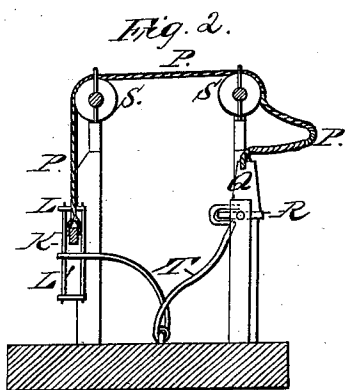
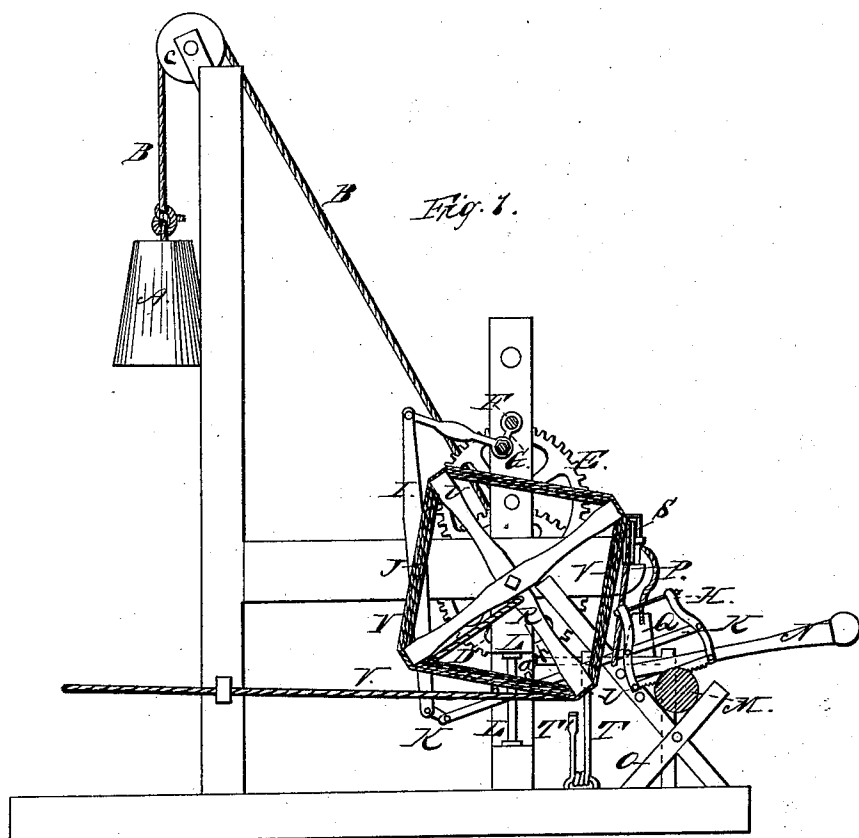


R. B. Brown,

Drag Saw,

No. 5,053,

Patented Apr. 10, 1847.



UNITED STATES PATENT OFFICE.

R. B. BROWN, OF WILLISTON, VERMONT.

CROSSCUT-SAWING MACHINE.

Specification of Letters Patent No. 5,053, dated April 10, 1847.

To all whom it may concern:

Be it known that I, REED B. BROWN, of Williston, in the county of Chittenden and State of Vermont, have made a new and
5 useful improvement in the manner of constructing a machine for the sawing of cord-wood for domestic purposes; and I do hereby declare that the following is a full and exact description thereof.

10 The power for actuating the saw is to be derived from a weight that passes over a pulley, and that is to be wound up in a manner to be presently described. The wood
15 to be sawed is to be placed by hand upon a wood-horse, formed in the usual manner, and is to be held down during the operation of the saw by means of a weighted lever made to press on its upper part. In the
20 arrangement of the gearing for operating the saw, there is not anything that is substantially new, and I do not intend, therefore, to make any claim to this part; but I have added thereto an apparatus for raising
25 the saw, and for arresting the descent of the moving weight by the falling of the saw frame when the piece of wood has been separated by the saw, so that the whole remains at rest until a new stick of wood is placed upon the horse by the attendant. I
30 have also devised a plan to facilitate the winding up of the weight by the coiling of a rope upon a reel, which coiling takes place while the weight is running down; the weight may then be wound up by drawing
35 upon the rope which has been so coiled.

In the accompanying drawing Figure 1, is a side elevation of my machine, and Fig. 2, shows this disengaging machinery by means of which the saw is lifted, and the
40 motion of the machine arrested.

A, is a weight attached to a cord B, and passing over a pulley C, the other end of the cord winding around a barrel on the axis of the wheel D; a pinion on the axis
45 of this wheel gears it into a pinion on the axis of the wheel E; and the teeth of this wheel gear into a pinion on a shaft F, that carries a crank G, which gives motion to the saw H, through the intermedium of the lever
50 I, that has its fulcrum at J. A vibrated

rod K, K, connected to the lever I, and to the saw frame carries the saw.

L, L, are guide bars between which the rod K, passes, and which check its lateral motion. M is the stick upon which the saw
55 is supposed to be operating, and N, the weighted lever by which it is held down on the horse O. When a stick has been sawed off, and its end falls, it will permit the said frame to descend, and this will set in action
60 the apparatus by which the saw frame is to be raised, and the descent of the weight A, arrested.

P, P, is a cord made fast by one end to the rod K, K, that carries the saw, and by
65 its other end to a weight Q, which is shown as resting on a tilting shelf R, R. The cord P, P, is slack while the weight is on the tilting shelf, in order to allow of the free
70 vibration of the saw; but when the weight is made to fall from this shelf, the rope will not only be rendered taut, but the saw frame will be raised by it, and the rod K, K, be brought into contact with the cap piece
75 L' or upper part of the guide pieces L, L.

From the upper side of the rod K project two pins *a, a*, Fig. 1, and these passing one on each side of the cap L', of the guides L, L, will arrest the vibration of the rod, and, consequently, the descent of the weight A. The
80 cord P, P, passes over the pulleys S, S, as most distinctly shown in Fig. 2. As soon as the stick is sawed off the saw will fall to a certain distance and the rod K, coming into contact with the end T', of a bent lever
85 T, the other end of which embraces the edge of the tilting shelf R, the said lever will be drawn away from this shelf, the weight Q, will fall, and the saw frame will be drawn
90 up by the cord P, which will have the effect of arresting the descent of the weight A.

U, is a reel upon the axis of the wheel D, and as the weight A, descends the cord V, will be wound on this reel, and when the weight has arrived at the bottom of its
95 course, a person may take hold of and run out with, the cord V, which will wind the rope B, on to the barrel of the wheel D, and raise the weight A, to the pulley C.

Having thus fully described the manner 100

in which I combine and arrange the respective parts of my improved machine for sawing cord-wood, what I claim therein as new, and desire to secure by Letters Patent, is—

5 The combination of the apparatus for elevating the saw, and arresting the descent of the weight which is to operate as a motive power, the arrangement of the respective parts being substantially the same with that

herein described and represented—that is to 10 say, I claim the combination of the bent lever T, tilting shelf R, weight Q, cord P, lever K and pins *a a*, cap piece L' and lever I with the rod connecting it to the crank G.

REED B. BROWN.

Witnesses:

THOS. P. JONES,

LEM. WILLIAMS.