

966,807.

Patented Aug. 9, 1910.

Fig. 1

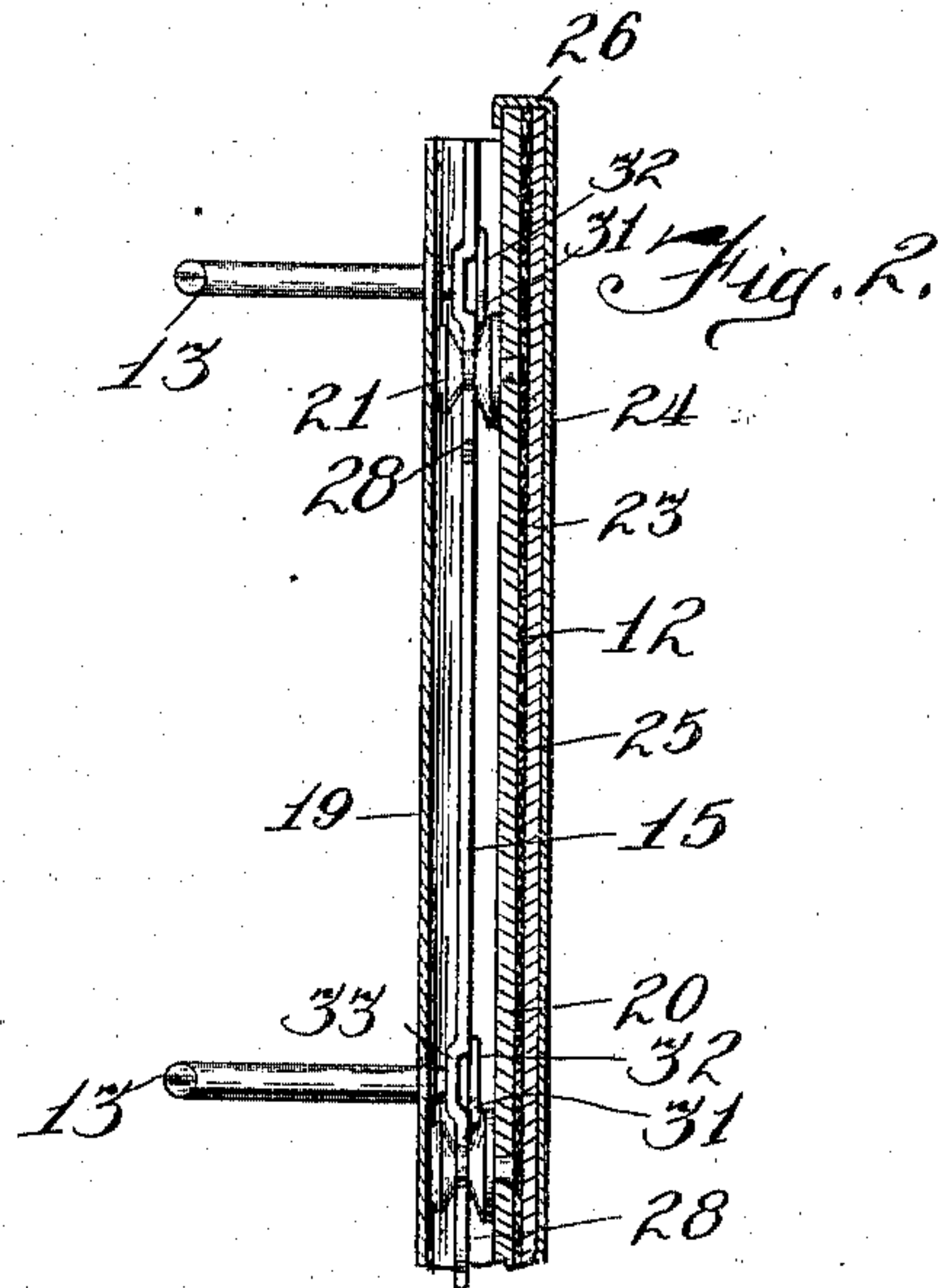
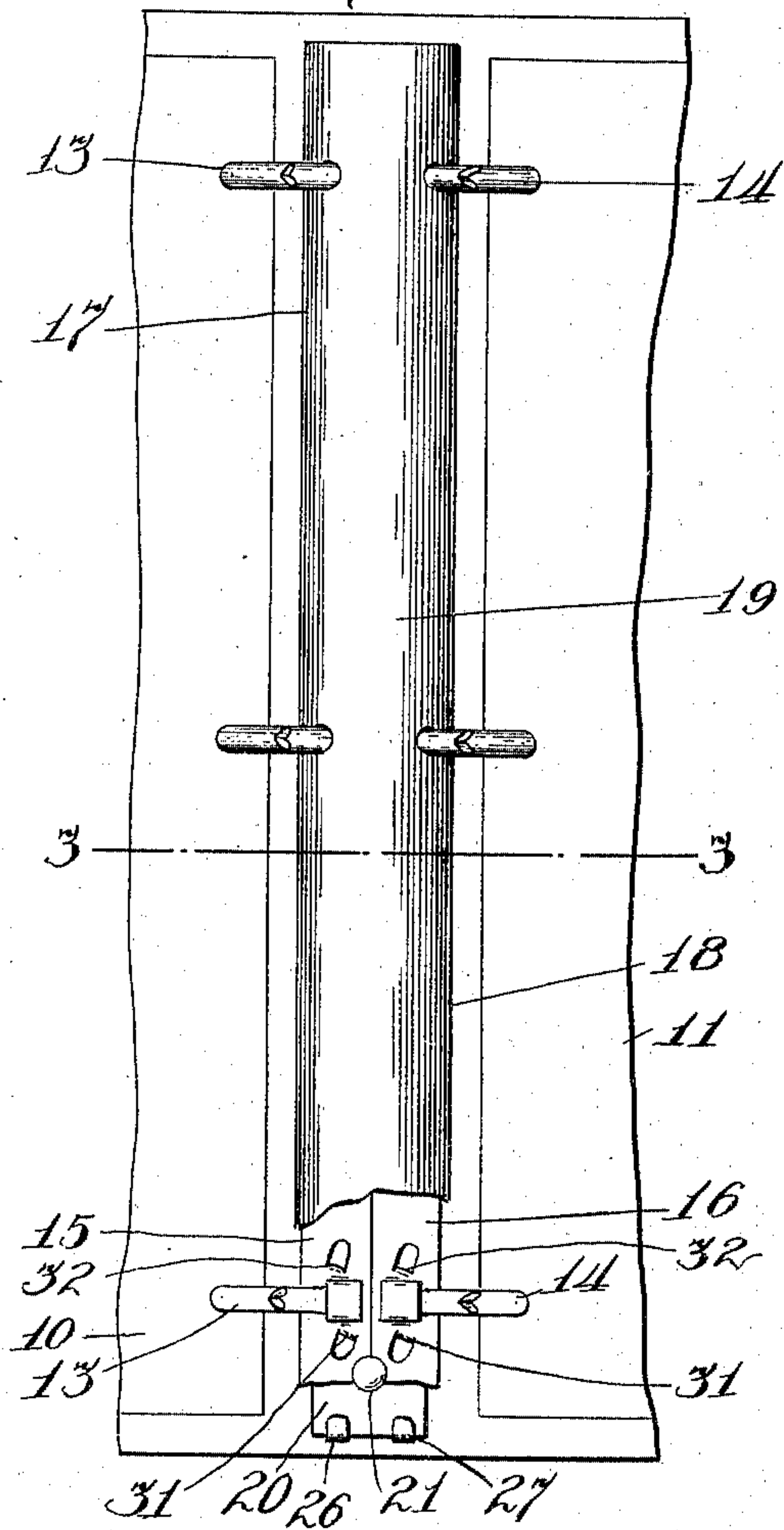


Fig. 3.

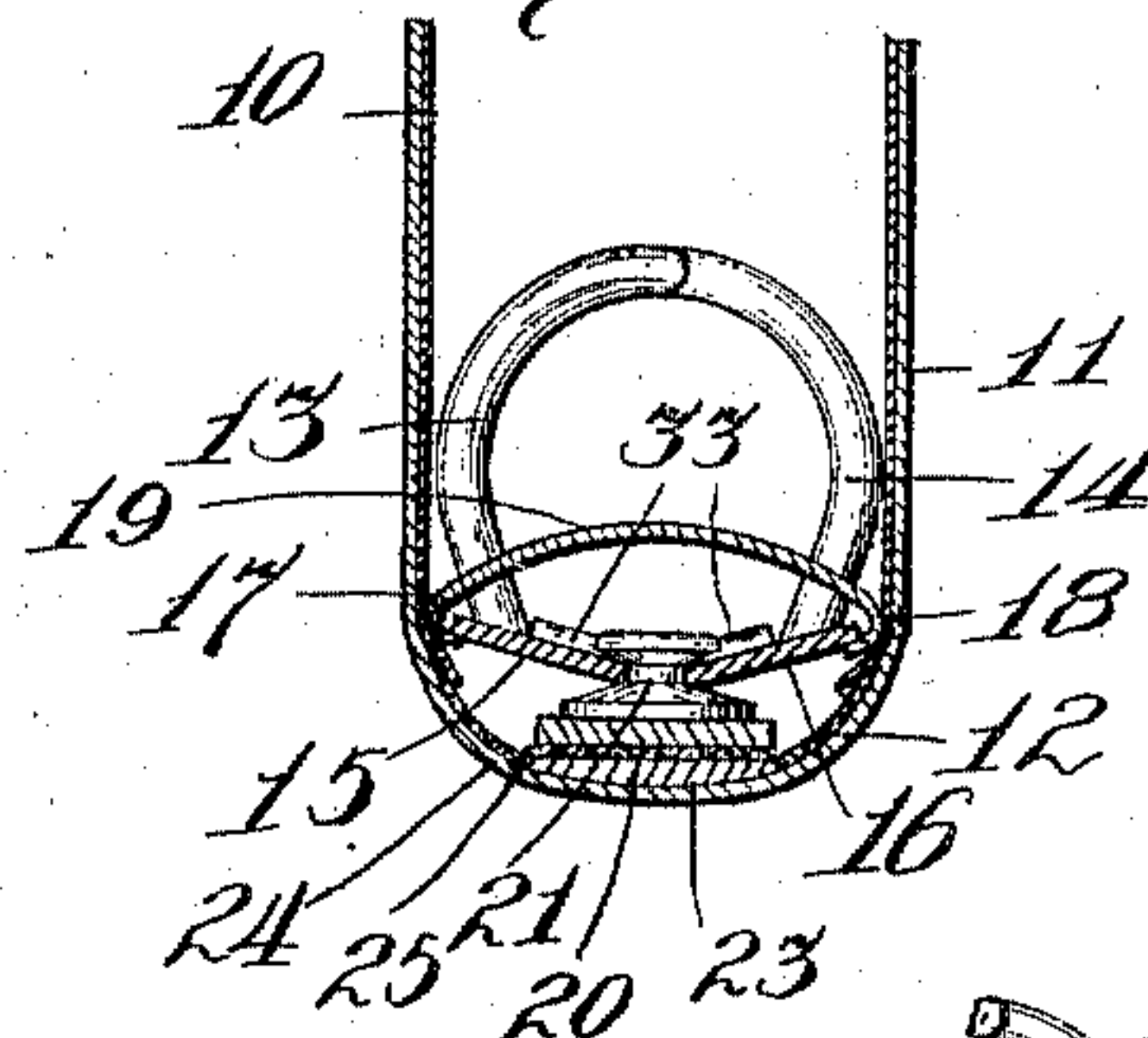


Fig. 4.

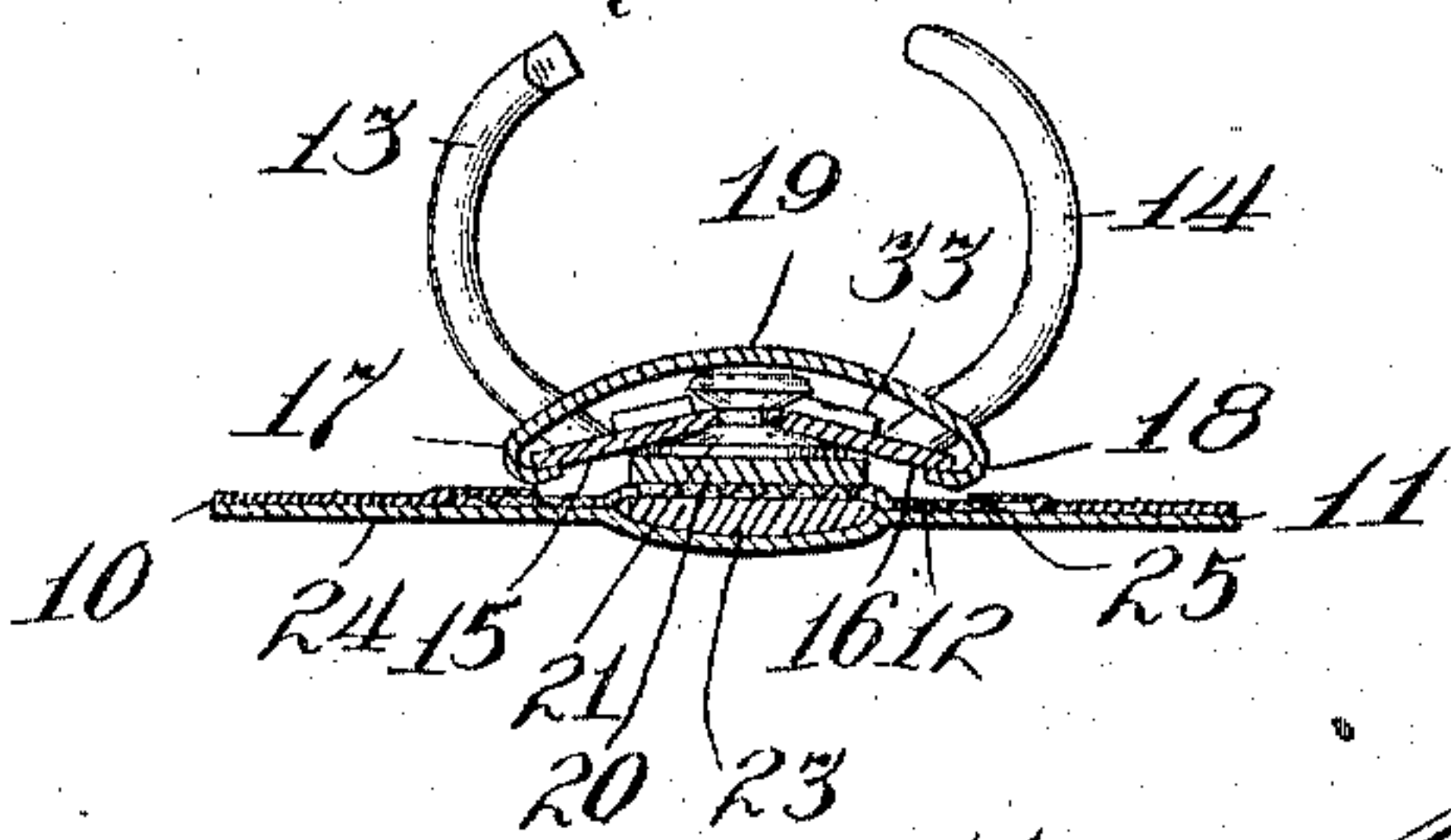
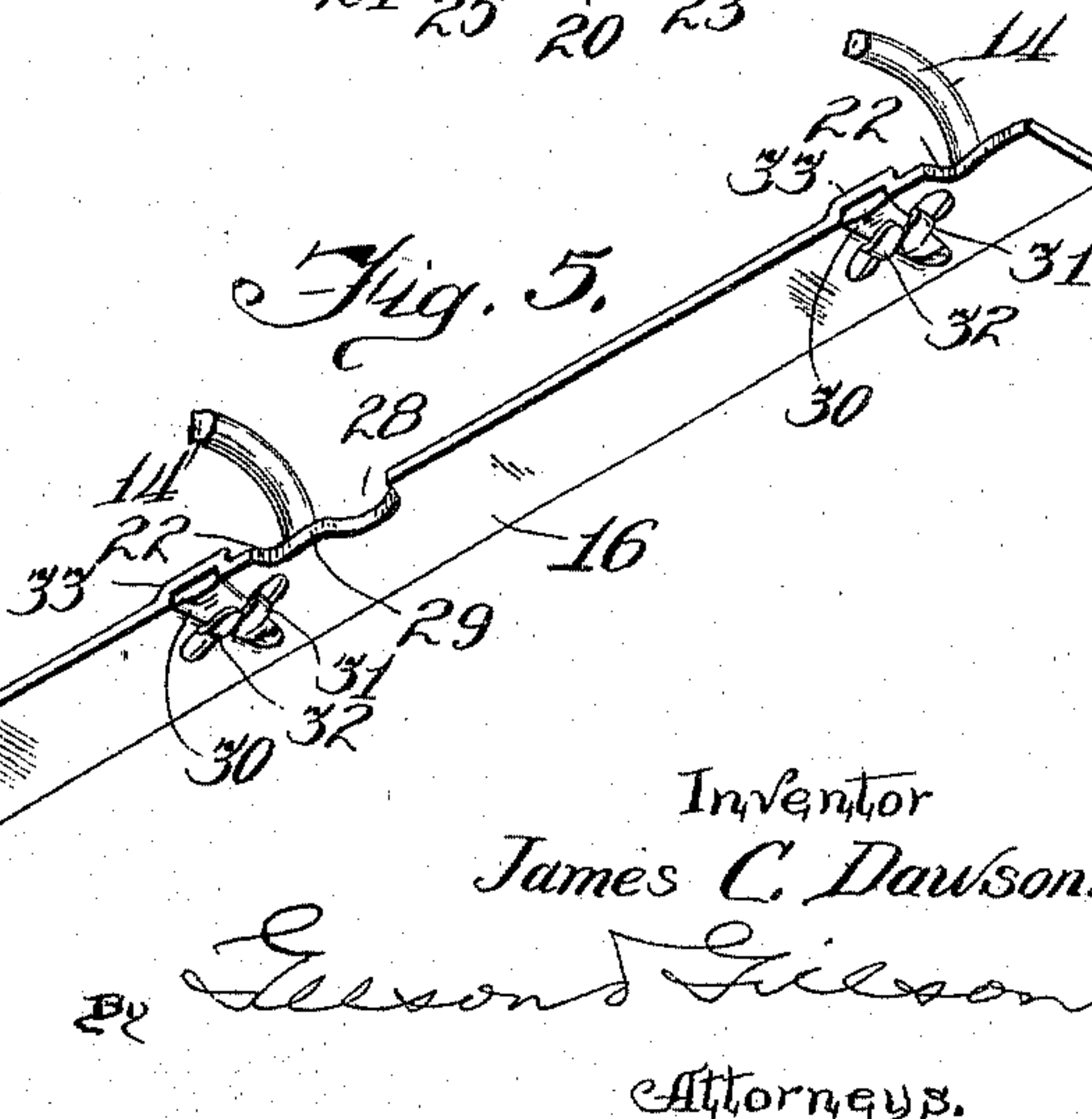


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES C. DAWSON, OF WEBSTER GROVES, MISSOURI, ASSIGNOR TO SIEBER & TRUSSELL MANUFACTURING CO., A CORPORATION OF MISSOURI.

LOOSE-LEAF BOOK.

966,807.

Specification of Letters Patent.

Patented Aug. 9, 1910.

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To all whom it may concern:

Be it known that I, JAMES C. DAWSON, a citizen of the United States, and resident of Webster Groves, county of St. Louis, and State of Missouri, have invented certain new and useful Improvements in Loose-Leaf Books, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to that form of loose leaf books or binders usually made in comparatively small form, which comprise a plurality of sets of mating sheet-holding prongs, opposing prongs being carried by plates fitting within marginal flanges of a bowed spring and having their inner edges in contact, the spring plate serving to hold the prongs in either closed or open position. The object of the invention is to simplify and improve structures of this type; and it consists of the mechanism hereinafter described and illustrated in the accompanying drawings, in which—

Figure 1 is a detail plan view of the back when open, some of the parts being broken away; Fig. 2 is a detail longitudinal central section thereof; Figs. 3 and 4 are detail cross-sections on the line 3—3 of Fig. 1, showing the binder mechanism one in open and the other in closed position; and Fig. 5 is a perspective of one of the prong-holding plates.

The book or binder comprises the usual side plates 10, 11, and a back 12 uniting such members together with the hereinafter described sheet-holding mechanism which is secured to the back. This sheet-holding mechanism comprises a plurality of pairs of mating prongs 13, 14, the opposed prongs being fixed to a pair of plates 15, 16, the outer edges of which are engaged by downwardly and inwardly-turned edge flanges 17, 18, of a bowed spring plate 19, the inner edges of the plates 15, 16, abutting, the combined width of these plates being greater than the normal width of the spring plate.

The plates 15, 16, are locked in place within the spring plate by means of a plate 20, located below them and carrying a plurality of headed studs 21, the shanks of which lie within registering recesses 22 in the inner edges of the prong carrying plates.

The plate 20 is fixedly secured to a plate 23, located between the outer and inner layers 24, 25, of the fabric forming the back 12, by means of lugs 26, 27, struck up from the plate 23 adjacent its ends and folded over upon the ends of the plate 20. This constitutes the preferred means for securing the plate 23 to the back of the binder.

The upper faces of the bases of the studs 21 and the lower faces of the heads thereof are beveled, as shown, to allow relative pivotal movement of the two plates, the bases of these studs also serving as bearings for the plates 15, 16. For convenience in assembling the parts, the plates 15, 16, are provided with registering recesses 28, forming apertures of sufficient size to receive the heads of the studs 21, and being located adjacent the recesses 22, which are somewhat smaller.

The edges of the plates 15, 16, are preferably cut away slightly between the recesses 28 and the adjacent recesses 22, as shown at 29. The plates 15, 16, having been inserted between the flanges 17, 18, the plate 20 is applied by inserting the heads of the studs through the larger apertures and then sliding the plate longitudinally to bring their shanks within the smaller apertures. When thus assembled, the entire binding mechanism is permanently held to the back of the book, the prong-carrying plates and spring cover plate being secured by the studs, which in turn are fixed to the plate 20, that being firmly bound to the binder back.

The prongs 13, 14, are secured to the carrying plates in any suitable manner. Preferably the plate is apertured to permit the prong to pass through it, and is struck up, as shown at 33, between the aperture and its inner edge, to form a recess to receive the flattened end 30 of the prong. Fingers 31, 32, are struck down from the body of the plate and folded backwardly against the lower face of the flattened prong end. In addition to this securing means a little solder is preferably applied. The combined width of the plates 15, 16, being greater than the normal width of the plate 19, the pressure of the latter causes them to incline upwardly or downwardly, thereby holding the prongs either open or closed. The prongs are closed by finger pressure applied to the members of

a single pair, and may be opened by pressure against the back of the book, which is flexible, forcing the plates 15, 16, upwardly.

I claim as my invention—

5 1. In a loose leaf book, in combination, a pair of prong-carrying plates related together as toggle arms, a spring plate spanning the pair of plates and yieldingly bearing upon their outer edges, and a base plate
10 loosely but positively engaged with the pair of plates.

2. In a loose leaf book having a back, a pair of prong-carrying plates related together as toggle arms, a spring bearing
15 against the outer edges of the plates, and headed studs fixed in the back and engaging the plates.

3. In a loose leaf book having a back, a

pair of prong-carrying plates related together as toggle arms, a spring bearing 20 against the outer edges of the plates, and headed studs fixed in the back, the inner edges of the plates having recesses for receiving the heads of the studs and recesses of less depth for inclosing the shanks thereof. 25

4. In a loose leaf book, in combination, a pair of plates related together as toggle arms, sheet-carrying prongs fixed to the plates, a spring plate covering the pair of plates and bearing against their outer edges, a back, 30 and headed studs connecting the pair of plates with the back.

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