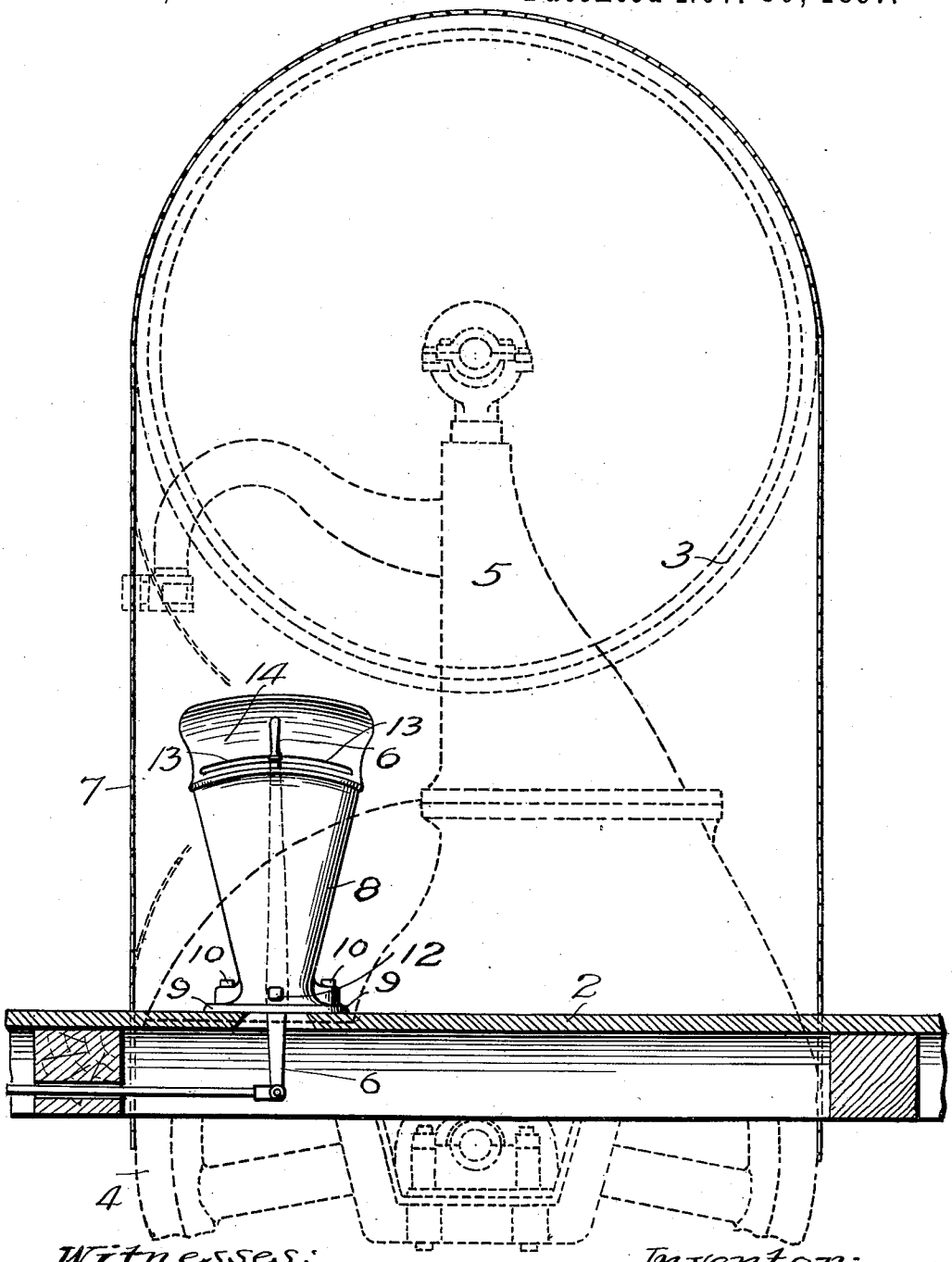
(No Model.) 2 Sheets—Sheet 1.

H. G. DITTBENNER.

LEVER SHIELD.

No. 594,608. Patented Nov. 30, 1897.



Witnesses:
C. E. VanDorn
W. E. Gooley.

Fig. 1.

Inventor;
Hermann G. Dittbenner.
By Paul & Hawley.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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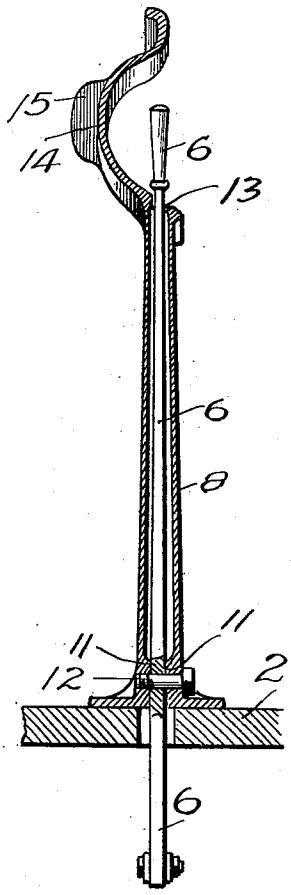


Fig. 2.

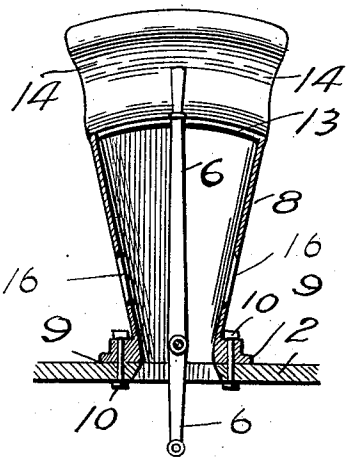


Fig. 3.

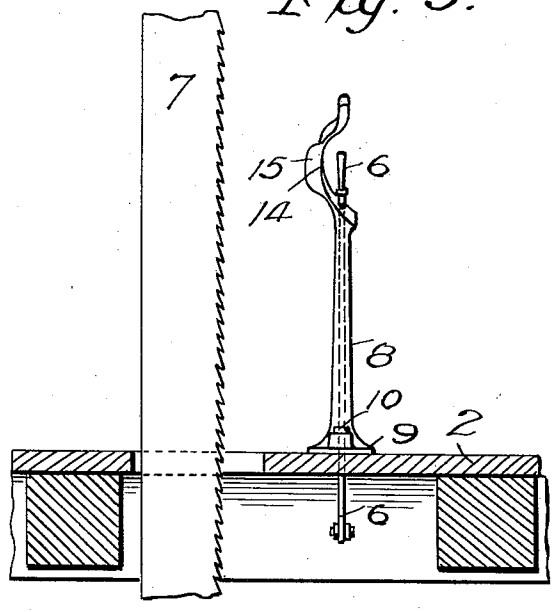


Fig. 4.

Witnesses,
C. E. Van Dorn
Richard Paul.

Inventor;
Hermann G. Dittbenner.
By Paul & Hanley.
his attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HERMANN G. DITTBENNER, OF MINNEAPOLIS, MINNESOTA.

LEVER-SHIELD.

SPECIFICATION forming part of Letters Patent No. 594,608, dated November 30, 1897.

Application filed January 20, 1897. Serial No. 619,989. (No model.)

To all whom it may concern:

Be it known that I, HERMANN G. DITTBENNER, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Lever-Shields, of which the following is a specification.

My invention relates to shields or guards for levers used in starting and stopping machinery; and the particular object of my invention is to provide a shield for levers that are used to operate sawmill-carriages to protect the hand of the operator from injury in case of a breakage of the saw or other part of the machinery; and a further object is to prevent the lever itself from being damaged or rendered inoperative and the control of the carriage thereby lost should a portion of the machinery or a piece of lumber be accidentally thrown against the same.

My invention consists generally in a hollow upright shield or guard provided at its upper end with a slot or opening to receive the upper end of the lever-arm, and said shield being provided on the side next the saw-carriage with an upward extension, forming a guard to protect the hand of the operator, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a shield embodying my invention, the band-saw wheels and frame being indicated by dotted lines. Fig. 2 is a vertical sectional view of the shield, showing the lever in position within the same. Fig. 3 is a sectional view looking at the front of the shield or guard. Fig. 4 is an end elevation of the shield, showing its position in relation to the band-saw.

In the drawings, 2 represents the flooring of the mill, upon which the band-wheels 3 and 4 are supported by suitable framework 5. A lever 6 extends up through the floor of the mill near the band-saw 7 and in position to be grasped by the hand of the operator when it is desired to move the sawmill-carriage. I have found that when the lever is placed in this position in close proximity to the saw the operator, having his hand unprotected, is in great danger of having it cut off or seriously injured by the ends of the band-saw should a breakage occur, and I have also found that if the lower portion of the lever is unprotected it is liable to be damaged and rendered inoperative by logs or pieces of machinery being thrown against it, so that the operator will lose control of the carriage and be unable to stop the same when desired. For the purpose of obviating this danger and to protect the hand of the operator I provide a shield or guard consisting of the heavy upright casting 8, securely fastened to the floor at the point where the lever passes through the same and extending up by the side of the lever to the point where the same is grasped by the hand of the operator.

The shield tapers from the top toward the bottom and is provided with the feet or flanges 9, through which pass the bolts 10, by means of which the device is secured to the floor of the mill. The casting 8 is provided at its lower end, on the inner surface, with the lugs 11, through which pass the bolt 12, and also through the lever-arm, thereby forming a riged bearing for the same. The upper end of the casting 8 is provided with a slot 13, extending, preferably, the entire length of the upper end of the casting, and through which extends the upper end of the lever. The length of the slot may be regulated according to the travel of the lever, so that the shield will in no way impede the free movement of the same in either direction.

The shield being very strongly made it is evident that it will most effectually protect the lever itself from being damaged by logs or broken machinery that may be thrown in its direction during the operation of sawing.

In order to protect the hand of the operator, I provide at the upper end of the shield, between the lever and the carriage, an outwardly-curved extension 14, which is preferably cast with the main portion of the shield and extends considerably above the handle or upper end of the lever, as shown in Fig. 2. This extension 14 preferably has a curved outer surface to deflect any article that may be thrown against it, and it is also provided with the ears or lugs 15 at each end to deflect the ends of the band-saw should it break and its ends be thrown against the shield.

I have found that with circular saws the extension 14 may be dispensed with, as the operator is not in as much danger of being in-

jured from a breakage of the saw as when the band-saw is used. I may therefore construct the part 14 independently of the lower portion of the shield and only use it when the lever is used to operate a band-saw. I prefer, however, to make the shield as shown in the drawings, and when so made it may be used either in connection with a circular or band saw, as desired. Instead of casting the shield in one piece I may make the side next to the operator removable, so that access may be had at any time to the interior of the shield and the lever.

I am aware that devices have been made to be placed over a lever to limit the movement of the same; but such devices do not form a guard or shield to protect the lever, being open at the sides and ends, so that a large portion of the lever is exposed to injury by a breakage in the machinery or accident in handling the logs while sawing, while the device I have shown, being composed of a solid casting, forms a continuous wall around the lever and completely shields the same from injury.

The opening in the floor through which the lever passes is of sufficient size to permit sawdust or other foreign matter that may drop through the slot 13 to pass down through the shield and out at the bottom without clogging the lever, and I also provide holes or openings 16 in the lower side walls of the casting 8, which aid in clearing the shield of any foreign matter that may fall down into it through the slot during the operation of sawing.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A lever-shield, comprising a base or lower portion forming a wall about the lower portion of the lever, and having an opening in its top to receive the upper portion of the same, and said shield being also provided with an extension projecting above the handle of said lever, for the purpose set forth.

2. In a device of the class described, the combination with the pivoted lever, of the shell or casing arranged over the same, means for securing said casing in an upright position, said casing having an opening at its upper end to receive the upper end of said lever, an extension provided near the upper end of said casing, said extension having a curved outer surface, and the ears provided on said surface, for the purpose set forth.

In testimony whereof I have hereunto set my hand this 12th day of January, A. D. 1897.

HERMANN G. DITTBENNER.

In presence of—

RICHARD PAUL,

M. E. GOOLEY.