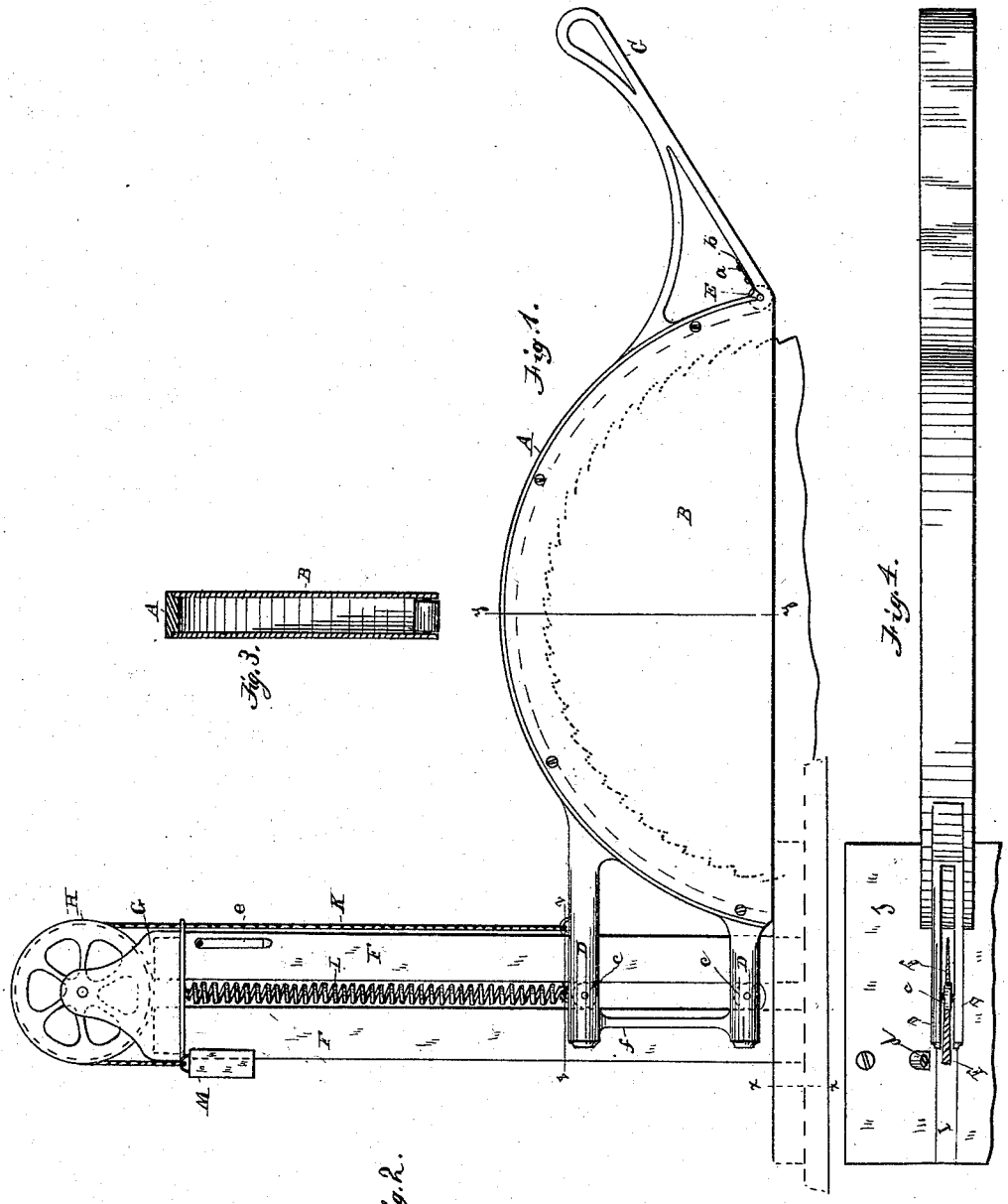
(No Model.)

J. G. GROFF.

SAW GUARD.

No. 263,171. Patented Aug. 22, 1882.



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JOSEPH G. GROFF, OF CONNERSVILLE, INDIANA.

SAW-GUARD.

SPECIFICATION forming part of Letters Patent No. 263,171, dated August 22, 1882.

Application filed May 22, 1882. (No model.)

To all whom it may concern.

Be it known that I, JOSEPH G. GROFF, of Connersville, in the county of Fayette and State of Indiana, have invented certain new and useful Improvements in Hoods or 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 part of this specification, in which—

Figure 1 is a side elevation of my invention; Fig. 2, a sectional elevation of the same, taken on the line *x x*, Fig. 1; and Figs. 3 and 4 are detail sectional views taken respectively on lines *y y* and *z z*, Fig. 1.

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

My invention relates to improvements in hoods or guards for circular saws; and it consists in the novel construction of the parts and the several combinations and sub-combinations of the same, which I will first describe, and then point out particularly in the claims.

Referring to the drawings, A represents the semicircular rim of the hood, rabbeted at its lateral edges to receive the removable sides, and having rearwardly-projecting slotted arms D D and a forward-inclined projection, C, as shown.

B represents the removable sides of the hood, made of heavy tin, glass, or other suitable material, and secured within the rabbeted portion of the rim A by means of screws or other fastenings which will permit the ready removal and replacement of said sides and facilitate repair in case of accident.

F F are upright plates which are embraced by the slotted arms D D of the hood, and serve to guide and support the hood in its upward and downward movements. These plates F F are of steel or other suitable material, preferably wedge-shaped in cross-section, as shown in Fig. 4, and are secured at their bottom to a dovetail plate, I, which is adjustable endwise in a corresponding bed-plate, J, let into the top of the table and secured by screws, as shown in Fig. 2. A set-screw, *d*, enables the plate I to be secured to said bed-plate J at the point desired. The plates F F work in the slot or kerf made by the lumber and serve to protect the rear of the saw. Instead of being wedge-shaped, the plates may be thin and of uniform thickness, with the front edge of the forward one beveled. The slotted arms D D are united and braced by a connecting-bar, *f*, and each of said arms carries a friction-roller, *c*, which is adapted to work up and down in the slot or space between the two plates F F, so as to facilitate the raising and lowering of the hood.

Upon the upper ends of the plates F F is fitted a cap, G, and journaled in this cap is a grooved wheel or pulley, H, over which passes a cord, K, fastened at one end to the upper arm, D, and carrying at its other end a weight, M, which operates to partly counterbalance the hood.

A spring, L, connected to the cap G and also to the upper arm, D, may be employed to assist the weight in raising the hood, and another spring, *e*, mounted on the plate F, operates to hold the hood up when raised for any purpose.

For the purpose of steadying the front of the hood a sharp-edged wheel, E, is arranged at the base of the projection C, and a spring, *b*, held by screws *a* or other fastenings, is caused to bear with yielding pressure upon said wheel E.

The operation of the device is as follows: The board or other article to be sawed is pushed along the table, and, striking the inclined projection C, raises the hood and passes under the wheel C against the saw, the hood settling down upon top of the board and the sharp wheel C steadying the front of the hood. As the board progresses in its forward movement the wedge-shaped plates F F enter the kerf cut by the saw, and by separating the parts of the board keep the saw clear. When the board has passed from under the hood the latter settles down upon the table again, as before.

It will be observed that the saw is kept covered by the hood during the whole operation of sawing, thus preventing injury to the operator through accident or unskillfulness.

When desired the hood can be raised by means of the projection C and held elevated by the spring *e*.

Having thus described my invention, I claim as new—

1. The combination of the hood, the rear-

wardly-extending slotted arms embracing the guide-plates, with said guide-plates having the slot between them, and the friction-wheels mounted in said arms and working in the slot between the guide-plates, substantially as described.

2. The combination, with the hood, of the rearward slotted arms, the vertical guide-plates, the grooved pulley, the weight, and the cord connected at one to the rearward arm and at the other to the weight, substantially as described.

3. The combination, with the guide-plate, of the hood having the rearwardly-extending slotted arms embracing the guide-plates and vertically adjustable thereon, and a sharp-edged wheel for steadying the front unguided end of the hood, substantially as described.

4. The combination, with the guide-plates, of the hood having the rearwardly-extending slotted arms embracing the guide-plates and the sharp-edged wheel, and a bearing-spring at the front of the hood, substantially as described, for the purpose specified.

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Witnesses:

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