

(No Model.)

C. E. BILLINGS.
OIL GUARD FOR DROP HAMMERS.

No. 566,128.

Patented Aug. 18, 1896.

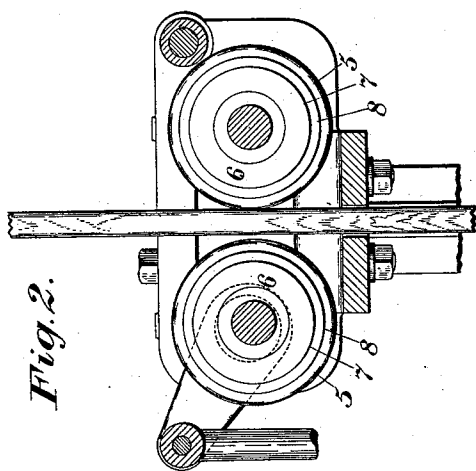


Fig. 2.

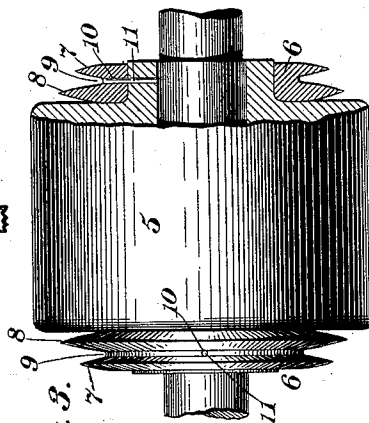


Fig. 3.

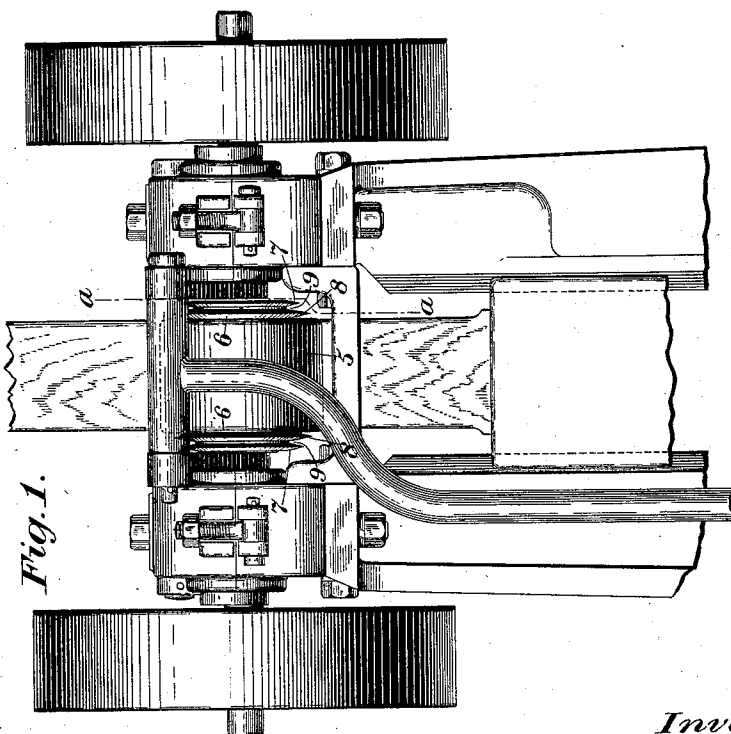


Fig. 1.

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UNITED STATES PATENT OFFICE.

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OIL-GUARD FOR DROP-HAMMERS.

SPECIFICATION forming part of Letters Patent No. 566,128, dated August 18, 1896.

Application filed May 28, 1896. Serial No. 593,408. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BILLINGS, a citizen of the United States, residing in Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Oil-Guards for Drop-Hammers, of which the following is a specification.

This invention relates to drop-hammers, and more particularly to oil-guards therefor; and the object of the invention is to provide improved means whereby oil from the journal-bearings of the drop-hammer can be prevented from flowing on the lifting-board, and which means will be simple in construction and effective in operation.

In the drawings accompanying and forming part of this specification, Figure 1 is a front view of the upper portion of a drop-hammer with the improved oil-guard in position thereon. Fig. 2 is a cross-sectional view, partly in elevation, taken in line *a a*, Fig. 1. Fig. 3 is a view of one of the lifting-rolls detached and partly in section and showing the improved oil-guard in position relatively thereto, one of said guards being shown in section.

Similar characters designate like parts in all the figures of the drawings.

In drop-hammers as ordinarily constructed it has been found, in practice, that lubricant from the journal-bearings works its way by means of the lifting-roll shafts to the periphery of said rolls, and from thence to the board forming the usual means for elevating the hammer, whereby within a comparatively short time such board becomes extremely slippery, so that the rolls permit the same to slip therethrough and only bite thereon intermittently, thereby soon rendering it unfit for use and thus necessitating constant renewal thereof, which is not only expensive in the matter of stock, but also in the time and labor required to replace the board. In order, therefore, to obviate this serious disadvantage, improved means is provided whereby oil from the journal-bearings is absolutely prevented from reaching the lifting-board.

In the preferred form thereof herein shown and described the improved oil-guard comprises a suitable disk disposed on the end of

the hub of each of the respective lifting-rolls 5; and in the present construction the disks are centrally bored to fit the said hub and preferably have two annular flanges 7 and 8, of differential diameters, and are provided with sharp-edged peripheries, and an annular groove 9 being located between said flanges. Each disk is provided with a transverse aperture 10 for the reception of a pin 11, which extends into a hole in the hub of the lifting-roll, whereby the disks are held on the hub for rotation.

In assembling the oil-guards the flanges of the disk having the largest diameter are disposed nearest the lifting-roll for the purpose hereinafter set forth. It will be understood that instead of locating the disks on the hubs of the rolls they may be secured in position adjacent to the ends of the rolls in any other suitable manner.

In the use of this improved oil-guard the oil from the journal-bearings finds its way by centrifugal force to the edge of the outer flanges 7 of the disks 6, where it either remains or is thrown off during the rotation of the lifting-rolls. In case, however, the oil should pass beyond such outer flanges it will be stopped by the inner flanges, where it will likewise either remain or be thrown off, so that lubricant from the journal-bearings is absolutely prevented from reaching the peripheries of the lifting-rolls, and thereby the lifting board or strap.

It will be understood that instead of forming the oil-guard as a disk having a pair of flanges thereon each disk may have any desired number of flanges and may be secured in position in any desired way, but the preferable construction is to provide each disk with two parallelly-extending flanges, whereby if the lubricant works its way from the outer flange the inner flange will form an effective means for preventing the same from reaching the lifting-board.

Having described my invention, I claim—

1. An oil-guard for shafts having a pair of parallel annular flanges of differential diameters and having an annular groove intermediate thereof.

2. In combination with a lifting-roll, of a drop-hammer, an oil-guard comprising a disk

disposed on each end of the hub thereof, and each of said disks having a pair of annular flanges of differential diameters.

3. In combination with a lifting-roll, of a
5 drop-hammer, an oil-guard disposed thereon and comprising a pair of centrally-bored disks, one fixedly secured at each end of said lifting-roll, each of said disks having a pair of

flanges of differential diameters having sharp peripheries and having an annular groove in- 10
intermediate thereof.

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