

H. D. MANNING.  
 TEMPORARY BINDER OR LOOSE SHEET HOLDER.  
 APPLICATION FILED OCT. 28, 1910.

1,002,291.

Patented Sept. 5, 1911.  
 2 SHEETS—SHEET 1.

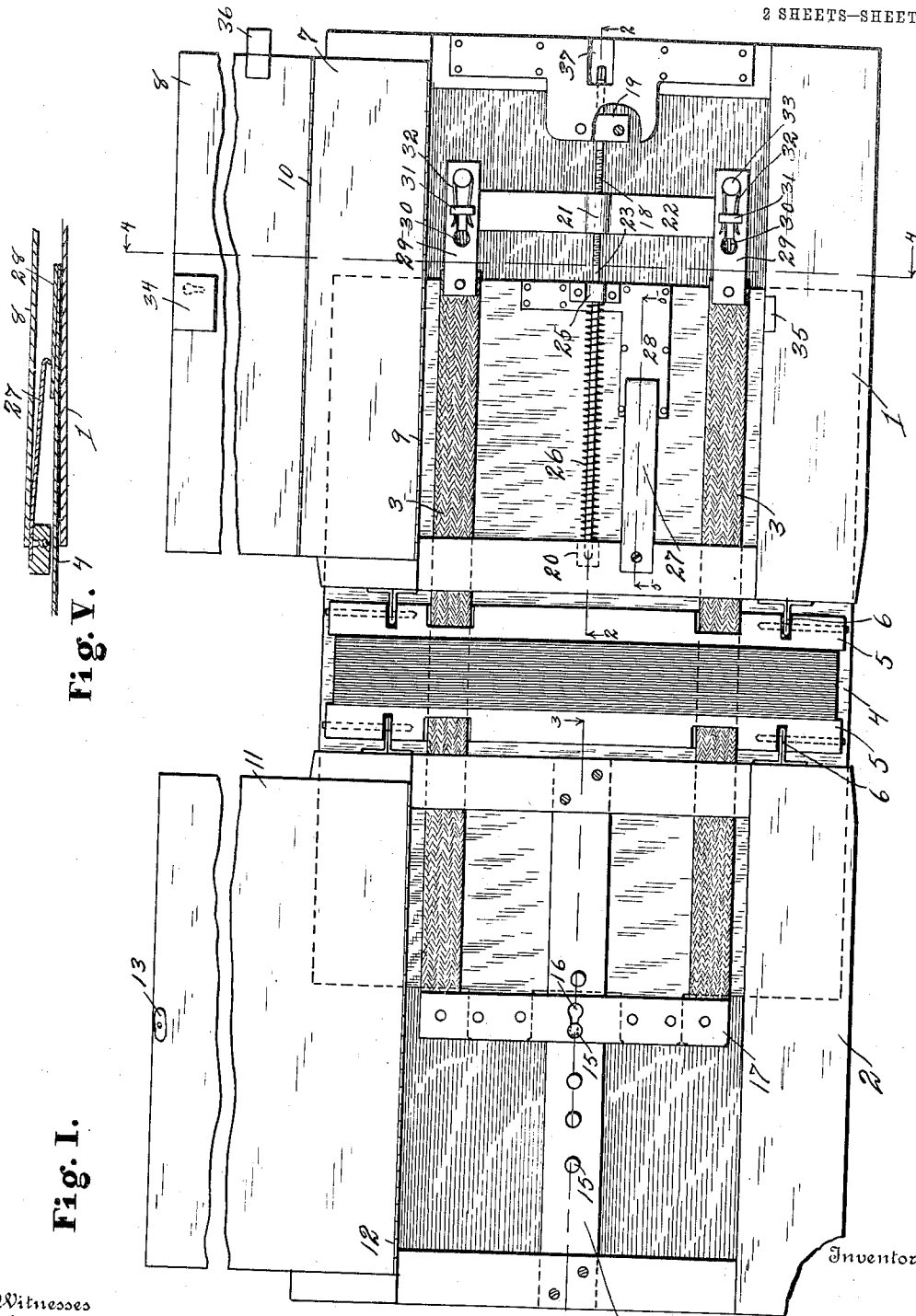


Fig. I.

Fig. V.

Witnesses  
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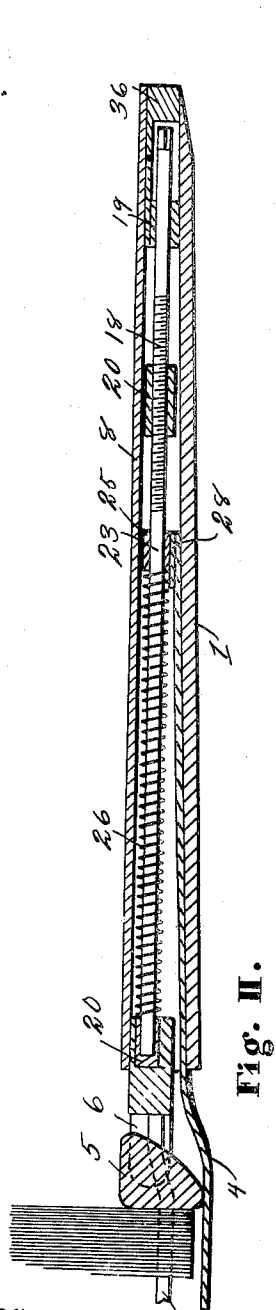


Fig. II.

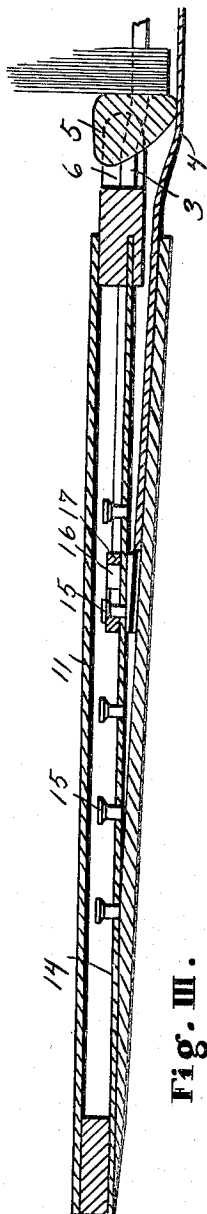


Fig. III.

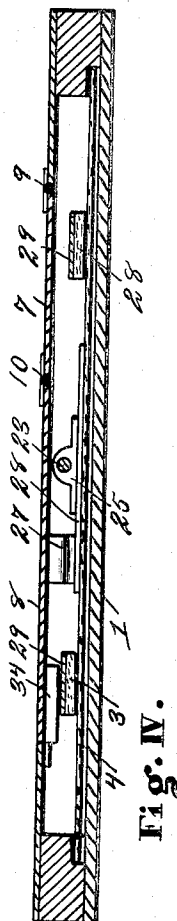


Fig. IV.

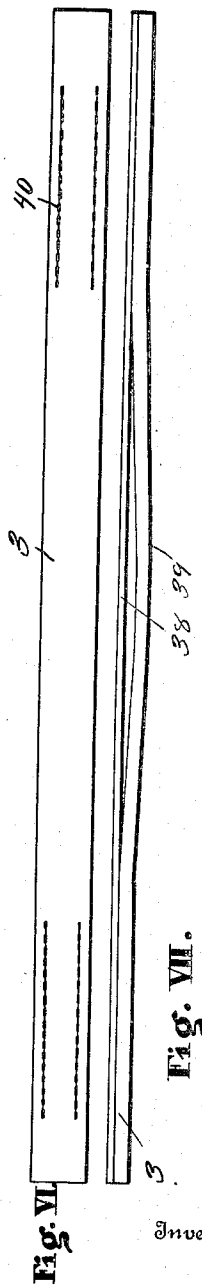


Fig. VI.

Fig. VII.

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# UNITED STATES PATENT OFFICE.

HARRY D. MANNING, OF NEWCASTLE, INDIANA, ASSIGNOR TO KALAMAZOO LOOSE LEAF BINDER COMPANY, OF KALAMAZOO, MICHIGAN.

TEMPORARY BINDER OR LOOSE-SHEET HOLDER.

1,002,291.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed October 23, 1910. Serial No. 589,554.

*To all whom it may concern:*

Be it known that I, HARRY D. MANNING, a citizen of the United States, residing at Newcastle, Indiana, have invented certain new and useful Improvements in Temporary Binders or Loose-Sheet Holders, of which the following is a specification.

This invention relates to improvements in temporary binders or loose sheet holders.

An application for Letters Patent on these improvements was filed in Great Britain on October 29, 1909, No. 24,936.

The main objects of this invention are, first, to provide in a temporary binder or loose sheet holder an improved adjusting mechanism for the binding cords or strips, whereby the leaves or sheets are effectively clamped, and one which is of rapid manipulation. Second, to provide in a temporary binder, or loose sheet holder, an improved back strip supporting means. Third, to provide in a temporary binder or loose sheet holder, an improved means for locking the binder to prevent its unauthorized adjustment or manipulation for the insertion or removal of sheets or leaves. Fourth, to provide an improved construction of binding strips. Fifth, to provide an improved binder in which the binding strips may be readily renewed.

Further objects and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention, is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure 1 is a detail inside view of a structure embodying the features of my invention, the cover lids being shown open, the leaves being shown in conventional form and parts being broken away to show structural details. Fig. 2 is a detail longitudinal section taken on a line corresponding to line 2—2 of Fig. 1, showing the structural details of the adjusting mechanism. Fig. 3 is a detail longitudinal section through the cover 2, taken on a line corresponding to

line 3—3 of Fig. 1, showing structural details of the step by step adjusting mechanism. Fig. 4 is a detail transverse section taken on a line corresponding to line 4—4 of Fig. 1. Fig. 5 is a detail longitudinal section taken on a line corresponding to line 5—5 of Fig. 1, showing the catch for holding the back strip in its retracted position.

In the drawings, similar reference characters refer to similar parts throughout the several views, and the sectional views are taken looking in the direction of the little arrows at the ends of the section lines.

Referring to the drawing, the covers 1 and 2 are provided with chambers to receive the adjusting mechanism for the binding strips 3, which are arranged through the inner ends of the covers to project into the chambers, and the back strip 4 which telescopes into the chambers, as illustrated.

Sheet clamping bars 5 are provided, the clamping bars being pivotally mounted on the hinge members 6, projecting inwardly at the inner ends of the covers. The binding strips 3 are arranged through these clamping bars. The cover chambers are provided with lids in their inner walls, the lid for the cover 1 being preferably made up of sections 7 and 8, the section 7 being hinged to the cover wall at 9, and the section 8 being hinged to the section 7 at 10. Hinges of the so-called piano cover type are shown. The lid 11 is hinged at 12 to cover 2, a button 13 being provided for retaining the lid in its closed position.

The binding strips are preferably supported on the cover 2 to be adjusted therein, a step by step. The mechanism for accomplishing this in the structure illustrated consists of the longitudinally-arranged bar 14, having a series of headed studs 15 thereon adapted to be engaged in the key-hole slot 16 in the cross bar 17, to which the binding strips are secured.

Clamping or binding tension is applied to the binding strips by means of the screw 18 supported in suitable bearings 19 and 20 in the chamber of the opposite cover. This screw 18 coacts with the nut member 21 of the cross bar 22, to which the binding strips are secured. The screw is provided with an unthreaded portion 23 on which the nut member is freely movable, so that when the

screw is turned until the nut member is released therefrom, the binding strips are freed and the binder may be rapidly opened.

The back strip 4 is connected at one end 5 to the cross bar 17 and is provided with a slide member 25 on the unthreaded portion of the screw 18, the screw thus serving to guide the back strip. On the unthreaded portion of the screw is a spring 26 which applies tension to the back strip and takes up 10 any slack therein occasioned by the adjustment of the binder. When the member 21 is released from the screw, and the covers pulled apart, the spring is put under tension so that when the covers are again moved 15 toward each other, the spring takes up the slack in the back strip and also moves the member 21 into engagement with the threaded portion of the screw, so that by merely 20 turning the screw, the binding tension is applied to the binding strips. To prevent this spring closing up the binder while it is being manipulated, for the insertion or removal of leaves, I provide a spring catch 27 25 which engages over the edge of the plate 28 on the back strip, when it is in its retracted position, and retains it until the spring is released.

To facilitate the ready attachment and removal of the binder strips, I provide them 30 with attaching pieces 29, having slots 30 therein adapted to be engaged over the studs 31 on the cross pieces 22, when presented transversely thereto. To prevent a twisting 35 movement of these attaching pieces 29 when tension on the binding strips is released, I provide springs 32 which are mounted on studs 33 to engage the shanks of the studs 31. The lid for this cover is provided with 40 a lock 34 on the section 8, the bolt of which engages with the keeper plate 35 when the lid is locked. Section 8 is preferably provided with a support 36 adapted to close into the key opening 37 when the lid is closed, 45 thus preventing manipulation of the binder adjusting mechanism until the lid is opened. The binding strips, designated generally by the numeral 3, are formed of two parts, the inner part 38 being shorter than the outer 50 part 39, the parts being secured together by their ends only, as by the stitches 40, so that when the binding strips are straightened out, the outer part 39 is slackened. This is shown somewhat exaggerated in Fig. 7. 55 The binding strips are connected to the cross bars 17 and 22 at points beyond the points of attachment of the layers of the binding strips to each other. As shown in Fig. 1, the attachments are at the extreme ends of 60 the binding strips. The object of this is that as these binding strips are of considerable thickness, in order to secure the desired strength and body, when they are bent their inner sides have a tendency to roughen or to 65 become corrugated, which roughening or

corrugating interferes with the slipping of the leaves on the binding strips. This is quite effectively remedied by thus forming the binding strips.

I have shown my improvements as applied to a binder having binding strips, and a general structure similar to that shown in the patent to Harry F. Bushong, No. 851,276, dated April 23, 1907, as I have particularly adapted them to such a binder. I desire, 70 however, to remark that my improvements are capable of being adapted to other or different types of binders, and I desire to be understood as claiming the same specifically, as illustrated, as well as broadly within the 75 scope of the appended claims.

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

1. In a temporary binder, the combination 85 with the covers, of binding strips, cross bars to which said binding strips are connected, one of the cross bars being provided with a keyhole slot, and the other with a nut member, a bar having a series of slot-engaging 90 studs thereon arranged longitudinally of one of the said covers, a screw coacting with said nut member and having an unthreaded portion at its inner end, arranged longitudinally of the other cover; a back strip adapted 95 to telescope into said covers, connected to said stud-engaging cross bar, a slide member to which the other end of said back strip is connected, arranged on the unthreaded 100 portion of said screw, a spring on said screw to engage said slide member, and a catch for automatically retaining said back strip in its retracted position.

2. In a temporary binder, the combination 105 with the covers, of binding strips, cross bars to which said binding strips are connected, one of the cross bars being provided with a key-hole slot, and the other with a nut member, a bar having a series of slot-engaging 110 studs thereon arranged longitudinally of one of the said covers, a screw coacting with said nut member and having an unthreaded portion at its inner end, arranged longitudinally of the other cover; a back strip 115 adapted to telescope into said covers, connected to said stud-engaging cross bar, a slide member to which the other end of said back strip is connected, arranged on the unthreaded portion of said screw, and a spring 120 on said screw to engage said slide member.

3. In a temporary binder, the combination 125 with the covers, of binding strips, cross bars to which said binding strips are connected, one of the cross bars being provided with a key-hole slot, and the other with a nut member, a bar having a series of slot-engaging studs thereon arranged longitudinally of one of the said covers, a screw coacting 130 with said nut member and having an unthreaded portion at its inner end, arranged

longitudinally of the other cover, a back strip, a slide member to which said back strip is connected, arranged on the unthreaded portion of said screw, and a spring  
5 on said screw to engage said slide member.

4. In a temporary binder, the combination with the covers, of binding strips connected to one of the covers, an adjusting means for said binding strips comprising a screw, and  
10 a coacting nut member connected to said binding strips, said screw having an unthreaded portion on which said nut member is freely movable, a back strip adapted to telescope into the cover containing said adjusting means, a member on said back strip  
15 slidably coacting with the unthreaded portion of said screw, a coiled spring arranged on said screw for applying tension to said back strip, and a spring catch for retaining  
20 said back strip in a retracted position.

5. In a temporary binder, the combination with the covers, of binding strips connected to one of the covers, an adjusting means for said binding strips comprising a  
25 screw, and a coacting nut member connected to said binding strips, said screw having an unthreaded portion on which said nut member is freely movable, a back strip adapted to telescope into the cover containing said  
30 adjusting means, a member on said back strip slidably coacting with the unthreaded portion of said screw, and a coiled spring arranged on said screw for applying tension to said back strip.

6. In a temporary binder, the combination with the covers, of binding strips connected to one of the covers, an adjusting means for said binding strips comprising a screw, and a coacting nut member connected to said  
40 binding strips, said screw having an unthreaded portion on which said nut member is freely movable, a back strip adapted to telescope into the cover containing said adjusting means, a member on said back  
45 strip slidably coacting with the unthreaded portion of said screw, a spring for applying tension to said back strip, and a spring catch for retaining said back strip in a retracted position.

7. In a temporary binder, the combination with the covers, of binding strips connected to one of the covers, an adjusting means for said binding strips comprising a screw, and a coacting nut member connected to said  
50 binding strips, said screw having an unthreaded portion on which said nut member is freely movable, a back strip adapted to telescope into the cover containing said adjusting means, a member on said back strip  
55 slidably coacting with the unthreaded portion of said screw, and a spring for applying tension to said back strip.

8. In a temporary binder, the combination with the covers, of binding strips; means for  
65 adjusting said binding cords comprising a

screw, and a coacting nut connected to said binding strips, said screw having an unthreaded portion on which said nut is freely movable to permit the rapid opening of the binder when the nut is disengaged from the  
70 screw.

9. In a temporary binder, the combination of the binding strip; means for adjusting said binding cord comprising a screw, and a  
75 nut member connected to said binding cord, said screw having an unthreaded portion on which said nut member is freely movable, a spring for returning said nut member to its thread-engaging position arranged on  
80 said screw, and a catch for rendering said spring inoperative.

10. In a temporary binder, the combination of the binding strip; means for adjusting said binding strip comprising a screw, a  
85 nut member connected to said binding strip, said screw having an unthreaded portion on which said nut member is freely movable, and a spring for returning said nut member to its thread-engaging position arranged on  
90 said screw.

11. In a temporary binder, the combination of the binding strip; means for adjusting said binding strip comprising a screw, a  
95 nut member connected to said binding strip, said screw having an unthreaded portion on which said nut member is freely movable.

12. In a temporary binder, the combination with the covers, of binding strips extending between the covers, means for adjusting said binding strips step by step, arranged  
100 in one of said covers, and a screw means for adjusting said binding strips operative only to the extent of approximately one step of the step by step adjusting mechanism arranged in the other cover, said adjusting  
105 means being adapted to permit free adjustment when said screw is disengaged.

13. In a temporary binder, the combination with the covers, of binding strips extending between the covers, means for adjusting  
110 said binding strips step by step, arranged in one of said covers, and a screw means for adjusting said binding strips operative only to the extent of approximately one step of the step by step adjusting mechanism arranged in the other cover.  
115

14. In a temporary binder, the combination with the covers, of binding strips; means for adjusting said binding cords comprising a cross bar arranged in one of the  
120 covers, a longitudinal bar having studs thereon, said cross bar being provided with key-hole stud-engaging slots; a back strip adapted to telescope into said covers under said longitudinal bar connected to said cross  
125 bar; a spring arranged in the other cover for applying tension to said back strip, and a catch for rendering said spring inoperative.

15. In a temporary binder, the combination with the covers, of binding strips;  
130

- means for adjusting said binding cords comprising a cross bar arranged in one of the covers, a longitudinal bar having studs thereon, said cross bar being provided with key-hole stud-engaging slots; a back strip adapted to telescope into said covers under said longitudinal bar connected to said cross bar, and a spring arranged in the other cover for applying tension to said back strip.
16. In a temporary binder, the combination with the covers, of binding strips; means for adjusting said binding cords comprising a cross bar arranged in one of the covers, a longitudinal bar having studs thereon, said cross bar being provided with key-hole stud-engaging slots; and a back strip adapted to telescope into said covers under said longitudinal bar and connected to said cross bar.
17. In a temporary binder, the combination with the covers, of an adjusting mechanism comprising a nut member, and a screw coacting with said nut member and having an unthreaded portion on which said nut member is freely movable, a back strip adapted to telescope into one of the covers, a spring for applying tension to said back strip arranged also to throw said nut member into engagement with the threaded portion of said screw, and a catch for said back strip.
18. In a temporary binder, the combination with the covers, of an adjusting mechanism comprising a nut member and a screw coacting with said nut member and having an unthreaded portion on which said nut member is freely movable, a back strip adapted to telescope into one of the covers, and a spring for applying tension to said back strip, arranged also to throw said nut member into engagement with the threaded portion of said screw.
19. In a temporary binder, the combination with the cover, of an adjusting mechanism comprising a nut member, a screw coacting with said nut member and having an unthreaded portion at its inner end arranged longitudinally of the cover, a back strip adapted to telescope into said cover, a slide member to which said back strip is connected, arranged on the unthreaded portion of said screw, a spring for applying tension to said back strip arranged on the unthreaded portion of said screw to engage said slide member, and a catch for retaining said back strip against the tension of said spring, whereby said spring is rendered inoperative.
20. In a temporary binder, the combination with the cover, of an adjusting mechanism comprising a nut member, a screw coacting with said nut member and having an unthreaded portion at its inner end arranged longitudinally of the cover, a back strip adapted to telescope into said cover, a slide member to which said back strip is connected arranged on the unthreaded portion of said screw, and a spring for applying tension to said back strip arranged on the unthreaded portion of said screw to engage said slide member.
21. In a temporary binder, the combination with the covers, of an adjusting mechanism, a back strip adapted to telescope into one of said covers, a spring for applying tension to said back strip, and a catch for said back strip.
22. In a temporary binder, the combination with the covers, of binding strips extending between said covers connected to one of the covers by means incapable of release when the sheets in the binder are under compression, and means independent of said connecting means for applying tension to said binding strips.
23. In a loose leaf binder, the combination with the covers, of binding strips connecting said covers; an adjusting mechanism for said binding strips comprising an adjustable member, studs on said adjustable member, slotted attaching pieces attached to said binding strips adapted to receive said studs when presented transversely thereto, and springs carried by said pieces adapted to engage said studs whereby said attaching pieces are held in position.
24. In a loose leaf binder, the combination with the covers, of binding strips connecting said covers; an adjusting mechanism for said binding strips comprising an adjustable member, studs on said adjustable member, and slotted attaching pieces attached to said binding strips adapted to receive said studs when presented transversely thereto.
25. In a loose leaf binder, the combination with the covers, of a plurality of binding strips connecting said covers, one of said covers having a series of studs arranged longitudinally thereof, a cross bar to which said binding strips are secured having a slot therein adapted to receive said studs, said slot being disposed longitudinally to the binding strips, means in the other cover for applying stress to said binding strips, and a lock arranged to prevent the manipulation of said means.
26. In a temporary binder, the combination with the covers, of binding strips extending between said covers, a back strip adapted to telescope into said covers, a cross bar to which said binding strips and back strip are secured, adjustably arranged in one of said covers, a spring for taking up the slack of said back strip arranged in the other cover, and means for adjusting said binding strips independently of said back strip arranged in the last mentioned cover.
27. In a temporary binder, the combination with the chambered cover, a binder adjusting mechanism adapted to be operated

by means of a key arranged within the chamber of said cover, said chamber being provided with a hinged lid in its inner wall affording access to the said adjusting mechanism, and a lock for said lid, said lid being  
5 provided with a closure for the key opening of said adjusting mechanism.

28. A structure of the class described, comprising covers, binding strips extending  
10 between the covers, said binding strips being formed of two layers secured together at their ends only, the outer layer being

longer than the inner and connections for said binding strips to said covers connected to the binding strips beyond the points of  
15 attachment of the layers thereof to each other.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

HARRY D. MANNING. [L. s.]

Witnesses:

L. G. GREENFIELD,

M. L. GLASGOW.

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