

E. A. Hollingsworth.
Paper Bag Mach.

Nº 45999.

Patented Jan. 24. 1865.

Fig. 4.

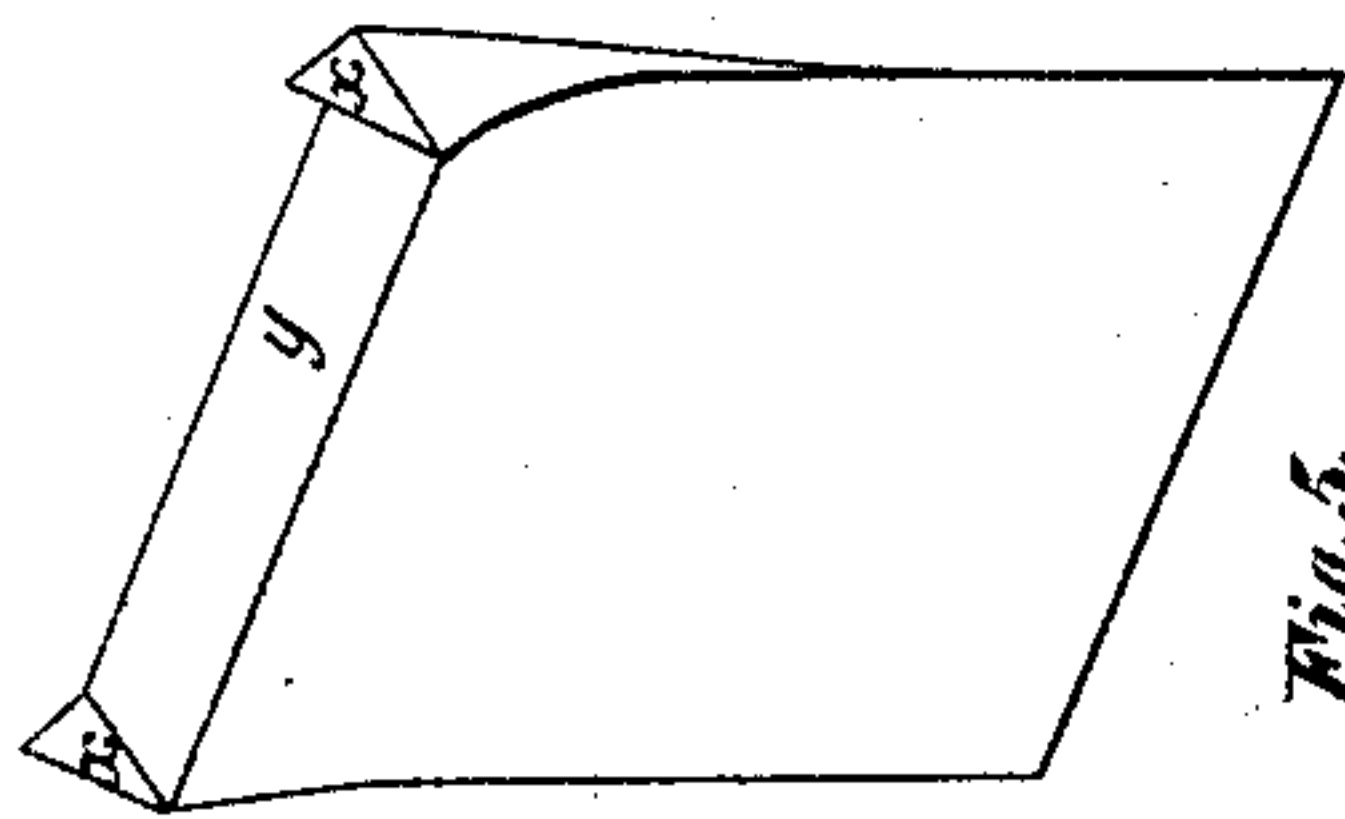


Fig. 5.

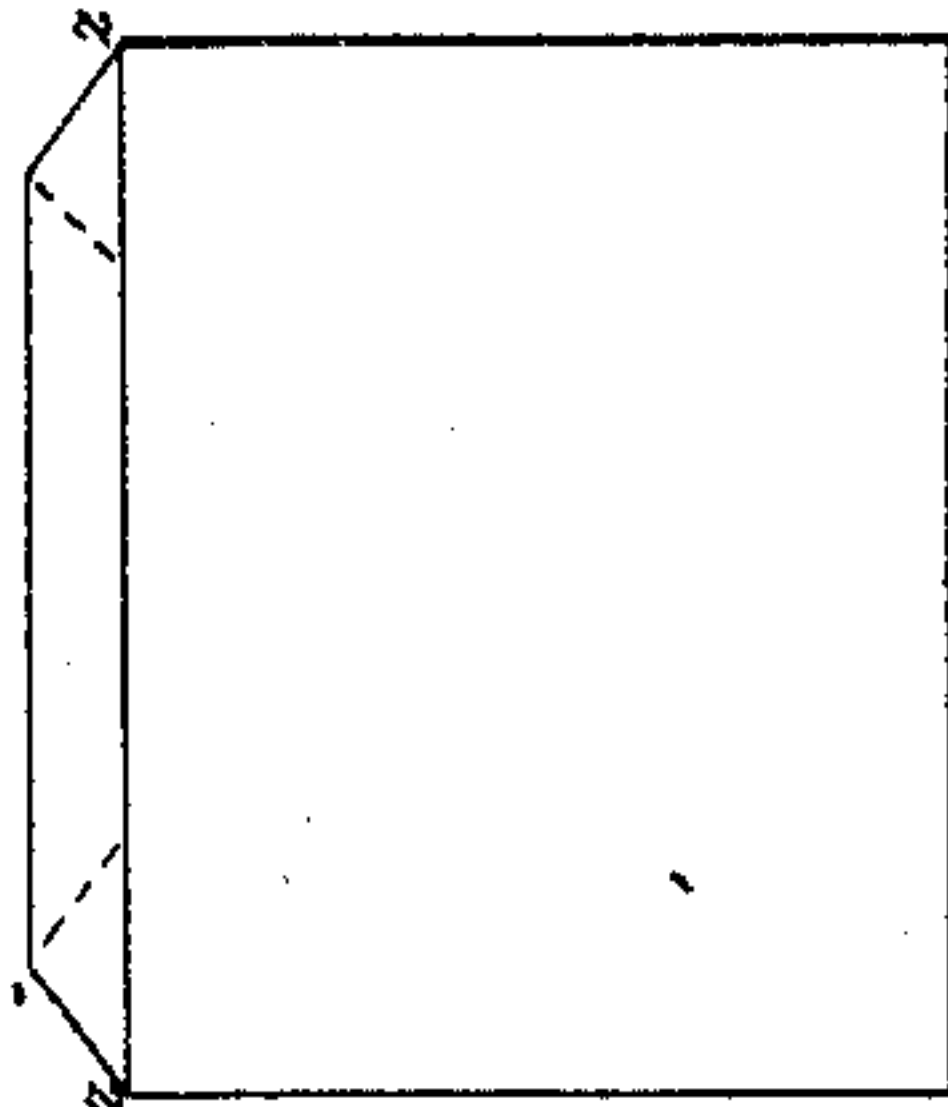


Fig. 6.



Fig. 3.

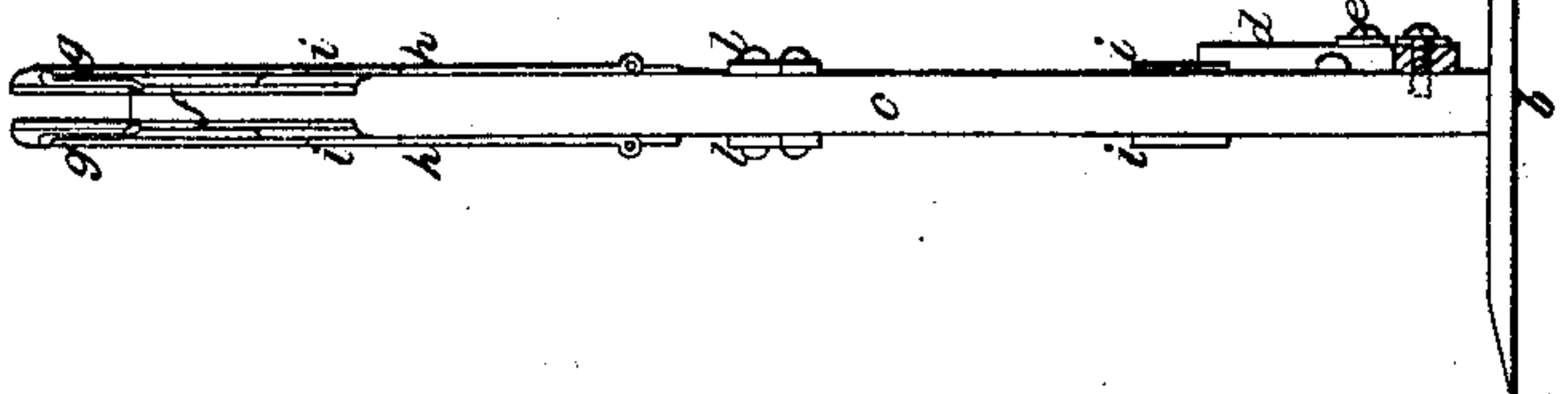


Fig. 2.

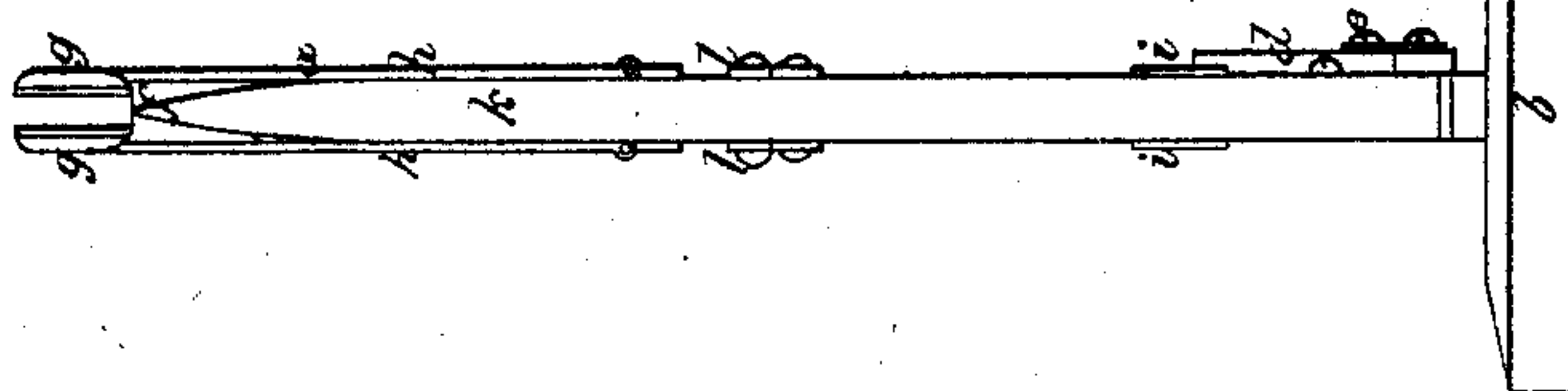
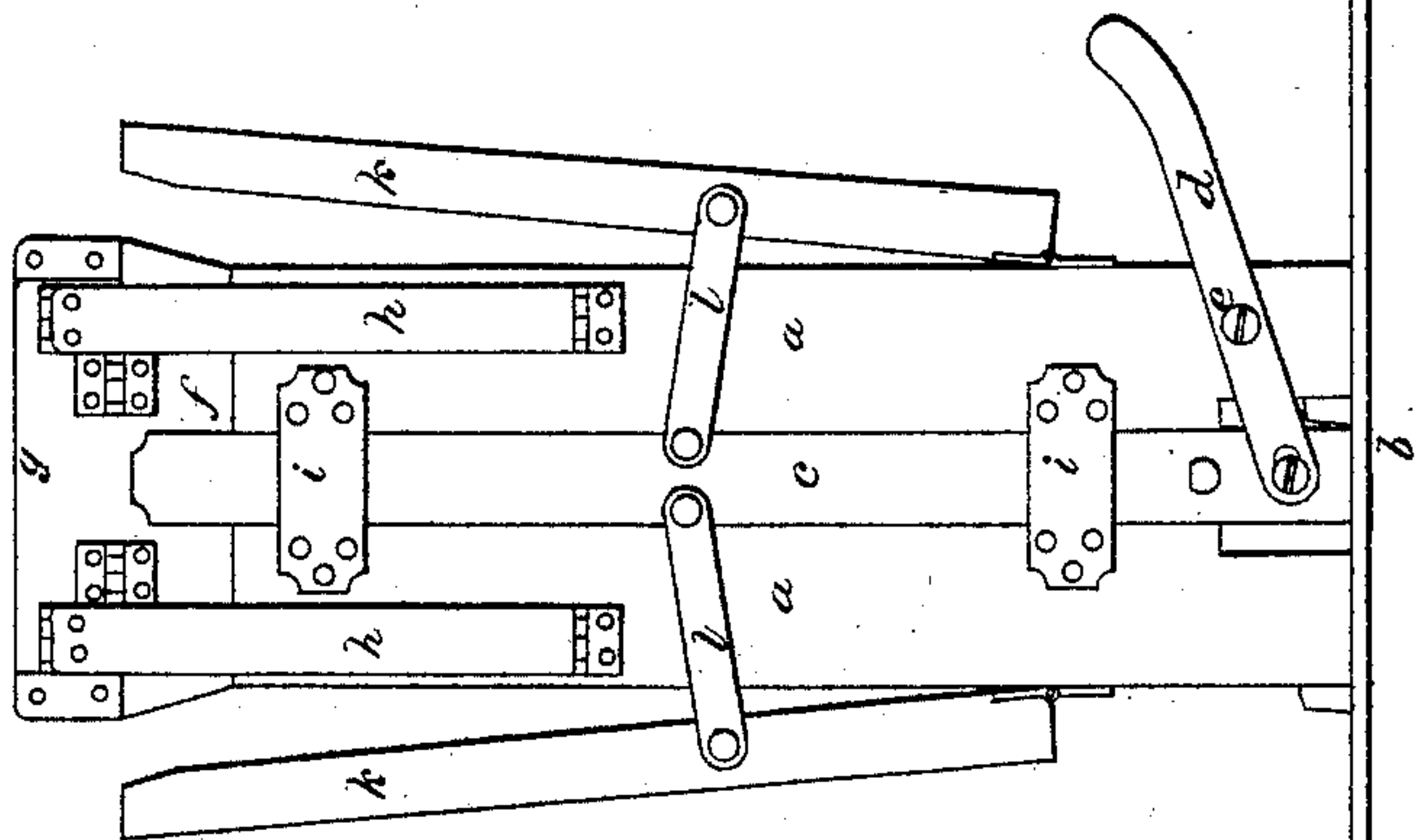


Fig. 1.



Frederick Curtis.
W. R. Hale Jr. } *Witnesses,*

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by his Attorney } *Inventor,*
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UNITED STATES PATENT OFFICE.

ELLIS A. HOLLINGSWORTH, OF SOUTH BRAINTREE, MASSACHUSETTS.

MACHINE FOR FOLDING PAPER BAGS.

Specification forming part of Letters Patent No. 45,999, dated January 24, 1865.

To all whom it may concern :

Be it known that I, ELLIS A. HOLLINGSWORTH, of South Braintree, in the county of Norfolk and State of Massachusetts, have invented a new and useful or Improved Machine for Folding the Bottom of Paper Bags; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, Fig. 2 a side view, and Fig 3 a vertical and transverse section, of it.

The object of the machine is to facilitate the infolding of the bottom corners of a common square-bottom paper bag.

The frame of the machine consists of two vertical posts, *a a*, erected on a foot or platform, *b*, and at a distance apart sufficient to receive between them a bar, *c*, whose lower end is jointed to a treadle, *d*, which turns on a fulcrum, *e*, projecting from one of the posts. On the top of the bar *c* is a cross-piece, *f*, which, at its middle is fastened to the bar, and so as to be at right angles with it. To the said cross-piece *f* two leaves or flaps, *g g*, are hinged, and so that each leaf may be turned either into a vertical or a horizontal position. Furthermore, to the outer edge of each of these leaves the upper ends of two opening bars, *h h*, are hinged, the lower ends of the said bars being hinged to the two posts *a a*, the whole being arranged as shown in the drawings. Guide plates *i i* extend across the bar *c* on each of its two opposite sides, and are fastened to the posts, such plates serving to guide the bar or keep it in its proper relation to the posts during its vertical movements. Besides the flaps or leaves, there are two stretchers or stretcher-bars, *k k*, they being arranged with respect to the flaps in manner as shown in the drawings. Each of the stretchers is hinged at its foot to the outer edge of one of the posts *a a*, and is connected to the bar *c* by means of two connecting-bars, *l l*, which are arranged on opposite sides of the stretcher, and are jointed to both the stretcher and the bar *c*, the same being so that during a downward movement of the bar *c* the two stretchers shall be moved in directions away from one another. By pressure exerted on the longer arm of the treadle, so as to force such downward, the bar *c* and its cross-piece, *f* will be pressed upward, and as a consequence the two leaves or flaps by the conjoint action of the bars *h h* and the up-

ward movement of the cross-piece *f*, will open apart from vertical to horizontal positions, the stretchers in the meantime being drawn toward one another.

In operating with the machine the leaves are first to be closed together, or to stand in vertical positions. Next, the bag should be inverted and placed mouth downward over the machine, and so that the latter shall pass up into the bag while the bag is in the act of being drawn downward, which should next be done. Next, with the hands the bottom of the bag is to be spread flat on the leaves. Next, the treadle should be depressed so as to throw open or apart the two leaves or cause them to assume horizontal positions. In so doing the leaves will press out the bottom part of the bag and cause the corners to rise up or stand in the triangular forms as shown in Fig. 4. These corners are next to be bent inward toward each other, and down upon that part of the bag which may rest on the leaves, after which the cross-piece *f* should be depressed, so as to close the leaves together, and thereby bend along their middles the bottom, and the parts turned down, the stretchers in the meantime being forced asunder, so as to throw out the bag at its edges, and cause it when folded to have the appearance as shown in side view in Fig. 5.

Fig. 6 denotes a view of the bottom of the bag, with its corners *x x* turned down on the part *y*, and preparatory to the closing of the flaps or leaves. The stretchers, while being forced apart, stretch out the bag at the parts *z z*.

I do not claim a machine as made with the two movable flaps or leaves *g g*—that is such a machine as is represented in the United States numbered 43,773.

What I claim as my invention is—

1. The combination of the stretchers *k k*, or their mechanical equivalents, with the leaves or flaps *g g*, the whole being so as to operate together substantially in manner and for the purpose or objects described.

2. In combination with the two leaves *g g* and their elevating mechanism, as described, the opening-bars *h h*, applied to the leaves and the posts, substantially as and so to operate as set forth.

ELLIS A. HOLLINGSWORTH.

Witnesses :

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