

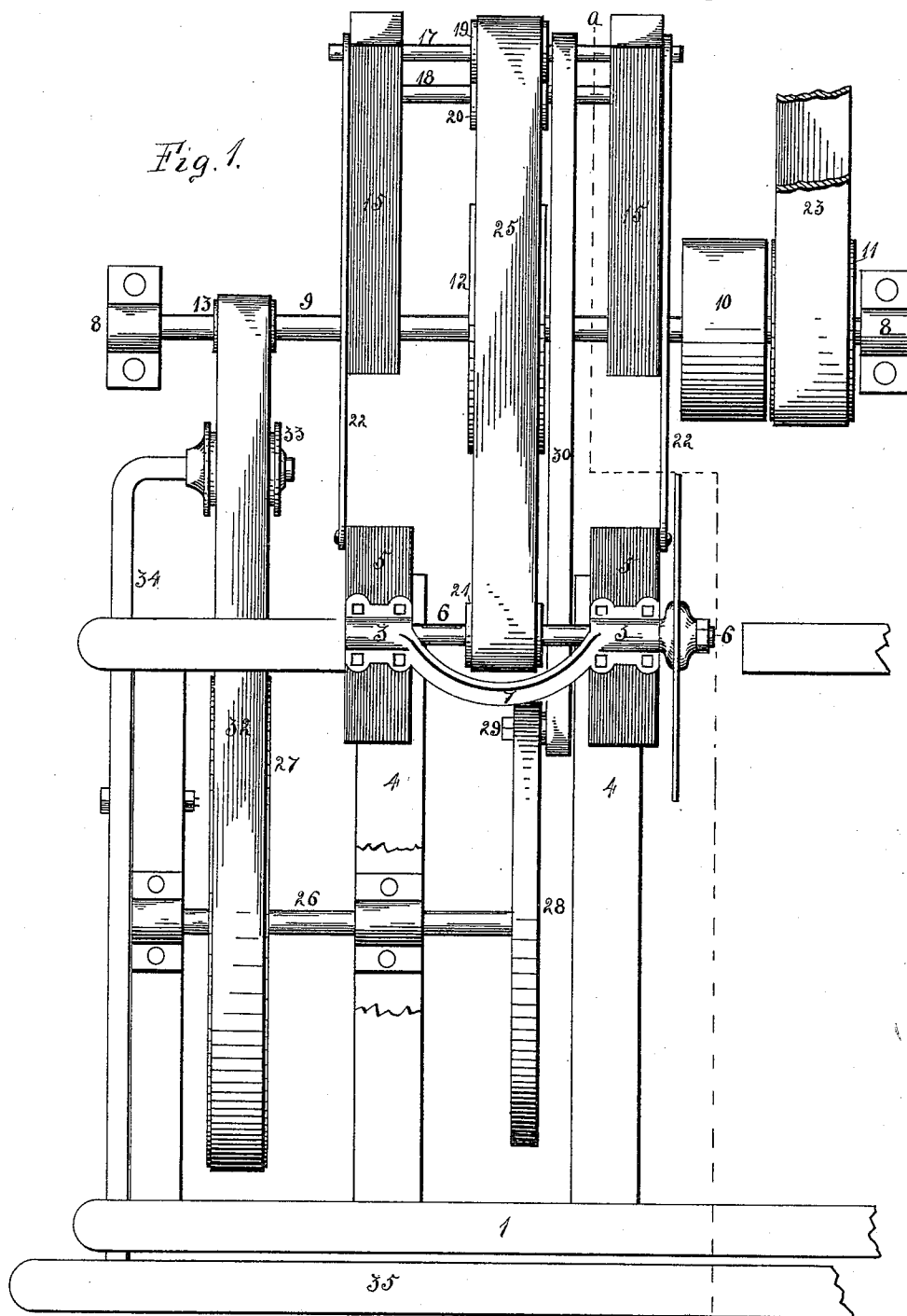
(No Model.)

2 Sheets—Sheet 1.

B. BRONSON.
SWINGING SAW.

No. 481,744.

Patented Aug. 30, 1892.



Witnesses:
C. Behel.
L. L. Miller.

Inventor:
Benjamin Bronson.
By A. O. Behel
Attys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

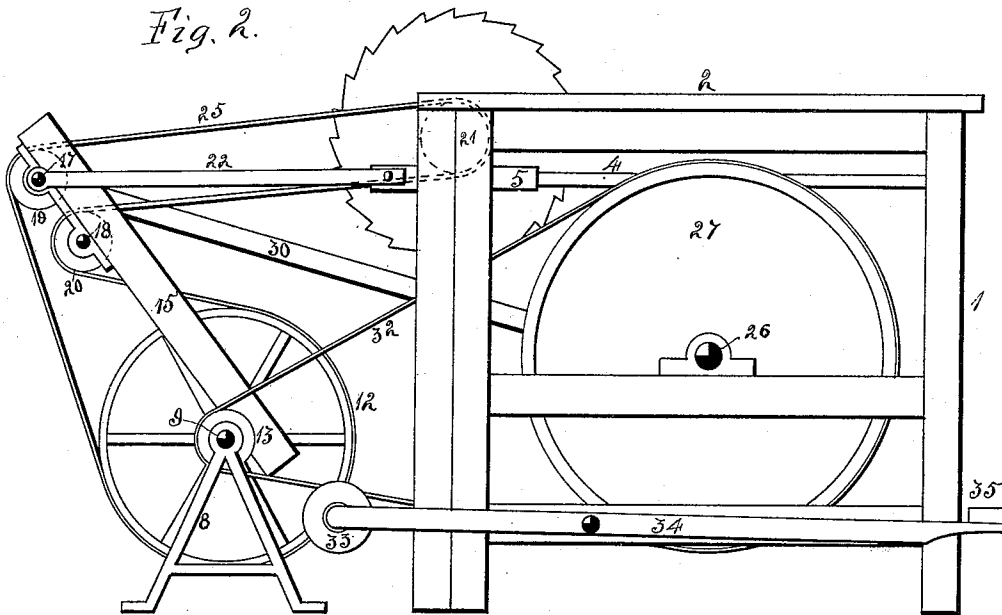
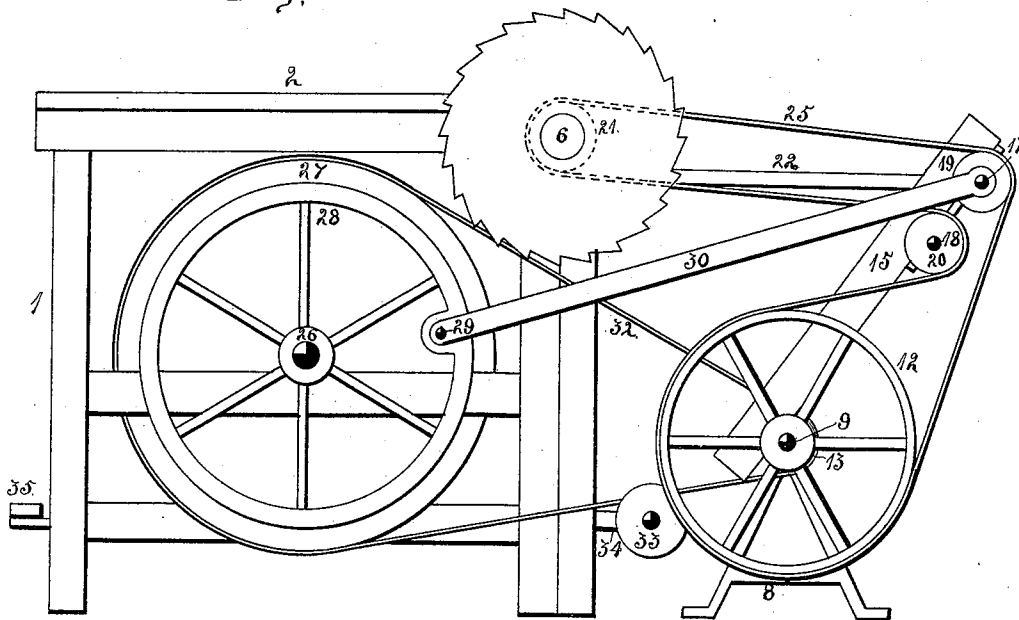


Fig. 3.



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UNITED STATES PATENT OFFICE.

BENJAMIN BRONSON, OF ROCKFORD, ILLINOIS.

SWINGING SAW.

SPECIFICATION forming part of Letters Patent No. 481,744, dated August 30, 1892.

Application filed December 18, 1891. Serial No. 415,543. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN BRONSON, a citizen of the United States, residing at Rockford, county of Winnebago, State of Illinois, have invented certain new and useful Improvements in Swinging Saws, of which the following is a specification.

The object of this invention is to produce a saw which shall advance and recede across the table, governed by the foot of the operator, leaving both of his hands free to hold the work, also to avoid reaching over the table, as is necessary in using the ordinary swing-saw.

In the accompanying drawings, Figure 1 is a plan view of my saw, portions of the table being removed to show the operative parts. Fig. 2 is an end elevation of the saw. Fig. 3 is a transverse vertical section on dotted line a, Fig. 1.

In the construction of my saw I first build a suitable frame 1, on the top of which rests the table 2. A vertical channel cut through the table extends from the rear edge forward nearly to the front side, and in this channel the saw advances, its upper part only extending above the table. Two rails 4 are supported in the frame on one side of the saw-channel, and on these rails the plates 5 are free to slide.

To the upper side of the plates 5 is rigidly secured the boxes 3, the saw-arbor 6, the bottoms of the boxes being joined by the web 7 to insure their constant alignment. The plates are of considerable length, and the boxes are fixed rigidly at right angles thereto, so that the whole may be moved on the track without binding.

Supported above the floor in suitable bearings 8 I locate the counter-shaft 9, parallel with and at a little distance in the rear of the frame 1. On this counter-shaft is mounted a tight and a loose pulley 10 and 11, respectively, and two additional pulleys 12 and 13, fixed rigidly to the shaft 9. On each side of the pulley 12 are two boxes, each supporting an upwardly-extending beam 15, and these, with the cross-pieces and the shafts 17 and 18, constitute the swinging frame. Each of the shafts 17 and 18 in the upper end of the swinging frame is provided with the pulleys 19 and 20. These pulleys, the pulley 12 on the coun-

ter-shaft, and a pulley 21, rigidly secured to the saw-shaft, are all in one vertical plane.

Between the sliding saw-carriage and the upper end of the swinging frame I make a link connection by securing the bars 22 to each end of the shaft 17 and their opposite ends to the outside edges of the sliding plates 5. A belt 23 passes from the motive power to the loose pulley 11. The belt 25 passes around the pulley 18 and the pulley 21, running over the idle-pulleys 19 and 20, to maintain a constant distance between the two first-mentioned pulleys, and thus allowing the saw, with its carriage, to advance and recede on the rails 4 without interfering with the constant supply of power.

Journaled within the supporting-frame of the saw-table is the shaft 26, near one end of which is rigidly secured the smooth-face balance-wheel 27 and on the other end of the shaft the crank-head 28, having in its face a wrist-pin 29. Between this wrist-pin and the shaft 17 of the swinging frame I provide the connecting-rod 30, journaled on the shaft 17.

Over the pulley 13 and the smooth-face balance-wheel 27 I run the belt 32, by means of which motion is imparted from the counter-shaft 9 to the shaft 26, and because of its connection therewith the throw of the crank causes the swinging frame to move forward and back, imparting a like movement to the saw and its carriage. The belt 32, however, is made normally too loose to transmit motion from counter-shaft 9 to shaft 26, and to cause it to drive the latter shaft when desired I provide the tightener-pulley 33, journaled on the rear end of the pivoted foot-lever 34, the forward end of which lever extends to a point within easy reach of the operator's foot. Thus when it is desirable to move the saw across the table it is only necessary to depress the foot-lever 34 by pressing down the cross-piece 35, attached thereto, producing sufficient frictional contact between the face of the pulley 13 and its surrounding belt 33 to drive the shaft 26. It is plain that in light work the lever may be held depressed, causing the saw to travel across the table and return for every revolution of the shaft 26.

I claim as my invention—

A circular-sawing machine having a sup-

porting-frame, a carriage capable of a sliding
movement, a saw on the carriage, a counter-
shaft, a pulley on the counter-shaft, a swing-
ing frame provided with pulleys, a belt pass-
5 ing over the pulleys and over the saw-arbor,
a loose belt connecting the shaft of the swing-
ing frame with the pulley on the counter-

shaft, a tightener for the belt, a disk on the
counter-shaft, and an arm connecting this disk
with the swinging frame.

BENJAMIN BRONSON.

Witnesses:

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