

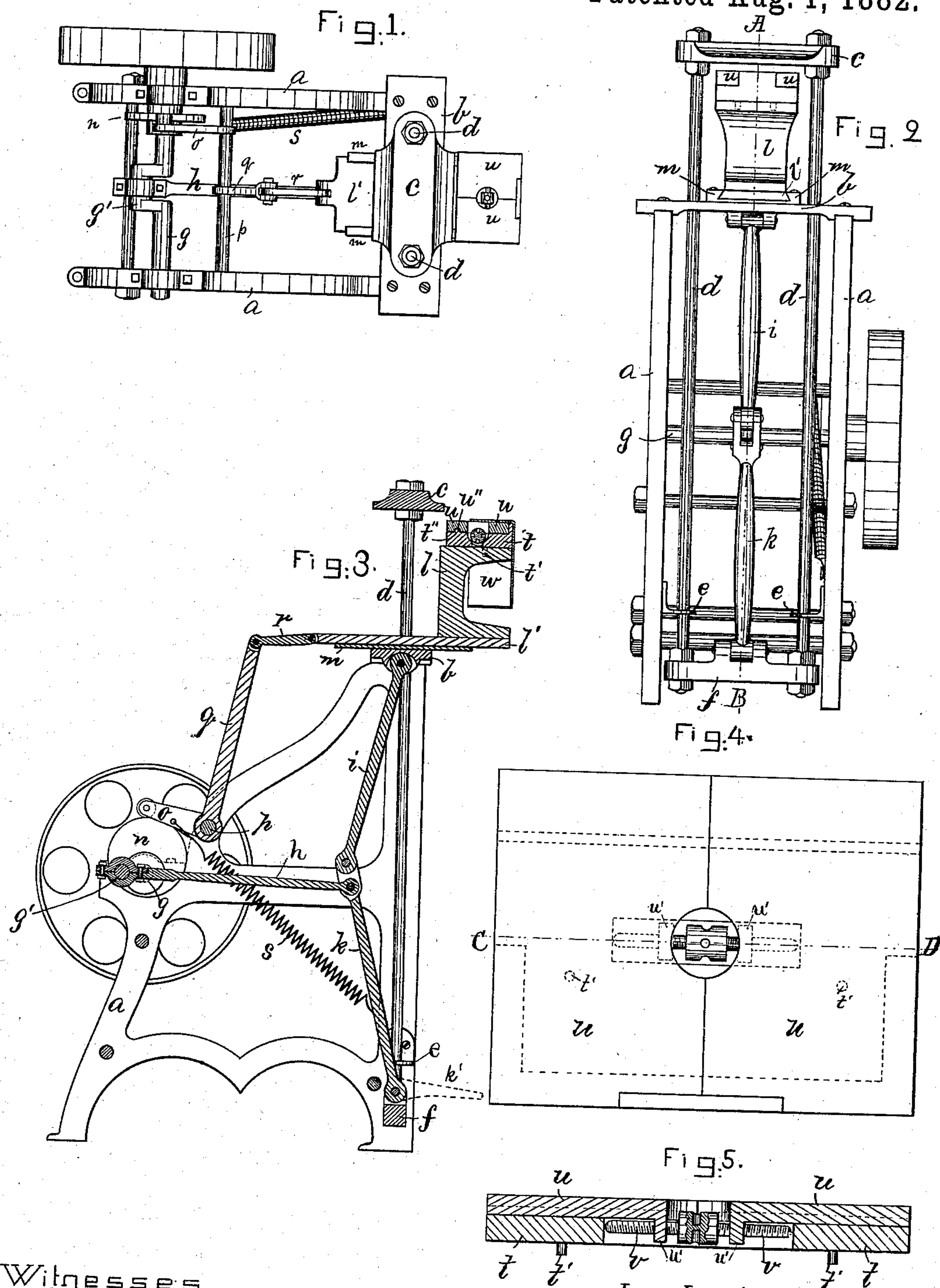
(No Model.)

G. W. GLAZIER & A. G. POTTER.

PAPER BOX MACHINE.

No. 261,846.

Patented Aug. 1, 1882.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE W. GLAZIER, OF SALEM, AND ALBERT G. POTTER, OF LYNN, MASS.

PAPER-BOX MACHINE.

SPECIFICATION forming part of Letters Patent No. 261,846, dated August 1, 1882.

Application filed February 17, 1882. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. GLAZIER, a citizen of the United States, residing at Salem, in the county of Essex and State of Massachusetts, and ALBERT G. POTTER, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have jointly invented certain new and useful Improvements in Paper-Box Machines; and we do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

This invention relates to improvements in paper-box machines; and it consists, first, in the combination with the up-and-down-movable presser-head, of a horizontally-movable box-rest, which is automatically brought forward to permit the box to be made to be placed on it, after which it is automatically moved backward beneath the vertically-movable presser-head, which then descends and unites the previously cemented, glued, or pasted corners of the box by pressure between the under side of the said head and a former resting loosely on the top of the horizontally-movable box-rest, and in this manner we are able to reduce the throw of the presser-head considerably, and also to enable the box to be manipulated with greater ease and to better advantage in placing it on the box-rest and removing it therefrom when pressed, as compared with box-machines in which the box-rest is held stationary.

The invention is carried out as follows, reference being had to the accompanying drawings, in which—

Figure 1 represents a plan view, and Fig. 2 represents a front elevation, of the improved paper-box machine. Fig. 3 represents a central longitudinal section on the line A B, shown in Fig. 2. Fig. 4 represents a plan view of the improved former; and Fig. 5 represents a cross-section on the line C D, shown in Fig. 4.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

a a represent the frame of a box-machine, with its stationary plate or table *b*, and vertically-moving presser-head *c*, having the downward-projecting rods *d d*, which pass through bearings in the table *b*, and have lower guides, *e e*, in the usual manner.

f is the lower cross-bar, uniting the lower ends of the rods *d d*.

The presser-head *c* is moved up and down by means of the rotary driving-shaft *g*, located in bearings in the frames *a a*, and provided with crank *g'*, to which the rear end of the link *h* is hinged, the forward end of the latter being hinged at the junction of the knuckle-jointed levers *i* and *k*, the former being hinged at its upper end to the under side of the stationary table *b* and the latter being hinged at its lower end to the cross-bar *f* in the ordinary manner. We wish here to state that we do not claim as our invention such connecting mechanism from the driving-shaft *g* to the vertically-movable presser-head *c*, and such connecting mechanism may be changed without departing from the spirit of our invention.

k' is a treadle attached to lower end of lever *k*, as shown in dotted lines in Fig. 3, in case it is desired to operate the presser mechanism with foot-power.

l is the horizontally-movable box-rest, and *l'* is its sole-plate, attached to it or made in one piece with it, as may be desired.

m m are guides on the top of the table *b*, in which the sole-plate *l'* is guided in its forward and backward motion.

n is an eccentric or cam on the driving-shaft *g*, which actuates the lever *o*, secured to the rock-shaft *p*, located in bearings in the frames *a a*.

q is another rocking lever secured to the rock-shaft *p*, the upper end of said lever *q* being jointed to the rear of the sole-plate *l'* by means of the intermediate link, *r*, as shown in Fig. 3. A spring, *s*, secured at one end to the rocking lever *o* and at its other end to the lower front part of the frame *a*, serves the purpose of moving the box-rest *l* backward to a position below the presser-head *c* after it has been moved forward by the connecting mechanism from the rotary shaft *g* to the sole-plate *l'*, as above described.

We do not wish to confine ourselves to the above-described connecting mechanism for sliding the box-rest *l* forward and back, as this may be changed without departing from the essence of our invention.

The laterally expansive and adjustable former is fully shown in Figs. 4 and 5, and it consists of a lower guide-plate, *t*, which is adapted

to rest loosely on the top of the box-rest *l*, having for this purpose projections *t' t'* on its under side to fit in corresponding recesses on the top of the rest *l*.

5 *u u* are the laterally-adjustable parts composing the former, which parts are adjusted out and in by means of the right-and-left-handed screw *v*, working in the screw-threaded ears *u' u'* on the under side of the plates *u u*, as shown
10 in Figs. 4 and 5. A groove, *u''*, is made on the under side of the plates *u u*, into which the guide-rib *t''* on the top of plate *t* is fitted to serve as a guide for the parts *u u*, when moved in or out. It will thus be seen that by moving
15 the parts *u u* out or in they may be adjusted to fit any desired size of box that is being made, and thus dispense with separate plates for each size of box.

20 *w* in Fig. 3 represents a box in process of being pressed on the machine.

The operation of the machine is as follows: The plates *u u* are first adjusted to the required width of the inside of the box that is being made, and placed on the box-rest *l*, as shown in
25 Fig. 3. The machine is then set in operation, and the pasted or cemented or glued box is put upon the former in a position as shown in Fig. 3, when the rest *l* is in its forward position, after which the latter and the box *w* upon

it are automatically moved back beneath the 30 presser-head *c*, which then descends and presses the glued or pasted parts of the box together, after which the head *c* ascends, the rest *l* moves forward to allow the operator to remove the finished box *w* and to replace it with another 35 one to be finished, and so on.

What we wish to secure by Letters Patent, and claim, is—

1. In a paper-box machine, the vertically-movable head *c*, in combination with the hori- 40 zontally-movable box-rest *l* and automatic connecting mechanism, substantially as described, for operating said head and box-rest in a manner and for the purpose set forth.

2. In a paper-box machine, the expansive 45 former, as described, consisting of guide-plate *t*, and laterally-adjustable plates *u u*, having right and left screw-threaded ears *u' u'*, in combination with the right-and-left-handed screw *v v*, as and for the purpose set forth. 50

In testimony whereof we have affixed our signatures in presence of two witnesses.

GEORGE W. GLAZIER.
ALBERT G. POTTER.

Witnesses:

ALBAN ANDRÉN,
BENJAMIN POTTER.