

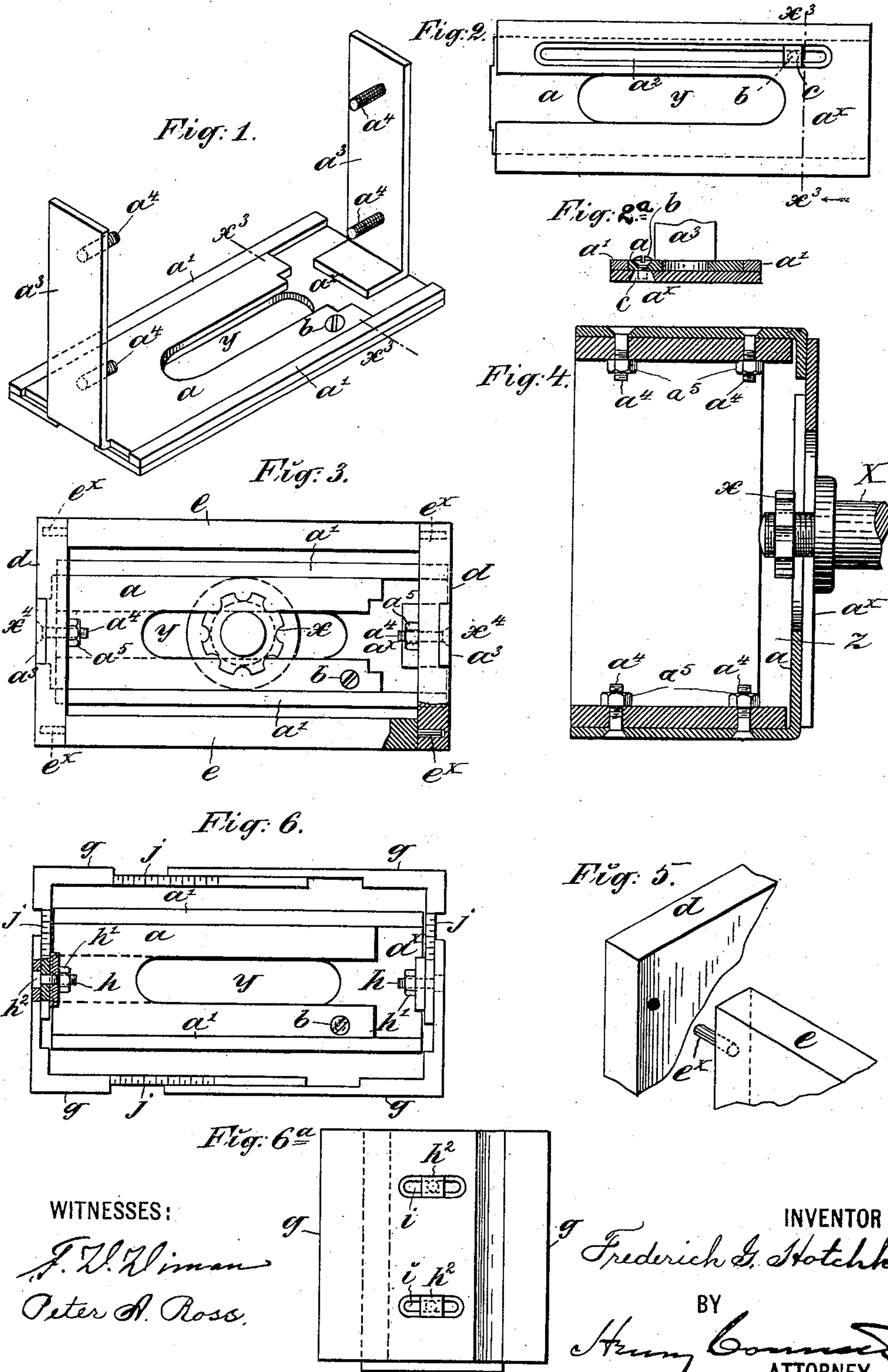
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Patented Dec. 20, 1898.

F. G. HOTCHKISS.
ADJUSTABLE FORM FOR PAPER BOX MACHINES.

(Application filed Jan. 5, 1898.)

(No Model.)



WITNESSES:

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ADJUSTABLE FORM FOR PAPER-BOX MACHINES.

SPECIFICATION forming part of Letters Patent No. 616,236, dated December 20, 1898.

Application filed January 5, 1898. Serial No. 665,672. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK G. HOTCHKISS, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Adjustable Forms for Use on Paper-Box Machines, of which the following is a specification.

This invention relates to forms for use on machines for stripping paper boxes and which are capable of adjustment to fit boxes of different dimensions; and the object of the invention is to provide a simple, inexpensive, and easily-adjusted form adapted to boxes having a considerable range as to length, width, and depth.

As herein shown, the form is designed for use on what is known as the "Inman" stripping-machine.

In the accompanying drawings, Figure 1 is a perspective view of the holder or base of the form. Fig. 2 is a view of the under or outer face of the holder, and Fig. 2^a is a cross-section of the same at line x^3 in Figs. 1 and 2. Fig. 3 is a face view of the holder, and Fig. 4 is a longitudinal mid-section of same at line x^4 in Fig. 3. Fig. 5 is a fragmentary view illustrating the manner of securing the side members or sections of the form to the end members thereof by dowel-pins. Fig. 6 is a face view of a somewhat different construction of the box-like form, and Fig. 6^a is an end view of the same.

Referring primarily to Figs. 1 to 5, X represents the arbor of the stripping-machine, on which the form is removably mounted through the medium of a reduced screw-threaded prolongation of the arbor and a nut x .

Figs. 1, 2, and 3 show the construction of the holder of the form. This holder consists of two plates a and a^x , arranged to overlap, the former being adapted to slide in keepers or guides in the latter. As herein shown, the plate a^x has side guides a' , between which the plate a may slide longitudinally. In the two plates are slots which coincide and form an oblong aperture y , through which passes the screw-threaded extremity of the arbor X, the nut x clamping on the inner or upper plate a . The plates are slidable on each other longi-

tudinally for adjustment and when set are secured by a flush clamping device consisting of a bolt b , the head of which is sunk in flush with the surface of the upper plate a , and a flush nut c , which fits in and may play along a groove or slot a^2 in the lower plate a^x , Fig. 2, in effecting the adjustment. As here shown and as preferred, the groove a^2 is beveled at its sides, and the nut c is beveled to fit it. The nut cannot rotate, and when the plates are clamped together by the bolt b the outer face of the holder (seen in Fig. 2) is plain and without projections, so that it may fit up snugly and properly to the face-plate on the arbor X.

At the end of each of the holder-plates is an upright a^3 for the purpose of mounting and securing the sections of the form on and to the holder. There are four sections in the holder, and these may be of wood cut to the proper length and breadth. The two like sections $d d$, which may be called "ends," have each a groove formed in its face to receive an upright a^3 , to which it is removably secured. The means of securing it here shown comprises two screw-studs a^4 , fixed in the upright. These pass through holes in the end d , and nuts a^5 secure the end firmly in place. The two like sections $e e$, which may be called "sides," fit in between the ends d and may be secured removably thereto by dowels e^x . (Seen best in Fig. 5.)

In the construction of the form described the variation is obtained by having a series or set of sections d (in pairs) of different lengths, varying, say, by one-eighth of an inch, and a series or set of sections e , (also in pairs,) varying, say, by one-fourth of an inch in length. The degree of variation, however, is not important to this invention. The operator selects a pair of ends and a pair of sides of the proper length, mounts the ends on the holder, and then fits in the sides, sliding the plates of the holder on each other to adjust it to the proper length. When properly adjusted, the bolt b is set tight. The form is now mounted on the arbor X, and in order to enable the operator to get at the nut x from the side—as the hollow in the form is sometimes quite narrow—the sides e are made narrower than the ends d by preference, so

as to leave a space under their lower edges, as seen at *z* in Fig. 4, to admit the insertion of the hand or a suitable tool.

The nuts *a*⁵ are not really essential where the side *e* fits snugly between the ends *d*; but in some cases it may be desirable to elongate the form a little, so that the dowel-pins *e*^x will still occupy the dowel-holes in the ends, but the sides will not abut firmly against the ends, in which case it will be necessary to secure the ends *d* firmly to the uprights *a*³ in some manner, and the nuts *a*⁵ effect this object.

Fig. 6 illustrates a form in which the holder is or may be substantially the same as that already described, but the sectional portion which fits inside of the paper box is somewhat different. In this construction the four sections *g* of the form are alike, and each comprises a part of a side and end, these parts being integrally or rigidly connected at the corner of the rectangle. The overlapping portions of the parts are gained, so as to preserve a flush outer surface, and the attachment to the uprights *a*³ is effected by bolts *h*, the shanks of which pass through slots *i* in the sections and through holes in the uprights *a*³ and have nuts *h*¹ on their inner ends. The beveled heads *h*² of the bolts engage the beveled margins of the slots *i*. The margins of the sections may be graduated where they overlap, as seen at *j*. This construction is best suited to a form made wholly of metal.

It will be understood that in these box-like forms for use in holding the paper box the sides and ends need not be unperforated or unapertured. They may as well be of open-work, especially if made of metal.

Having thus described my invention, I claim—

1. In a form for use on a paper-box machine, the combination with an adjustable holder, consisting of two plates slidably connected together face to face and provided with guides to keep them in alinement when moved one on the other, said plates having coinci-

dent slots forming an elongated aperture to receive the arbor of the machine, of an independent clamping device for securing said plates together when set, and form-sections mounted adjustably on the said holder, substantially as set forth.

2. In a form for use on a paper-box machine, the combination with an adjustable holder, consisting of two slidable plates connected face to face and provided with guides and means for securing them together when set, the ends *d*, *d*, secured to uprights *a*³ on the respective plates of the holder, and sides *e*, *e*, between said ends and secured removably thereto, substantially as set forth.

3. In a form for use on a paper-box machine, the combination with the form-sections, mounted on a holder, of the said holder, consisting of the two plates *a* and *a*^x, mounted, one on the other face to face, so that they may slide over each other, said plates being provided with an elongated aperture *y*, uprights *a*³, suitable guides to keep them alined, and means for securing the plates together when adjusted and set, said means comprising a bolt *b*, which occupies a hole in one plate and a slot *a*² in the other, and a beveled nut *c*, occupying the said slot *a*², substantially as set forth.

4. In a form for use on a paper-box machine, the combination with the form-sections, of a holder on which said sections are mounted, said holder being extensible only in a longitudinal direction and having a longitudinally-elongated aperture to receive the arbor of the machine, and having a clamping device independent of the arbor for securing its parts together when adjusted, substantially as set forth.

In witness whereof I have hereunto signed my name, this 30th day of December, 1897, in the presence of two subscribing witnesses.

FREDERICK G. HOTCHKISS.

Witnesses:

PETER A. ROSS,
HENRY CONNETT.