J. O. McLAUGHLIN.

LOOSE LEAF BINDER.

APPLICATION FILED OCT. 3, 1916.

Patented Oct. 16, 1917.

1,243,319.

Fig. 1.

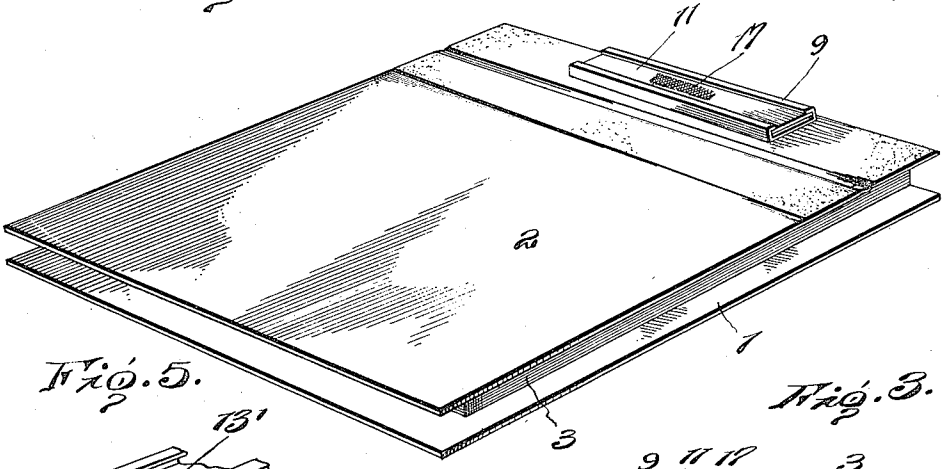


Fig. 5.

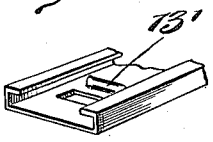


Fig. 3.

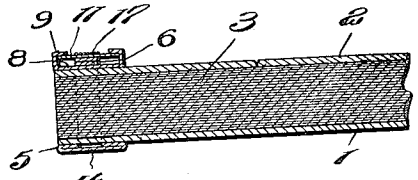
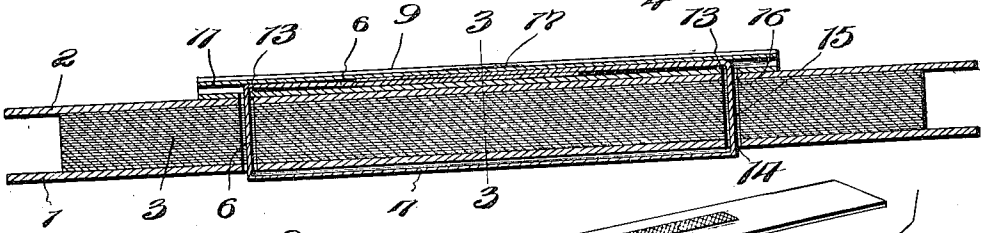
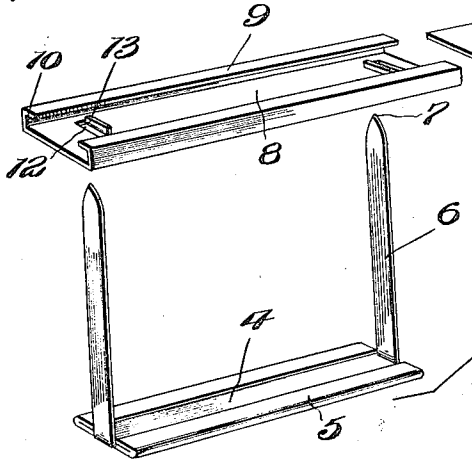


Fig. 2.





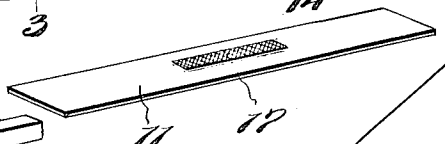


Fig. 4.

Inventor

J. O. McLaughlin.

By H. A. Tracy Attorney

UNITED STATES PATENT OFFICE.

JOHN O. McLAUGHLIN, OF CADIZ, OHIO.

LOOSE-LEAF BINDER.

1,243,319. Specification of Letters Patent. Patented Oct. 16, 1917.

Application filed October 3, 1916. Serial No. 123,528.

To all whom it may concern:

Be it known that I, JOHN O. McLAUGHLIN, a citizen of the United States, residing at Cadiz, in the county of Harrison and State of Ohio, have invented certain new and useful Improvements in Loose-Leaf Binders, of which the following is a specification.

This invention relates to loose leaf binders and while the device embodying the invention is designed primarily for use in binding manuscript the principles of the invention may be embodied in a binder for account sheets and in fact sheets of any character whatsoever.

It is one aim of the invention to provide a device of this class which may be employed for binding but a few sheets or a large number of sheets and which will yet be so constructed that whether only a few or a large number of sheets are held by the device, there will be no projecting parts liable to cause annoyance or render the use of the binder inconvenient.

Another aim of the invention is to provide a device of the class mentioned so constructed that the same will be compact and may be employed either with or without a back or cover for the leaves to be bound.

In the accompanying drawings:

Figure 1 is a perspective view of the device embodying the present invention;

Fig. 2 is a vertical longitudinal sectional view through the device;

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2;

Fig. 4 is a perspective view of the parts comprising the device in position about to be assembled;

Fig. 5 is a perspective view illustrating a slight modification of the invention.

As before stated, the binder embodying the present invention may be employed with or without backs or covers for the leaves to be held, but in the drawings the device is illustrated as employed in connection with a back 1 and a cover or front 2 for the leaves, which latter are indicated by the numeral 3. The device includes a member having a number of tongues or prongs which are to be inserted through the leaves to be bound and a locking and housing member for the free or idle ends of the said tongues. The first mentioned member comprises a plate 4 which has its longitudinal edges overturned upon its face, as indicated by the numeral 5, for the purpose of increasing the strength of said plate, or, if desired, it may be strengthened by crimping it longitudinally, and this plate is provided at each end with an integral tongue 6 preferably pointed at its free end, as indicated by the numeral 7, so that it may be more readily inserted through the leaves to be bound and held. It will be understood by reference to the drawings that this member of the device is formed from sheet metal and that the tongues 6 are flexible, and after insertion through the back 1, the leaves 3, and the front 2, the projecting portions of the tongues may be bent down toward each other, thereby firmly binding the said back, leaves and front together.

The second mentioned member of the device comprises a plate which is indicated by the numeral 8 and which has its longitudinal edges provided with overhanging flanges 9 which project toward each other and are located in parallelism and the flanges provide grooves 10 which are designed to receive the longitudinal edges of a cap plate indicated by the numeral 11, said plate 11 being slidably removably assembled with the plate 8. To receive the tongues 6 the plate 8 is provided adjacent each end with a slot 12 and in forming these slots the middle of the plate at the adjacent edges of the two slots is struck up to provide a short lug 13.

By referring now to Fig. 2 of the drawings it will be observed that the back 1 is provided with openings 14 to receive the tongues 6, and the leaves 3 before being assembled and bound have openings 15 punched therein, which openings register throughout the stack of leaves, and the openings 14 and 15 are so spaced that the tongues 6 when in position perpendicular to the plate 4 may be inserted through the said openings and further openings 16 formed in the cover 2 of the device. After the tongues 6 have been inserted through the openings 14, 15 and 16 and through the openings 12 in the plate 8, their projecting free ends are bent down toward each other and ordinarily in overlapped position, as shown in Fig. 2 of the drawings, although if a large number of leaves are to be bound, the projecting or free ends of the tongues will be so short that they will not meet and overlap. In any event, after the tongues have been bent down the cap plate 11 is slidably fitted to the plate 8 in position covering said downbent ends of the tongues, as shown in Figs.

2 and 3 of the drawings. In order that the cap plate may be readily fitted to the plate 8 and readily removed therefrom a portion of the upper surface is preferably corrugated or otherwise roughened, as indicated by the numeral 17, or, if desired, the plate may be provided with a finger piece of any suitable type.

The lugs 13 are of a height substantially equal to the thickness of the tongues 6 and consequently when in the manufacture of the device the parts are so proportioned that the plate 11 may be slidably fitted beneath the flanges 9 and cover the tongues in overlapped position, the said plate will not have a loose fit with the plate 8 in the event that the projecting ends of the tongues do not overlap, inasmuch as the combined thickness of the tongues is equal to the thickness of a single tongue and the height of one of the lugs 13. Or, if desired, this same result may be obtained by denting the plate 8 upward near the inner longitudinal edge of each slot, as shown in Fig. 5 and indicated at 13′.

It will be understood that when the tongues are bent down and the cap plate 11 is slidably fitted in the plate the turned down ends of the tongues will be concealed and protected and will be prevented from being accidentally sprung up so as to release the sheets to be bound.

Having thus described the invention, what is claimed as new is:

1. In a device of the class described, a member having spaced flexible tongues designed for insertion through leaves to be bound, a member having spaced guide flanges and having openings for the passage of the tongues, the tongues being designed to be bent down upon the last mentioned member between the said flanges and the said member being provided with upstanding lugs at the adjacent sides of the openings therein and over which lugs the said tongues are to be bent, and a cap plate removably slidably fitted beneath the flanges in position to cover the down bent portions of the tongues.

2. In a device of the class described, a member having spaced flexible tongues designed for insertion through leaves to be bound, a member having openings for the passage of the tongues and upon which latter member the tongues are to be bent down, the said member inwardly of each opening having a portion raised above its upper surface and over which portion the respective tongue is to extend, and a cap member adapted to be removably assembled with the last-mentioned member in position to cover the down-bent portions of the tongues.

In testimony whereof I affix my signature.

JOHN O. McLAUGHLIN. [L. S.]