(No Model.)

2 Sheets—Sheet 1.

F. N. ARMSTRONG.

GANG EDGER.

No. 445,647. Patented Feb. 3, 1891.

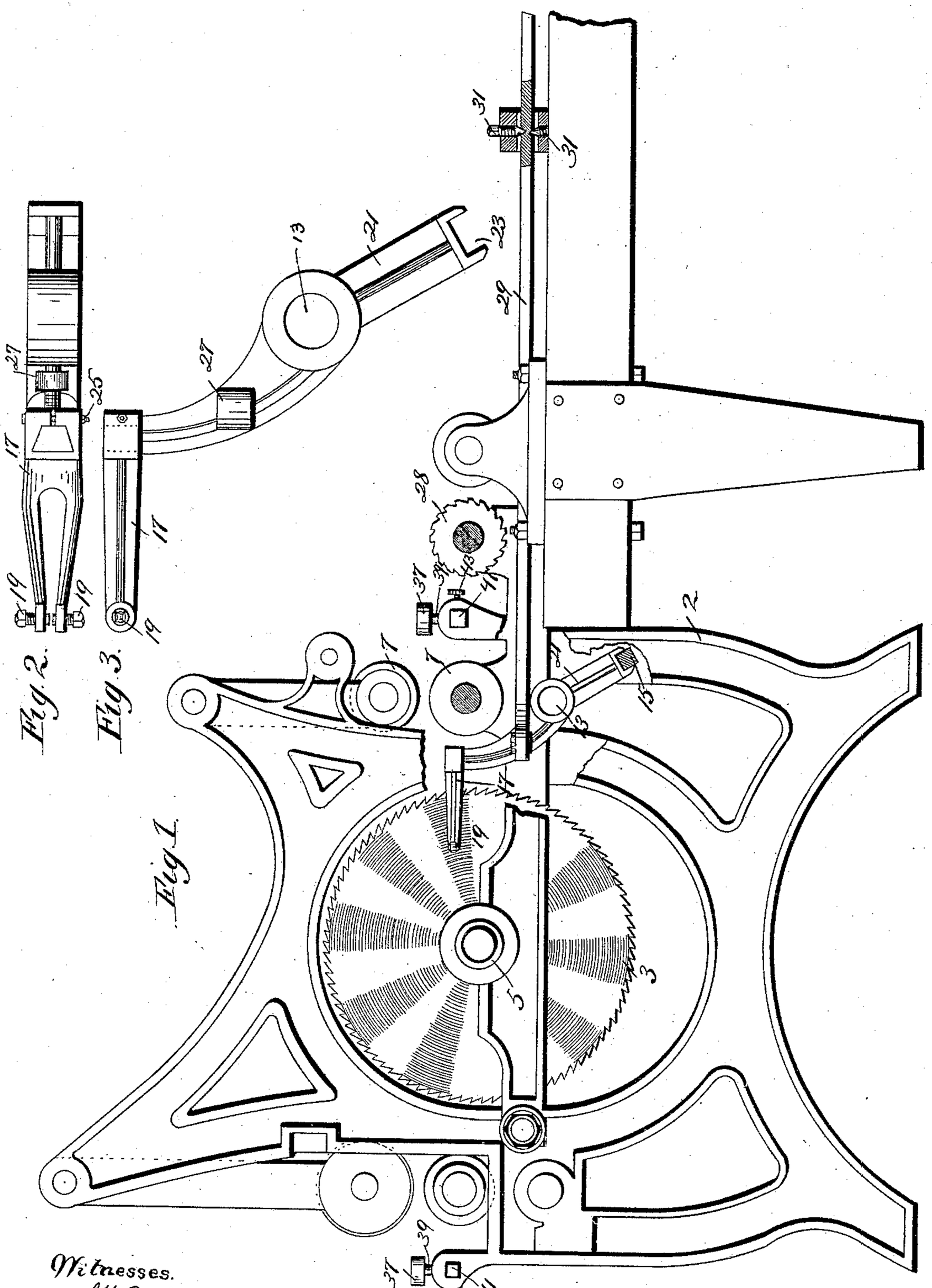


Fig. 2.

Fig. 3.

Fig. 1.

Witnesses.
S. W. Roberts
a. m. gaskill

Inventor.
Frederic N. Armstrong
By Paul Mason Atty's.

(No Model.) 2 Sheets—Sheet 2.

F. N. ARMSTRONG.

GANG EDGER.

No. 445,647. Patented Feb. 3, 1891.

Fig. 4.

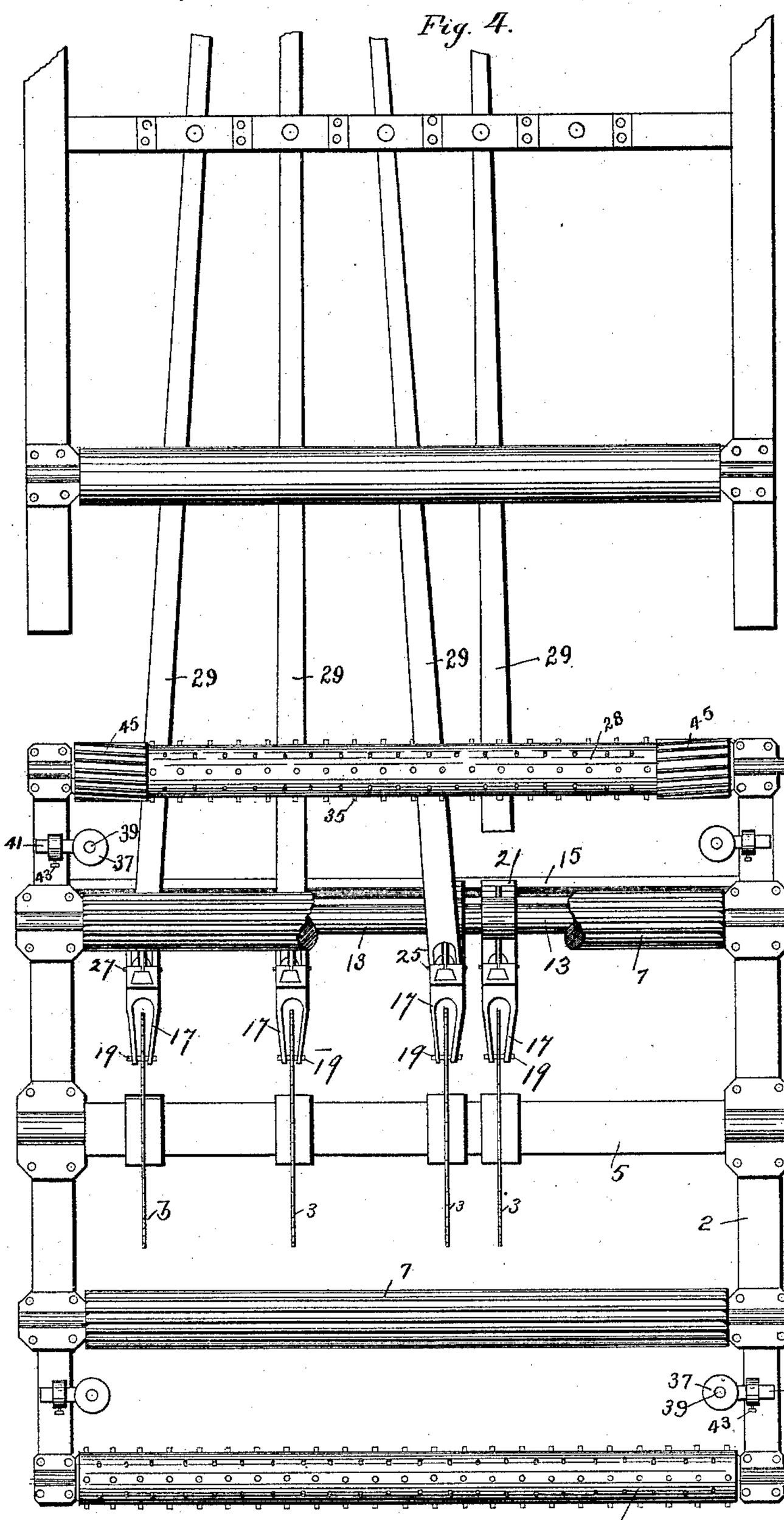


Fig. 9.

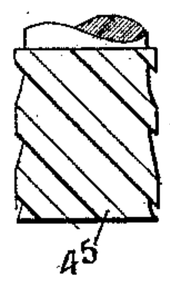


Fig. 10.

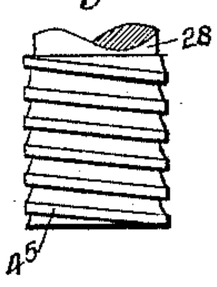


Fig. 7.

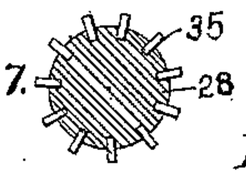


Fig. 6.

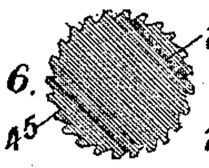


Fig. 8.

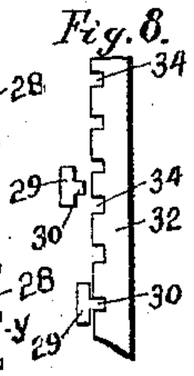
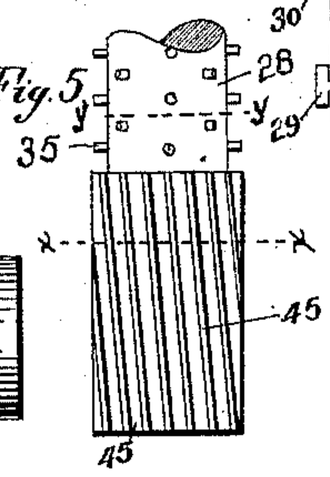


Fig. 5.



Witnesses
S. W. Roberts
A. M. Gaskill

Inventor
Frederic N. Armstrong
By Paul & Wooster Atty's

UNITED STATES PATENT OFFICE.

FREDERIC N. ARMSTRONG, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO SMITH & RICHARDSON, OF SAME PLACE.

GANG-EDGER.

SPECIFICATION forming part of Letters Patent No. 445,647, dated February 3, 1891.

Application filed November 4, 1889. Serial No. 329,256. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC N. ARMSTRONG, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Gang-Edgers, of which the following is a specification.

The object of this invention is to provide an improved gang-edger for use in saw-mills; and the objects I have in view are to provide improved means for moving the saws and an improved means for feeding the boards to the saws.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a portion of a gang-edger embodying my invention. Fig. 2 is a plan view of one of the saw-guides. Fig. 3 is a side elevation of the same. Fig. 4 is a plan view of a portion of the machine. Fig. 5 is a detail elevation of the feed-roll. Fig. 6 is a transverse section of the same on line *x x* of Fig. 5. Fig. 7 is a transverse section on line *y y* of Fig. 5. Fig. 8 is a detail of the means for holding the ends of the adjusting-levers. Fig. 9 is a detail of the feed-roll. Fig. 10 is a view showing a single continuous rib as used upon the end of the feed-roll.

In the accompanying drawings, 2 represents the frame of the machine, which is of any preferred size, shape, and construction.

3 3 represent the saws, which are mounted upon a suitable arbor 5, upon which the saws are adapted to be moved longitudinally. The edger is provided with the usual feed-rolls 7, having the driving-pulleys 9, and with a pulley 11 for driving the saws. Arranged in front of the saws and extending transversely across the machine is a stationary shaft 13, and below this is a bar 15, preferably of rectangular form in cross-section. A saw-guide 17 is arranged to engage each of the saws, being provided at its forward end with the threaded pins 19, which engage the opposite faces of the saws. An inclined bar 21 is mounted upon the shaft 13, and is provided at its lower end with an opening or socket 23, which engages the bar 15. This bar is adapted to slide freely in the direction of the length of the shaft 13, and is held in an upright and exact position by the guide-bar 15. Any desired number of these bars may be arranged on the shaft 13. The upper end of the bar 21 is of rectangular or polygonal shape, and the rear end of the guide 17 is provided with an opening that is adapted to fit upon this end of the bar 21. The end of the bar 17 is split or open, and a clamping-bolt 25 is passed through the end of the guide outside of the opening that fits upon the bar 21. By this means the guide 17 may be clamped upon the end of the bar 21, and by loosening the clamping-bolt 25 the guide may be instantly removed from the bar. The bar 21 is provided upon each side, preferably at a point above the shaft 13, with a curved projection 27. A pivoted lever 29 is arranged upon the frame of the machine and extends, preferably, to the end of the frame, passing beneath the feed-roll. This lever is supported upon the ends of pointed screws 31, that engage both sides of the lever. The opposite end of the lever is provided with a fork, which is adapted to engage the projections 27 upon the bar 21. By this means a horizontal movement of the lever 29 will cause the bar 21 to be moved laterally in the machine, thereby moving the saw-guide and moving the saw longitudinally upon its arbor. The lever 29 is provided upon its under surface with a lug 30, and the lever is arranged to move over a bar 32, having therein a series of notches 34. By this means the lever is locked when the lug 30 engages any one of the notches 34, and in order to change the position of the lever its lug must be disengaged from the notch, which is done by raising the lever, and there is sufficient spring to the lever to permit it to be disengaged from the notch by raising its end.

In order to feed the boards into the machine, I prefer to use a feed-roller 28, that is provided with a series of short pins or studs 35, having blunt ends and projecting a short distance from the surface of the roll. As the boards pass over the feed-roll, the pins keep the boards from swinging around, and thus cause them to be fed squarely to the saws.

Arranged on each side of the frame of the machine is a guide-roll 37, preferably mounted upon an upright pin 39, that is secured to a sliding box or bar 41. This bar may be adjusted and secured in position by a set-screw

43. In order to hold the boards which are fed into the machine at its sides close to the guide-rolls 37, I prefer to provide the feed-roll 28 near each end with a series of spiral ribs or projections 45. I may use for this purpose a series of short ribs, as shown in Figs. 4, 5, and 9, or a single continuous rib, as shown in Fig. 10. As the boards are passed over the ends of the feed-roll 28, they are by the spiral form of these ribs held against the guide-rolls 37, and by this means these boards are brought in proper position to the saws. By means of the levers and guides already described the saws may be set and locked at any desired position upon the saw-arbor and may be readily changed when desired.

I claim as my invention—

1. In a gang-edger, the combination, with the movable saws, of a stationary shaft 13, extending across the machine, the guide-bar arranged below said shaft, the bars 21, mounted upon said shaft 13, each provided with a recess engaging said guide-bar 15, the saw-guides secured to the upper ends of said bars and engaging said saws, and the pivoted levers engaging said bars, substantially as described.

2. The combination, in a gang-edger, with the movable saws, of the stationary shaft 13, extending across the machine, the guide-bar 15, arranged below said shaft, the bars 21, mounted upon said shaft 13, recessed in the lower part of said bars 21, whereby said bars are adapted to engage the said guide-bar 15, the projections 27 upon said bars 21, adapted to engage the forked ends of the bars 29, said bars 21 provided with polygonal ends, and the saw-guide 17, having the threaded pins 19 and provided with polygonal openings adapted to engage said bar 21, said guides 17 having split ends and provided with clamping-bolts passing through said ends, substantially as shown and described.

3. The combination, with the saws arranged to move longitudinally upon the saw-arbor, of the transverse stationary shaft 13, the guide-bar 15, arranged below said shaft, the bars 21, mounted upon said shaft 13 and engaging said guide-bar, the saw-guides mounted upon said bars, the curved projections 27 upon said bars, and the pivoted levers 29, engaging said projections 27, substantially as described.

In testimony whereof I have hereunto set my hand this 13th day of September, 1889.

FREDERIC N. ARMSTRONG.

In presence of—

A. C. PAUL,

A. M. GASKILL.