

No. 760,328.

PATENTED MAY 17, 1904.

A. W. FRISKEY.
BINDER FRAME.

APPLICATION FILED DEC. 3, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

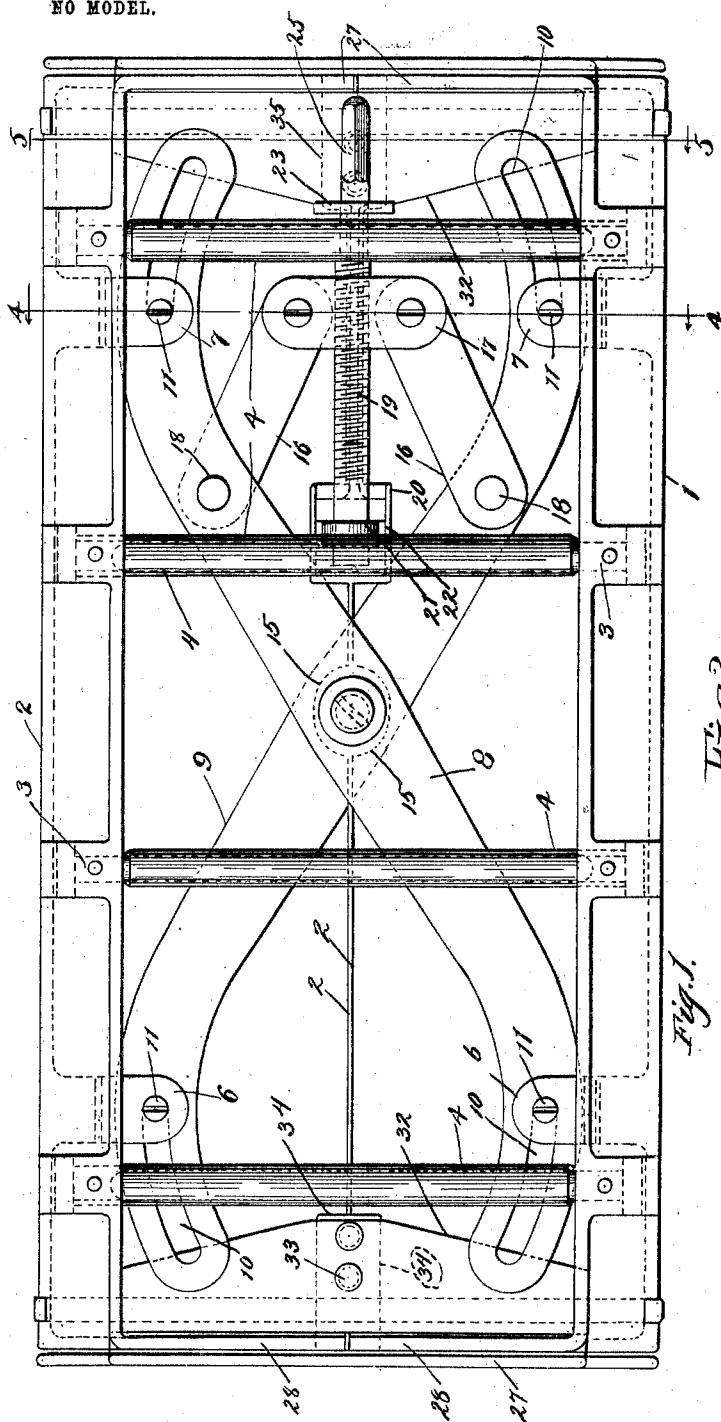
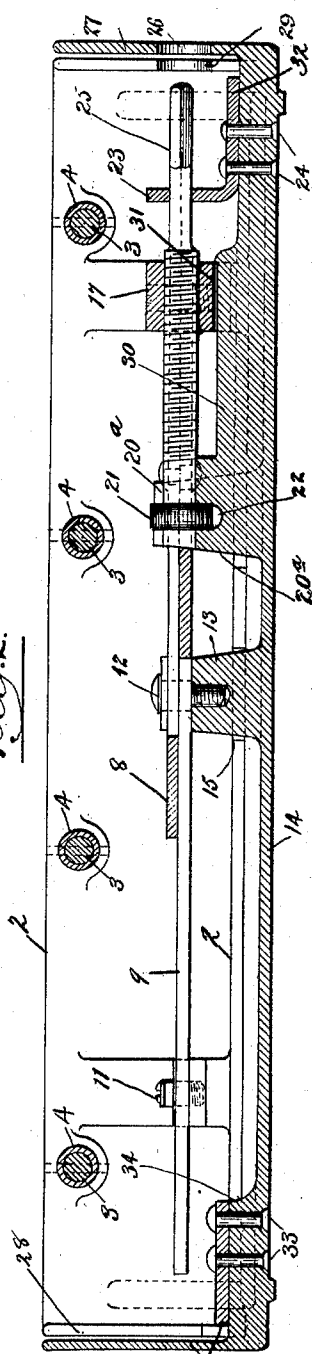


Fig. 1.

Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

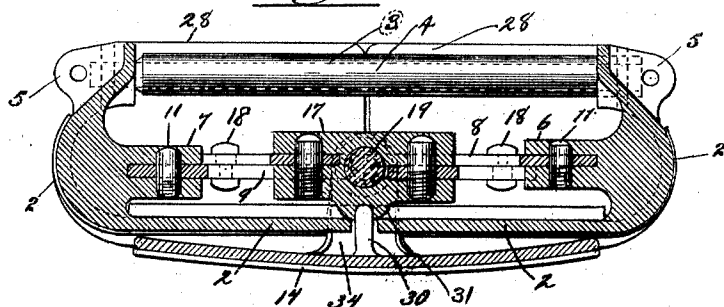


Fig. 3.

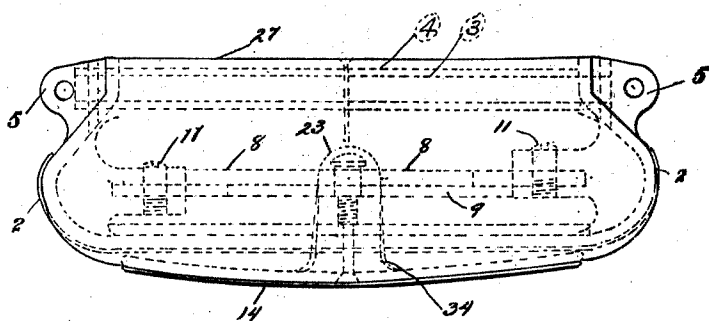
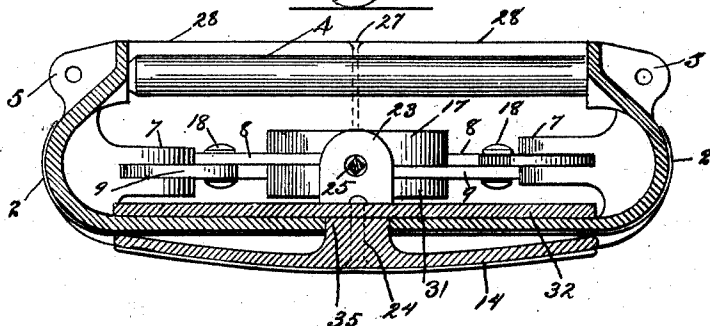


Fig. 5.



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UNITED STATES PATENT OFFICE.

ARTHUR W. FRISKEY, OF CHICAGO, ILLINOIS.

BINDER-FRAME.

SPECIFICATION forming part of Letters Patent No. 760,328, dated May 17, 1904.

Application filed December 3, 1902. Serial No. 133,677. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR W. FRISKEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Binder-Frames, of which the following is a full, clear, and exact specification.

My invention relates to that class of binder-frames having impaling-pins and relatively adjustable side members, whereby loose ledger-sheets in books of any desired thickness may be firmly held in book form; and the invention has for its primary object to provide an improved and efficient construction whereby the sides may be quickly and conveniently adjusted relative to each other and will retain their adjustment without the aid of special locking means.

With these ends in view my invention consists in certain features of novelty in the construction, combination, and arrangement of parts and by which the said object and certain other objects hereinafter appearing are attained, all as fully described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a plan view of my improved binder-frame. Fig. 2 is a vertical sectional view of my improved binder-frame, taken through the longitudinal axis thereof. Fig. 3 is an end elevation. Fig. 4 is a cross-section on the line 4 4, Fig. 1; and Fig. 5 is a cross-section on line 5 5, Fig. 1.

1 2 are the two side members, which are identical in construction and operation and to one of which is secured a pin 3 and to the other a sleeve 4, into which the pin is inserted. The pin is shown as secured to the side member 2 and the sleeve to the member 1, and in this example of my invention I have illustrated four of these pins and sleeves, which constitute the impaling-pins before mentioned, upon which the loose sheets are impaled in the usual way. These side members 1 2 of the binder-frame may be cast or otherwise made in the form of the back of the book with ears 5, whereby the covers may be attached.

The side members 1 2 are hollow, and formed in or secured to each of them are two lugs 6

7, which are preferably bifurcated or split in a direction longitudinally of the binder-frame, as better shown in Fig. 4, so as to receive opposite ends of two crossed levers 8 9, which ends are slotted, as shown at 10, for the insertion of pins 11, which are preferably in the form of short studs passing through the bifurcated lugs 6 7 and having their ends threaded in one side of each lug. The ends of the levers 8 9 are curved on outwardly-extending parts, and slots 10 are similarly curved, and the levers are pivoted at their intersection by screw or pivot 12 to any suitable support fixed with relation to the side members 1 2. This support is in the form of a boss 13, formed at the mid-length and center of a back member 14 and projecting upwardly into the inclosure constituted by the two side members through suitable openings 15, arranged opposite each other in the inner edges of the side members where they come together above or inwardly from the back member 14, which overlaps the space between these inner edges when the side members are spread apart by the action of the crossed levers 8 9.

The levers 8 9 are actuated for thus increasing and decreasing the distance between the side members 1 2, and thereby adapting the binder-frame for books of different thicknesses or for removing the leaves from the impaling-pins by means of toggle-levers 16, having a cross-head 17, to which they are pivoted at their contiguous ends, while their other ends are pivoted by pivots 18 to the levers 8 9, respectively, at points between the pivot 12, which constitutes the fulcrum of levers 8 9, and the pins 11, and preferably at points adjacent to the fulcrum, so that a slight movement of the toggle cross-head 17 will result in a considerable movement of the ends of the levers 8 9. The cross-head 17 is moved inwardly or outwardly for accomplishing this result by a screw 19, which is threaded on the cross-head 17, so that the latter will act as a nut thereon, and which has its inner end rotatably mounted in a bearing 20, but fixed against longitudinal movement by means of a flange 21, seated in a recess 22 in bearing 20. The upper side of the bearing 20 is slotted or open, as shown at 20^a, so that the end

of the screw and the flange 21 may be inserted from the upper side, and when inserted will be held against outward movement by the cross-head 17, which in turn is held by the links 16 and by a bearing-bracket 23, secured by rivets or other suitable devices 24 to the back member 14. The end of the screw is formed with a key-post 25, whereby it may be rotated by means of any suitable key inserted thereover through a slot or opening 26, formed in one of the end walls 27 of the back member 14, which are turned inwardly and overlap the ends of the side members, which are also formed with end walls or flanges 28, projecting inwardly in line with each other, but notched at their inner contiguous ends, as shown at 29, so as not to cover the keyhole 26.

The back member 14 and directly under the cross-head or nut 17 is formed with a track or way 30, extending longitudinally of the screw 19, and the under side of the nut or cross-head is provided with a notch or groove 31, which engages over this track or way 30, and thereby prevents a twisting movement of the cross-head.

To each end of the back member 14 is secured a cross-plate 32, which overlaps the inwardly-projecting edges of the side members 12, and thereby supports the back member on the side members independently of the boss 13 and the pivot-levers connected thereto. The bearing-bracket 23 is formed on one of these cross-plates 32, and this plate is attached to the back member by the rivets 24, which pass through the plate and through a block 35, arranged between the edges of the side members, so as to fill up the space and hold the plate 32 against the inner faces of the inwardly-projecting edges of these side members. The cross-plate 32 at the opposite end is secured by similar rivets 33 and a similar block 34.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a binder-frame the combination of a binding means comprising two relatively movable members, crossed levers having their ends operatively connected to said members, a back member to which said levers are pivoted and a screw journaled upon said back member and operatively connected with said levers for oscillating them upon their pivot, substantially as set forth.

2. In a binder-frame the combination of a

binding means comprising two relatively movable members, crossed levers having their ends operatively connected with said members, a back member to which said levers are pivoted, toggle-levers comprising a nut or threaded cross-head, operatively connected with said levers for oscillating them on their pivot, and a screw rotatably secured to said back member and engaging in said threaded cross-head, substantially as set forth.

3. In a binder-frame the combination of a binding means comprising two relatively movable members, crossed levers having their ends operatively connected with said members, a back member to which said levers are pivoted, a screw rotatably fixed to said back member, a cross-head threaded on said screw and operatively connected with said levers and a guide-way for said cross-head on said back member, substantially as set forth.

4. In a binder-frame the combination of a binding means comprising two relatively movable members, a back member overlapping said first members on their outer sides, a transverse plate secured to said back member at one end thereof and overlapping said first members on their inner sides, said plate having an inwardly-turned bracket, a screw having its end journaled in said bracket and fixed against endwise movement, and means operatively connecting said screw with said first members for adjusting them relatively, substantially as set forth.

5. The combination of the clamping-sections, arms for expanding and contracting the sections, pivoted between such sections a rotating rod lying between said sections, and toggle-links connecting the rod with the arms, the construction being such that when the rod is rotated, the arms will be actuated, substantially as described.

6. The combination of two clamping-sections, a support arranged therebetween, arms pivoted in said support, a screw-rod, a block moving on said rod, and connecting-links extending between the block and the arms, the construction being such that when the rod is rotated the arms will be moved relatively to each other to contract or expand the clamping-sections, substantially as set forth.

ARTHUR W. FRISKEY.

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