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1,561,891

E. A. TRUSSELL

REFILL BOOK

Filed March 13, 1924

Fig. 1.

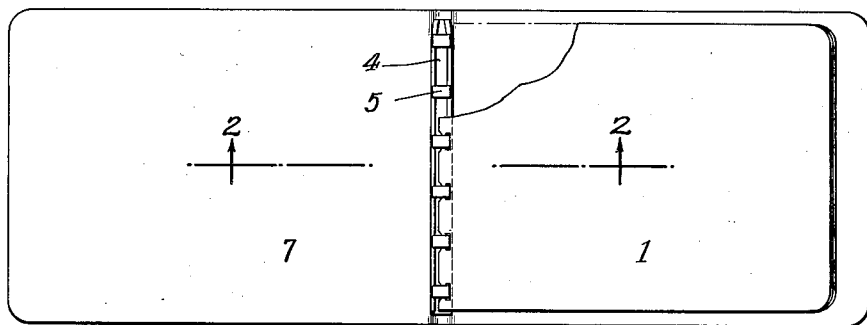


Fig. 2.

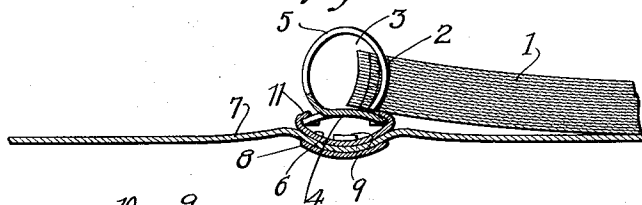


Fig. 3.



Fig. 4.

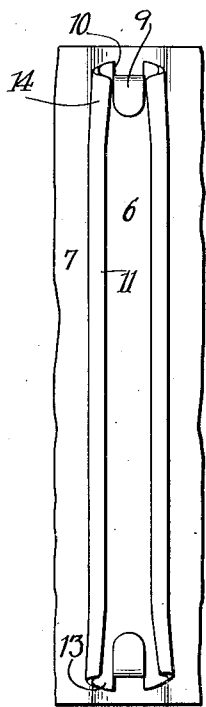
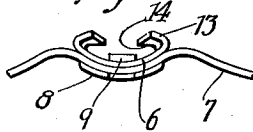


Fig. 5.



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REFILL BOOK.

Application filed March 13, 1924. Serial No. 698,817.

To all whom it may concern:

Be it known that I, EMORY A. TRUSSELL, a citizen of the United States, and resident of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Refill Books, of which the following is a specification.

Refill books have their leaves bound together in a package which is removable from the cover and replaceable by a fresh package commonly called a refill; the cover being made of durable comparatively expensive material. The present application is directed to improvements in the construction of such refill books or refills.

These are to be distinguished from the ordinary loose leaf books, in which the sheets are separately insertable or removable. In the refill books it is only the whole refill which is insertable or removable, except that single sheets which become obsolete may be torn out.

The accompanying drawings illustrate an embodiment of the invention.

Fig. 1 is a plan of the book laid open, with part of the refill pad broken away;

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

Fig. 3 is an underside plan view of the binder;

Fig. 4 is a plan of the central part of the cover with the fastening means for the binder; and

Fig. 5 is an end view of the parts shown in Fig. 4.

Referring to the embodiment of the invention illustrated, the leaves 1 are provided with rectangular slots 2 near their binding edges and close together along the lengths of such edges. In books of small capacity, the leaves are necessarily perforated extremely close to the edge, and a multiplicity of fastening points is essential to prevent accidental tearing out of the leaves. Preferably also the leaves are cut away at their inner edges as indicated at 3, at points opposite the slots 2 so as to lessen the pressure of the edges of the leaves against the inner faces of the rings.

The leaves are mounted on a binder consisting of a back plate 4 which is curved backward at the edges and which at one edge is slitted (see Fig. 3) and is provided

with projecting tongues which are bent upward to form rings 5 of rectangular cross section fitting in the rectangular slots 2 of the leaves. The free ends of the rings 5 are carried around to practically or approximately contact with the top of the curved plate 4 at points slightly within the edge of the latter. The width of the back 4 is approximately equal to or a little less than the outside diameter of the rings 5.

The fastening means comprises a plate 6 fastened between two halves of the cover by means of a plate 8 on the back with prongs 9 projecting up through the leather of the back and through notches 10 in the ends of the plate 6 and bent down over the latter. The fastening plate 6 has inward flanges 11 along its side edges entering the triangular spaces formed between the rings 5 and the edges of the plate 4, and forming a channel to hold the binder in position in the book.

At one end, 12, of the binder it is tapered or reduced in width so that this end may be freely inserted in the end 13 of the fastening plate; the latter being bent out obliquely as shown to facilitate such insertion (or being cut away slightly for the same purpose). The binder carrying the refill pad is inserted in this way and pushed endwise to a central position in the book. In this position, its advance end 12 is engaged and held frictionally in the corresponding end of the fastener, which is contracted as at 14 to grip the binder and hold it in the central position.

The feature last described is of very considerable importance. The construction of the end of the fastening means permits considerable variation or tolerance in manufacture between the dimensions of the binder and of the fastener and materially reduces the manufacturing costs. The same tool that bends the tongues 9 over the fastening plate is utilized to spread one end of this plate and to pinch the other end together so that there is practically no additional cost in these two operations. The taper of the flanges 11 at the point 14 is so gradual that the binder when pushed forcibly into position will be locked against accidental loosening. To remove the refill pad it will be drawn out from the fastener in the opposite direction to that of its introduction.

The improvement may be applied to binders of other designs than that herein illustrated.

Though I have described with great particularity of detail, a certain embodiment of my invention, yet it is not to be understood therefrom that the invention is restricted to the particular embodiments disclosed. Various modifications thereof in detail and in the arrangement of the parts may be made by those skilled in the art without departure from the invention as defined in the following claims.

What I claim is:

15 1. A refill book including in combination a refill pad of leaves with a binder holding them together and a fastening means comprising flanges within which the binder can be inserted endwise, the sides of said fastening means being contracted at one end to stop the binder in a central position and hold it there.

2. A refill book including in combination

a refill pad of leaves with a binder holding them together and a fastening plate 6 having flanges 11 forming a channel within which the binder can be inserted endwise, said channel at one end tapering inward so as to grip the end of the binder frictionally and hold it removably in a central position. 25 30

3. A refill book including in combination a refill pad of leaves with a binder holding them together, said binder comprising rings passing through the leaves to permit them to be opened out flat and a back plate carrying said rings, and a fastening plate having flanges forming a channel within which the back plate of the binder can be inserted endwise, said channel tapering inward at one end so as to grip the end of said binder plate frictionally and hold it removably in a central position. 35 40

In witness whereof, I have hereunto signed my name.

EMORY A. TRUSSELL.