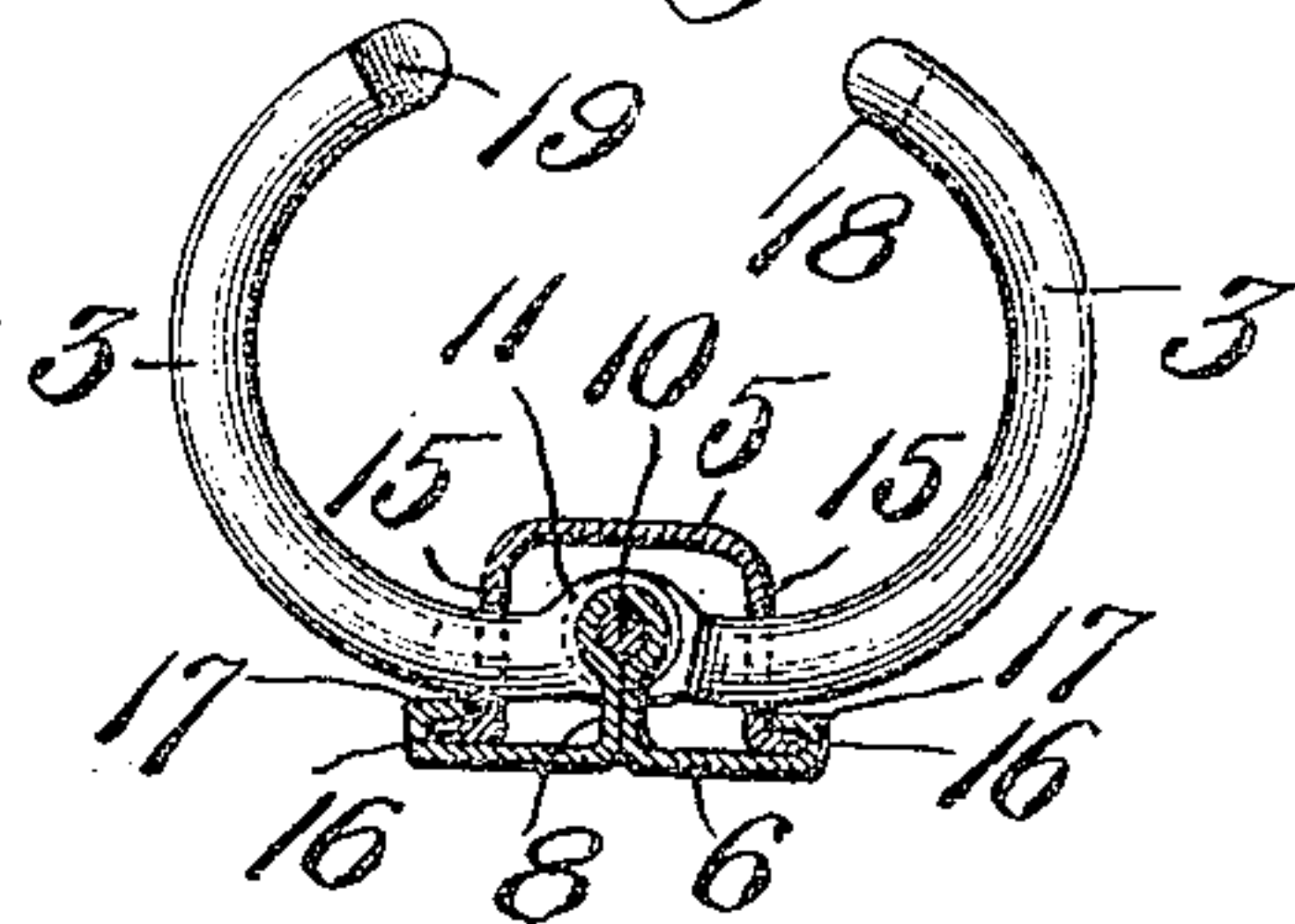
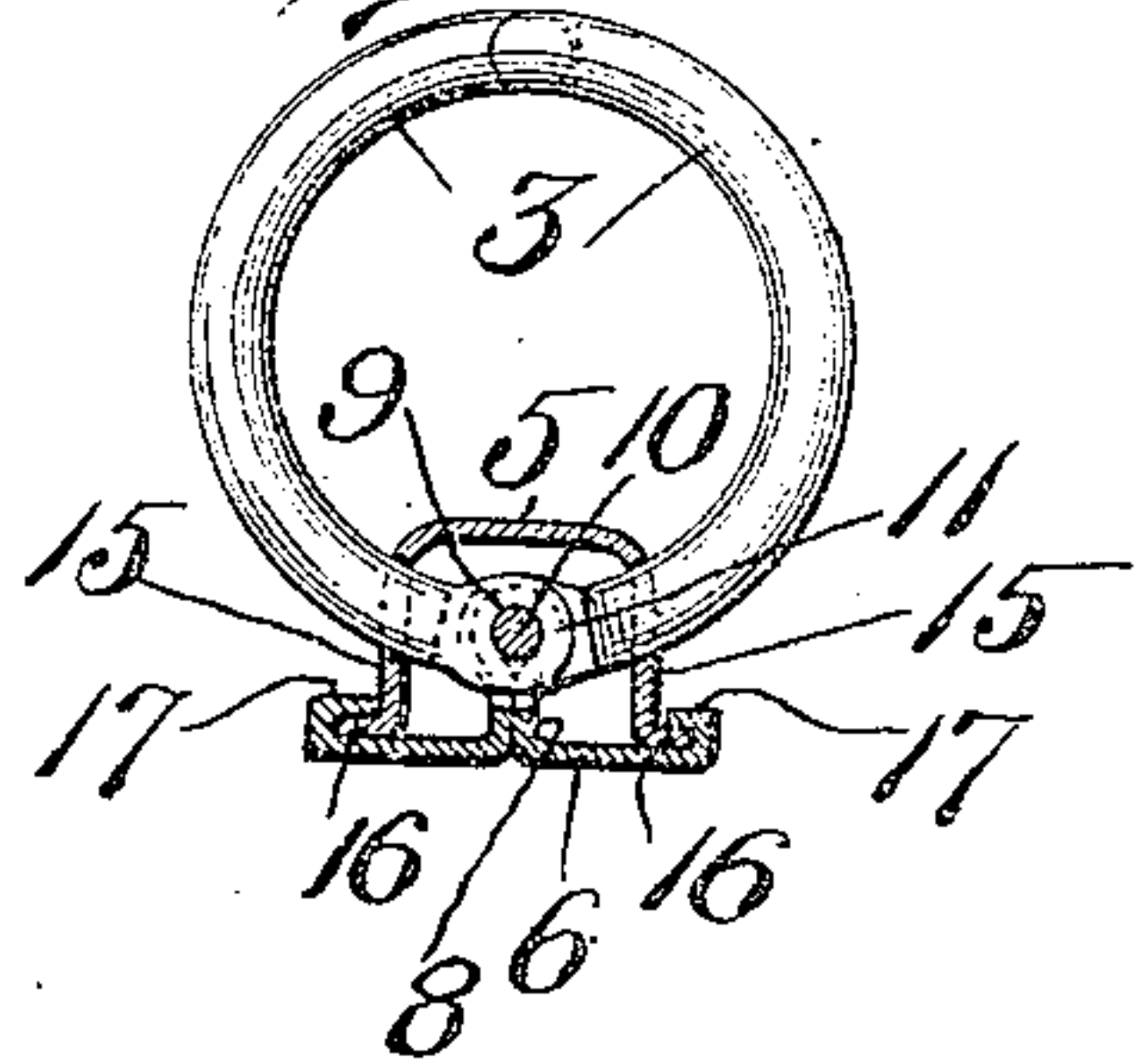
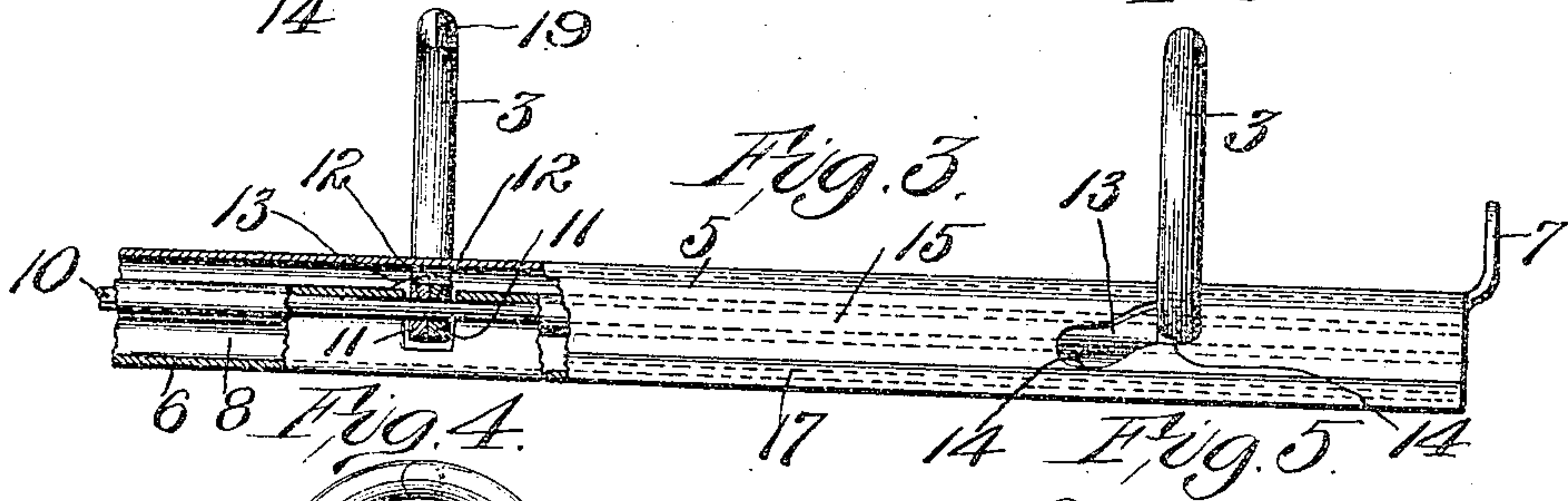
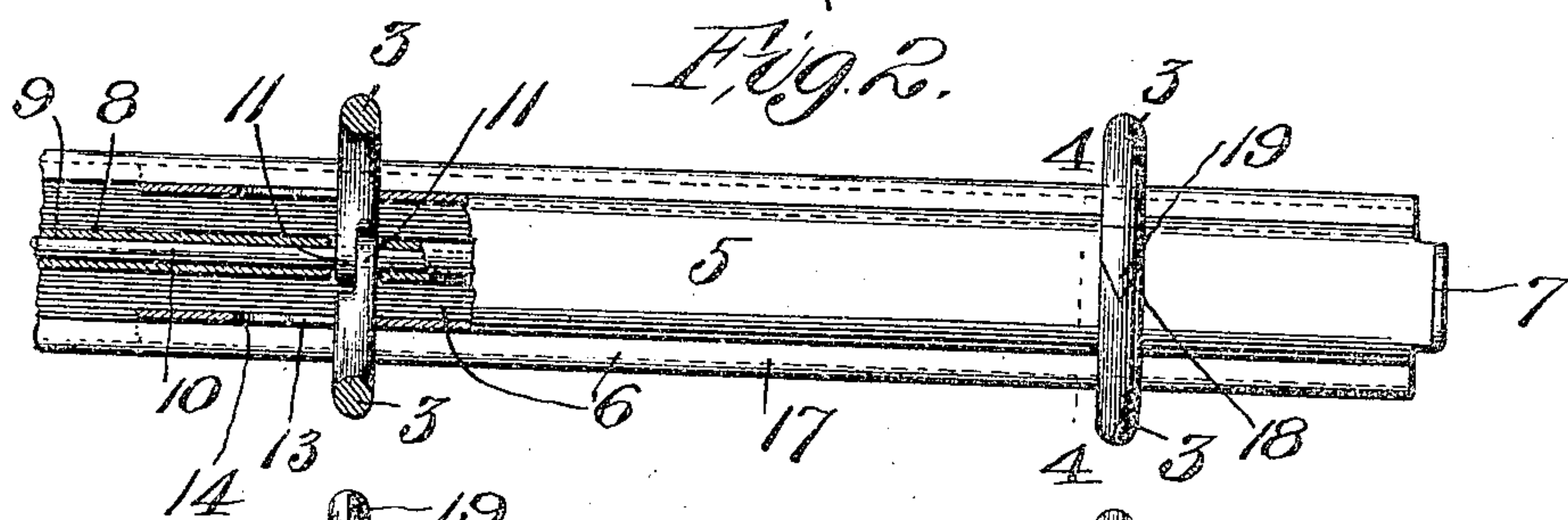
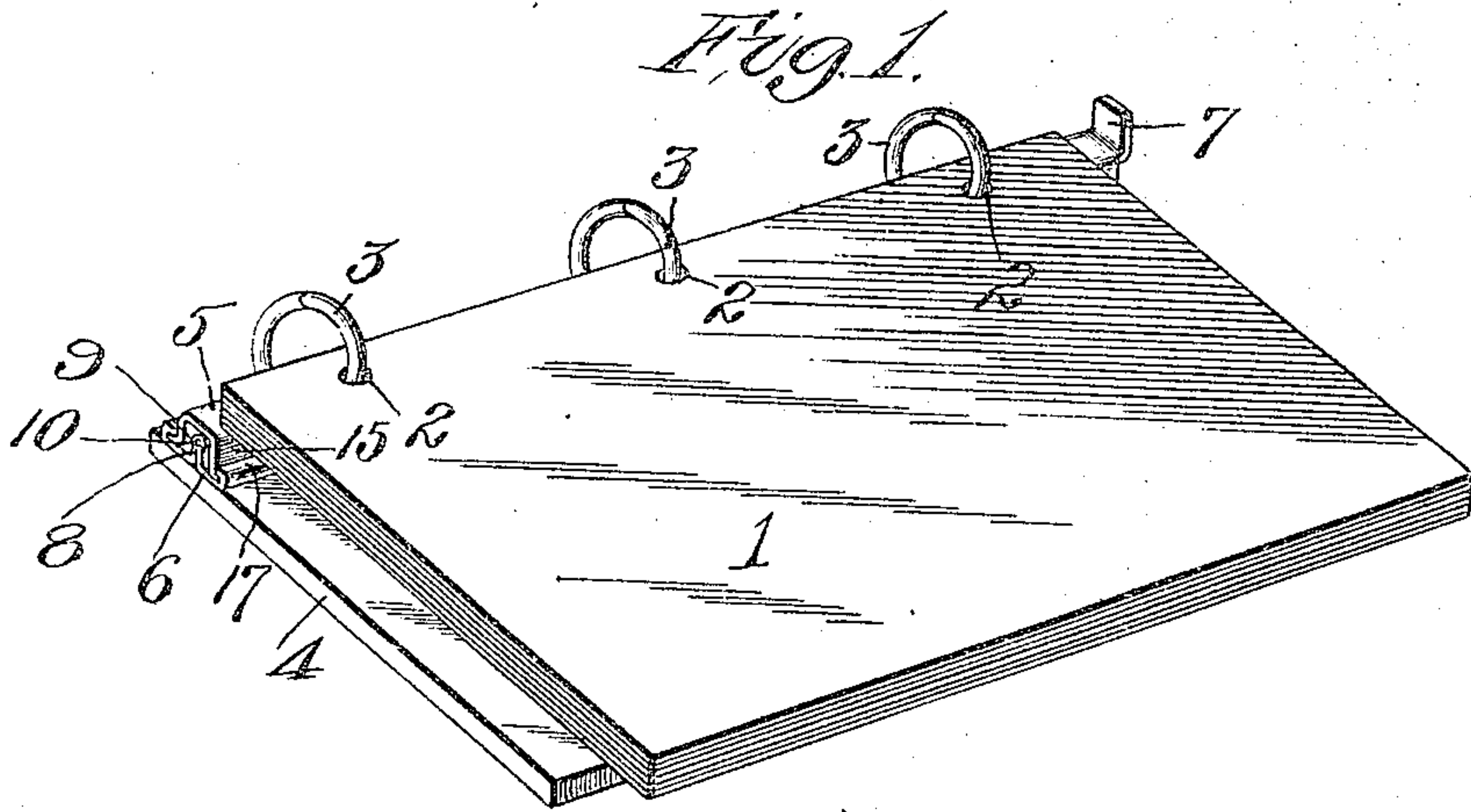


No. 801,208.

PATENTED OCT. 10, 1905.

C. G. BODEN.
BINDER.

APPLICATION FILED DEC. 27, 1904.



Witnesses:
Jm. H. Scott.
Gladys Walton.

Inventor:
Charles S. Boden,
by Hugh W. Wagner,
His Atty.

UNITED STATES PATENT OFFICE.

CHARLES G. BODEN, OF ST. LOUIS, MISSOURI.

BINDER.

No. 801,208.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed December 27, 1904. Serial No. 238,337.

To all whom it may concern:

Be it known that I, CHARLES G. BODEN, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Binders, of which the following is a specification.

This invention relates to improvements in binders or holders for loose-leaf records.

In the drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur, Figure 1 is a perspective view of my device in position on a board for the base or back for a loose-leaf block, said view showing the loose leaves also in position. Fig. 2 is a top plan view, partly in section, showing one of the clips or pairs of arches closed. Fig. 3 is a side elevation, partly in section. Fig. 4 is a sectional view on the line 4 4, Fig. 2, looking to the right; and Fig. 5 is a sectional view taken at the same relative position, but showing the clip open.

The individual loose leaves 1 contain perforations 2, through which are inserted the arches 3, forming clips to hold same in position on and in relation to the board or back 4. The arches 3 are held and borne by the device composed of the upper plate or slide 5 and the lower plate 6. The plate 6 may be attached to the board 4 in any suitable or desired manner. The top plate 5 may be corrugated in order to impart greater strength thereto, and particularly to the upturned extension 7, formed integral with plate 5 and acting as a handle, whereby said plate 5 can be moved, as hereinafter described. Such corrugations are not shown in the drawings. The base-plate 6 has a bead 8 formed therein, which in its upper portion contains a longitudinal opening or space 9, through which the binder rod or wire 10 passes. The lower ends of the arches 3 are formed with cut-away portions, so that they terminate in the extensions 11, containing perforations 12, through which the wire or rod 10 passes, forming a hinge for said arches.

Cam-slots 13, having straight extensions 14, are formed in the downwardly-turned side portions 15 of the upper plate 5. Said side portions 15 terminate in flanges 16, which are adapted to slide in or under the overlapping flanges 17 on the lower plate 6. The arches 3, which are locked and hinged to the bottom plate 6 by the wire 10, as above described, protrude through the slots 13 in the plate 5.

Three or more clips or double pairs of arches 3 are provided, as shown in Fig. 1, the other figures in the drawings being on an enlarged scale for clearness of details and partly broken away. In order that the oppositely-facing arches 3, forming each clip, may lock together when in the closed position, (indicated in Fig. 4,) the end of one of said arches is formed with the notch 18, while the opposite arch is formed with a beveled portion 19, which fits into said notch 18.

The upper plate 5 is adapted to slide longitudinally with reference to the lower plate 6, the flanges 16 of the upper plate being retained in the groove formed by the flange 17 of the lower plate and the handle 7 being a convenient means of imparting motion thereto. When the upper plate or slide 5 is in the position indicated in Fig. 3, not only are the arches 3 closed, as depicted in Fig. 4, but they are locked positively together by reason of the straight extension 14, in which said arches 3 rest. When by means of the handle 7 the slide of the upper plate 5 is pulled to the right in Fig. 3, the cam-slot 13 and the similar slot on the opposite side of the plate 5 act to open or spread apart the arches 3 to the position depicted in Fig. 5. When in this wide-open position, the arches 3 rest in the straight extension 14 at the opposite end from the straight extension 14, in which they are shown as resting in Fig. 3, and in said new position are positively locked wide open. The reverse movement of the upper plate or slide 5 causes the arches 3 to close to the initial position shown in Fig. 4. It will be readily understood that the edges of the cam-slots 13 exert a pressure on the arches 3 to cause them to move in either direction, as above described.

It will be obvious that one of the chief uses for binders of the kind hereinbefore set forth will be in books, and I do not wish to be understood as limiting myself to binders merely for pads of leaves such as illustrated in the drawings. In the use of my device in ordinary books the plate 6 would be attached to the back of the book instead of to the board 4.

Having thus described my said invention, what I claim, and desire to secure by Letters Patent, is—

1. A binder comprising in its entirety two plates having relative sliding movement, the upper of said plates being of inverted-U shape and having each of its sides formed with irregular slots, arches comprising a pair of hinged members supported by the lower plate

and projecting through said upper-plate slots to be supported by said upper-plate sides.

2. A binder consisting of a lower plate having inturned longitudinal side edges and an upper plate of inverted-U shape the sides of which engage to slide with respect to said inturned edges of the lower plate, said sides having irregular slots therein, arches comprising a pair of members hingedly supported by the lower plate and projecting through said upper-plate slots whereby said arch members are supported by said upper-plate sides.

3. A binder comprising a pair of plates the longitudinal side edges of which interengage to allow of a sliding movement between said plates, arches comprising a pair of members supported by the lower of said plates, the upper of said plates being of bowed form and having its opposite sides each formed with irregular slots through which said arch members project to be supported and actuated by said upper plate.

4. A binder comprising in its entirety a lower plate formed with a central bead having an opening therethrough, the longitudinal side edges of said plate being turned inwardly and spaced from the major portion of the plate, arches comprising members having perforated extensions projecting in said bead-opening, a rod in the bead-opening passing through the perforated extensions, and a slide of inverted-U shape having its longitudinal side edges turned outwardly to engage in said space formed by the lower-plate edges, said slide having each of its sides formed with inclined slots terminating in a horizontal portion, said arches passing through said slots to be actuated by the edges thereof.

In testimony whereof I have affixed my signature in presence of two witnesses.

CHARLES G. BODEN.

Witnesses:

M. E. LETCHER,
GLADYS WALTON.