

Patented Nov. 2, 1909.

938,530.

Fig. 1.

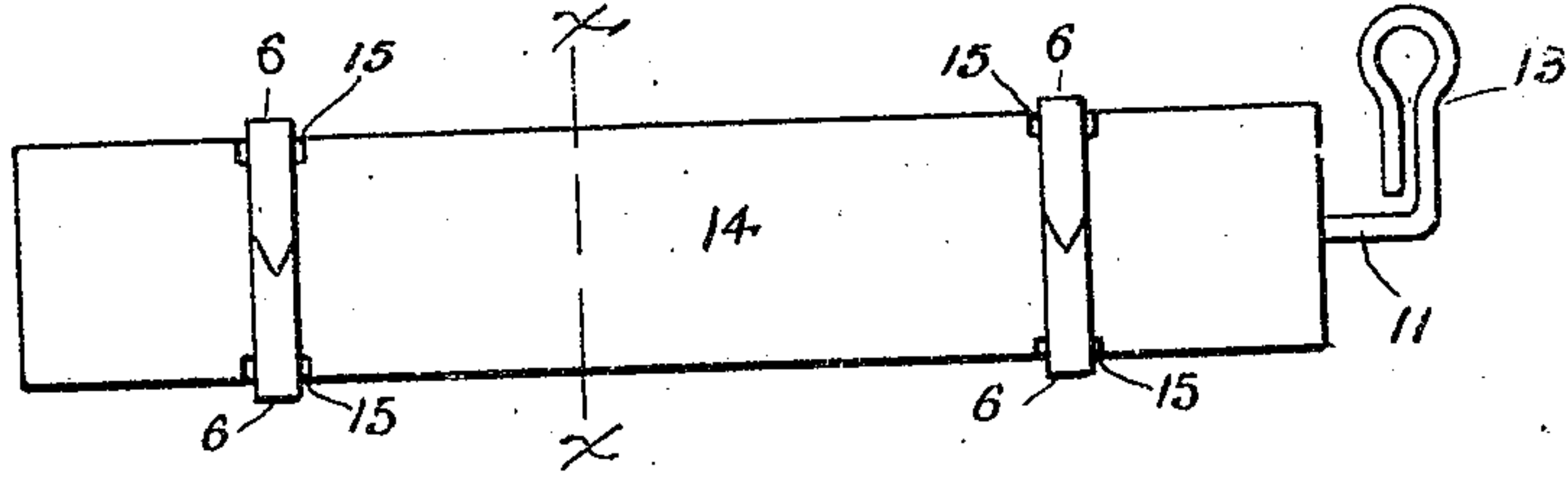


Fig. 2.

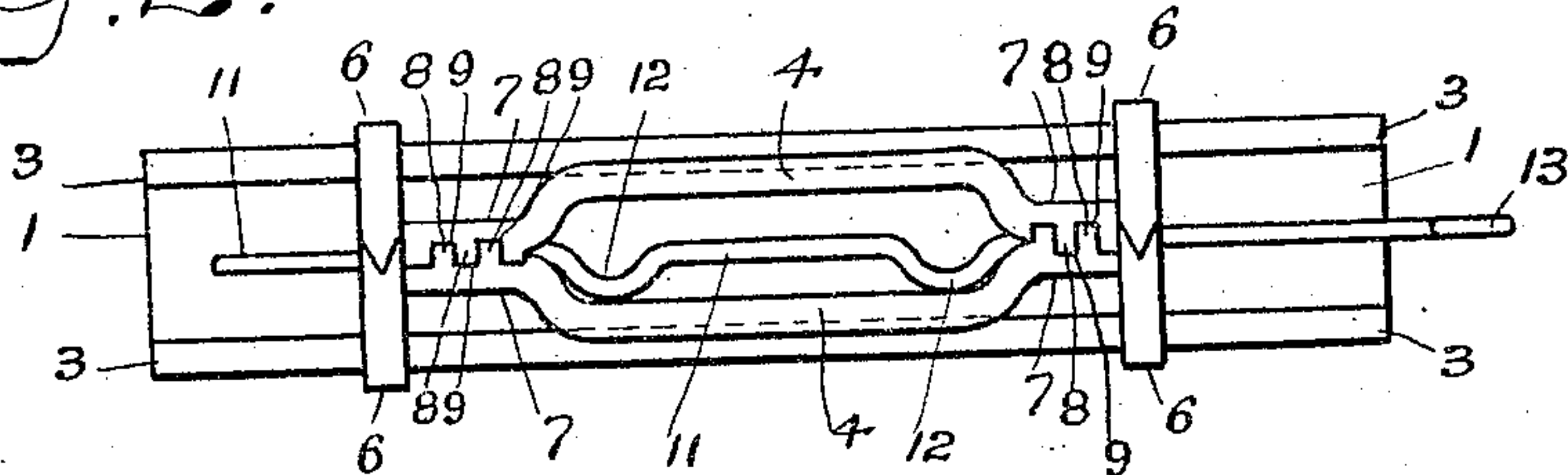


Fig. 3.

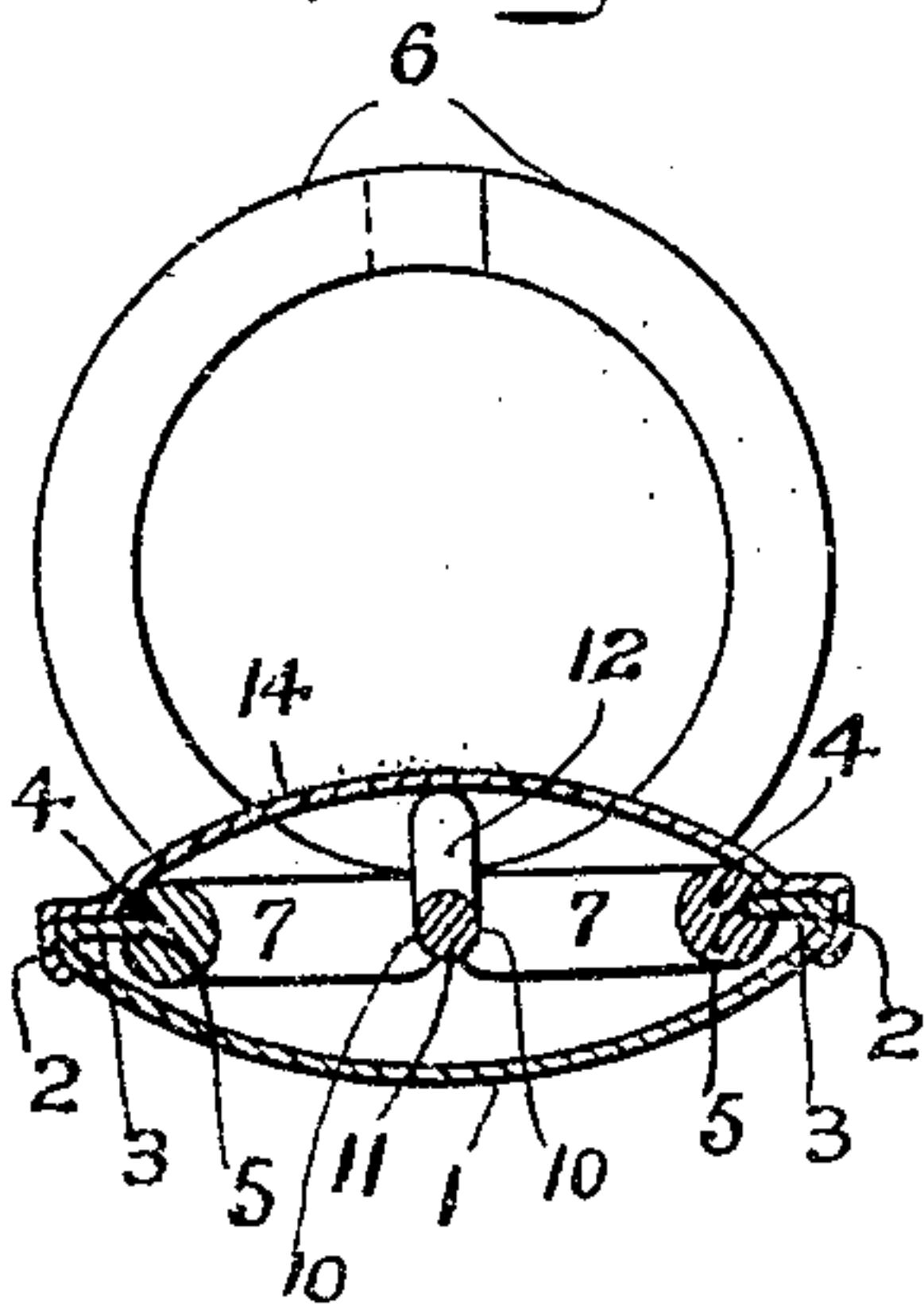


Fig. 5.

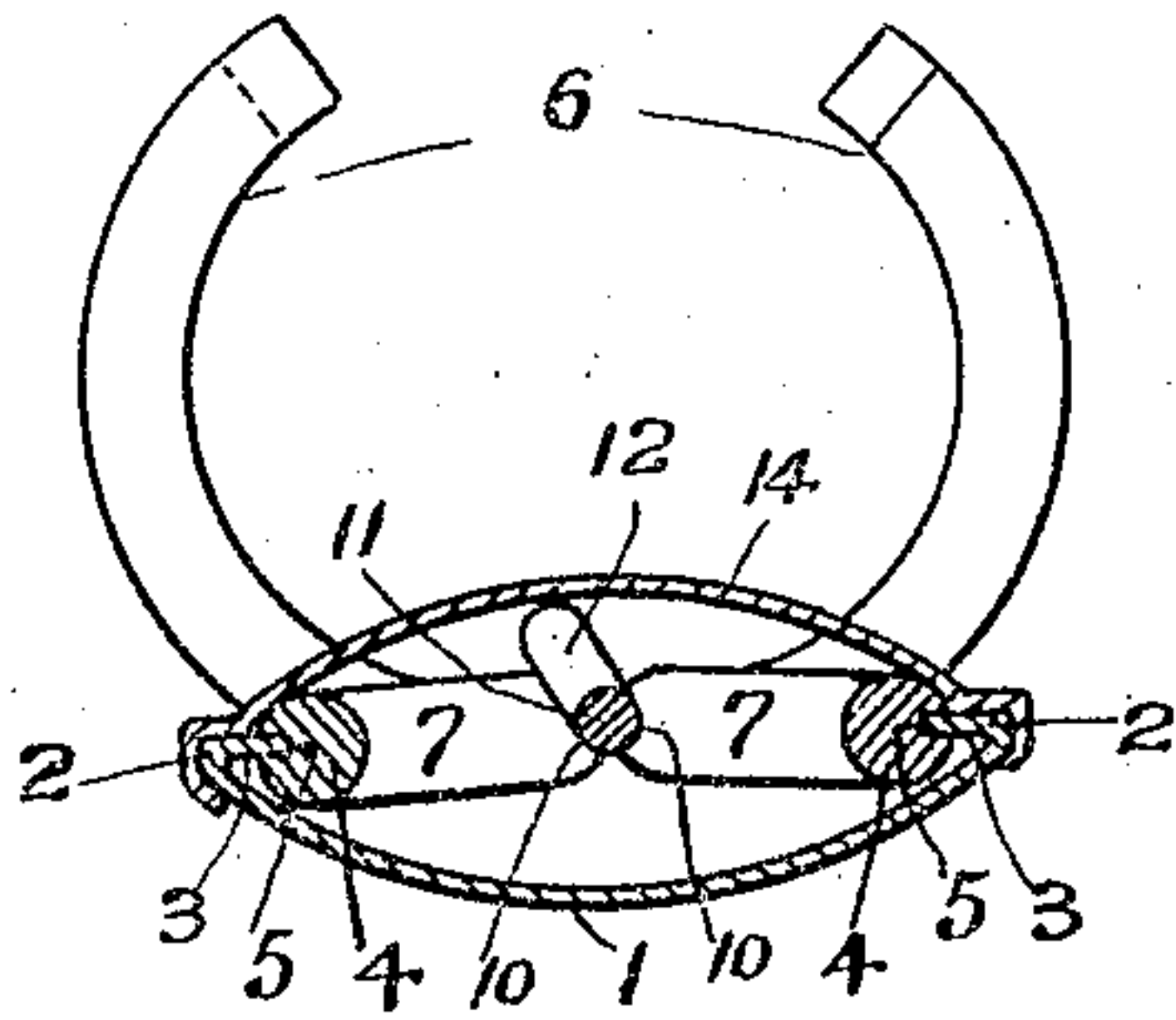


Fig. 4.

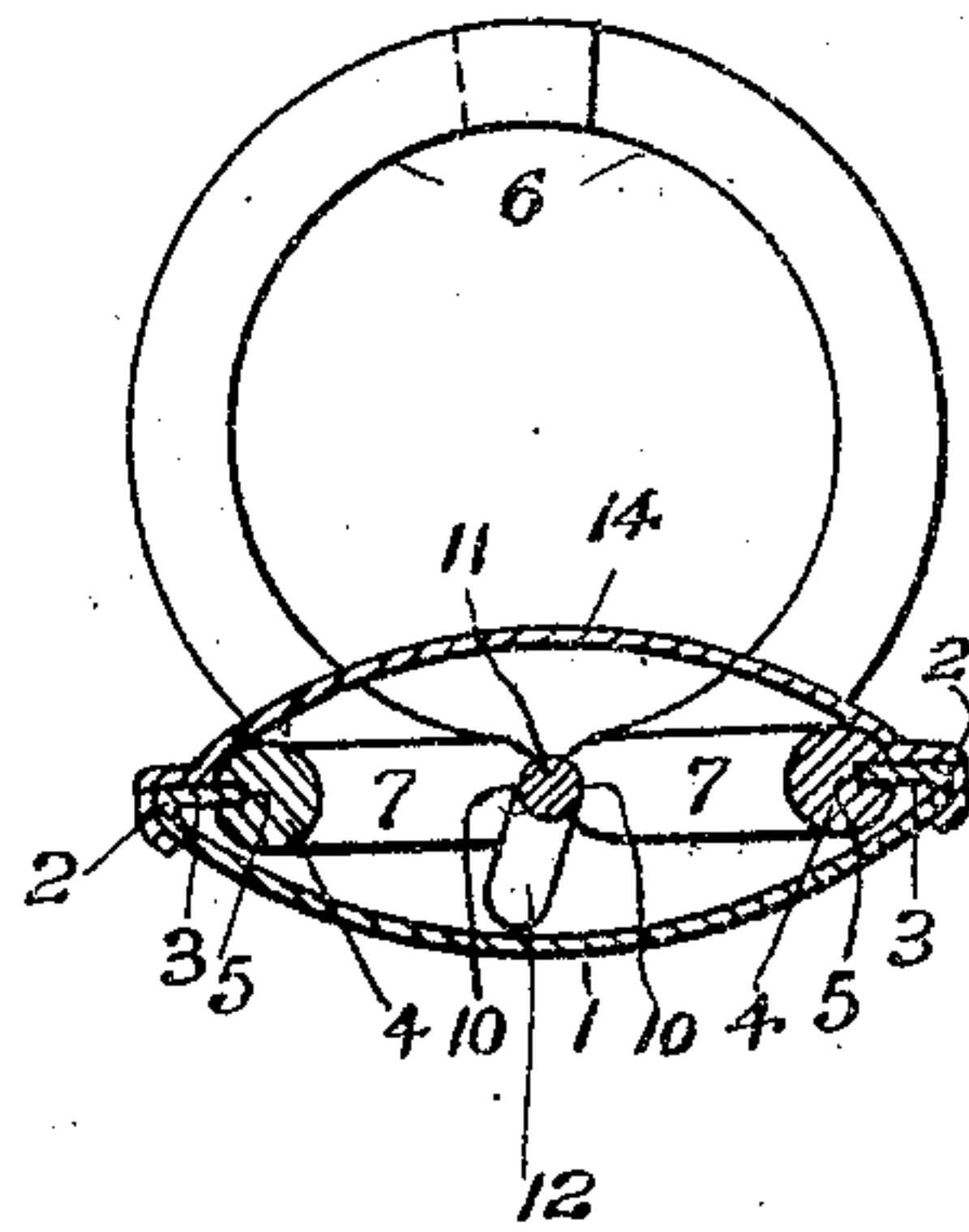


Fig. 6.

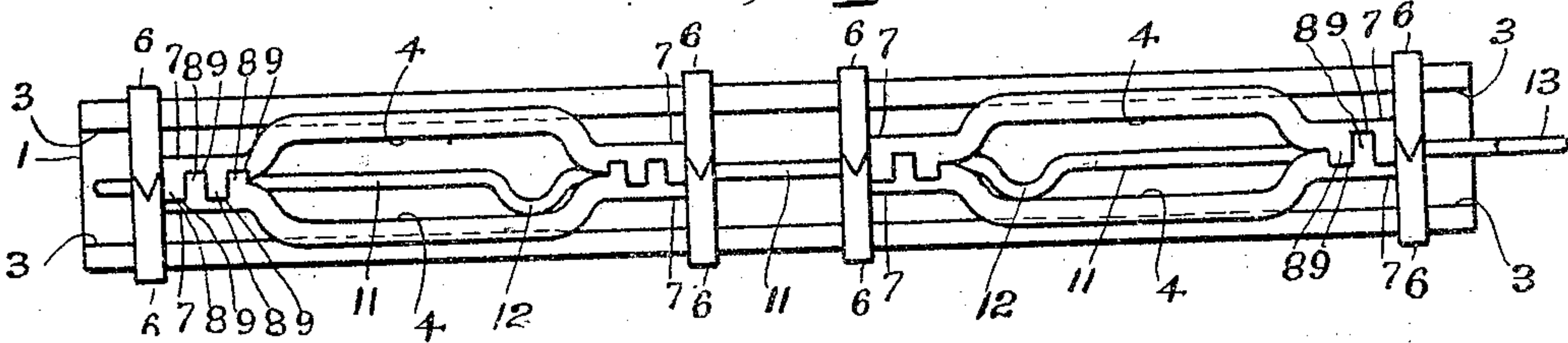
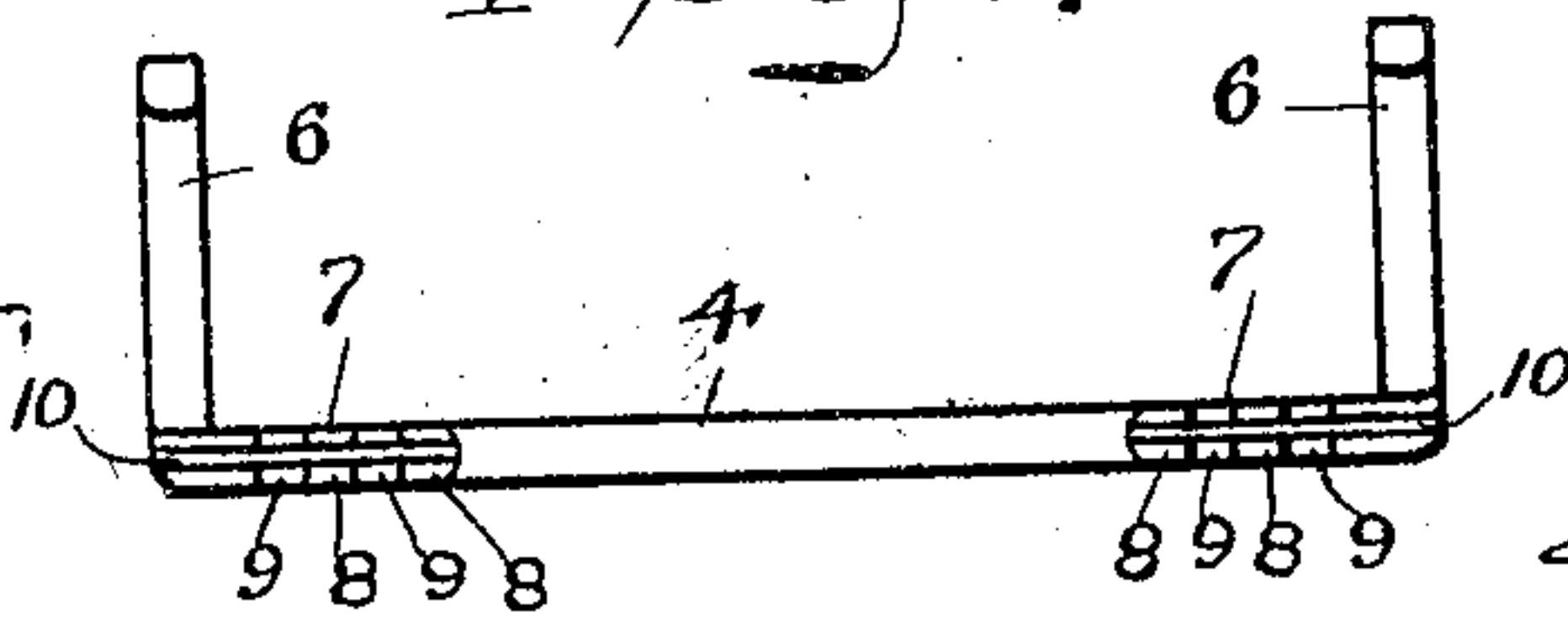


Fig. 7.



WITNESSES:

H. C. Lamb,
 M. J. Longden

INVENTOR

Edgar P. Webster

BY

ATTORNEY

UNITED STATES PATENT OFFICE.

EDGAR P. WEBSTER, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE NATIONAL
BLANK BOOK CO., OF HOLYOKE, MASSACHUSETTS, A CORPORATION OF MASSA-
CHUSETTS.

LOOSE-LEAF BINDER.

938,530.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed June 15, 1909. Serial No. 502,241.

To all whom it may concern:

Be it known that I, EDGAR P. WEBSTER, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Loose-Leaf Binders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to loose leaf binders, but more particularly has reference to that class of such devices in which complementary hook elements are provided that are capable of being opened or closed.

The object of my improvement is to greatly facilitate the assembly and operation of the hook carrying elements, and furthermore to enable all the hooks to be opened or closed and locked in closed position by the manipulation of a single element.

With these ends in view my invention consists in the combination and arrangement of parts hereinafter fully set forth and then particularly pointed out in the claims which conclude this description.

In the accompanying drawing Figure 1 is a plan view of my improved loose leaf binder—Fig. 2 a plan view of the same with the top casing removed—Fig. 3 a cross section at the line *x, x*, of Fig. 1—Fig. 4 a view similar to Fig. 3 but showing the offset depending at an angle against the bottom casing—Fig. 5 a view likewise similar to Fig. 3, but showing the position of the parts when the hooks are opened and immediately prior to the turning of the pintle lever for the purpose of closing said rings—Fig. 6 an interior plan illustrating a series of loose leaf binders constructed in accordance with my improvement, and Fig. 7 is a detail inner edge view of one of the hook carrying arms.

Similar numerals of reference denote like parts in the several figures of the drawing.

1 is the bottom casing which is provided with integral upstanding sides 2 that are turned inwardly so as to form lateral edges 3.

4 are the hook carrying arms which are grooved as seen at 5 lengthwise of their outer surfaces and in assembling these arms these grooves are merely engaged with the edges 3 whereupon they will readily slide so as to assume their proper place within the

casing, and this manner of assembling these arms with respect to the casing will bring the complementary arched hooks 6, carried by said arms, above the plane of the edges 3 so that it is not necessary to form any notches within the bottom casing in order to allow for the movements of these hooks in opening and closing. These arms 4 are formed with inwardly extending lugs 7 the inner edges of which are provided with interlocking tongues 8 and notches 9, and grooves 10 are cut lengthwise of the inner edges of said lugs, and through these grooves extends a pintle lever 11 which constitutes the means for pivoting together the oppositely disposed lugs.

The object of the tongues and notches is to cause the lugs to be closely associated so that the pintle lever will not become displaced during the operation of the hooks, and while I prefer this construction, I do not wish to be limited thereto since the inner edges of these lugs may be grooved and the tongues and notches omitted, as is shown in the Letters Patent above referred to.

The pintle lever 11 has offset portions 12 while one extremity of said lever is provided with any suitable crank or handle 13, and the casing is closed by the cap plate 14 which is provided with small gates 15 to allow for the movements of the hooks in opening and closing. By turning the lever 11 to the position shown at Figs. 1, and 3, the offsets 12 will extend in a vertical plane against the plate 14, and the hooks 6 will therefore be locked in closed position so that they cannot be manually opened. By turning the lever 11 in the reverse direction these offsets will be caused to bear against the bottom of the casing, as shown at Fig. 4, and by the continued turning of this lever the offsets will operate against the casing after the manner of a cam, and the lever and lugs will be elevated and the hooks thereby opened.

When the lever is turned so as to cause the offsets to bear against the cap plate 14 the lugs will thereby be thrown downwardly and the hooks closed.

It will be apparent that the journaling of the side arms to the edges of the casing will enable the rocking movements of said arms to be effected with great facility, and, moreover, this method of journaling brings these arms higher up in the casing so that the normal plane of the hooks is elevated, thereby

doing away with the necessity of notching the edges of the casing for the accommodation of the hooks during the opening and closing, and furthermore permitting the sliding of the arms into position with respect to the casing after the pintle lever has been assembled between the lugs.

In the construction shown at Fig. 2 where a single pair of complementary hooks 6 is shown, I provide two offsets 12 in the immediate vicinity of the lugs so that the latter will act as stops to prevent lengthwise displacement of the pintle lever.

In the construction shown at Fig. 6, where I have shown two pairs of arms with their complementary hooks, I have provided two offsets located in such a manner that lengthwise movement of the pintle lever is impossible.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A loose leaf binder, comprising a bottom casing having upstanding sides that terminate in inwardly extending edges, arms having grooves in their outer surfaces which engage with said edges and provided with inwardly extending grooved lugs and terminating in complementary arched hooks, a

pintle lever extending lengthwise of said casing through the grooves in the lugs and provided with offset portions, and the cap plate which covers said casing.

2. In a loose leaf binder, the combination of the casing having upstanding sides that terminate in inwardly extending edges, a pair of arms having grooves lengthwise of their outer surfaces which grooves are engaged with said edges, said arms terminating in complementary arched hooks and provided with inwardly extending grooved lugs that have interlocking tongues and notches, a pintle lever extending lengthwise of the casing through the grooves in said lugs and provided with offset portions adjacent to said lugs, and the cap plate which covers said casing, said lever being provided with a suitable handle whereby the turning of the lever in reverse directions will cause said offset portions to impinge against the casing and cap plate thereby opening and closing the hooks.

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

EDGAR P. WEBSTER.

Witnesses:

F. W. SMITH, Jr.,
M. T. LONGDEN.