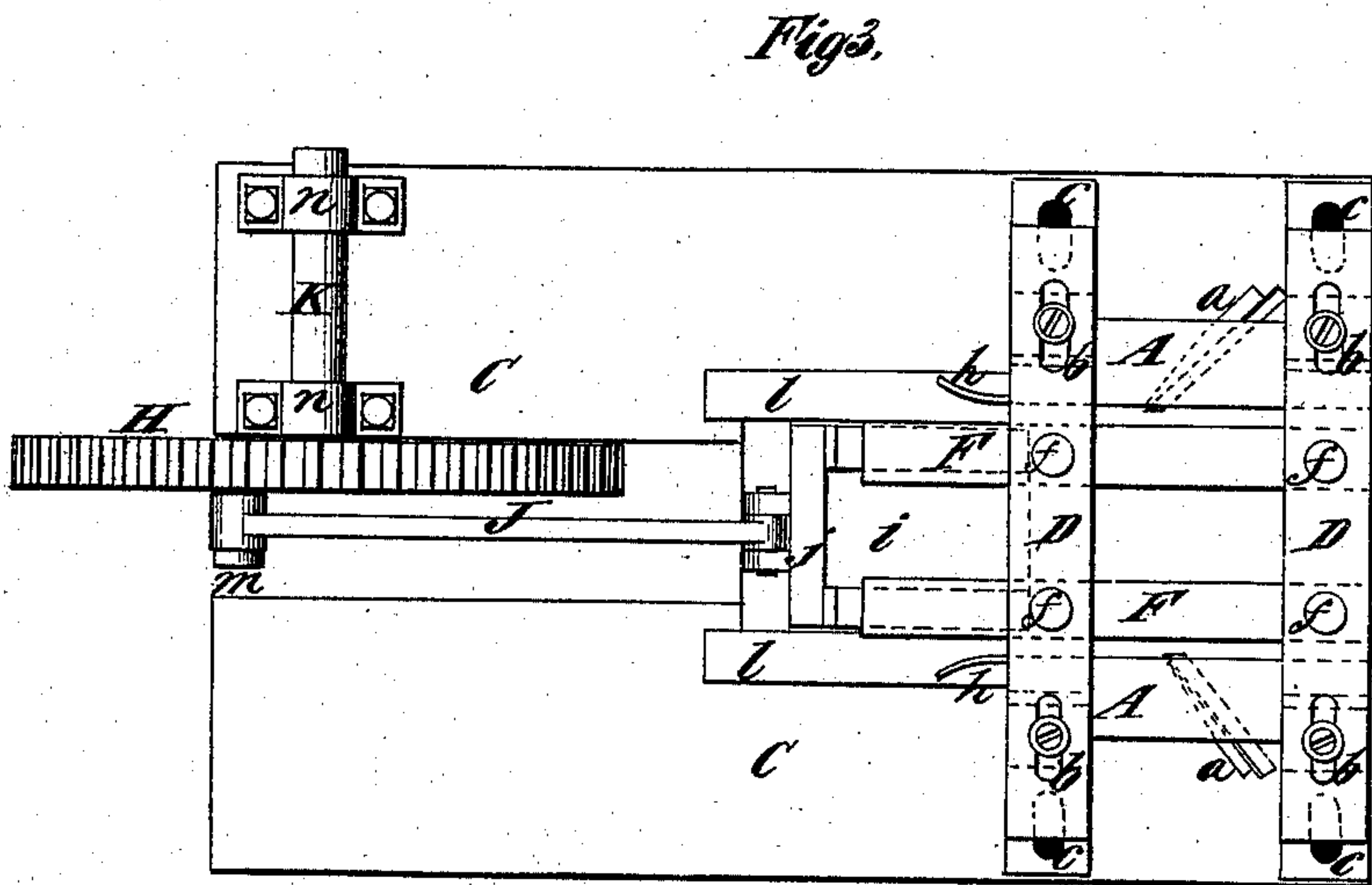
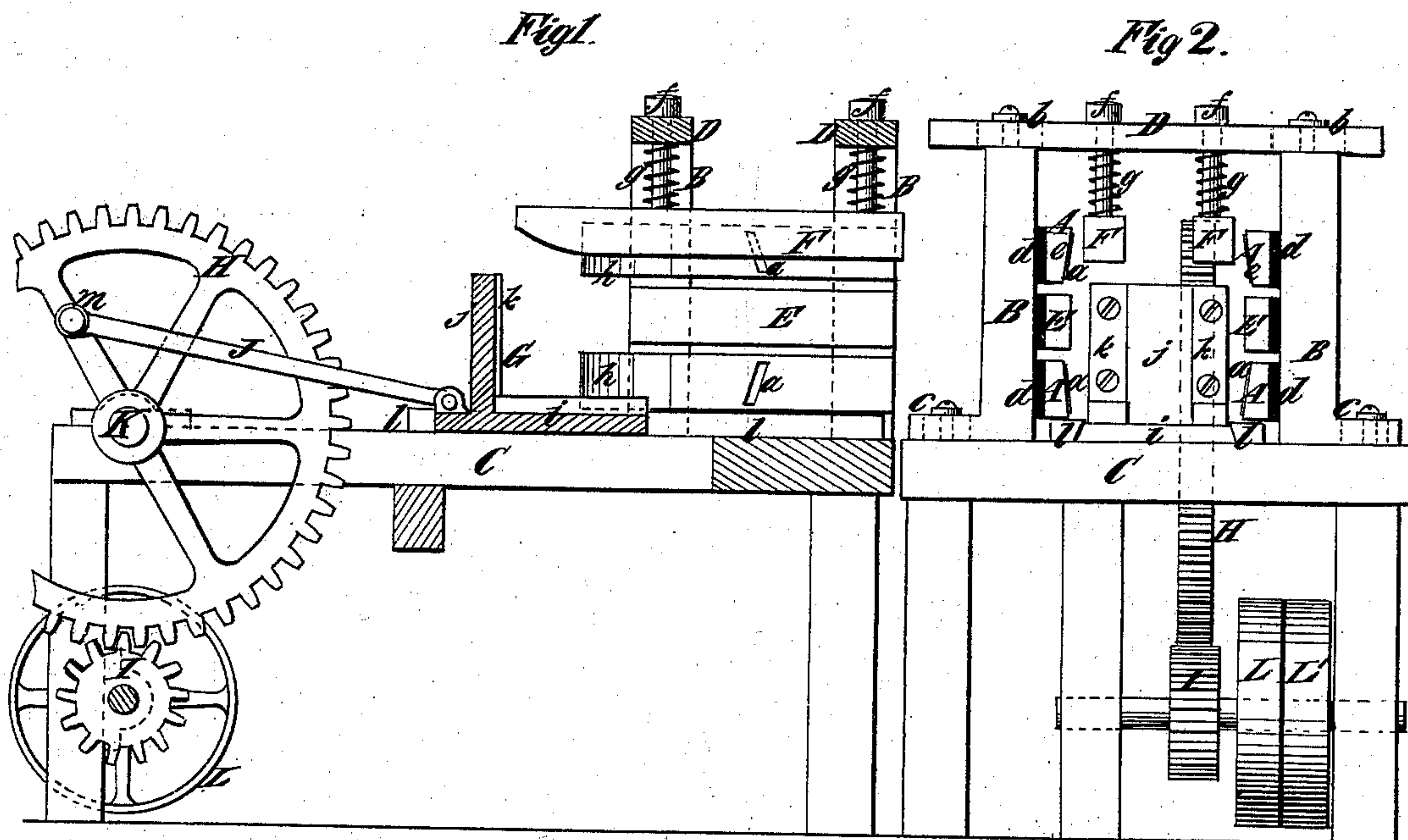


P. B. H. SMITH.
Machine for Dressing Boxes.

No. 214,725.

Patented April 22, 1879.



Witnesses:
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UNITED STATES PATENT OFFICE.

PEREZ B. H. SMITH, OF GREEN POINT, BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR DRESSING BOXES.

Specification forming part of Letters Patent No. 214,725, dated April 22, 1879; application filed February 20, 1879.

To all whom it may concern:

Be it known that I, PEREZ B. H. SMITH, of Green Point, in the city of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Machines for Dressing Boxes, of which the following is a specification.

The object of my invention is to produce a machine by which the edges of wooden boxes may be trimmed, dressed, or chamfered more quickly and effectively than has been possible with machinery of the kind hitherto employed for that purpose.

To this end my invention consists in the combination of vertical standards, horizontally-arranged cutter-holders fastened to said standards and provided with mortises in which cutters are rigidly secured, a reciprocating carriage or follower for supporting boxes and presenting them to said cutters, and a crank for imparting motion to said carriage or follower.

It also consists in various details of construction, whereby the machine is made adjustable to accommodate boxes of various sizes, and whereby the boxes are properly guided while passing through the machine.

In the accompanying drawings, Figure 1 represents a longitudinal section of a machine embodying my improvements. Fig. 2 is an end view thereof, and Fig. 3 a plan thereof.

Similar letters of reference designate corresponding parts in all the figures.

In carrying out my invention I may use fixed cutters of any kind; but I prefer to use cutters of the kind here represented, consisting of pieces of wood or metal A, arranged horizontally, constituting holders for cutters *a*, inserted in them in the manner in which plane-irons are usually inserted. Although any number of these cutters may be employed, I prefer to use four, as here represented.

The cutter-holders A are secured at each end to uprights B, erected upon the base-plate C of the machine, and each pair of which are connected across the top by cross-bars D, for strengthening the machine. In order to provide for the transverse adjustment of the cutters I have shown slots *b* in the cross-bars D, and slots *c* in the feet of the uprights B, through which bolts pass for securing the parts of the machine together.

In order to provide for the yielding of the cutters under a heavy pressure, I have shown each cutter-holder as having pieces of rubber or other elastic material *d* arranged between its back and the uprights B.

I preferably make the inner face, *e*, of each cutter-holder A slightly inclined, as clearly represented in Fig. 2, and the cutter-holders which are arranged uppermost in the machine have their faces inclined reversely to those which are arranged underneath. This arrangement of cutters lessens the liability of a box becoming displaced while passing through the machine. To further aid in guiding boxes through the machine, I have shown a guide, E, as arranged upon each side of the machine between the upper and lower cutters, and I have also shown pressure-guides F secured to the cross-bars D by means of bolts *f*, which are made adjustable in said cross-bars, so as to permit the vertical movement of the pressure-guides F. To increase the resistance offered by the pressure-guides F to the vertical movement of a box, I employ springs or equivalents, such as weights, for impinging against the same. The springs *g* here represented are of spiral form, and are coiled around the bolts *f*. The guides E are also shown as having pieces of rubber or other suitable elastic material arranged between them and the uprights B.

To properly guide a box while entering the machine, I provide the cutter-holders A with curved or slanting guide-plates *h*, and I have represented one end of the pressure-guides F as curved on the under side for a like purpose.

G designates a reciprocating carriage or follower for supporting boxes and presenting them to the cutters *a*. As represented, it consists of a plate, *i*, and a plate, *j*, extending vertically therefrom, against which the boxes rest. *k* designates metal plates arranged upon each corner of the plate *j*, and forming a solid rest for a box. In lieu of the carriage here shown, a single plate properly guided might be employed to present the boxes to the cutters. The carriage or follower is held in position on the base-plate C of the machine by guides *l*, along which it travels. Any suitable means may be employed for reciprocating the carriage or follower G. That here represented consists of a large gear-wheel, H, driven by a pinion,

I, and a connecting-rod, J, extending from a crank-pin, *m*, on the gear-wheel H to the carriage G. K designates the shaft upon which the gear-wheel H is mounted, and which is supported in bearings *n* upon the base-plate C. L L' designate fast and loose pulleys, by which the machine may be operated.

The machine having been set in motion the boxes are placed upon the carriage or follower one after another and by it are carried through the machine.

With slight modifications the machine might be adapted for other purposes than that above named.

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

1. In a machine for dressing boxes, the combination of vertical standards, horizontally-arranged cutter-holders fastened to said standards and provided with mortises in which cutters are rigidly secured, a reciprocating carriage or follower for supporting boxes and presenting them to said cutters, and a crank for imparting motion thereto, substantially as specified.

2. In a machine for dressing boxes, the combination of two series of cutters having inclined faces, those of one series being inclined reversely to those of the other series, and a reciprocating carriage or follower for presenting boxes to said cutters, substantially as specified.

3. In a machine for dressing boxes, the combination of one or more stationary cutters, yielding pressure-guides for a box during its passage through the machine, springs or their equivalents acting upon said guides, a reciprocating carriage or follower for presenting boxes to said cutters, and a crank for imparting motion thereto, substantially as specified.

4. The combination of the cutter-holders A, cutters *a*, yielding guides E F, reciprocating carriage G, shaft K, crank *m*, and connecting-rod J, substantially as specified.

P. B. H. SMITH.

Witnesses:

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