2 Sheets—Sheet 1.

L. L. MAXHIMER, H. & E. B. TRUBEY.

Drag-Sawing Machines.

No. 219,286. Patented Sept. 2, 1879.

Fig. 1.

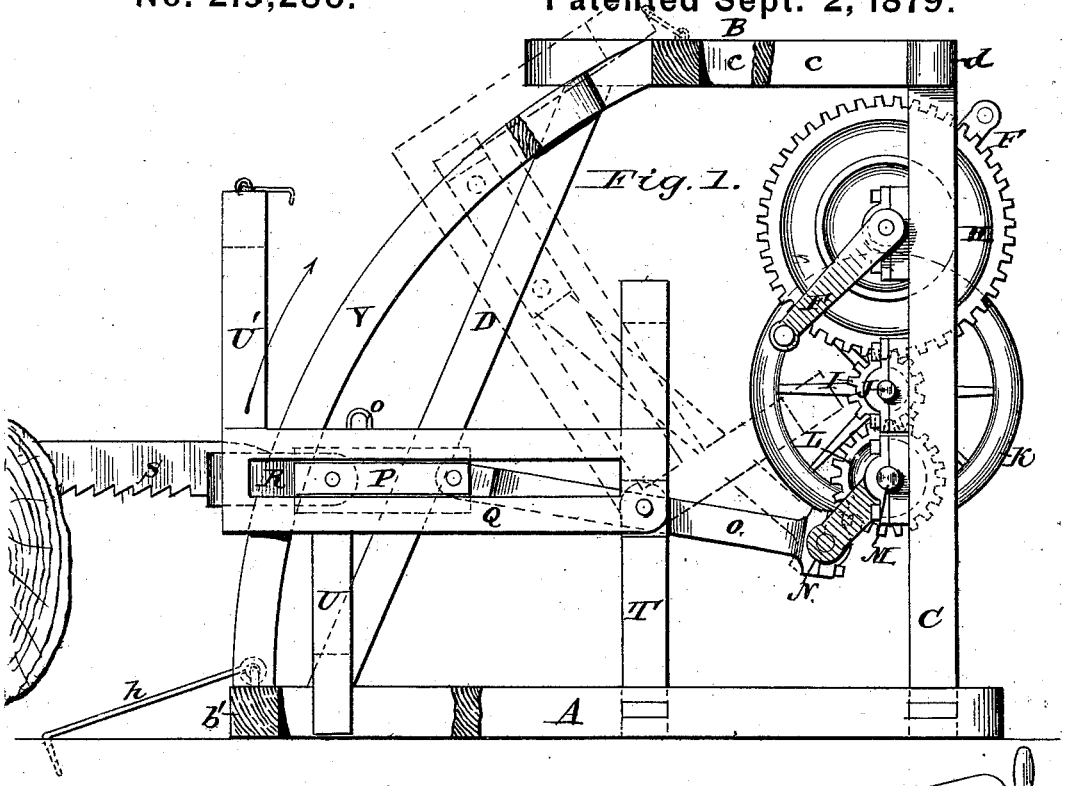
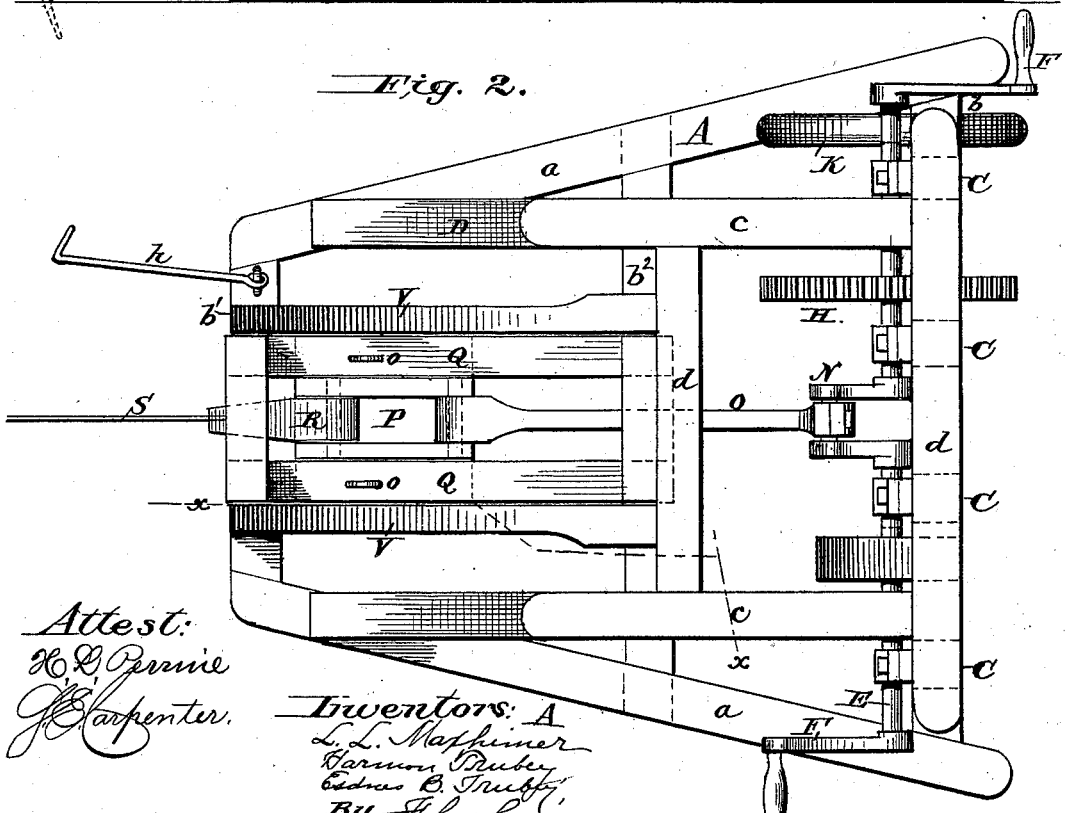


Fig. 2.



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2 Sheets—Sheet 2.

L. L. MAXHIMER, H. & E. B. TRUBEY.

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Fig. 3.

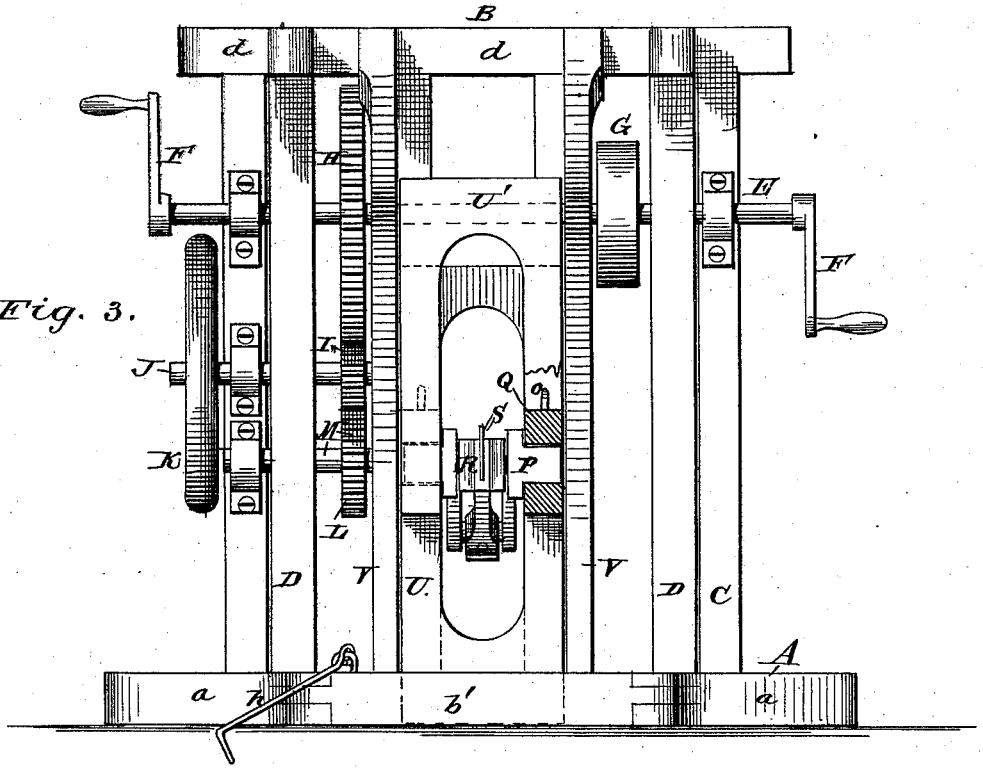
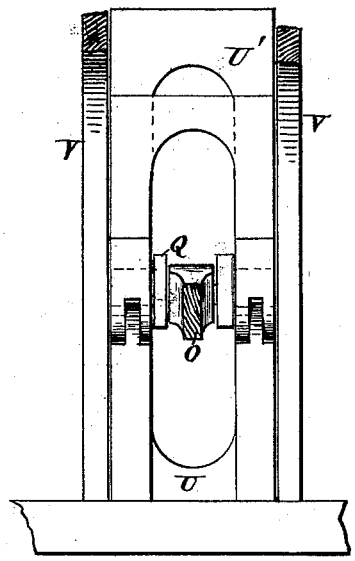


Fig. 4.



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UNITED STATES PATENT OFFICE.

LEONARD L. MAXHIMER, HARMON TRUBEY, AND ESDRAS B. TRUBEY, OF NAVARRE, OHIO.

IMPROVEMENT IN DRAG-SAWING MACHINES.

Specification forming part of Letters Patent No. **219,286**, dated September 2, 1879; application filed July 2, 1879.

To all whom it may concern:

Be it known that we, LEONARD L. MAXHIMER, HARMON TRUBEY, and ESDRAS B. TRUBEY, all of Navarre, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Sawing-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to those drag-sawing machines in which is employed the combination of a swiveling head with hinged guides, whereby the saw may be readily raised or lowered and adjusted horizontally or at an angle independent of the angle of inclination of the guides; and it consists in certain combinations and arrangements of parts, as hereinafter described and distinctly claimed.

Figure 1 is a side elevation of this improved sawing-machine, partly in section, the section being taken on line *x x* of Fig. 2. Fig. 2 is a plan or top view. Fig. 3 is a front elevation. Fig. 4 is a rear view of the hinged support and slide.

In the drawings, A is the base of the frame, and B the top thereof, said base and top being united by the upright posts C at the rear end and by the inclined posts D at the front end.

The base A is composed of two side sills, *a a*, converging toward each other from rear to front, and united by the end sills, *b* b^1, and intermediate cross-sill, b^2. The top B is composed of the side rails, *c c*, and the transverse rails *d d*. The inclined posts D D serve in the double capacity of supports and braces. As thus constructed the frame has the combined properties of lightness, strength, and compactness, and the pyramidal shape of the base serves to give steadiness also.

The machinery for operating the saw is supported in bearings at the rear end of the frame, and consists of a driving-shaft, E, provided with two cranks, F F, one at each end, adapted for the application of man-power, and also with a band-wheel, G, whereby steam or horse power may be applied for operating the machine. This shaft has a large gear-wheel, H, through which motion is communicated to the pinion I on the shaft J, which latter is provided with a balance-wheel, K. The pinion I meshes with gear-wheel L on the shaft M, which shaft is provided with crank N. One end of a pitman, O, is connected to the crank N, the other end being connected to a cross-head which moves in hinged guides Q. This slide or cross-head P carries a swivel-head, R, to which the saw S is attached. The guides Q are two parallel slotted bars, hinged at their rear ends to the short upright standards T, and united by means of bows U U′, which project downward and upward, respectively, from the front end of the guides. These bows form a vertical loop or slot, through which the saw projects, and in which it moves when adjusted vertically, the ends of the slot forming stops or rests, preventing it from falling below a given point when the log is sawed off, or rising too high when thrown up to admit the log to position. The downwardly-projecting bow serves also as a stop and support for the hinged guides.

The hinged guides Q are provided with eyes *o o*, to which is attached a cord or chain, whereby the saw-carriage may be raised or lowered to suit logs of extreme sizes. Said guides are elevated and depressed between curved standards V V, which serve to keep them from swaying laterally.

Dogs *h* are adapted to hook into the ground and hold the machine firmly in place.

When the machine is in transportation the hinged guides, with saw-carriage, may be swung up into a vertical position, in which case the bow U′ will hook over a cross-bar at the top of the frame and hold the parts in this position.

The operation is as follows: The log is brought into position in front of the machine and the saw properly adjusted thereto. The machinery being set in motion, a rapid reciprocating movement is imparted to the saw.

The saw has a double capacity of adjustment in consequence of the combined use of the swiveling head and hinged guides.

What is claimed as the invention is—

1. The combination of the hinged guides carrying the cross-head and the downwardly-projecting bow, adapted to act as a support for the guides and as a rest for the swiveling saw-blade, substantially as described.

2. The combination of the hinged guides, the upwardly-projecting bow attached thereto, and the front cross-bar at the top of the frame, said bow being adapted to hook over the said cross-bar when the guides are thrown back in position for transportation, substantially as described.

3. The combination of the independently-swiveling saw-blade, the cross-head, the hinged guides, and the bows attached to the latter, forming a loop, through which the saw projects, and in which it moves when adjusted vertically, the ends being adapted to form stops, preventing it from falling below a given point when the log is sawed off, or rising too high when thrown up to admit the log to position, substantially as described.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 28th day of June, 1879.

LEONARD L. MAXHIMER. [L. S.]
HARMON TRUBEY. [L. S.]
ESDRAS B. TRUBEY. [L. S.]

Witnesses:
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J. M. TRUBEY.