June 26, 1928. 1,675,301

J. C. DAWSON

LOOSE LEAF BINDER

Filed Feb. 17, 1926

Fig. 1.

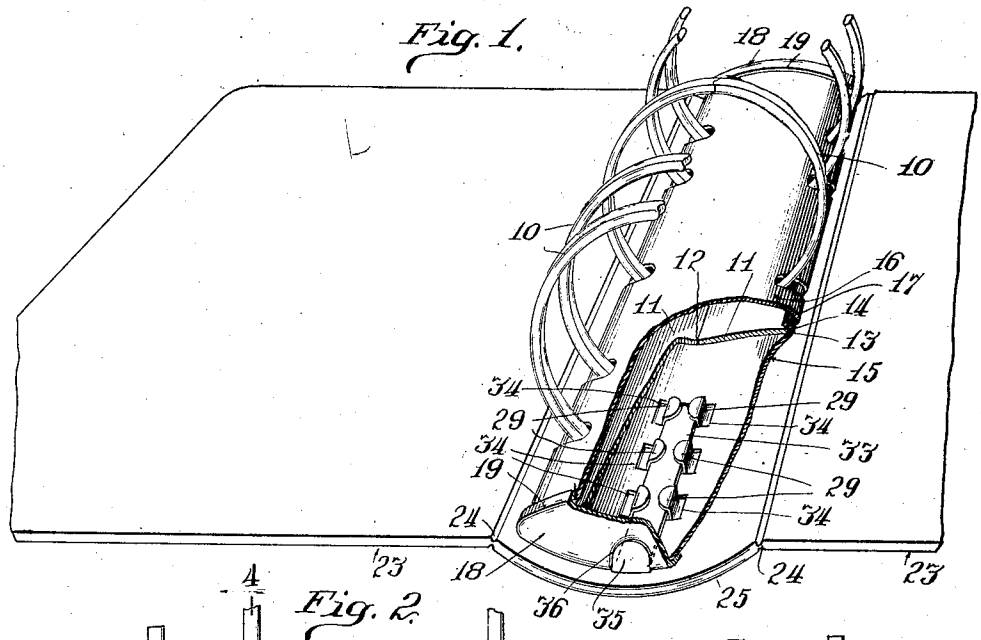


Fig. 2.

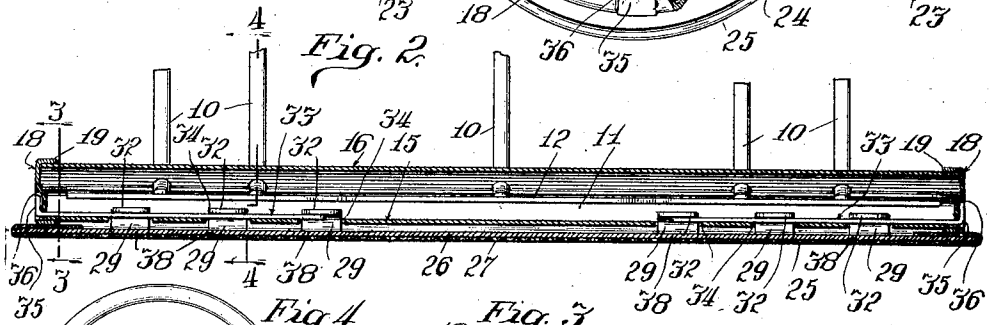


Fig. 4.

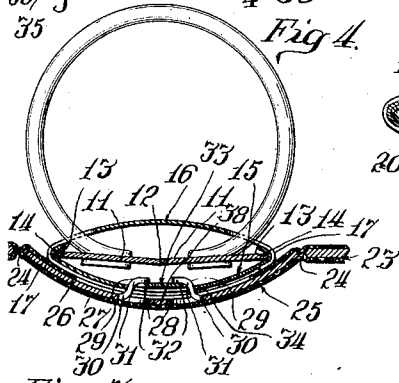


Fig. 3.

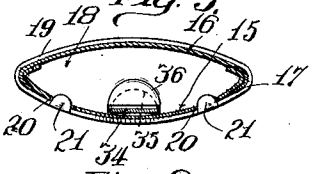


Fig. 6.

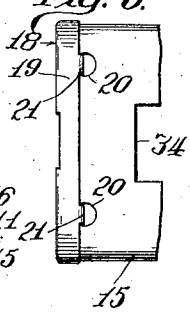


Fig. 5.

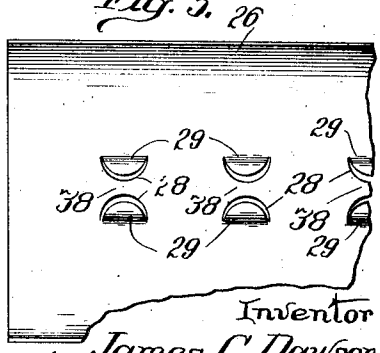
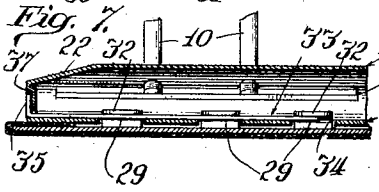


Fig. 7.



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UNITED STATES PATENT OFFICE.

JAMES C. DAWSON, OF WEBSTER GROVES, MISSOURI, ASSIGNOR TO ELMA N. DAWSON, OF WEBSTER GROVES, MISSOURI.

LOOSE-LEAF BINDER.

Application filed February 17, 1926. Serial No. 88,804.

This invention relates to loose leaf books and has for its principal object to improve the means for securing the binder mechanism to the book back.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of the open book, parts being broken away to show the fastening means;

Fig. 2 is a longitudinal section through the middle of the binder mechanism;

Figs. 3 and 4 are sectional views taken on the lines 3—3 and 4—4 of Fig. 2, respectively;

Fig. 5 is a plan view of a fragment of a plate forming a portion of the book back;

Fig. 6 is an inverted plan view of a fragment of one end of the binder mechanism;

Fig. 7 is a sectional view corresponding to one end of Fig. 2 showing an alternative construction in the cover plate and cap.

The binder mechanism includes sets of mating prongs 10 carried by toggle plates 11 articulated at their adjacent edges 12 and pivotally mounted at their remote edges 13 in the short bent flanges 14 of a concave resilient base plate 15. This plate pressing inwardly on the edges 13 of the toggle plates tends to hold the prongs 10 in either open or closed position.

A resilient cover plate 16 has marginal flanges 17 which grip the flanges 14 and hold the cover plate onto the base plate.

The ends of the casing formed by the base and cover plate are closed by caps 18 which take their general form from the form of those plates and have a marginal flange 19 telescoping over those plates as best illustrated in Fig. 2. The base plate is perforated at 20 (Fig. 6) to receive bendable ears 21 on the flanges 19 of the caps which pass through the perforations and are bent down against the inside of the base plate.

Instead of making the caps of separate pieces the ends 22 (Fig. 7) of the cover plate 16 may be formed down, as indicated in Fig. 7, to close the ends of the casing.

The book back is composed of sides 23 connected by flexible joints 24 with an intermediate portion 25 consisting of a plate 26 (Fig. 4) and a covering 27 of fabric, or the like, as commonly used for book backs. The plate 26 is cut along the curved lines 28 (Fig. 5) and the metal thus freed is bent upwardly in the general form of reversely curved fingers 29 bent short at 30 and 31 to give them rigidity. Beyond the curves 31, the fingers have opposed end portions 32 relatively close together for cooperation with the sides of keys 33 lying on top of the base plate 15, which is perforated at 34 to receive the ears.

The keys 33 have upturned ends 35 by which they may be readily inserted and withdrawn, and the caps 18 and 22 are provided with depressions 36 and 37 to receive the ends 35.

The fingers 29 have sufficient strength and rigidity to cooperate with the keys in holding the back firmly to the binder, at the same time they will yield to permit the key to be inserted even when an accumulation of tolerances renders the key space small.

The ears may be formed without danger of fracturing the metal by over-stretching and the metal at 38 (Fig. 5) left between the cuts 28 bridges the space between the fingers and supports the covering 27 against bagging inwardly and becoming worn on the corners thus formed.

I claim as my invention:

1. In a loose leaf book, the combination of a back including a plate, separate fingers struck up from the plate with their free ends opposed and relatively close together, a binder mechanism including a base plate having an opening receiving the fingers and a key cooperating with the fingers and the base plate to secure the binder mechanism to the book back.

2. In a loose leaf book, the combination of a back including a plate, separate fingers struck up from the plate with their free ends opposed and relatively close together, a flexible covering for the plate, a bridge between the fingers supporting the covering, a binder mechanism including a base plate having an opening receiving the fingers and a key cooperating with the fingers and the base plate to secure the binder mechanism to the book back.

3. In a loose leaf book, the combination of a book back including a plate having a pair of openings, opposed fingers rising from the corresponding edges of the openings, a binder mechanism including a base plate having an opening receiving the op-

posed fingers and a key cooperating with the fingers to secure the binder mechanism to the book back.

4. In a loose leaf book, the combination of a back including a plate, separate fingers struck from the plate and extending in opposite directions with their free ends relatively close to the same plane extending lengthwise and normal to the plate, a binder mechanism including a base plate perforated to receive the fingers, and a key cooperating with the fingers and the base plate to secure the binder mechanism to the book back.

In testimony whereof I affix my signature.

JAMES C. DAWSON.