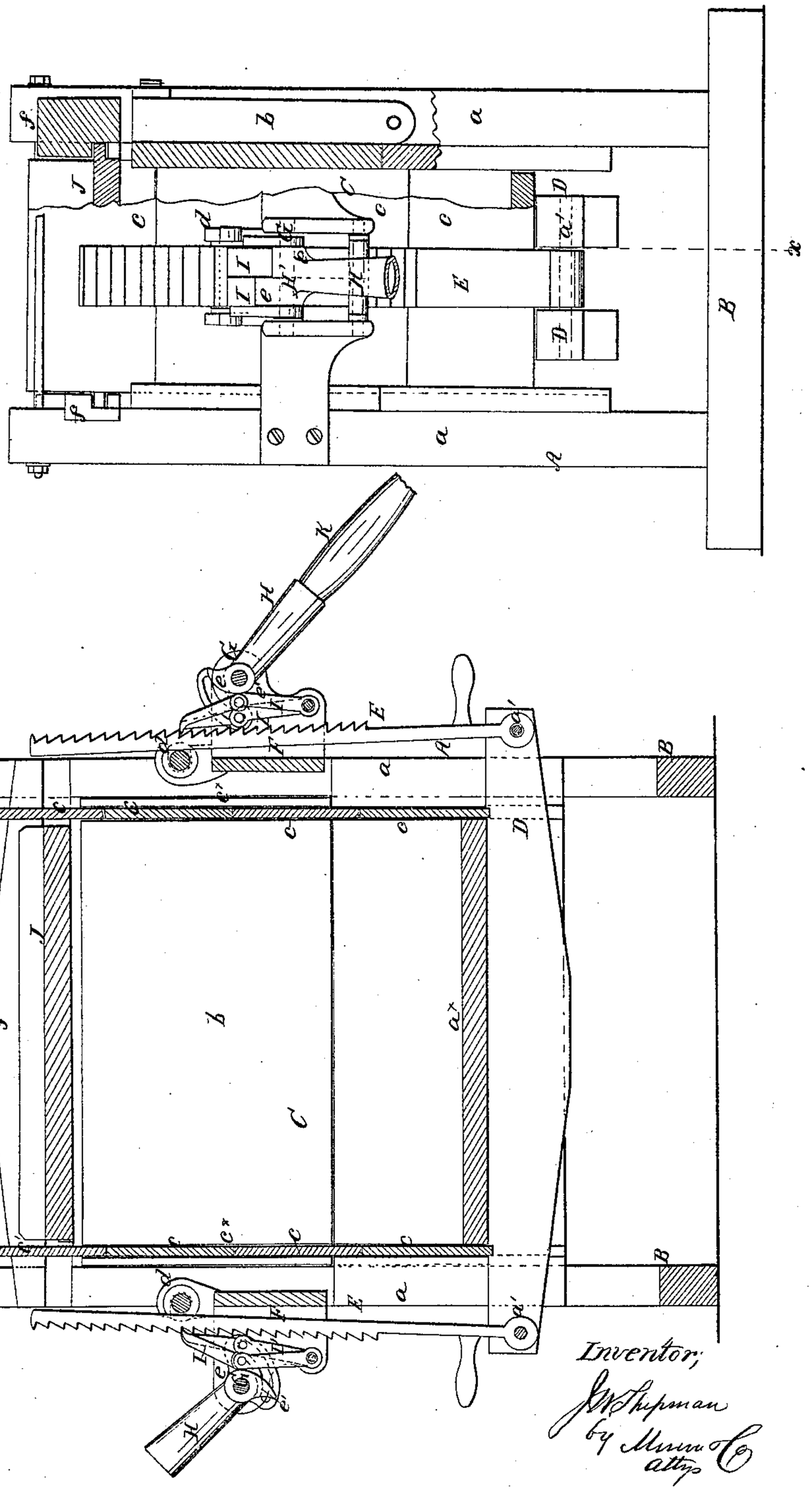
J. W. Shipman,

Hay Press,

No. 33,798, Patented Nov. 26, 1861.

Witnesses;
J. W. Connly
Tyler Reed

Fig: 2.



Inventor;
J. W. Shipman
by Munn & Co
attys

UNITED STATES PATENT OFFICE.

J. W. SHIPMAN, OF SPRINGFIELD CENTRE, NEW YORK.

IMPROVEMENT IN PRESSES FOR HOPS, HAY, &c.

Specification forming part of Letters Patent No. **33,798,** dated November 26, 1861.

To all whom it may concern:

Be it known that I, J. W. SHIPMAN, of Springfield Centre, in the county of Otsego and State of New York, have invented a new and Improved Press for Compressing Manually Hops, Hay, and other Articles or Substances for Baling; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section of my invention taken in the line *x x* of Fig. 2, and Fig. 2 an end sectional view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a press of simple construction, which may be operated manually and with great facility for compressing substances for baling.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a framing, which is composed of four uprights, *a*, attached to suitable side pieces, B B, and C is a press-box, which is fitted in the framing A, and provided with two side doors, *b b*. The ends of the press-box are formed of a series of detached pieces, *c*, placed one over the other in grooves $c^{\times}$, made in the inner surfaces of the sides of the press-box, as shown clearly in Fig. 1.

D D represent two longitudinal bars, which are placed in the lower part of the framing, and on which the end pieces, *c*, of the press-box rest. On the bars D D the bottom $a^{\times}$ of the press-box C is secured, and at each end of the bars D D there is attached the lower end of a vertical rack-bar, E. These rack-bars are toothed at their outer surfaces, and their inner surfaces bear against friction-rollers *d d*, which are fitted at the upper parts of boxes F, through which the rack-bars E pass, (see Fig. 1,) the lower ends of the rack-bars being fitted loosely on rods *a'*, which pass through the ends of the bars D D.

In the outer part of each box F there is fitted or placed a shaft, G, and on each shaft there are placed two cams, *e e'*, provided with a socket, H. The cams *e e'* of each shaft G have reverse positions, and they, with their socket H, are all formed of one piece of metal, which is designated by H' in Fig. 2.

In the lower part of each box F there are secured two toggles, I I. The upper parts of these toggles are of pawl form, and engage alternately with the rack-bars E under the action of the cams *e e'*.

The upper parts of the uprights *a* of the framing are connected, by longitudinal bars *f*, the inner surfaces of which are grooved to receive the edges of a slide, J, which forms the top of the press-box C.

The operation of the press is as follows: The end pieces, *c*, are fitted in the grooves $c^{\times}$ of the side pieces, *b b*, of the press-box C, the slide J being removed and the bottom of the press-box lowered to its fullest extent. The press-box is then filled with the substance to be compressed, and the slide J being replaced the shafts G are operated by means of levers K, fitted in the sockets H. The toggles I, at each end of the press, act alternately upon the rack-bars E, which causes the bars D D and the bottom of the press-box to ascend, and the substance therefore is compressed between the bottom of the press-box and the slide J. The end pieces, *c*, as the bottom of the press-box ascends, pass out at the top of the grooves $c^{\times}$. The substance, when fully compressed and formed, is removed from the press-box by letting down the side doors, *b b*. This arrangement forms a very simple and efficient press, one which may be economically constructed and operated within a limited space.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the cam-piece and socket H', and toggles I I, with the box F, hinged rack-bar E, and bars D D, as herein shown and described.

J. W. SHIPMAN.

Witnesses:

G. W. VAN DEVEER,

S. M. LUCE.