March 9, 1943. A. G. LOTTER 2,313,713

LOOSE-LEAF BINDER

Filed Aug. 14, 1939

Fig. 1.

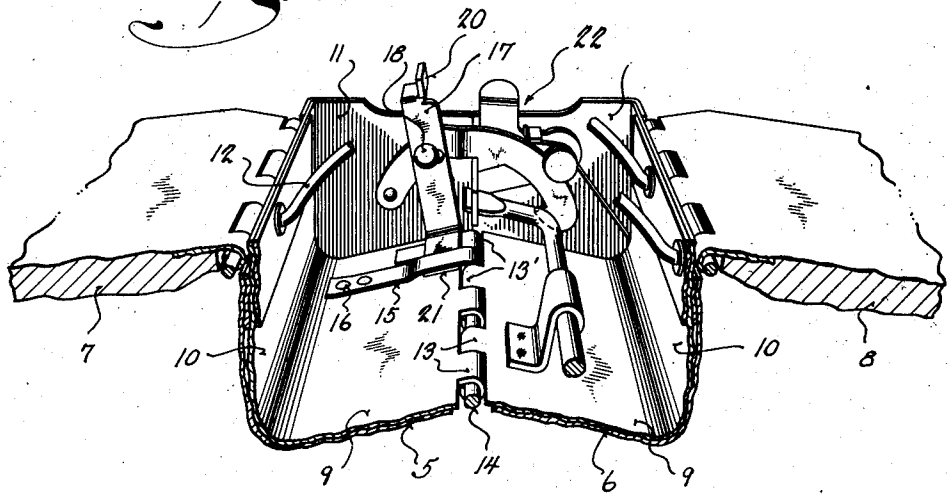


Fig. 2.

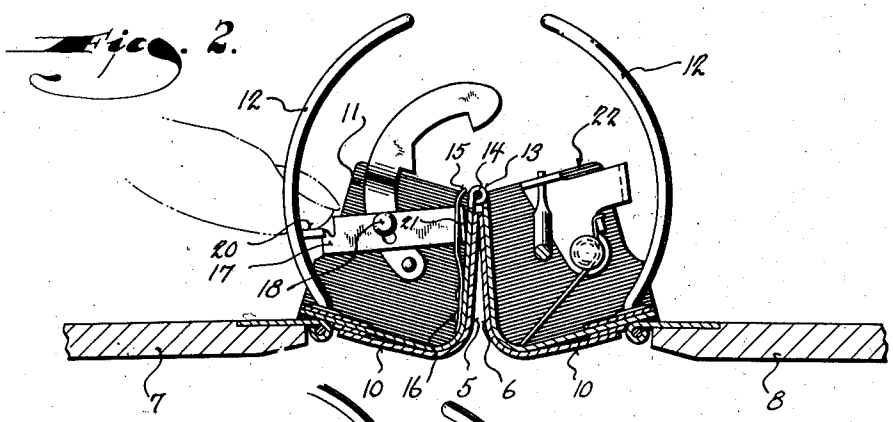
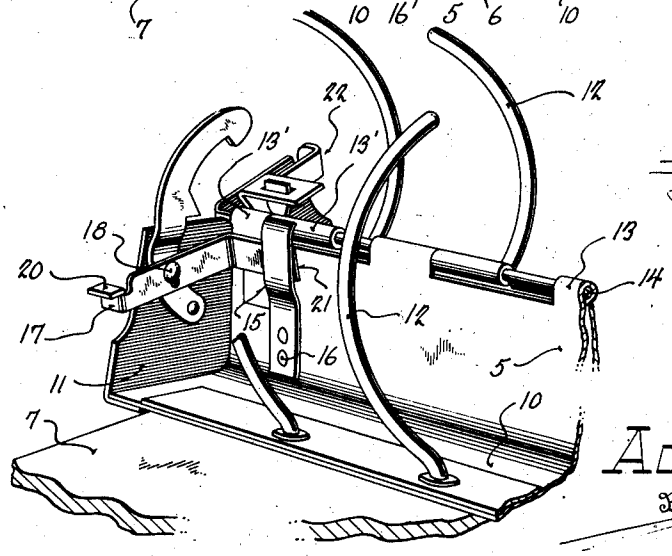


Fig. 3.



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Patented Mar. 9, 1943

2,313,713

UNITED STATES PATENT OFFICE

2,313,713

LOOSE-LEAF BINDER

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Application August 14, 1939, Serial No. 290,112

2 Claims. (Cl. 129—17)

This invention relates to loose leaf binders, and refers particularly to loose-leaf binders of the visible record type in which complementary sets of impaling prongs are shiftable transversely with respect to each other.

In certain binders of this type, the complementary sections which carry the impaling prongs are hingedly connected in a manner permitting relative longitudinal shifting of the sections in addition to the customary opening and closing motion.

It is, of course, desirable to have the hingedly connected sections remain in their positions at which the prongs are in predetermined normal positions during the usual opening and closing of the binder except when it is desired to actually shift the prongs for transferring the position of a sheet or number of sheets.

This invention therefore has as one of its objects to provide a simple practical latch for holding the sections against relative longitudinal shifting except when such shifting is desired.

Another object of this invention is to provide a latch for the purpose described which is so designed that it automatically becomes operative upon moving the sections and the prongs longitudinally relatively to each other to their normal positions.

With the above and other objects in view which will appear as the description proceeds, this invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described, and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

The accompanying drawing illustrates one complete example of the physical embodiment of the invention constructed in accordance with the best mode so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view in cross section through a loose-leaf binder embodying this invention;

Figure 2 is a cross sectional view through the binder in its open position, and illustrating the manner in which the latch is released; and

Figure 3 is a perspective view of the binder portion shown in Figure 2, but with the sections open and shifted to alter the transverse spacing of the prongs.

Referring now particularly to the accompanying drawing in which like numerals indicate like parts, the numerals 5 and 6 designate the two complementary back sections of the binder to which covers 7 and 8 are respectively hingedly connected. Each of the two complementary sections comprises inner and outer angularly disposed walls 9 and 10 and end walls 11.

Inasmuch as the invention is embodied entirely in one end of the binder, only that end has been illustrated, it being understood that the opposite end thereof is similar in construction except for the omission of the latching device to be hereinafter described.

The outer walls 10 of each section carry a plurality of impaling prongs 12, and the edges of the inner walls 9 have interengaging hinge loops 13 through which a hinge pin 14 passes to hingedly connect the sections. The hinge loops are shorter than the spaces therebetween. Consequently, the hinge connection between the sections permits a limited degree of relative longitudinal motion between the sections to enable the prongs to be carried from their normal positions, shown in Figure 1, to the transversely shifted position, shown in Figure 3.

This relative shifting of the prongs is necessary in visible record bookkeeping to enable one or a plurality of leaves to be shifted in their positions with relation to the other leaves in the book.

Heretofore, no means was provided for guarding against unintentional longitudinal shifting of the binder sections, so that when the binder was open, as in Figures 1 and 3, the sections were often unintentionally shifted to disturb the arrangement of the sheets.

To preclude this objectionable possibility, the present invention provides a releasable latch 15 which in its operative position holds the sections against relative longitudinal shifting out of their normal relative positions.

This latch consists of a spring finger riveted or otherwise secured, as at 16, to the wall 9 of one of the sections with its outer free end portion offset slightly from the surface of the wall 9. At its extremity, this offset outer end of the spring finger is turned in to normally project into the space between the adjacent hinge loops 13'.

The width of the spring finger is substantially equal to the difference in lengths of the hinge loops, and the spaces into which they fit. Hence, when the latch is in its operative position projecting its outer extremity into the space between the loops 13, the sections are held against

relative longitudinal motion and the impaling prongs are in their normal positions.

To disengage the spring latch and free the sections for longitudinal shifting, a lever 17 is loosely pivoted, as at 18, on the adjacent end wall of the section to which the spring finger is secured. The outer extremity of this lever has a finger piece 20 against which pressure may be exerted, and at its inner end 21 is directed inwardly at right angles to underlie the outer offset portion of the spring finger and lift the same out of the space between the hinge loops upon rocking motion being imparted to the lever in the manner illustrated in Figure 2.

With the latch held in the position shown in Figure 2, it is of course possible to shift the sections longitudinally relative to each other to the positions shown in Figure 3. In this position, the spring finger bears against the adjacent hinge loop with a spring tension so that when the sections are returned to their normal positions, the finger automatically snaps into place to hold the sections against unintentional longitudinal shifting.

A releasable latch indicated generally by the numeral 22, is also provided to hold the sections closed in the position shown in Figure 1, but this latch mechanism forms no part of the present invention. It constitutes the subject matter of Patent No. 1,744,275 issued January 21, 1930, to Adolph G. Lotter.

From the foregoing description taken in connection with the accompanying drawing, it will be readily apparent that this invention provides an exceedingly simple but effective latch for securing the complementary sections of a visible loose-leaf type binder against unintentional relative longitudinal shifting.

What I claim as my invention is:

1. In a loose-leaf binder: complementary sections having edgewise adjacent walls; hinge loops on the adjacent edges of the walls; a hinge pin in said loops to hingedly connect the sections; said loops being shorter than the spaces therebetween so that the sections have a limited degree of relative longitudinal motion; a substantially flat spring strip secured to the inner face of one of said edgewise adjacent walls with a free end portion thereof positioned to project into the space between two adjacent hinge loops to hold the sections against relative longitudinal motion; and a medially pivoted releasing lever having a part positioned under the free end portion of the spring strip to lift the same against its inherent resiliency and out of said space between the hinge loops upon rocking of the releasing lever on its pivot.

2. In a loose-leaf binder: complementary sections, each of which has two angularly disposed side walls and end walls substantially perpendicular to the side walls; impaling prongs on one side wall of each section; hinge loops on the edges of the other side wall of each section; a hinge pin in the loops to hingedly connect the sections; said loops being shorter than the spaces therebetween so that the sections have a limited degree of relative longitudinal motion to enable moving the prongs of one section transversely with respect to the prongs of the other section; a spring strip fixed to the inner surface of the hinged side wall of one section with a free end portion thereof positioned to engage in the space between two adjacent hinge loops to hold the sections against relative longitudinal motion; and a releasing lever medially pivoted on the adjacent end wall of said section with one end thereof under the free end portion of the spring strip and its other end exposed outside said end wall to provide a handle.

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