

No. 898,385.

PATENTED SEPT. 8, 1908.

L. C. McNEAL.
TEMPORARY BINDER FOR LOOSE SHEETS.
APPLICATION FILED APR. 2, 1906.

FIG. 1.

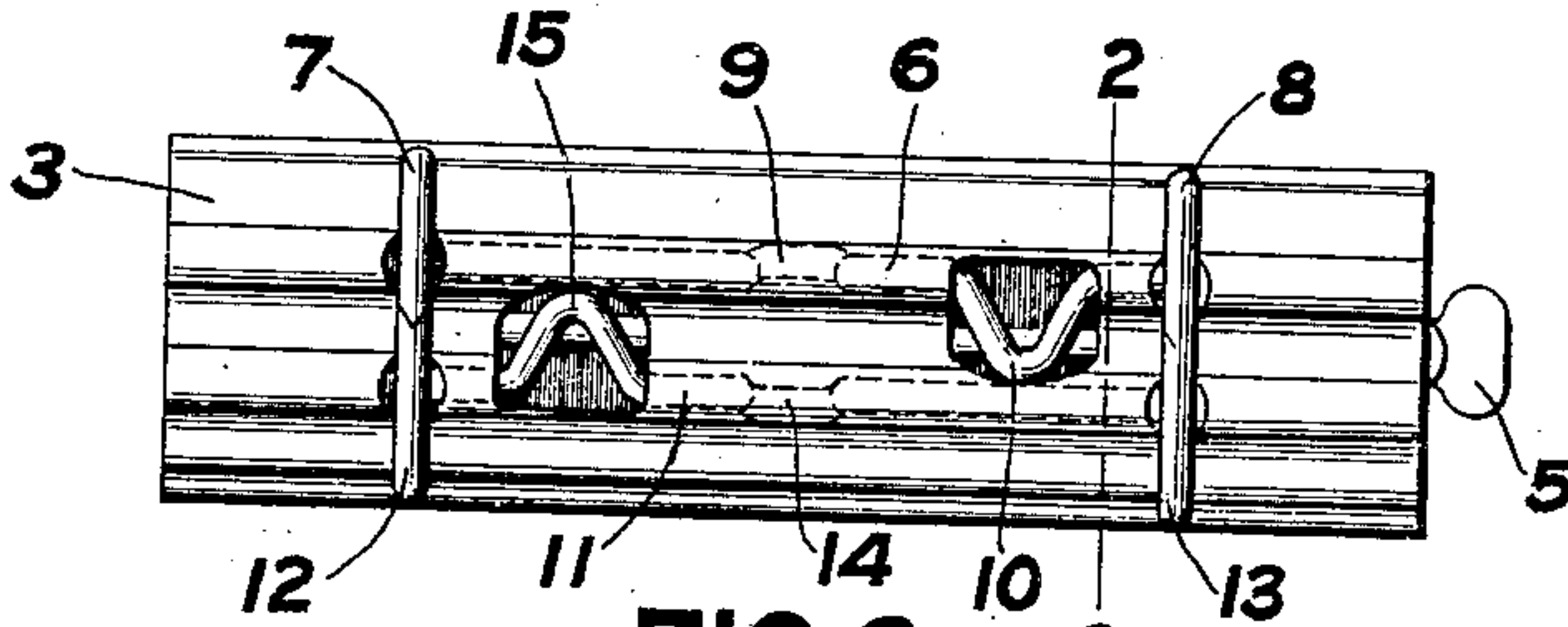


FIG. 2.

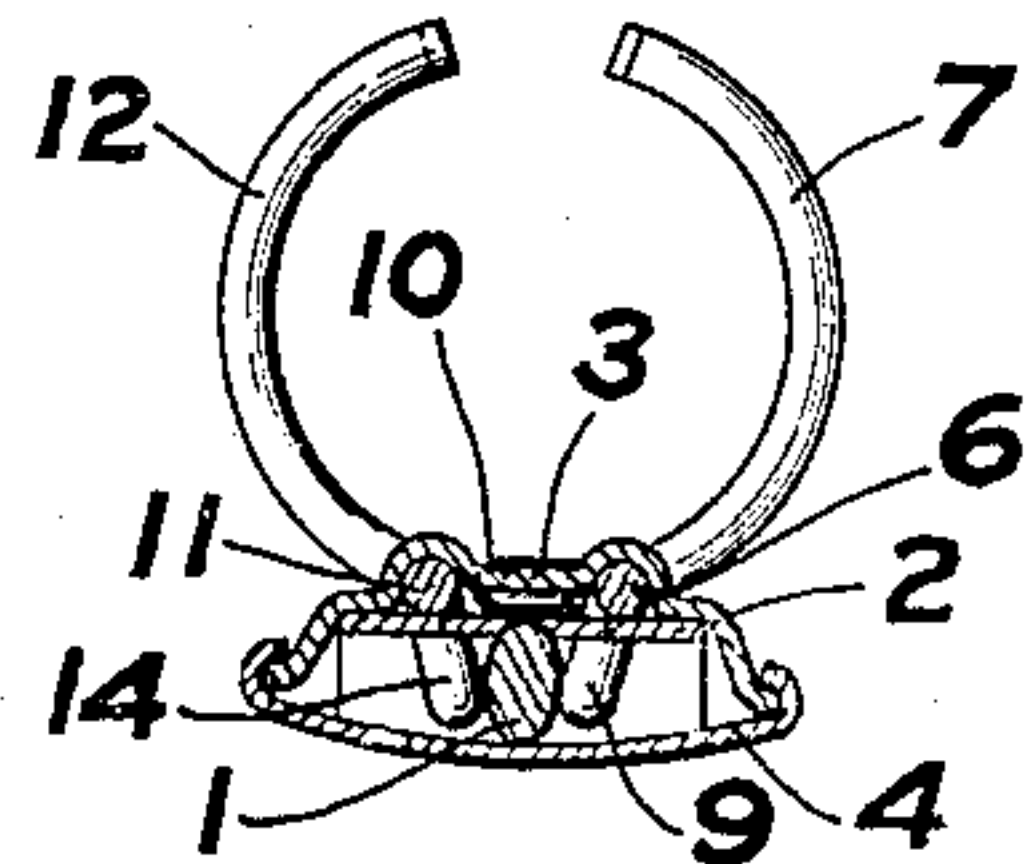


FIG. 3.

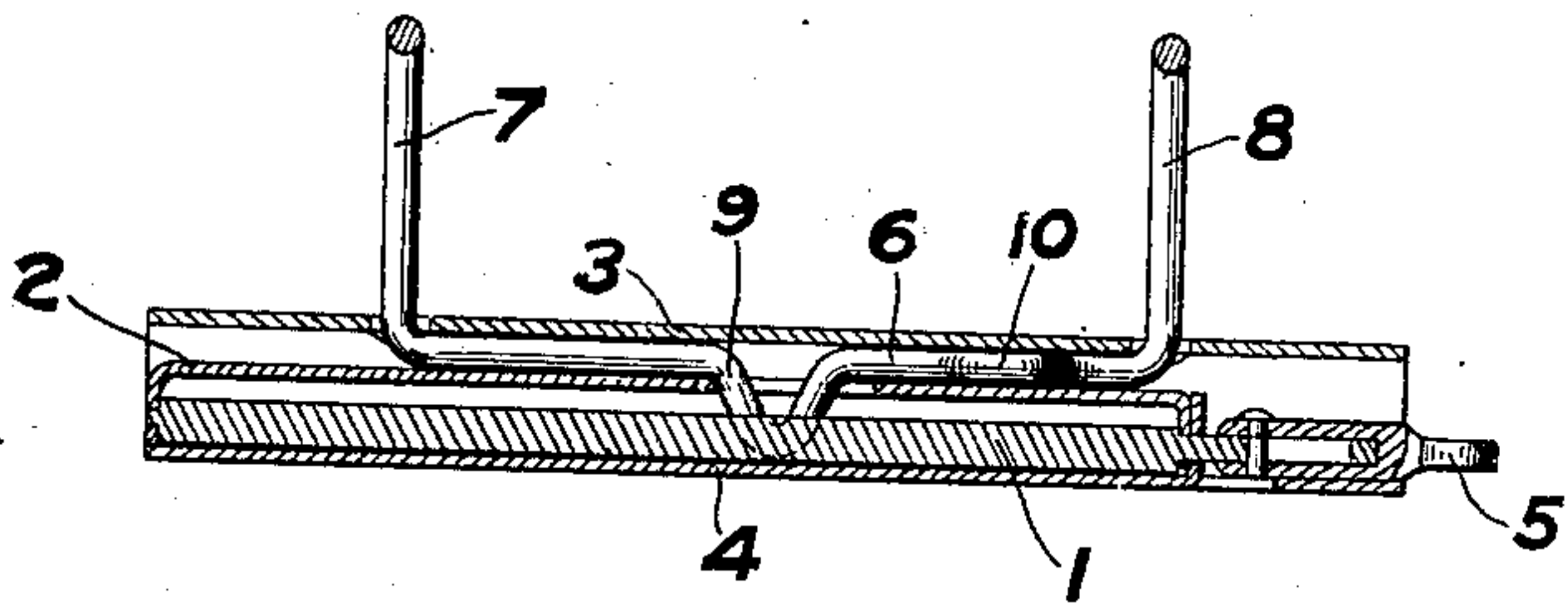


FIG. 4.

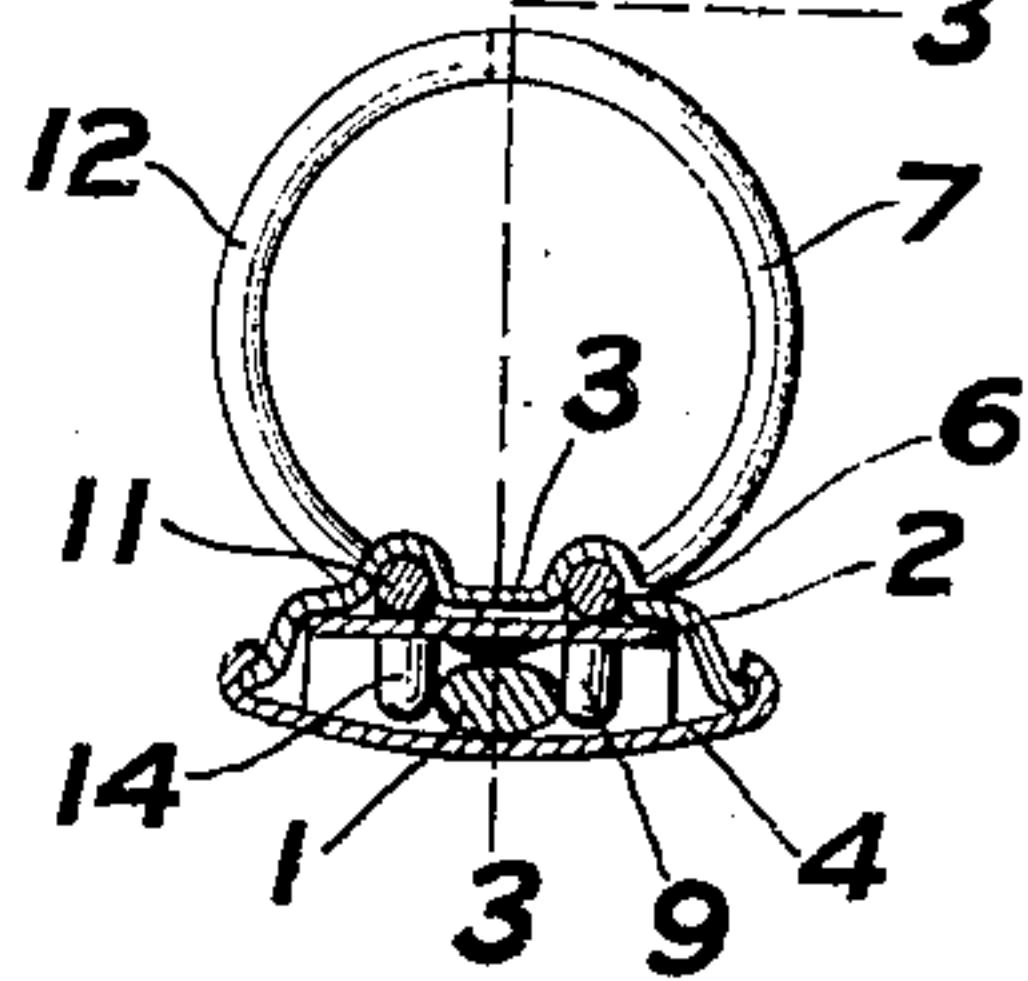


FIG. 5.

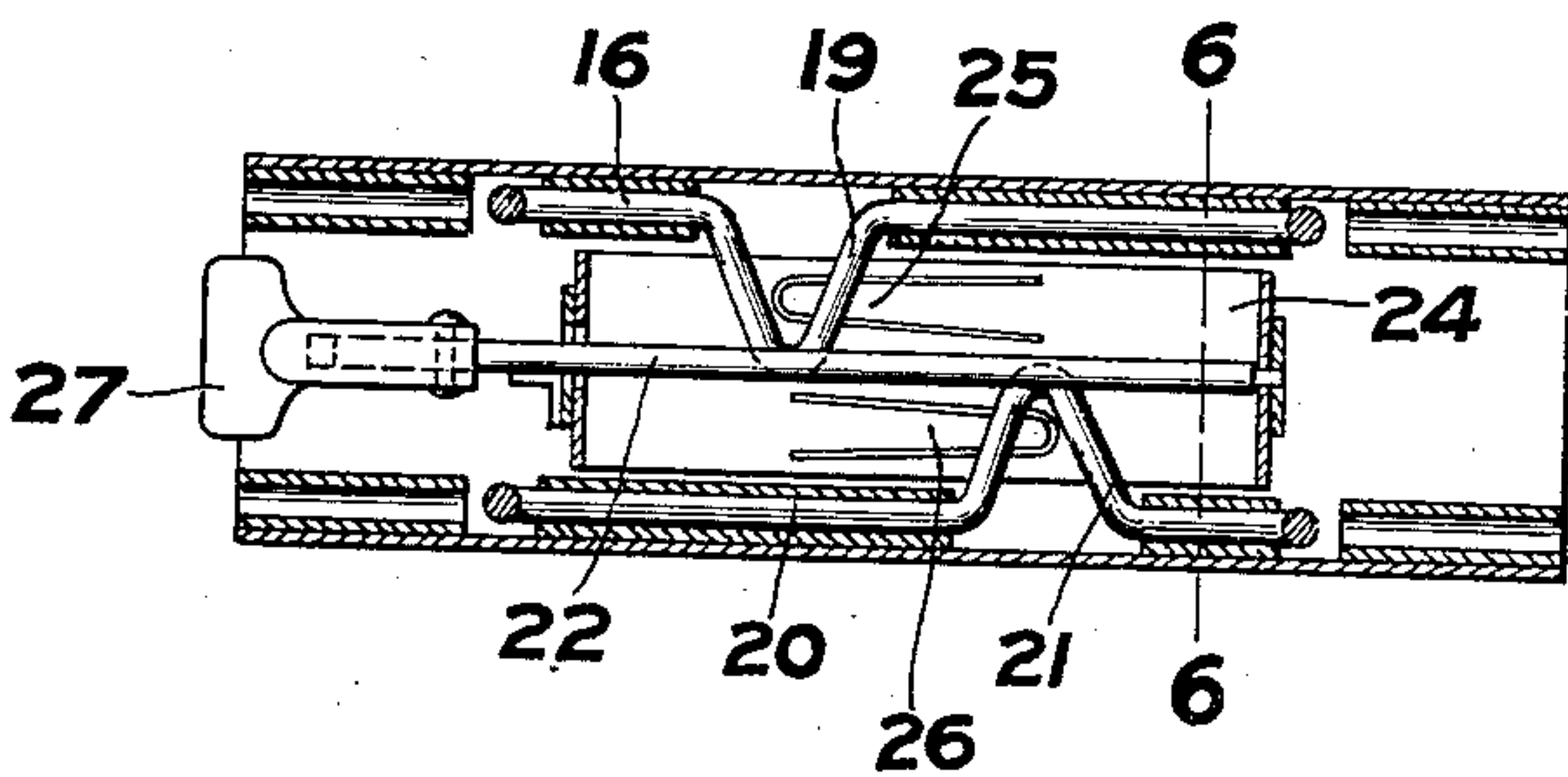


FIG. 6.

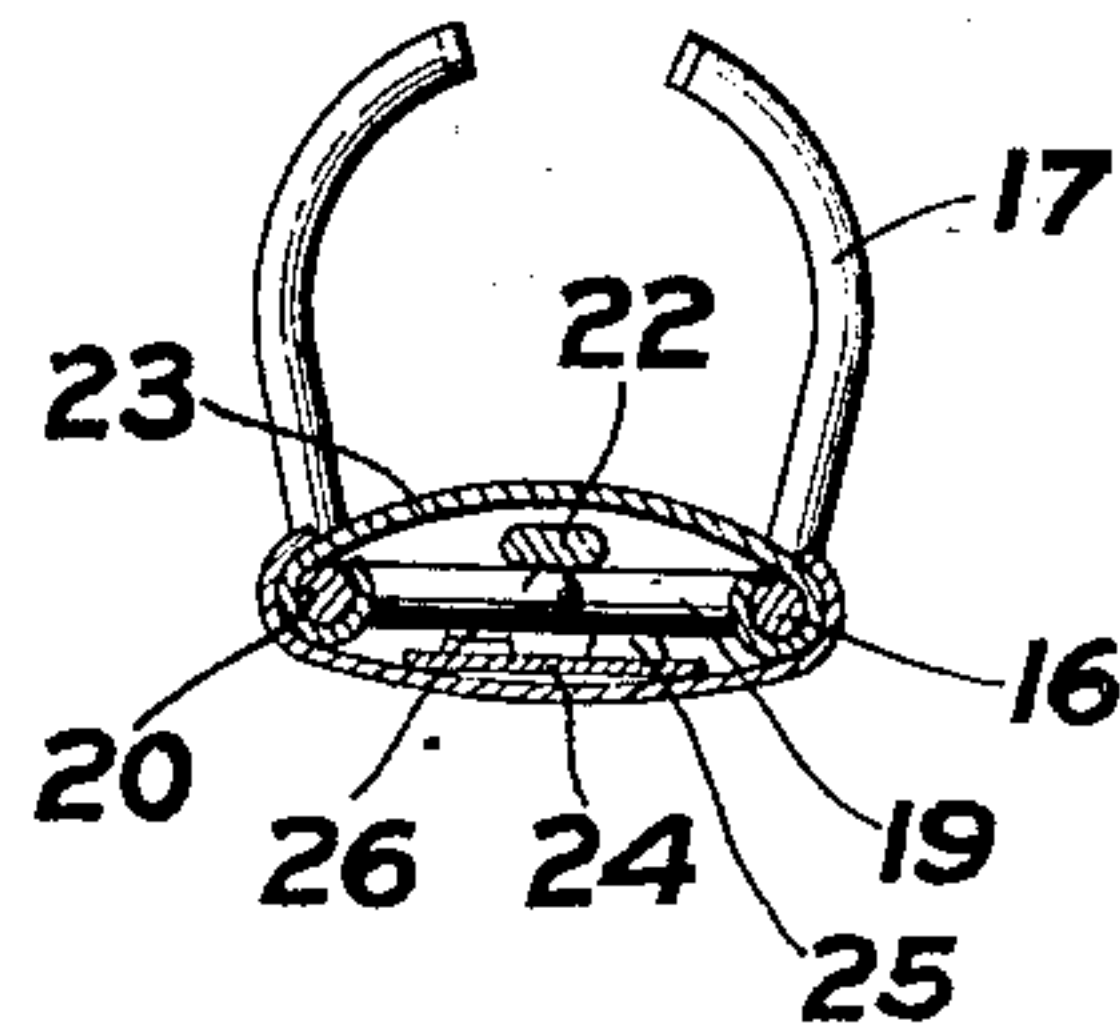


FIG. 7.

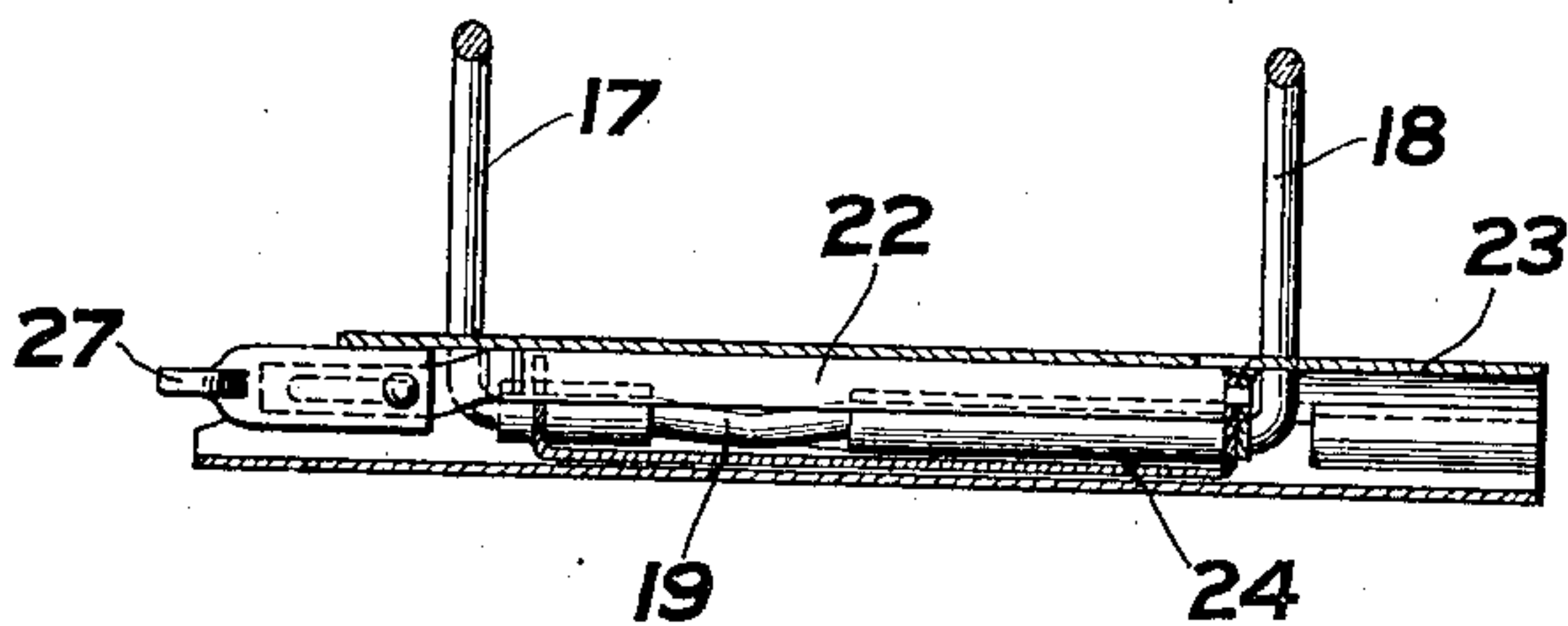
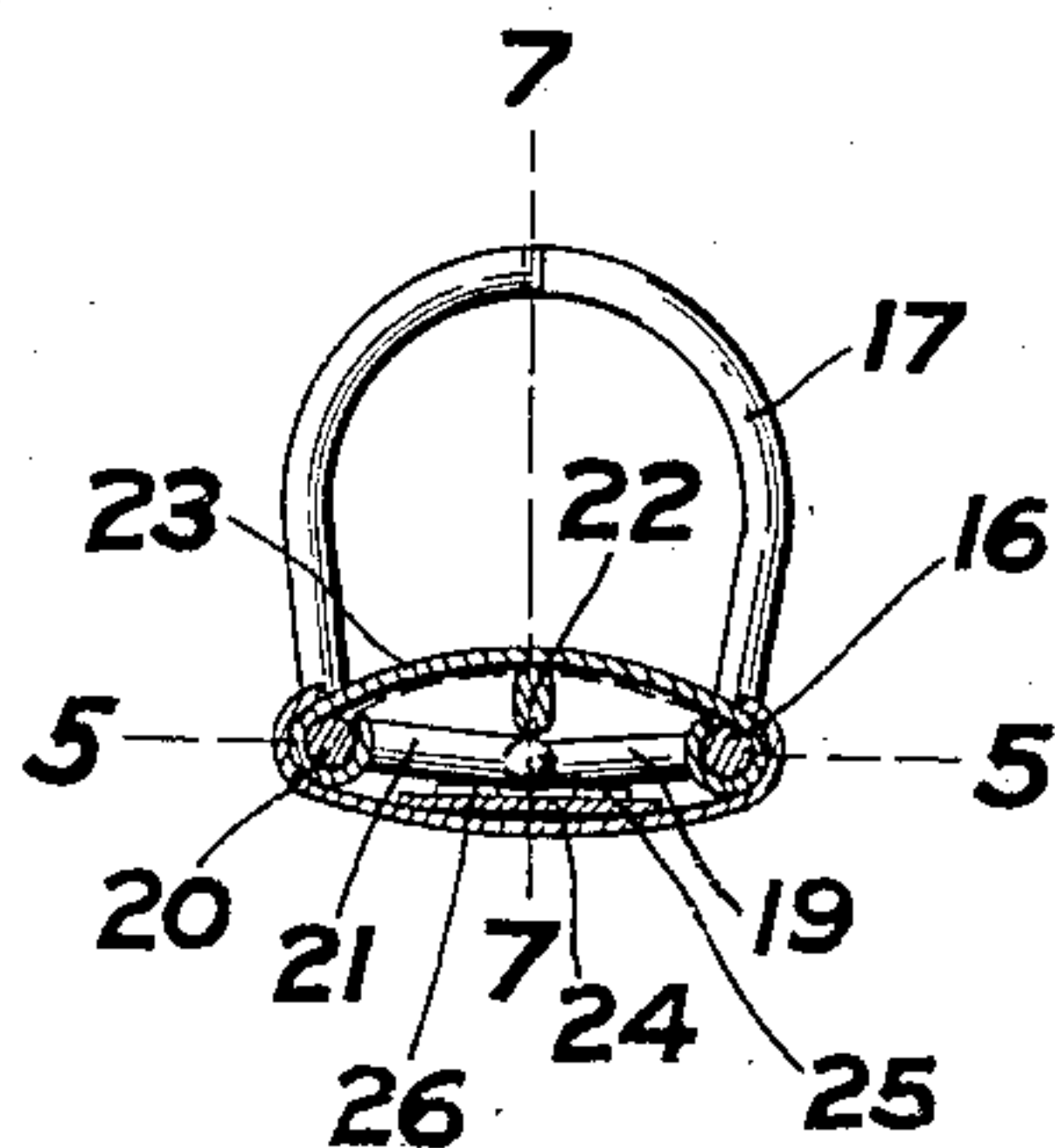


FIG. 8.



WITNESSES:

W. Gurnee.

L. Thon.

INVENTOR:

Luther C. McNeal
by Ogden & Davis
his attorneys

UNITED STATES PATENT OFFICE.

LUTHER C. McNEAL, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-FOURTH TO HOWARD L. OSGOOD AND C. SCHUYLER DAVIS, OF ROCHESTER, NEW YORK.

TEMPORARY BINDER FOR LOOSE SHEETS.

No. 898,385.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Original application filed March 10, 1904, Serial No. 197,403. Divided and this application filed April 2, 1906.
Serial No. 309,328.

To all whom it may concern:

Be it known that I, LUTHER C. McNEAL, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Temporary Binders for Loose Sheets, of which the following is a specification.

This invention relates to temporary binders for loose sheets, and has for its object to produce a binder that is simple and strong in construction and made of few parts that are readily assembled and operated.

This application is a division of the application filed March 10, 1904, Serial No. 197,403, in which this same invention is shown and described.

In the drawings:—Figure 1 is a top plan view; Fig. 2 is a cross-section on the line 2—2 of Fig. 1, looking towards the left, and showing the prongs open; Fig. 3 is a longitudinal section on the line 3—3 of Fig. 4; Fig. 4 is a cross-section on the line 2—2 of Fig. 1, looking towards the left, and showing the prongs closed; Fig. 5 is a horizontal section on the line 5—5 of Fig. 8, and shows a modified form of binder; Fig. 6 is a cross-section on the line 6—6 of Fig. 5, looking towards the left, and showing the prongs open; Fig. 7 is a vertical section on the line 7—7 of Fig. 8; and Fig. 8 is a cross-section on the line 6—6 of Fig. 5, looking towards the left, and showing the prongs closed.

In the construction shown in Figs. 1–4 inclusive, the rocking shafts 6 and 11 are supported within the casing formed by the top plate 3 and the intermediate plate 2, hollow ribs being formed in the top plate 3 to receive the said shafts 6 and 11. A bottom plate 4 incloses the operating rod 1.

The operating rod 1 is represented as rotatably supported in ears on the plates 2 and 4, and a hand piece 5 is shown for turning it. The operating rod is thicker in one dimension than the other. The rocking shaft 6, carrying the tilting prongs 7 and 8, has two arms. When the prongs are closed, as shown in Fig. 4, one arm 9 of the shaft 6 is vertical, and the other arm 10 of this shaft is slightly inclined forwardly from the horizontal. The other rock shaft 11, carrying the prongs 12

and 13, also has two arms, one 14 of which is vertical, and the other 15 is inclined from the horizontal when the prongs are closed.

The operating rod 1 lies below the horizontal arms 10 and 15 and between the vertical arms 9 and 14. The dimensions of the operating rod are such that when it lies in one position, it raises the horizontal arms 10 and 15 and releases the vertical arms 9 and 14, thereby opening the binder, as shown in Fig. 2; and when it is turned over it forces out the vertical arms 9 and 14, and releases the horizontal arms 10 and 15, thereby closing the binder, as shown in Fig. 4.

Figs. 5–8 inclusive show a construction that differs from that in Figs. 1–4 inclusive in that the prongs are moved in one direction by the operating rod, and in the other by a spring. In this construction the shaft 16, carrying the tilting prongs 17 and 18, has an inwardly extending arm 19 by which it is rocked. The other shaft 20 has a similarly inwardly extending arm 21 by which it is rocked. An operating bar 22 is rotatably supported above the arms 19 and 21 in ears on the plates 23 and 24. Springs 25 and 26 tend to force the arms up and thereby to tilt the prongs open as shown in Fig. 6. These springs are tongues on the plate 24. The operating bar 22 is thicker in one dimension than the other, and when turned in one position releases the arms 19 and 21 so that the springs 25 and 26 can raise them and thereby tilt the prongs open (see Fig. 6), and when turned in the other direction force down the arms 19 and 21 and thereby close the prongs (see Fig. 8). The bar 22 is turned by the hand piece 27.

While a spring is shown in this last described form for the purpose of automatically opening the tilting prongs, the spring may be omitted, for the weight of the papers will tend to open the binder, and, in any event, as soon as the prongs are released by the operating rod, they can be readily opened manually.

In the construction shown in Figs. 5–8 inclusive, the prongs on each side of the binder are represented as formed in one piece with the horizontal shaft on that side, and the shafts 16 and 20 are supported be-

tween the plates which form the casing upon portions of the plate 23 which are bent around said shafts, respectively.

In both forms of construction the prongs
5 extend through the top of the casing, which accordingly acts as a brace to keep them alined, and by making the cases oval the operating parts are inclosed within a small compass and at the same time the sheets can be
10 readily turned from the prongs.

What I claim is:—

1. A temporary binder comprising a pair of parallel rock shafts having mating prongs and laterally projecting arms and a central
15 rock bar, parallel with said shafts, crossing the arms of both shafts and shaped to actuate said arms.

2. A temporary binder comprising a pair of parallel rock shafts having mating prongs
20 and laterally projecting arms, springs acting on the arms in one direction, and a rock bar journaled at its ends parallel with said rock shafts and crossing the arms of both shafts to move them in opposition to the springs.

25 3. A temporary binder comprising a pair of parallel rock shafts having mating prongs and laterally projecting arms and a rock bar journaled between and parallel with said

rock shafts and crossing the arms of both, said rock bar being wider in one dimension 30 than the other to act operatively on said arms.

4. A temporary binder comprising a pair of parallel rock shafts having mating prongs and inwardly extending operating arms, 35 springs pressing the arms in one direction, and a flattened rock bar parallel with the rock shafts and crossing the inner ends of said arms to actuate them against the action of their springs. 40

5. A temporary binder comprising a pair of spaced plates connected at their longitudinal edges, an inner bottom plate having up-
turned ends, parallel rock shafts journaled in the longitudinal edges of the casing, and hav- 45 ing mating prongs and inwardly extending actuating arms, springs engaging said arms to move the prongs in one direction, a central longitudinal rock bar journaled in said upturned ends and crossing said actuating 50 arms to move them against the action of their springs.

LUTHER C. McNEAL.

Witnesses:

D. GURNEE,
L. THON.