

O. H. GRONBERG & W. M. FERRY.
Edging-Machines.

No. 139,142.

Patented May 20, 1873.

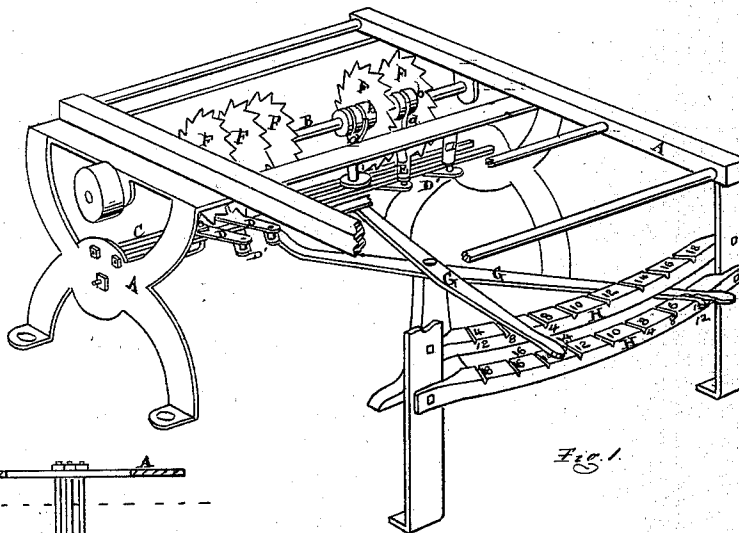


Fig. 1.

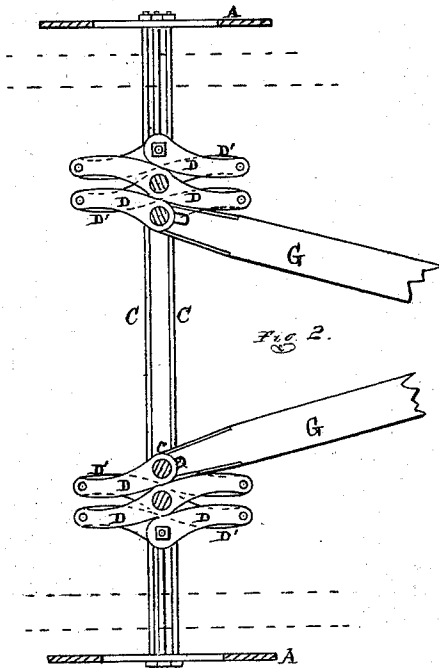


Fig. 2.

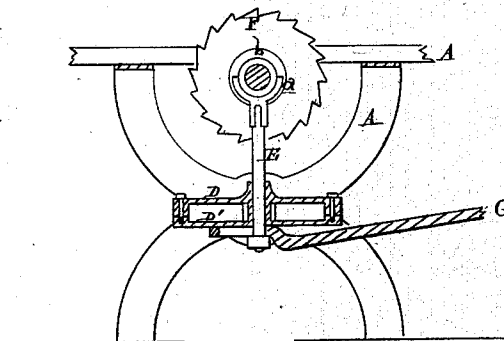


Fig. 3.

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IMPROVEMENT IN EDGING-MACHINES.

Specification forming part of Letters Patent No. **139,142**, dated May 20, 1873; application filed April 8, 1873.

To all whom it may concern:

Be it known that we, OTTO H. GRONBERG, of Ferrysburg, and WILLIAM M. FERRY, of Grand Haven, in the county of Ottawa and State of Michigan, have invented a new and useful Improvement in Edging-Machines; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a sectional plan, showing the lazy-tongs and their connections. Fig. 3 is a longitudinal vertical section taken on the line *xx* in Fig. 1.

Like letters refer to like parts in the several figures.

The nature of this invention relates to an improvement in that class of machines for edging and ripping lumber wherein two or more saws are employed on a mandrel, the said saws having a longitudinal adjustment on the mandrel for ripping the boards in parallel lines; and our object is to so construct the machine that the sawyer can, in once passing a board through it, take out the narrow strip of heart, which is usually decayed, and edge both strips, so that the latter will inspect as "clear" or upper quality of lumber; or, if he so prefer while edging a board, he can rip it into strips of uniform width by a single movement of the adjusting-lever. The invention consists in one or two gangs of circular saws, whose collars are feathered on a mandrel, each gang being adjusted by a lever, or its equivalent, through a system of crossed levers or lazy-tongs, whose center pivots are short standards which embrace the collars of the several saws; also, in the arrangement of the notched quadrants, as more fully herein-after set forth.

In the drawing, A represents the frame of our machine, and B a saw-mandrel transversely journaled therein near the rear end, directly under which two slide-bars, C C, are bolted across and between the sides of the frame. D D' are crossed levers, the former lying on the slide-bars and the latter under-

neath them, pivoted together at their ends and at their intersections, forming what is known as the lazy-tongs. In the double-gang edger shown in the accompanying drawing there are two of these lazy-tongs, one for each gang of saws, the outer pivot of each being rigidly secured at the proper point between the slide-bars. The intersecting pivots of the crossed levers are short standards, E, projecting upward, and on the top of each is sleeved a yoke, *a*, which embraces a groove in the collar *b* of each saw F. The central pivot of the inner end of each lazy-tongs is extended downward to form a pendent stud, which is received in a slot at the end of a lever, G, pivoted at *c* to a post rising from the floor, or from a girt in the frame, while the outer end of said lever rests on a quadrant, H, at the end of the frame. The movement of the lever in one direction expands or dilates the lazy-tongs and a reverse movement contracts it. The saws move with the center-pivots of the crossed levers, the saw over the moving end of the lazy-tongs moving twice as fast and as far as the next one to it, so that there will always be the same distance between the saws as there is between the outer saw and the gage or guide at the side of the frame; it follows, then, that a board to be edged by the inner saw will always be ripped into strips of equal widths at the single passage through the machine. In the machine shown there are two gangs of saws, one at each end of the mandrel, each moved by its own lever, in such a manner that all the saws of both gangs, except the inner or last one, may be collected in a group at either end of the mandrel, when a board at that side of the machine may be ripped into strips of uniform width; or the board may be edged and one or more strips be taken from one or both sides. It will be noticed that one gang has three saws, the two inner ones being mounted on one collar, four inches apart; this is done for the purpose of enabling the sawyer to rip out the heart or a defective streak in any part of the board, which is thus converted into clear strips or upper quality of lumber, having a much higher market value than if the de-

fective streak were left in, which would cause the board to be imperfect, as of low grade. A saw may be keyed or secured in a stationary position near one end of the mandrel for edging one side of the board, where the machine has but one gang of saws; in the double gang, all the saws are movable on their mandrel. Each lever rests upon its own quadrant at the head of the machine, the upper quadrant being bolted to the inner faces of the legs, and the lower one to their outer faces, so as to bring the notches and figures on its top in full view of the sawyer; both quadrants have notches on their upper faces, so spaced as to indicate each two inches of lateral movement of the saws. On the under face of each lever is a rib, which drops into any notch on its quadrant, and thus locks the saws in their position. The top of the upper quadrant is figured at each notch, from 4 to 18, by intervals of two inches, reading from left to right; on the face or front of this quadrant the figures "12" are placed under "4" of the top row, "8" under "6," and "4" under "8" of the top row. The lower quadrant is notched and figured in like manner, reading from right to left, both on the top and front sides, as above described; the figures on the tops of the quadrants indicate the spaces between the saws of a gang, while adding

the figures together on the faces, between the two notches in which the levers may be engaged, gives the distance between the inner saw of one gang and that of the other. One of the advantages of this machine lies in the fact that the saws do not have to be removed for filing, as they may be spaced apart on the mandrel far enough to allow the sawyer to use his file between them in filing. If preferred, the slide-bars may be notched instead of the quadrants, to lock the levers in adjusting the saws.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In gang edging and ripping machines, the combination of lazy-tongs with the saw-collars for adjusting the saws on their mandrel, substantially as herein shown and set forth.

2. The combination of the movable saws F F, the lazy-tongs D D', the levers G G, and the quadrants H H, arranged as described, for the purpose set forth.

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Witnesses:

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