

(No Model.)

J. L. LEWIS.  
Power Press.

No. 235,865.

Patented Dec. 28, 1880.

Fig. 1.

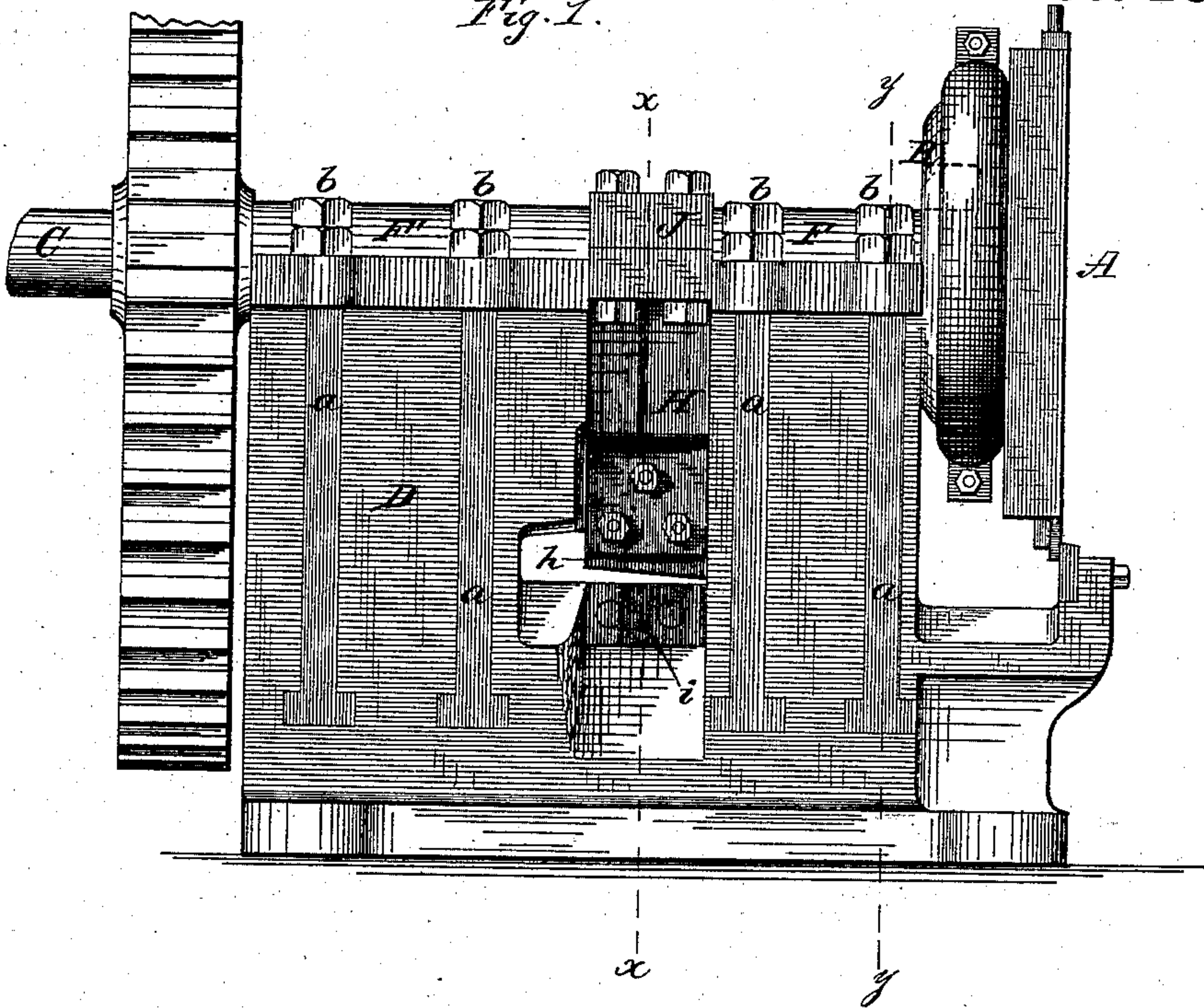


Fig. 2.

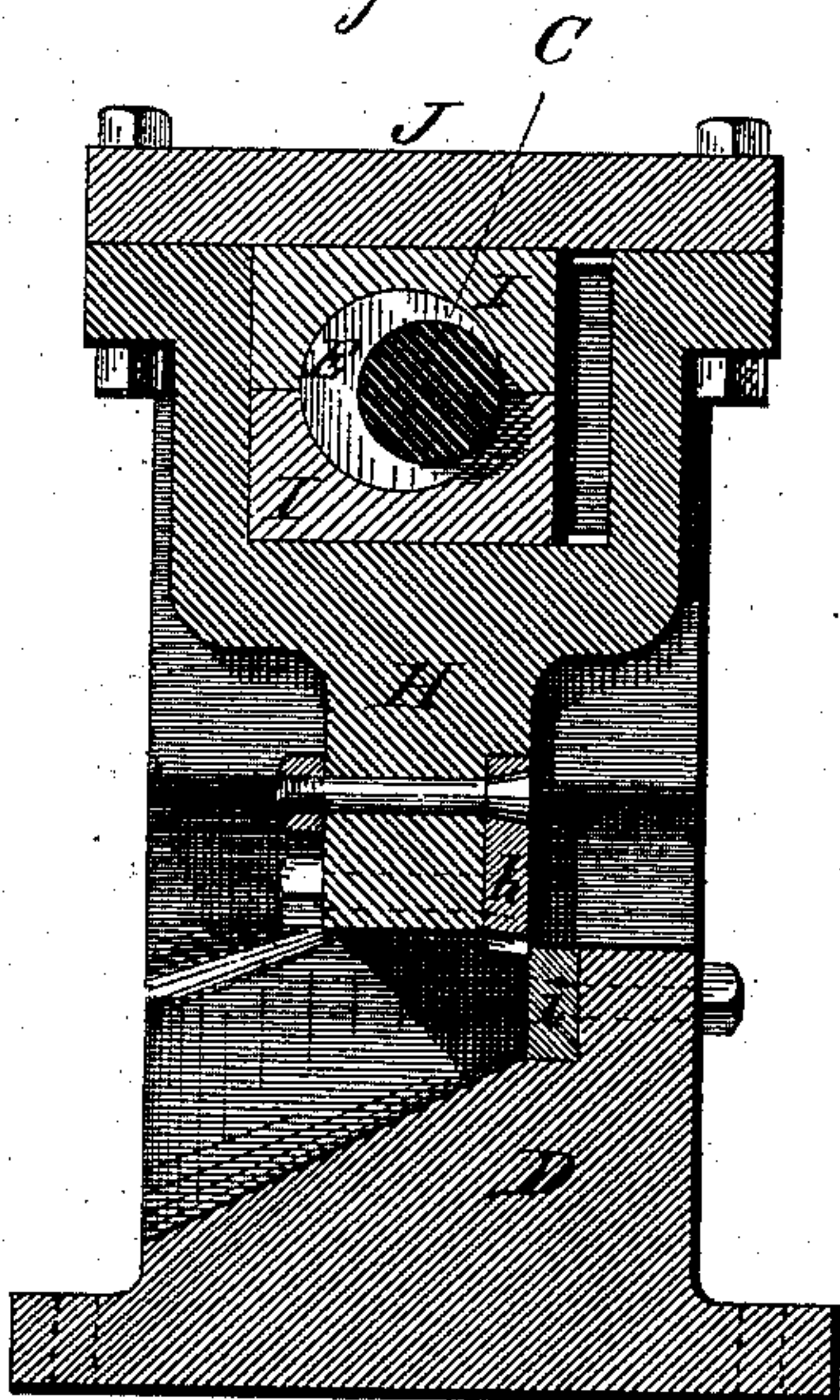
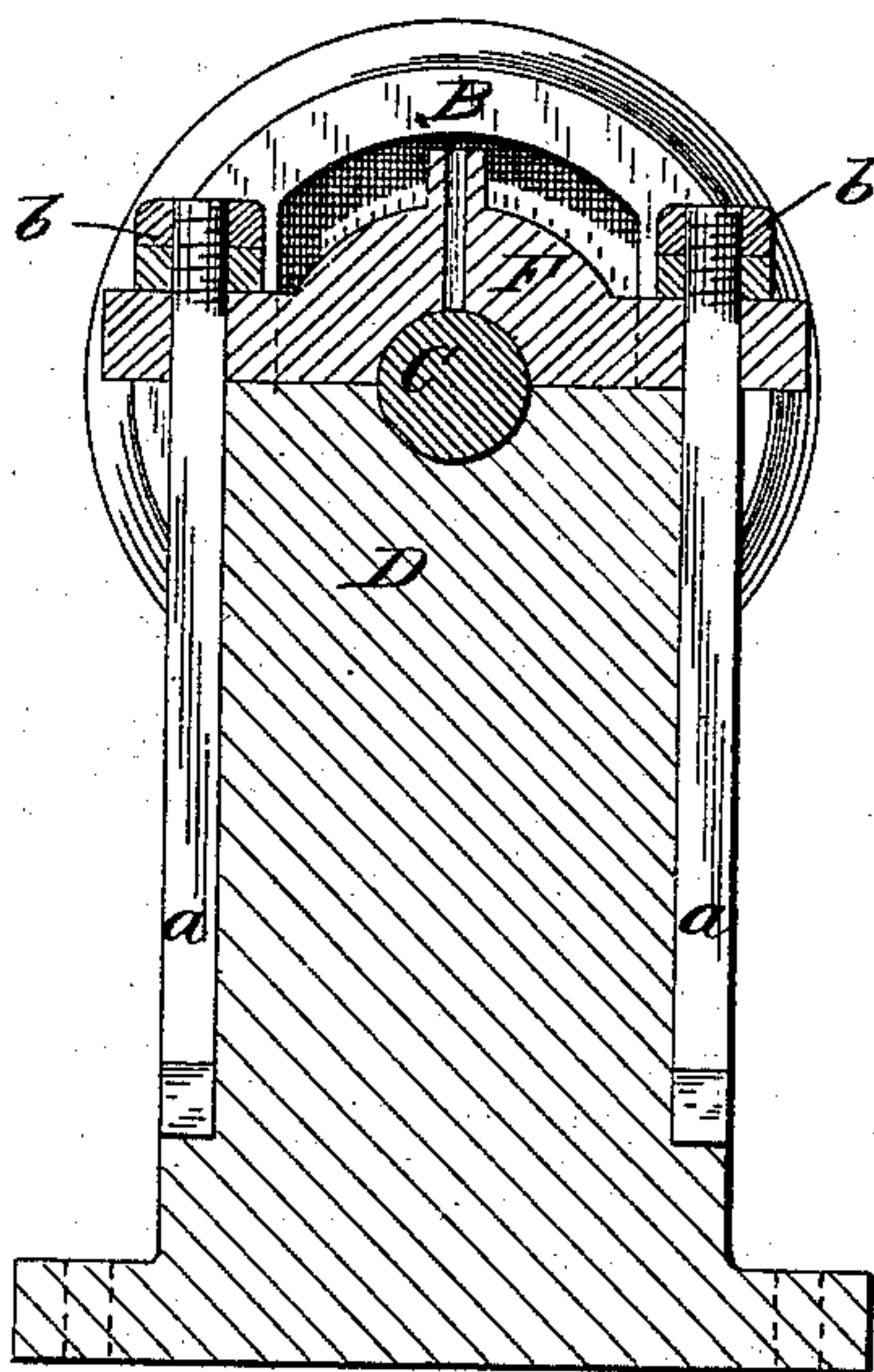


Fig. 3.



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# UNITED STATES PATENT OFFICE.

JOHN L. LEWIS, OF PITTSBURG, PENNSYLVANIA.

## POWER-PRESS.

SPECIFICATION forming part of Letters Patent No. 235,865, dated December 28, 1880.

Application filed October 25, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. LEWIS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain  
5 new and useful Improvements in Power-Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

10 Figure 1 is a side elevation of the press. Fig. 2 is a transverse vertical section on line *x x* of Fig. 1. Fig. 3 is a similar section on line *y y* of Fig. 1.

This invention relates to an improvement on  
15 the power-press described in Letters Patent No. 204,158, granted to me. The shears described therein are adapted to cut and punch many different sizes of bar and plate; but it is desirable to render the press capable also  
20 of cutting the very heaviest bars and other heavy iron, as well as those of light grades; and it is especially desirable to have a press capable of doing all the above varieties of work; and the object of this invention is to  
25 convert the tool described in my said patent into one of the above character.

My present improvement, then, consists in setting a shear on an eccentric about the middle of the main shaft, and so constructing the  
30 frame with an opening at the same point as to admit of the insertion and attachment of the lower blade, the upper or movable shear taking motion from the eccentric by means of a laterally-reciprocating journal-box; also, in  
35 extending the shaft-cap into the head of the body, which is recessed to such a degree that in case of a too heavy strain the cap may yield upwardly without more damage than the stripping of threads on the stay bolts or  
40 nuts; further, in the construction and combination of parts, substantially as hereinafter fully described and claimed.

More particularly, my invention is as follows:

45 A designates the reciprocating and reversible tool holder or plunger, which, as explained in my former patent, receives motion through the circular head B by means of an eccentric on the main shaft C and a sliding journal-box.  
50 These parts, with one exception, as well as the

under part of the tool, remain as described in said patent, and need not, therefore, be further described herein. The body D of the machine has a central gap, as shown, and the shaft C revolves in a suitable bearing 55 throughout the length of the body. At the middle, or thereabout, of the shaft C, I construct the eccentric E, and on each side of this I place the respective caps F F' on the shaft, and secure them by means of the T- 60 headed bolts *a*, which are let into corresponding recesses in the body D, as shown, and the caps are firmly held down by the nuts *b*.

The circular head B is recessed, as shown in Fig. 3, to permit the entrance of a project- 65 ing end of cap F, which thus imparts stiffness to the shaft, and prevents knocking when at work; but besides merely allowing the entrance of the elongated cap F, the head B has its recess larger vertically than the space re- 70 quired to admit the cap F. The object of this is simple. Should the shear be subjected to a strain beyond its power of resistance the cap-bolts will strip and the shaft rise and lift the cap. Now if the latter simply fitted into 75 the head B a serious break might occur; but the recess being intended to admit of such vertical play of the cap F, no damage could in such event occur beyond the mere stripping of the threads on two or more of the cap 80 bolts or nuts.

In the gap left about the middle of the body D, I place a plunger, H, having a top opening for the reception of the sliding journal-box I, which exactly fits the eccentric E, 85 the box I being secured against vertical play by the plunger-cap J, as shown. Plunger H has at its lower extremity the blade or cutter *h*, and to a corresponding part of body D, below it, is secured a similar blade, *i*. Thus constructed, at each revolution of the shaft C plunger H reciprocates vertically, and as the shaft is supported securely on both sides of the plunger very heavy work may be done on that portion of the machine. 95

In practice I would prefer to set the two eccentrics at opposite points of the shaft, so that the working effort of the two plungers would take place at different times, or, in other words, plunger A would be descending while 100

plunger H would be recovering for a fresh effort.

I claim as my invention—

1. In combination with the gapped body D,  
5 plunger A, head B, eccentric shaft C, and  
caps F F', the plunger H, having a cutter  
suitably attached and corresponding with a  
cutter, i, on the body, substantially as de-  
scribed.
- 10 2. The combination of plunger A, head B,

recessed as described, projecting cap F, shaft C, body D, and T-headed bolts a, substantially as specified.

In testimony whereof I have hereto set my hand.

JOHN L. LEWIS.

Witnesses:

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