

No. 26,622.

PATENTED DEC. 27, 1859.

C. E. RYMES.
RETAINER FOR HYDRAULIC OR OTHER PRESSES.

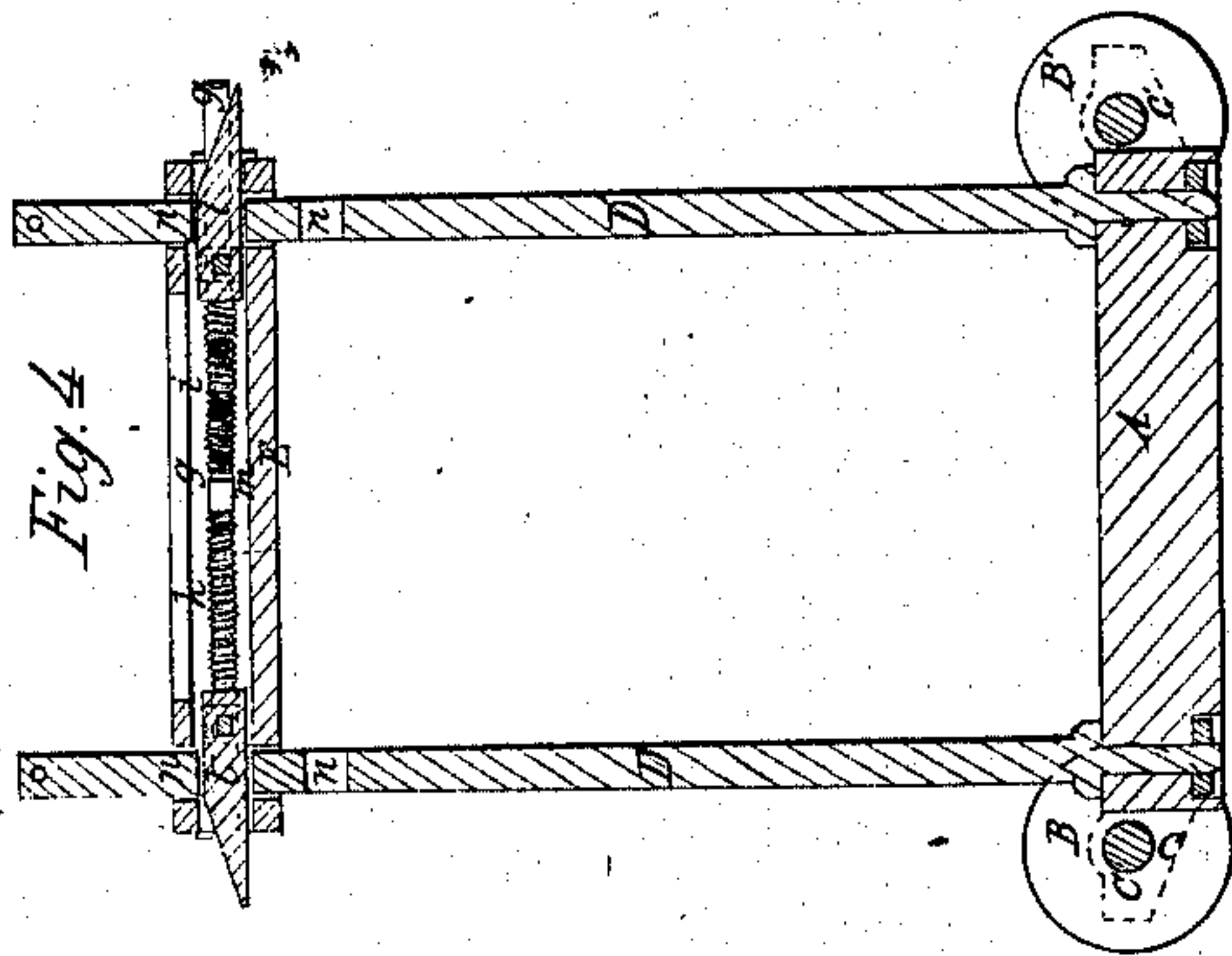


Fig. 5

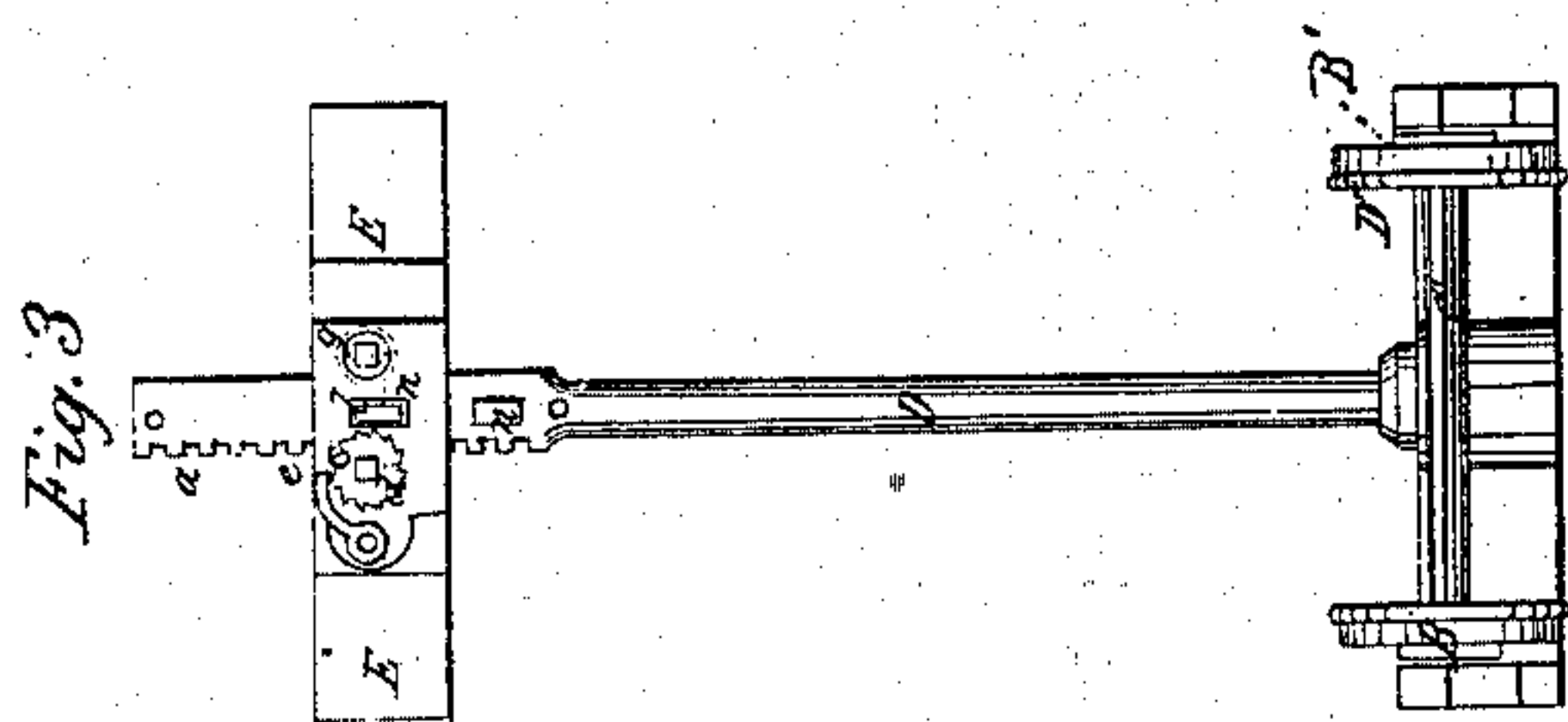
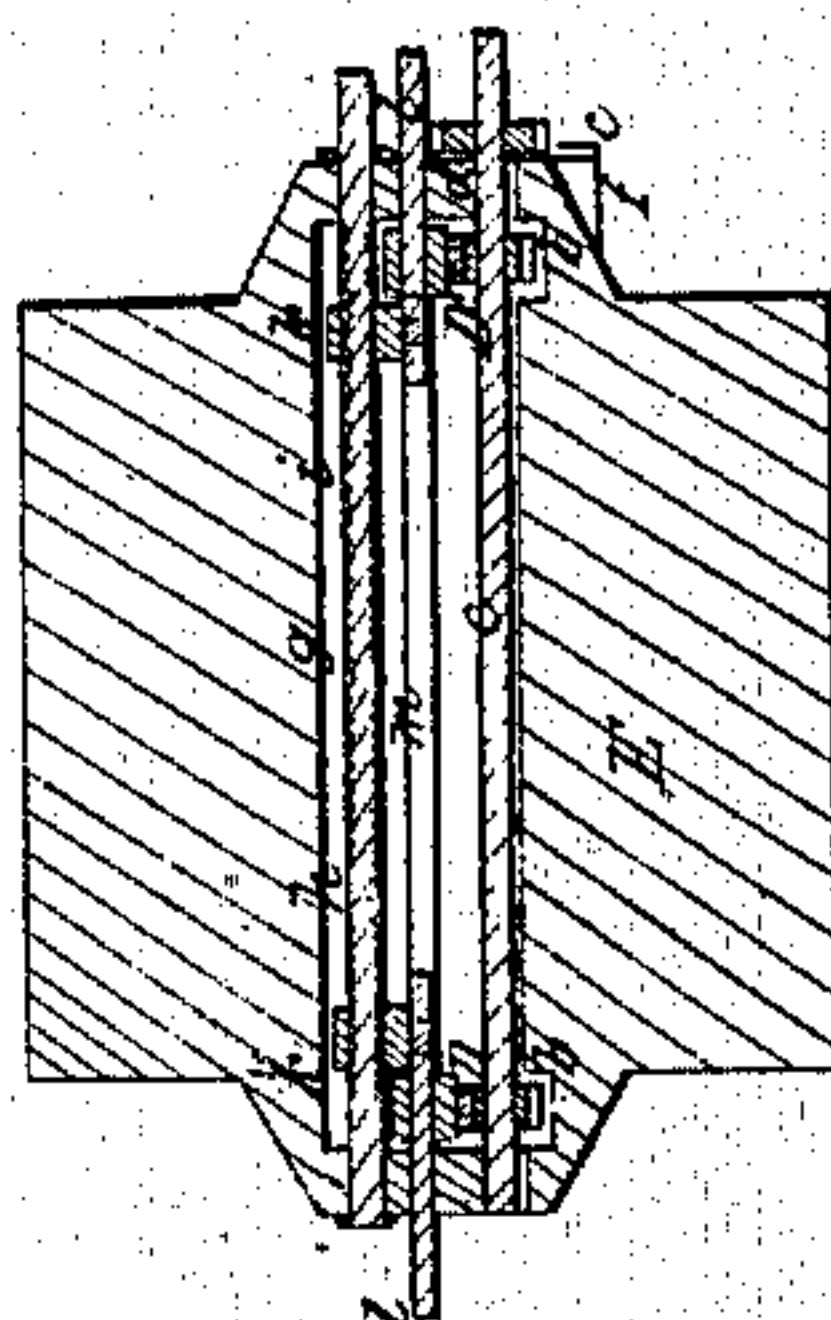


Fig. 3

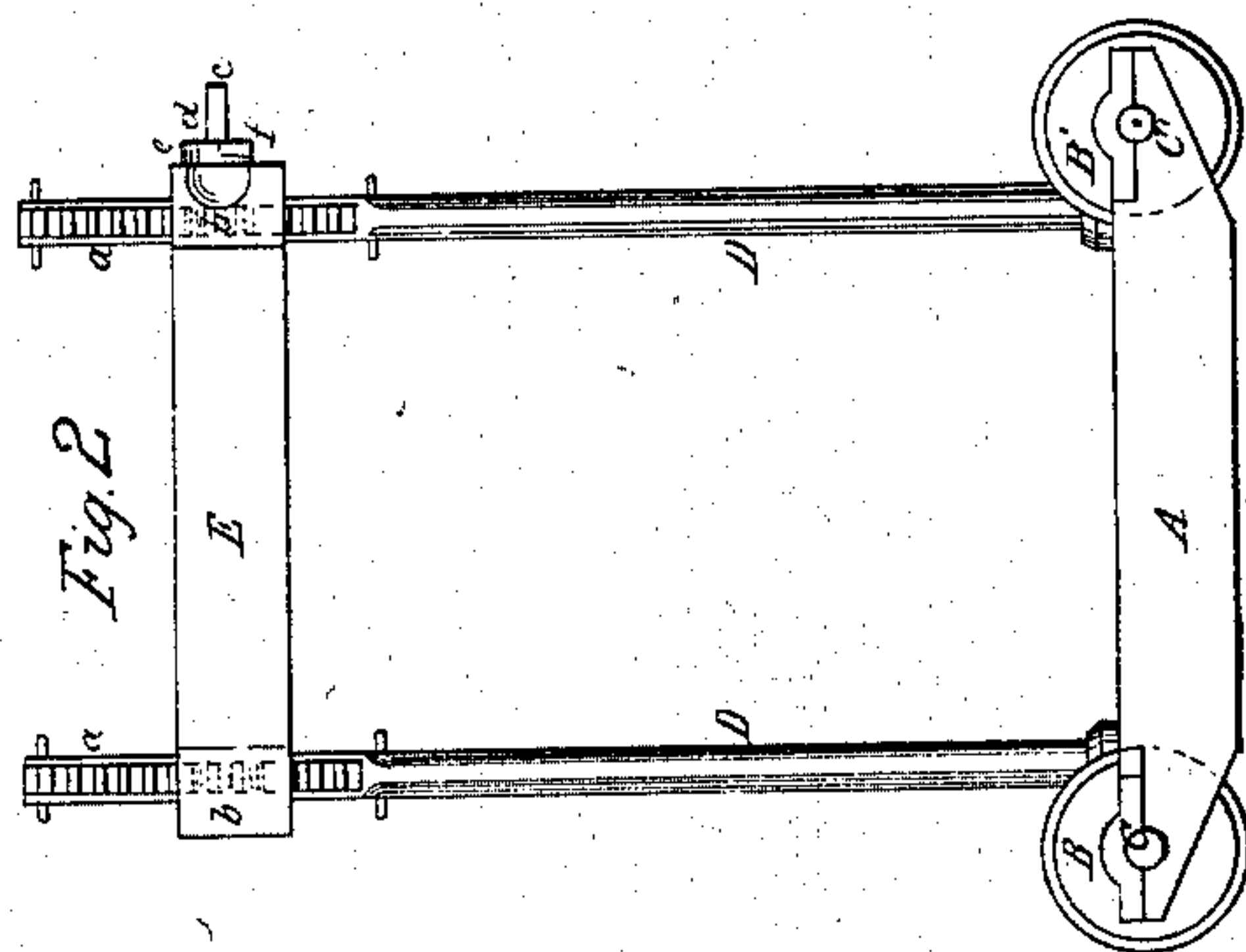
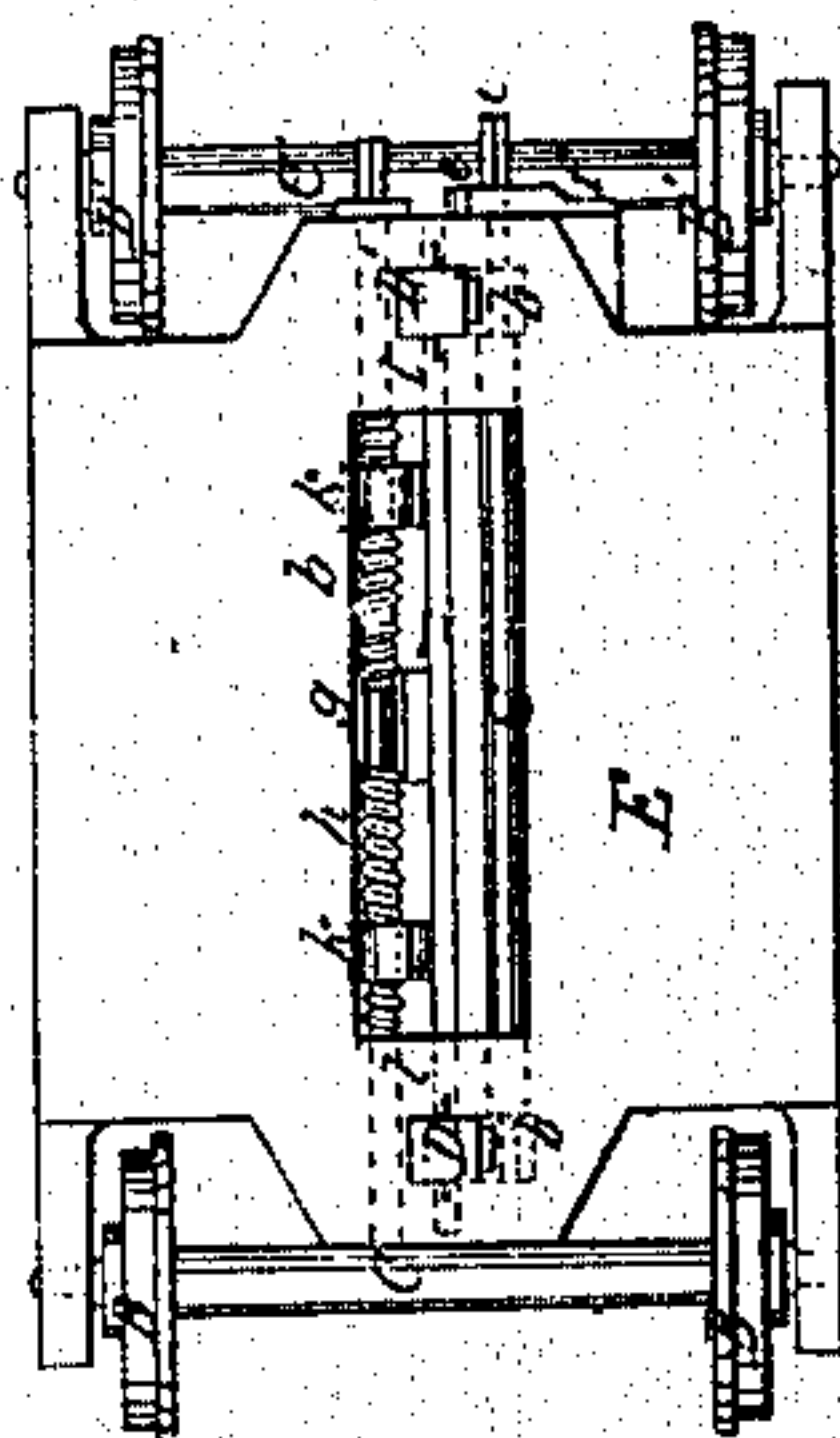


Fig. 2

Fig. 1



Witnesses
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UNITED STATES PATENT OFFICE.

CHRISTOPHER E. RYMES, OF CHARLESTOWN, MASSACHUSETTS.

RETAINER FOR HYDRAULIC PRESSES.

Specification of Letters Patent No. 26,622, dated December 27, 1859.

To all whom it may concern:

Be it known that I, CHRISTOPHER E. RYMES, of Charlestown, in the county of Middlesex and State of Massachusetts, have
5 invented an Improved Retainer for Hydraulic or other Presses; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, is a top view. Fig. 2, a front elevation, and Fig. 3, an end elevation of such retainer. Fig. 4, is a longitudinal section of it, while Fig. 5, is a horizontal section of the platen, its wedges, shafts, and
15 other mechanism.

The article termed a "retainer" is used for receiving tobacco in suitable receptacles or boxes, transporting the same into a hydraulic press, and retaining or holding it
20 while it is being pressed as well as for a sufficient period after it may have been pressed, the retention of the tobacco in a compressed state being kept up for a period sufficient for it to become set or so compact-
25 ed that there may be little or no expansion of it after its removal from the retainer. With a hydraulic press it is customary to employ several retainers which by means of wheels and railways are conducted to and
30 from the press.

The lower part, or bed plate A, of each retainer is furnished with two sets of railway wheels B B; B' B', mounted on axles C, C'. From the part A, two metallic bars, posts or
35 standards, D, D', extend upward vertically or at right angles to the top surface of such bed. Each of such bars, D, D', is furnished with a toothed rack, a, arranged on it as shown in the drawings, the same being to re-
40 ceive and engage with one of two gears or pinions, b, b, which are fixed on a key shaft c, that extends through and is supported on a platen or follower, F, through which the bars D, D', pass. A ratchet d, is fixed on
45 the shaft, near one end of it, and is furnished with a retaining pawl e, which turns on a pin or journal f, projecting from the follower E. Another key shaft, g, also extends through and is arranged horizontally on the
50 follower and parallel to the first named key shaft. This shaft, g, is furnished with two male screws, h, i, whose threads are pitched alike and in opposite directions, one being a right and the other, a left screw. These

screws work respectively in female screws 55 formed in two arms, k, k, each of which projects from one of two wedges l, l, in manner and within a recess, m, formed in the platen E as shown in the drawings. Furthermore, each rod or bar, D, or D', is furnished with
60 two or more slots n, n, arranged in rear of its rack and in other respects as shown in the figures.

By applying a crank key to the shaft, g, and revolving it, the wedges may be made
65 either to approach the bars D, D', or recede from them and therefore, whenever it may be necessary, the wedges may be caused to enter the slots of the bars and operate to confine the platen in position or from rising up-
70 ward, after removal of the hydraulic press from it.

I am aware that a tobacco press retainer has been constructed not only with screws upon its upright bars but with nuts (in or
75 on its platen) to work on such screws. These are objectionable on account of the difficulty of turning them back, the great expenditure of time required to revolve them sufficiently for elevating the platen to the height re-
80 quired for loading the retainer, as well as the difficulty in maintaining the horizontality of the platen. There are other disadvantages attendant upon them which are ob-
85 viated by my invention.

By the employment of two wedges operated simultaneously by the revolution of one shaft and its two screws, the platen may not only be correctly locked down, but will be
90 caused to always maintain its parallelism to the bed. Furthermore, the arrangement of the wedges and screw shaft within a recess in the platen and to operate with slots arranged in the standards or bars as described, causes the said wedges and their operative
95 mechanism to be out of the way of the platen of the hydraulic press, and enables it to close down upon the follower E.

By means of the racks upon the bars and the pinions fixed on one shaft and arranged
100 on the follower as described, the elevation of the follower after withdrawal of the wedges from their slots can be effected very expeditiously.

What therefore I claim is—

1. The arrangement and application of the two wedges and their operative screw shaft, (provided with screws as described) in the
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follower and with respect to and so as to operate with slots formed and arranged in the bars D, D', substantially as specified.

2. And in combination with the slots and
5 the wedges and their operating mechanisms, applied to the follower as described; I claim the elevating racks and pinions arranged in

and applied to the follower and its upright bars essentially in manner as set forth.

CHRISTOPHER E. RYMES.

Witnesses:

R. H. EDDY,

F. R. HALE, Jr.