J. WALKER, Jr.

FILE, TEMPORARY BINDER, LOOSE LEAF BOOK, AND THE LIKE.

APPLICATION FILED JUNE 7, 1907.

920,508. **Patented May 4, 1909.**

Fig. 1.

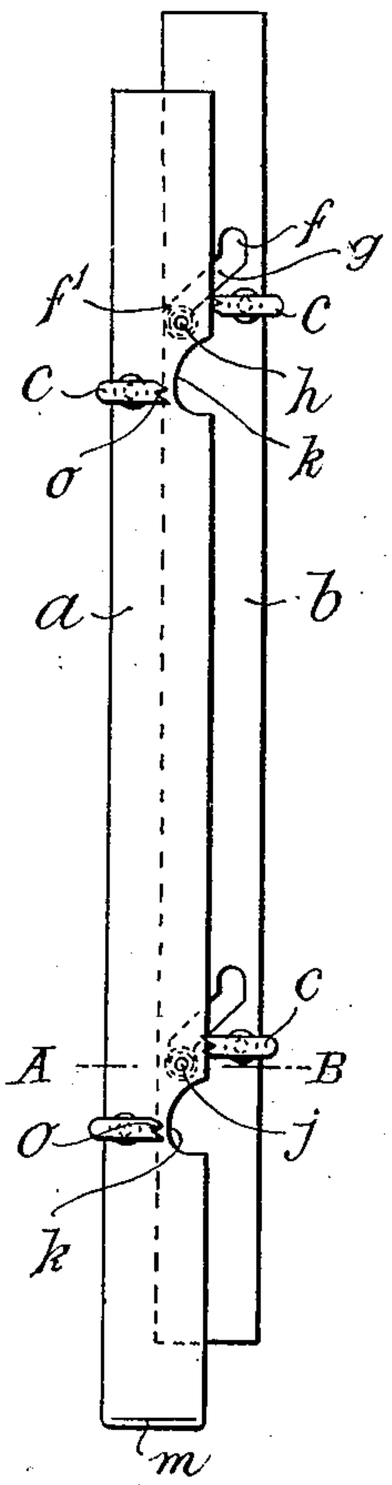


Fig. 2.

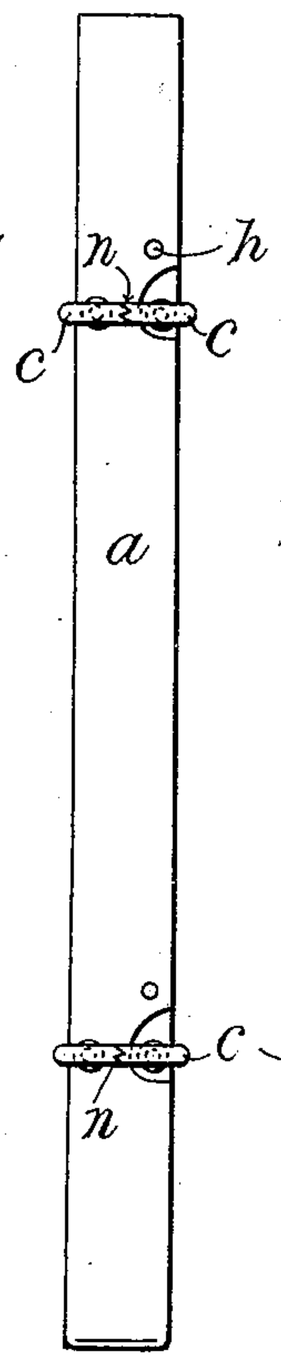


Fig. 3.

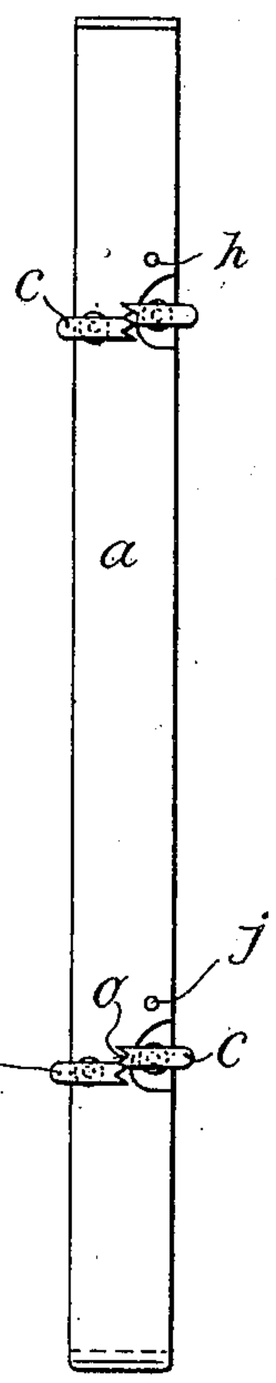


Fig. 5.

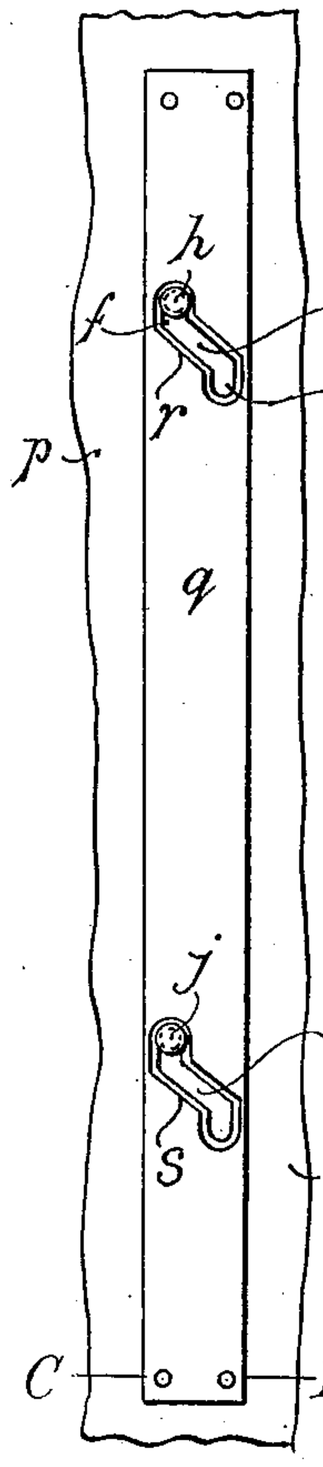


Fig. 8.

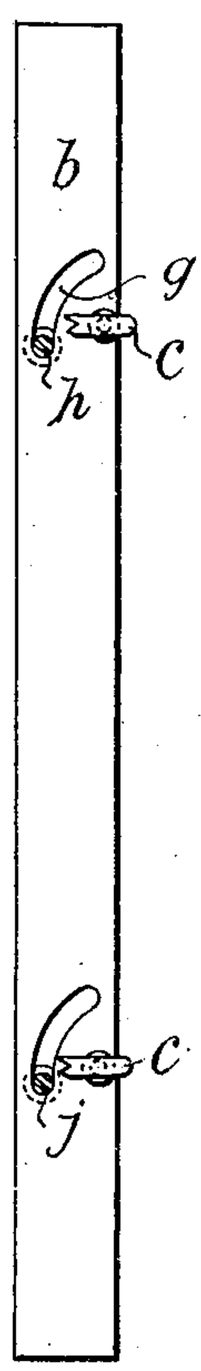


Fig. 4.

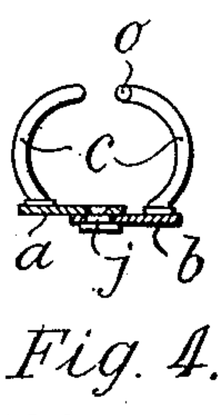


Fig. 7.

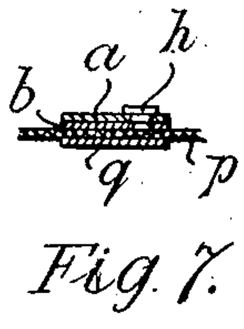
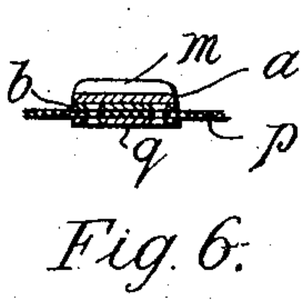


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN WALKER, JR., OF PUTNEY, LONDON, ENGLAND.

FILE, TEMPORARY BINDER, LOOSE-LEAF BOOK, AND THE LIKE.

No. 920,508. Specification of Letters Patent. Patented May 4, 1909.

Application filed June 7, 1907. Serial No. 377,687.

To all whom it may concern:

Be it known that I, JOHN WALKER, JR., of 109 Kenilworth Court, Putney, London, England, manufacturer, have invented certain new and useful Improvements in and Relating to Files, Temporary Binders, Loose-Leaf Books, and the Like, of which the following is a specification.

This invention relates to files, temporary binders, loose leaf books and the like and has for its object to provide a simple device for binding papers or documents, which cannot become accidentally opened, and forms an improvement on the invention set forth in my application for Letters Patent Serial No. 238,718.

A file, temporary binder, loose leaf book or the like made in accordance with my invention preferably comprises two plates of which one is adapted to slide upon the other, two or more prongs disposed on one plate and adapted to mate with similar prongs on the other, when the file is in its closed or normal position, serrations on the coacting ends of said prongs adapted to engage and hold the device in its closed or normal position, and pins on one plate adapted to travel in slots in the other and to coact therewith when one plate is slid in relation to the other, so as to cause the mating prongs to approach or recede from one another in such a manner as to be out of alinement when the plate is slid to open the file.

One form of device made in accordance with this invention comprises two plates one superimposed on the other and on each plate are disposed filing prongs. In the bottom plate are two slots, the ends of which are parallel with the longitudinal axis of the plate, and the central portion is inclined thereto. In the top plate are two pins adapted to travel in the slots in the bottom plate, the pins lying at the extreme ends of the slot when the prongs on one plate mate with the corresponding prongs on the other plate. In opening the device the relative motion between the prongs is first longitudinal of the device, then diagonal and then longitudinal again. To hold the device in its closed or normal position and prevent it from being accidentally opened the coacting ends of the prongs are preferably serrated so that in closing the device the last longitudinal movement brings said serrations into adjacent positions. Said serrations have sloping faces so that on further longitudinal movement of the plate and prongs, the prongs spring apart slightly and the serrations ride over one another and engage thereby holding the prongs in the closed position. Said serrations have the further very important function that they hold the ends of the prongs in alinement so that no two prongs can easily become separated by bending or springing of the metal while the device is closed.

Referring now to the drawings:—Figure 1 is a plan of one form of device made in accordance with this invention, showing the device open. Fig. 2 is a plan of the same showing the device closed. Fig. 3 is a plan of the same showing the sloping faces of the serrations of the mating prongs in adjacent positions. Fig. 4 is a section on the line A—B, Fig. 1; Fig. 5 is an inverted plan of the device showing a convenient method of attaching the device to binding material; Fig. 6 is a cross section of Fig. 5 on the line C—D; Fig. 7 is a cross section of a modified form and Fig. 8 is a plan of the plate *b* showing curved slots therein.

a and *b* are two plates each carrying filing prongs *c* . . . In the plate *b* are two slots the ends of which *f f'* are parallel to the axis of the plate and the central portion *g* inclined thereto. In the top plate *a* are two pins or studs *h j* adapted to travel in the slots in the plate *b* the pins lying in the parts *f f* when the prongs of one plate meet the corresponding prongs of the other plate.

In operation when it is desired to open the device the plate *a* is slid on the plate *b* and is guided by slots therein, thereby imparting to the plate *a* and the pins *h j* and the prongs thereon, first a movement longitudinally of the device, then a diagonal movement and then another longitudinal movement, thus leaving sufficient room between the pairs of prongs *c* . . . for the purpose of inserting or removing the leaves or papers. The plate *a* may be notched as at *k* to clear the feet of the prongs *c* . . . on the plate *b* and it may be provided with a thumb-piece *m* to facilitate its manipulation. The coacting ends of the prongs *c* . . . are provided with serrations *n* . . . having sloping faces *o* . . . In the last longitudinal movement in closing the device, the sloping faces *o* . . . of the serrations *n* . . . are brought into adjacent positions as shown in Fig. 3. On further longitudinal motion the prongs *c* . . . spring apart slightly and the serrations ride over one another and assume

the closed position shown in Fig. 2. The prongs *c* . . . thus serve the double purpose of holding the loose leaves or the like to be filed and of securing the device in its closed position.

In the arrangement shown in Figs. 5 and 6 the binding material *p* is secured to the plate *b* by an auxiliary plate *q* riveted thereto, slots *r* and *s* are provided in the plate *q* corresponding to the slots in the plate *b* and these slots are slightly larger to accommodate the heads of the pins *h* and *j*.

In the arrangement shown in Fig. 7 the pins *h* and *j* are secured to the lower plate *b* and passed through slots in the uppermost plate *a*.

The slots may be of any convenient form for instance straight or curved as in Fig. 8 so that when the plates are slid to the open position the prongs on one plate are brought out of alinement with the prongs on the other.

For use in files the device may conveniently be attached to a board.

A loose leaf book or file made in accordance with this invention is very simple in construction, compact and easily opened and closed, and in its closed position it is held efficiently by reason of the shape of the slots and the engagement of the serrations in the coacting ends of the mating prongs.

What I claim and desire to secure by Letters Patent is:—

1. A file, temporary binder, loose leaf book, or the like, having members carrying mating prongs, said members being adapted to be moved relatively in a substantially longitudinal direction to close said prongs, whereby said prongs move toward each other sidewise, means for preventing the direct endwise separation of said prongs in a direction transverse to said members, and means on the prongs themselves for resisting the sidewise separation of the prongs in a direction longitudinally of said members.

2. A file, temporary binder, loose leaf book, or the like, having members carrying mating prongs, said members being adapted to be moved relatively in a substantially longitudinal direction to close said prongs, whereby said prongs move toward each other sidewise, means for preventing the direct endwise separation of said prongs in a direction transverse to said members, the ends of said prongs having serrations so disposed as to resist their sidewise separation in a direction longitudinally of said members.

3. A file, temporary binder, loose leaf book, or the like, having members carrying mating prongs, said members being adapted to be moved relatively in a substantially longitudinal direction to close said prongs, whereby said prongs move toward each other sidewise, means for preventing the direct endwise separation of said prongs in a direction transverse to said members, and means on the prongs themselves for resisting the sidewise separation of the prongs in a direction longitudinally of said members, said means being adapted to yield to pressure exerted longitudinally of said members whereby the latter can be separated when sufficient pressure is exerted.

4. A file, temporary binder, loose leaf book, or the like, having members carrying mating prongs, said members being adapted to be moved relatively in a substantially longitudinal direction to close said prongs, whereby said prongs move toward each other sidewise, means for preventing the direct endwise separation of said prongs in a direction transverse to said members, the ends of said prongs having serrations so disposed as to resist their sidewise separation in a direction longitudinally of said members, said serrations being adapted to permit such longitudinal separation when sufficient force is exerted longitudinally of said members.

5. A file, temporary binder, loose leaf book, or the like having members carrying mating prongs, said members being adapted to be moved relatively in a substantially longitudinal direction to close said prongs whereby said prongs move toward each other sidewise, means for preventing the direct endwise separation of said prongs in a direction transverse to said members, and means on the prongs themselves for resisting the sidewise separation of the prongs and longitudinal movement of said members, said means being adapted to hold the ends of the prongs in alinement when the device is closed.

6. A file, temporary binder, loose leaf book, or the like having members carrying mating prongs, said members being adapted to be moved relatively in a substantially longitudinal direction to close said prongs whereby said prongs move toward each other sidewise, means for preventing the direct endwise separation of said prongs in a direction transverse to said members, means on the prongs themselves for resisting the sidewise separation of the prongs and longitudinal movement of said members, said means being adapted to hold the ends of the prongs in alinement when the device is closed, and serrations on the ends of said prongs so disposed as to resist their sidewise separation and relative longitudinal movement of said members, said serrations being adapted to hold the ends of the prongs in alinement when the device is closed.

In witness whereof I have hereunto set my hand in presence of two witnesses.

JOHN WALKER, JUNR.

Witnesses:

GORDON MELVILLE CLARK,

ROBERT MILTON SPEARPOINT.