J. Bailey,

Drag Saw.

No. 39,028. Patented June 30, 1863.

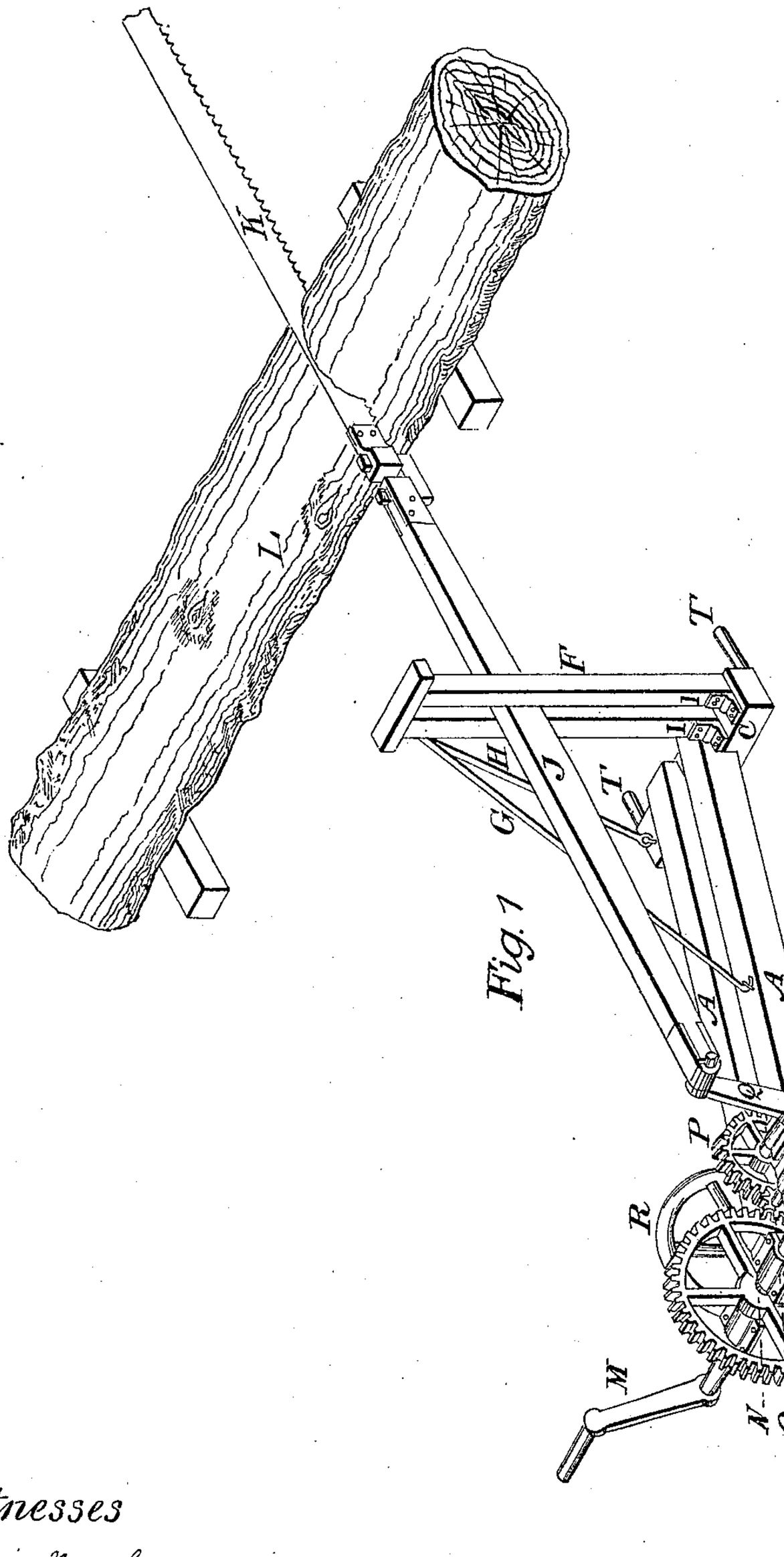

Fig. 1

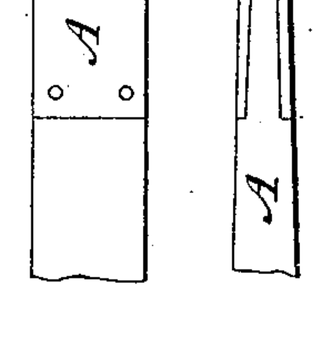

Fig. 2

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JAMES BAILEY, OF PRAIRIE TOWNSHIP, INDIANA.

IMPROVED DRAG-SAW.

Specification forming part of Letters Patent No. **39,028**, dated June 30, 1863.

To all whom it may concern:

Be it known that I, JAMES BAILEY, of Prairie township, in the county of Henry and State of Indiana, have invented a new and improved mode of working and attaching cross cut or drag saws for cutting wood in the log; and I do hereby declare that the following is a full and exact description—to wit:

The nature of my invention consists in applying the power of man to a crank, and, through spur-gearing and the regulating power of a fly-wheel, transmitting the same to the saw, and thereby increasing the velocity and the useful effect of the labor expended, and in arranging the frame so as to bring the height of the working crank or cranks suitable for the most efficient application of the power, and work the saw from a position most convenient for operating on the log, and at the same time adapt it in lightness and construction for portability, and also in attaching the saw-blade to the pitman in such a manner as to facilitate its detachment in case of need or while being moved to suit the position of the log to be cut.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is an isometrical perspective view; Fig. 2, a side view of part of pitman and saw-blade; Fig. 3, an edge view of the same.

In Fig. 1, A A are the inclined frame-pieces; B, the upright stand; C, the front sill; D, the back sill; E E, braces; F, the guide-frame; G and H, guide-frame braces; I I, guide-frame hinges; J, the pitman; K, the saw-blade; L, the log. M M are the working cranks; N, the driving spur-wheel; O, the intermediate pinion. P is the driven spur-wheel; Q, the pitman-crank; R, the fly-wheel; S S, the truck-wheels. T T are the handles; U, the driving-shaft; V, the intermediate shaft, and W the driven shaft.

In Figs. 2 and 3, A is the pitman-strap; B, the saw-blade strap, and C the connecting link.

By inclining the frame-pieces A A from the front sill, C, upward at a proper angle the machinery is elevated to the proper height to allow the most efficient application of the power of man to the working-cranks M M, and allows the guide-frame F to extend to the lowest possible point, thereby avoiding the necessity of a laborious elevation of the log. The power is transmitted from the cranks M M, through the shaft U and spur-wheel N, to the pinion O and intermediate shaft, V, on which is hung the fly-wheel R, which by its high velocity gives steadiness to the motion and requiring but a light fly-wheel to give the necessary momentum. The motion thus regulated is then transferred to the driven spur-wheel P, which is made half the diameter of the driving-wheel N, thereby increasing the motion to two double strokes of the saw for one revolution of the driving-wheel N or working-cranks M M. The motion is continued on by the shaft W and pitman-crank Q to the pitman J and saw-blade K.

To make it a portable machine and facilitate its removal from place to place, the truck-wheels S S are attached to the back sill, D, by suitable gudgeons, the sill being secured to the upright stand B. The saw-blade is detached from the pitman J, and the pitman-crank Q placed in position to draw the pitman as far as possible out of the way of the handles T T. The guide-frame brace G is then unhooked at the lower end and the guide-frame let down and allowed to rest on the pitman by turning upon the hinges I I at the bottom, the lower end of the guide-frame brace H being attached to the front sill, C, by a joint in a line with the hinges I I and moving with the frame. Everything being clear it can be seized by the handles T T and moved as required.

The pitman-strap A in Figs. 2 and 3 is securely attached to the pitman by bolts or rivets, and the extreme end perforated vertically by a rectangular hole, to which is snugly fitted one leg of the connecting-link C. The saw-blade strap B is secured to the saw-blade and fitted in a similar manner to the other leg of the link C. By withdrawing the link C the saw-blade is detached from the pitman.

I claim—

1. The arrangement of the inclined frame-pieces A A, in combination with the upright

stand B, front and back sills, C and D, and braces E E, in the manner described, and for the purpose herein specified.

2. The truck-wheels S S and handles T T, in combination with the arrangement of guide F and braces G and H, and saw blade attachment, substantially in the manner and for the purpose herein specified.

3. The connecting-link C, Figs. 2 and 3, in combination with the pitman-strap A and saw-blade strap B, in the manner and for the purpose herein specified.

JAMES BAILEY.

Witnesses:
LEVI BOUSLOG,
CORNELIUS SMITH.