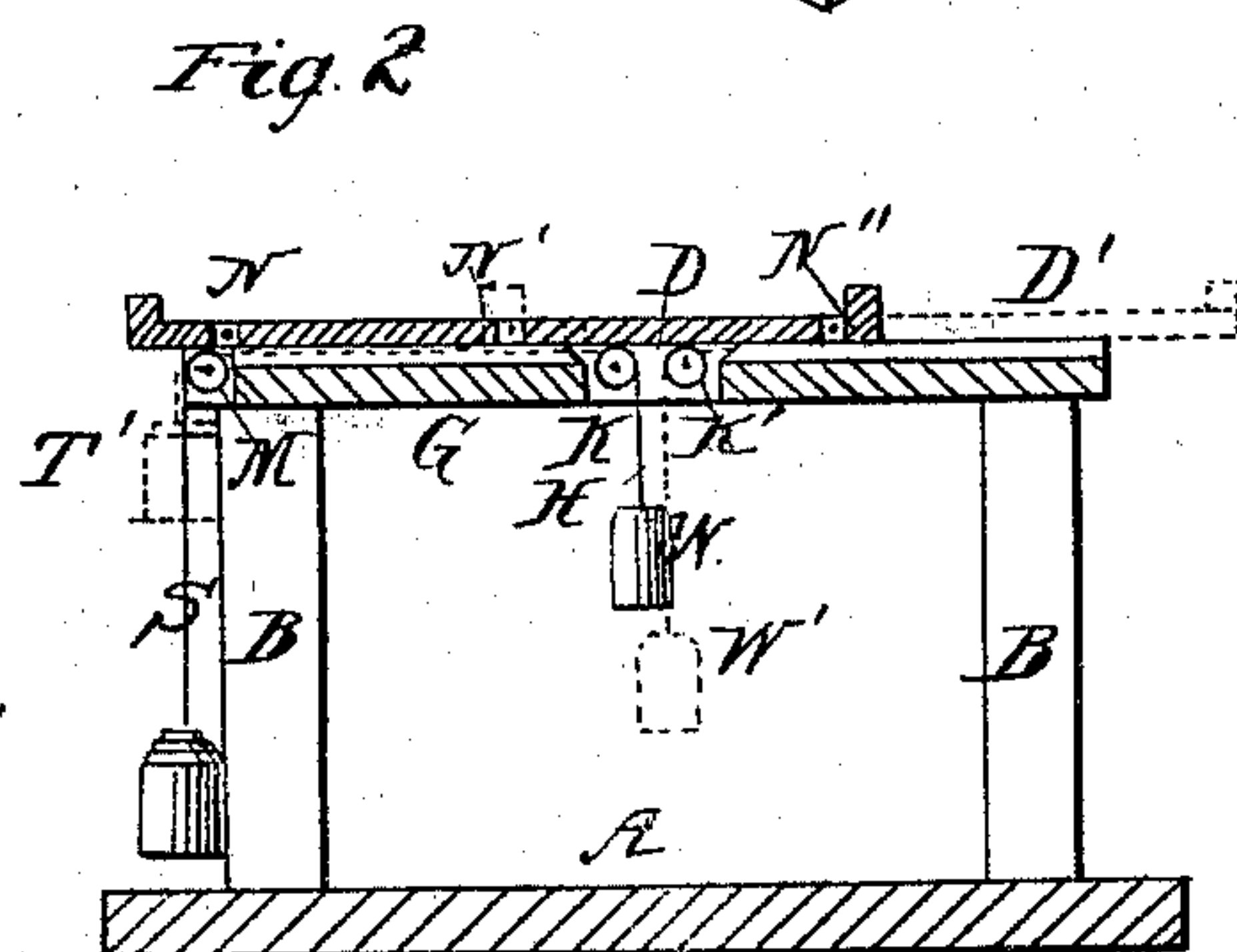
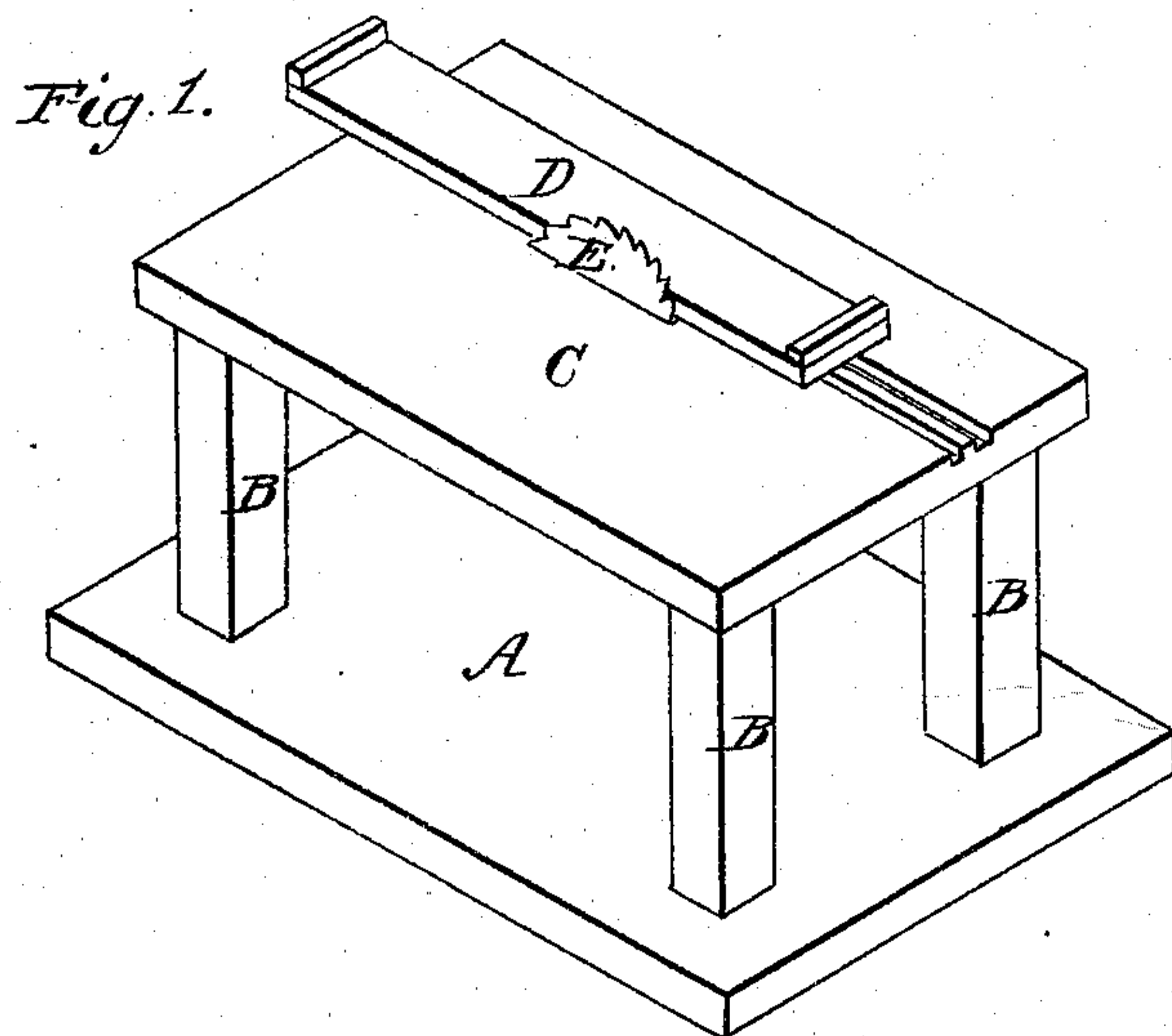


*R. V. Whiting,*  
*Circular Sawing Machine.*  
*N<sup>o</sup> 68,137.      Patented Aug. 27, 1867.*



*Witnesses*

*Wm. D. Corthell*  
*M. W. Corthell*

*Inventor*

*Ralph V. Whiting*

# United States Patent Office.

RALPH V. WHITING, OF ABINGTON, MASSACHUSETTS, ASSIGNOR TO D.  
B. GURNEY, OF THE SAME PLACE.

*Letters Patent No. 68,137, dated August 27, 1867.*

## IMPROVEMENT IN CIRCULAR-SAWING MACHINES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, RALPH V. WHITING, of Abington, in the county of Plymouth, and State of Massachusetts, have invented certain new and useful improvements in Board-Sawing Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in arranging the weights which draw back the slide or carriage of a board-sawing machine, in such a manner that when the carriage first starts to return the combined weights pull in one direction, and in aid of each other, but when the carriage has passed a certain distance, and has, with its load, acquired quite a momentum, the weights will act in opposition to each other, and thus cease to give additional velocity to the carriage, or, if desirable, they may act to check the speed, or even to stop the carriage altogether.

To enable others skilled in the art to make and use my invention, I will proceed to give a description of its construction and use. In the drawings—

Figure 1 is a perspective view of the machine, all details not essential to the illustration of my invention being omitted.

Figure 2 is a vertical section of the machine.

A represents a floor or base, upon which I build my machine. B B B B, legs or supports for the machine. C, the table or bed, through which the saw works. D is a slide or carriage, upon which the log is carried. All of the above parts may be made of any suitable material, and their construction may vary with the character of the work to be done. I have not entered upon a particular description of them for the reason that my invention relates entirely to the method of weighting the slides on the carriage D.

The method in common use to cause the slide to run back, after it has carried the log past the saw, is to attach a cord, S, with a weight, T, near to the rear end, as at N, fig. 2. The object of this arrangement is that a weight acting in this manner must be quite heavy in order to start the slide back, and having once started it, it still continues to act with full force, thus constantly accelerating the motion of the slide, so that at the end of its ways its motion will be very rapid, or if the weight is so light that the slide does not acquire a rapid motion, the whole time required for it to return will be too long for the most economical working of the machine. To obviate this difficulty I attach a second weight, W, by a cord, H, to a central point, N', on the slide, so that when the slide has passed by the saw, as represented by the dotted lines at D', fig. 2, both the weights pull in the same direction until the point of attachment of the line H has passed by the pulley K, then the weight W acts in opposition to the weight T, so that the motion of the slide is checked.

The great advantage of this arrangement is, that I have the two weights to start the slide, and thus to cause it to move rapidly at first, and yet not give it an accelerated motion, for the weight W, as stated above, begins to act in opposition to the weight T when the slide has passed a certain part of its backward journey, thus checking its velocity. By this arrangement the backward journey of the slide is made in considerable less time than can be accomplished by the old method of weighting. I make a saving of time, for the whole operation of sawing, of about thirty per cent.

What I claim as my invention, and desire to secure by Letters Patent, is—

So arranging the weights which draw back the slide or carriage of a board-sawing machine, that when the carriage first starts to return, the combined weights pull in one direction and in aid of each other, but when the carriage has passed a certain distance, and has with its load acquired quite a momentum, the weights will act in opposition to each other, and thus cease to give additional velocity to the carriage, substantially as described and for the purpose set forth.

RALPH V. WHITING.

Witnesses:

ISAAC HERSEY,  
J. E. KEITH.