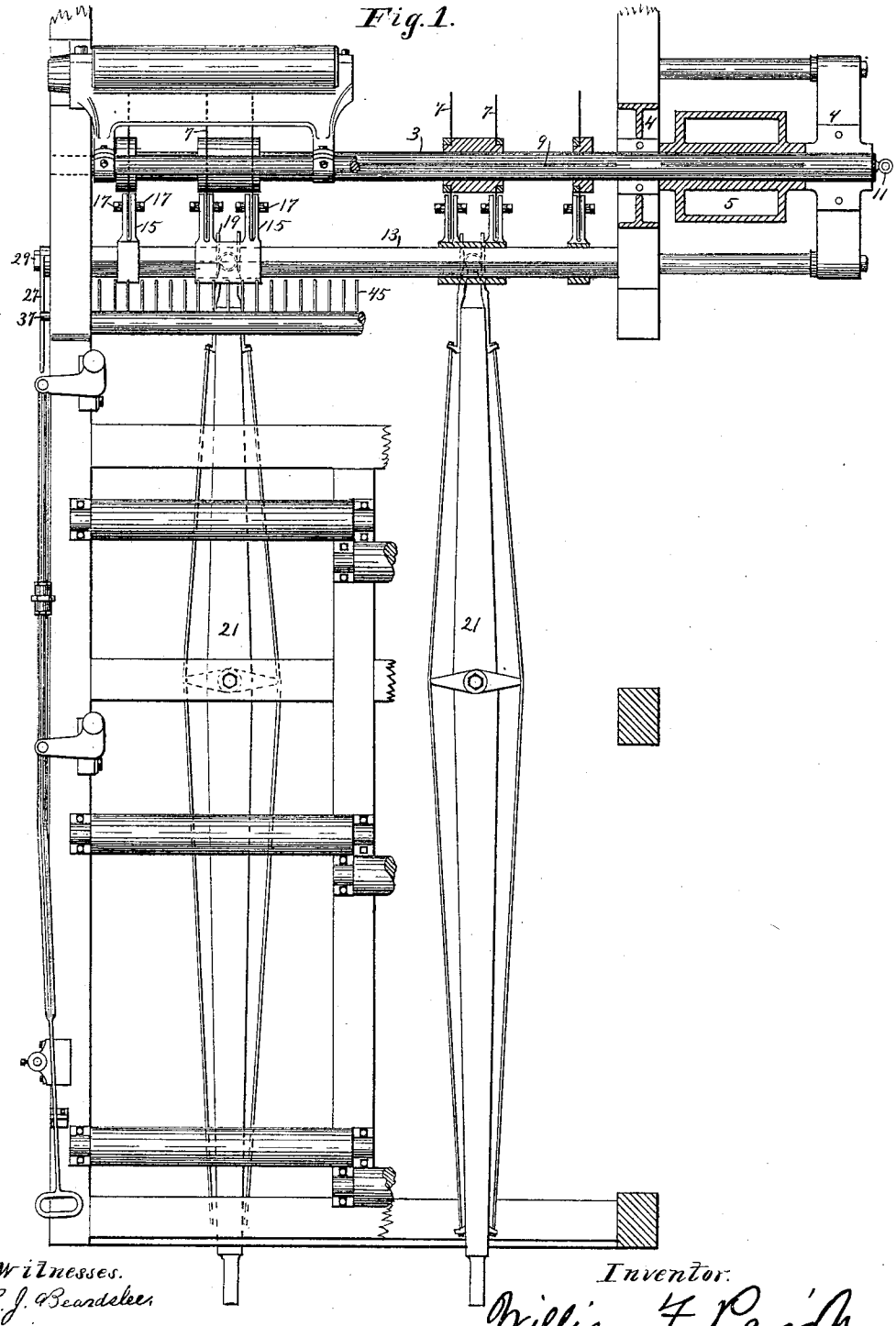
(No Model.) 4 Sheets—Sheet 1.

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EDGER.

No. 379,659. Patented Mar. 20, 1888.

Fig. 1.



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Fig. 2.

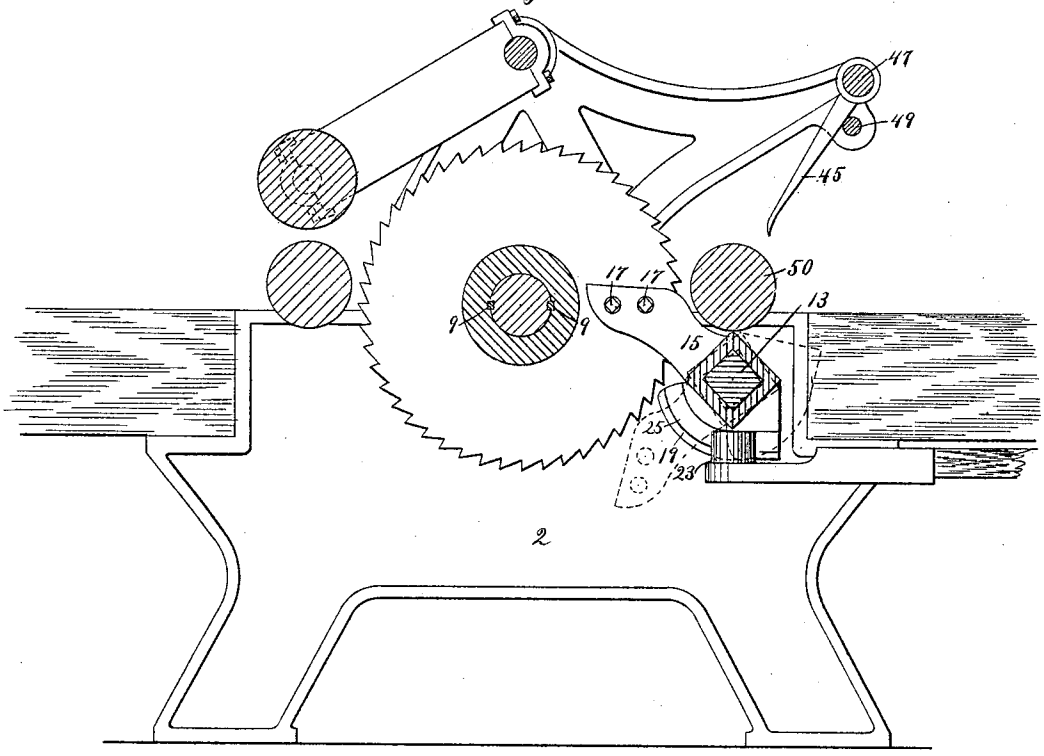


Fig. 6.

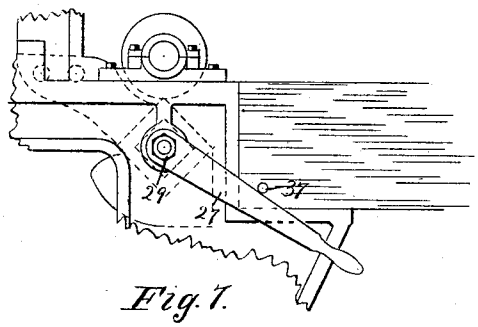
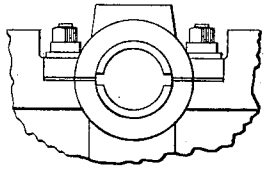


Fig. 7.



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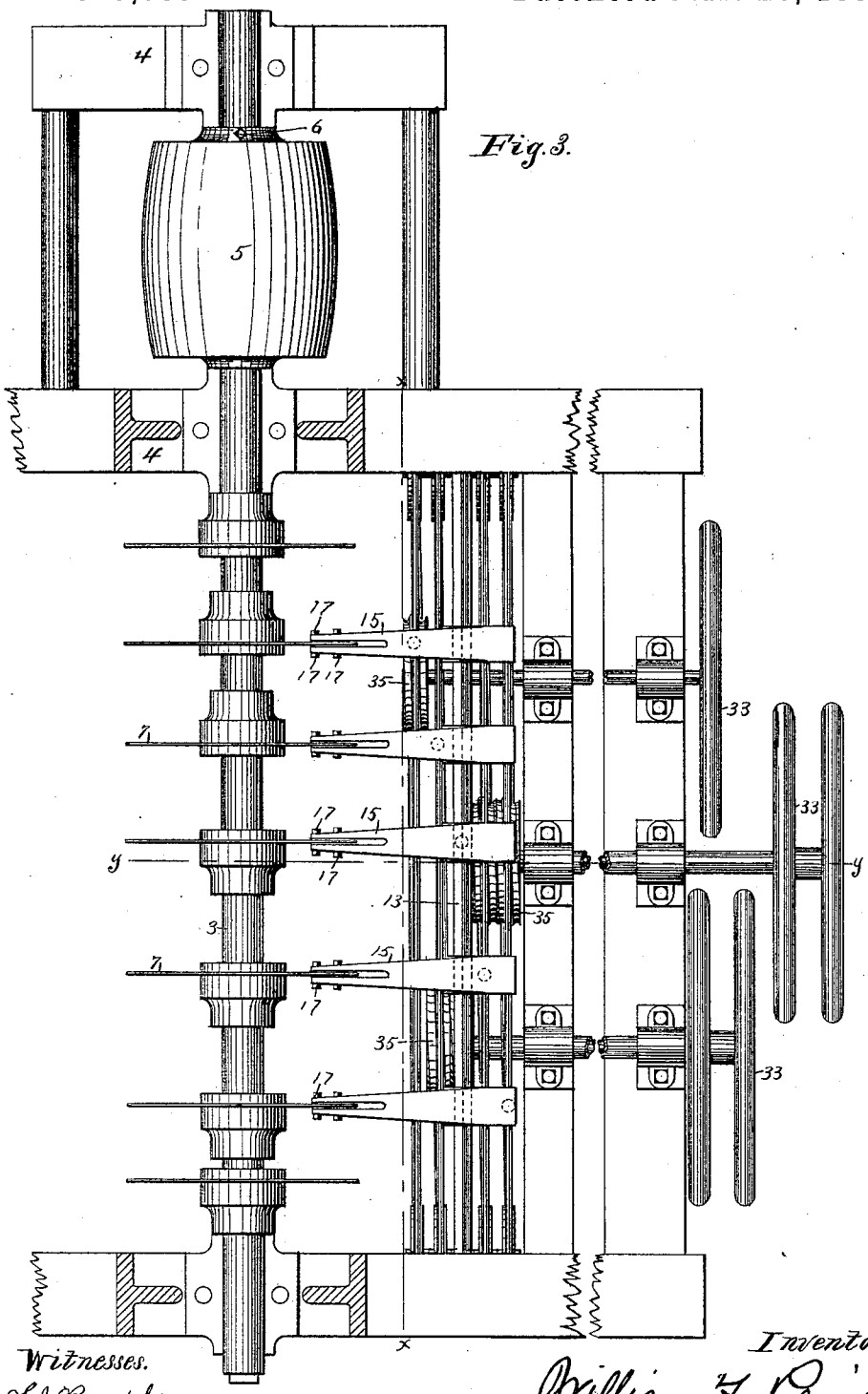


Fig. 3.

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No. 379,659. Patented Mar. 20, 1888.

Fig. 4.

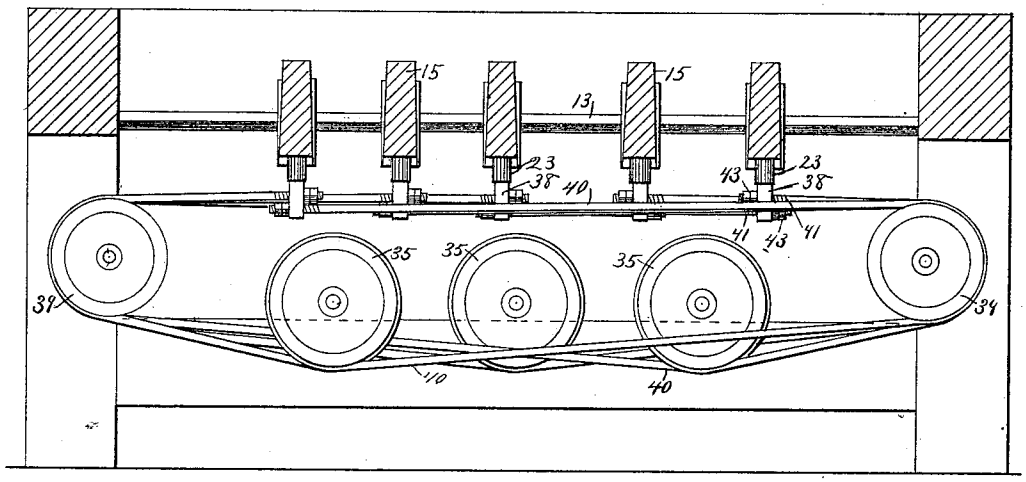
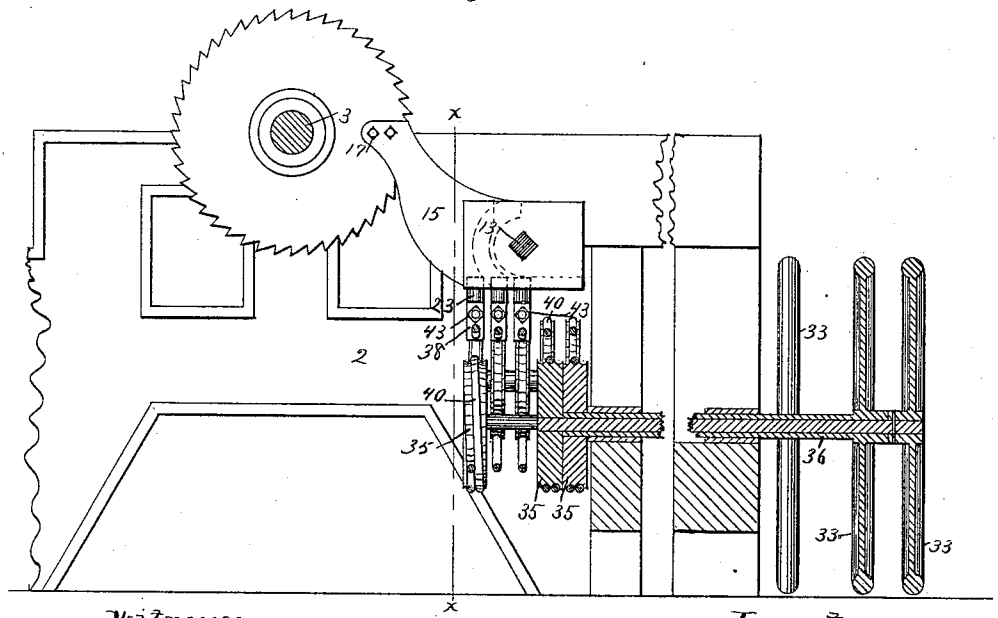


Fig. 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM F. PARISH, OF MINNEAPOLIS, MINNESOTA.

EDGER.

SPECIFICATION forming part of Letters Patent No. 379,659, dated March 20, 1888.

Application filed October 14, 1887. Serial No. 252,301. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. PARISH, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain Improvements in Edgers, of which the following is a specification.

My invention relates to improvements in that class of machines that are used in saw-mills for edging lumber; and the objects that I have in view are to provide improved means for operating the movable saws and setting them at any desired distance from each other to suit the width of the lumber that is being operated upon; also to construct this operating device so that the guides by which the saws are moved may be readily disconnected from the saws without disconnecting them from the operating-levers or other devices that are used for moving them, thereby permitting free access to the saws and permitting the guides to be readily connected with the saws when it is desired to use them again.

Another object is to improve the construction of the mechanism for supporting the saws and the main driving-pulley, so that the main shaft or arbor may be quickly removed from the machine and replaced when desired.

Other objects of the invention will appear from the following detailed description, taken in connection with the accompanying drawings, in which—

Figure 1 is a plan view of a portion of a machine embodying my invention. Fig. 2 is a vertical section, on a larger scale, taken in a plane at right angles to the saw-arbor. Fig. 3 is a plan view of the portion of a machine showing a different mechanism for adjusting the saw-guides and saws. Fig. 4 is a transverse vertical section on line *x x* of Fig. 3. Fig. 5 is a longitudinal vertical section on line *y y* of Fig. 3. Fig. 6 is a detail showing the means for locking the bar that supports the saw-guides. Fig. 7 is an end elevation of the box for the main shaft, showing the feather-ways therein.

In the drawings, 2 represents the frame of the machine, which may be of any suitable size and construction. In this frame is mounted the saw-arbor 3, extending transversely across the machine and provided at one end with the driving-pulley 5. Mounted upon this shaft are a number of saws, 7, which are free to slide longitudinally on the shaft but revolve therewith. I prefer to construct the arbor with two feathers, 9, which may be arranged upon opposite sides thereon, as shown in Fig. 2, and are received in feather-guides in the sleeves of the saws, thereby securing the saws so that they revolve with the shaft, but are free to slide longitudinally thereon. The feathers on the shaft are omitted at the parts that are inclosed in the bearing-boxes in the frame of the machine. These boxes are also provided with ways which permit the feathers to be passed therethrough. The driving-pulley 5 is also provided upon its interior with similar feather-guides and the shaft with similar feathers at the part that is within the pulley when the shaft is in position. I also prefer to provide an eyebolt, 11, that is screwed into the shaft 3. The pulley is arranged between two parts, 4 4, of the frame and makes a running fit between the ends of the boxes thereon. The pulley is provided also with a set-screw, 6, that prevents the shaft from accidental movement and forms the only means for holding it in place. With this construction, when it is desired to remove the saws from the shaft, the set-screw is loosened and a bar may be inserted through the eyebolt 11 and the shaft pulled longitudinally through the saws and pulley and thus removed from the machine, or drawn out far enough so that the saws may be removed.

The feathers pass through the feather-ways in the saw sleeves and boxes. I do not confine myself, however, to this construction for supporting the saws and pulley, and they may be secured to the shaft in any other suitable manner.

Mounted in the frame of the machine is a shaft, 13, that is adapted to be turned on its axis, for the purpose hereinafter described. The saw-guides are mounted on this shaft, and are free to slide longitudinally thereon, but are prevented from turning on the shaft. I prefer to make the shaft square or polygonal, and to provide the saw-guides with openings that fit thereon, though any other equivalent construction—such as a round shaft with a spline or feather—may be used instead, if preferred. The saw-guides 15 are provided with

slots or recesses into which the saws project, and with bearing-screws 17, that may be adjusted against the opposite sides of the saw. They are also provided with dependent shroudings or flanges 19, forming grooves that extend at right angles to the direction of the shaft 13 and partially surround the same.

The machine may be provided with horizontal levers 21, which are pivoted beneath the frame of the machine and extend to the forward end thereof, and are provided at their opposite ends with vertical pins 23, which project into the groove between the dependent flanges 19. This pin is preferably provided with an anti-friction roller, and the inner sides of the flanges 19, or one of them, may be provided with steel strips 25, against which the roller bears, and which may be used to take up the wear. The end of the shaft 13 is preferably provided with a handle, 27, by means of which the shaft may be locked in its bearings. I prefer to provide a screw-thread on the end of the shaft 13, and provide a nut, 29, outside of the handle 27. I also prefer to provide a lug, 37, in the frame of the machine, against which the handle bears when the guides are in engagement with the saws.

For the purpose of locking the shaft in that position, the handle is carried under the lug 37, and the nut 29 is then screwed up against the handle, thereby locking it beneath the lug and preventing any movement of the guides. When it is desired to disengage the guides from the saws, the nut 29 is loosened and the handle is released from the lug, and the shaft may then be turned in its bearings. By rocking the shaft in its bearings the saw-guides may be turned into the position shown in dotted lines in Fig. 2, where they will be disengaged from the saws, permitting the saws to be moved along on the shaft at will, and permitting them to be removed from the shaft. This movement of the saw-guides does not, however, disengage them from the device that is used for moving them longitudinally on the shaft 13, as the pin 23 still remains in the groove between the two flanges 19. When, therefore, it is desired to re-engage the guides with the saws, it is only necessary to reverse the rocking movement of the shaft 13, and the guides will be brought back into their former position, and the machine will again be in position for operation.

Instead of using the levers 21 for shifting the position of the guides and saws, I prefer to use in many instances the shifting device shown in Figs. 3, 4, and 5. In this device a series of shafts are mountad in the frame of the machine, extend to the forward end thereof, where they are provided with suitable hand-wheels, 33, and at their opposite ends with the grooved pulleys 35, which are arranged substantially beneath the saw-guides. The pins 23, which engage the saw-guides, are secured upon the blocks 38. Suitable wire ropes, 40, or other equivalent devices, are wrapped around the pulleys 35, and then passed around idler-pulleys 39 at the sides of the machine and have their opposite ends secured to the blocks 38. I prefer to secure the threaded bolts 41 to the ends of the ropes 40, and to pass these in opposite directions through the blocks 38, and provide them with the adjusting-nuts 43, by means of which the ropes may be tightened over the pulleys.

The construction of the saw-guides is preferably the same in this case as in the other, and they engage the pins 23 in the manner already described, and may be disengaged therefrom whenever it is desired. I prefer to use two series of shafts, 36, one inside of the other, as shown in Fig. 5, as thereby considerable saving of space is effected. It will be seen that by turning any one of these shafts upon its axis the guide with which it is connected may be moved longitudinally on its operating-shaft 13, thereby bringing the saws nearer together or farther apart, as may be desired. In Fig. 1 of the drawings I have shown a machine provided with two double saw-guides and with two single guides. In the other figures I have shown only the single guides. Either form may, however, be used.

In some instances I prefer to provide the machine with a device for preventing the lumber from being thrown backward as it strikes the saws. This device consists of the series of arms 45, having sharpened ends and pivoted loosely upon the bar 47, and resting by gravity upon the bar 49 arranged below the bar 47. The lower ends of the arms 45, projecting toward the saws, are at a short distance above the feed-roll 50 that is nearest to the saws. These arms move upward freely to permit the boards to pass under them; but if the boards are thrown upward or backward the ends of the arms strike into the boards and prevent any considerable upward or backward movement. I make no claim, however, for this device in this application, as the same has been used for many years.

I claim as my invention—

1. The combination, in a machine of the class described, with the saw-arbor and saw, of the saw-guide 15, mounted upon the rock-shaft 13, but free to slide longitudinally thereon, and provided with the dependent flanges 19, forming a groove at right angles to the shaft 13, and the shifting device provided with the pin 23, projecting into the groove between said flanges 19, substantially as described, and for the purpose set forth.

2. The combination, in a machine of the class described, with the saw-arbor and the series of movable saws mounted thereon, of the shaft 13, the series of saw-guides mounted upon said shaft and free to move thereon and provided with the dependent flanges 19, and the shifting device having the pins 23 projecting into the grooves between said flanges 19, thereby permitting said shaft 13 to be rocked in its bearings to disengage said saw-guides from the

saws without disengaging them from the shifting device, substantially as described.

3. The combination, in a machine of the class described, with the saw-arbor and saws, of the rocking shaft 13, the series of saw-guides mounted upon said shaft and adapted to be moved longitudinally thereon, the lug 37 on the frame of the machine, the handle 27 on the end of the shaft 13, and the clamping-nut 29, all substantially as described.

In testimony whereof I have hereunto set my hand this 14th day of September, 1887.

WILLIAM F. PARISH.

In presence of—

L. SCHLESINGER,

R. H. SANFORD.