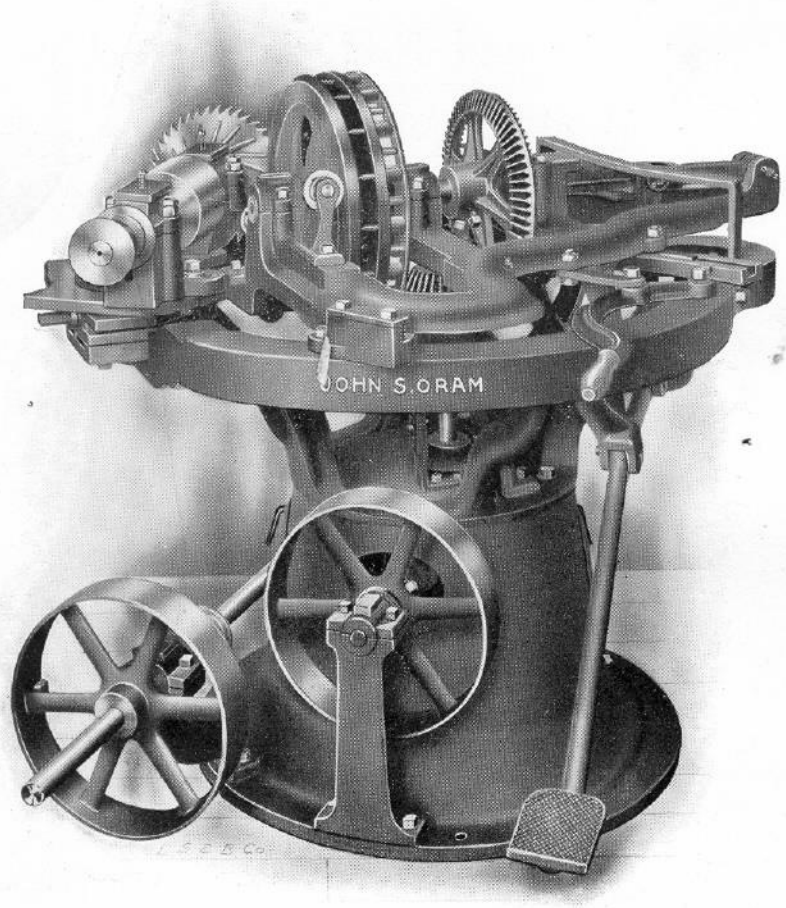
Capacity, 8,000 to 12,000 heads per day.

Two sizes made—23 and 35 inches.

Pulleys on countershaft, 10 x 6, tight and loose; speed, 650; horse power, 4; weight, 23-inch machine, 1,000 pounds; 35-inch machine, 1,300 pounds.

Boxed for export, 1,500 to 1,800 pounds; cubic feet, 45 to 75.

Oram's Latest Improved Ralya's Head Rounder



Speed of Arbor, 4,500 to 5,000; weight, about 1,800 pounds; floor space, 36 x 36; pulleys on counter, 10 x 6, tight and loose; speed, 750 to 830; horse power, 6 to 10.

It is now arranged to turn heading as small as 9½ inches. Special sizes made to cut as large as 30 inches. For tight barrel heading only.

Boxed for export, 2,400 pounds; cubic feet, 70.

Used exclusively in all large factories.

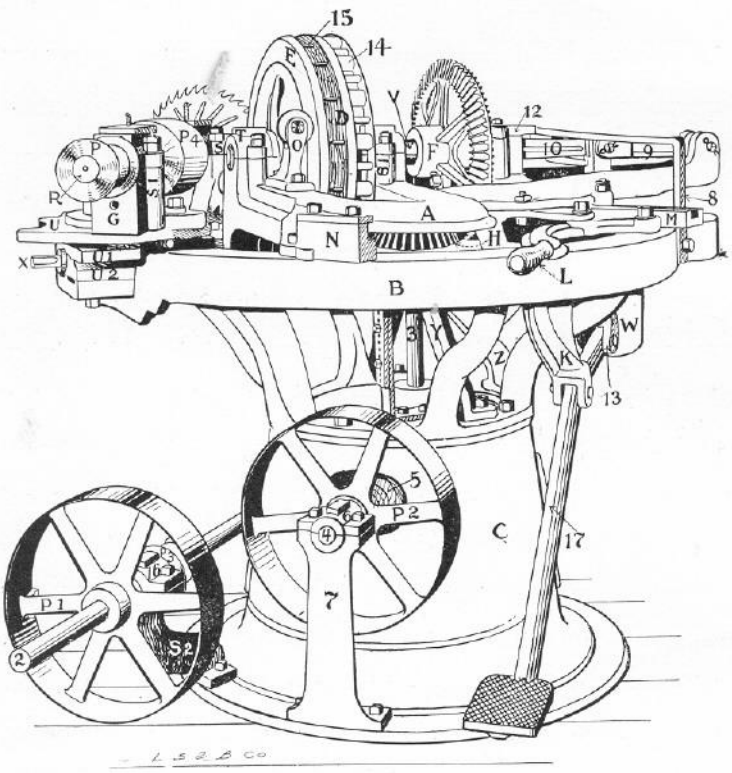
See pages 37, 38, 39.

Ralya's Head Rounding Machine

It is constructed entirely of iron, and the design is such that it cannot be racked or strained out of shape by any amount of handling or by bolting down on an uneven floor.

Another important feature is the arrangement of Foot Lever and Toggle Joint for clamping the head. Great power is thus obtained, and both hands are free to be used in placing the head on the receding center between clamps; also in removing the finished head, but one hand is required, the clamps disengaging automatically. Again our Cutter Head, in which the cutters are dovetailed making it impossible for them to get loose and fly out, is free from screws or other objectionable means of holding same. We are thus enabled to insert from eight to sixteen cutters in each head with perfect safety, and consequently can speed the machine faster and feed it heavier than can be done by any other arrangement now in use. We spare neither stock nor workmanship to keep this machine where it has always been—ahead of all others. As many as 5,000 Oil Barrel Heads have been turned on this machine inside of ten hours, and this for several days in succession; 3,000 considered an average day's work.

Oram's Latest Improved Ralya's Head Rounder



For explanation of lettering on cut, see next page.

Explanation of Lettering in Cut

A	Jewsharp.
B	Basket.
C	Base.
D	Pin Clamp. (Give diameter.)
E	Back Clamp Plate. (Give diameter.) (Center Pin not shown.)
F	Ratchet Gear.
G	Arbor Box.
H	Top Bevel Pinion. (Mention if keyed on or fastened with cap screws.)
K	Treadle Hanger.
L	Hand Lever.
M	Long Jewsharp Slide.
N	Short Jewsharp Slide.
O	Outside Roller Stand. (Inside Stand not shown).
P	Arbor Feed Pulley.
P1	Feed Shaft Pulley.
P2	Sleeve Pinion Pulley.
P3	Feed Shaft Flanged Pulley.
P4	Arbor Pulley.
R	Arbor.
S	Front Arbor Box Cap.
S1	Back Arbor Box Cap.
S2	Feed Shaft Stand.
T	Back Clamp Journal Cap.
U	Top Slide Plate.
U1	Middle Slide Plate.
U2	Bottom Slide Plate.
V	Pin Clamp Shaft.
W	Treadle Weight.
X	Short Slide Screw. (Long Slide Screw not shown).
Y	Double Leg—Shaft Stand.
Z	Single Leg—Shaft Stand.
2	Lower Feed Shaft.
3	Upright Pinion Shaft.
4	Sleeve Pinion Shaft.
5	Sleeve Pinion.
6	Cap Sleeve Pinion Stand.
7	Sleeve Pinion Stand.
8	Toggle Joint Guide.
9	Toggle Joint, back half.
10	Toggle Joint, front half. (Slide Block on end of 10 not shown).
12	Slide Block Cap.
13	Toggle and Treadle Connecting Rod.
14	Clamp Rubbers.
15	Clamp Pins.
16	Cap on Stand S2. (Opposite Stand to S2 not shown).
17	Treadle.
18	Cap on Pin Clamp Shaft.

Bevel Gear inside of Base not shown.
Step for Bottom Shaft 3 not shown.
Bearing for inside end of Shaft 4 not shown.

We make Cutter Heads, 8-Bit Beveler and Trimmer.

12—Bit—with or without Trimmer.
14—Bit—with or without Trimmer.
16—Bit—with or without Trimmer.

Concave Saws always kept in stock. Mention diameter and dish.

If machine is an old one, better give dimensions of parts ordered for repairs, such as size of holes in gears, etc., date of purchase if possible.