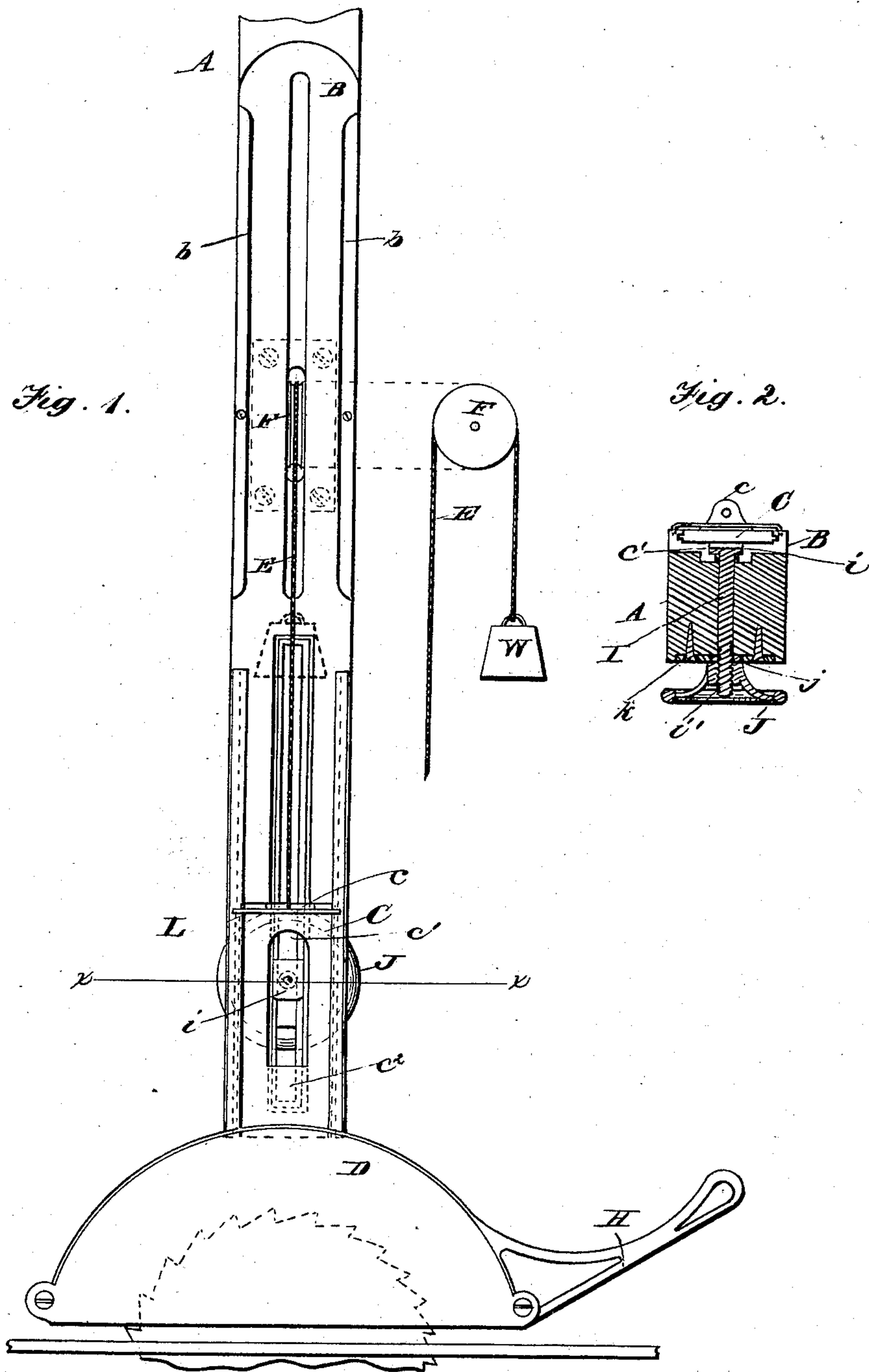


(No Model.)

J. G. GROFF.  
GUARD FOR CIRCULAR SAWS.

No. 264,149.

Patented Sept. 12, 1882.



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# UNITED STATES PATENT OFFICE.

JOSEPH G. GROFF, OF CONNERSVILLE, INDIANA.

## GUARD FOR CIRCULAR SAWS.

SPECIFICATION forming part of Letters Patent No. 264,149, dated September 12, 1882.

Application filed November 23, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH G. GROFF, of Connorsville, in the county of Fayette and State of Indiana, have invented certain new and useful Improvements in Guards for Circular Saws; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view showing the invention in elevation; Fig. 2, a sectional view taken on the line *x x*, Fig. 1.

Similar letters of reference in the several figures denote the same parts.

This invention has for its object, first, to render the guard or hood of a circular saw self-adjusting, so as to enable it to accommodate itself to stock of varying thicknesses, and at the same time cover the saw, and, secondly, to render it capable of being easily raised above the saw out of the way and securely locked in raised position.

To the accomplishment of these objects the invention consists in certain novelties of construction, which I will now proceed to describe.

Referring to the accompanying drawings, A represents the stationary post or staff depending from the ceiling over the saw-table. On the front of this post is secured, in any suitable manner, a metal guide, B, vertically grooved, as shown at *b b*, for the accommodation of shank C, attached to or formed with the guard proper, D, as shown. The shank C has an offset, *c*, to which is secured a cord or wire, E, that passes thence up the post and over a sheave or pulley, F, mounted therein, to the other side of the post, where it is provided with a suitable weight, W. (Shown by full lines in Fig. 1.)

The weight of the guard and its shank is somewhat greater than that of the weight W, and consequently there is a tendency of the guard to bear down upon the saw-table or upon the board thereon being sawed. Whatever, therefore, may be the thickness of the board, the hood will automatically adjust itself down upon it. An upwardly-inclined arm or projection, H, is formed upon or attached to the guard, so as to project in front of the same, as shown in Fig. 1. When the operator presses the board to the saw it strikes this inclined

arm and gradually raises the hood until it rests upon the board. When the board has passed the saw the guard immediately descends upon the table again, thus keeping the saw completely completely covered at all times.

It is sometimes necessary to maintain the guard in elevated position—as, for instance, when applying or removing the saw—and I have found it desirable to provide means for conveniently locking it at such times. Such means preferably consist of a bolt, I, passing horizontally through the post A, and having a square head, *i*, at its outer end, normally lying within a recess in the metal guide-plate B, opposite a slot, *c'*, in the guard-shank C, and screw-threaded at its other end, *i'*, and carrying a hand-wheel, J. The hub of the hand-wheel is provided with a beveled collar, *j*, which is held by a plate, *k*, secured to the post, as seen in Fig. 2. By this construction the hand-wheel is enabled to be rotated in either direction, so as to project or retract the bolt without changing its position with relation to the post. As before stated, the head of the bolt normally stands opposite the slot *c'* in the guard-shank C. When, however, the latter is raised to its fullest extent its solid part *c<sup>2</sup>* is brought opposite the bolt-head, and then by turning the hand-wheel the bolt-head can be made to bind against said solid portion, and thus lock the guard securely in elevated position. To lower the guard again it is only necessary to release the bolt-head from the guard-shank, when the guard will drop gradually to the table.

Other means than those shown may be employed to lock the guard in elevated position; but perhaps nothing simpler could be used. So, too, instead of employing a counter-weight to assist in raising the hood, a lever pivoted to the post and having the lifting-cord attached to its short arm and its long arm arranged in convenient position to be grasped and operated might be used; but such an arrangement would not be so good as the weight.

For the purpose of limiting the downward movement of the guard, a stop-bar, L, is arranged upon the post B in position to be struck by the offset *c* on the guard-shank, as shown.

I claim as my invention—

1. The combination of the guard or hood



having the shank and the upwardly-inclined arm with the post having the guides for the guard-shank to work in, and with the cord and counter-weight, substantially as described.

5 2. The combination of the guard or hood and its shank, of the post and the guides thereon for the shank, with the cord and counter-weight and a locking device for securely holding the guard-shank when raised, substantially as de-  
10 scribed.

3. The combination of the guard and its shank, the guides on the post in which the shank works, the offset on the guard-shank, and the stop-bar against which the offset strikes

to limit the movement of the guard, substan- 15  
tially as described.

4. The combination of the shank carrying the saw-hood, the square-headed bolt having the screw-threaded shank, with the hand-wheel having the beveled collar, and the plates co- 20  
operating with said collar to hold the hand-wheel at all times in the same relation to the post, substantially as described.

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Witnesses:

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