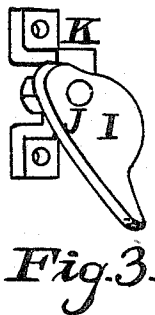
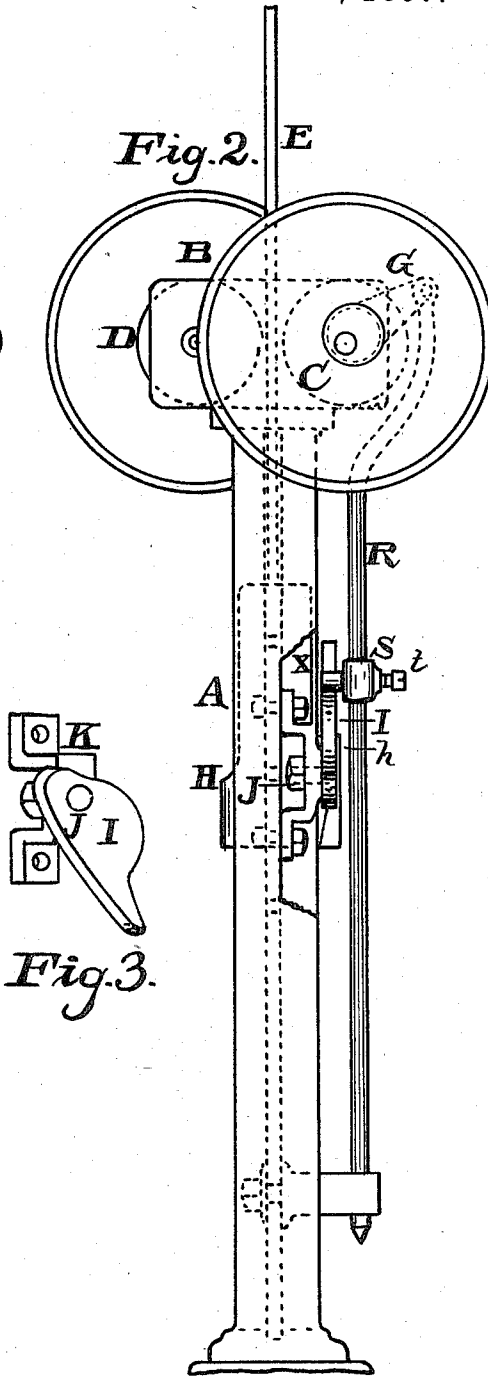
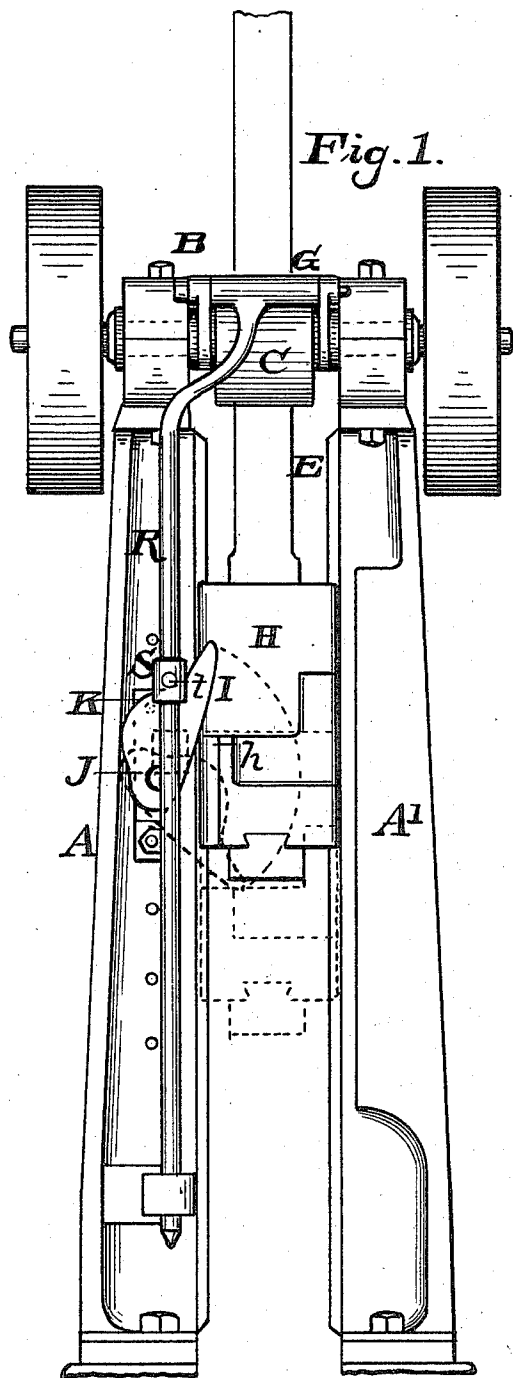


(No Model.)

E. H. WHITLOCK.
DROP HAMMER.

No. 579,356.

Patented Mar. 23, 1897.



Witnesses,

H. C. Locke.

Sam. L. L. L.

Inventor,

Elliott H. Whitlock,

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UNITED STATES PATENT OFFICE.

ELLIOTT H. WHITLOCK, OF CLEVELAND, OHIO.

DROP-HAMMER.

SPECIFICATION forming part of Letters Patent No. 579,356, dated March 23, 1897.

Application filed December 4, 1896. Serial No. 614,435. (No model.)

To all whom it may concern:

Be it known that I, ELLIOTT H. WHITLOCK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Drop-Hammers, of which the following is a specification.

This invention relates to drop-hammers of that class in which there is a reciprocatory hammer or ram which is provided with a lifting-board and in which a pair of lifting-rolls is employed for engaging with the lifting-board for lifting the hammer and in which a shifting mechanism is employed for shifting one of said rolls relatively to the other to release the rolls from engagement with the lifting-board to allow the hammer to drop.

The object of this invention is to provide in combination with a machine of this class and provided with a pair of lifting-rolls one roll supported on an eccentrically-journaled shaft and shiftable toward and from the fixed roll by means of an eccentric actuating-rod, of a cam-lever supported on a changeable fulcrum attached to the side post of the frame of the machine and adapted to be turned upwardly by a projection on the hammer in its upward movements. The bracket and cam-lever may be changed to different heights on the post, so that the hammer may be raised to different heights to increase or decrease the stroke of the hammer, as may be desired. The cam-lever engages with a projecting pin on a sleeve adjustably set on the eccentric actuating-rod for gradually lifting said rod for releasing the eccentrically-mounted roll from the lifting-board.

In the accompanying drawings, Figure 1 is a front elevation of a drop-hammer having my improvement embodied therein. Fig. 2 is a side elevation of the same having a portion of the side frame broken out to show the construction and application of my improvement. Fig. 3 is a detached view of new cam-lever.

A A' represent the two side posts of the framework of a drop-hammer, and B is the head supporting the two lifting-rolls; C, the eccentrically-mounted and D the fixed roll.

E is the lifting-board, attached to the hammer H. R is the eccentric actuating-rod, attached to the eccentric holding-frame G. These parts of the machine I do not claim as parts of my invention, but are shown for the purpose of showing the combination and operations of my improved attachment for operating the eccentric actuating-rod.

I is a cam-shaped lever of peculiar construction, is pivoted on a bolt J, held in a bracket K, bolted to the web of the side post A, back of the rod R.

S is a sleeve adjustably held on the rod R by a set-screw *t*, and is provided with a pin or projecting lug *x*, which engages with the cam side of the lever I and is carried upward by same as said lever is turned upwardly on the bolt J. In its normal position said lever I will be down in the position seen in dotted lines in Fig. 1. A projection or abutment *h* on the hammer comes in contact with the understraight side of said lever and upon which the lever rides as the hammer moves upward.

The form of the cam curve may be varied to give more or less quick or gradual upward movement to the eccentric actuating-rod, as may be desired.

Having described my invention, I claim—

In a drop-hammer provided with lifting-rolls for raising the hammer, one of which is mounted on eccentric bearings and is shiftable toward and from the other, and an eccentric actuating-rod in operative connection with said shiftable roll; the combination of a cam-lever fulcrumed on a changeable bracket attached to the side frame, an adjustable sleeve on said eccentric actuating-rod having a pin or lug *x* adapted to ride on the cam-lever and be lifted thereby by means of a projection or abutment on the hammer contacting with and turning said lever upwardly, said cam being such that the lifting movement imparted to the rod will cause the rolls to have a gradually-increasing motion from beginning to finish of their separation.

ELLIOTT H. WHITLOCK.

Witnesses:

GEO. W. TIBBITTS,
AARON HAHN.