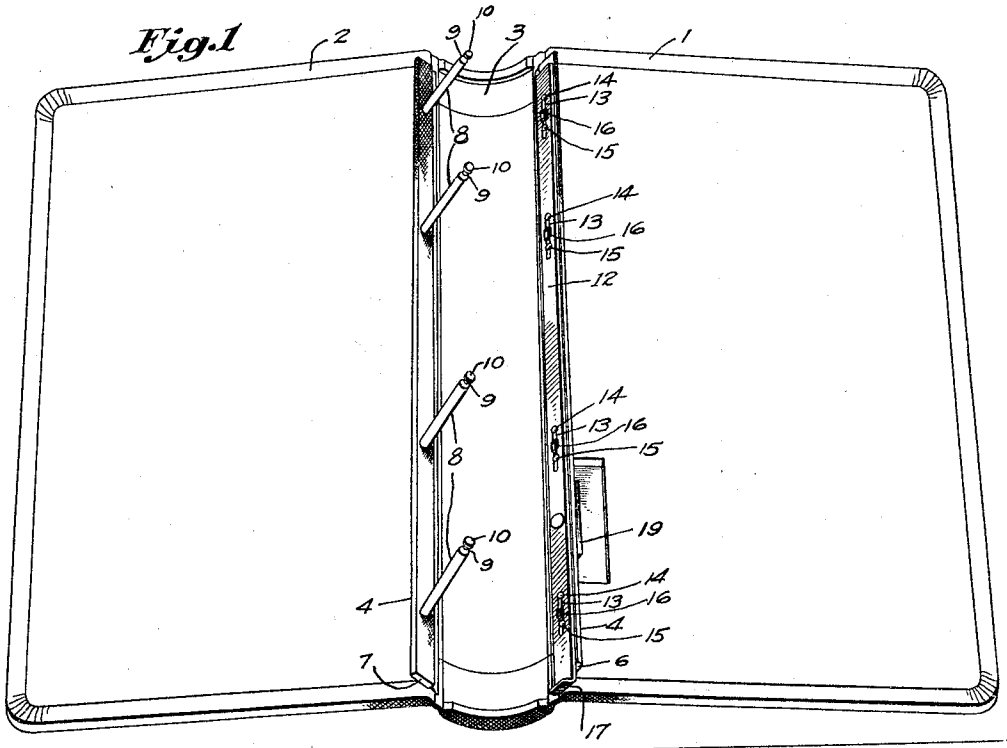
Sept. 6, 1932. LE ROI E. HUTCHINGS 1,876,419

BINDER LOCK

Filed May 14, 1930 2 Sheets-Sheet 1

Fig. 1



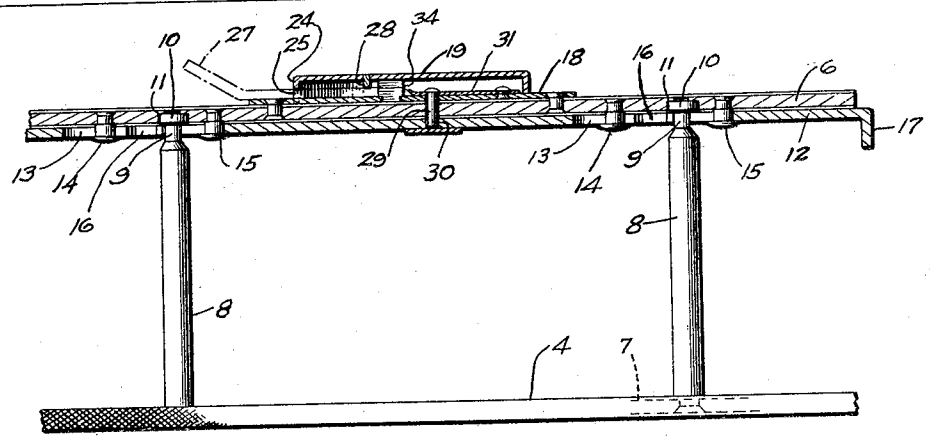


Fig. 2

Inventor

Le Roi E. Hutchings

By Barton A. Beauchamp

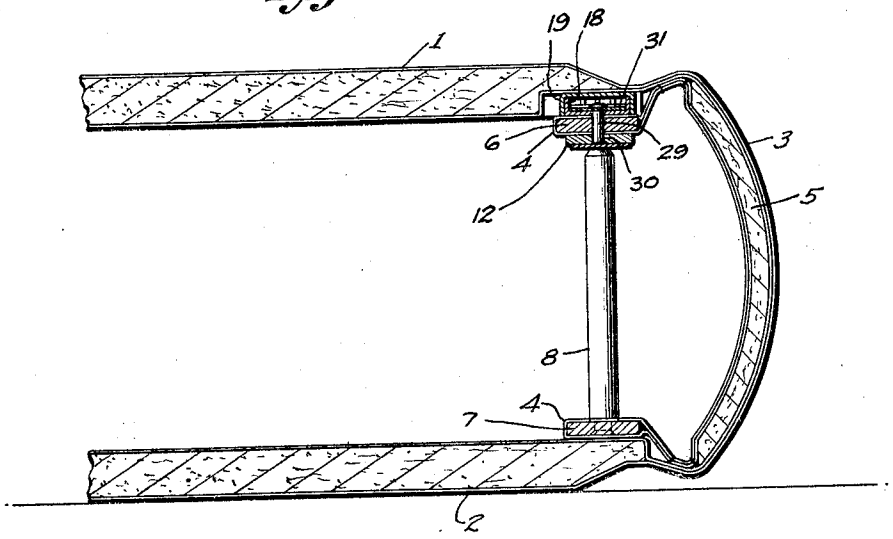
Attorney

Sept. 6, 1932. LE ROI E. HUTCHINGS 1,876,419

BINDER LOCK

Filed May 14, 1930 2 Sheets-Sheet 2

Fig. 3



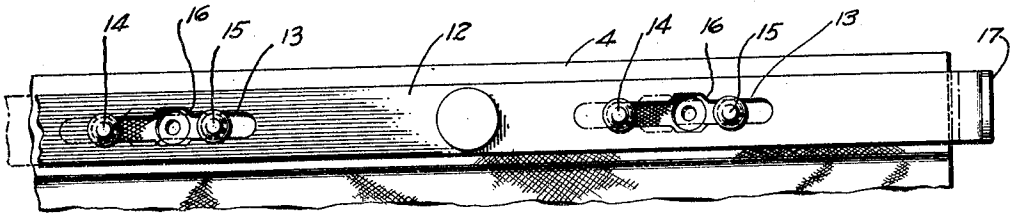


Fig. 4

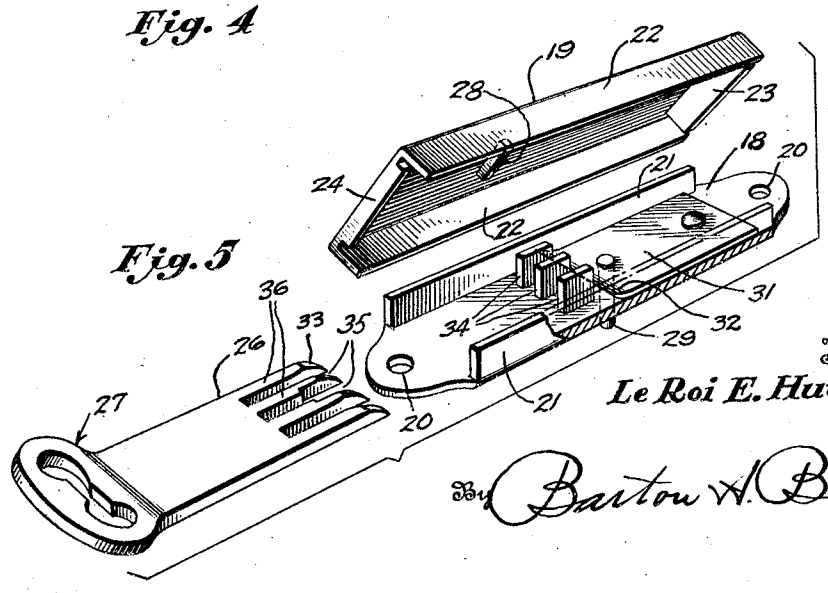


Fig. 5

Inventor
Le Roi E. Hutchings

By Barton H. Beau Jr
Attorney

Patented Sept. 6, 1932 1,876,419

UNITED STATES PATENT OFFICE

LE ROI E. HUTCHINGS, OF TONAWANDA, NEW YORK, ASSIGNOR TO REMINGTON RAND INC., OF BUFFALO, NEW YORK

BINDER LOCK

Application filed May 14, 1930. Serial No. 452,476.

This invention relates to loose leaf binders and particularly to means for retaining sheets in such binders.

In the development of loose leaf binders numerous constructions have been devised for removably mounting a stack of sheets between a pair of cover members. The present invention provides a binder which will allow removal of sheets only by duly authorized persons. Binders of this description are particularly necessary where they are subject to public inspection as in the case of municipal records, etc.

A binder embodying the principles of the invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of the improved binder with the sheet retaining means disengaged and in sheet receiving position.

Fig. 2 is a fragmentary longitudinal section through the binding bars and the locking device.

Fig. 3 is a transverse section through the binder and locking device.

Fig. 4 is a partial plan view of the post engaging mechanism.

Fig. 5 is a detailed perspective view of the key and the key controlled locking mechanism.

The binder comprises a pair of cover members 1 and 2, hingedly connected by a back 3. Adjacent each hinge connection there extends a longitudinal pocket or tube 4 formed of fabric or like flexible material and which is incorporated in the regular binding and covering with which it is customary to cover the comparatively rigid base member 5 forming the core of the back 3.

Contained within the tubes 4 and extending the entire length thereof are substantially rigid metallic binding members or bars 6 and 7. A plurality of leaf-impaling posts 8 are arranged along the bar 7, perpendicular thereto and with their adjacent ends riveted in apertures provided in the bar 7. The free ends of posts 8 are provided with annular grooves 9 and headed portions 10 for engagement with a releasable means which is associated with the opposing bar 6. The bar 6 is provided with a series of apertures 11 which are located to register with and receive the headed portions 10 of the posts 8. A locking bar 12 is slidably mounted on the bar 6. This slidable association is effected by the provision of a number of elongated slots 13 in the bar 12 equal to the number of leaf impaling posts 8. As will be seen in Figs. 2 and 4 each of the slots 13 is engaged by a pair of spaced, headed studs 14 and 15 which are secured to the bar 6 by riveting. Intermediate the ends of each of the slots 13 is an enlargement 16 adapted to admit headed portions 10 of the posts 8, the remaining narrow portion of the slots being of substantially the same width as the neck portion 9 of the posts. In Fig. 4 the stud 14 is shown disposed at one end of the slot 13 while the stud 15 is spaced from the opposite end of the slot and the enlargement 16 is in registry with the post 8 and the aperture 11. It is obvious that after insertion of the free ends of the posts 8, the bar 12 may be slid longitudinally to the position indicated in the dotted lines, (Fig. 4), wherein the annular grooves 9 are engaged by the narrow portions of the slots 13 to prevent removal of the headed portions 10 from the apertures 11. To facilitate sliding the bar 12 it is provided with a manipulating portion 17 bent from the end thereof.

The binder is further provided with means which automatically engages the locking bar 12 when it is moved to the locked position and prevents its removal to the unlocked position until the automatic engaging means has been released by the use of a key. This prevents the operation of the sheet releasing mechanism excepting by duly authorized persons.

The above mentioned locking means is mounted upon the bar 6 on the outer face or the face opposed to that which carries the locking bar 12 and includes a base plate 18 and a cover member 19. The base plate 18 is secured to the bar 6 by means of a pair of rivets which pass through apertures 20 provided therefor. A pair of longitudinally extending perpendicular flanges 21 are formed from opposite edges of the base plate 18 and cooperate with a pair of flanges 22 formed

on the cover member 19 to provide an elongated, rectangular compartment between said base plate and said cover member. The flanges 21 and 22 may be fastened together in any suitable manner as by spot welding. One end of this compartment is closed by a depending flange 23 and the other end is provided with a narrower flange 24 which forms a restricted slot 25 adapted to receive the stem 26 of a key indicated generally at 27 in Fig. 5. A protuberance 28 is provided on the inner side of the cover member 19 and cooperates with the flange 24 to positively guide the stem of the key 27 in contacting relation with the base plate 18 while it is being introduced.

A latch or locking pin 29 passes through apertures in the base plate 18 and the bar 6 and is also adapted to be received by an aperture 30 in the locking bar 12 when the bar is in locked position at which time the pin 29 and the aperture 30 are in registry. To allow for ready insertion and removal of the latch pin 29 it is carried by a flat spring 31 which is secured to the base plate 18 by riveting. The free, pin-carrying end of the spring 31 is bent away from the base plate 18 as at 32 to permit easy insertion of the beveled edge 33 of the key stem 26. It will be understood that the camming or wedging cooperation between the bent edge 32 of the spring and the beveled edge 33, (Fig. 2), will, upon insertion of the key, space the free end of the spring from the base plate 18 and withdraw the latch pin 29 from the aperture 30 in the locking bar 12. With the key 27 thus inserted free and unrestricted use of the post releasing mechanism may be made and the convenient removal of sheets effected. To prevent the use of some unauthorized implement in place of the key which is intended for the lock, the base plate 18 is provided with a plurality of obstructing blocks 34 which are arranged between the aperture 25 and the flat spring 31. The stem 26 of the key is formed with notches 35 which allow the protruding fingers 36 to extend between the blocks 34. By varying the size and arrangement of the blocks 34 and the notches 35 numerous individual key combinations may be employed.

It will be understood that the lock herein disclosed may be associated with a wide variety of loose sheet binders and like record devices.

It will be understood that the specific construction which has been set forth is descriptive of one practical illustration of the principles embodied in the invention.

What is claimed is:

1. A loose leaf binder comprising two binding members, one of which is provided with leaf impaling posts and the other of which carries means for interlocking with said posts and key controlled mechanism comprising a latch pin, a resilient mounting therefor which normally disposes said latch pin in locking engagement with said interlocking means when said interlocking means is in operative enagement with said posts, and a key for releasing said latch pin when it is desired to disrupt the operative engagement of said interlocking means and said posts.

2. In a loose leaf binder having a pair of spaced cover members, a binding member on each cover member, leaf impaling posts mounted on one binding member and extending therefrom, the second binding member being formed to receive the free ends of the posts, a manually operable member slidably mounted on the second binding member and movable to engage and secure the posts against removal from the second binding member, said second binding member and said manually operable member being each formed with an orifice, the orifices in said members being arranged in registering position when the manually operable member is in post securing position, a latch having a resilient portion secured to the second binding member and another portion adapted to engage the orifices in the manually operable member and second binding member to retain the manually operable member against post releasing movement.

3. In a loose leaf binder having a pair of spaced cover members, a binding member on each cover member, leaf impaling posts mounted on one binding member and extending therefrom, the second binding member being formed to receive the free ends of the posts, a manually operable member slidably mounted on the second binding member and movable to engage and secure the posts against removal from the second binding member, said second binding member and said manually operable member being each formed with an orifice, the orifices in said members being arranged in registering position when the manually operable member is in post securing position, a latch having a resilient portion secured to the second binding member and another portion adapted to engage the orifices in the manually operable member and second binding member to retain the manually operable member against post releasing movement, a housing secured to the second binding member and enclosing the latch, and a key insertable through the housing to engage and remove the latch means from the orifice in the manually operable member.

4. In a loose leaf binder having a pair of spaced cover members, a binding member on each cover member, leaf impaling posts mounted on one binding member and extending therefrom, the second binding member being formed to receive the free ends of the posts, a manually operable member slidably mounted on the second binding member and

movable to engage and secure the posts against removal from the second binding member, said second binding member and said manually operable member being each formed with an orifice, the orifices in said members being arranged in registering position when the manually operable member is in post securing position, latch means including a flat spring secured at one end to the second binding member and a locking pin secured to the opposite end of the flat spring, said locking pin engaging through the orifice of said second binding member and through the orifice in said manually operable member and being resiliently retained therein by said flat spring, thereby locking the manually operable member against post releasing movement, a housing secured to the second binding member and enclosing the latch means, and a key insertable through the housing to engage the latch means and remove the locking pin from the orifice in the manually operable member.

LE ROI E. HUTCHINGS.