

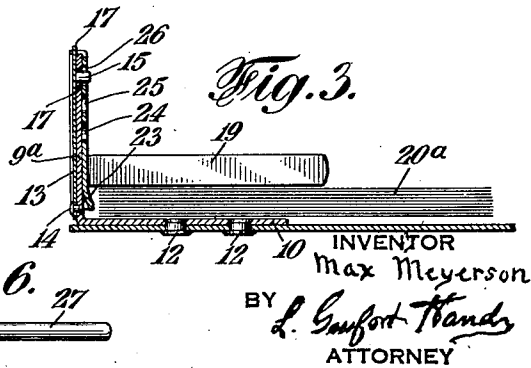
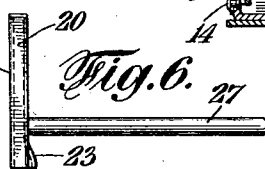
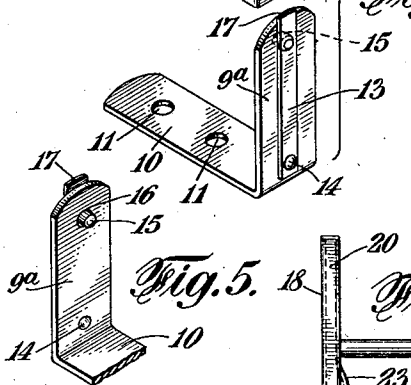
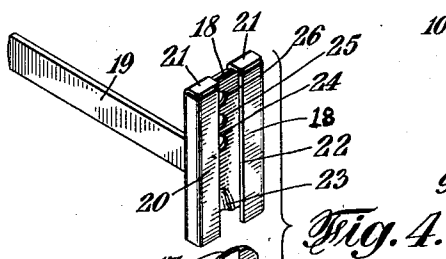
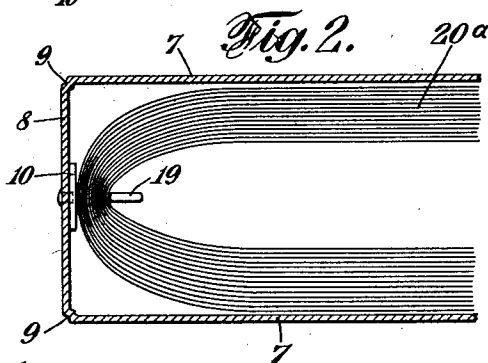
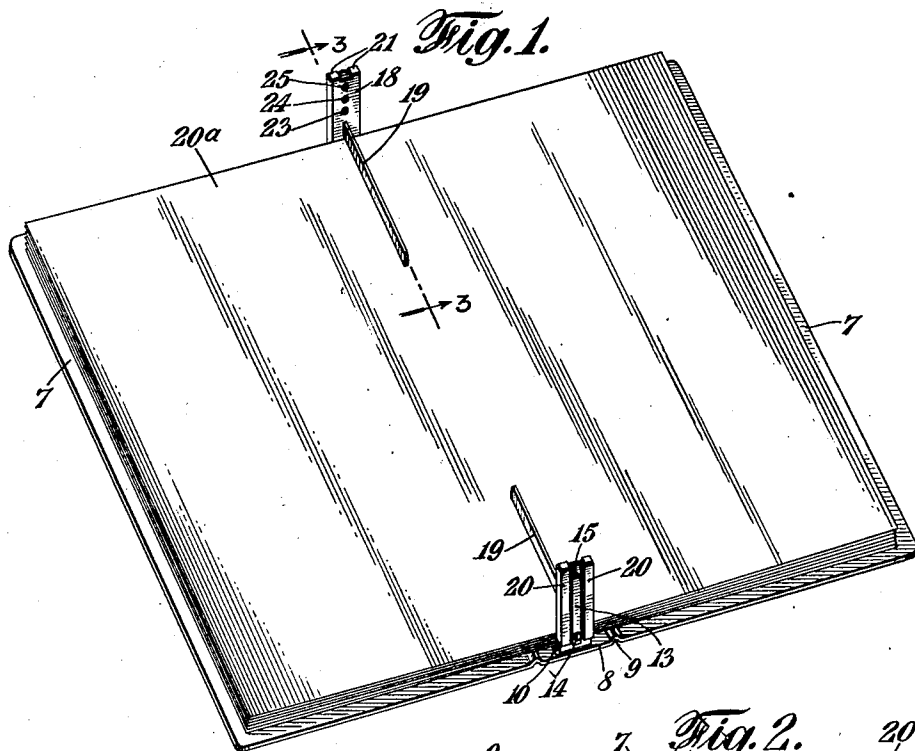
Oct. 6, 1931.

M. MEYERSON

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LOOSE LEAF BINDER

Filed Sept. 12, 1929



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LOOSE LEAF BINDER

Application filed September 12, 1929. Serial No. 392,024.

My invention relates to loose leaf binders of the type in which a number of leaves or sheets are to be detachably and interchangeably mounted upon a covering and thus made into a book.

More particularly stated, my invention contemplates improved means whereby the leaves are clamped in and released from position.

Among the objects of my invention are the following:—

1. To enable the leaves, as they accumulate within the book, to be clamped firmly in position, and especially where the leaves form a mass of substantial thickness.

2. To enable the operator to adjust the device instantly for any particular thickness of accumulated leaves.

3. To provide in connection with a device of this kind a clamping device which can be quickly and easily adjusted step by step, to fit varying thicknesses of a mass of leaves.

4. To provide a clamping device of the type above mentioned, in which there is a telescopic slide and an improved latch mechanism associated therewith in order to allow for different thicknesses of the mass of leaves to be clamped.

5. To provide said telescopic slide and its latch mechanism with an improved guide for enabling them to be quickly and accurately fitted together after they have been taken apart.

6. To improve the locking mechanism of the clamping devices just mentioned; and

7. To provide a number of specific improvements in loose leaf binders generally.

Reference is made to the accompanying drawings forming a part of this specification, and in which like reference characters indicate like parts throughout all of the figures.

Figure 1 is a perspective, showing one of my devices incorporated in the form of a book, here shown as open, and carrying a number of loose leaves.

Figure 2 is a substantially central fragmentary section through the book, showing it as closed.

Figure 3 is a section on the line 3—3 of

Figure 1, looking in the direction indicated by the arrows.

Figure 4 is a perspective showing one of the posts used in my device, and the telescopic slide associated therewith and carrying a clamping bar.

Figure 5 is a fragmentary perspective of the post appearing in the lower portion of Figure 4, but shows it as turned around as compared therewith.

Figure 6 is a side elevation of a slide somewhat like the one appearing at the top of Figure 1, but carrying a slightly different form of clamping bar.

A pair of covers 7, 7, are connected together by a back strip 8, so as to form a pair of flexible corners 9.

The back strip 8 extends the entire length of the covers, and is preferably somewhat stiff, in order to facilitate the mounting of other parts thereupon.

Mounted upon the back strip 8 and adjacent the ends thereof are a pair of posts 9, 9, each provided with a bent portion 10 integral with it and serving as a base.

Each base 10 is provided with holes 11, 11. Rivets 12, 12 extend through these holes and also through mating holes in the back strip 8, as may be understood from Figure 3, so as to hold the posts firmly in position.

As thus mounted, each post 9, 9 extends perpendicularly from the plane of the back strip, so that when the book is open and horizontal as shown in Figure 1, the posts extend vertically from the ends of the back strip, and thus parallel with each other.

Each post 9 is provided with a spring latch 13, which is simply a leaf spring, secured at its lower end by a rivet 14 and carrying adjacent its upper end a bolt 15, which extends loosely but snugly through a bolt hole 16 in the post 9.

The free end 17 of the spring latch extends slightly above the adjacent end of the post. This is to enable the operator to bend the spring latch slightly away from the post, which he does preferably by lodging his thumb nail against the protruding end 17, and forcing the same to the left according to

Figure 3, thus moving the bolt 15 in the direction of its axis.

Telescopically fitted upon each post 9 and detachable relatively thereto is a slide 18, carrying a clamping bar 19.

The purpose of the clamping bar 19 is to press upon the leaves 20a, in order to hold them firmly against the back strip 19 and thus hold them in position. There being two clamping bars 19, one adjacent each end of the back strip 8, the leaves are so clamped that they may be bent practically upon a line, and because of this fact great flexibility is conferred upon the book as a whole, so that it can be readily opened and shut, and the leaves turned over back and forth, like the leaves of an ordinary printed book.

The slide 18 here shown is made of a single bit of sheet metal, having a pair of oppositely disposed edge portions 20, 20, bent toward each other, as indicated in the upper portion of Figure 4. The slide 18 is further provided with a pair of ears 21, 21, bent over and forming lugs which extend, adjacent the ends of the edge portions 20, 20, as may be understood from Figure 4.

Each slide 18 has thus the form of a flat sleeve provided centrally with a channel 22 which is simply the space between the contiguous edge portions 20, 20, this flat sleeve being partially closed at one of its ends by means of the lugs 21, 21.

The slide 18 can be placed upon the post, and moved up or down, relatively thereto and taken off, as occasion may require.

The slide 18 is provided with a portion 23 integral with it and flared slightly. This portion 23 serves as a guide for engaging the bolt 15 and moving it slightly, so as to flex the spring latch 13 a little. This enables the slide to move telescopically down over the post 9. The spring latch, in thus flexing, simply moves partially into the channel 22.

By this arrangement each post and the slide associated with it occupy a minimum of space, and together constitute a very compact clamping unit.

Each slide 18 is provided with bolt holes 24, 25, 26, in this instance three in number. These bolt holes are so positioned as to be in alinement with the bolt 15 when the slide is shifted in its position upon the post 18. The wall of the slide 20 with its holes 24, 25 and 26, and the spring latch 13 with its bolt 15 together constitute a latch mechanism common to the post and the slide, for detachably holding the slide in different positions of adjustment upon the post.

In order to shift the slide the operator flexes the spring latch 13 as above described, so as to withdraw the bolt 15, and then the slide can be moved freely or taken off the post. The slide can be shifted into three definite and predetermined positions, by so shifting its position that the bolt 15 occupies

first one and then another of the three holes 24, 25, 26.

In Figure 6 I show a slide 20 carrying a clamping bar 27, which has the form of a solid cylinder instead of being flat like the clamping bar 19 above described. The action of the clamping bar 27 is substantially the same as that of the clamping bar 19. Its rounded surface renders its pressure upon the leaves 20a somewhat easier as regards the wear and tear of the leaves but the clamping bar 19 can be used to bend the leaves a little more abruptly.

Whenever leaves are placed in the book at the start, and whenever leaves are to be added or taken out, the slides 18, are taken off the posts 9, the leaves are put in or taken out, the slides are replaced upon the posts, and shifted downwardly until the clamping bars 19 are pressing snugly upon the leaves, as indicated in Figure 1. When the slides are thus in position, they are held securely by the bolts 15, or in other words by the spring latches.

The action of my device may be readily understood from the foregoing description.

Leaves are placed in the book or removed therefrom as required. At any time when the leaves are loose the slides are shifted to new positions and the leaves are tightened by pressure of the clamping bars.

If a slide is worn out, broken or lost, it is readily replaced by a new one.

The slides and posts can easily be standardized, and are of suitable form to facilitate their production in quantity. They are adapted for sale in five and ten cent stores, and with or without the book covers they can easily be made the basis of a mail order business.

I do not limit myself to the precise mechanism shown as variations may be made therein without departing from my invention, the scope of which is commensurate with my claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is as follows:—

1. In a loose leaf binder the combination, with book covers and a back strip for supporting loose leaves, of a pair of posts mounted adjacent the ends of said back strip, each post having a spring latch, and a slide mounted telescopically upon each post and provided with portions for engaging said spring latch, in order to hold the slide detachably in position upon the post.

2. In a loose leaf binder the combination, with book covers and a back strip for supporting loose leaves, of a pair of posts mounted upon said back strip and located adjacent the respective ends thereof, a slide mounted upon each post and movable into different positions relatively thereto, a clamping arm secured to each slide and movable therewith,

said clamping arm, being thus carried into holding engagement with said loose sheets, and spring latch mechanism common to said post and said slide for holding said slide in
5 different positions of adjustment relatively to said post.

3. In a loose leaf binder the combination, with book covers and a back strip for supporting loose leaves, of a pair of posts mounted upon said back strip and located adjacent the respective ends thereof, a spring latch mounted upon each post and provided with a bolt movable back and forth as said spring latch is flexed, and a slide fitted telescopically
10 upon each post and movable relatively thereto, said slide having a plurality of holes into which said bolt may be thrust in order to hold said slide in a predetermined position relatively to said post, and a clamping arm carried by said slide and movable therewith for the purpose of pressing loose leaves against said back strip.

4. In a loose leaf binder the combination of a back strip, a post mounted thereupon, a spring latch carried by said post, a slide fitted telescopically upon said post and provided with a portion for coacting with said spring latch in order to hold said slide in different positions of adjustment relatively to said post, and a clamping arm carried by said slide and movable therewith, for the purpose of pressing loose leaves against said back strip.

5. In a loose leaf binder the combination of a back strip, a post mounted thereupon and provided with a hole, a spring latch mounted upon said post and provided with a bolt extending through said hole, a slide fitted upon said post and movable relatively thereto, said slide having a plurality of holes so positioned
40 as to be brought successively into registry with said bolt as said slide is moved into different positions of adjustment relatively to said post, and a clamping arm carried by said slide, pressing loose leaves against said back strip.

6. In a loose leaf binder the combination of book covers and a back strip connecting them together, a post mounted upon said back strip, a spring latch mounted upon said post and provided with a portion protruding slightly therefrom in order to enable the operator to actuate said spring latch by hand, a slide fitted upon said post and movable relatively thereto, said slide having a portion provided with means for coacting with said spring latch in order to hold said slide in different positions of adjustment relatively to said post, and a clamping arm carried by said slide for engaging loose leaves resting upon said book covers and said back strip.

7. In a loose leaf binder the combination of book covers and a back strip, a post mounted upon said back strip, said post being provided with a bolt hole extending through it, a spring latch mounted upon said post and provided

with a bolt extending through said bolt hole, a slide fitted telescopically upon said post and provided with a row of holes so positioned as to be brought successively into registry with said bolt in order to hold said slide in a plurality of different positions of adjustment upon said post, and a clamping arm carried by said slide and extending therefrom in a direction parallel with said back strip, for the purpose of clamping loose leaves against said back strip.

8. In a loose leaf binder the combination of book covers and a back strip connected therewith, a post mounted upon said back strip, a slide detachably fitted upon said post and movable relatively thereto into different positions of adjustment, said slide being made of sheet metal and provided with an expanded portion for guiding said slide relatively to the end of said post in order to fit said slide upon said post, means common to said post and said slide for holding said slide in different positions of adjustment upon said post, and a clamping arm carried by said slide for the purpose of clamping loose leaves against said book covers and back strip.

9. In a loose leaf binder, the combination with book covers and a back strip, of posts mounted upon said back strip disposed adjacent the ends of said back strip, a pair of separately formed members longitudinally slidable one upon each of said posts, each of said members having a clamping arm projecting therefrom in the direction of the other post adapted for engaging leaves of paper intended to be bound, and spring latch mechanism co-operative between said posts and said slidable members for detachably holding said slidable members in position upon said posts.

In testimony whereof I affix my signature.
MAX MEYERSON.

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