

F. W. GOSTICK.
 LOOSE LEAF BOOK.
 APPLICATION FILED AUG. 6, 1910.

1,048,956.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

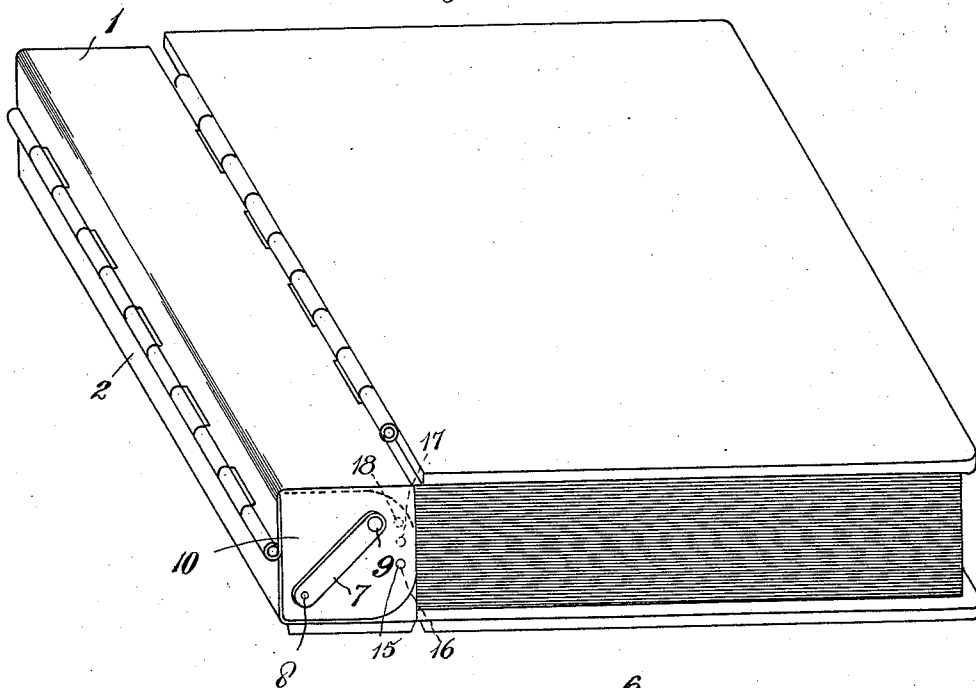


Fig. 2.

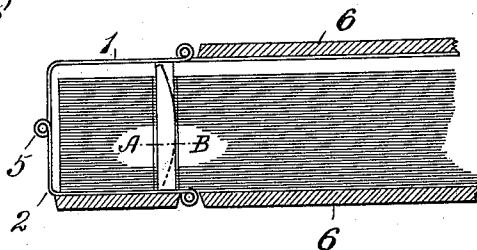


Fig. 3.

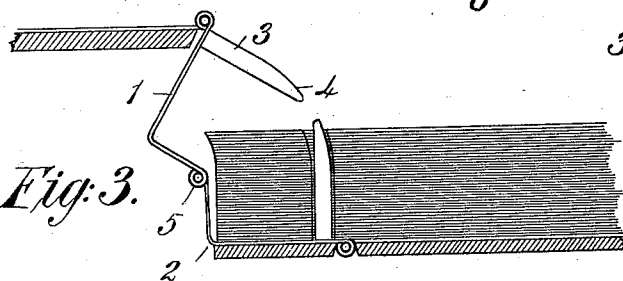


Fig. 4.

Witnesses
Am. Lych.
H. C. Darby.

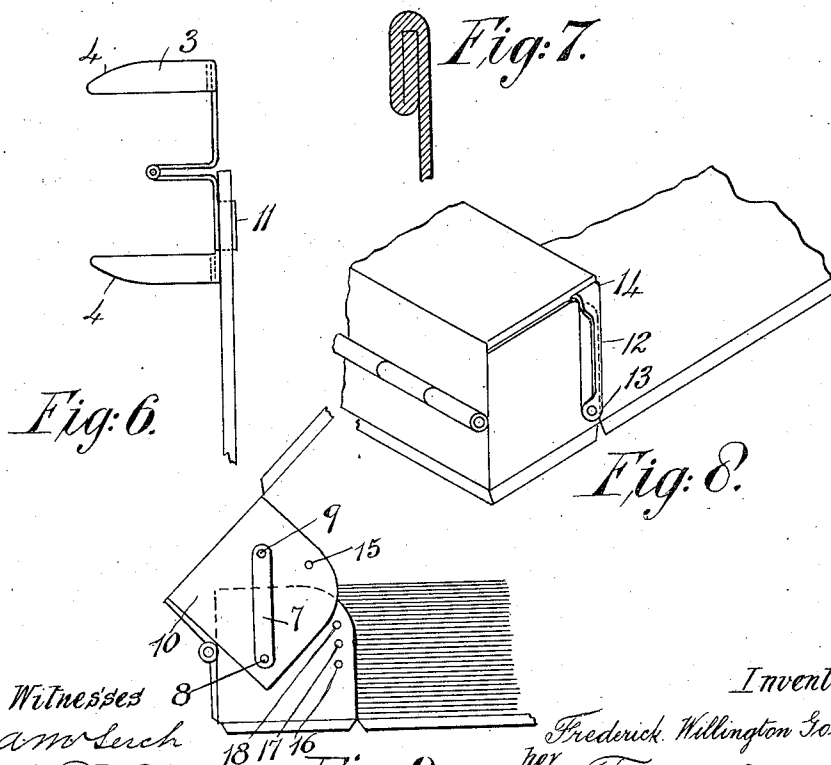
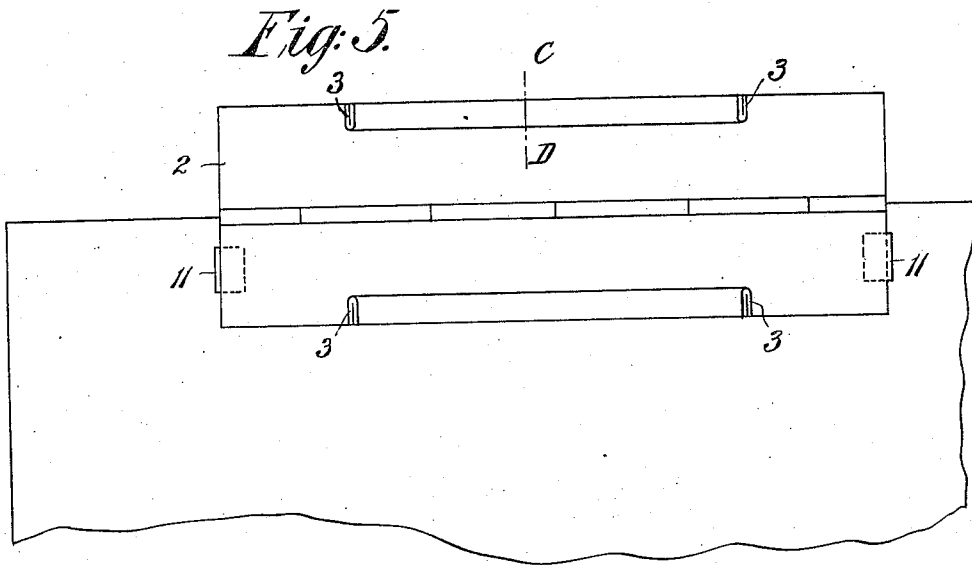
Inventor
Frederick Willington Gostick.
per. Frank S. Anderson.
Morney.

F. W. GOSTICK.
LOOSE LEAF BOOK.
APPLICATION FILED AUG. 6, 1910.

1,048,956.

Patented Dec. 31, 1912.

2 SHEETS-SHEET 2.



Witnesses
a notary
H. C. Parkley.

Inventor
Frederick Willington Gostick.
per. Frank A. Ahlman.
Attorney.

UNITED STATES PATENT OFFICE.

FREDERICK WILLINGTON GOSTICK, OF ECKINGTON, NEAR SHEFFIELD, ENGLAND.

LOOSE-LEAF BOOK.

1,048,956.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed August 6, 1910. Serial No. 575,988.

To all whom it may concern:

Be it known that I, FREDERICK WILLINGTON GOSTICK, a subject of the King of Great Britain, residing at The Manse, Southgate, Eckington, near Sheffield, in the county of York, England, have invented new and useful Improvements in Loose-Leaf Books, of which the following is a specification.

10 This invention relates to devices for securing the leaves of loose leaf books, and is applicable to ledgers and account books, to note books and pocket books, and to letter files and binders.

15 According to the invention the back of the book is formed in the known manner of two L-shaped strips of metal. To these L-shaped strips there is attached on what may be called the parallel faces—*i. e.* those which do not abut at the middle of the back—a number of prongs of metal projecting at right angles to the metal faces to which they are secured. The prongs themselves are not curved at all but lie with their planes at right angles to the hinge line of the book. At their inner ends the outer edges are shaped to a curve meeting the inner edges so as to form a point.

25 Constructions according to the invention are illustrated in the accompanying drawings in which—

30 Figure 1 is a perspective view of a loose leaf book in which the invention is embodied; Figs. 2 and 3 are partial cross sections thereof; Fig. 4 is a detail, being a cross section of the prongs on the line A—B of Fig. 2. Fig. 5 is a view from inside of a different construction; Fig. 6 is a cross section thereof, and Fig. 7 an enlarged cross section of a detail on the line C—D of Fig. 5. Fig. 8 illustrates a method of locking a loose leaf book of this type, and Fig. 9 is an end view of Fig. 1 showing the means for locking the end plates in a plurality of relative positions.

45 As may be seen from Figs. 1 to 3, the mechanism by which the sheets are held consists of two L-shaped metal strips 1 and 2, to each of which is secured a number of prongs 3. These prongs, as may be clearly seen from Figs. 2 and 3, have their outer edges shaped to a curve meeting the inner edges. This curve is approximately that of a circular arc struck from the hinge line 5 upon which the two L-shaped strips 1, 2 are united. Generally the book will be provided with stiff covers 6 hinged to the L-

shaped parts 1, 2, either by metal or by cloth or like hinges. The prongs 3 are preferably arranged in adjacent pairs. They 60 may be of flat metal strip, but where greater strength is required they may be semi-circular or semi-elliptical in section, the flat sides being contiguous as may be seen from Fig. 4.

65 In order that the leaf holding device may be locked while the covers 6 are opened to use the book in the ordinary way, a locking arm 7 is provided pivoted at 8 and carrying at 9 a pin adapted to spring into holes in the bent over ends 10 of the metal strips, these holes coinciding when the L-shaped pieces are in their closed position. If desired a number of holes may be provided as illustrated in Figs. 1 and 9 so that the L-shaped pieces may be locked in different 75 relative positions, the pin carried by the arm 7 at 9 can spring into the single hole 15 in the outer end plate and into anyone of the holes 16, 17 or 18 in the inner end plate. 80

85 As may be seen from Fig. 3 when the back is being closed the outer edge 4 of the descending prong 3 follows the path marked out by the outer edge of the prong upon the other part 2. The inner edge must also follow a circular path and thus the sheets become set back a little as shown. This happens when the book is opened so that closing takes places without any damage to the leaves whatever. 90

95 An alternative form of construction is illustrated in Figs. 5, 6 and 7. In this case the L-shaped strips 1 and 2 are not pivoted to the cover of the book but are rigidly fixed thereto by lugs 11 formed integral with the strips and passing entirely through the cover and bent over at its back. The prongs 3 are formed from the strips in the following manner: The edges of the strip are bent over double along their whole length so that 100 their cross section appears as is shown in Fig. 7. Then slits are made from the end of the strips to the points 3, 3, (Fig. 5) and the portion of metal between the ends and these points 3, 3, are turned up at right angles to the strip so that the prongs 3, 3, are formed standing at right angles to the strip, and between the strips are left the folded portions of metal sheet. 105

110 Fig. 8 shows an alternative form of locking device. This consists of a preferably folded strip of metal 12 hinged at 13 to the bent over end of one of the L-shaped strips and folded over at its top at 14. The

bent over end of the other L-shaped strip is slotted so that the part 14 can pass into the slot, the fold of the strip 12 passing over the front edge of the two bent over ends. If desired for more expensive books such locking devices may be finally secured by means of a lock with a key. As an alternative, prongs may be formed by the bent up ends of a separate strip of suitable stiff metal soldered, brazed or otherwise secured to the L-shaped strips. Also instead of the metal strips being hinged together by means of curled edges and a pin passing therethrough, they may be entirely separate and simply secured to the binding strip or the like which forms the back of the binder and also in such cases serves as a hinge.

What I claim is:

1. In a loose leaf binder the combination of two covers, a flexible connection joining said covers and serving as a hinge and straight prongs projecting from said covers and having their outer edges curved in a circular arc toward the point:

2. In a loose leaf binder the combination of two L-shaped metal strips, hinges joining said strips, two covers each pivoted to one of said strips and prongs projecting from said strips, and having their inner edges straight, and at right angles to said strip, and their outer edges curved toward the point in approximately a circular arc with its center in the hinge line.

3. In a loose leaf binder the combination of two L-shaped metal strips, hinges joining said strips, prongs projecting from said strips and having their inner edges straight and at right angles to said strips, and their outer edges curved toward the point and two end plates at each end of said strips, each of said end plates completely overlapping the other, and being formed integral with one of said L shaped strips.

4. In a loose leaf binder the combination of two L shaped metal strips, hinges joining said strips, prongs projecting from said strips, and having their inner edges straight and at right angles to said strips, and their outer edges curved toward the point, two end plates at each end of said strips, each of said end plates completely overlapping the other and being formed integral with one of said L shaped strips, and a locking lever pivoted at one end to one of said end plates, and shaped at the other end to pass through a hole in one of said end plates and through one of a number of holes in the other end plate, in order to lock the said two end plates in a number of positions relatively to each other.

5. In a loose leaf binder the combination of two L shaped metal strips, hinges join-

ing said strips, prongs projecting from said strips, and having their inner edges straight and at right angles to said strips, and their outer edges curved toward the point, two end plates at each end of said strips, each of said end plates completely overlapping the other and being formed integral with one of said L shaped strips, a locking lever pivoted at its inner end to one of said end plates and a pin formed on the outer end of said locking lever and adapted to be sprung into a series of pairs of holes consisting of a hole in one of the said end plates and one of a number of holes in the other end plate so as to lock the said two strips in a series of definite relative angular positions.

6. In a loose leaf binder the combination of two metal strips, hinges joining said strips, and prongs bent outward from the material of said strips and having their inner edges straight and at right angles to said strip, and their outer edges curved toward the point in approximately a circular arc with its center in the hinge line.

7. In a loose leaf binder the combination of two metal strips, a flexible connection between longitudinal edges of said strips forming a hinge, and prongs formed of metal integral with the outer long edges of said strips, and bent at right angles to said strips and having their outer edges curved toward the points, the remaining material intermediate said prongs being rolled up and bent flat upon said metal strips.

8. A method of forming a strip for a loose leaf binder, consisting in folding over the edge of a metal sheet, folding the edge over a second time, cutting the metal along the second fold to a certain distance from each end, and turning the two folded end portions at right angles to the strip to form prongs.

9. A method of forming a loose leaf binder consisting in cutting out two metal sheets, folding over once along the edge of each sheet, folding over the edges a second time, cutting the metal along the second folds to a certain distance from each end and turning the folded end portions at right angles to their respective strips to form prongs, and hinging the two strips together along their untouched long edges.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK WILLINGTON GOSTICK.

Witnesses:

LUTHER J. PARR,
CHAS. N. DANIELS.