

(No Model.)

2 Sheets—Sheet 1

T. C. DEXTER.
PACKING BOX FOR PAPER FOLDING MACHINES.

No. 513,766.

Patented Jan. 30, 1894.

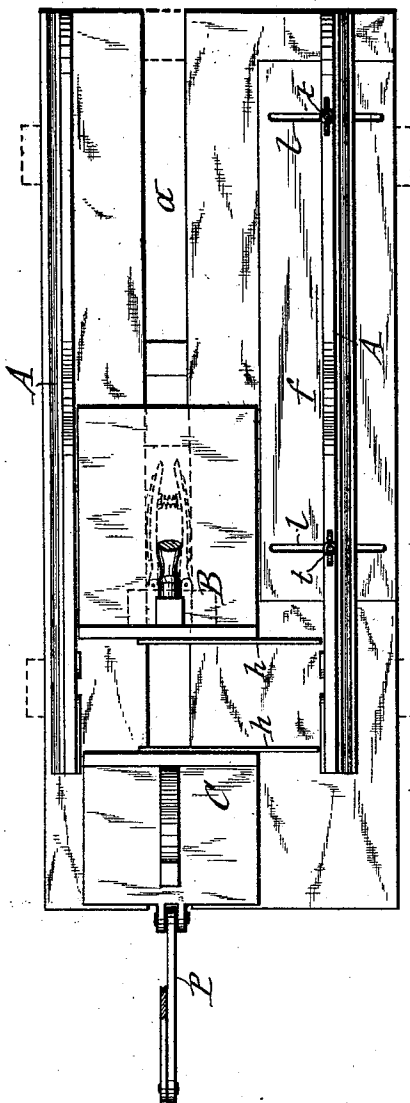


Fig. 2

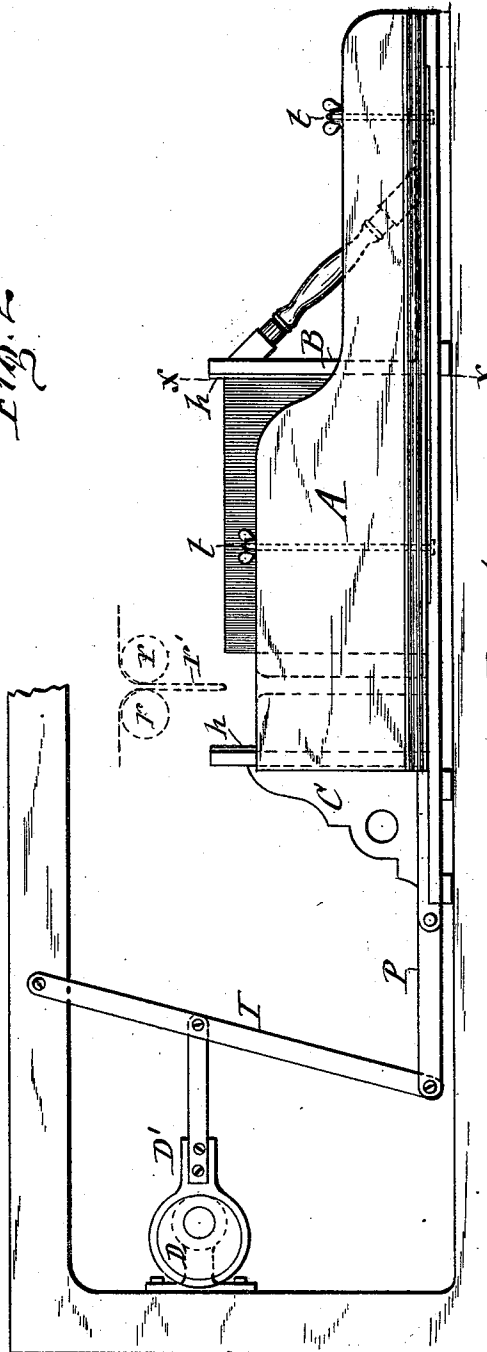


Fig. 1

WITNESSES:

C. L. Bendixon
J. J. Laass

INVENTOR:

Talbot C. Dexter
By E. Laass
his ATTORNEY

(No Model.)

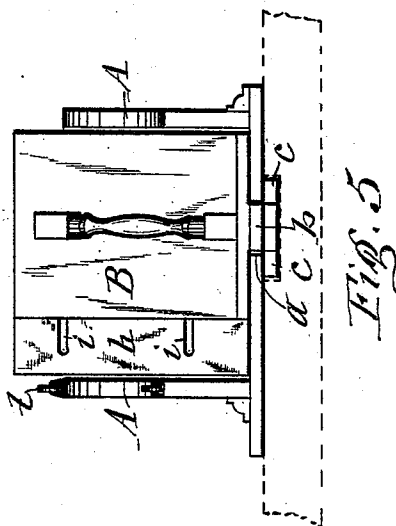
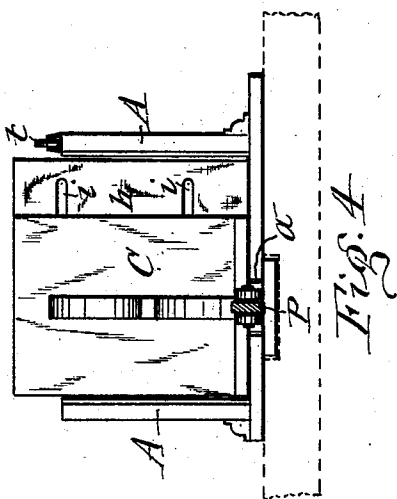
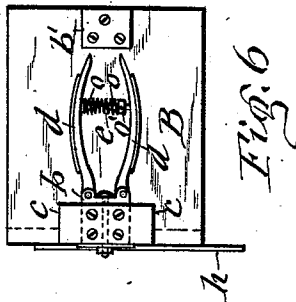
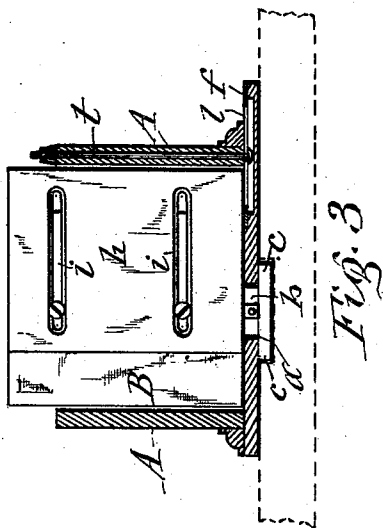
2 Sheets—Sheet 2.

T. C. DEXTER.

PACKING BOX FOR PAPER FOLDING MACHINES.

No. 513,766.

Patented Jan. 30, 1894.



WITNESSES:

C. L. Burdick
J. J. Saass

INVENTOR:

Talbot C. Dexter
By *C. Saass*
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UNITED STATES PATENT OFFICE.

TALBOT C. DEXTER, OF FULTON, NEW YORK.

PACKING-BOX FOR PAPER-FOLDING MACHINES.

SPECIFICATION forming part of Letters Patent No. 513,766, dated January 30, 1894.

Application filed April 23, 1893. Serial No. 472,204. (No model.)

To all whom it may concern:

Be it known that I, TALBOT C. DEXTER, of Fulton, in the county of Oswego, in the State of New York, have invented new and useful

Improvements in Packing-Boxes for Paper-Folding Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of packing boxes which are connected to paper-folding machines and receive the folded sheets of paper and hold them packed side by side in a neat and compact manner. Such a packing box usually consists of a trough receiving the folded sheets of paper from the folding machine and having in one end a longitudinally movable paper-pusher, and in the opposite end a follower which by a frictional hold upon the trough partially resists the pressure of the paper in process of being packed in the trough between the aforesaid pusher and follower. Heretofore such frictional hold of the follower was obtained by means of spring-cushions attached to the sides of the follower and bearing on the inner sides of the paper-receiving trough. This construction I have found to be objectionable owing to the fact that the paper-receiving trough is usually made adjustable in width to accommodate papers of different sizes, and said variations of the width of the trough varies the tension of the aforesaid spring-cushions correspondingly and consequently the follower is liable to be either deprived of its requisite frictional hold on the trough, or receive excessive hold and thus become fastened or unduly bound in the trough.

The object of this invention is to obviate such defects, and to that end the invention consists essentially in providing the paper-receiving trough with longitudinal side-bearings on its base, and attaching to the under side of the follower the friction-cushions which engage the aforesaid side bearings, which latter are permanently secured in their positions and thus the friction-cushions are maintained under a uniform tension during the adjustment of the width of the trough.

The invention also consists in certain novelties in the details of the construction of the

aforesaid packing box as hereinafter more fully described and set forth in the claims.

In the annexed drawings Figure 1 is a side view of a paper-packing box embodying my invention and showing the same partly filled with folded paper. Fig. 2 is a top plan view of the same in its empty condition to illustrate the adjustability of the width of the box or trough. Fig. 3 is a transverse section on line *x, x*, in Fig. 1, and an inner face view of the follower. Fig. 4 is a rear end view of the packing box. Fig. 5 is a front end view of the same, and Fig. 6 is an inverted plan view of the follower.

Similar letters of reference indicate corresponding parts.

A—represents the box or trough into which the folded sheets of paper are delivered from the folding machine as indicated in Fig. 1 of the drawings, in which —*r-r*— designate the paper-folding rollers represented in the act of folding the paper —*r'*. This box or trough has one of its side-walls adjustable laterally in its position, usually by means of metal plates —*f*— countersunk in the top of the bottom-board of the trough and firmly secured thereto and provided with transverse slots —*l*— directly underneath which are grooves in the board parallel with the slots. Vertically through the side-wall of the trough and through the slots —*l*— pass bolts —*t*— which have their heads under the plates —*f*— and are provided with nuts on their upper ends bearing on top of the side wall. Said box or trough is thus adjustable in width to receive papers of different widths.

C—represents the paper-pusher which is in one end of the trough and is reciprocated longitudinally therein by mechanism usually receiving motion from the folding machine which latter is constructed and operated in various ways well understood by persons conversant in that art, and therefore needs no illustration in this case.

An exemplification of one of the means of transmitting motion to the paper pusher is shown in Fig. 1 of the drawings and consists of a revolving eccentric —*D*—, the eccentric rod —*D'*— connected to the lever —*I*— which is pivoted at one end to the frame of the folding machine, and at the opposite end to the

pitman —P— which latter is connected to the base of the paper-pusher.

B— denotes the follower against which the paper is packed by the pusher —C. Said follower and pusher are each faced with metal plates —h— on their inner sides, which plates are provided with horizontal slots —i— through which pass the screws which fasten the plates in position. Said slots allow the plates to be shifted laterally and thus adjust the widths of the follower and pusher to the width of the box or trough —A. In this adjustment the friction or spring cushion, which hitherto was attached to the side of the follower to press against the inner side of the trough, had its tension either reduced or increased and thus its efficiency impaired. This defect I now obviate by employing permanently located longitudinal guides on the bottom of the trough or box —A— and by attaching the spring-cushions to the base of the follower so as to bring said cushions to bear on the permanently located guides. I preferably form said guides of a longitudinal slot —a— in the bottom of the trough —A—, and attach to the under side of the base of the follower at opposite ends thereof the guide-blocks —b—b'— by which the follower slides in said slot.

To prevent the follower from being lifted from the bottom of the trough by the pressure of the paper pushed against it by the pusher —C— I provide the block —b—, which is directly under the vertical wall of the follower, with flanges —c—c— which engage the under side of the trough. When said block is formed of wood I form the aforesaid flanges by attaching to the bottom of the block a metal plate which projects over the side edges of the block as shown.

Between the two blocks —b—b'— are the friction cushions which bear on the vertical faces of the slot —a. These cushions I preferably form of bowed arms —d—d— pivoted to one of the aforesaid blocks, preferably the

block —b—, and having a suitable spring —e— between their free ends. For this purpose I prefer to employ an expansive spiral spring surrounding the stems —o—o— fixed to the arms, one of the said stems being provided with a nut or collar —o'— bearing on one end of the spring.

What I claim as my invention is—

1. The trough —A— provided with the longitudinal slot —a— in its bottom, the follower —B— provided on its under side with the guide-blocks —b—b'— sliding in the aforesaid slot, the flanges —c—c— on the block —b— engaging the under side of the trough, and friction cushions on the under side of the follower engaging the vertical faces of the slot —a— in combination with the paper-pusher —C— as set forth.

2. The combination of the trough —A— provided with the slot —a— in its bottom, the follower —B— provided at opposite ends with guide-blocks —b—b'— attached to the under side thereof and sliding in said slot, the plate —c— attached to the block —b— and engaging the under side of the trough, the spring-arms —d—d— connected to the under side of the follower between the blocks —b—b'— and bearing on the vertical faces of the slot —a— and the pusher —C— in the opposite end of the trough, as set forth.

3. In combination with the trough —A— provided with the longitudinal slot —a— in its bottom, the paper-pusher —C— and follower —B—, the blocks —b—b— attached to the bottom of the follower at the ends thereof and sliding in the aforesaid slot, the laterally movable arms —d—d— pivoted to one of said blocks, and the spring —e— interposed between the free ends of said arms, as set forth.

In testimony whereof I have hereunto signed my name this 8th day of April, 1893.

TALBOT C. DEXTER. [L. S.]

Witnesses:

GILES S. PIPER,
ARVIN RICE.