(No Model.)

E. L. & J. A. DUNHAM.

DRAG SAWING MACHINE.

No. 245,800. Patented Aug. 16, 1881.

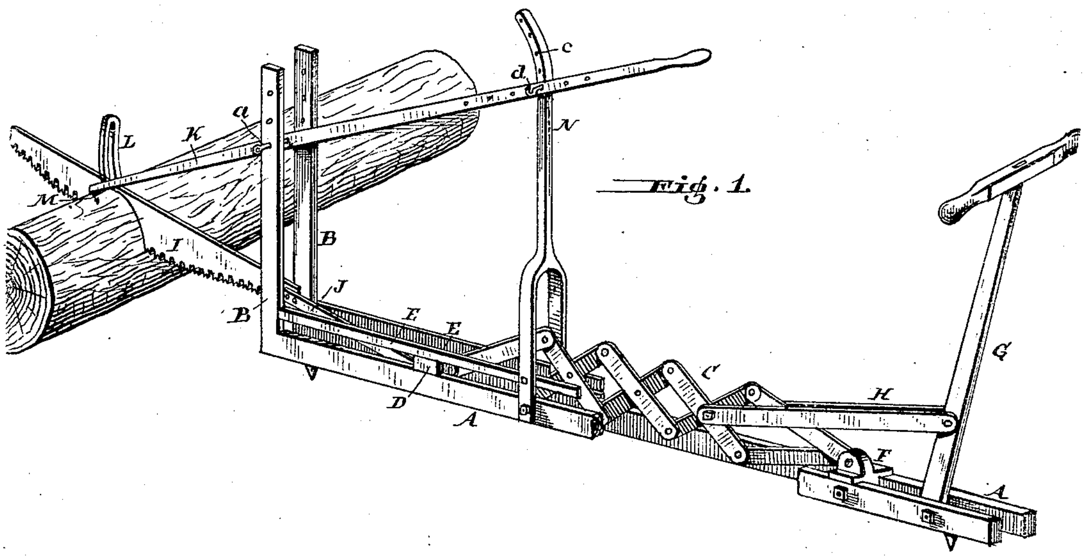
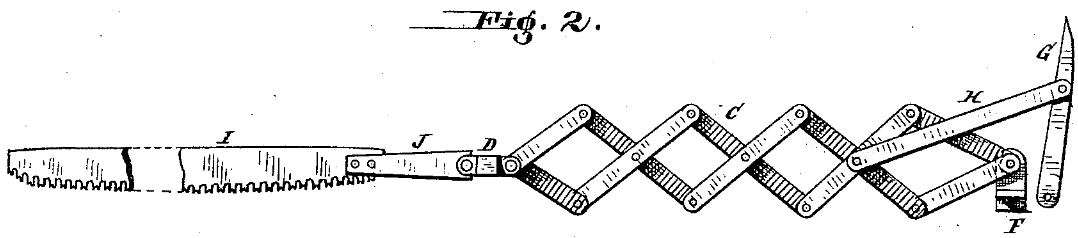


Fig. 1.

Fig. 2.



Witnesses:
A. W. Long,
Wm. B. F. Kiper

Edwin L. Dunham,
Justin A. Dunham, Inventors,
By Paine, Grafton & Ladd,
Attorneys.

UNITED STATES PATENT OFFICE.

EDWIN L. DUNHAM AND JUSTIN A. DUNHAM, OF QUINCY TOWNSHIP, BRANCH COUNTY, MICHIGAN.

DRAG-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 245,800, dated August 16, 1881.

Application filed January 20, 1881. (No model.)

To all whom it may concern:

Be it known that we, EDWIN L. DUNHAM and JUSTIN A. DUNHAM, citizens of the United States, residing at Quincy township, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Drag-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 or figures of reference marked thereon, which form a part of this specification.

The present invention relates to that class of sawing-machines in which a reciprocating drag-saw is operated through the medium of a system of lazy-tongs or shear-levers, and devices for imparting motion thereto.

The object of the invention is to furnish a machine which shall be more simple in construction and effective in operation than others of the same class heretofore known.

To these ends the invention consists in the construction and combination of parts, which will be hereinafter more fully described, and then set forth in the claim.

In the drawings, Figure 1 is a perspective view of a sawing-machine embodying our improvements. Fig. 2 is a detail view of the drag-saw and lazy-tongs, and operating-lever combined therewith.

The parallel base sills, A, and front standards, B, constitute the frame of the machine. The base sills are held at a suitable distance apart from each other, so as to receive the series of lazy-tongs or shear-levers C between them. These levers are pivoted or jointed together in the customary manner, and the front pair of levers are connected with a sliding block or cross-head, D, which moves in guideways on the sill A. Rails E, secured to said sills, form spaces between the same and the rails for the reception of the ends of the cross-head D. The rear pair of shear-levers are connected with a post or short standard, F, which is bolted to the base-sills.

A vertical lever, G, pivoted to the base-sills in rear of the post F, is connected with the lazy-tongs or shear-levers by means of the links or connecting-bars H. This lever G is operated by hand, and serves to open and close the lazy-tongs or shear-levers for imparting a reciprocating motion to the drag-saw I connected therewith. The saw slides back and forth between the standards B, and is connected with the sliding block or cross-head D by means of the connecting-rod J, one end of which is riveted to the saw, and the other end is pivot-jointed to the cross-head D.

A lever, K, extending in front of the frame of the machine and fitted between the standards B, is connected therewith by a suitable pivot or fulcrum-pin, *a*. A series of holes made in said standards serve for shifting the position of the fulcrum-pin, so as to raise or lower the lever K, according to the size or diameter of the log to be operated upon.

The front end of the lever K carries a saw-guide, L, which may be a simple slotted plate through which the saw passes, or a pair of spring-plates may receive the saw between the same. In either case the saw operates freely through the guide, the object thereof being chiefly to provide means for guiding or steadying the movement of the saw, whether the logs be large or small. A hook or spur, M, at the front end of the lever K, enters the log and holds it steadily during the sawing operation.

The lever K extends in rear of the standards B, and is locked to a standard, N, which rises from the base sills, A. The upper portion of this standard is curved in a forward direction, and has a series of holes, *c*, for receiving a locking-pin, *d*, which is passed through the lever and standard. The object of this arrangement is to enable the lever K, and saw guided thereby, to be held at different elevations, as will readily be apparent. The lower portion of the standard N is bifurcated or forked, so that the shear-levers or lazy-tongs can play back and forth between said forked portion.

A sawing-machine constructed according to the present invention is very simple in construction, and is more easily operated than other machines which employ a complicated system of lazy-tongs and operating devices.

It will be apparent that the construction

shown is specially designed to increase the length of the saw-stroke.

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

In a drag-sawing machine, the combination of the lazy-tongs or shear-levers, the sliding cross-head, the connecting-rod, with the reciprocating saw attached, the rear fulcrum-post, the vertical operating-lever, the connecting-bars, and the base-sills, all constructed and relatively arranged as herein set forth, for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWIN LORENZO DUNHAM.
JUSTIN ALONZO DUNHAM.

Witnesses:
A. J. McGOWAN,
F. M. FOX.