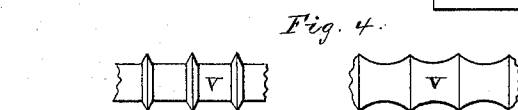
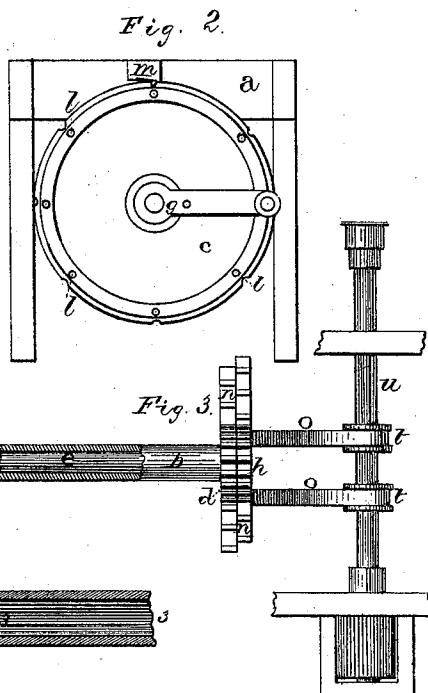
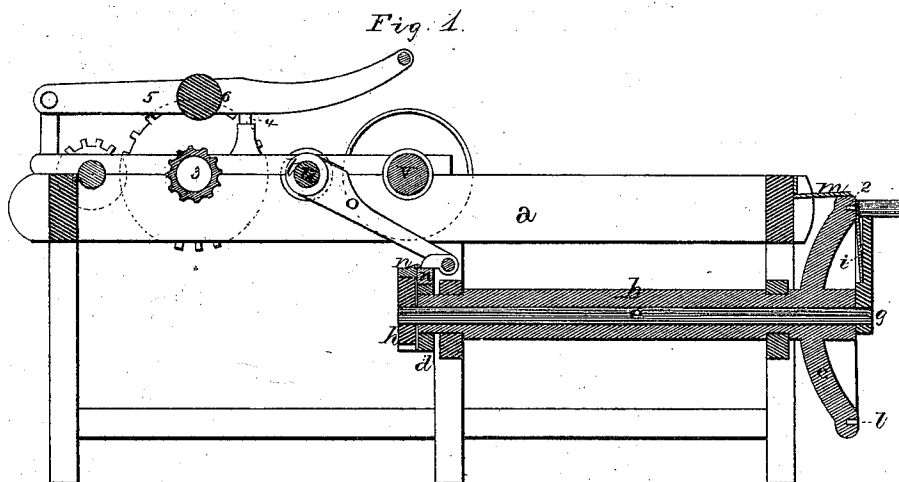


W. G. CALDWELL.
Machines for Edging Lumber.

No. 141,852.

Patented August 19, 1873.



WITNESSES.

Chas. E. Duhamel
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UNITED STATES PATENT OFFICE.

WILLIAM G. CALDWELL, OF THREE RIVERS, MICHIGAN, ASSIGNOR TO
THREE RIVERS MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR EDGING LUMBER.

Specification forming part of Letters Patent No. **141,852**, dated August 19, 1873; application filed
May 19, 1873.

To all whom it may concern:

Be it known that I, W. G. CALDWELL, of Three Rivers, county of St. Joseph and State of Michigan, have invented certain new and useful Improvements in Machines for Edging Lumber, of which the following is a specification:

The nature of my invention relates to an improvement in machines for edging lumber; and it consists in, first, the devices for changing the distance between the saws; second, the introduction of steam or hot air into the feed-rolls, so as to prevent them from clogging from pitch or ice; third, springs placed on the sides of the machine for the purpose of receiving the weight of the top roll, and to prevent it from striking down on lower roll as the lumber passes from under; fourth, projections on the roll, placed in front of the saw, so as to guide the lumber straight while being sawed; fifth, concavities, of any suitable form, in the side of the roller, for guiding the lumber, all of which will be more fully described hereafter.

Figure 1 is a longitudinal section of my invention. Fig. 2 is an end view of the same. Figs. 3 are detail views. Figs. 4, 5 show different forms of the roll.

a represents the frame, of any suitable shape or construction, having journaled in its front end the hollow shaft or sleeve *b*, having secured to its outer end the large hand-wheel *c*, and to the other the pinion *d*. Passing through this shaft is a smaller one, *e*, having the crank *g* secured to one end and the pinion *h* to the other. The handle of the crank is secured to a spring, *i*, which keeps the projection *2* on its inner side pressed into the openings *l* made in the side of the hand-wheel *c*, so as to bind the two shafts *b e* together, so that when one is moved the other will turn with it. By withdrawing this projection either shaft may be moved independently of the other. Catching in notches on the periphery of the hand-wheel is a spring, *m*, which holds the shaft *b* stationary while the other is being turned. The openings or holes *l* in the hand-wheel are or may be numbered, so as to show the distance which the saws are apart on the mandrel. The two pinions *d h* mesh with two small racks, *n*, each of which has attached to it an

arm, *o*, and a sliding collar, *t*, for passing over the mandrel *u*, to which the saws are secured. By turning the two shafts *b e* together the racks are moved toward the sides of the frame, shifting the two saws from side to side, as may be desired; and by turning either shaft alone the saws may be moved nearer together or farther apart, as may be desired. Placed in front of the mandrel *u* is a roller, *v*, having a pulley on one end, so as to cause it to revolve, and which may have either a number of any suitably-shaped projections raised upon its periphery; or in the periphery there may be formed any suitably-shaped recesses for the purpose of guiding the lumber straight as it is fed to the saws. Either one of these devices may be used.

The feed-rolls of all sawing-machines are apt to become clogged with pitch or ice, and in order to prevent it I make my feed-roller 3 hollow, and pass a column of steam or heated air into it, so as to always keep it hot, and thus prevent the formation of these obstructions.

Placed on each side of the frame are one or more springs, *4*, of any suitable kind, upon which the frame 5 carrying the roll 6 rests, so that when the lumber passes out from under the roll the shock or concussion of the frame in falling back into position will be received upon them, and prevent the roll 6 from striking down upon the one underneath.

Instead of a single shaft passing through the one *b*, two or more, each carrying a pinion, may be made to pass through, and any desired number of saws may then be operated in the manner above described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hollow shaft or sleeve, in combination with one or more shafts passing through it and devices for shifting the saws back and forth, when the said shafts are connected and operated all together or independently of each other, substantially as shown and described.

2. The shafts *b e*, each provided with a pinion, in combination with the wheel *c*, crank *g*, and devices for shifting the saws, the shafts being arranged to operate together or independently, substantially as set forth.

3. The wheel *c*, crank *g*, and spring-handle, provided with a projection for catching in the holes *l*, when arranged to operate the shafts *b e*, substantially as specified.

4. A corrugated hollow feed-roller, 3, heated by steam or hot air, substantially as described.

In testimony that I claim the foregoing as

my invention I hereunto affix my signature
this 7th day of May, 1873.

WM. G. CALDWELL.

Witnesses:

O. F. BEAN,

D. D. TENNYSON.