

(No Model.)

R. H. CLARK.

POWER PRESS.

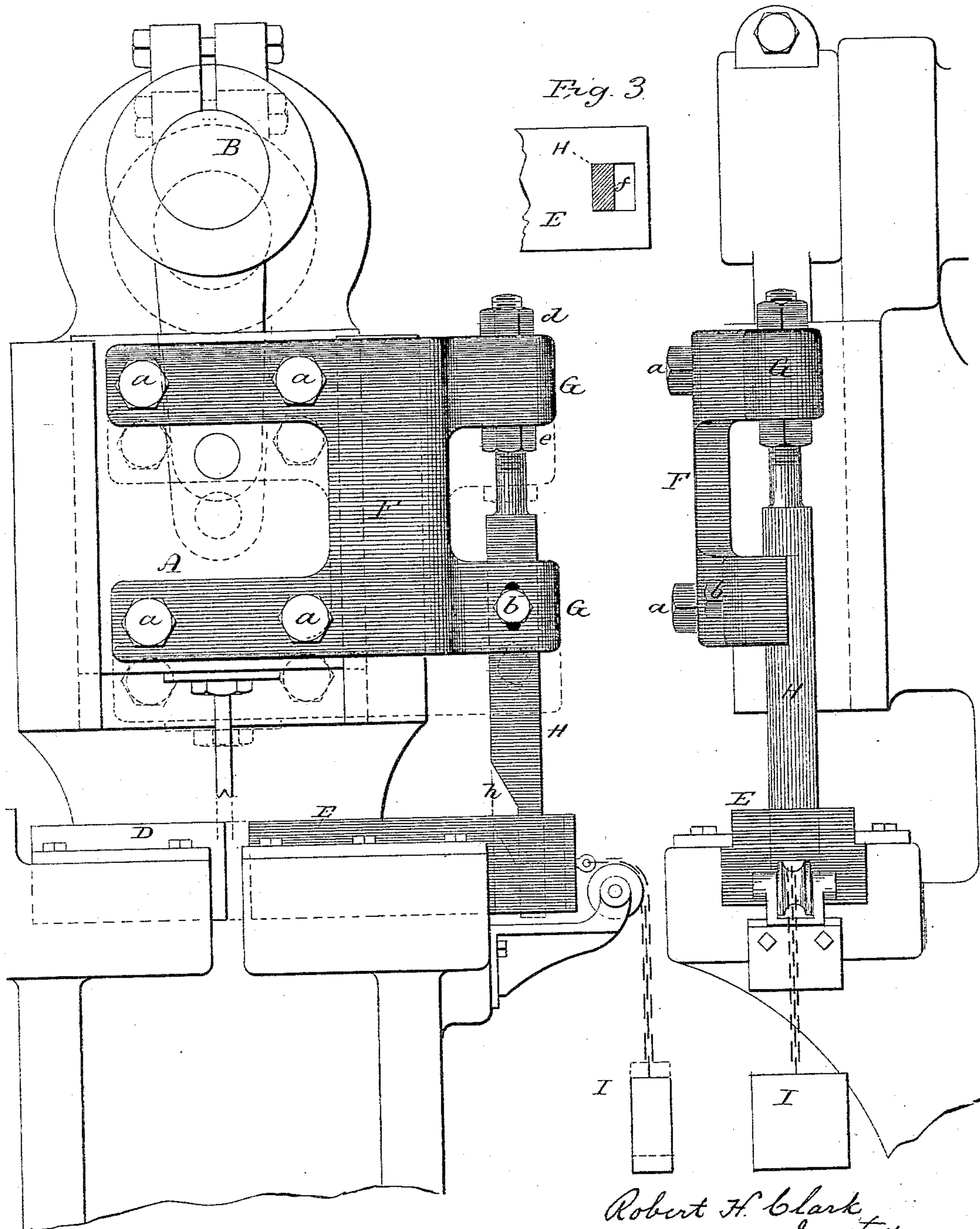
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Fig. 1

Fig. 2

Fig. 3



Witnesses.
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UNITED STATES PATENT OFFICE.

ROBERT H. CLARK, OF SEYMOUR, CONNECTICUT, ASSIGNOR TO NORMAN SPERRY, OF SAME PLACE.

POWER-PRESS.

SPECIFICATION forming part of Letters Patent No. 319,195, dated June 2, 1885.

Application filed April 20, 1885. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. CLARK, of Seymour, in the county of New Haven and State of Connecticut, have invented a new Improvement in Attachments for Power-Presses; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a front view of the press, showing the attachment applied; Fig. 2, a side view of so much of the press as will illustrate the invention; Fig. 3, a top view of the slide E, showing the follower H in section.

This invention relates to an attachment for power-presses, adapted to open and close dies arranged in the bed of the press, and which are required to be thus opened or closed in the performance of work on the press.

Usually presses for this class of work—that is, such as require dies on the bed to be opened or closed—are constructed with special reference to such work, and the slides which carry the dies are operated by cams and levers on the driving-shaft of the press, adapted to so open and close the dies.

The object of my invention is an attachment for a common power-press, which may be applied when occasion requires, and so that the press may be used with the ordinary fixed die, or with sliding or opening dies, as the case may be; and it consists, principally, in a bracket attached to the slide of the press, extending to one side, and so as to partake of the reciprocating movement of the slide; the said slide carrying a follower or vertically-moving cam, made adjustable, and adapted to impart to the movable portion of the die a transverse reciprocating movement for opening and closing, and as more fully hereinafter described.

In the illustration I show a common well-known power-press, which needs but general description.

A is the slide, which is arranged in guides, and receives an up-and-down reciprocating movement from the driving-shaft B, so as to

carry the punch or tool C toward and from the bed below.

D represents the fixed part of the die or die-holder in the bed, and E a slide carrying the corresponding part of the die, the part D being firmly held in the bed while the part E moves in transverse guides toward and from the part D, and so that under such movement, as the slide E approaches the part D, the dies are closed for work; but as the slide E is moved away the dies are opened for the release of the work.

F is a bracket adapted to be applied and fixed to the slide A, here represented as by bolts *a*, and so that the bracket may be attached to the slide or removed therefrom, as occasion may require. The bracket extends to one side, and is constructed with supports G, one above the other.

H is the follower, which extends upward, and is held to the support G by a screw, *b*, through a slot in the support, so as to permit vertical adjustment of the follower. The follower extends up through the support G, and is screw-threaded both above and below the support to receive corresponding nuts, *d e*, so that by turning the two nuts the follower may be raised or lowered, as occasion may require. The follower extends down through a slot, *f*, in the slide E. On its inner face the follower is constructed with an incline, *h*. The slide E is held back against the follower by a weight, I, or other suitable device, which will yield as the slide is moved forward, but will hold the slide back against the follower.

As the slide descends, the cam-surface *h* of the follower strikes the inner end of the slot and forces the slide into its closed position against the part D, and so as to close the dies, and as indicated in broken lines, Fig. 1. This closing of the dies occurs during the first part of the descent of the slide, before the tool commences its operation, or may be at any time during the operation when such movement of the slide and die is desirable. Then, as the slide ascends, during the last part of its movement, the cam-surface *h* rises above the slide and permits the slide E to return, as shown.

The time at which the cam will act upon the

slide may be varied by adjusting the relative position of the follower through the screws *d e*.

In some cases the slide E is employed to carry a die for the swaging operation. The use to which the slide E may be applied is immaterial to my invention, the essential feature of which is the combination, with the slide, of a removable bracket adapted, when applied, to partake of the reciprocating movement of the slide and carry a follower which will operate a transverse slide in the bed.

I claim—

1. In a power-press in which a vertically-reciprocating slide is employed to carry the tool, the combination, with said slide, of a bracket, F, attached to said slide, and so as to partake of its vertical reciprocating movement, said bracket extending to one side of the slide, and the follower H, supported in the extension of said bracket and constructed with a cam-surface, *h*, with the transverse slide E, arranged in the bed of the press, and against

which the said follower works, substantially as described, and whereby the vertical reciprocating movement of the slide on the press will impart a transverse reciprocating movement to said slide E, substantially as described.

2. In a power-press, substantially such as described, the combination of the vertically-reciprocating slide A, the bracket F, removably attached to said slide and so as to partake of its reciprocating movement, said bracket extended to one side, the follower H, supported in said extension and made adjustable vertically therein, and the said slide constructed with a cam-surface, *h*, and the transverse slide E, arranged in the bed of the press, substantially as described.

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Witnesses:

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