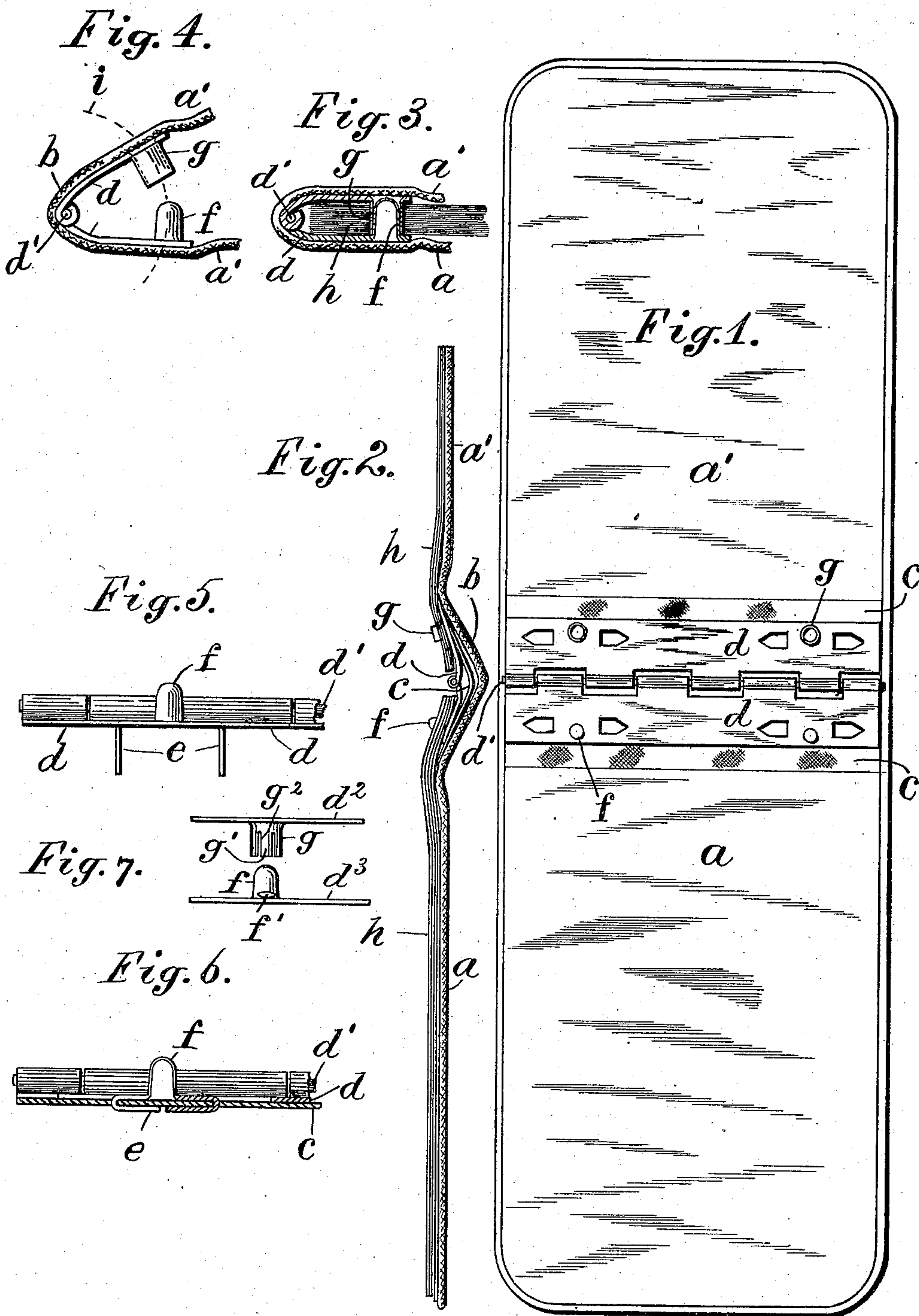


No. 881,606.

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L. M. MORDEN.
TEMPORARY BINDER.
APPLICATION FILED JUNE 1, 1906.



Witnesses:
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UNITED STATES PATENT OFFICE.

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TEMPORARY BINDER.

No. 881,606.

Specification of Letters Patent.

Patented March 10, 1908

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To all whom it may concern:

Be it known that I, LUCENA M. MORDEN, a citizen of the United States, of 59 Grand street, Waterbury, county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Temporary Binders, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to that class of binders for perforated sheets in which the covers of the binder are provided with opposed studs and sockets to penetrate the perforations of the sheets and to lock the covers together.

In the present invention the covers are provided near their hinge with two hinge-plates jointed directly together, and the plates furnished upon their adjacent faces respectively with studs and sockets adapted to engage one another frictionally, and also penetrating the perforations of the sheets to hold them in the binder.

Where the plates are hinged directly together, they are adapted to hold only a limited number of perforated sheets in the binder, and require to be bent apart or offset somewhat near the hinge to effect this object; but the construction is so compact that it is very cheap to manufacture, and is exceedingly convenient for pocket memorandum books, and other small binders.

The invention will be understood by reference to the annexed drawing, in which

Figure 1 shows a binder with covers for the perforated sheets; Fig. 2 is an edge view of the same broken off at one end, with perforated sheets resting upon the opposite covers; Fig. 3 shows the joint of the covers closed and the studs and sockets engaged to lock the plates together; Fig. 4 shows the joint of the covers opened sufficiently to separate the studs and sockets; Fig. 5 is an edge view of one of the plates adjacent to the stud at one end, with integral prongs upon the under side of the plate to engage a flap upon the book-covers; and Fig. 6 is a view similar to Fig. 5 with the prongs clenched upon the flap within the back of the covers. Fig. 7 is an end view of independent plates, with the socket and stud having a lip and recess to engage one another.

a, a' designate the book-covers connected by a flexible back-piece *b*, within which a flap *c* is secured at its edges, leaving the middle

portion of the fold of the back entirely free. The metallic plates *d* are shown united by hinge-pin *d'* and formed with prongs *e* punched from the metal of the plates, to insert through the flap *c* and clench upon the under side of the same as shown in Fig. 6. The plate *d* is provided with the studs *f* which are contracted or tapered and rounded at the end or apex to readily enter tubular sockets *g* upon the plate *d'*.

Fig. 4 shows the studs and sockets adjacent to one another and adapted to be engaged frictionally by pressing them one upon the other, which is readily effected by applying the fingers to the outer sides of the covers. The dotted curve *i* shows the arc in which the studs and sockets move in approaching one another, and the necessity of reducing the end of the stud to enter the socket freely, and shaping its base to cramp or crowd therein at the end of the closing movement, to produce a frictional grip and retain its engagement therein.

Fig. 3 shows the metallic plates locked together by the complete engagement of the studs and sockets, the contact of the socket upon one plate with the inner face of the opposite plate serving to determine the closing movement and thus limiting the volume of the perforated sheets which can be accommodated in the binder.

The perforated sheets *h*, as shown in Fig. 2, are formed to fit over the studs and sockets, which hold them in place when the plates are locked together as indicated in Fig. 1.

To make room between the plates, when closed, for the studs and sockets, and to accommodate a limited number of the perforated sheets *h*, the hinge-plates *d* are bent apart from one another, or offset adjacent to the pivot *d'*, by which they are inclined outwardly for a short distance from the pivot, and then extend parallel with one another at a distance apart about equal to the length of the studs *f*.

When the studs and sockets are engaged, the plates and covers therefore lie parallel with one another, and a pile of perforated sheets equal in thickness to the length of the studs can be accommodated between the plates.

With such construction, the binder, consisting of the metallic plates with studs and sockets upon their opposed faces, can be instantly opened by pulling the plates or the covers apart, as shown in Fig. 4, and the per-

forated sheets can be separated at any point before thus opening the binding, by dividing the sheets at the desired point, so that a portion of the sheets remains upon the studs and
 5 a portion upon the sockets, and held in place, thereby when the covers and plates are wholly opened.

The binder can thus be opened to remove or insert a perforated sheet at any desired
 10 point, and the binder then clamped upon the sheets by merely closing the hinged plates and pressing them together. In such closing movement, the sheets upon the studs are transferred to the outer sides of the sockets,
 15 so that the perforations in the sheets are all held upon the sockets, as is evident by inspection of Fig. 3.

By providing the loose flap *c* within the back of the covers, and attaching the same
 20 at its edges only to the covers, the prongs of the metallic plates can be secured within the covers without extending through the covers themselves to the outer side of the same, and the fastening means for the metallic plates
 25 is thus wholly concealed. The back and the flap are made of full length or of sufficient looseness as shown in Fig. 2, to readily embrace the outer side of the hinge when the binder is closed, as shown in Fig. 3.

It is evident that the construction for the studs and sockets must be different from those pressed together in a right line, if they are rigidly attached to plates hinged directly to one another, so as to approach one another in a curved line, as the dotted line *i*
 35 in Fig. 4; and such curved motion makes it desirable that the studs should be notched upon the outer side (that is, the farthest from the hinge), and that the sockets should
 40 be provided with a lip to engage such notch; the lip being adapted to slip over the tapering outer side of the stud and to drop into such notch when the covers are closed. Such a construction is shown in Fig. 7, where the
 45 outer side of the stud *f* is shown with a notch

or recess *f'* at its base, and the socket formed with a lip *g'* bent inwardly to engage the recess.

Slits *g*² are shown in Fig. 7 formed in the sides of the socket to permit the lip a greater
 50 elasticity if desired.

The essential feature of my invention is the hinging of the plates directly together, and the attachment of the studs and sockets to their opposed faces, with such construc-
 55 tion of the studs and sockets as to engage when they move toward one another in a curved line.

Having thus set forth the nature of the invention what is claimed herein is: 60

1. A temporary binder comprising a loose leaf book with covers connected by a flexible back, metallic plates hinged together and attached to the covers and offset adjacent to the hinges to form an interspace for perforated sheets, the opposed faces of the metallic plates having respectively the projecting studs *f* tapered toward the point and provided with recess *f'* at the base, and with projecting sockets adapted to fit the perforations of the sheets and having each a lip adapted to engage the recess in the stud. 65

2. A temporary binder comprising a loose leaf book with covers connected by a flexible back and having a loose flap within the back, 75 metallic plates hinged together and attached to the loose flap with interspace for perforated sheets, and the opposed faces of the metallic plates provided with projecting studs and sockets adapted to fit the perforations of the sheets and to engage one another for holding the sheets in the binder. 80

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LUCENA M. MORDEN.

Witnesses:

L. LEE,

THOMAS S. CRANE