June 17, 1952 W. E. SCHROER 2,600,808

LOCKING DEVICE FOR BOOK SUPPORTING METALS

Filed April 11, 1949

Fig. 1.

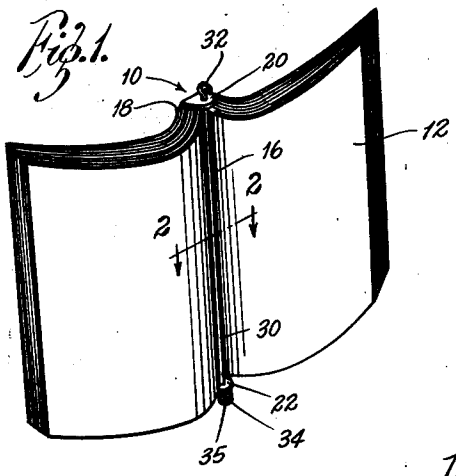


Fig. 2.

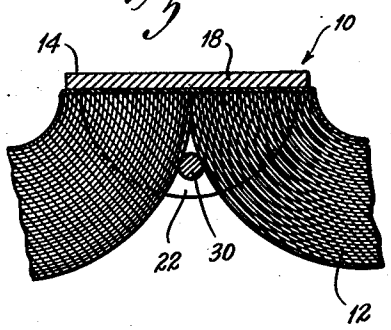


Fig. 3.

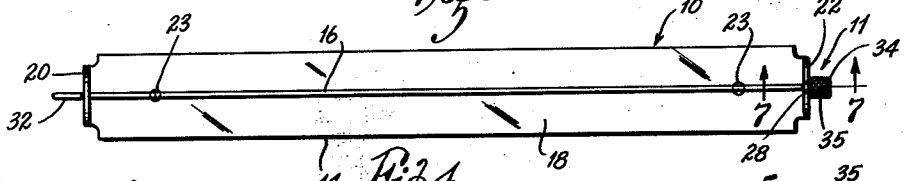


Fig. 4.

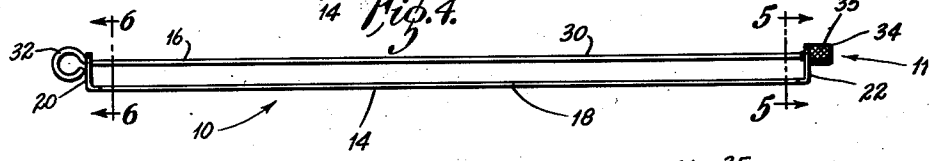


Fig. 5.

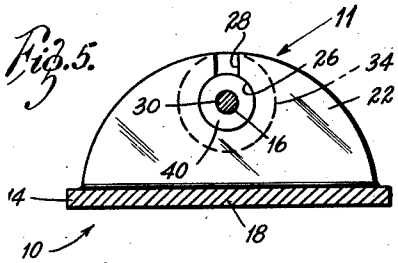


Fig. 6.

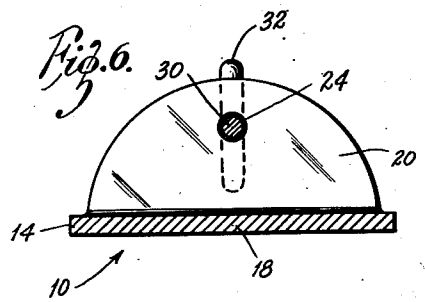
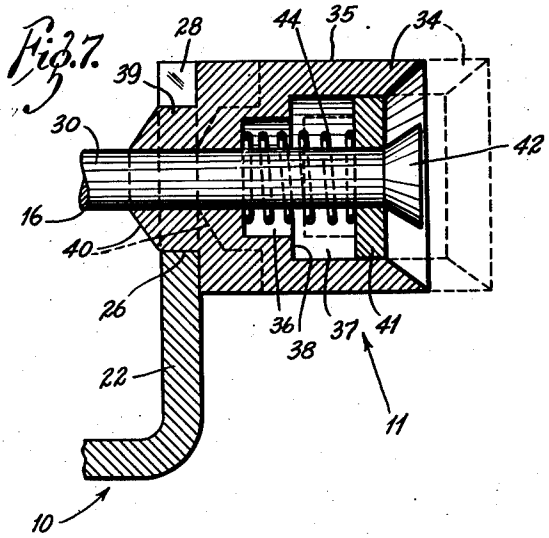


Fig. 7.



INVENTOR:
WALTER E. SCHROER,
BY Rogers & Ezell,
ATTORNEYS.

Patented June 17, 1952 2,600,808

UNITED STATES PATENT OFFICE

2,600,808

LOCKING DEVICE FOR BOOK SUPPORTING METALS

Walter E. Schroer, Affton, Mo., assignor to Loose Leaf Metals Co., St. Louis, Mo., a corporation of Missouri

Application April 11, 1949, Serial No. 86,770

1 Claim. (Cl. 129—38)

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The present invention relates generally to the binder art, and more particularly to a novel locking device for a metal for engaging and supporting a telephone directory or the like.

The locking device comprises a member slidably mounted on the free end of a rod-like retaining member. The sliding member contains a protuberance which is yieldably urged into holding engagement with an aperture contained in one of the leg portions of the body member of the metal.

There are numerous book supporting metals in use at the present time, but the locking means of the majority of them are not entirely satisfactory, many of them being cumbersome and requiring an excessive amount of time to engage and disengage; or else they are unreliable in operation.

It is an object of the present invention, therefore, to provide a supporting metal with a novel locking means which is simple in construction, yet positive in its locking action.

Another object is to provide a supporting metal with a novel locking means which can be engaged and disengaged quickly and easily.

Other objects are to provide a supporting metal with a novel locking means which contains a minimum number of parts, is of rugged construction, and which is relatively inexpensive to manufacture.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawing wherein a preferred embodiment of the present invention is shown, in which:

Fig. 1 is a perspective view of a supporting metal provided with a locking device embodying the teachings of the present invention, shown employed with a telephone directory;

Fig. 2 is an enlarged fragmentary horizontal sectional view taken on the line 2—2 in Fig. 1;

Fig. 3 is an enlarged top plan view of the metal;

Fig. 4 is an enlarged front elevational view of the metal;

Fig. 5 is an enlarged vertical transverse sectional view taken on the line 5—5 in Fig. 4;

Fig. 6 is an enlarged vertical transverse sectional view taken on the line 6—6 in Fig. 4; and

Fig. 7 is an enlarged fragmentary vertical longitudinal sectional view taken on the line 7—7 in Fig. 3.

Referring to the drawing more particularly by reference numerals, 10 indicates generally a supporting metal provided with a locking device 11 made in accordance with the teachings of the present invention, the metal being in supporting engagement with a telephone directory 12.

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The metal 10 includes an elongated U-shaped body member 14 which has a member 16 mounted thereon for retaining the book 12 in position.

The body member 14 comprises a flat elongated portion 18 with semicircular-shaped upturned end portions 20 and 22 normal thereto. The flat portion 18 contains a pair of spaced openings 23 for a purpose described hereinafter. The end portion 20 contains a relatively small circular opening 24, as shown in Fig. 6, and the end portion 22 contains a relatively large circular opening 26 inwardly of the upper edge thereof, as shown in Fig. 5. A vertical slot 28 extends from the opening 26 to the upper edge of the end portion 22 for a purpose described hereinafter.

The member 16 includes a rod-like body portion 30, one end of which extends through the end opening 24 and which contains a ring-like portion 32 for suspending the metal and book by a chain or cord.

The locking device 11 includes a cylindrical locking member 34 (Fig. 7) with a knurled outer surface 35 which is slidably mounted on the other end of the rod-like portion 30. The member 34 contains two connecting cylindrical chambers 36 and 37, the latter being of larger diameter than the former, thus forming a shoulder 38 between them. At one end, the member 34 is formed as a cylindrical protuberance 39 which has a frusto-conical end portion 40, the cylindrical protuberance 39 being slightly smaller than the opening 26 in the end portion 22 of the body member 14.

A washer 41 is slidably mounted on the rod-like portion 30 within the chamber 37 and is prevented from sliding off of the end thereof by an enlarged end portion 42. The outside diameter of the washer 41 is slightly smaller than the inside diameter of the chamber 37.

A coil spring 44 is disposed around the rod-like portion 30 within the chambers 36 and 37, with one end bearing against the washer 41 and the other end against the innermost wall of the chamber 36.

In use, the metal 10 is brought into supporting engagement with the telephone directory 12 by first grasping the flat portion 18 of the body member 14 in one hand and the knurled surface 35 of the locking member 34 with the other hand. The locking member 34 is then pulled outwardly to the position shown in dotted lines in Fig. 7, in which position the shoulder 38 abuts the washer 41 thereby limiting the outward movement of the locking member 34, the end of the frusto-conical portion 40 clears the outer face of the end portion 22, and the spring 44 is compressed against the washer 41. The end of the rod-like portion

30 which contains the locking member 34 is then lifted upwardly through the slot 28 thereby pivoting the retaining member 16 about the end portion 20 so as to provide a U-shaped opening for the insertion of the directory 12.

The telephone directory 12 is then opened in the center and positioned between the member 16 and the body member 14 with the back thereof against the inner face of the elongated portion 18. The member 16 is then swung downwardly into position between the open pages of the directory 12, the locking member 34 pulled outwardly against the action of the spring 44 until the end of the frusto-conical portion 40 clears the outer face of the end portion 20, and the rod-like member 30 inserted through the slot 28 into the opening 26. The locking member 34 is then released, permitting the spring 44 to drive the cylindrical portion 39 into the opening 26, thereby locking the member 16 in position. The frusto-conical portion 40 guides the cylindrical portion 39 into the opening 26.

Normally, the metal 10 is suspended from a chain or cord (not shown) which engages the ring-like portion 32, but, if desirable, it can be fastened to a wall or the like by screws inserted through the openings 23 before the directory 12 is placed in position.

The locking device is simple and rugged in construction, is easily engaged and disengaged, but it is also positive in its action so as to prevent the member 16 from being inadvertently disengaged. Therefore, it is apparent that there has been provided a novel locking device for a book supporting metal which fulfills all of the objects and advantages sought therefor.

It is to be understood that the foregoing description and the accompanying drawing have been given only by way of illustration and example, and that changes and alterations in the present disclosure, which will be readily apparent to one skilled in the art, are contemplated as within the scope of the present invention which is limited only by the claim which follows.

What is claimed is:

A device of the type described, comprising an elongated body member; a rod-like retaining member having one end thereof mounted adjacent one end of said body member so as to be both pivotable and slidable with respect to said body member; said one end having a ring-like portion disposed externally of said body member for suspending said device and a telephone directory, or the like, supported thereby; a locking member slidably mounted adjacent the other end of said retaining member and engageable with the other end of said body member so as to prevent pivotal movement of the retaining member, but not sliding movement thereof, relative to said body member, said locking member containing a pair of connecting cylindrical chambers, the outer chamber being of a larger diameter than the inner one so as to form a shoulder between them; a washer disposed on the retaining member adjacent the other end and within said outer chamber, the washer being larger than the inner chamber so as to abut the shoulder and limit the outward movement of the locking member; and a coiled spring disposed about the retaining member within the chambers and adjacent the washer.

WALTER E. SCHROER.

REFERENCES CITED

The following references are of record in the file of this patent:

FOREIGN PATENTS

Number	Country	Date
195,079	Great Britain	1924