

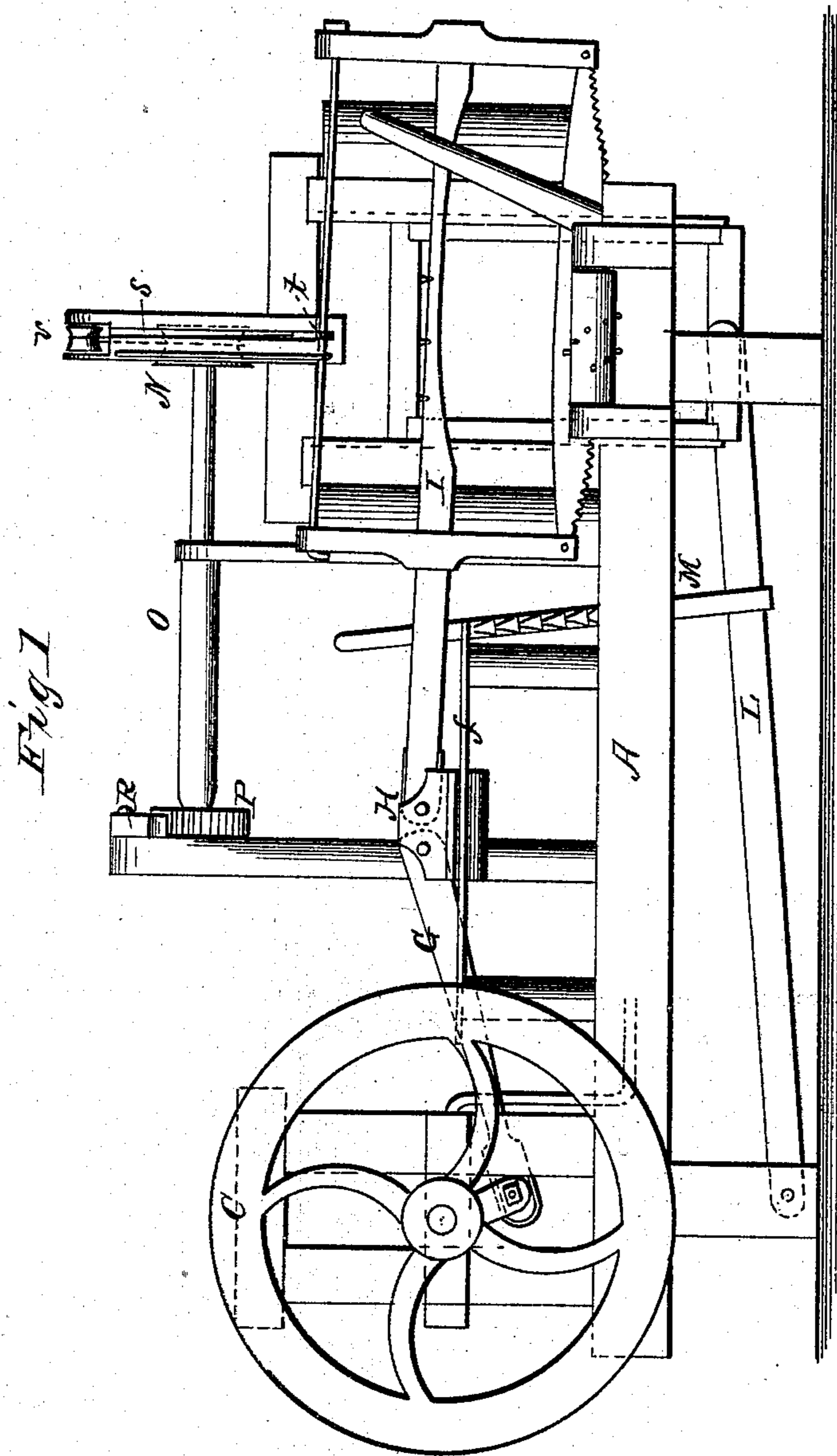
2 Sheets—Sheet 1.

L. RUEL.

FIRE WOOD SAWING MACHINES.

No. 182,712.

Patented Sept. 26, 1876.



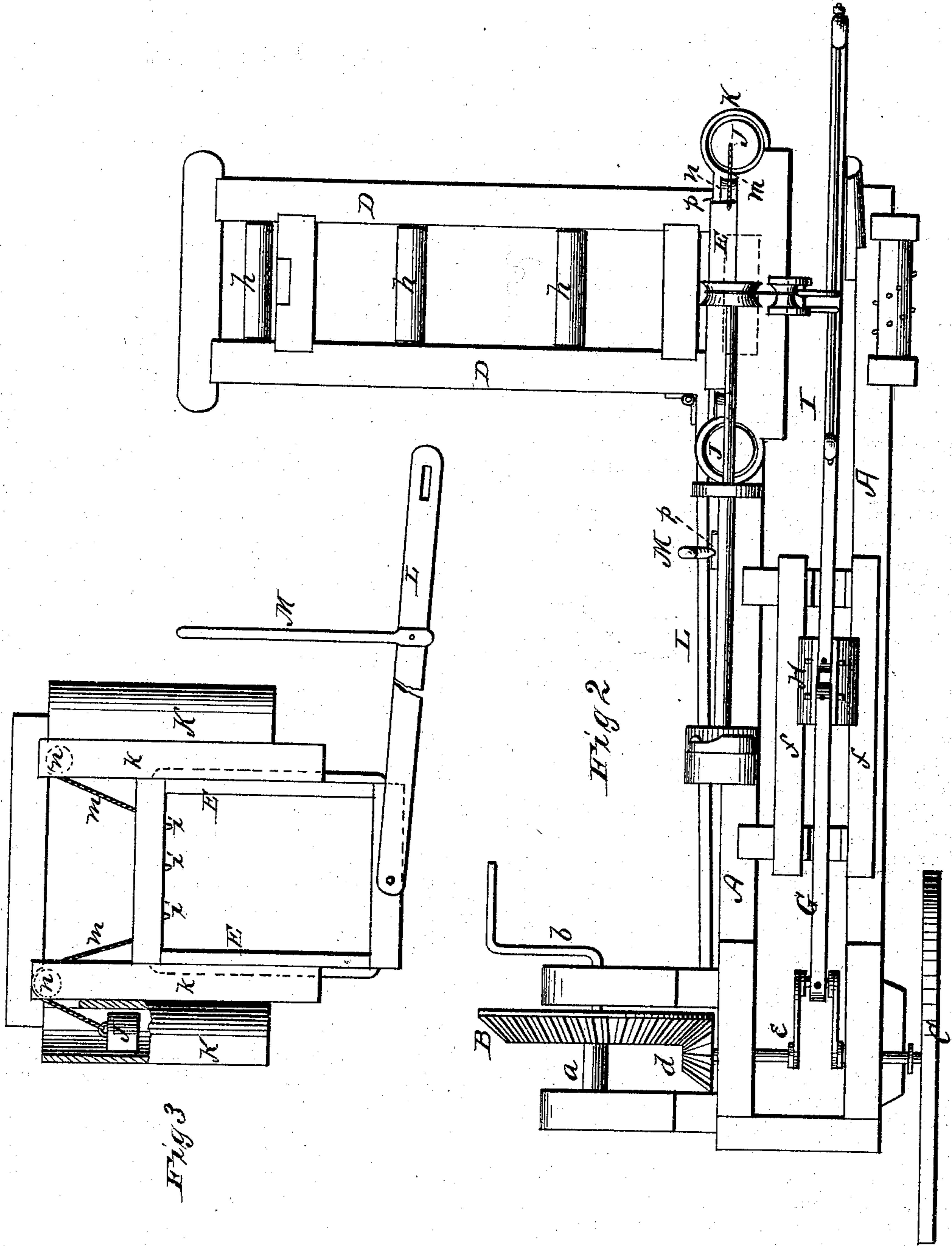
WITNESSES

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UNITED STATES PATENT OFFICE.

LAURENT RUEL, OF WHITEFIELD, NEW HAMPSHIRE.

IMPROVEMENT IN FIRE-WOOD-SAWING MACHINES.

Specification forming part of Letters Patent No. 182,712, dated September 26, 1876; application filed July 12, 1876.

To all whom it may concern:

Be it known that I, LAURENT RUEL, of Whitefield, in the county of Coos, and in the State of New Hampshire, have invented certain new and useful Improvements in Fire-Wood-Sawing Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a wood-sawing machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation of my machine. Fig. 2 is a plan view of the same. Fig. 3 is a detail view of a part thereof.

A represents the main frame-work of the machine, constructed in any suitable manner to receive the various working parts, as hereinafter described. Parallel with the frame, near one end, is a shaft, *a*, provided with a crank, *b*, for turning the same. On this shaft is secured a large bevel-gear wheel, *B*, which meshes with a pinion, *d*, on one end of a shaft, *e*, running transversely across the frame. On the other end of the shaft *e* is the balance-wheel *C*. The shaft *e* is further formed with a crank, on which is placed a pitman, *G*, running longitudinally with the frame, and connecting with a cross-head, *H*, upon two parallel guides, *f f*. To this cross-head the saw *I* is pivoted, as shown, said saw being of the form ordinarily used for sawing wood, and provided with an arm that is attached by a pivot to the cross-head. Opposite the saw, to the front of the frame *A*, is hinged another frame, *D*, which may be turned along the side of the main frame when the machine is not in use; but when the machine is in use, the frame *D* is to be thrown out at right angles, as shown in Fig. 2. The frame *D* is provided with a series of rollers, *h h*, over which the wood or log is pushed toward the saw.

The wood is held in place while the saw op-

erates thereon by means of a vertically-sliding gate, *E*, having pins or teeth *i* in the under surface of its upper cross-bar. This gate slides in vertical guides *k k*, and is raised automatically from the log by means of weights *J J*, connected to the gate by cords *m m*, passing over pulleys *n n* at the top of the guides *k*, and the weights running in tubular casings *K K*, as shown.

To the lower end of the gate *E* is attached one end of a lever, *L*, the other end of which is connected to one of the rear legs of the machine. This lever is provided with a ratchet-handle, *M*, by means of which the lever is operated so as to lower the gate *E*, the handle being then caught upon a plate, *p*, thus locking the gate on the log. By simply releasing the handle from the plate the weights *J* will at once raise the gate from the log.

The saw is raised up from the log by the following means: The top brace or rod of the saw passes through a perforated plate, *t*, to which is attached a cord or chain, *s*, and this cord or chain passes over a pulley, *v*, and is attached to a wheel, *N*, secured upon the end of a shaft, *O*. At the other end of this shaft is a ratchet-wheel, *P*, and a pawl, *R*, takes into the same, for holding the saw when raised.

The crank *b*, handle *M*, and shaft *O*, are all in close proximity to each other, so that the operator can easily manipulate them as required.

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

1. The combination of the toothed gate *E*, cords *m*, weights *J*, casings *K*, lever *L*, ratchet-handle *M*, and plate *p*, all as and for the purposes herein set forth.

2. The combination of the saw *I*, plate *t*, cord *s*, pulley *v*, and shaft *O*, with pulley *N* and pawl and ratchet *P R*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 29th day of May, 1876.

LAURENT RUEL. [L. S.]

Witnesses:

C. L. EVERT,
IRA S. M. GOVE.