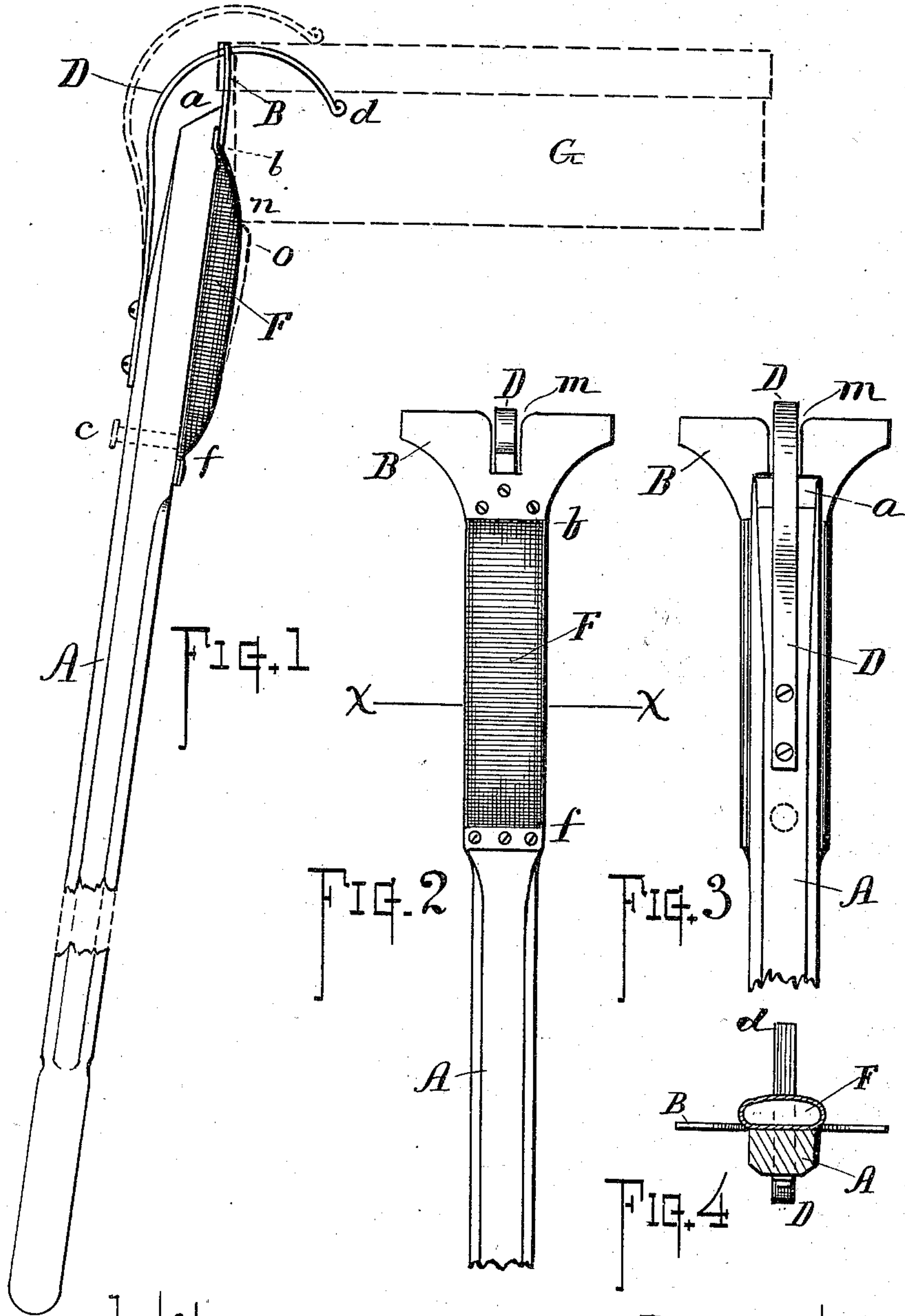


(No Model.)

G. C. BEMIS.
INSTRUMENT FOR HANDLING BOXES.

No. 555,997.

Patented Mar. 10, 1896.



Witnesses.

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UNITED STATES PATENT OFFICE.

GILBERT C. BEMIS, OF WORCESTER, MASSACHUSETTS.

INSTRUMENT FOR HANDLING BOXES.

SPECIFICATION forming part of Letters Patent No. 555,997, dated March 10, 1896.

Application filed December 18, 1895. Serial No. 572,520. (No model.)

To all whom it may concern:

Be it known that I, GILBERT C. BEMIS, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Instruments for Handling Boxes, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

This invention relates to that class of instruments employed for removing and replacing goods-boxes on high shelves.

The object of my present invention is to provide an instrument for handling paste-board boxes adapted for handling boxes of different sizes without adjustment of parts; also to provide in a box-handling instrument means for retaining the box-cover while introducing the blade beneath the same. These objects I attain by the instrument constructed as hereinafter explained and illustrated in the drawings, wherein—

Figure 1 is a side view; Fig. 2, a front view; Fig. 3, a back view, and Fig. 4 a transverse section at line *x x*.

Referring to parts, A indicates the handle, staff, or pole of any desired length.

B indicates a thin blade or plate fixed to the end of the staff and adapted for insertion beneath the lid of the box.

D indicates a spring or yielding finger attached to the back of the staff and curved over the top end thereof with its free end normally projecting forward of the blade and having its extremity preferably bent into a short roll or offset at *d*. This spring is secured to the staff at a sufficient distance from the top to, afford a free flexure of the spring, so that the free end can be pressed back to the plate when desired.

F indicates a yielding pad or flexible sack filled with air or other fluid, attached to the front of the staff, its upper end firmly secured at *b* at the base of the blade B and its lower end *f* secured at some distance down the staff. This sack F is preferably formed of pliant or semielastic material, such as rubber or rubber fabric, to afford a yielding surface and variable cushion of suitable tension. The sack may be made either permanently closed

or with facilities for effecting its inflation when desired. (See dotted lines *c*, Fig. 1.)

The blade is best made with a central slot *m* for the reception of the spring D when the latter is depressed, and the top end of the staff is preferably beveled, as at *a*, for guiding the end of the spring up to the slot in case the said end is pressed outward beyond the blade, so that the spring will resume its normal position when pressure is removed therefrom.

In operation the end of the spring D is hooked over the top of the box G and the blade B is inserted beneath the edge of the cover, the spring preventing the cover from lifting off from the box as the blade is inserted beneath its overhanging edge. The box is then drawn outward from the shelf or lifted, and its lower angle *n* takes bearing against the pneumatic pad. The weight of the box causes a depression of the portion of the pad against which it bears and a corresponding bulging outward of that portion of the pad below the angle of the box, (see dotted line *o*,) thereby forming a seat for securely sustaining the box as it is lifted, regardless of the vertical height of the box, so that the instrument is readily available for boxes of different sizes without special adjustment thereof to a particular size.

A number of boxes standing one upon another can be lifted from a shelf by this instrument by insertion of the blade beneath the cover of the lower box, in which case the spring D is merely pressed back by contact of its end against the end of the box above that with which the blade engages. The slot *m* and bevel *a* facilitate this action without liability of the end of the spring becoming caught against the back of the blade.

In lieu of forming the bevel *a* upon the staff, it may, if desired, be formed upon a lug attached to the back of the blade B.

I am aware that instruments of different construction, for lifting boxes, employing a staff and thin plate or blade for insertion beneath the edge of the box-cover are well known, and I do not therefore claim such feature broadly as my invention.

What I claim, and desire to secure by Letters Patent, is—

1. An instrument for lifting boxes com-

prising a staff carrying a plate or blade for insertion beneath the box-cover; and the pneumatic supporting-pad or yielding cushion attached to the front of the staff, and adapted
5 for sustaining the lower angle of the box, substantially as set forth.

2. An instrument for handling boxes, comprising a staff having a thin end or blade for insertion beneath the box-cover; and a spring
10 or resilient finger attached to the staff and normally projecting forward for pressure upon the top of the box-cover, for the purpose set forth.

3. The blade having the central slot *m*, and
15 staff provided with the beveled surface *a*, in combination with the spring attached to the staff and having its free end projecting for-

ward coincident with said slot, substantially as set forth.

4. In an instrument of the character de- 20 scribed, the combination of the staff, the transversely-disposed blade fixed to the end of said staff, the yielding pad along the front of the staff below the blade, and the spring
25 attached to the back of the staff and projecting forward over the blade, substantially as set forth.

Witness my hand this 16th day of December, 1895.

GILBERT C. BEMIS.

Witnesses:

SAMUEL R. BARTON,
CHAS. H. BURLEIGH.