

No. 139,965.

Fig: 1.

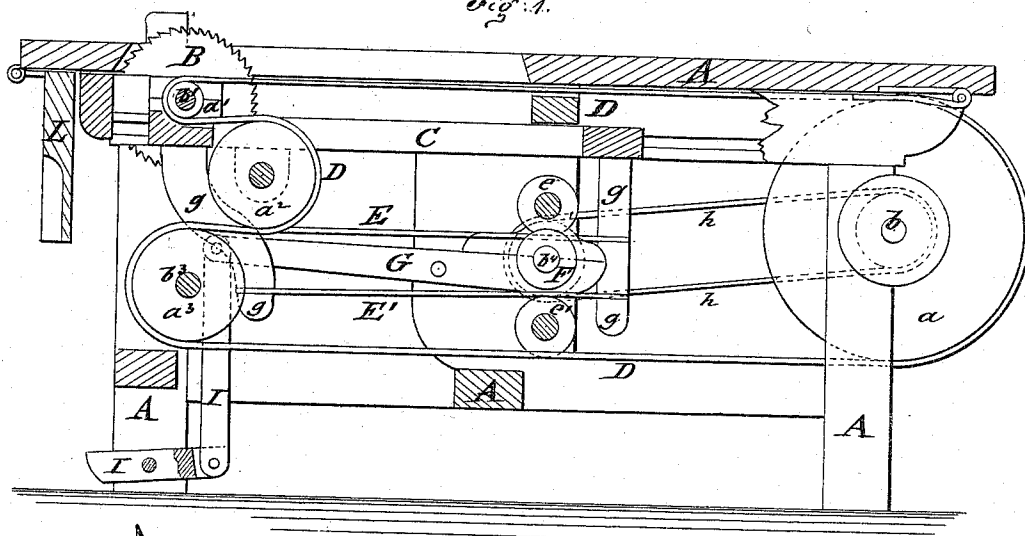
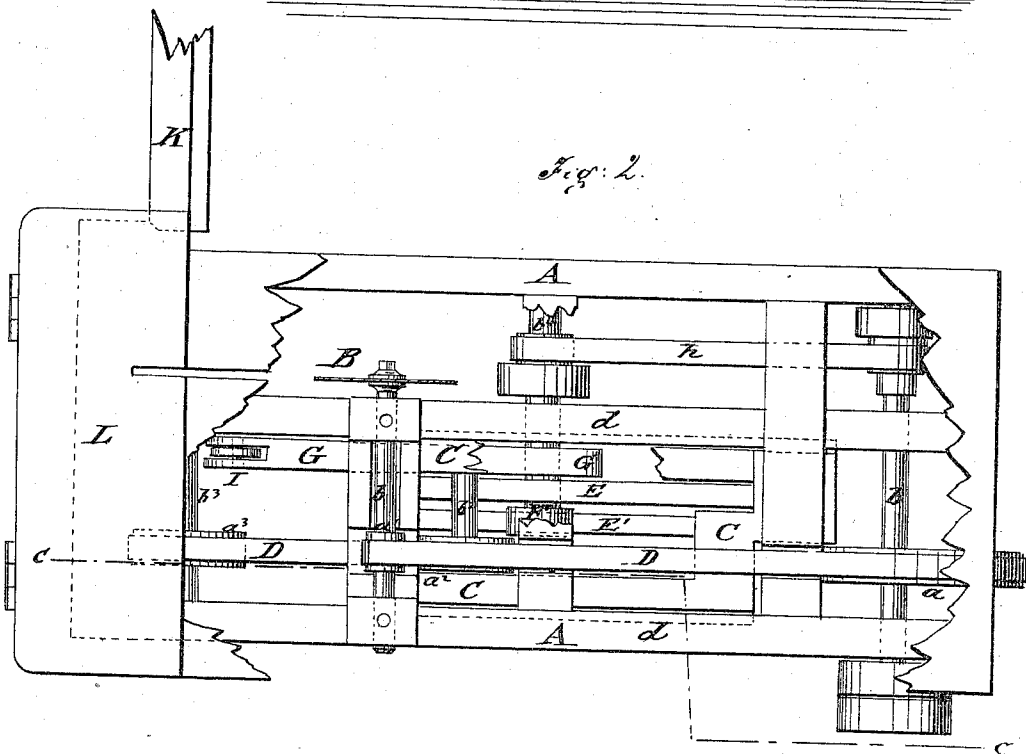


Fig: 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE MARSHALL, OF NEW YORK, N. Y.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **139,965**, dated June 17, 1873; application filed April 12, 1873.

To all whom it may concern:

Be it known that I, GEORGE MARSHALL, of the city, county, and State of New York, have invented a new and Improved Sawing-Machine, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved sawing-machine in the line *c c*, Fig. 2; and Fig. 2, a top view of the same, with parts cut off to show arrangement of belt-connection.

Similar letters of reference indicate corresponding parts.

This invention relates to an improvement in the mechanism for sliding the bearings of the saw-mandrel in a ripping and cross-cutting machine; and consists in the connection of the sliding carriage and its belting with a powerful foot-lever and friction-rollers, by which the saw can be moved and operated in both directions, and adjusted rapidly for the different purposes to which the machine is applicable.

In the drawing, A represents the frame of the machine of the usual shape; B, the saw fitted suitably into the sliding-carriage C, which moves lengthwise in guides *d d*. D is the belt which passes over a roller, *a*, of the driving-shaft *b*; then over a roller, *a'*, of the saw-mandrel *b'*; then over roller *a''* of the sliding carriage C and roller *a'''* of shaft *b'''* of frame A, rotating the saw B, and adapting itself to the rectilinear motion of the carriage C. E and E' are two belts stretched longitudinally between downward-projecting pieces *g* of carriage C. They are in contact with friction-rollers *e* and *e'*, respectively, whose shafts turn in journals of frame A. Between these rollers *e e'* is hung a double roller F, the shaft *b''* of which is connected with lever G, and constantly rotated by belt *h*, or other connection with the driving-shaft *b*. The front

end of lever G is connected to a treadle I, which is operated by the attendant by pressing roller F either against belt E and the upper friction-roller *e*, or against belt E' and the lower friction-roller *e'*. Whenever roller F is brought up against belt E, the friction exerted upon it by the rollers F and *e* compels the saw to move forward, but its motion is reversed when roller F is brought down on belt E and roller *e'*. In place of belts E and E', equivalent gearing may be employed. K is the rule used in cross-cutting. It is hinged to the side of frame A, and may be folded up against it when the machine is used for ripping. L is a cap also hinged to the frame at the front end thereof to be folded over toward the saw to protect the attendant and serve, in connection with rule K, as a rest in cross-cutting; it is folded down out of the way when the machine is used for ripping.

The operations of ripping and cross-cutting may therefore be accomplished with rapidity and ease, resulting in a saving of time and labor.

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

1. The foot-lever G having double roller F, combined with friction-rollers *e e'* to impart forward and reverse motion to carriage C, as set forth.

2. The saw-carriage C having projecting pieces *g* for stretching belts E E', with rollers *a''* and *a'* of the mandrel *b'*, for adjustment of driving-belt D, as described.

3. The hinged guide K and cap L arranged, as shown and described, to operate as specified.

GEORGE MARSHALL.

Witnesses:

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