

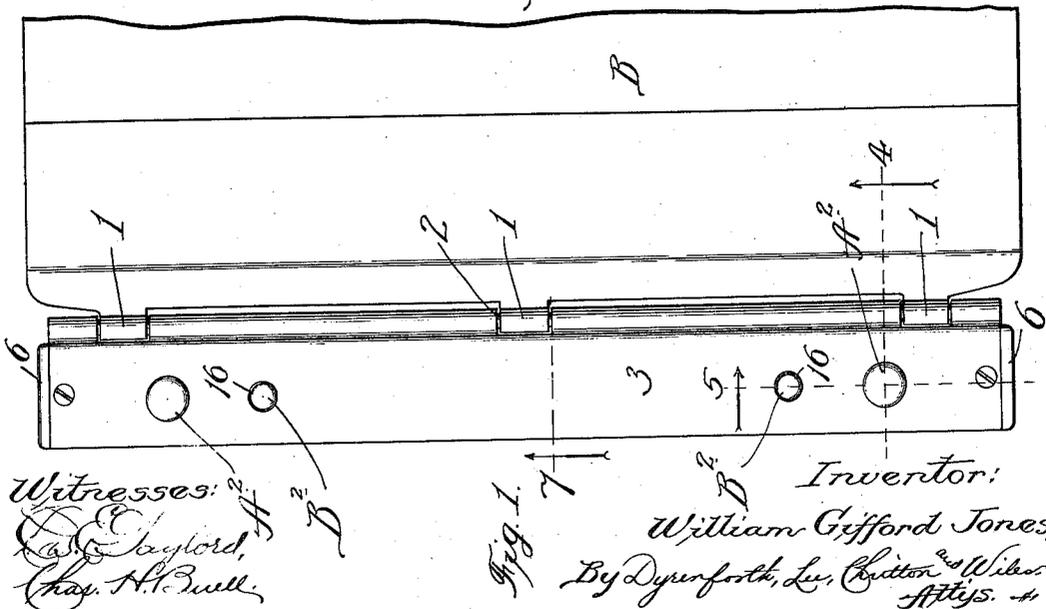
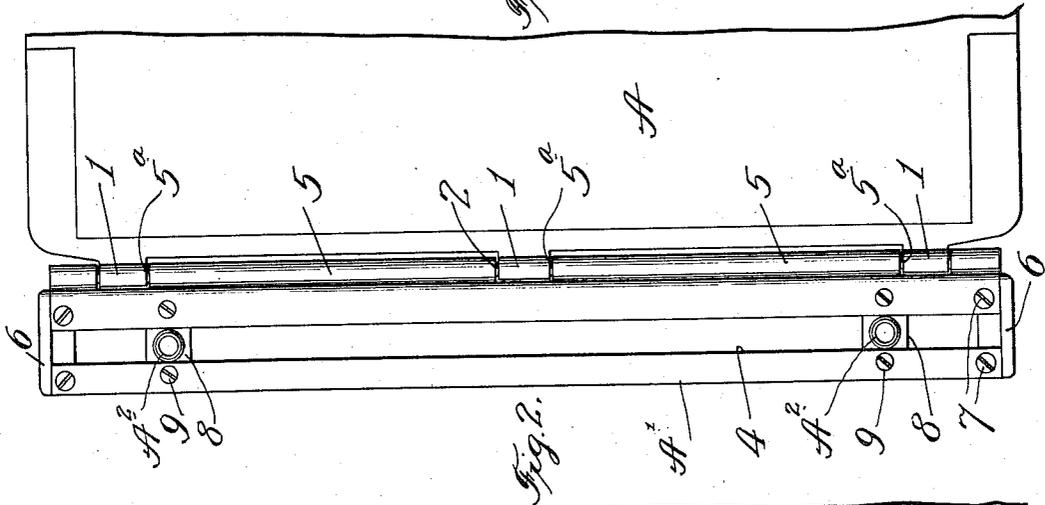
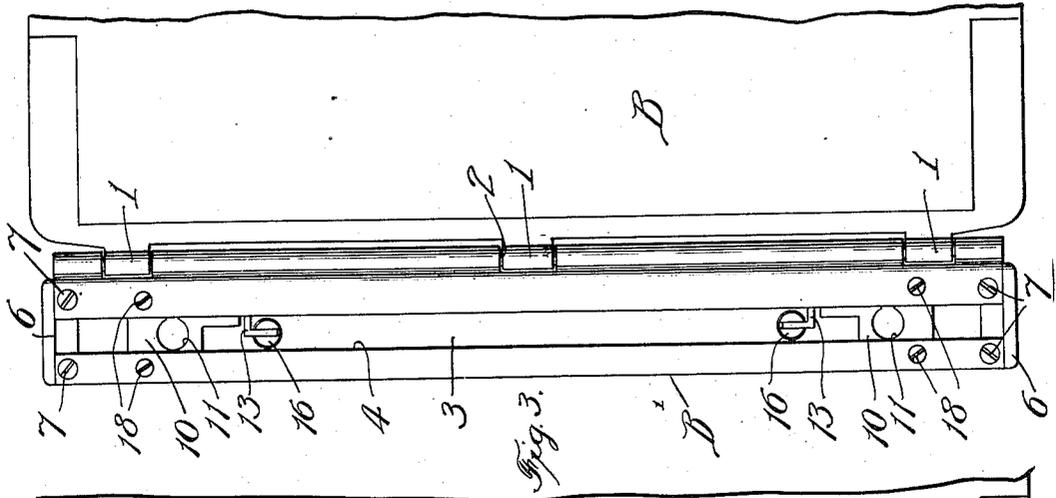
W. G. JONES.  
BINDER.

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Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.

1,155,068.



Witnesses:  
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Fig. 1.

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## UNITED STATES PATENT OFFICE.

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## BINDER.

1,155,068.

Specification of Letters Patent.

Patented Sept. 28, 1915.

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*To all whom it may concern:*

Be it known that I, WILLIAM GIFFORD JONES, a citizen of the United States, residing at Oak Park, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Binders, of which the following is a specification.

This invention relates particularly to loose-leaf binders; and the primary object is to provide a binder which can be used as a transfer binder, or for analogous purposes, the binder being of improved construction and provided with locking means operating in an improved manner.

The invention is illustrated in its preferred embodiment in the accompanying drawings in which—

Figure 1 represents a broken plan view of a transfer binder embodying the invention; Fig. 2, a broken inner plan view of the lower cover-section and clamping-member connected therewith; Fig. 3, a broken inner plan view of the upper cover-section and clamping-member connected therewith, the clamping-member being equipped with an improved locking means; Fig. 4, an enlarged broken sectional view, taken as indicated at line 4, Fig. 1; Fig. 5, a broken sectional view of the upper clamping-member, taken as indicated at line 5 of Fig. 1; Fig. 6, a broken sectional view, taken as indicated at line 6 of Fig. 5; Fig. 7, a sectional view of the upper clamping-member, taken as indicated at line 7 of Fig. 1; and Fig. 8, a perspective view of one of the locking devices employed.

In the preferred construction, which is illustrated, A represents a lower cover-section equipped with a clamping member A' from which rise sectional binding posts A<sup>2</sup>; and B, an upper cover-section attached to an upper clamping-member B', which is fitted with locking devices B<sup>2</sup>.

The cover-sections are preferably provided at their rear ends with hinge-eyes 1, for connection, by means of pintles 2, with hinge-eyes with which the clamping-members are provided at their inner edges.

The lower clamping-member A' may be

of any desired construction, suited to firmly support the posts A<sup>2</sup>. As shown, it comprises a sheet-metal member 3 bent into hollow form, the edges being left separated at the inner side of the hollow member to afford a longitudinal slot 4. In the forming operation, hinge-eyes 5 are provided at the inner edge of the hollow member, by bending the metal at that portion into tubular form and cutting away portions at 5<sup>a</sup> to accommodate the hinge-eyes 1. The tubular members are fitted with end-caps, or end-plugs 6, which are recessed to accommodate the sheet-metal wrapped about the plugs, so that flush surfaces will be provided. The end-plugs are secured in place by screws 7. A short distance from each end of the clamping-member A', there are provided inner-plugs 8, which are secured in place by screws 9. The sectional posts A<sup>2</sup> rise from the inner-plugs 8, the lower ends of the posts extending through the slot 4, and being firmly secured to the plugs 8. The upper clamping-member B', which is made hollow to contain the locking devices, likewise preferably comprises a strip of sheet-metal 3 which is formed in the same manner as in the case of the lower clamping-member, thus providing at the inner or lower side of the upper clamping-member a longitudinal slot 4, and at the inner edge of the upper clamping-member the hinge-eyes 5. End-plugs 6 are provided for the upper clamping-member, which are secured in place by screws 7, as in the case of the lower clamping-member.

Each locking device B<sup>2</sup> preferably comprises a plug 10 provided with a vertical post-receiving bore 11 and an intercepting inclined ball-bore 12; a small lever 13 located in a longitudinal slot 13<sup>a</sup> with which the plug is provided, and supported on a transverse pivot 13<sup>b</sup>; a friction-lock ball 14 located in the inclined bore 12 and embraced above and below by the bifurcated extremity of the lever 13; a small coiled spring 15 seated in a suitable socket or bore 15<sup>a</sup>, which is crossed by the longitudinal slot 13<sup>a</sup> of the plug, the upper edge of the lever 13 being

recessed to receive the lower end of the spring 15; and a push-button 16 having its lower end connected, by a pivot 16<sup>a</sup>, to the offset inner end of the lever 13.

5 As will be understood from Figs. 4 and 5, the ball-bore 12 inclines downwardly and toward the post-bore 11, and it intercepts the bore 11 along one side, thus providing a tapered slot 12<sup>a</sup>, through which the ball 14  
10 may project slightly into the post-bore.

The upper wall of the hollow clamping-member B' is provided with a perforation 17 for the push-button 16. In the assembling operation, the plug 10 and the co-acting parts of the locking device mounted thereon are inserted into the hollow clamping-member before the end-plug is inserted, the push-button 16 being deflected upwardly through the opening 17 as the plug 10 is  
20 shoved inwardly to position. The plug 10 is then secured in position, by screws 18. It will be understood that the spring 15 is entered in its socket and placed under compression as the plug 10 is shoved into the  
25 tubular member, the upper end of said spring bearing against the upper wall of said tubular member. Finally, the end-plug is inserted and secured in position.

30 From the description given, it will be understood that when the upper clamping-member B' is being shoved down to clamp the leaves of the book, the balls 14 will not interfere with such action; but any upward pressure upon the upper clamping-  
35 member causes the balls to bind between the binding-posts and the downwardly converging opposed walls of the ball-bores. The springs 15 tend to force the balls downwardly and into locking engagement with  
40 the posts, this action occurring because the forked extremities of the levers 13 engage the balls above and below. When desired, the push-buttons 16 may be depressed, thereby lifting or releasing the balls, thus en-  
45 abling the upper clamping-member to be lifted freely on the posts. It thus appears that the frictionally-acting balls are spring-actuated in one direction, and may be manually lifted at will.

50 The improved construction is simple, easily assembled, durable, and affords an effective locking device possessing great certainty of action. These features will be readily appreciated by those skilled in the  
55 art.

No unnecessary limitation should be understood from the foregoing detailed description which has been given for clearness of understanding only; but the appended  
60 claims should be construed as broadly as is permissible in view of the prior art.

What I claim as new and desire to secure by Letters Patent is:

1. In a binder, the combination with a

lower clamping-member equipped with a 65 binding-post rising therefrom, and an upper clamping-member having a post-receiving perforation, of a plug within said upper clamping-member provided with a post-bore and an intersecting inclined ball-bore, a lever 70 pivotally mounted within said plug and adapted to elevate said ball, and a push-button pivotally connected with said lever and projecting through the upper wall of the upper clamping-member and serving to 75 actuate said lever.

2. In a binder, the combination with a hollow clamping-member having a post-receiving perforation therethrough, of a plug therein insertible from the end of the clamp- 80 ing-member and having a vertical post-bore registering with said perforation and having also an inclined ball-runway intersecting said post-bore, a lever mounted in said plug and having upper and lower furca- 85 tions engaging said ball, a thumb-piece for said lever accessible from the top side of said hollow clamping member, and a coil spring disposed in a socket in said plug and confined between said lever and the upper 90 wall of the clamping-member and serving normally to force said ball to the locking position.

3. In means of the character set forth, the combination of a tubular binding-member 95 provided with a vertical post-receiving perforation, of a plug in said binding-member insertible from the end of the clamping-member and provided with a registering post-receiving perforation and an intersecting 100 inclined runway, a ball in said runway, a lever pivoted in a longitudinal slot in said plug and having upper and lower furcations engaging said ball, a spring confined in a socket in said plug and engaging said lever 105 between the ball and the lever pivot and having its upper end bearing against the upper wall of said tubular binding-member, and a push-button pivotally connected with said lever and projecting through a vertical 110 perforation in the upper wall of said clamping-member.

4. In a binder, a hollow clamping-member comprising a sheet-metal member bent into hollow form, the edge portions of the metal 115 being left separated at the inner side of the hollow member to afford a longitudinal slot, the metal at the inner edge of the hollow member being curved to form a hinge-eye, end-caps closing the ends of said hollow 120 member, and plugs within said hollow member equipped with locking-devices and having perforations registering with vertical perforations extending through said hollow member. 125

5. In a binder, a hollow clamping-member comprising a sheet-metal member bent into hollow form, the metal at the inner edge of

the hollow member being curved to form a hinge-eye, and the edges of the sheet-metal member being separated to provide a longitudinal slot at the inner side of the hollow member, plugs secured in the hollow member some distance from the ends thereof, posts secured in said plugs and projecting up-

wardly through said slot, and end-caps for the hollow member.

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In presence of—  
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N. B. DEARBORN.