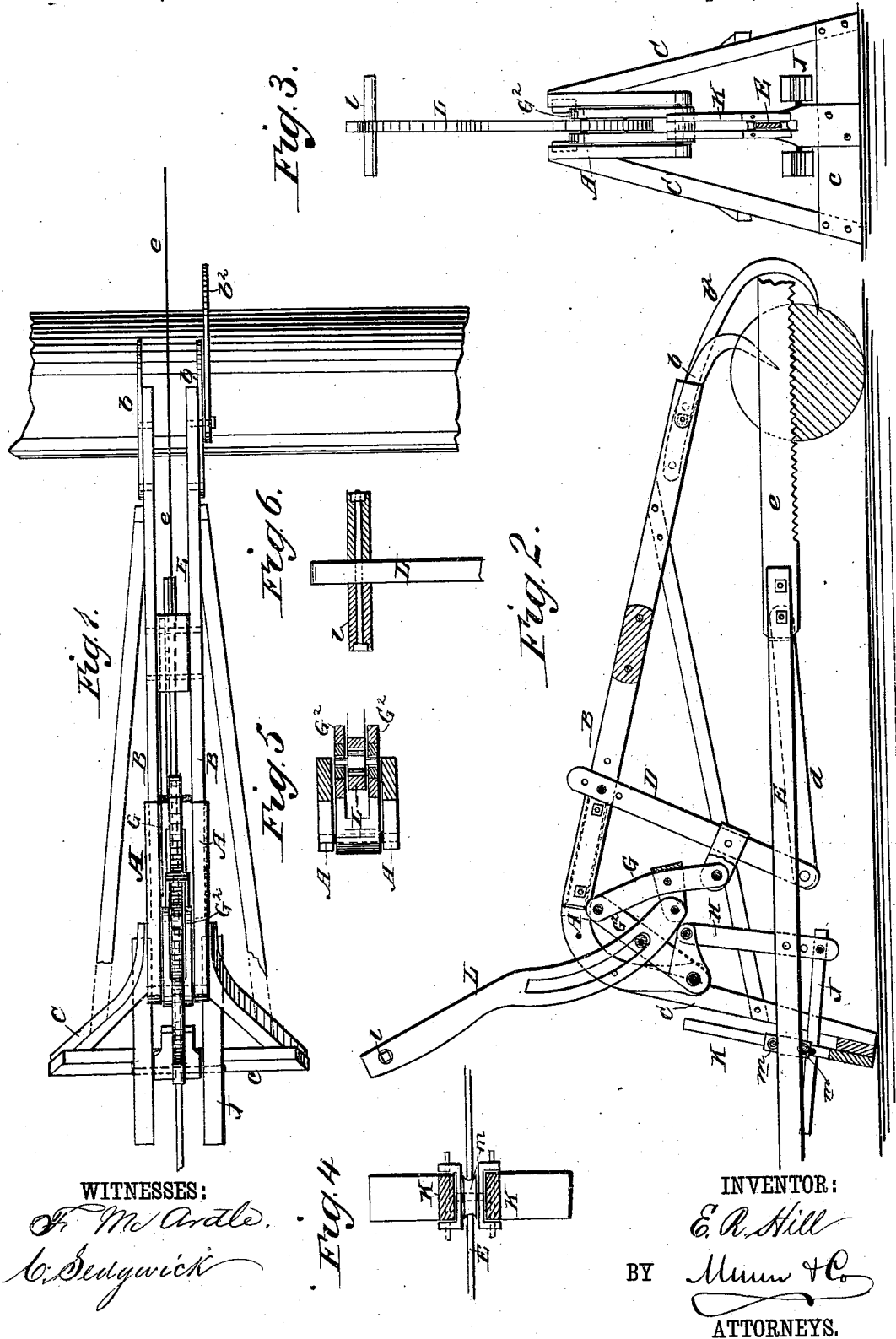


(No Model.)

E. R. HILL.
SAWING MACHINE.

No. 243,896.

Patented July 5, 1881.



UNITED STATES PATENT OFFICE.

EDWIN R. HILL, OF RUSH RIVER, WISCONSIN.

SAWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 243,896, dated July 5, 1881.

Application filed May 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWIN R. HILL, of Rush River, county of St. Croix, and State of Wisconsin, have invented certain useful Improvements in Sawing-Machines, of which the following is a specification.

My invention relates to that class of portable sawing-machines which are used for sawing in the woods or fields, and are adapted to be readily moved from place to place.

In the accompanying drawings, Figure 1 is a top view of a machine embodying my improvements. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a rear end view. Figs. 4, 5, and 6 are detail views.

A A represent two elbows, of cast or malleable iron or other suitable metal.

B B are two bars bolted to the upper and front ends of the elbows, and extending forward therefrom parallel with each other.

C C are two bars bolted to the lower and rear ends of the elbows, extending downward and divergently therefrom, and having their lower ends connected by a cross bar or brace, *e*, thus forming the main stand or support for the frame of the machine.

To the front ends of the bars B are attached two rigid cant-hooks, *b b*, one on each side, and near the point of attachment of these hooks is a similarly-shaped but longer hook, *b*², which is pivoted by means of a screw-bolt and nut, and may also be moved from one side to the other by means of said bolt and nut.

Between the bars B B, near the front ends of the elbows, is pivoted the upper end of a lever, D, the lower end of which is pivoted to the rear end of a pitman, *d*. The front end of this pitman is pivoted to the front end of the saw-rod E, which is provided with any suitable means for the attachment of the rear end of the saw *e*.

To the lever D is pivoted the lower end of a lever, G, the upper end of which is pivoted to the upper end of a slotted elbow-lever, G². These two levers G G² constitute a toggle-lever. The lower and elbow end of the lever G² is pivoted between the lower and rear ends of the elbows A.

To the short arm of the elbow-lever G² is

pivoted the upper end of a slotted connecting-rod, H, the lower end of which is pivoted to the front end of a treadle, J, which has its fulcrum on a slotted standard, K, attached to the cross bar or brace *c*. The saw-rod E works in and is guided by the slotted connecting-rod H and standard K between the two friction-rollers *m m*.

To the lever G is pivoted the front and lower end of a hand-lever, L, the lower portion of which is curved and slotted and works in the slot of the elbow-lever G², which is provided with a friction-roller working in the slot of said curved lever L.

In operating this apparatus the operator stands upon the treadle J, with one foot in front and the other in rear of the fulcrum of said treadle, and with his hands grasping the handle *l* of the lever L. By alternately pressing downward with the feet on the treadle and alternately pushing and pulling on the hand-lever L the saw is made to reciprocate in the usual manner.

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

1. In a sawing-machine, the combination, with a frame having rigid pivoted hooks, of the pendent lever D, pitman *d*, guided saw-rod E, toggle-lever G G², slotted hand-lever L, pivoted to the toggle-arm G and working in a slot of toggle-arm G² over a friction-roll, and the treadle J, connected with toggle-arm G² by a pitman, H, as shown and described.

2. The combination of the lever D, toggle-bars G G², rod H, and hand-lever L, the toggle-bars G G² pivoted at the lower end of the arm G² to the frame and treadle J through the connecting-rod H, and the arm G pivoted to the saw-rod through the pendent lever D and to the hand-lever L, as shown and described, whereby the weight of the operator upon the treadle increases the effect of the hand-lever to reciprocate the saw.

EDWIN ROSWELL HILL.

Witnesses:

OLE RASMUSEN,
C. H. BISHOP.