

J. S. McCOMB.
 LOOSE LEAF BINDER.
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935,318.

Patented Sept. 28, 1909.

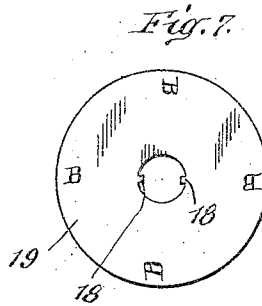
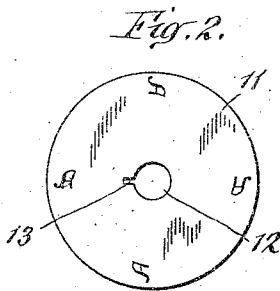
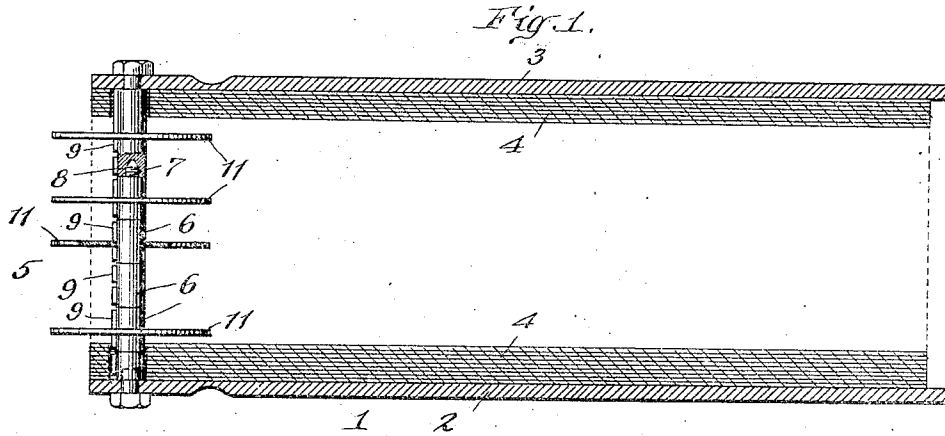


Fig. 5.

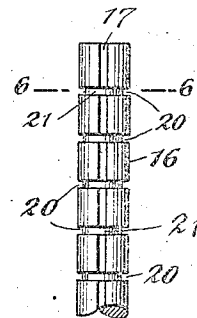


Fig. 4.



Fig. 3.

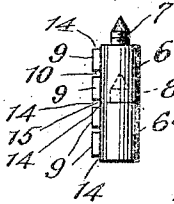


Fig. 6.

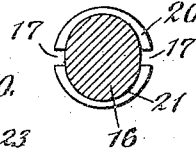


Fig. 10.

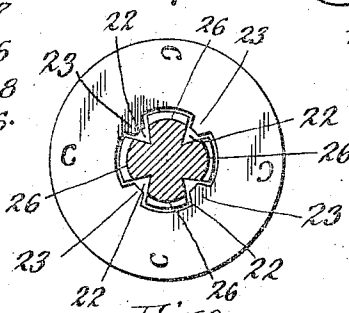


Fig. 9.

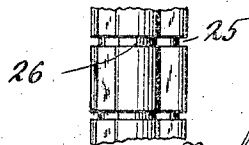
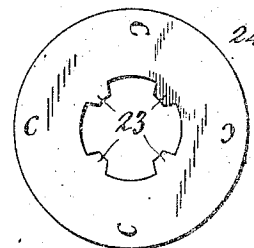


Fig. 8.



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LOOSE-LEAF BINDER.

935,318.

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To all whom it may concern:

Be it known that I, JENNINGS SCOTT McCOMB, a citizen of the United States, and a resident of Dobbs Ferry, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification, taken in connection with the accompanying drawing, which forms a part of the same.

This invention relates to loose leaf binders and more particularly to the binder posts, supports carried on the binder posts and means for readily mounting and dismounting the supports.

In the accompanying drawing showing illustrative embodiments of this invention, and in which the same reference characters refer to similar parts in the several figures, Figure 1 is a longitudinal vertical section through a loose leaf binder equipped with my invention, the posts and supports being shown in side elevation, a portion of one post and a part of one support being broken away to better illustrate the invention. Fig. 2 is a plan view of one of the supports or index disks. Fig. 3 is a side elevation of two sections of the post. Fig. 4 is a plan view of the sections shown in Fig. 5. Fig. 5 is a side elevation of a modified form of post. Fig. 6 is a cross section on line 6, 6 of Fig. 5 on an enlarged scale. Fig. 7 is a plan view of a modified form of support or index disk. Fig. 8 is a plan view of another modified form of support or disk. Fig. 9 is a fragmentary side elevation of a modified form of post. Fig. 10 is a cross section through a post such as that shown in Fig. 9, the index disks being shown in plan.

In the illustrative embodiments of this invention shown in the drawing, 1 is a loose leaf binder having covers 2 and 3 and removable sheets 4. It is usual in such constructions to have a pillar or post 5 which can be extended or shortened to meet the varying requirements of the binder. I have formed my posts 5, it being understood that two or more such posts may be used, of a plurality of detachable sections 6, 6. Each section 6, Figs. 1 and 3, has an external screw threaded portion 7 and an internal screw threaded

portion 8, to permit the different sections 6 to be removably secured to each other. On one, or two or more of the sections 6 I form a fin 9 which preferably has a portion broken away, forming a recess 10 for a purpose hereinafter described, Fig. 3.

To insert or to remove a loose leaf sheet in the loose leaf binders now in use entails a great amount of unnecessary labor in that a great number of the sheets in the binder have to be first removed and then threaded back upon the post 5 to enable the new sheet, for instance, to be locked in its proper position in the binder. I overcome this difficulty and save this unnecessary labor by placing one or more supports 11 upon the posts or pillars 5. These supports may be given any desired shape, but I preferably form them as disks, either out of thin metal or heavy paper, or any other suitable material. By arranging these disks at intervals upon the posts 5 and supporting them in spaced relation to each other, it will be clear that any leaves or papers appearing, for example, above one of the disks 11, will be supported by that disk, permitting the post 5 to be disconnected, by unscrewing one of the sections 6, for instance, the section which may be directly beneath the section upon which one of the supports 11 may be mounted. This will permit the cover 3, a part of the post 5 and all the leaves of the binder above the particular support 11 to be removed bodily at one operation, to permit the insertion or withdrawal of one or more leaves at the desired place in the binder.

To enable the user to readily determine approximately the place where it is desired to disconnect the post 5 I preferably form index numerals or characters upon the supports 11 shown, for instance, as A A, B B and C C, in Figs. 2, 7 and 10 respectively. These characters may correspond with similar characters on the usual front index of the binder (not shown) and in that way become a rear index. Any desired number of these supports or index disks 11 may be used, one for each letter of the front index or for any desired number of such letters; as shown in Fig. 1 I have for purposes of illustration shown four such supports 11, though it is to

be understood, of course that this number may be increased or decreased without limiting the scope of my invention. These disks 11 may be mounted in various ways upon the sections 6, 6 of the posts 5. In Figs. 1, 2 and 3 I have shown the disk 11 provided with a concentric aperture 12, having a radiating slot 13 to receive the fins 9 of the different sections 6, 6. The locking means are so arranged upon the different sections 6, 6 that when they are firmly secured together all the fins 9 will register with each other, permitting a disk 11 to be slipped over the end of the post 5 and moved down on the different sections 6, 6 until the required location is reached opposite a recess 10. The disk 11 may be then given a partial rotation to secure it between the different sections of one of the fins 9 on one section 6, which will hold it from further longitudinal movement on the post 5 in an obvious manner. I may also form notches 14, 14 at each end of fin 9 on one of the sections 6 so that when two sections are brought together a recess 15 is formed between the fins 9 on the two sections. This permits a wider range of adjustment of the disks 11, it being understood, of course, that the disks 11 may be mounted in the grooves 15. In this form of my invention the disks 11 can rotate upon the different sections, but they will always serve as supports for the leaves in the manner above described and by arranging a plurality of designated numerals or letters upon their surface as shown in Figs. 2, 7 and 10, some one of these letters will always be visible from the rear, enabling the user to tell at a glance where to disconnect the pillar or post without the aid of the front index. In this form of my invention also the disks act as keys to aid in unscrewing the different sections 6. If two substantially adjacent disks 11 are manipulated until their slots 13 register with the fin 9 of the section 6 upon which each is mounted, and the disks are given a slight downward or upward movement so that the respective fins are brought within the slots 13, it is quite clear that by holding one of the disks 11 and rotating the other the different sections 6, 6 will be unscrewed.

In addition to preventing a longitudinal movement of the disks upon the posts, I may also prevent their relative rotation after they have once been properly located on the post. In Figs. 5, 6 and 7 the posts 16 are formed with a plurality of grooves 17 to fit teeth 18, 18 on a support 19, Fig. 7. These disks 19 can be readily slipped down on the posts 16 as long as the teeth 18, 18 register with the grooves 17, 17. When, however, they register with the transverse grooves 20, the teeth 18, 18 are caused to move out of the longitudinal grooves 17, 17 and into the grooves 20. Unlike the construction, however, in Figs. 1, 2 and 3, the bearing surface

21, forming the bottom surface of the groove 20, is eccentric as shown on an enlarged scale in Fig. 6. This eccentric may be given any desired contour, but I preferably form it so that the teeth 18, 18 will be locked upon the eccentric by approximately a quarter turn of the disk 19, preventing further relative rotation of the disk on the post 16.

I may vary the contour of my post, forming the cross section of it, for instance, in the form of a Maltese cross, and provide suitable means for locking the supporting disk in any desired position, both from further longitudinal movement on the pillar or post and from further relative rotation.

In Figs. 8, 9 and 10 I have shown the post formed with a plurality of notches 22, four such notches being shown for instance in Fig. 10 for the reception of lugs 23, 23 upon the supporting disk 24. This disk 24 can be slipped up and down the pillar or support until the lugs 23, 23 register with one of the transverse grooves 25 when it may be given a partial revolution. To bind the disk to the post and to prevent further rotation of the disk upon it, I preferably form wedge or cam surfaces 26 upon the post, the lugs 23 being forced up these surfaces 26 and securely locked to them in an obvious manner to prevent further rotation of the parts.

Having thus described this invention in connection with the several illustrative embodiments thereof to the details of which I do not desire to be limited, what is claimed as new and what it is desired to secure by Letters Patent is set forth in the appended claims.

1. In a loose leaf binder, an extensible post or pillar, one or more supports mounted on a single pillar or post, and means carried partly by sections of the posts and partly by the support to hold the support at any required point on the pillar or post.

2. In a loose leaf binder, an extensible post formed of a plurality of sections, one or more supports adapted to cooperate with a single pillar or post, and means carried by the support and by the pillar preventing longitudinal movement of the support on the pillar, after the support has been properly positioned.

3. In a loose leaf binder, a plurality of detachable sections forming an extensible post, interrupted fins upon the post, and one or more supports provided with a center aperture and a radial groove.

4. A section for an extensible post for loose leaf binders, comprising a member having means to cooperate with other similar members to form an extensible post, and a fin carried by said section.

5. A section for an extensible post for loose leaf binders, comprising a substantially cylindrical body, a reduced external screw threaded portion at one end and an internal

screw threaded portion at the other end and an interrupted fin carried by the section.

6. In a loose leaf binder, an extensible post or pillar formed of different units and provided with interlocking surfaces, one or more supports mounted on a single pillar, and means carried partly by the different units

of the pillar and partly by the support or supports to permit the units being operated to connect and disconnect them.

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