

(No Model.)

J. B. & O. B. JOHNSON.

BALING PRESS.

No. 362,280.

Patented May 3, 1887.

Fig. 1.

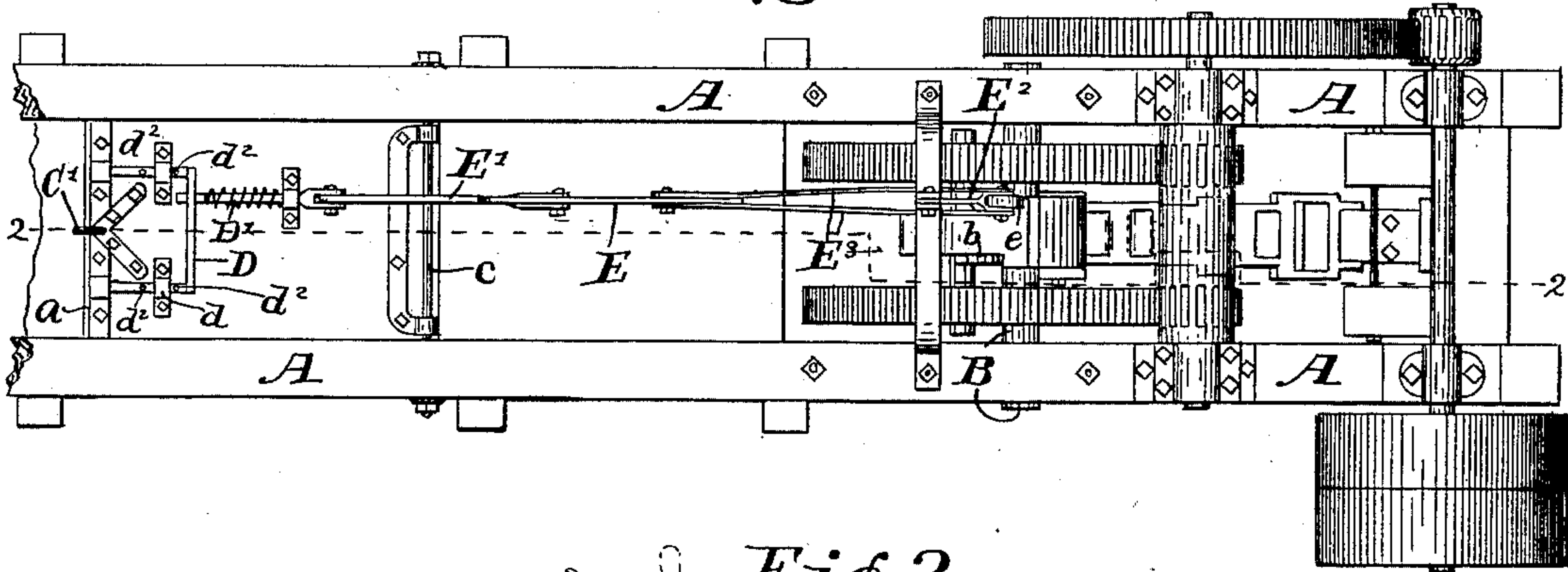


Fig. 2.

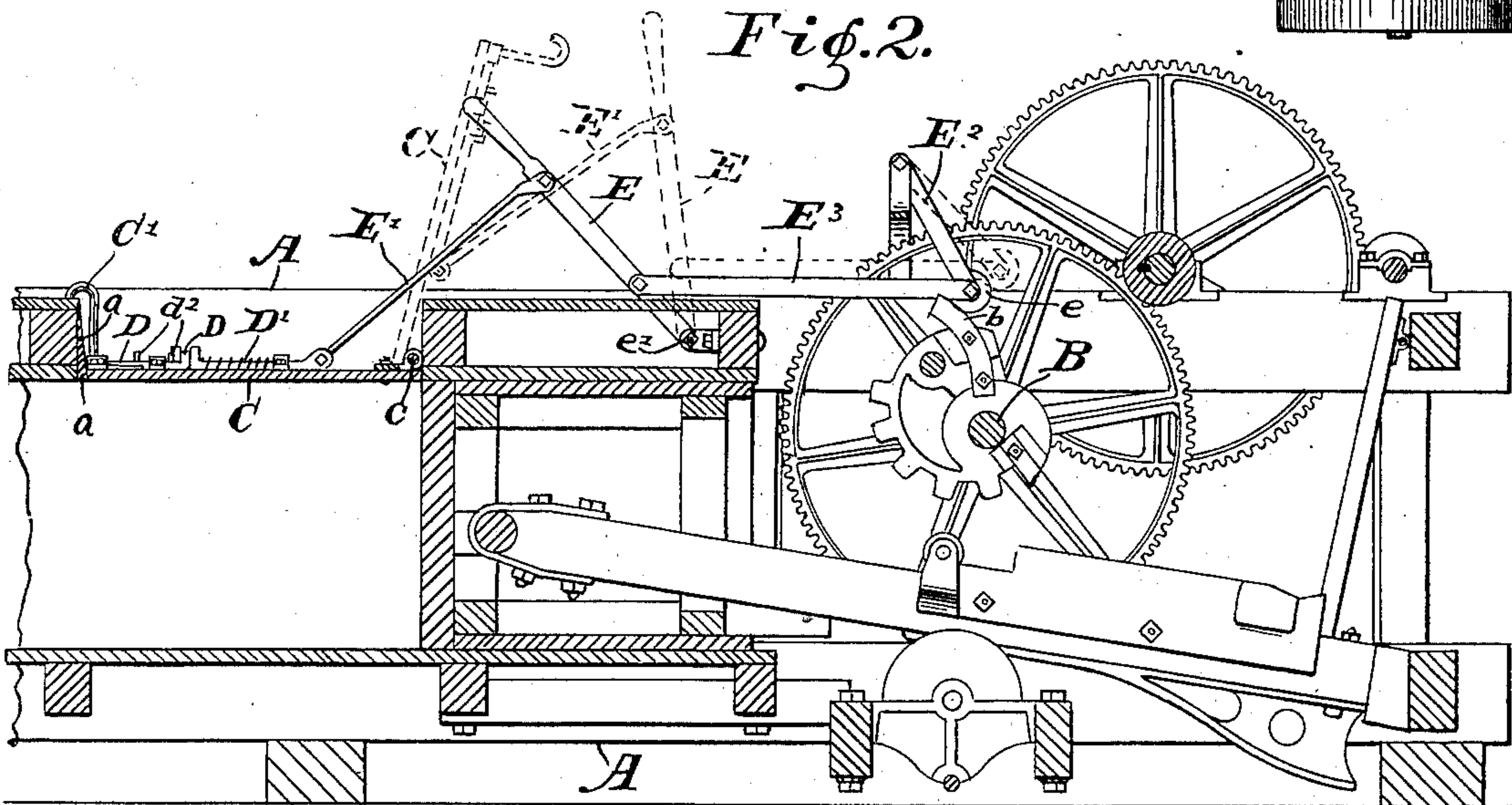
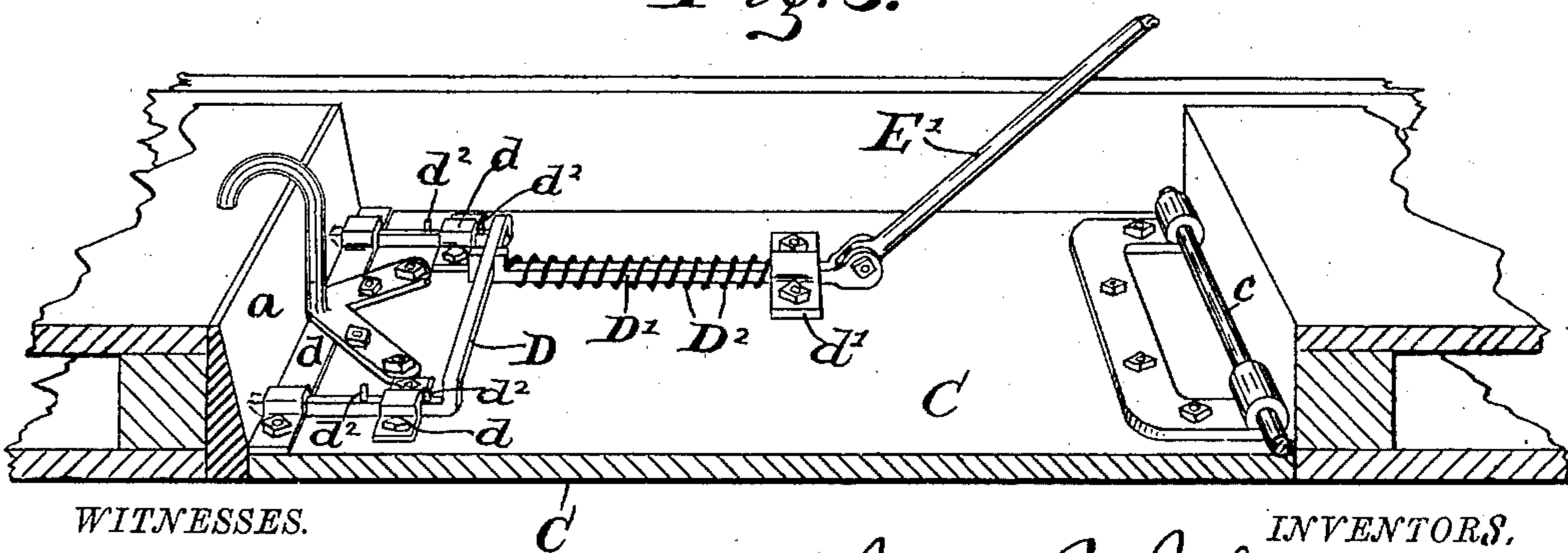


Fig. 3.



WITNESSES.

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JESSE B. JOHNSON AND OSCAR B. JOHNSON, OF INDIANAPOLIS, INDIANA.

BALING-PRESS.

SPECIFICATION forming part of Letters Patent No. 362,280, dated May 3, 1887.

Application filed September 17, 1886. Serial No. 213,788. (No model.)

To all whom it may concern:

Be it known that we, JESSE B. JOHNSON and OSCAR B. JOHNSON, of the city of Indianapolis, county of Marion, and State of Indiana, have
5 invented certain new and useful Improvements in Baling-Presses, of which the following is a specification.

The object of our present invention is to provide a means for automatically raising the
10 trap-door which covers the orifice in the press into which the material is introduced before being subjected to pressure. This object is accomplished by a system of links and levers connected to a latch on said door and to the frame-
15 work, and an arm which comes in contact with and operates said links and levers, and thus disengages the latch and raises the door at the proper time, as will be hereinafter more particularly described and claimed.

20 Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a top or plan view of so much of a press as includes the operating mechanism and the trap-door; Fig. 2, a central
25 vertical section of the same on the dotted line 2 2 in Fig. 1; and Fig. 3, a perspective view of the trap-door and latch, the side of the press being broken away to show the latch
30 more clearly.

In said drawings, the portions marked A represent the frame-work of the press; B, the shaft by which, through suitable gearing, the plunger or press-head is driven; C, the trap-
35 door to the press; D, the latch thereto; and E, a lever by which, in connection with the links and rods which will be presently described, said latch and door are operated.

40 The frame A is the frame-work of any ordinary or desired press, and carries the mechanism and press structure.

The shaft B is preferably the shaft upon which is the device which engages directly with the plunger. Secured to said shaft upon
45 the side of said engaging device, or to any suitable hub on said shaft, is an arm, *b*, which engages with a contact-point, *e*, on the links which operate the latch and trap-door, said contact-point being preferably, as shown, in
50 the form of an anti-friction roller. This arm *b* may, if desired, be secured to the plunger in-

stead of a shaft, or to any other suitably moving part of the press; and, especially in presses driven by horse-power, it is expected that securing the arm to the plunger will be the most
55 usual construction.

The trap-door C is in itself the ordinary trap-door, and is secured to the frame or structure of the press by a suitable hinge, the pintle or rod of which in the construction
60 shown is marked *c*. In front of this door, secured in the press structure, is a beveled latch-strike, *a*, with which the engaging points of the latch D come in contact as the door is closed, and which serve to force back said latch
65 until said points reach the orifices in said strike into which they are to enter. Secured to said trap-door also is the stop C', which prevents it from being forced down too far when it is closed.
70

The latch D is a double latch having two points of engagement, one near each side of the door, and is secured to said door by clips
75 *d*. A spring-actuated operating-rod, D', is connected to this latch at one end, and passes back through a clip, *d'*, at the other. The spring D² thereon serves to hold said rod and the latch forward, so that said latch will be held into engagement, except when forcibly pulled back. Upon each side of each of the rear clips, *d*, in
80 the latch D, is a pin or stop, *d*², which limits the movement of said latch in either direction, and thus prevents the points of said latch from projecting too far when the spring D² is at liberty to act, and also prevents said latch
85 from being drawn too far back by the operation of the levers and links.

The lever E is pivoted to the frame-work or press structure by a pivot, *e'*. It is connected to the sliding bar D' by a rod or link, E', and
90 to a swinging link, E², by a link, E³. At the junction of these two links E² and E³ the contact-point or anti-friction roller *e* is located, as shown most plainly in Fig. 2.

The operation is as follows: The door being
95 closed down and the several parts in the position shown in the full lines in Fig. 2, and the shaft B or other moving part carrying the arm *b* being put in motion, said arm *b* comes in contact with the anti-friction truck *e*, and forces
100 the several links, levers, and trap-door into the position shown by the dotted lines in said

Fig. 2. The first operation, as this arm begins to force said anti-friction roller or contact-point and the parts connected thereto rearwardly, is to withdraw the points of the latch out of engagement with the strike *a*, drawing said latch backwardly until the pins or stops *d*² come in contact with the front side of the rear clips, *d*. The movement continuing, the trap-door is then raised, as shown, and as will be readily understood.

The lever *E* is provided with a handle, as shown, by which, when it is desired to throw the trap-door down, it can be done by hand. The force upon the rod *D'* having been released by the passage of the arm *b* past the contact-point or anti-friction roller *e*, the spring *D*² forces said rod *D'*, and with it the latch *D*, forward until the pins or stops *d*² on the rear side of the clips *d* come in contact with said clips, and the latch is then ready for re-engagement when the door is shut. As will be seen, by a proper arrangement of the arm *b* on a moving part the trap-door can at any desired period of the operation of the press be automatically

unlatched and raised up, thus giving the persons engaged in filling the press the longest possible time in which to do their work.

Having thus fully described our said invention, what we claim as new, and desire to secure by Letters Patent, is--

The combination, in a press, of a moving portion, the trap-door, a latch, *D*, on said door, a spring-operated rod connected to said latch, a lever, *E*, connected by a link to said spring-operated rod and to a swinging link by another link, and a contact-point with which an arm on said moving part will come in contact and operate said latch and door through said links and levers.

In witness whereof we have hereunto set our hands and seals, at Indianapolis, Indiana, this 14th day of September, A. D. 1886.

JESSE B. JOHNSON. [L. S.]
OSCAR B. JOHNSON. [L. S.]

In presence of--

E. W. BRADFORD,
CHARLES L. THURBER.