

Sept. 29, 1925.

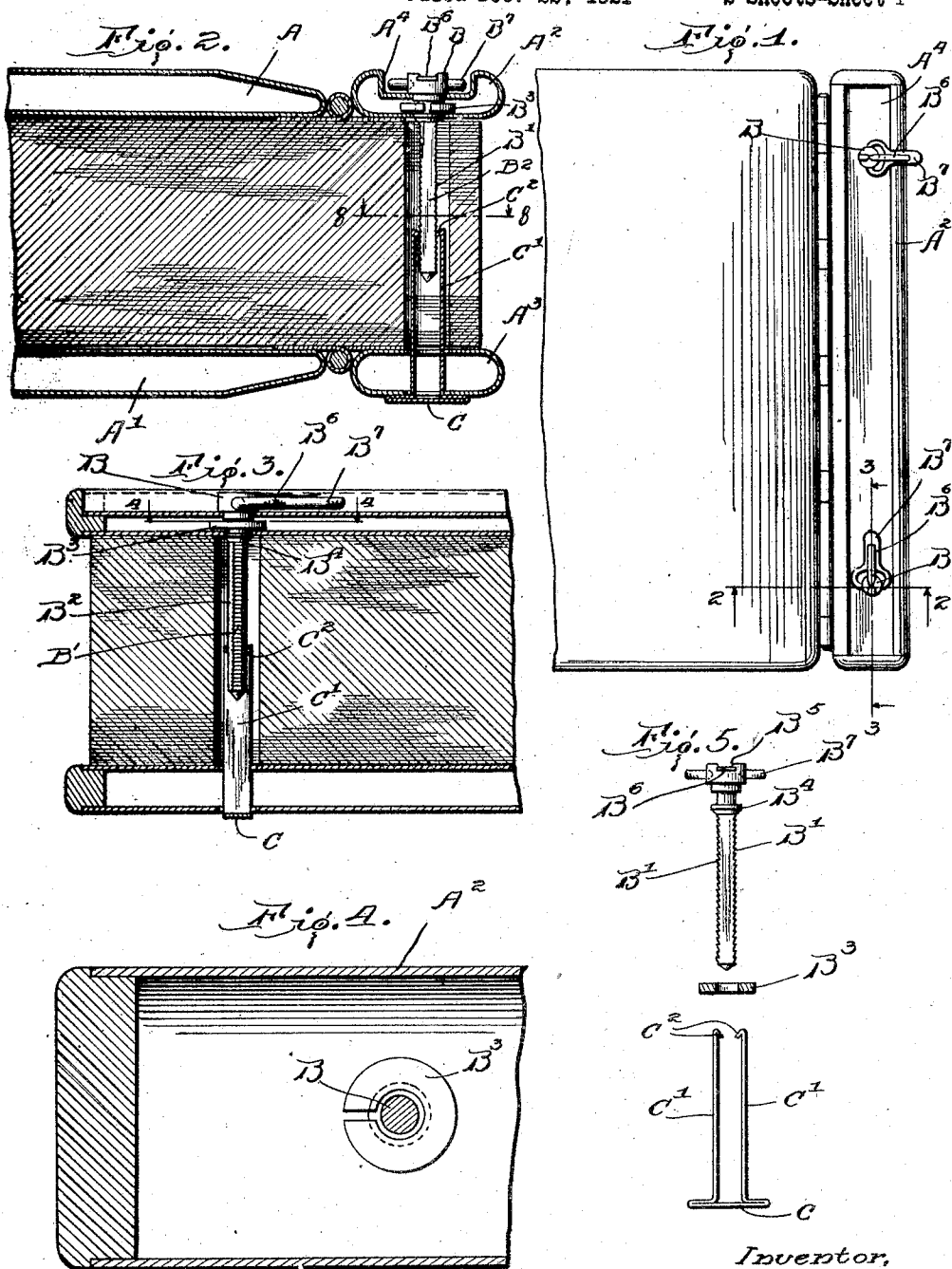
1,555,070

L. M. PARKER

POST BINDER

Filed Dec. 22, 1921

2 Sheets-Sheet 1



Inventor,
Leslie M. Parker.
by Parker & Carter.
Attorneys.

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2 Sheets-Sheet 2

Fig. 10.

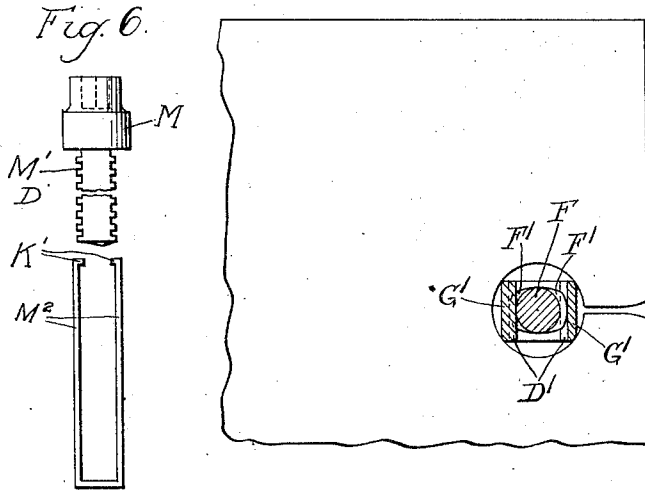


Fig. 9.

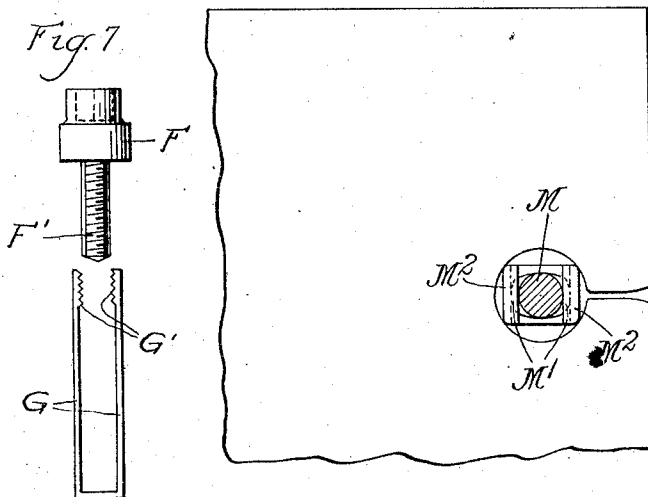
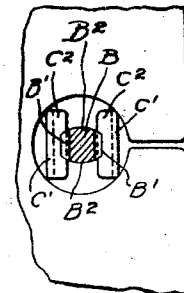


Fig. 8.



Inventor.
Leslie M. Parker
by Parker & Carter
Attorneys.

UNITED STATES PATENT OFFICE.

LESLIE M. PARKER, OF EVANSTON, ILLINOIS.

POST BINDER.

Application filed December 22, 1921. Serial No. 524,065.

To all whom it may concern:

Be it known that I, LESLIE M. PARKER, a citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Post Binders, of which the following is a specification.

This invention relates to binders for holding loose leaf sheets and particularly to a binder intended for use in connection with perforated sheets. One object of the invention is to provide in such a binder a construction wherein the attaching means or posts do not extend at either end beyond the normal thickness of the binder. Another object is to provide in such a binder a construction whereby the backs of the binder may be readily and immediately attached or detached. Other objects will appear from time to time throughout the specification and claims. The invention is illustrated more or less diagrammatically in the accompanying drawings, wherein:

Fig. 1 is a plan view of the binder;

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1;

Fig. 3 is a section on line 3—3 of Fig. 1;

Fig. 4 is a section on an enlarged scale taken on line 4—4 of Fig. 3;

Fig. 5 is a detailed side elevation of the attaching means;

Figure 6 is a modified form of the fastening mechanism;

Figure 7 is a further modification;

Figure 8 is a partial sectional view taken on line 8—8 of Figure 2.

Figure 9 is a partial sectional view of the form of the device shown in Figure 6 in place;

Figure 10 is a similar view showing the form of the device shown in Figure 7 in place.

Like parts are designated by like characters throughout.

A, A' are binder covers hinged respectively to backs A², A³. The back A², which is preferably tubular, is provided in its upper surface with the longitudinal depression A⁴. It is perforated to receive the upper fastening members B which are mounted for rotation and provided along the greater part of their length with two oppositely positioned rows of notches B', B' and with two oppositely positioned smooth surfaces B²,

B². The members B are held in position by means of the split washers B³ which are adapted to slip over the lower inclined portion of the shoulder B⁴, which shoulder is spaced from the enlarged upper end sufficiently to receive the washer. The upper ends of the members B are enlarged and slotted as at B⁵ to receive a leaf spring B⁶. Rotatably mounted in the end of each member B is an operating handle B⁷. These handles are normally held flat, as shown, by means of the springs B⁸, but they may be raised in opposition to the springs.

The back member A³ is perforated for the reception of the lower holding means C. The holding means C comprises a lower laterally extending portion and the two upwardly extending arms C', C' which terminate in their upper ends in downwardly bent hook points C² which are adapted to engage the notches B' on the member B.

In Figure 6 I have shown a modified form in which the central member M is shaped in much the same manner as member B in Fig. 2, but instead of being provided with interrupted screw threads such as in Fig. 2 there are provided instead lateral extensions M', M', and the upward extensions M² of the lower member are provided with rigid inwardly extending parts K', K'. In this construction the parts cannot be sprung into place since the parts K' K' are rigid. It is necessary to rotate the member M so that the members M' will not contact the parts K'. In this position the smooth sides of the member M come opposite the parts K'. When the two members have been pressed together sufficiently to hold the sheets, the member M is then rotated and the extensions M' engage the parts K' and the two members are held against relative longitudinal movement. The members M² are in contact with the interior of the perforation and they are thus held against outward separation and so are held in proper relation to the member M for engagement with this member.

In Figure 7 the member F is generally similar to member B shown in Figure 3. I have provided, however, for the ends of the upwardly extending arms G' screw-threaded portions G' which form part of an interrupted screw-thread, and the arms G bear against the inside of the perforations

in the paper. Thus the arms G are held in proper position by their contact with the interior walls of the perforation in the same manner as above described, and they are
 5 thus held against outward lateral displacement and are held in proper engaging contact with the member F, and particularly with the screw-threaded portions F'.

I have shown an operative invention, still
 10 it will be obvious that many changes of form, shape and relation of parts may be made without departing materially from the spirit of my invention, and I wish therefore that my showing be taken as in a sense dia-
 15 grammatical. In particular, while I have shown the upper holding members as rotatable and the lower holding members as stationary, it will be obvious that this arrangement might be reversed.

20 The use and operation of the invention is as follows:

The lower binder cover is laid upon its back with the securing members extending upwardly. Perforated sheets are then placed
 25 upon these members. The sheets may either be threaded upon the securing members or they may be placed upon them by bending the edges of the paper adjacent the perforation. When the desired quantity of sheets have
 30 been so placed, the upper cover of the binder is placed in position so that the upper holding members mate with the lower holding members and the two are then pressed together. In the form shown in Figs. 1 to
 35 5 inclusive, the members may be sprung together since the lower holding member is a spring member. In the form shown on the remaining figures, it is necessary to rotate the upper holding members so that the
 40 threaded portions upon them correspond to the interruptions in the threaded portions on the lower holding members or vice versa. When this is done the construction of the modified form may be forced together until
 45 the papers are firmly held and then the holding means separately or together are rotated, so that the threaded portions on the upper and lower holding members engage each other. In this form the upper end of
 50 the thimble always rests upon the top sheet and thus, even though the upper cover of the binder be removed, the papers will constantly be held in order and will always bear against a circular holding member.

55 When it is desired to remove sheets from the binder the upper holding members are rotated so that they no longer engage with the lower holding members and the binder covers may then be separated and the sheets removed. As above pointed out the upper
 60 holding members may be rotated singly or together.

In the first form illustrated, in order to rotate the upper holding members the small
 65 handles upon them are raised, in opposition

to the leaf springs, sufficiently to clear the edge of the depression in which they normally lie and they may then be sufficiently rotated to free the two holding members and thus to permit separation of the binder. 70

In all forms of the device shown the outer member of the fastener is in contact with the interior walls of the perforations within which it lies.

I claim: 75

1. In a binder for perforated sheets, a pair of backs in combination with a fastening device comprising two interlocking parts one mounted on each of said backs, and one of them adapted to surround and grip the other, said parts held against relative longitudinal movement when in one relative position and free to have relative longitudinal movement when rotated from such position, said interlocking parts adapted to be held against lateral movement by the contact of one of them with the interior of the perforations of said sheets. 80 85

2. In a binder for perforated sheets a pair of backs in combination with a plurality of fastening devices each comprising two interlocking parts, one mounted on each of said backs, and one of them adapted to surround and grip the other, said parts held against relative longitudinal movement when in one relative position and free to have relative longitudinal movement when rotated from such position, said interlocking parts adapted to be held against lateral movement by the contact of one of them with the interior of the perforations of said sheets. 90 95 100

3. In a fastening device for securing together a plurality of perforated sheets, a pair of members one adapted to surround and grip the other, said surrounding member provided with extended arms, said arms provided adjacent their upper ends upon their inner faces with screw threads, said surrounded member provided with oppositely positioned rows of screw threads and oppositely placed smooth areas between such screw threads, said members adapted to have relative longitudinal movement when said smooth areas are in opposition to said screw threads on said arms, said members adapted to be rotated so as to bring the screw threads upon said arms in engagement with those upon said surrounded member, said members held against relative longitudinal movement when said screw threads are so engaged. 105 110 115 120

4. In a binder for perforated sheets, a pair of backs in combination with a fastening device comprising two interlocking parts one mounted on each of said backs and adapted for relative rotation, and one of them adapted to surround and grip the other, said parts held against relative longitudinal movement when in one relative position and free to have relative longitudinal movement when rotated from such position, 125 130

said interlocking parts held against lateral movement by the contact of one of them with the interior of said perforation.

5 In a binder for perforated sheets, a pair of backs in combination with a plurality of fastening devices each comprising two interlocking parts, one mounted on each of said backs and adapted for relative rotation, and one of them adapted to surround 10 and grip the other, said parts held against relative longitudinal movement when in one relative position and free to have relative longitudinal movement when rotated from such position, said interlocking parts held 15 against lateral movement by the contact of one of them with the interior of said perforation.

6. In a fastening device for securing together a plurality of perforated sheets, a 20 pair of members one adapted to surround and grip the other, said surrounding member provided with extended arms, said arms provided adjacent their upper ends upon their inner faces with screw threads, said 25 surrounded member provided with oppositely positioned rows of screw threads and oppositely placed smooth areas between such screw threads, said members adapted to have relative longitudinal movement when said 30 smooth areas are in opposition to said screw threads on said arms, said members adapted to be rotated so as to bring the screw threads upon said arms in engagement with those upon said surrounded member, said 35 members held against relative longitudinal movement when said screw threads are so engaged, the arms of said surrounding member being held against lateral movement by their contact with the interior of said perforation. 40

7. In a binder, a back portion and a fastening member mounted for rotation

therein, a depression in said back and a pivoted handle on said fastening member adapted normally to lie within said depression and thereby to prevent rotation of the fastening member and adapted to be moved out of said depression and to permit rotation of said fastening member. 45

8. In a binder, a back portion and a fastening member mounted for rotation therein, a depression in said back and a pivoted handle on said fastening member adapted normally to lie within said depression and thereby to prevent rotation of the fastening member and adapted to be moved out of said depression and to permit rotation of said fastening member, and a spring adapted normally to hold the handle within said depression. 50 55 60

9. In a fastening device for securing together a plurality of perforated sheets, a pair of members one adapted to surround and grip the other, said surrounding member provided with upwardly extended arms, 65 said arms provided with inwardly extending rigid projections, said surrounded member provided with oppositely positioned rows of corresponding projections and oppositely placed smooth areas between said projections, said members adapted to have relative longitudinal movement when said smooth areas are in opposition to said projections on said arms, said members adapted to be rotated so as to bring the projections upon 70 said arms in engagement with those upon said surrounded member, said members held against relative longitudinal movement when said projections are so engaged. 75

Signed at Chicago county of Cook and State of Illinois, this 20th day of December 1921. 80

LESLIE M. PARKER.