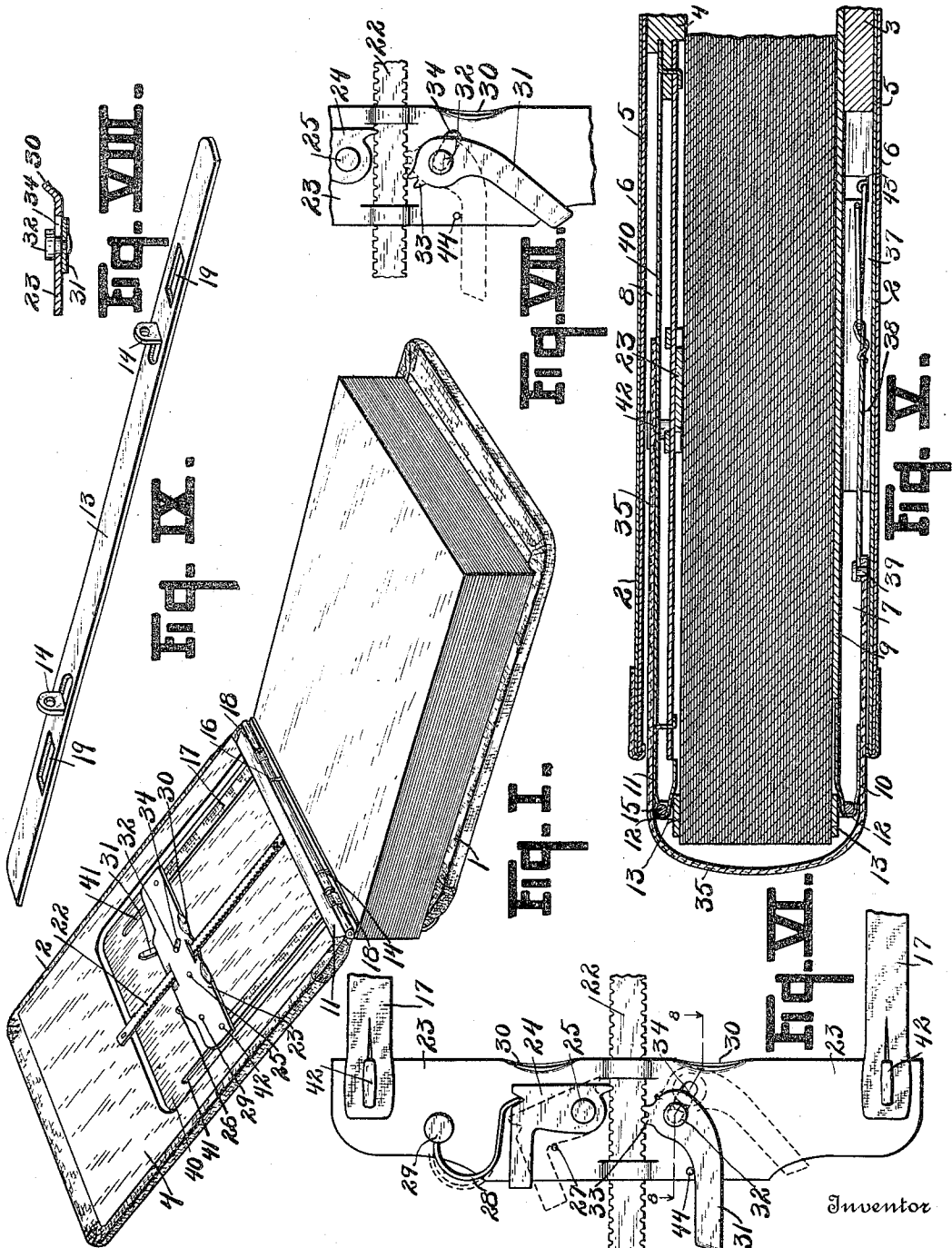


1,022,452.

Patented Apr. 9, 1912.

2 SHEETS—SHEET 1.



Witnesses
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G. P. WIGGINTON.
TEMPORARY BINDER.

APPLICATION FILED OCT. 24, 1911.

Patented Apr. 9, 1912.

2 SHEETS—SHEET 2.

1,022,452.

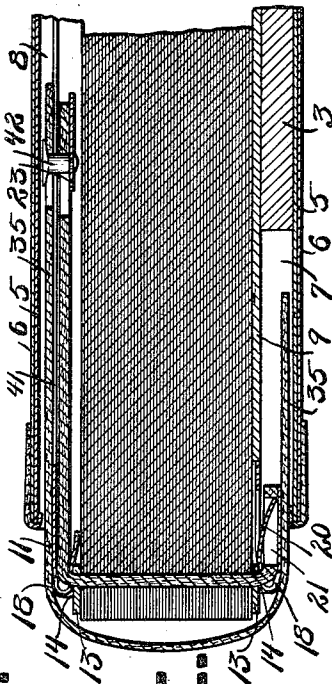
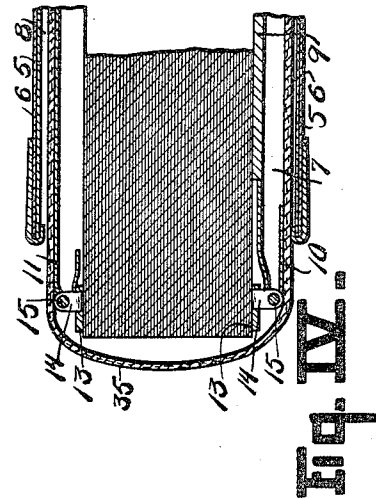
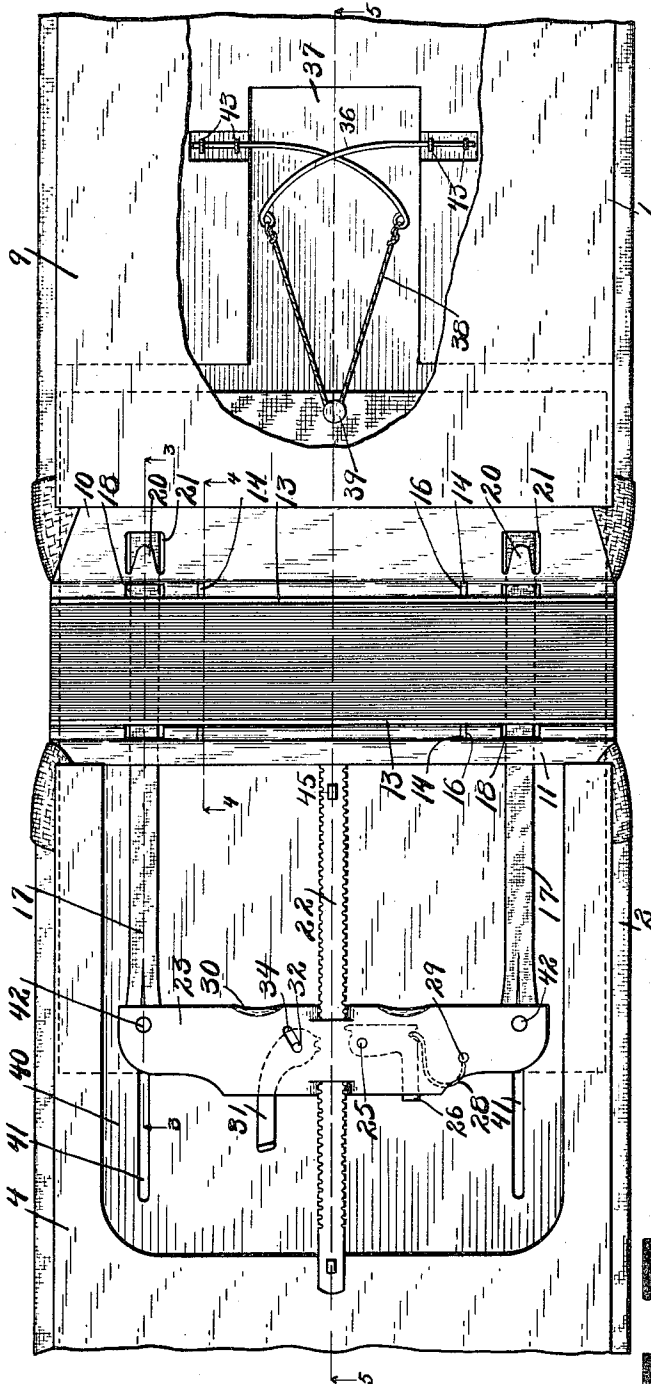


Fig. II.

Fig. III.

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UNITED STATES PATENT OFFICE.

GEORGE P. WIGGINTON, OF KALAMAZOO, MICHIGAN.

TEMPORARY BINDER.

1,022,452.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed October 24, 1911. Serial No. 656,468.

To all whom it may concern:

Be it known that I, GEORGE P. WIGGINTON, a citizen of the United States, residing at the city of Kalamazoo, county of Kalamazoo, and State of Michigan, have invented certain new and useful Improvements in Temporary Binders, of which the following is a specification.

This invention relates to improvements in temporary binders.

My present invention is an adaptation and in some respects an improvement upon the apparatus shown in Letters Patent No. 1,010,556, issued to me on the 5th day of December, 1911.

The main objects of this invention are, first, to provide in a temporary binder or loose sheet holder, an improved adjusting mechanism. Second, to provide an improved temporary binder or loose sheet holder which is capable of very rapid manipulation to permit the insertion or removal of sheets or leaves, and one in which the sheets may be very securely clamped, the mechanism at the same time being simple and compact, so that it may be embodied in small binders. Third, to provide an improved temporary binder or loose sheet holder having a back strip or piece which is automatically adjusted upon the adjusting of the binder.

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 I is a perspective view of a structure embodying the features of my invention, the cover containing the adjusting mechanism being shown open, sheets or leaves being shown in the binder. Fig. II is a detail inside plan view of the structure shown in Fig. I, with the covers extended, the leaves being shown in an upright position. Fig. III is a detail longitudinal section taken on a line corresponding to line 3—3 of Fig. II, with the covers closed. Fig. IV is a detail section taken on

a line corresponding to line 4—4 of Fig. III, with the covers closed. Fig. V is a detail longitudinal section taken on a line corresponding to line 5—5 of Fig. II, with the covers closed. Fig. VI is an inverted view of the adjusting member 23, the adjusting lever 31 being shown in its actuated position by full lines, and in its initial position by dotted lines, the pawl 24 being shown in its engaged position by full lines and in its disengaged position by dotted lines. Fig. VII is an inverted detail of the adjusting member 23, with the adjusting lever 31 shown in its disengaged position by full lines, and in its engaged position by dotted lines. Fig. VIII is a sectional view taken on a line corresponding to the broken line 8—8 of Fig. VI. Fig. IX is a perspective view of one of the clamping bars 13.

In the drawing, 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 in the embodiment of my invention illustrated, comprise the body boards 3 and 4 respectively, with outer walls or cover plates 5 and a suitable finishing binding or covering 6 of cloth, leather, or the like. The body boards are recessed to provide cover chambers 7 and 8 for the covers 1 and 2 respectively. The cover 1 is provided with an inner wall 9.

At the inner ends of the covers 1 and 2 are cover bars 10 and 11 respectively, formed of sheet metal folded longitudinally upon the ends of the cover boards. The folded edges of the cover bars are curved to provide knuckles 12 for the sheet clamping bars 13. These leaf or sheet clamping bars 13 are formed of flat strips of metal and are disposed in bearing engagement with the knuckles of the cover bars. The clamping bars 13 are provided with ear-like pintle members 14 which are struck longitudinally from the bars and perforated to receive the pintles 15, the cover bars being provided with slot-like openings 16 for these pintle ears. These knuckle openings are deep enough to permit the leaf clamping bars to swing against either side of the cover, the cover bars being provided with openings 18 through which the binding strips are arranged, the clamping bars having openings

19 for the binding strips alined with the openings 18 of the cover bars. The openings 18 of the cover bars are deep enough so that the binding strips swing freely therein no matter what position the clamping bars assume relative to the covers. The binding strips are secured to the cover 3 by means of the tongues 20 formed integrally with its cover bar, the tongues being turned inwardly to engage holes 21 in the binding strips. The binding strips are adjustably secured to the other cover by means of the ratchet bar 22, on which the binding strip member 23 is slidably mounted. The pawl 24 is pivoted at 25 on the under side of the member 23 to coact with the ratchet bar. The outer end of the pawl is extended laterally and turned up to provide a finger piece 26 which engaging the edge of the adjusting member 23, serves as a stop for the pawl in one direction. The pin 27 limits the movement of the pawl in the other direction. A U-shaped spring 28 is mounted on the stud 29 to engage the pawl and serves 25 to hold the pawl yieldingly in its engaging or disengaging position. The adjusting member 23 has finger holds 30 on its forward edge so that the member may be conveniently grasped for retracting the binding strips. These features of the attachment for the binding strips to the cover, the clamping bars and adjusting means so far described, are substantially the same as those of my said patent referred to.

35 To apply clamping stress to the binding strips, I provide an adjusting lever 31 arranged to coact with the ratchet bar 22, the bar being preferably a double ratchet or toothed on each edge. This lever is mounted on the pivot 32 on the adjusting member to coact with the bar as stated, for drawing up the binding strips or applying tension thereto. The lever 31 is preferably provided with a plurality of rack engaging teeth 33. When the lever is in its initial position, as shown by full lines in Fig. VII and by dotted lines in Fig. VI, it is out of engagement with the rack. When the lever is actuated however, the teeth are brought into engagement with the rack. To permit repeated actuation of the lever in tightening the binding strips, I arrange the pivot 32 in a slot 34 in the adjusting member, the slot being inclined so that the lever can be disengaged from the ratchet bar while the lever is still in its actuated position, and this permits repeated engagement and actuation of the lever. The lever is automatically disengaged in releasing the binding strips. In releasing the binding strips, it is only necessary to disengage the pawl 24 which automatically disengages the lever, should it remain in engagement with the rack bar after the adjustment is completed. A stop pin 44 55 is provided for the lever to limit its actuat-

ing movement. By this simple means, the binding strips may be quickly drawn up to clamp the sheets or leaves. Ordinarily, it is not necessary to manipulate the lever as the binding strips can be drawn sufficiently taut by hand. If, however, it is desired to further tighten them, it can be quickly done through the adjusting lever 31.

The back strip 35 telescopes into the cover chambers which are open on the outside of the cover bars to receive the same. The back strip 35 is yieldingly connected to the cover 1 by means of the rod springs 36 arranged in an extension 37 of the chamber 7. The springs 36 are secured as by the rivets 43 on opposed sides of the recess extension 37 with their free ends overlapped or crossed. The free ends of the springs are connected by the cord 38 to the back strip 35, the cord being looped over the button 39 on the back strip, its ends being secured to the ends of the springs. This spring connection can be embodied in a short thin cover and the connection serves to assist in keeping the back strip properly centered. The other end of the back strip is connected to the adjusting member 23.

To cover the end of the back strip, and to prevent its being displaced or disarranged during the manipulation of the adjusting mechanism, I provide the chamber of the cover 2 with a partition plate 40. This partition plate is preferably formed integrally with the cover bar 11. The back strip projects into the cover at the rear of this plate, the chamber in front of the plate being open to permit the manipulation of the adjusting mechanism. The plate 40 is longitudinally slotted at 41 to receive the studs 42 on the adjusting member, the studs also serving to connect the binding strips to the adjusting member. The plate 40 is provided with integral attaching lugs 45 for the bar 22. The bar thus mounted on the cover is carried so that the strain on the binding cords is effectively distributed in the cover, and although made of light material, is not likely to be distorted thereby.

With the parts thus arranged, the back is automatically adjusted and at the same time is concealed in the cover, although the adjusting mechanism is arranged in the open recess of the cover for convenience in manipulation.

My improved binder is very simple and economical in structure, is quickly adjusted, and is compact and light in weight.

I have illustrated and described my improvements in the detailed form in which I have embodied them. While I am aware that various modifications in structural details are possible, I have not attempted to illustrate or describe such herein, as they will be readily understood by those skilled in the art to which this invention relates.

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 with the cover, of a binding strip; a ratchet bar carried by said cover, said bar being toothed on both edges; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with the teeth on one edge of said bar; means for holding said pawl in an inoperative position; and an adjusting lever having a toothed engaging portion, pivotally mounted on said adjusting member to coact with the teeth on the other edge of said bar, the pivot of said lever being arranged in a rearwardly inclined slot in said adjusting member.

2. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover, said bar being toothed on both edges; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with the teeth on one edge of said bar; means for holding said pawl in an inoperative position; and an adjusting lever having a toothed engaging portion, pivotally mounted on said adjusting member to coact with the teeth on the other edge of said bar.

3. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; and an adjusting lever mounted on said adjusting member to coact with said bar, the pivot of said lever being arranged in a slot in said adjusting member.

4. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; and an adjusting lever mounted on said adjusting member to coact with said bar.

5. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; means for securing said adjusting member in its adjusted position on said bar; and an adjusting lever mounted on said adjusting member to coact with said bar, the pivot of said lever being arranged in a rearwardly inclined slot in said adjusting member.

6. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjust-

ing member to which said binding strip is connected, mounted on said bar; means for securing said adjusting member in its adjusted position on said bar; and an adjusting lever for said adjusting member mounted thereon to engage said bar.

7. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; means for securing said adjusting member in its adjusted position on said bar; and an adjusting lever for said adjusting member mounted thereon to engage said bar, said lever being adjustably mounted to permit its being repeatedly engaged with said bar during a single adjustment of the binder.

8. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; means for holding said pawl in an inoperative position; and a lever mounted on said adjusting member to coact with said bar, said lever being automatically disengaged from said bar on the extending movement of the adjusting member.

9. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; and a lever mounted on said adjusting member to coact with said bar, said lever being automatically disengaged from said bar on the extending movement of the adjusting member.

10. In a temporary binder, the combination with the covers, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, slidably mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; means for holding said pawl in an inoperative position; and an adjusting lever mounted on said adjusting member to coact with said bar, said lever being arranged so that it is disengaged from said rack when in its initial position and is swung into engagement with the bar upon the actuating movement thereof.

11. In a temporary binder, the combination with the covers, of a binding strip; a bar carried by said cover; an adjusting member to which said binding strip is connected, slidably mounted on said bar; a means for securing said member in its adjusted position on said bar; and an adjusting lever mounted on said adjusting member to coact with said bar, said lever being

arranged so that it is disengaged from said bar when in its initial position and is swung into engagement with the bar upon the actuating movement thereof.

5 12. In a temporary binder, the combination with the covers, one of the covers being provided with a recess; binding strips; a ratchet bar arranged in said cover recess, said ratchet bar being toothed on both
10 edges; an adjusting member to which said binding strips are connected, mounted on said bar; a pawl mounted on said adjusting member at one side of said ratchet bar to coact with the teeth thereof; means for
15 holding said pawl in its disengaging position; and a lever pivotally mounted on said adjusting member at the other side of said ratchet bar to coact therewith, said recess being open to permit the grasping of said
20 adjusting member and the manipulation of said pawl and lever.

13. In a temporary binder, the combination with the covers, one of the covers being provided with a recess; binding strips;
25 a ratchet bar arranged in said cover recess; an adjusting member to which said binding strips are connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; and an adjusting
30 lever mounted on said adjusting member to coact with said bar, said recess being open to permit the grasping of said adjusting member and the manipulation of said pawl and lever.

35 14. In a temporary binder, the combination with the covers comprising recessed cover boards; outer walls; cover bars folded longitudinally to receive the inner ends of
40 the cover boards, the folded edges of the bars being curved to provide knuckles and having binding strip openings therein, said covers being provided with openings at the rear of said cover bars; a longitudinally
45 slotted partition plate for one of the covers, the cover bar of that cover being formed integrally with said partition plate; a back strip arranged to telescope into the covers through said openings thereof at the rear
50 of the cover bars and at the rear of said plate; clamping bars coacting with said cover knuckles and having pivotal connection therewith; binding strips arranged
55 through the said openings in said cover bars; a bar mounted on said partition plate, said plate having bar engaging lugs struck up therefrom; an adjusting member for said binding strips mounted on said bar; and
60 studs on said adjusting member arranged through said slots in said partition plate and engaging said back strip and said binding strips.

65 15. In a temporary binder, the combination with the covers comprising recessed cover boards; outer walls; cover bars, said covers being provided with openings at the

rear of said cover bars; a longitudinally slotted partition plate for one of the covers; a back strip arranged to telescope into the covers through said openings thereof at the rear of the cover bars and at the rear of said
70 plate; clamping bars pivotally associated with said cover bars; binding strips extending between said covers; a bar mounted on said partition plate; an adjusting member for said binding strips mounted on said bar; and connecting members for said back strip
75 to said adjusting member arranged through said slots in said partition plate.

16. In a temporary binder, the combination with the chambered covers; clamping
80 bars; clamping bar knuckles at the inner ends of said covers, the cover chambers having openings at the rear of the knuckles; a back strip arranged to telescope into the covers through said openings at the rear of
85 said knuckles; a longitudinally slotted partition plate for one of said covers disposed in front of the back strip; binding strips connecting said covers disposed in front of said partition plate; an adjusting member;
90 studs on said adjusting member arranged through said slots in said partition plate and engaging with said back strip and binding strips; and a bar on which said adjusting member is adjustably mounted.
95

17. In a temporary binder, the combination with the chambered covers; clamping
100 bars; clamping bar knuckles at the inner ends of said covers, the cover chambers having openings at the rear of the knuckles; a back strip arranged to telescope into the covers through said openings at the rear of said knuckles; a longitudinally slotted
105 partition plate for one of said covers disposed in front of the back strip; binding strips connecting said covers disposed in front of said partition plate; a binding strip adjusting member; and connecting members for said back strip to said adjusting member
110 arranged through said slots in said partition plate.

18. In a temporary binder, the combination with the chambered covers open at their inner ends; a back strip extending between the covers, arranged to telescope into said
115 chambers; a longitudinally slotted partition plate arranged in one of the cover chambers in front of said back strip, the chamber being open in front of said plate; a binding strip extending between the covers, arranged
120 in front of said partition plate; a rack bar arranged in front of said plate; an adjusting member for said binding strip slidably mounted on said bar, said adjusting member being provided with a pawl coacting
125 with said rack bar; and connecting members for said back strip to said adjusting member, arranged through said slot in said plate.

19. In a temporary binder, the combina- 130

tion with the chambered covers open at their inner ends, a back strip extending between the covers arranged to telescope into said chambers; a longitudinally slotted partition plate arranged in one of the cover chambers in front of said back strip, the chamber being open in front of said plate; a binding strip extending between the covers, arranged in front of said plate; an adjusting member for said binding strip arranged in front of said plate; and a stud on said adjusting member arranged through said slot in said plate, said binding strip and back strip being engaged with said stud.

20. In a temporary binder, the combination with the chambered covers open at their inner ends; a longitudinally slotted partition plate arranged in one of the cover chambers; a back strip extending between the covers, arranged to the rear of said plate; an adjusting member for said binding strip, arranged in front of said plate; and connecting members for said back strip to said adjusting member arranged through said slot in said plate.

21. In a temporary binder, the combination with the chambered covers open at their inner ends, a back strip extending between the covers arranged to telescope into said chambers; a partition plate arranged in one of the cover chambers in front of said back strip, the chamber being open in front of said plate; a binding strip extending between the covers, arranged in front of said plate; an adjusting member for said bind-

ing strip arranged in front of said plate; and operating connections for said back strip and said adjusting member.

22. In a temporary binder, the combination with the chambered covers open at their inner ends, of a back strip adapted to telescope into said chambers; and a connection for said back strip to one of said covers comprising a pair of rod springs arranged in an opposed overlapping relation, the outer ends of the springs being secured to the cover, and a connecting cord for said springs to said back strip, said back strip being provided with a stud over which said cord is looped, the ends of the cord being secured to the free ends of said springs.

23. In a temporary binder, the combination with the chambered covers; a back strip adapted to telescope into said covers; and a connection for said back strip to one of said covers comprising a pair of rod springs secured at one end to said cover, the free ends of said springs being connected to said back strip by a cord, the ends of the cord being secured to the free ends of said springs, the loop of the cord having a sliding connection with said back strip.

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

GEORGE P. WIGGINTON. [L. S.]

Witnesses:

EDNA M. ALLYN,
W. H. STUART.