

L. M. MORDEN.
 MULTIPLE BOOK RINGS.
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1,046,836.

Patented Dec. 10, 1912.

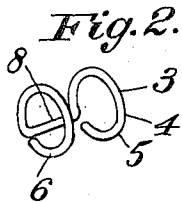
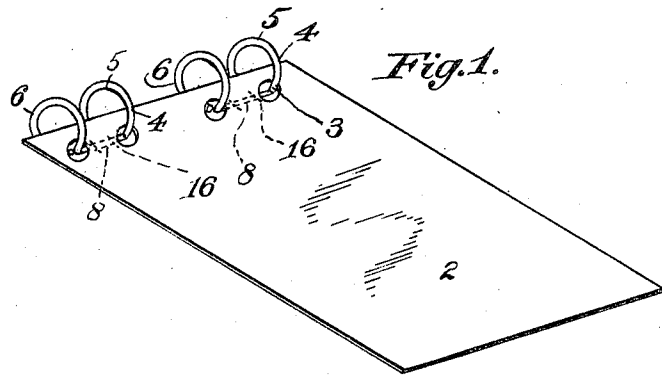


Fig. 3.

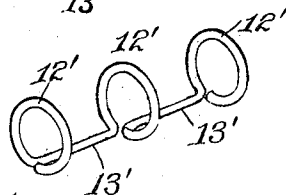
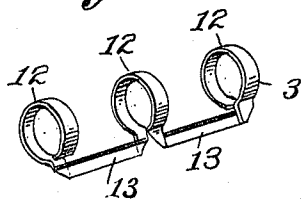


Fig. 4.

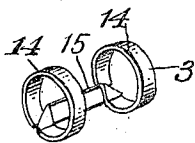


Fig. 5.

Fig. 6.

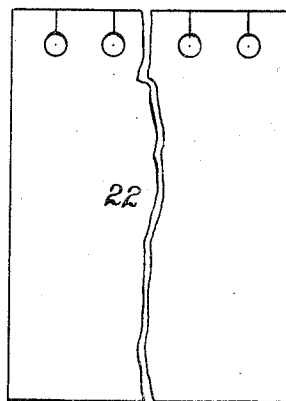
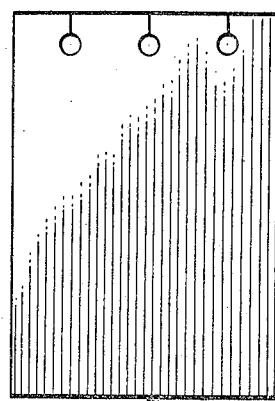


Fig. 7.



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UNITED STATES PATENT OFFICE.

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MULTIPLE BOOK-RINGS.

1,046,836.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LUCENA M. MORDEN, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Multiple Book-Rings, of which the following is a specification.

This invention relates to book rings, the object of the invention being to provide multiple book rings of an integral structure each consisting of a plurality of rings forming a set of rings and means integrally connecting the rings thereby to hold the same upright. By means of this improved construction of rings I am enabled to provide an inexpensive substitute for single openable book rings, which single book rings, however, could not be maintained upright against tipping sidewise unless secured to some support, whereas in the present improvement the rings may be used without any support as the longitudinal members or bars maintain the same upright against tipping sidewise, so that the separation of the leaves from the rings is prevented as well as the distortion and tearing of such leaves, which occurs when single rings are used, unless the same are attached to a back or support or fileboard. I am also enabled to provide a plurality of integrally connected rings constituting a simple and effective means for holding leaves without the necessity of providing mechanism for opening or closing the rings and which may be used for the reception of slotted leaves.

In the drawings accompanying and forming part of this specification, Figure 1 illustrates a perspective view of a supporting sheet or cover carried by two sets of rings; Fig. 2 is a view of one set of rings detached from the sheet; Figs. 3, 4 and 5 illustrate different forms of integral rings which may be used; Fig. 6 is a view of a slotted leaf for use with this improved form of multiple rings when each set comprises a pair of rings, and Fig. 7 is a view of a slotted leaf showing three openings.

Similar characters of reference indicate corresponding parts throughout the figures of the drawings.

In the embodiment shown the supporting sheet 2 has attached thereto two independent sets of multiple book rings 3, each set of which in this form comprises a pair of rings formed of wire, which wire 4 is so bent as

to form end rings 5 and 6 integrally connected by a lengthwise extending member, rod or bar 8, constituting the means by which the rings may be attached to the supporting sheet by some suitable fastening means such as a thread or staple 16 and also the means which holds the rings in upright position. Each of the rings, it will be observed, is of integral formation and practically a complete ring and passes through an opening in the sheet.

In the form shown in Fig. 3 the set of rings comprises three rings 12 made of ribbon stock, each forming substantially a complete ring and integrally connected by a longitudinally extending bar or member 13 by suitably bending the metal upon itself so that the bars will extend transversely to the rings and also edgewise to the ring. That is to say, the bar is located at right angles to the width of the flat stock forming the ring.

In the form shown in Fig. 4 the set of rings likewise comprises three rings 12' made, however, from wire and integrally connected by bars or rods 13'.

In the form shown in Fig. 5 the set comprises a pair of rings 14 formed in a similar manner to that shown in Fig. 3, except that the bar 15 projects upward into the rings instead of outside thereof as in Fig. 3.

In Fig. 6 is shown a leaf 22 having two sets of slots adapted for use with two sets of rings, such as is shown herein.

In Fig. 7 is shown a leaf having a set of three slots adapted for use with that form of the improvement having three rings.

By the present improvement it will be immediately apparent that the sets of multiple book rings may be very inexpensively formed of either round or flat wire, or of any suitable form of stock and that the rings of each set are integrally connected and suitably spaced the desired distance apart by the lengthwise extending members or bars, which also constitute the means for securing the rings to the back or support when such is used. It will also be observed that the sets of rings can be efficiently used independently of any back or support. When a supporting sheet is used the attachment of the rings thereto in the manner shown prevents the rings from rotating and therefore prevents the carrying of the bar to the front where it would interfere with the attachment of the leaves.

While in Fig. 1 the set of multiple book rings is shown attached to a supporting sheet, it is to be understood that this is not at all necessary and in fact these rings are specially designed for use independently of any support or supporting sheet.

Thus it will be observed that by the present improvement not only may the rings be inexpensively formed, but that they may be used in an efficient manner without attachment to any cover, back or support, since the longitudinal members will prevent the tipping thereof sidewise, and thus the leaves or sheets are prevented from slipping out even though such rings are not attached to a support.

As hereinbefore stated, the multiple rings may be used independently of a cover, back or support, but they may be also efficiently used in connection with a cover, back or support, or supporting sheet, and when so used such support or member has openings through which the rings may be passed, while the connecting rods or bars may be secured to such member.

I claim as my invention:

1. Multiple book rings consisting of a plurality of complete rings formed of flat stock and integrally connected by a lengthwise extending member or members extending transversely to the plane of the rings and located edgewise thereto.

2. Multiple book rings consisting of a plurality of complete rings formed of flat stock and integrally connected by a lengthwise extending member or members extending transversely to the plane of the rings and located edgewise thereto at the under side thereof.

3. Multiple book rings consisting of three complete rings integrally connected by lengthwise extending bars bent from the stock of such rings to extend transversely to the plane thereof.

4. Multiple book rings consisting of three complete rings formed of flat stock integrally connected by lengthwise extending

bars located edgewise to the rings and bent from the stock of such rings to extend transversely to the plane thereof, said rings being spaced an equal distance apart.

5. The combination of multiple book rings consisting of three complete rings integrally connected by lengthwise extending bars bent from the stock of such rings to extend transversely to the plane thereof, said rings being spaced an equal distance apart, and a leaf attachable to the rings without opening such rings, said leaf having slotted openings at the margin thereof.

6. Multiple book rings consisting of a plurality of sets of rings, each set comprising a plurality of rings integrally connected by a lengthwise extending bar bent from the stock of such rings to extend transversely to the plane of the rings, and a leaf attachable to the sets of rings without the opening of any of such rings and having a plurality of sets of slotted openings at the margins thereof, the number of slotted openings in each set corresponding with the number of rings of each set.

7. Multiple book rings consisting of a plurality of sets of rings, each set comprising a plurality of rings integrally connected by a lengthwise extending bar bent from the stock of such rings to extend transversely to the plane of the rings, and a leaf attachable to the sets of rings without the opening of any of such rings and having a plurality of sets of slotted openings at the margins thereof, the number of slotted openings in each set corresponding with the number of rings of each set and the sets of slotted openings being spaced apart a greater distance than the distance between the openings of either set.

Signed at Waterbury, Connecticut, this 28th day of July, 1911.

LUCENA M. MORDEN.

Witnesses:

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