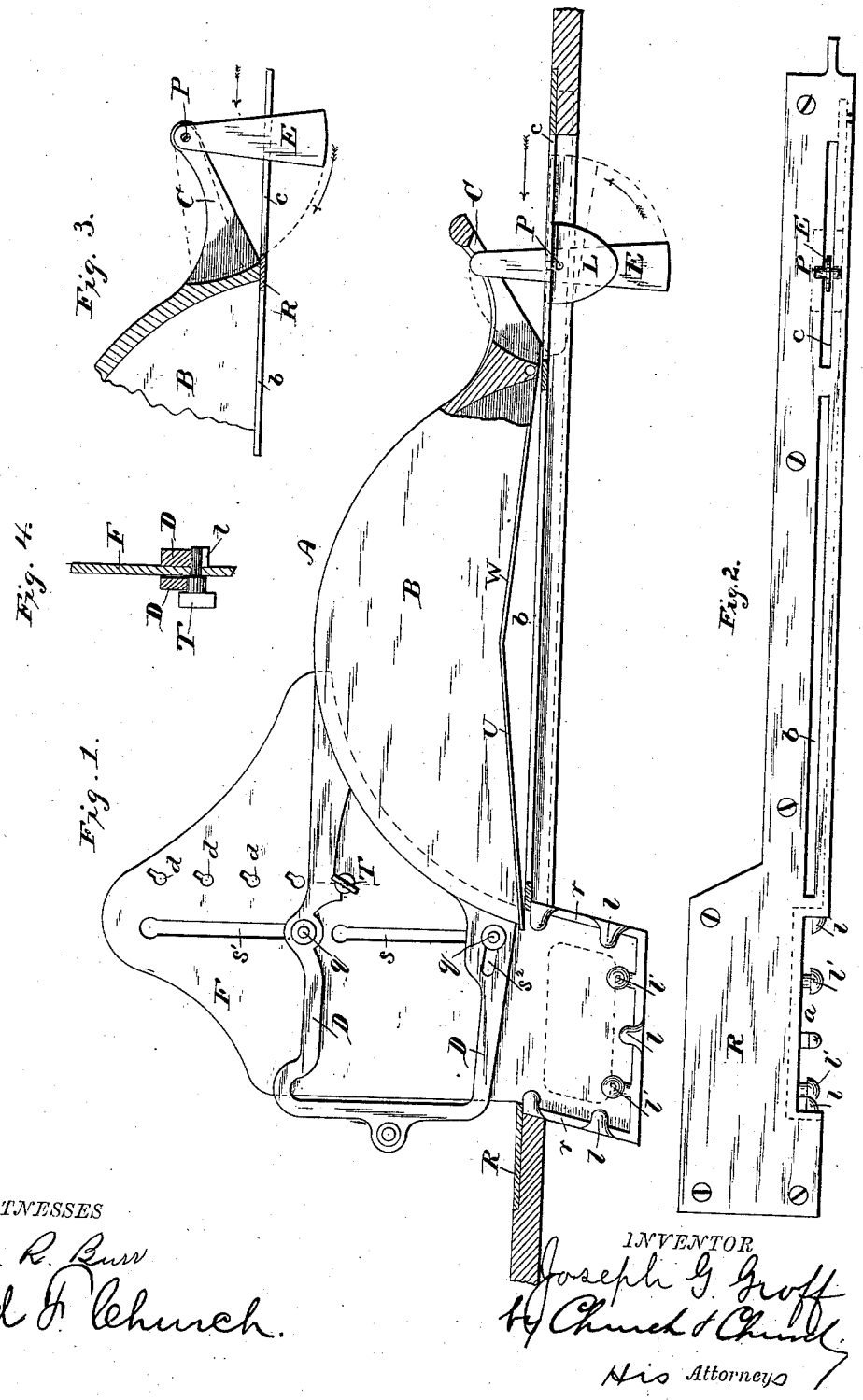
(No Model.)

J. G. GROFF.

SAW GUARD.

No. 307,112. Patented Oct. 28, 1884.



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SAW-GUARD.

SPECIFICATION forming part of Letters Patent No. 307,112, dated October 28, 1884.

Application filed April 14, 1884. (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 Saw-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 a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to that class of saw-guards which are automatic in their action, rising upon the approach of the material to be sawed, resting upon the material while being sawed, and descending again into normal position after the material has passed from under it; and its novelty consists in certain features of construction, which I will first describe, and then point out particularly in the claims at the end of this specification.

In the accompanying drawings, Figure 1 represents a side elevation of a saw-guard containing my improvements, parts of the device being shown in section. Fig. 2 is a top plan view of the bed-plate; Fig. 3, a view of a modification of the means for maintaining the hood in the proper relation laterally to the saw. Fig. 4 is a detail sectional view taken on the line *x x*, Fig. 1.

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

The letter A indicates the main frame of the hood proper, and B the sides of the same, provided with the inclines U and W at the bottom, as shown in Fig. 1.

D represents arms secured to the hood proper and extending rearwardly; and C, an upwardly-inclined arm or projection at the front of the hood, which serves as the means for raising the hood by the advancing material. The rearward-extending arms D embrace a vertical plate, F, which is supported in a suitable socket formed upon or pendant from a bed-plate, R, arranged upon the saw-table, as shown in Figs. 1 and 2. This plate F is preferably provided with two vertical slots, *s s'*, in which work cross-pins *q q*, which pass through and are carried by the upper and lower arms, D D. The lower arms, D, are provided with elongated horizontal slots s^2, and the lower pin, *q*, has a play within the same sufficient to permit the hood proper and its connections to turn or pivot upon the upper cross pin or roller, *q*, as a center.

In addition to the slots *s s'*, the plate F is further provided with apertures *d*, arranged in a vertical series, as shown in Fig. 1, and into these apertures is adapted to fit a key, T, having a wing, *t*, projecting at right angles to its body, as shown in Fig. 4.

The normal height of the hood above the table is determined by securing the key in one or the other of the series of apertures *d* in the blade F below the upper arm, B, as shown in Fig. 1, and to so secure the key it is only necessary that its wing or lug *t* be turned so as to enter the corresponding portion of the aperture in the blade, and then, after the key is shoved in, that it be turned so as to cause the said wing or lug to engage with the blade and prevent the withdrawal of the key.

The base-plate R, though it may be made in several sections, is preferably made in one continuous piece with a recess, *a*, at the rear for accommodating the shank of the plate F with a central slot, *b*, for accommodating the saw, and with a forward slot, *c*, for accommodating a hinged or pivoted latch, E, which will be further on described. The said base-plate is further provided at its rear, and adjacent to the recess *a*, with a depending plate, *r*, made either solid or with an opening in it, as shown in dotted lines, Fig. 1, and provided with a series of projecting lugs or fingers, *l*, or with headed pins or studs *l'*, or with both of these contrivances, and constituting the socket for receiving and holding the shank of the blade F. When the lugs or fingers *l* only are used in connection with the plate *r*, the shank of the blade F is slipped down between said plate and lugs and confined between them, as will be readily understood by reference to Figs. 1 and 2. When the headed pins *l'* are used, either separately or in connection with the plate R, the lower end of the shank of the blade F is preferably slotted, as shown in Fig. 1, to receive said pins, the heads of the pins on the one side, with or without the lugs L,

and the plate R on the other side serving to keep the blade in position.

In the forward slot, *c*, of the bed-plate, and preferably to depending lugs L, formed upon or secured to the bed-plate, is pivoted a latch, E, by means of pivots P, which have bearings in the said depending lugs L. The lower portion of this latch is made heavier than the upper portion, so as to keep it normally hung in vertical position, as shown in Fig. 1, and its upper portion projects above the top of the saw-table and into or through a slot in the upwardly-inclined arm or projection C on the front of the hood. As the material is advanced to the saw it strikes the latch and turns it into a horizontal position, as shown in dotted lines, Fig. 1, and it there remains until the material passes completely by, when it automatically resumes its normal vertical position with its upper end projecting into the slot of the upturned arm C and securing the hood in its proper position and against accidental lateral displacement.

The latch may be of any suitable width, and is preferably of a thickness equal to that of the vertical blade F. Both it and said blade being in direct line with the vertical face of the saw, form reliable points from which to measure for the purpose of adjusting the guide on the saw-table without exposing the saw or removing the hood. Another reliable indicator of the position of the saw is afforded by the provision of a forward extension or point, *o*, on the bed-plate R, as shown in Fig. 2. This, as well as the latch and the vertical blade F, are in line with the saw and with each other, and the uncovering of the saw for the purpose of adjusting the guide is therefore rendered still more unnecessary.

The pivots upon which the latch turns are preferably formed upon or secured to the latch, and the lugs *l* are provided with open bearings for said pivots, so as to permit of the insertion or removal of the latch when desired.

Instead of pivoting the latch to the bed-plate, as shown in Fig. 1, it may be pivoted within a slot in the upturned arm or projection C at the front of the hood in such manner as to swing into and out of a slot in the bed-plate, as shown in Fig. 3.

As previously stated, the bed-plate may be made in two or more sections, if desired; but when it is made in a single piece, I preferably construct it with a depending flange, extending down from the point *m* to the point *n*, as shown in Fig. 2, or for a less distance, for the purpose of giving additional strength to the bed-plate.

The general operation of the guard as a whole does not differ from that of guards now in use and shown in my previous patents, and hence need not be here detailed.

I claim as my invention—

1. In a saw-guard, and in combination with its hood and the bed plate or table, a latch or catch attached either to the hood or bed-plate and engaging positively both the hood and the bed plate or table to prevent the lateral displacement of the hood.

2. The combination, with a saw guard or hood having the rearwardly-extended arms, of the vertical blade having the series of apertures, and the locking-key adapted to be inserted in one or the other of said apertures, and to be locked therein, substantially as described.

3. The combination, with the saw-guard having the rearwardly-extended arms, of the vertical blade having the series of apertures and the key having the wing or lug, and adapted to be secured in one or the other of said apertures by being passed through the same and turned, substantially as described.

4. In a saw hood or guard, the socket consisting of a single depending plate and the lugs or fingers thereon, in combination with the shank of the vertical blade, substantially as described.

5. In a saw hood or guard, the combination, with the bed-plate, of the single depending plate, its lugs, and the headed pins or studs and the vertical blade having the slotted shank, substantially as described.

6. In a saw hood or guard, the bed-plate having the socket-recess, the socket composed of the depending plate and the lugs, and having the slots for the saw and latch, respectively, and terminating at the front in an extension or point, substantially as shown and described.

7. In a saw-guard, and in combination therewith and with the bed plate or table, an automatic latch attached either to the hood or bed-plate, which yields to the advancing material but normally engages with the bed-plate and guard to prevent the lateral displacement of the latter, substantially as described.

8. In a saw-guard, and in combination with its hood and bed plate or table, a hinged or pivoted latch attached either to the hood or bed-plate, for locking the hood against lateral displacement, substantially as described.

9. In the herein-described saw-guard, the combination of the hood having the rearwardly-extended arms, with the vertical blade to which the hood is hinged, and the hinged or pivoted latch co-operating with slots in the bed-plate and the hood in the manner described, and arranged in line with the vertical blade, substantially as described, for the purpose specified.

10. The combination, with the bed-plate, of the hinged or pivoted latch arranged within the slot of the bed-plate, as described, and the slotted forward projection of the saw-guard, substantially as described.

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