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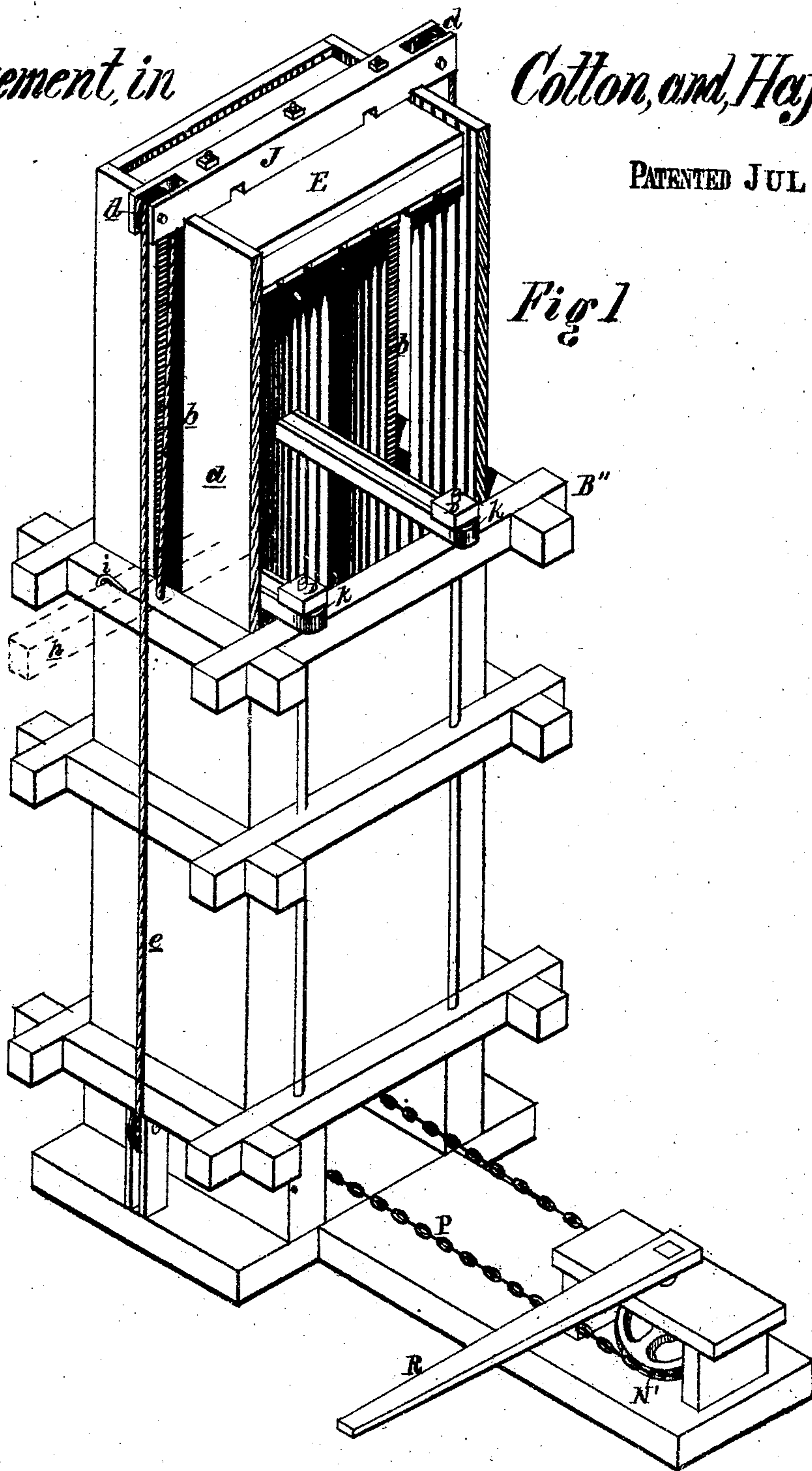
David Knowles

Improvement in

Cotton, and Hay Presses.

PATENTED JUL 11 1871

Fig 1



Witnesses.

M. J. Keeloy
George R. Oakford.

Inventor.

David Knowles

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Improvement in Cotton and Hay Presses.

Fig 2

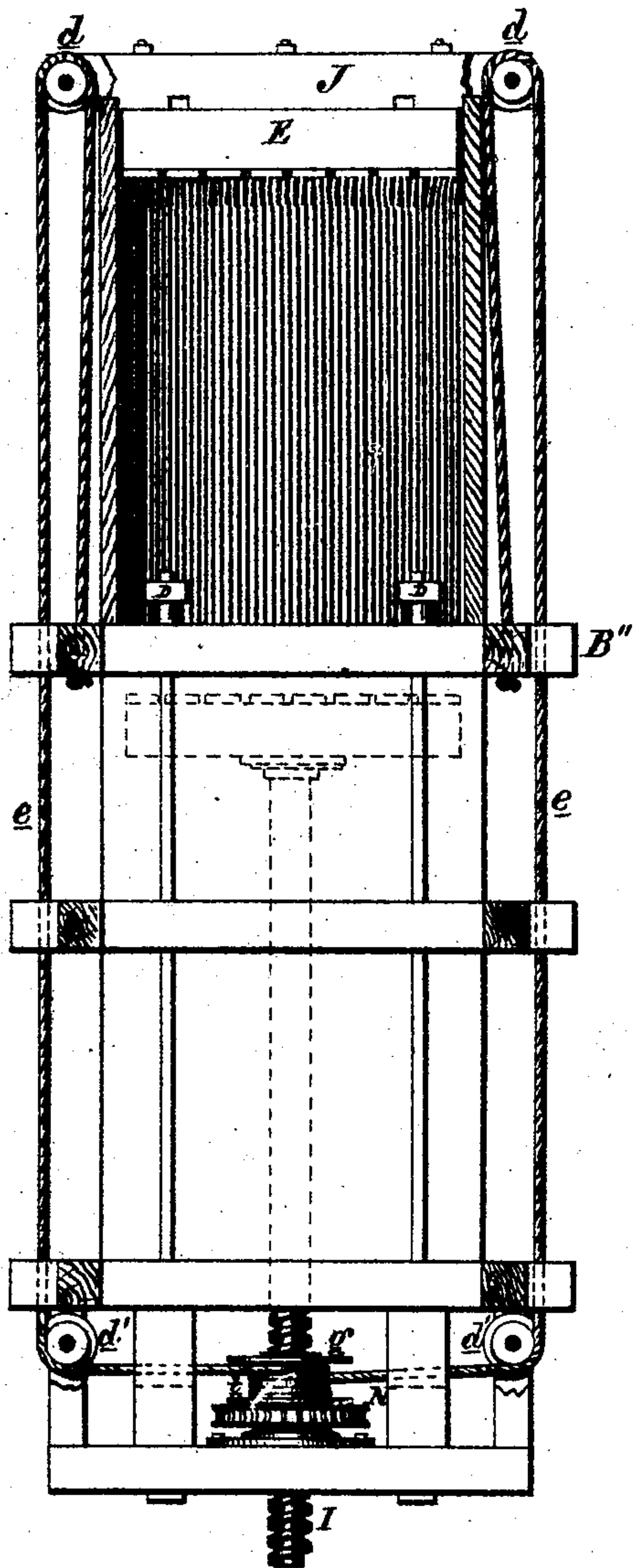


Fig 3

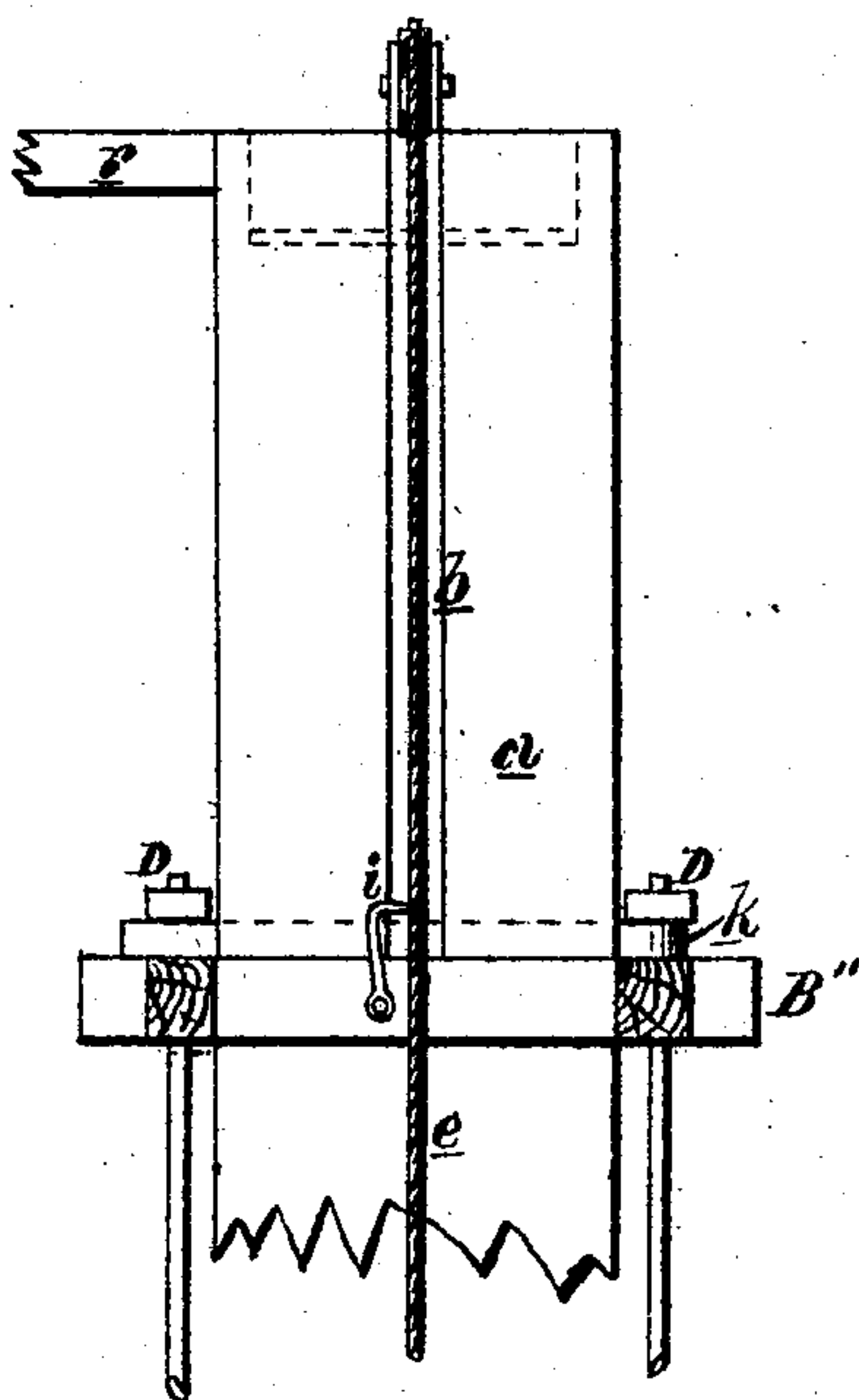
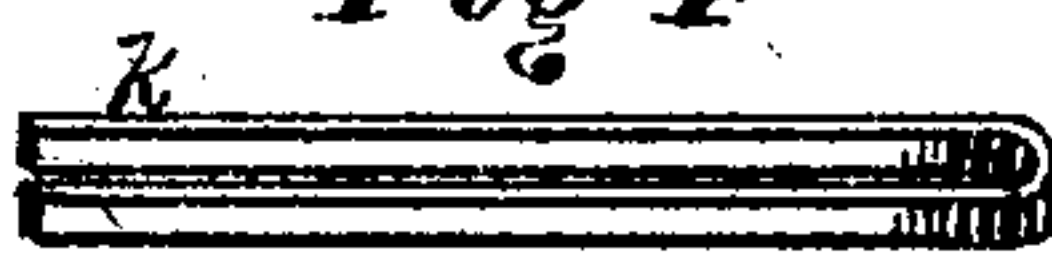


Fig 4



Witnesses.
M. F. Keeling
Isaac R. Oakford,

Inventor.
David Knowles

UNITED STATES PATENT OFFICE.

DAVID KNOWLES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN HAY AND COTTON-PRESSES.

Specification forming part of Letters Patent No. 116,965, dated July 11, 1871.

To all whom it may concern:

Be it known that I, DAVID KNOWLES, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Presses for Baling Cotton, Hay, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Figure 1 is a perspective view of a press embodying my improvement. Fig. 2 is a front elevation and view of the same. Fig. 3 is an end view of the upper section. Fig. 4 is the lock-bars of the head of the press.

To enable others to make and use my invention, I will now proceed to describe its construction and operation.

In place of the ordinary head-block I substitute a frame, B'', as shown in the drawing, Fig. 1, on which I place a supplementary box, a, corresponding in size with that of the press proper, with guide-slots b b at the ends of the same. The head-block E is movable, with the cross-beams J extending through the guide-slots b b at the ends of the box a, having shears or pulleys d d at the ends of the same. The rope or chain e, being made fast to the frame B'', is passed over the pulleys d d, and then down and under the pulleys d' d' at the bottom of the press; thence to the shell-pulley g, which is made movable on the box or nut of the screw-shaft I, upon which the chain-wheel N is secured.

In operating the press I first elevate the head-block by means of a counter-balance or other simple device, slide it back on the ways r, and, hav-

ing filled the press, I engage the shell-pulley or drum g with the chain-wheel N by means of the clutch-pin t, when the head-block is drawn down to the frame B'' by the endless chain P and lever R, in connection with the chain-wheel N'. It is then secured by sliding the lock-bars k under the nuts D of the long iron bolts or rods. The clutch-pin t is then withdrawn and the operation is completed with the screw alone. If the substance being pressed is an elastic material, as cotton, after filling the press, I insert the retaining-bar h through the guide-slots after the press is filled, and when drawn to the frame B'' it is secured by means of the side hooks i upon the frame B'', when the head-block is again thrown up and the press refilled, which operation can be repeated at pleasure, or so long as it is available, thereby greatly facilitating the operation of baling, and, at the same time, requiring a much shorter screw.

Having thus described my invention and its operation, what I claim and wish to secure by Letters Patent, is—

In the press herein described, the combination of the supplementary box a and head-block E, with cross-beam J provided with sheaves d d, the rope or chain e and P, sheaves d' d', windlass g, wheels N N', screw I, and clutch-pin t, when all are constructed and arranged substantially as shown and described, for the purpose set forth.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

Witnesses: DAVID KNOWLES.

JACOB R. MASSEY,
JAMES MACNICHOL.