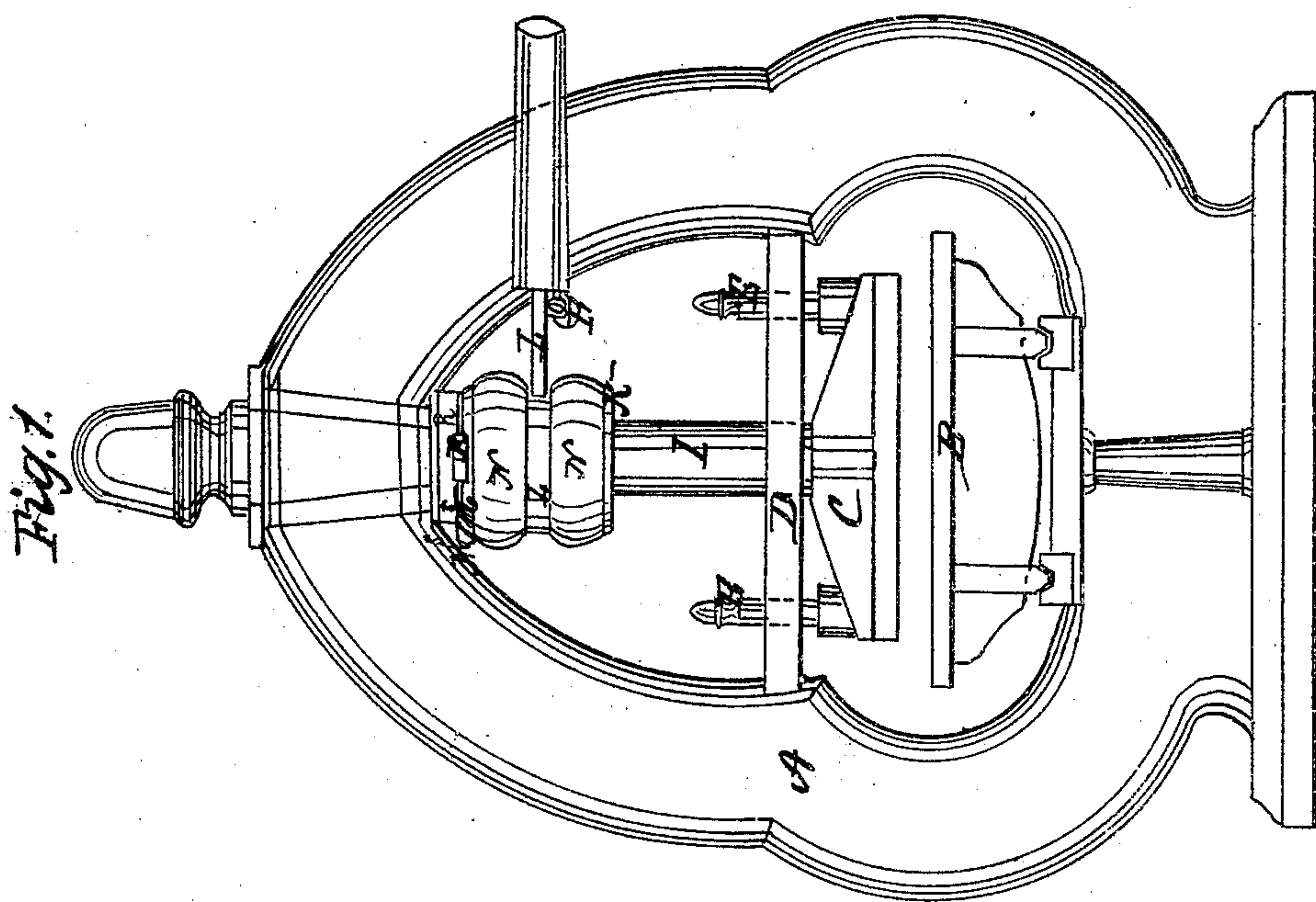
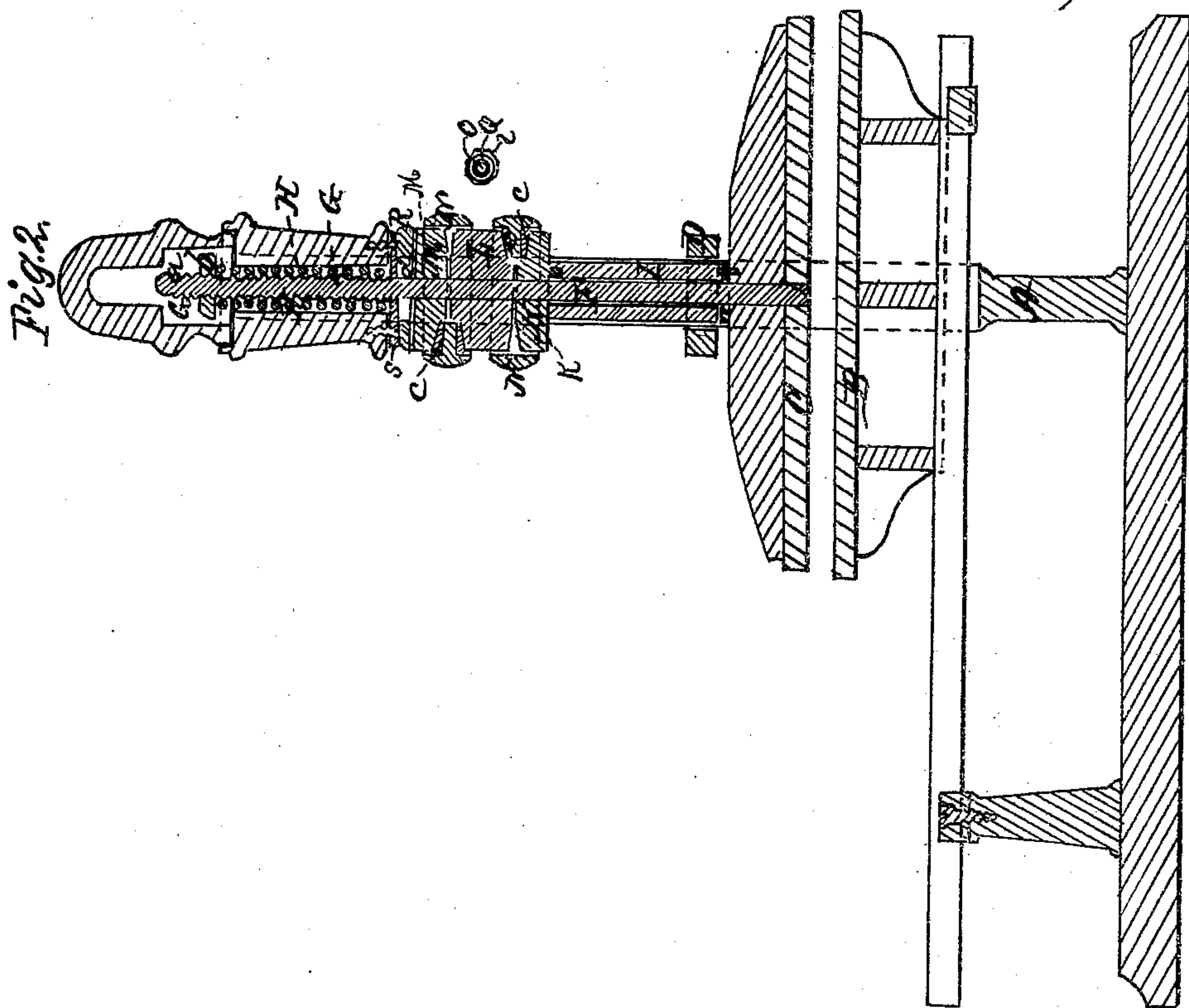


J. Morse. Sheet 1 of 2 Sheets
Printing Press.

N^o 18527.

Patented Oct. 27, 1857.



J. Morse. Sheet 2. 2. Sheets
Printing Press.

N^o 18527.

Patented Oct. 27. 1857.

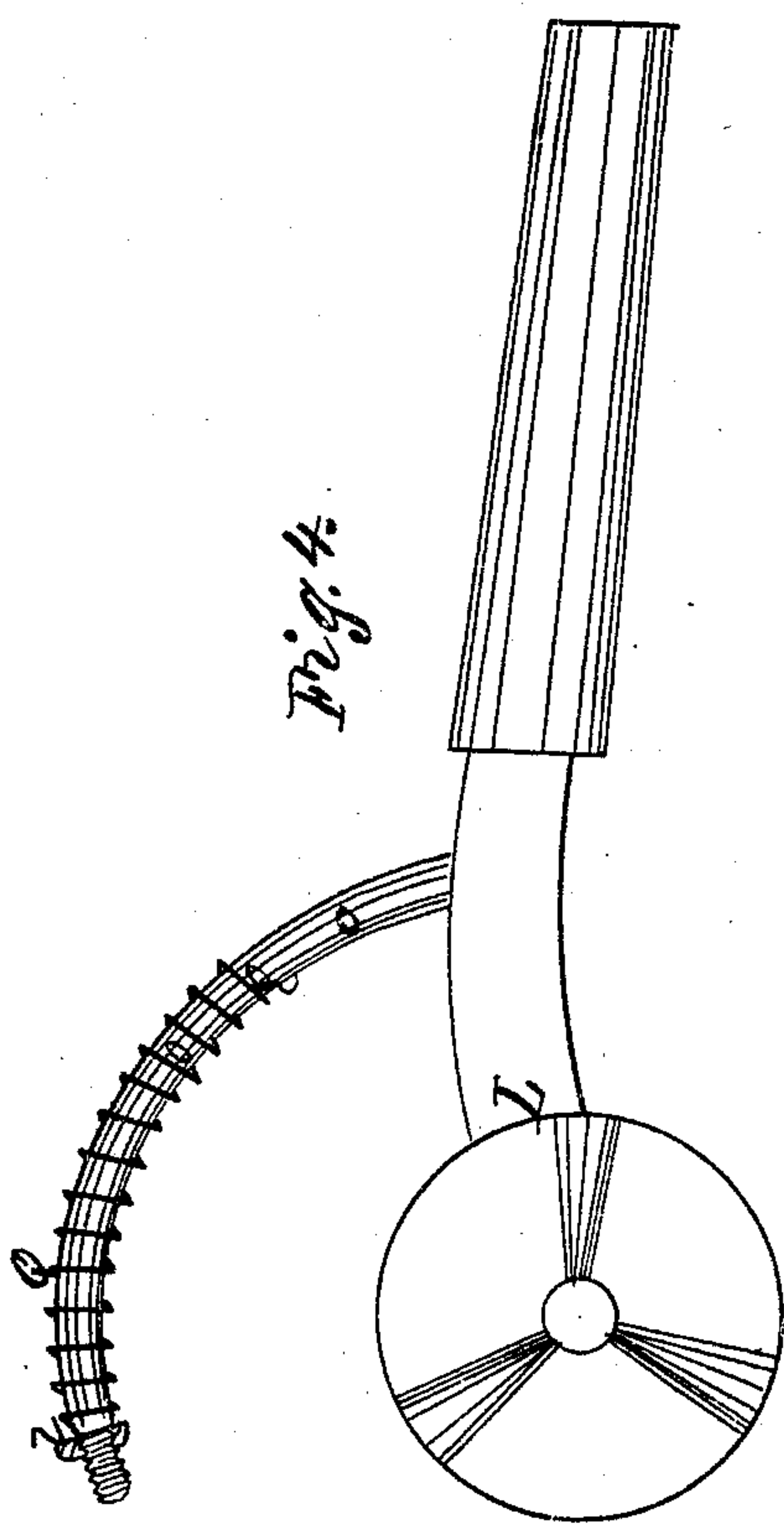


Fig. 6.



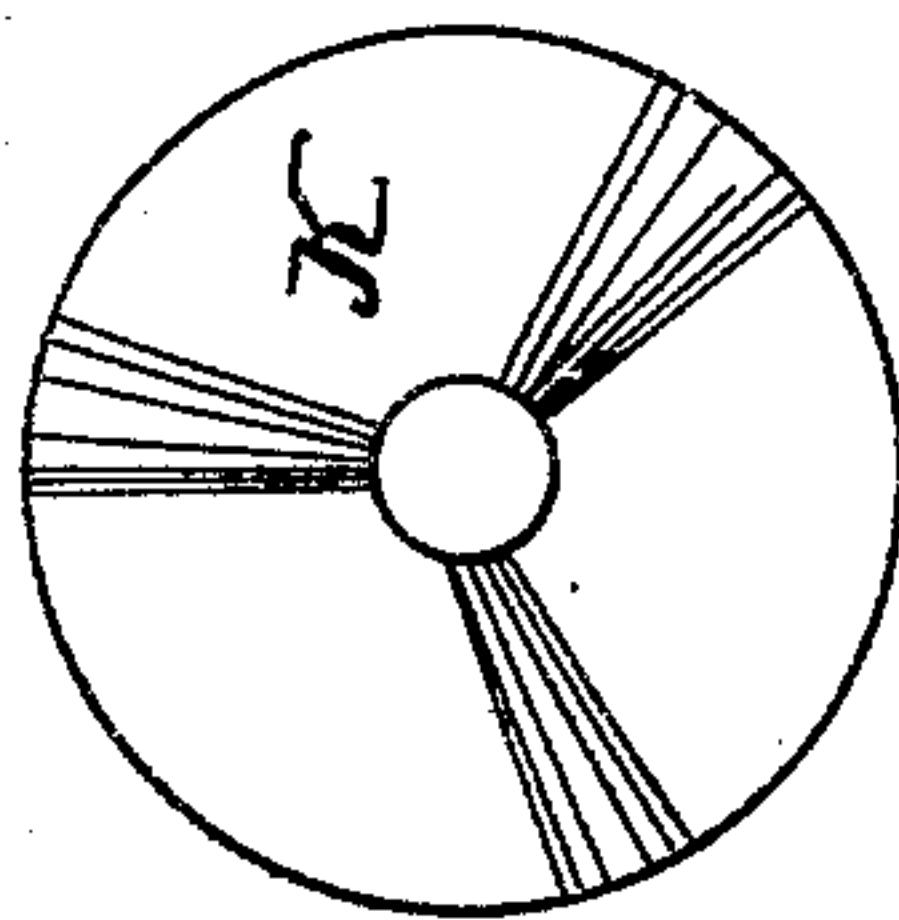
Fig. 7.



Fig. 3.



Fig. 5.



UNITED STATES PATENT OFFICE.

JEDEDIAH MORSE, OF CANTON, MASSACHUSETTS, ASSIGNOR TO THE S. P. RUGGLES POWER PRESS MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS.

HAND PRINTING-PRESS.

Specification of Letters Patent No. 18,527, dated October 27, 1857.

To all whom it may concern:

Be it known that I, JEDEDIAH MORSE, of Canton, in the county of Norfolk and State of Massachusetts, have invented a new and
5 useful Hand Printing-Press; 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 front elevation of the press. Fig. 2, a longitudinal and vertical section of it. Fig. 3, is a top view of the pressure adjusting wedge. Fig. 4, a top view of the pressure lever.

15 In such drawings, A, is the frame of the press; B the bed, and C, the platen, the same being arranged together in the usual manner. Directly over the platen and extending across the frame is a bar D, which serves to
20 receive the guides E, E, which project up from the platen and play through holes in said bar.

There is attached to the middle part of the platen, a rod F, which rises perpendicularly
25 upward therefrom and through a chamber G, made in the upper part of the press frame, and for the purpose of receiving a helical spring, H, which encompasses the rod and rests on the bottom of the said chamber.
30 The rod has a male screw, *a*, on which a nut, *b*, is screwed down upon the upper end of the spring, H, the platen thus being suspended from the upper part of the frame by means of the said rod and spring.

35 Resting on the top of the platen and surrounding the rod, F, is a tubular pitman, I, carrying on its upper end, a cam plate or head K, formed as shown in top and side views, in Figs. 5, and 6, the same having ar-
40 ranged above it, a cam lever L, as seen in top and side views in Figs. 4 and 7. Over the lever and directly under the crown of the arch of the frame is another cam plate, M, formed like the plate K. Between the lever
45 I, and each cam plate there is a series of conical rollers, *c, c*, rotating freely on journals extending from the inner side of a ring N, the whole being constructed in such manner, that when the cam lever L, which turns
50 on the rod F, is pulled forward, it shall cause the platen to be depressed toward the bed. The rod, F, constitutes a fulcrum for the cam lever, and it extends through an elongated slot, *d*, made in a metallic wedge,
55 R, which is placed between the cam plate M, and a bearing S under and against the

crown of the arch of the frame and is for the purpose of enabling a person to regulate the degree of impression given by the cam lever, L, when pulled forward. An arm or
60 curved rod, O, extends backward from the cam lever and through an eye or staple P, projecting from the frame. On the said rod and between the staple and a nut, *z*, screwed upon the outer end of the rod, there is a
65 spring, Q, for the purpose of retracting the rod after it has been pulled forward.

By my arrangement of the lifter spring, H, and its rod, F, with respect to the platen and the lever, L, I am enabled not only to
70 apply the lifting power of the platen directly to the middle of the same, but I make the rod F, answer, not only as a fulcrum for the lever L but as a means of support to the cam plates K, and M and the pitman.
75

By applying to the middle of the platen the spring for elevating it, a great advantage is gained over the application of springs to each of the guides, E, E, in the ordinary way, and all danger of canting of the platen
80 avoided; for when the platen has lifter springs arranged on its guides E, E, it is liable, owing to one being sometimes a little stiffer than the other, to be canted or drawn
85 up a little more on one side than the other, the same causing the lower face of the platen to be out of parallelism with the bed or face of the type on the latter. Under such circumstances, it will readily be seen
90 that more or less unevenness is likely to ensue in the impression, all of which is avoided by my arrangement of the single lifter spring and its rod with reference to the platen and cam lever and pitman as above
95 described. Furthermore, the particular arrangement of the regulating wedge, R, viz., directly under the crown of the arch, and above the cam lever, has advantages, because it is out of the way and not so likely to be
100 disturbed or driven inward or outward, as is the case, where it is arranged so as to extend through the platen hub, for it is well known that pressmen are in the habit of throwing their wrenches or other tools down
105 upon the platen, and that without care is exercised, they may be thrown in contact with the regulating wedge so as to change its position. Besides this, when the regulating wedge passes through the platen hub, the
110 latter is very much weakened by the passage that is required to be made through it for the reception of the wedge. All these diffi-

culties are obviated by my arrangement of the wedge.

By forming the regulating wedge, R, with an elongated slot for the reception of the
5 lifter rod, F, the said lifter rod is made to serve the purpose of maintaining the wedge directly underneath the crown of the arch of the frame, or in other words preventing the wedge from falling out of place or being
10 lost.

I do not claim the combination of one or more cam plates, K, M, a cam lever, L, and one or two sets of rollers or their equivalents arranged between the said cam lever and
15 cam plates as I am aware that such mechanism for operating a platen is not new. Nor do I claim arranging the platen on the top of the arch or frame of the press and applying it to a bolt and other devices for lifting
20 a platen as shown or used in the well-known Albion press invented by Cope. I so arrange the rod F, depending from the spring G, as to cause it to pass through the lever pitman and other mechanism, for depressing
25 the platen, the same serving not only to support the whole in place but as a fulcrum for the lever to work on.

I am aware that the foot of the lower toggle of a press has been attached to the toggle
30 by a screw, whereby the impression could be

adjusted. This differs from my arrangement of the impression wedge that embraces the lifter rod and is disposed directly underneath and against the crown of the arch of the frame. By my arrangement of the
35 wedge, I attain greater security against displacement of the adjusting contrivance, than when it is applied to the foot of a toggle by a screw and moves with the toggle, for in this latter case, it will readily be seen that
40 the movement of the toggle must necessarily render the adjusting foot screw more or less liable to turn so as either to be screwed up or unscrewed.

I claim—

1. Arranging the lifter rod F, with respect to its spring, G, the cam lever L, the pitman, I, and cam plates, N, N, substantially in manner and so as to operate there-
45 with as described.

2. I also claim the arrangement of the regulating wedge, on the lifter rod and between the depressing mechanism and the crown of the arch substantially as described.
50

In testimony whereof, I have hereunto set
55 my signature.

JEDEDIAH MORSE.

Witnesses:

R. H. EDDY,
T. B. HALL.