

(No Model.)

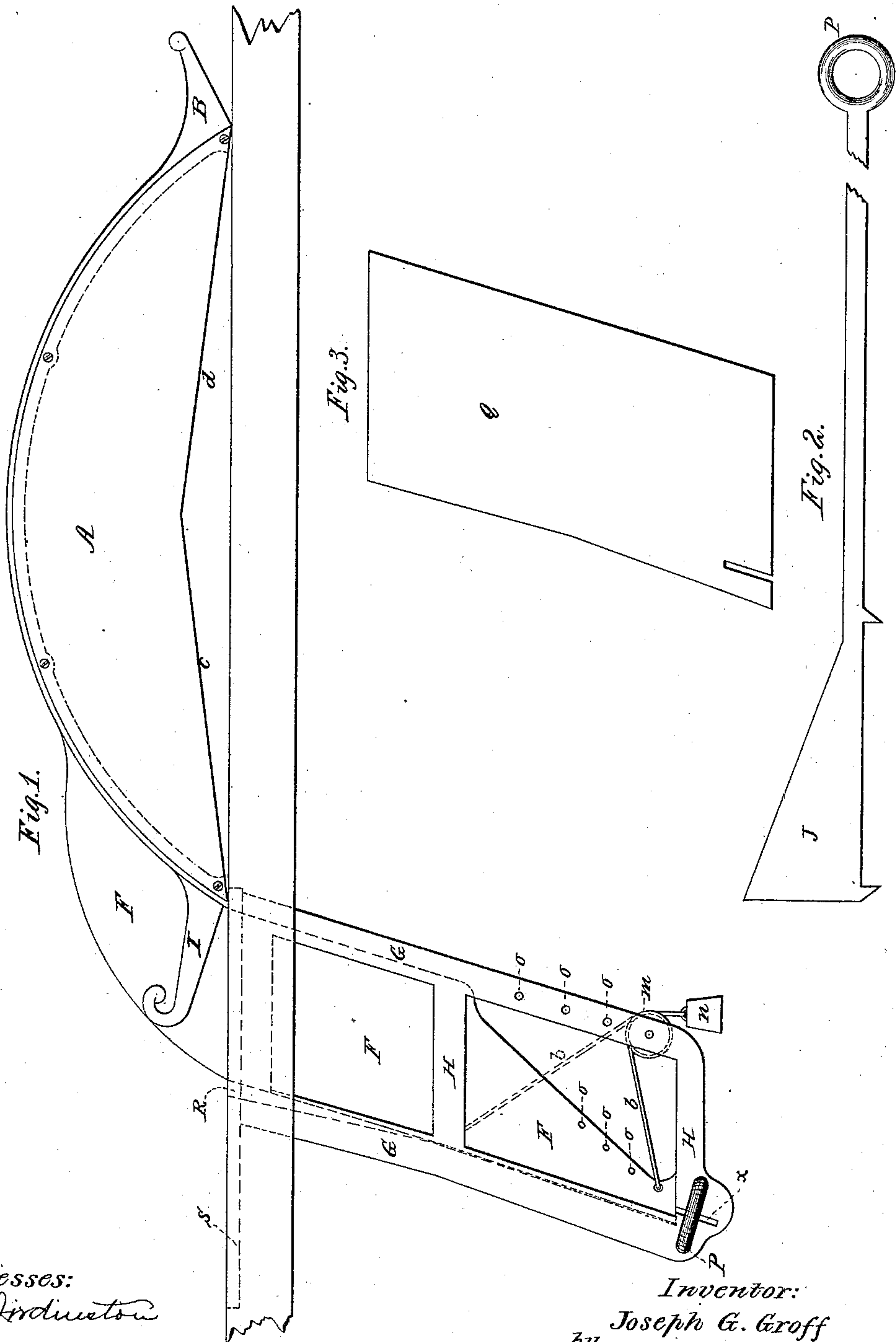
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J. G. GROFF.

SAW GUARD.

No. 277,711.

Patented May 15, 1883.



Witnesses:
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A. J. Stewart.

Inventor:
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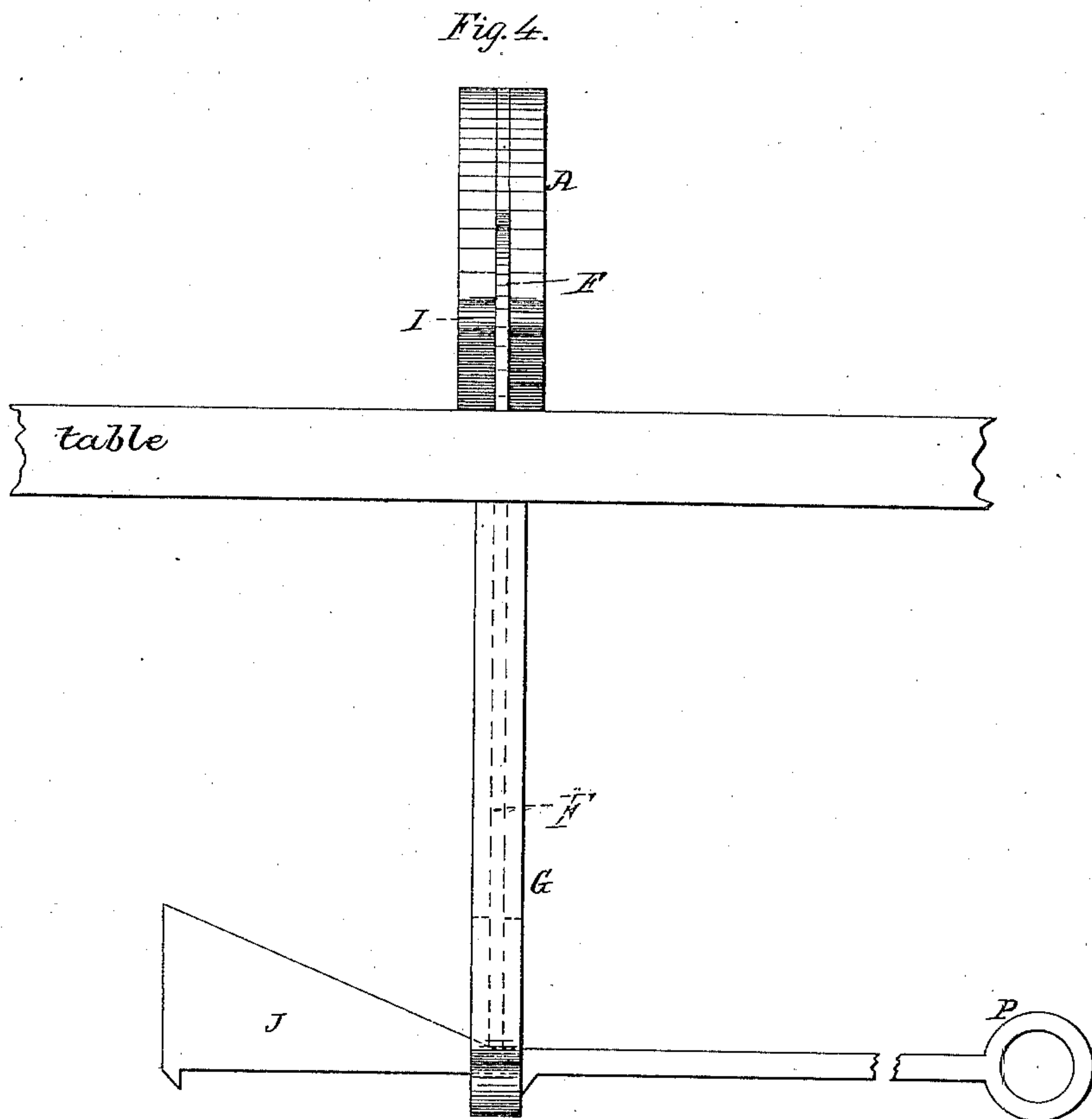
2 Sheets—Sheet 2.

J. G. GROFF.

SAW GUARD.

No. 277,711.

Patented May 15, 1883.



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UNITED STATES PATENT OFFICE.

JOSEPH G. GROFF, OF CONNERSVILLE, INDIANA.

SAW-GUARD.

SPECIFICATION forming part of Letters Patent No. 277,711, dated May 15, 1883.

Application filed January 30, 1883. (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 Saw Hoods or Guards; 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, and to the figures and letters of reference marked thereon.

This invention relates to that class of saw hoods or guards which are raised automatically by the lumber as it approaches the saw, and which descend again upon the table after the lumber passes the saw, the saw being all the while inclosed and covered by the hood, and the operator protected from contact with the saw, and also from flying splinters, &c.

The invention has for its object to locate the body of the mechanism connected to the guard, and upon which the guard depends for its effective operation, under the table and out of the way, so that only the guard proper will be exposed above the table, leaving, with this exception, the top of the table free and unobstructed.

The novel details of construction and combinations of parts involved in the invention I will first describe, and then point out particularly in the claims at the end of this specification.

Referring to the accompanying drawings, Figure 1 represents a side elevation of a saw-hood constructed in accordance with my invention. Fig. 2 represents a detail view of means for adjusting the hood at the desired elevation, and Fig. 3 represents a view of one of the plates which protect and cover the operative parts below the table. Fig. 4 is a rear view of the device as represented in Fig. 1.

A represents the hood proper, the bottom edges of whose sides form an obtuse angle, *c d*, and the opposite ends of which are provided with upwardly-inclined projections or arms B I, the former of which is located at the front end and the latter at the rear end. Formed upon or secured in any suitable manner to the said hood A is a downwardly backwardly inclined shank or blade, F. This shank works within a corresponding frame or socket, G H, located

below the table and formed with, or connected in any suitable manner to, a bed-plate, S, let into the top of the table, as shown. This frame or socket may consist of longitudinal end pieces and side bars, as shown, and having its sides covered by plates Q, such as shown in Fig. 3, to exclude sawdust, &c., from the interior; or it may be formed of one piece with closed sides and ends, and integral with or attached to the said bed-plate S. In either case it may be provided with friction-rollers, to permit of the more ready movement of the shank F within it, as will be further on explained. The upper portion of the shank, at the back thereof, is provided with a groove, R, which renders the opening in the shank wider at the top than at the bottom, to permit of the backward movement of the shank in the socket, to a limited extent, when the forward end of the hood is raised by the approaching lumber.

The operation of the invention is as follows: The hood being in the position as shown in Fig. 1, on the approach of the board to be sawed, the forward end of the board strikes the upturned projection B, raises the forward end of the hood, and at the same time tilts the hood back to the extent which the lateral motion of the shank in its socket will permit. Further advancing, the end of the board will strike the inclined surface *c* and raise the rear end of the hood, thus leaving the hood supported at both ends upon the board, with the saw inclosed by it. As the board passes from under the hood a reverse movement of the hood takes place—that is to say, the rear edge of the board passing along the angle *d* permits the forward end of the hood to descend again upon the table, and then passing the angle *c* it engages with the rear upwardly-inclined projection, I, and passing along the under face of the latter permits the rear end of the guard to descend gradually to the table.

In the construction of guards of ordinary size the shank F may be made of uniform width and extended down to the bottom of the socket; but where the guards are made large and heavy and it becomes advisable to employ a counterbalance-weight to facilitate their operation, I cut away the lower end of the shank, as shown in Fig. 1, and form therein a series of perforations, *o*, for the attachment of a cord,

b, passing over a pulley, *m*, and having hung upon it a weight, *n*. The cord is adapted to be attached to either of the perforations, according as it is desired that the weight should exert more or less leverage upon the shank.

Where stock of uniform thickness is to be sawed it is desirable, in order that the hood may not be required to be raised an unnecessary height by the material, that the hood be held normally at a height a little less than that required for the passage of the stock under it, and therefore to provide means for effecting this desired adjustment of the hood I employ an inclined or wedge-shaped blade or block, *J*, located in a slot, *x*, at the lower end of the socket *G H*, with the lower end of the shank bearing upon its inclined face, and having a handle, *P*, by means of which it can be moved back and forth under the end of the shank, so as to raise or lower the shank, and thus adjust the hood attached to the shank at the desired height.

It will be observed that as the socket and shank are located below the table the upper face of the table is left entirely free and unobstructed by anything save the hood itself, while the latter at all times covers the saw and prevents liability of accident to the operator.

Having thus described my invention, I claim
as new—

1. The combination, with the hood, of the depending shank connected to the rear of the hood, and the depending socket arranged below the top of the table, and adapted to receive the shank and permit of a limited backward swinging motion of the same, substantially as described, for the purpose specified.

2. The hood having the depending shank and the upwardly-inclined projections at its front and rear ends, substantially as described.

3. The hood having the depending shank, the upwardly-inclined projections at its ends, and the inclines *c d* on the lower edges of its sides, substantially as described.

4. The combination of the hood, its depending shank, the depending socket in which the shank works, and the adjustable cord and counter-weight, substantially as described.

5. The combination of the hood, its shank, the depending socket, and the laterally-moving wedge-shaped blade or block for adjusting the shank and hood vertically, substantially as described.

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