O. E. JONES.

LOOSE LEAF BINDER.

APPLICATION FILED DEC. 29, 1920.

1,399,016. **Patented Dec. 6, 1921.**

Fig. 1.

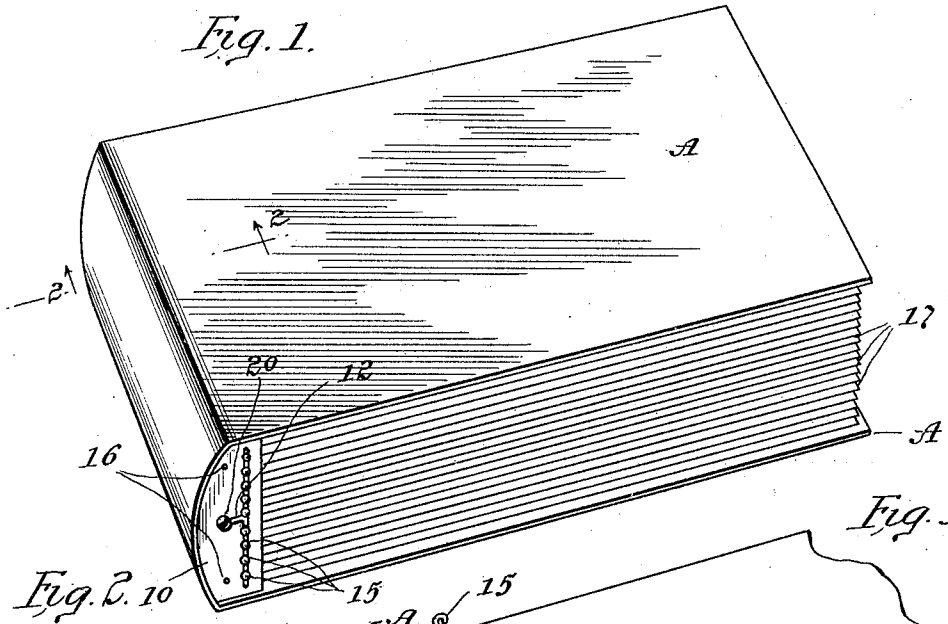


Fig. 2.

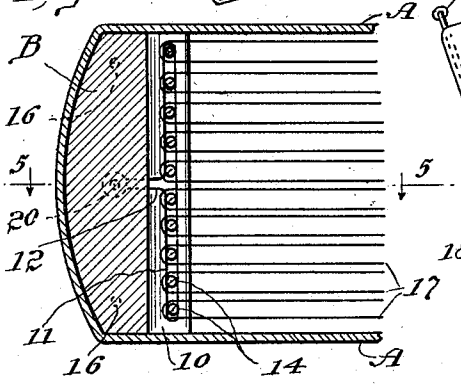


Fig. 3.

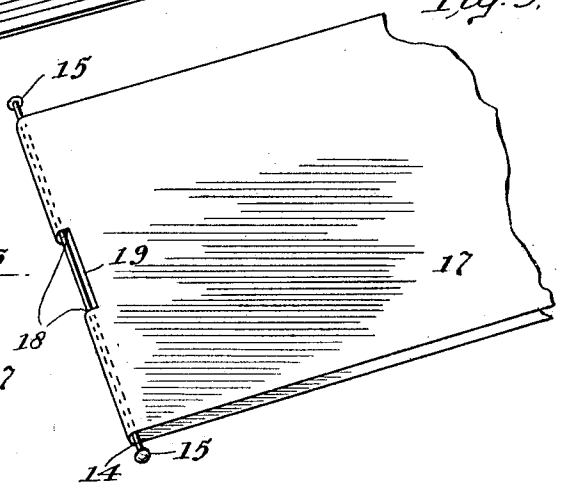


Fig. 4.

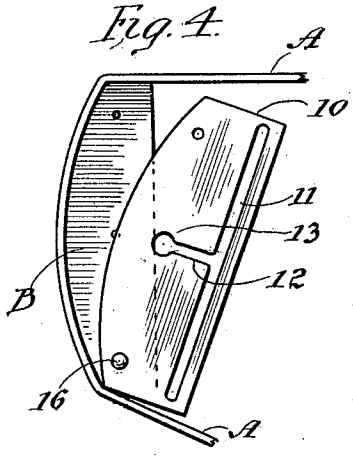
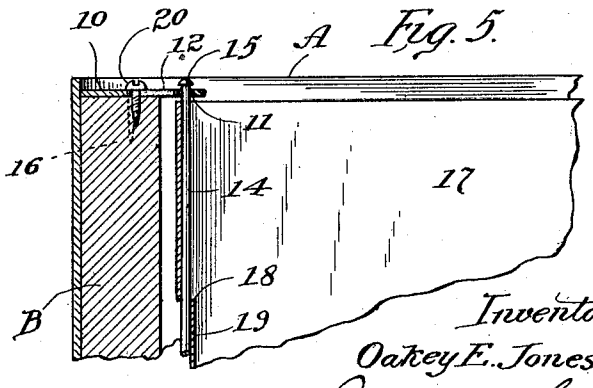


Fig. 5.



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UNITED STATES PATENT OFFICE.

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LOOSE-LEAF BINDER.

1,399,016. Specification of Letters Patent. Patented Dec. 6, 1921.

Application filed December 29, 1920. Serial No. 433,842.

To all whom it may concern:

Be it known that I, OAKEY E. JONES, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Loose-Leaf Binders, of which the following is a specification.

My invention relates to binders for loose leaves, and has for its object the provision of a structure wherein individual leaves may be readily removed from the binder and new leaves inserted without the necessity of taking out any of the remaining leaves. Another object is the provision of means for locking the device for holding the leaves in a manner so that the binder or book, when opened, will permit the leaves to lie flat. A still further object is the provision of a loose leaf binder wherein the structure may be quickly manipulated for inserting or removing the leaves. Other objects as may be obvious to others skilled in the art consist in providing a loose leaf binder that is compact in construction effective in performing the functions for which it has been designed, durable in construction and easy to operate. I prefer to accomplish the divers objects of my invention in substantially the manner hereinafter set forth, reference being had to the accompanying drawings that form a part of this specification, in which—

Figure 1 is a perspective view of my improved loose leaf binder, the leaves and covers being closed.

Fig. 2 is a sectional view on line 2—2, Fig. 1, slightly enlarged, and showing only the back or binding portion of the structure.

Fig. 3 is a perspective view of the leaf attaching element in conjunction with a folded leaf, and detached from the structure.

Fig. 4 is a view similar to Fig. 2 having several elements of the structure removed for the purpose of clearness.

Fig. 5 is a fragmental longitudinal section taken on line 5—5, Fig. 2.

In the drawings, similar reference characters designate the same parts throughout the divers views, and by reference to Fig. 1, it will be seen my improved binder structure preferably consists of front and rear covers A, A, that extend around a portion of the block B and form therewith the back of the book; said covers being secured to the block in any suitable manner. Block B is preferably an elongated piece of wood of approximately the height of the binder or book having its inner surface plane and its outer surface to which the covers are attached convexed or segmental, as seen in Figs. 2 and 4 of the drawings. Top and bottom plates 10, corresponding in contour with the cross-sectional shape of the block, are mounted upon opposite ends thereof, and, as seen in Figs. 2, 4 and 5, these end plates are wide enough to extend beyond the inner edge of the block a suitable distance so as to project into the space between the respective covers A. These plates 10 are provided adjacent their longitudinal edges with elongated narrow slots 11 that extend from adjacent their opposite end edges, substantially parallel with the inner plane edge of block B, and as will hereinafter be pointed out, these slots 11 provide guide-ways for the leaf mounting element. Intermediate their ends, these slots are each provided with a lateral channel 12 extending toward block B that terminates in an enlarged substantially circular opening 13, thereby providing a key-slot offset for slot 11. I prefer to locate these key-slots approximately midway the lengths of slots 11, as seen in Fig. 4 of the drawings, although they may be positioned at other points along the length of said slots 11.

A plurality of rods 14 of a length sufficient to extend through the slots in plate 10 are employed to retain the leaves, and these rods are provided with enlarged ends in the form of rounded heads 15 which are of a slightly greater diameter than the width of the slots 11, but which are smaller than the diameter of the enlarged opening 13 of the key-slot. This construction permits heads 15 to be inserted in opening 13 and the shanks of the rods moved through the offset slot 12 into the elongated slot 11. The plates 10 are secured to the block B by tacks 16 one of which is removed in order to swing the plate upon the other tack (Fig. 4) to expose or uncover the key-slot. After all the rods have been positioned in the slots and the plate moved to normal position and secured, a screw 20 is inserted through opening 13 into the block, it being understood the head of element 20 is greater in diameter than opening 13, thus preventing accidental dislodgment of the rods.

The leaves I employ in connection with the mounting rods may be of any desired type and are doubled or folded, as shown in

the drawings, a perspective of which is illustrated in Fig. 3. As observed in Fig. 3, wherein I have shown the flat leaf type for convenience, the leaf 17 is folded intermediate its length to provide double or twin leaves, the folder portion being extended around the respective rods 14 for retaining them in the binder.

I have also provided means to securely retain the leaves upon the rods and prevent them from slipping inwardly or backward toward block B when mounted in the binder. This consists in forming transverse narrow slots 18 in the folded edge of a pair of leaves and then bending the part between slots 18 inwardly, as at 19, opposite to the direction of the fold between the leaves. As seen in Figs. 3 and 5, the rod is laced, as it were, inwardly and outwardly through slots 18 so that the outwardly folded portion is upon one segment and the inwardly extended portion 19 is upon the opposite segment thereof, the part 19 acting as a stop to prevent the leaves moving inwardly away from their respective rods.

From the foregoing, it will be obvious that I have provided a binder structure for loose leaves that is simple in construction, easy to operate, comparatively inexpensive to manufacture and dependable in its operation, and I desire it understood that obvious modifications or changes in the structure herein described may be made without departing from my invention as such changes are contemplated as coming within the scope of the appended claims.

What I claim is:

1. A loose leaf binder comprising covers and a back to which the same are secured, plates mounted upon opposite ends of said back, each having an elongated slot therein and a key slot offset therefrom, rods extending between said plates and through said elongated slots and having heads adapted to be inserted through said key slot and retained in said elongated slots, means for closing said key slot, and leaves mounted upon said rods.

2. Means for mounting loose-leaves in a binder comprising a back, a plate at one end of said back having an elongated slot provided with a lateral extension, a plurality of rods disposed in said elongated slot having portions insertible through said lateral extension, an element for closing said lateral extension, and means for retaining the opposite ends of said rods.

3. Means for mounting loose-leaves in a binder comprising a back, a plate at one end of said back having an elongated slot and a key-slot opening therein, a plurality of rods disposed in said elongated slot having heads insertible through said key-slot, an element closing said key-slot, and means for retaining the opposite ends of said rods.

4. Means for mounting loose-leaves in a binder comprising a back, an element at one end of the binder back that is provided with an elongated slot having an offset portion, a plurality of leaf engaging members corresponding ends whereof are disposed in said slot that are insertible and removable only through said offset portion, means for closing the offset portion, and means for retaining the opposite ends of said members.

5. Means for mounting loose-leaves in a binder comprising a back, an element at each end of the binder back that is provided with an elongated slot each having an offset portion, a plurality of leaf engaging members opposite ends whereof are disposed in opposite elongated slots and are insertible and removable only through said offset portions, and means for closing each of said offset portions.

6. Means for mounting loose leaves in a binder comprising a back, a plurality of rods having heads upon their ends, an overhanging plate secured to each end of the binder back, each of said plates provided with connected slots disposed at an angle to each other in the overhanging portion, one of said slots arranged to receive the heads of said rods during their insertion and removal and the other of said slots adapted to position said rods with respect to the back of the binder, and elements for closing the slots through which the heads of said rods are passed.

Signed at Los Angeles, county of Los Angeles and State of California, this 11th day of December, 1920.

OAKEY E. JONES.

Witnesses:
A. T. COPLEY,
GLENN M. PETERSON.