

(No Model.)

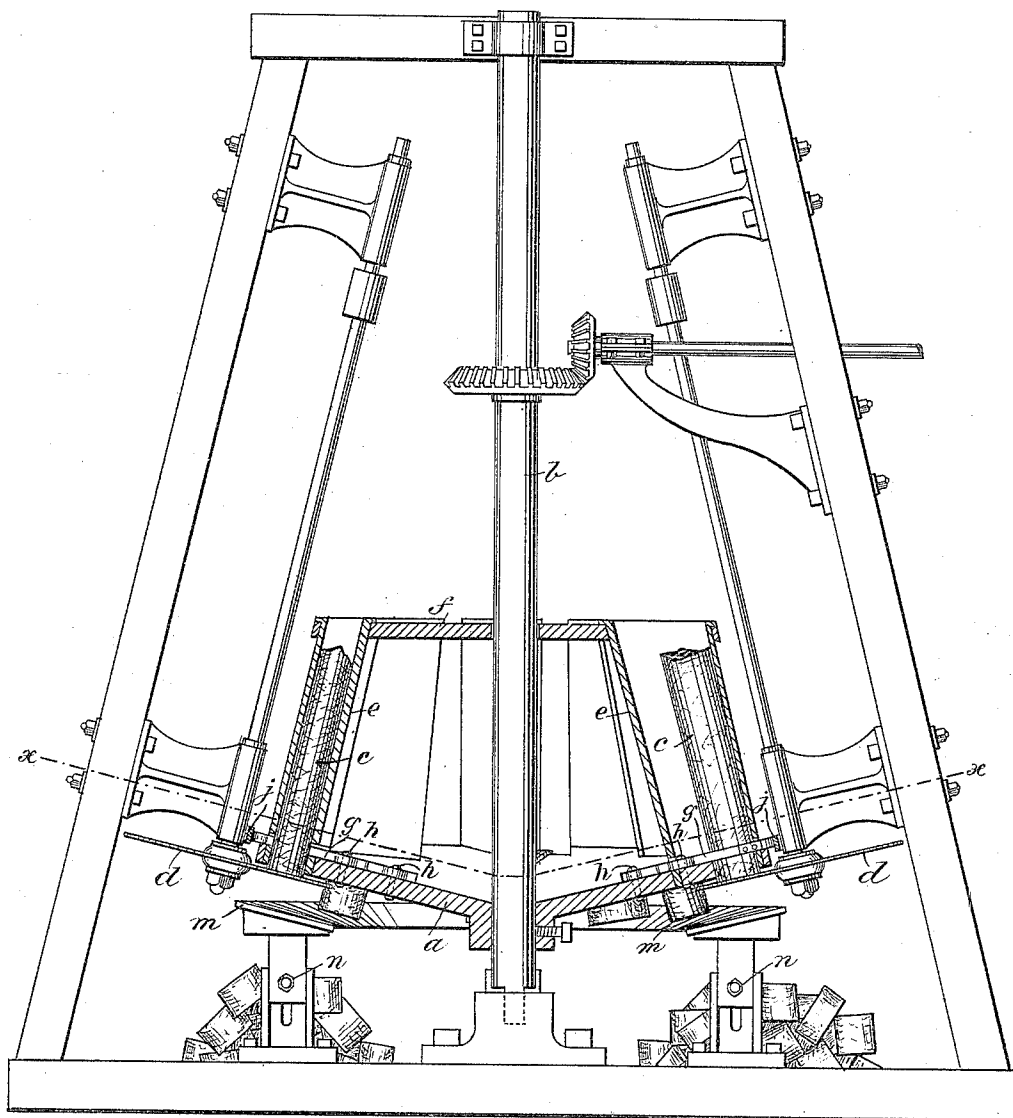
2 Sheets—Sheet 1.

G. L. CUMMINGS.
WOOD SAWING MACHINE.

No. 446,510.

Patented Feb. 17, 1891.

Fig-1.



WITNESSES.

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Fig. 3.

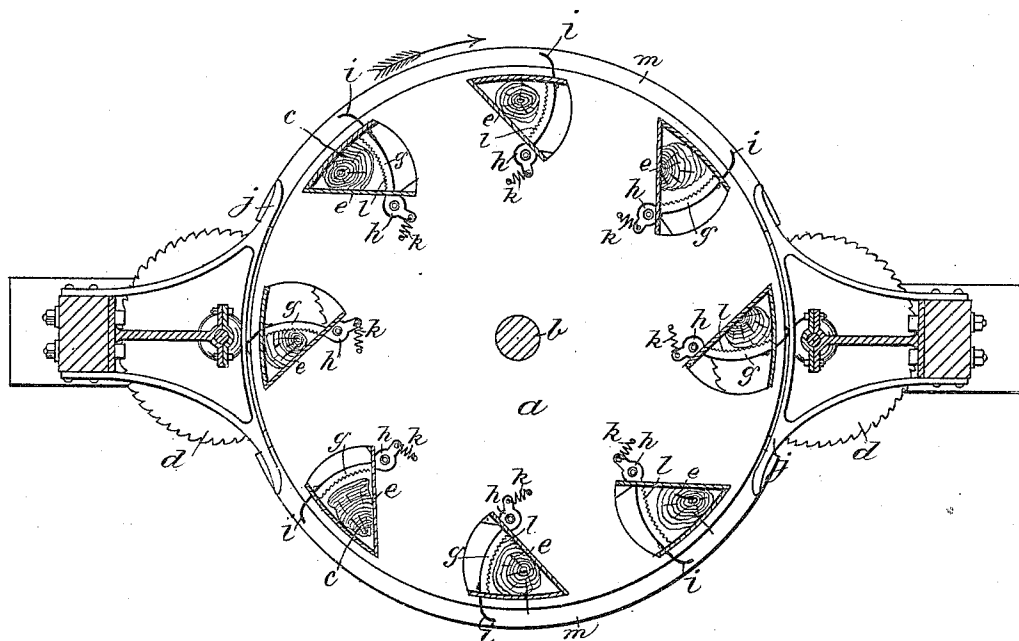
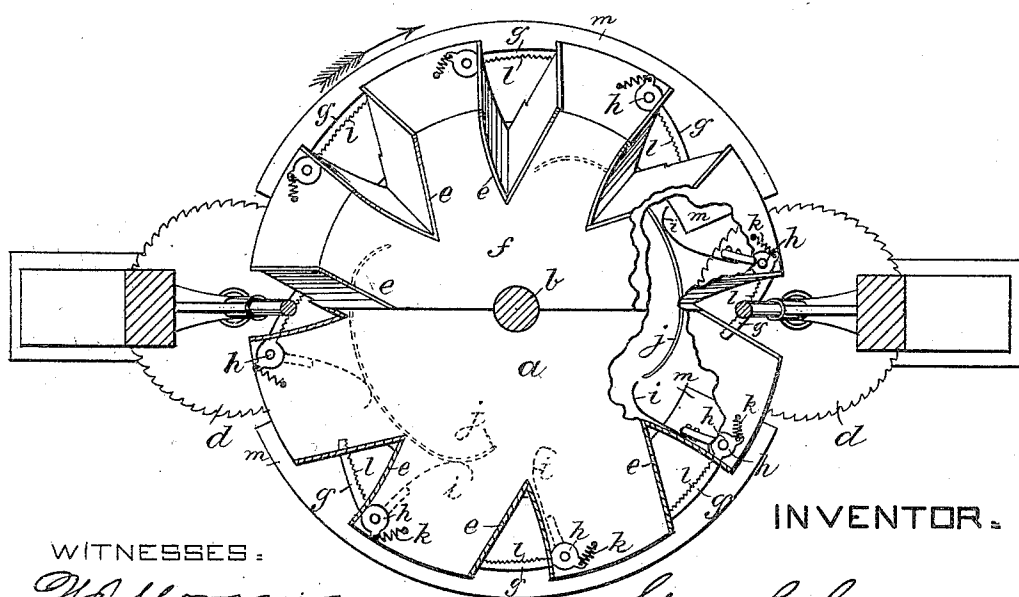


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE L. CUMMINGS, OF NEW YORK, N. Y.

WOOD-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 446,510, dated February 17, 1891.

Application filed February 10, 1890. Serial No. 339,780. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. CUMMINGS, a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented new and useful Improvements in Wood-Sawing Machines, of which the following is a specification.

My invention consists of an improved contrivance for automatically feeding wood to the saws of kindling-wood-sawing machines, as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is a sectional elevation of a kindling-wood-sawing machine as I prefer to construct it. Fig. 2 is partly a plan view and partly a horizontal section on line *xx* of Fig. 1, with modified arrangement of the wood carrying and holding apparatus. Fig. 3 is a section of Fig. 1 on the line *xx*.

The essential feature of the invention is a rotating holder and carrier for the wood, on which the wood which is presented to it by hand is received in an upright or nearly upright position, said carrier being provided with automatic gripping devices to clamp and hold the wood while passing the saw and release and allow the wood to feed by dropping after each cut onto a gage that determines the length of the feed, when the gripping devices clamp and hold the wood again for the next cut.

The carrier consists, essentially, of the table *a*, attached to and carried by the slowly-rotating shaft *b* to present the sticks of wood *c* to one or more saws *d*, suitably arranged with relation to the table for cutting off the ends of the sticks projecting below the table. In this example the table is represented a little concave on the upper side, with the wood-holding troughs *e* a little inclined toward the vertical axis and having the V-shaped cross-section, so that the wood will lie more securely than if said troughs were vertical; but good results are had with the holders in a vertical condition. A series of such holders are arranged on the outer margin of the table in successive order and as close together as is practicable, said holders extending upward to any desired extent, and, if desired, having a supporting-disk *f* or arms carried by the shaft to stay the upper ends. With each

holder *e* a clamp *g* is provided to grip the wood between it and the annular bottom of the trough and hold it from dropping and against the thrusts of the saw. The table is notched in the edge or has openings made through it coincidently with the trough-holders, allowing the wood to drop by its gravity when released from the clamp. The clamp consists of a lever preferably a little curved on the gripping-edge, pivoted to the table at *h*, and extending across the open side of the trough, and having a spring-arm *i* on the free end to bear on the stationary cam *j* when passing the saw for being pressed against the wood to grip it, and also having the coiled spring *k* attached to its short arm for retracting it and releasing the wood to feed after passing the saw. The clamp is preferably notched on the clamping-edge, as represented at *l*, to hold the wood better than if plain. Below the table and under the lower ends of the wood is a gage-table *m*, onto which the wood falls after being released by the clamps to gage the feed and control the length of the short pieces cut off. The wood rests and slides on this table while free. The gage-table is adjustable vertically, as represented at *n*, Fig. 1, to vary the length to be cut off. The wood sticks are put in the holders by the attendant while these clamps are slack.

The construction and arrangement of the various parts of the apparatus may be varied in many respects. For example, the cam or cams for effecting the gripping of the wood by the clamps may be located under the table *a*, and the clamps arranged to be acted on thereby through the short arms connected to the pivots *h* below the table, and having the spring-arms *i* ranging so as to be pressed in the direction for similarly closing the clamp, as represented in Fig. 2. In this example I represent two saws arranged with one feeder; but more or only one may be employed, as preferred.

A band-saw may be used instead of a circular saw, if preferred.

I claim as my invention—

1. The combination, with the saw and the stationary gage-table, of the rotating feed-table, the vertical angular wood-holding troughs extending upward from the table suitably for holding the wood upright, the clamping-le-

vers ranging across the open sides of the troughs and adapted to clamp the wood in the angles thereof, and the cam and springs for actuating the levers, substantially as described.

2. The combination, with the saw and the stationary gage-table, of the rotating feed-table, the vertical angular wood-holding troughs extending upward from the table suitably for holding the wood upright, the clamping-levers ranging across the open sides of the troughs and having a spring-arm for apply-

ing the clamping force and a retracting-spring for releasing the wood, and the clamping-lever-actuating cam, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 7th day of February, 1890.

GEORGE L. CUMMINGS.

Witnesses:

W. J. MORGAN,
W. B. EARLL.