

989,909.

2 SHEETS—SHEET 1.

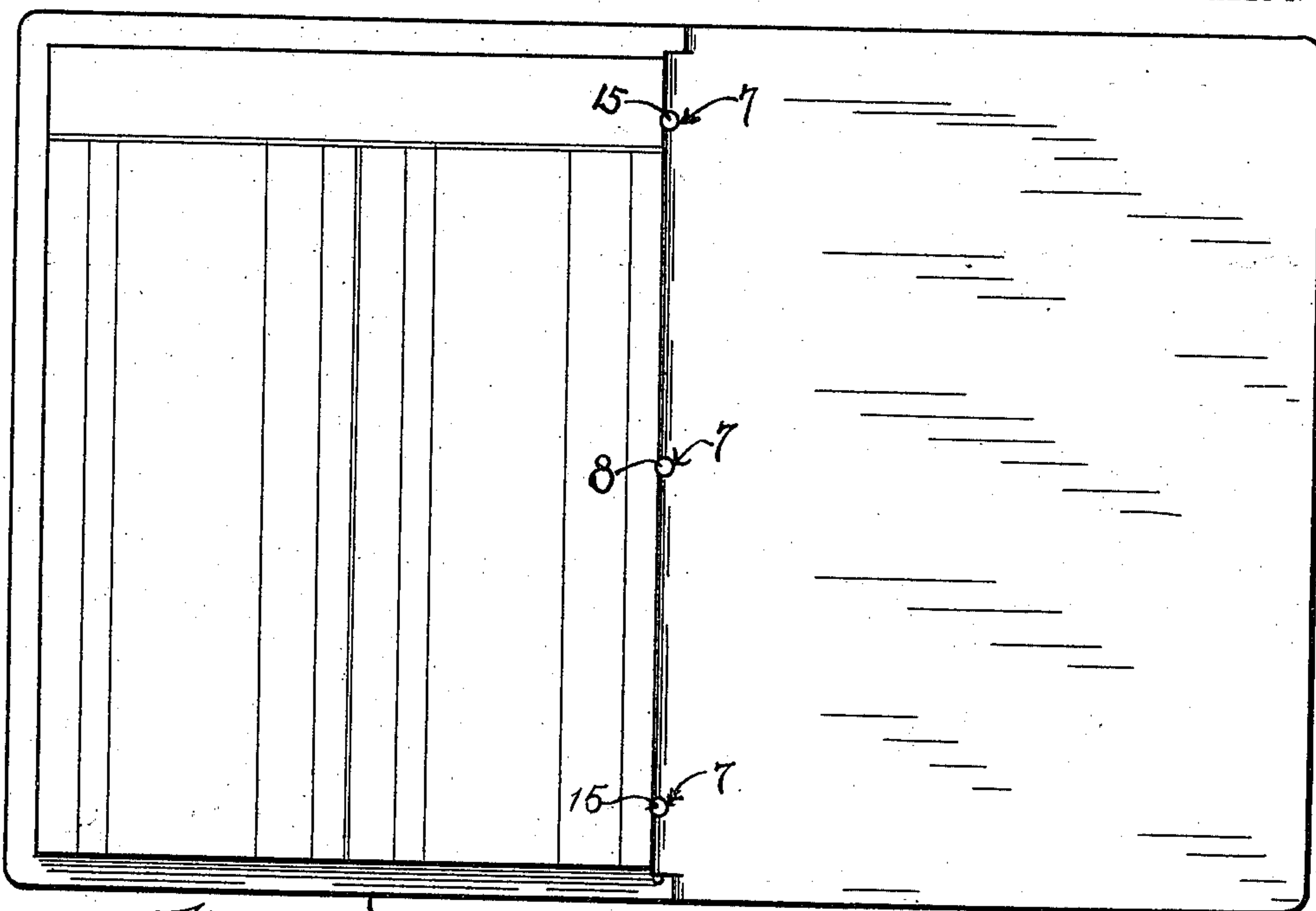


Fig. 1. 2

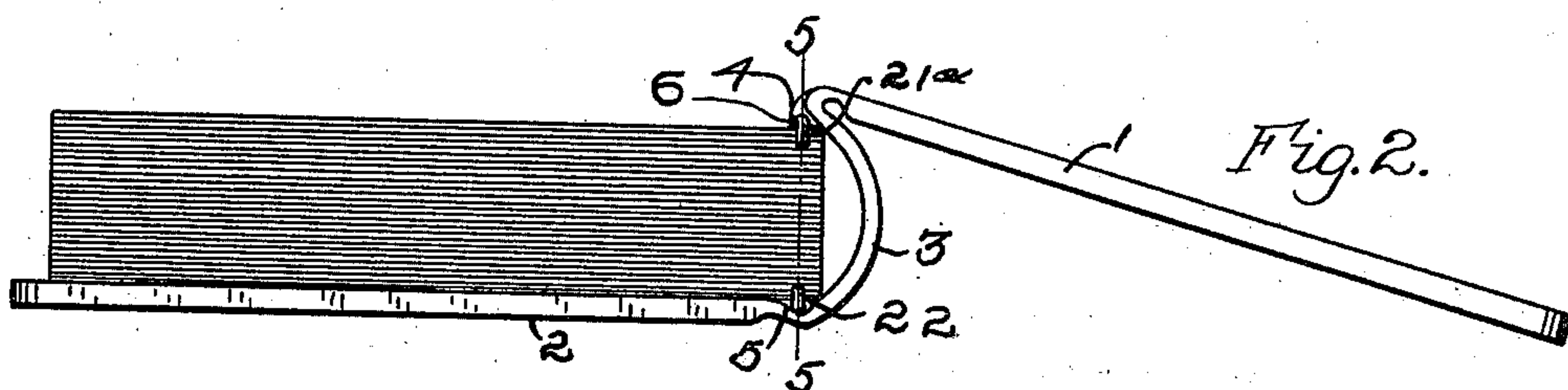


Fig. 2.

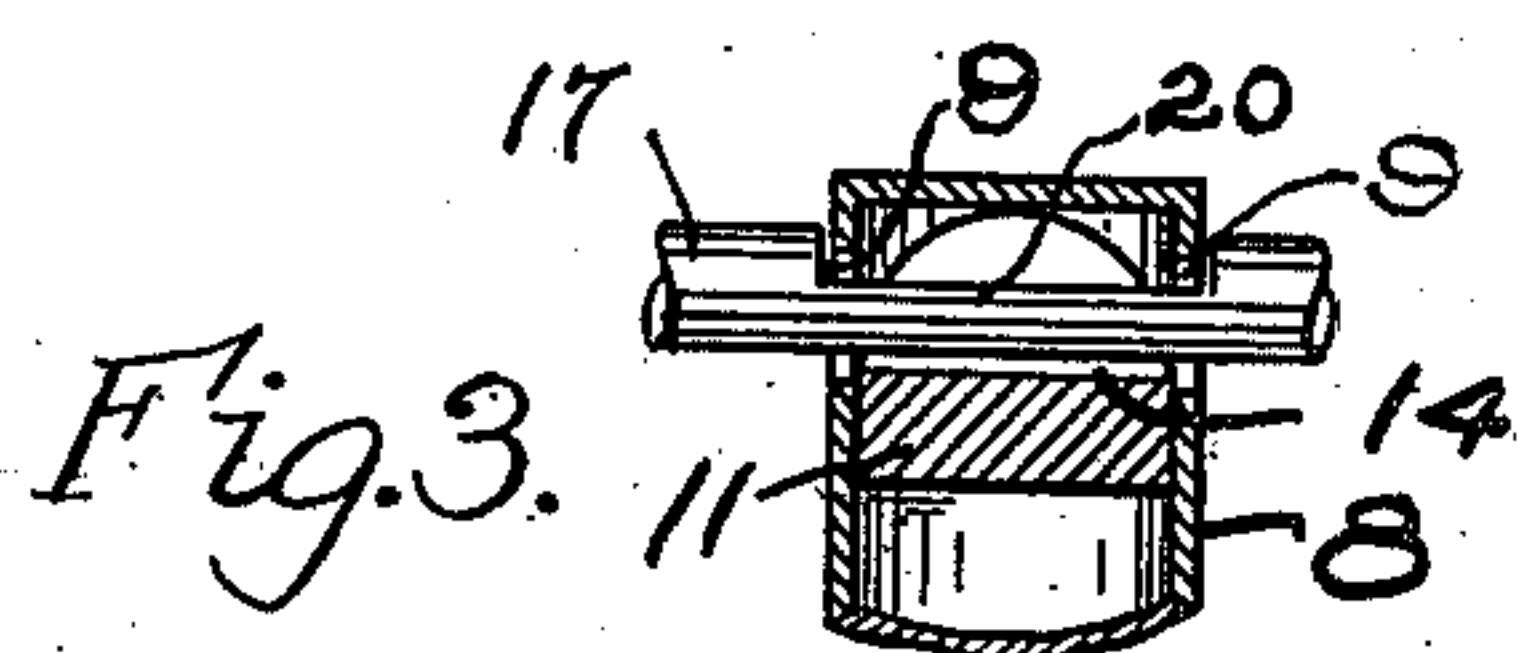


Fig. 3.

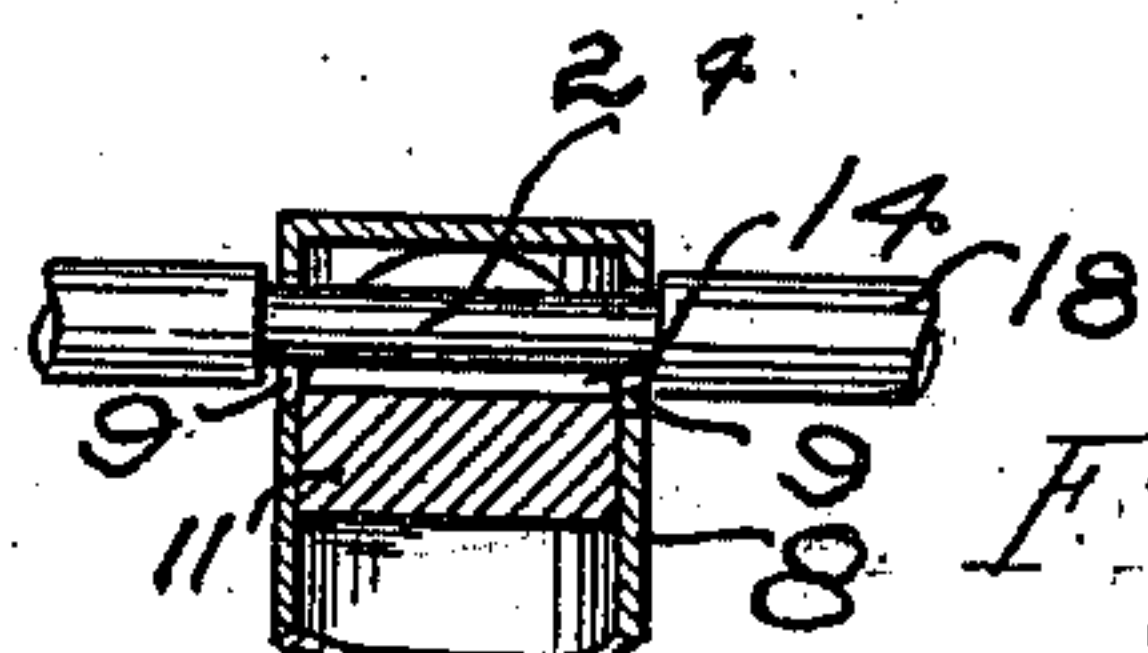


Fig. 4.

Witnesses  
H. A. Stock.

W.C. Schroeder

Inventor  
Gus Larsen

By E. E. Crooman,

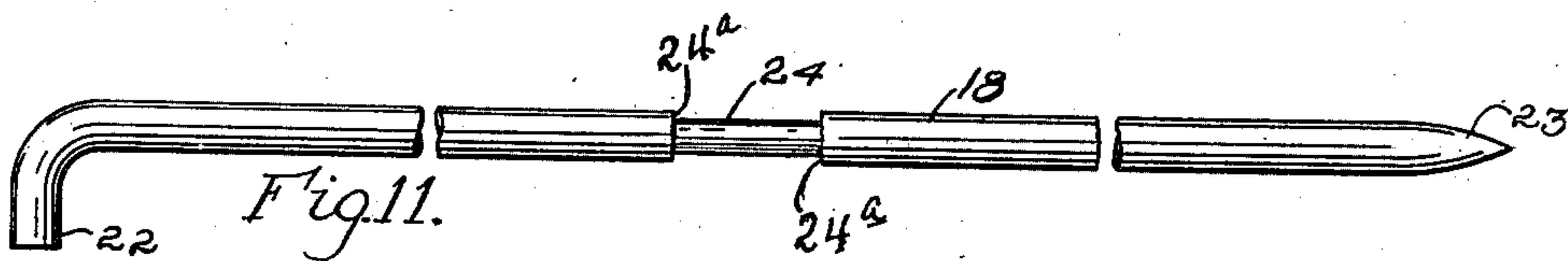
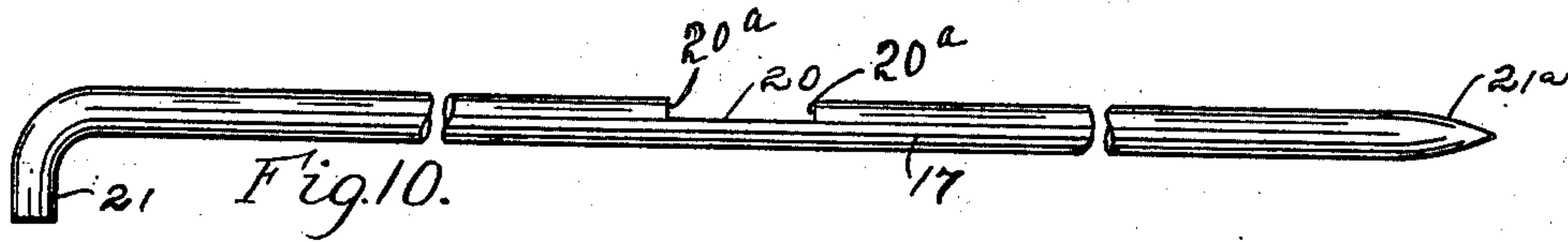
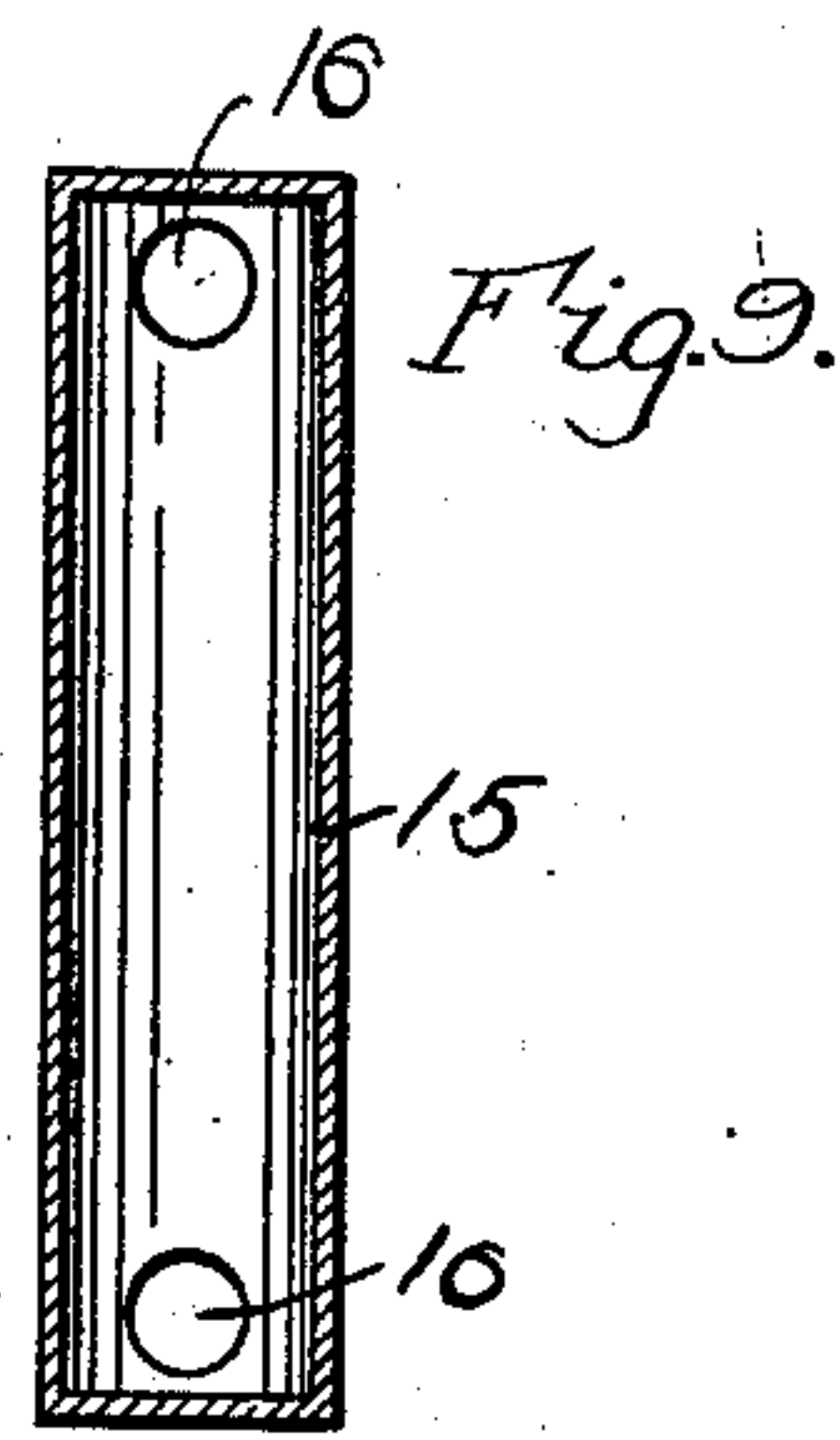
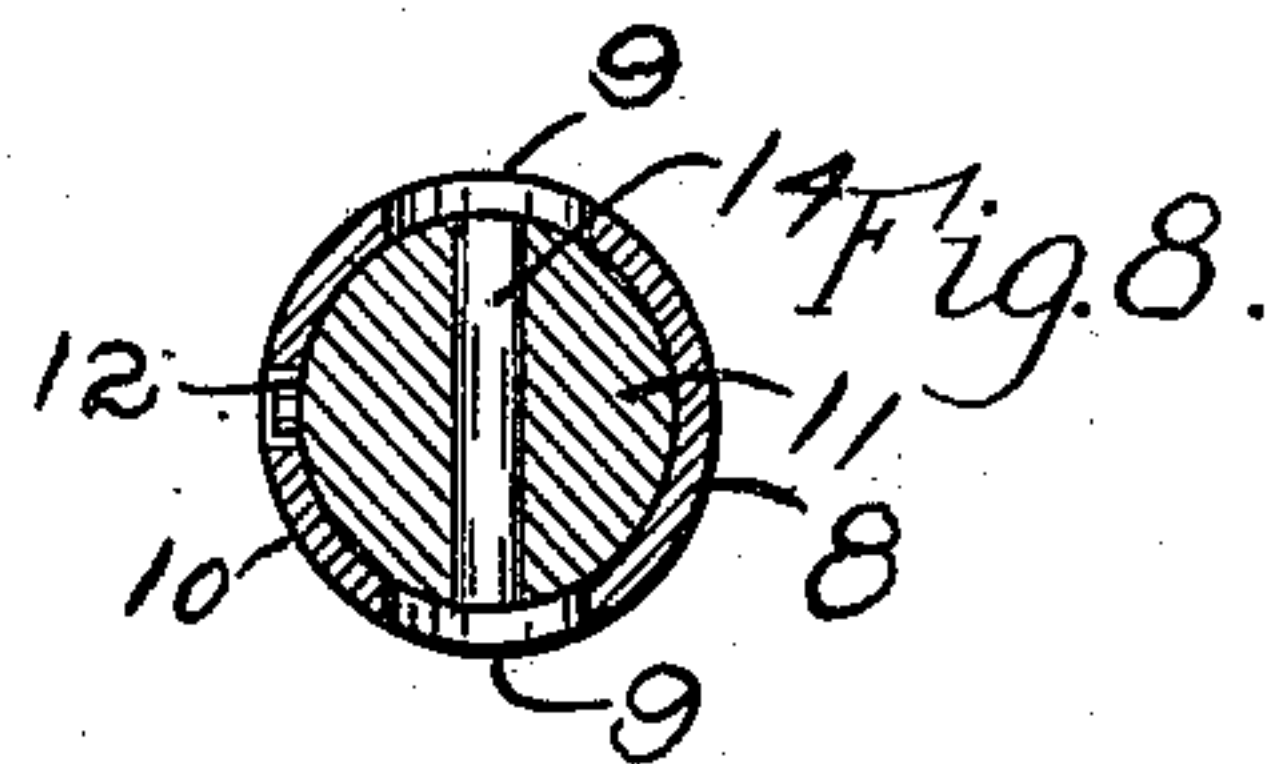
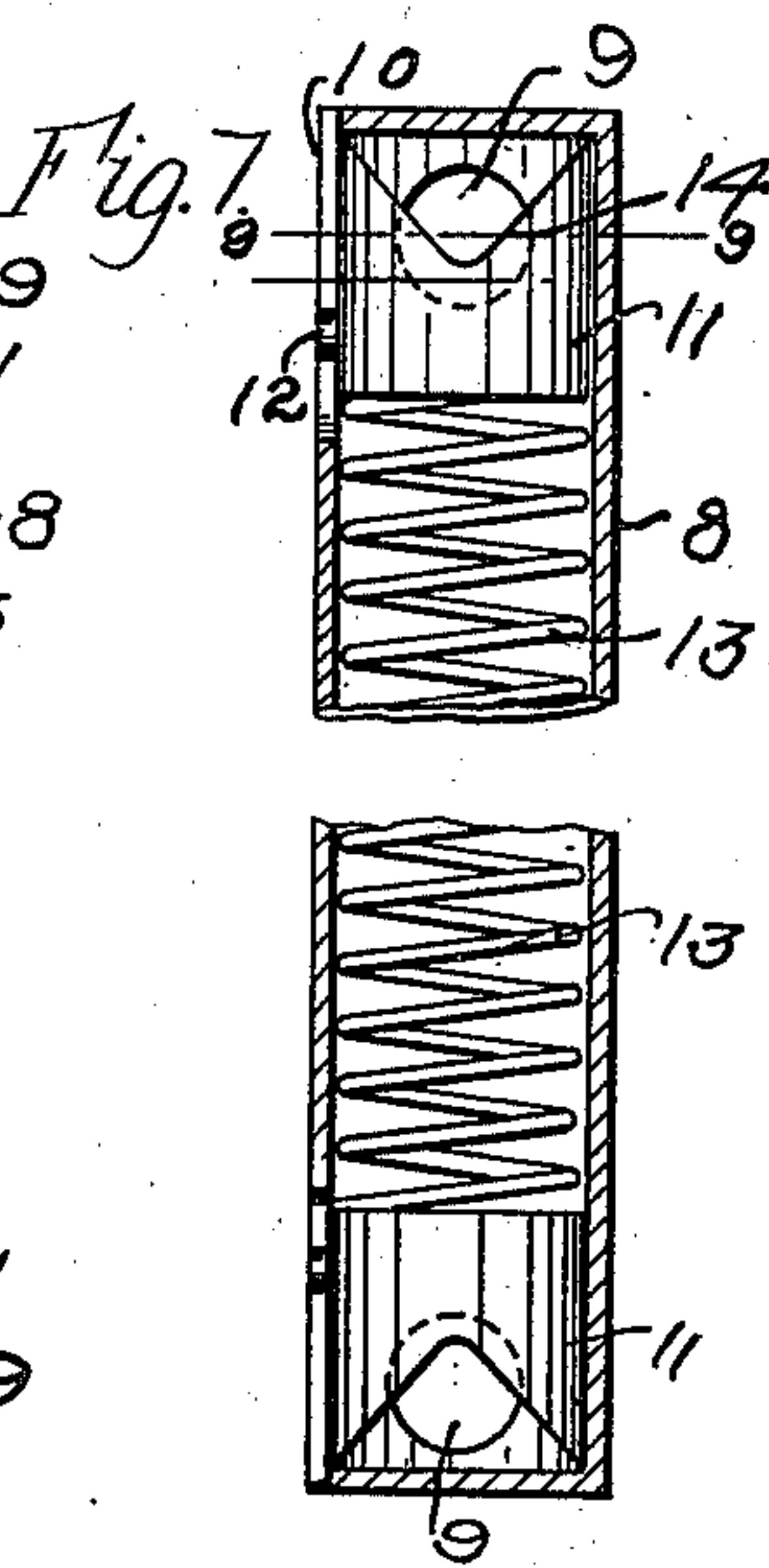
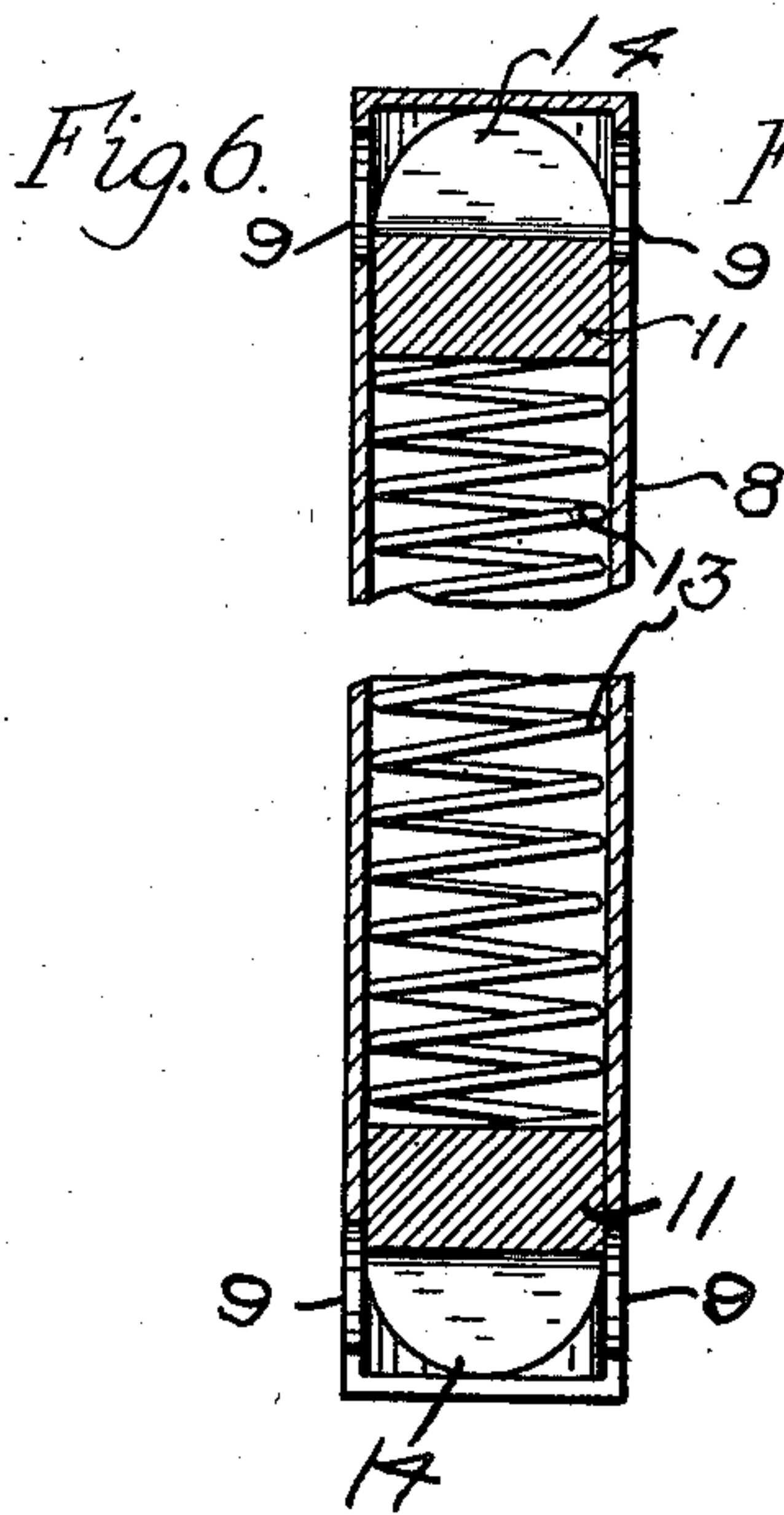
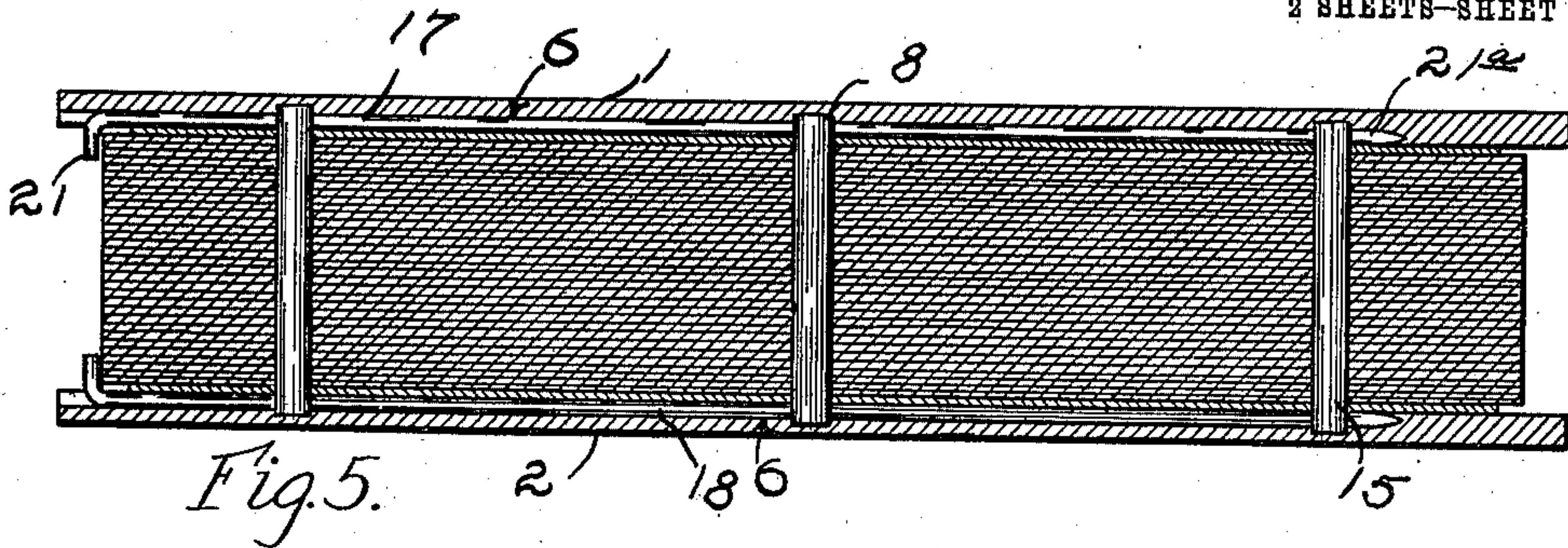
Attorney.

G. LARSEN.  
BOOK LOCKING DEVICE.  
APPLICATION FILED AUG. 3, 1910.

989,909.

Patented Apr. 18, 1911.

2 SHEETS—SHEET 2.



Witnesses  
O. A. Stark.

H. Q. Schroeder

Inventor  
Gus Larsen

By E. O. Kroonman,  
Attorney.



# UNITED STATES PATENT OFFICE.

GUS LARSEN, OF OAKLAND, CALIFORNIA.

## BOOK-LOCKING DEVICE.

989,909.

Specification of Letters Patent.

Patented Apr. 18, 1911.

Application filed August 3, 1910. Serial No. 575,272.

*To all whom it may concern:*

Be it known that I, GUS LARSEN, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Book-Locking Devices, of which the following is a specification.

This invention relates to loose leaf books, and the principal object of the same is to provide novel means for retaining leaves therein, said retaining means including interchangeable locking means by the use of which the leaves may be readily removed as the book is being filled, and when filled said leaves may be permanently locked therein.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

Figure 1 is a plan view of the improved book one cover being shown in an open position. Fig. 2 is an end view thereof. Figs. 3 and 4 are fragmentary vertical sectional views of the leaf locking means. Fig. 5 is a vertical sectional view taken substantially on the line 5—5, Fig. 2, the covers of the book being closed. Fig. 6 is a vertical sectional view of one of the locking posts. Fig. 7 is a similar view, taken at right angles to Fig. 6. Fig. 8 is a horizontal sectional view taken on the line 9—9, Fig. 7. Fig. 9 is a vertical sectional view of a guide post forming a part of this invention. Fig. 10 is a detail view in side elevation of one of the bars used for temporarily locking the leaves in the book. Fig. 11 is a similar view of one of the bars for permanently locking the leaves in the book.

Referring to the accompanying drawings by numerals, it will be seen that the improved loose leaf book comprises the covers 1 and 2 and the flexible back 3 which is preferably integral with said covers. The back 3 is provided with the upper and lower inwardly projecting extensions 4 and 5. Said extensions are provided with the longitudinal openings 6 and the intersecting transverse openings 7. The openings 7 form seats for the ends of locking and guiding posts and in the accompanying drawings, the extensions have been shown equipped

with three of said posts, but it will be understood, of course, that more or less may be employed.

The intermediate openings of the extensions 4, 5 receive the ends of the hollow and preferably cylindrical locking post 8 said post having its ends closed, and adjacent each end is provided with transverse guide openings 9, and also with vertical guide slots 10. Latches 11 are slidable vertical in said post and are provided with laterally projecting lugs 12 that enter the guide slots 10. The latches 11 are held to their respective ends of the post 8 by an interposed spring 13, and have their outer ends provided with V-shaped notches 14 that are in alinement with the guide openings 9.

The end openings of the extensions 4 have the closed ends of the hollow and preferably cylindrical guide posts 15 seated therein, said posts provided with transverse end openings 16 that aline with the end openings 9 of post 8.

Locking bars 17 and 18 are employed for retaining the leaves 19 on the posts 8 and 15, said bars being shown in detail in Figs. 10 and 11. Said bars are passed through the longitudinal openings of extensions 4 and 5 and through the end openings 9 and 16 of said posts and are locked to the post 8 by means of the latches 11. The bars 17 are adapted for temporarily locking the leaves 19 to the posts and are provided with an intermediate cut-out portion 20. Said cut-out portions extend longitudinally of the bars 17 and their ends provide the abutment shoulders 20<sup>a</sup>. In use, the cut-out portions of the bars 17 are within the post 8, and they rest within the notches of latches 11 and the pressure of the spring 13 upon said latches causes the bars to bind within the openings 9, and thereby hold the leaves upon the posts. To release the leaves, the bars are pressed toward the center of post 8 so that the end shoulders of the cut-out portions are clear of the edges of the openings 9, whereupon said bars can be readily withdrawn. The bars 17 have a handgrip 21 at one end to facilitate handling the same and their other ends 21<sup>a</sup> are pointed which facilitates placing the bars in position to lock the leaves to the posts.

The bars 18 are provided with handgrips 22 and an end point 23 similar to and for the same purpose as that described in connection with bars 17. The bars 18 are used



for permanently locking the leaves to the book, and are provided with the intermediate reduced portions 24. Said reduced portions are of the same contour of the bars 18, and the ends thereof provide the abutment shoulders 24<sup>a</sup>. When the book has been filled with the leaves, the bars 18 are passed through the end posts 15 and the intermediate post 8, the reduced portions of said bars being within the post 8 and seated in the spring pressed latches 11. Said latches clamp the reduced portions of said bars to the opening 9 with the end shoulders 24<sup>a</sup> abutting the outer end of said opening so that said bars cannot be removed from the post 8.

From the foregoing description it will be seen that this invention provides simple means whereby the leaves may be temporarily or permanently locked within the book and also that the locking bars in addition to performing their functions of retaining the leaves on the posts, also securely fasten said posts to the extensions of the back of the cover.

What I claim as my invention is:—

1. A binder comprising covers, guiding posts carried thereby and provided with transverse end openings, a locking post also carried by said covers, said locking post provided with transverse end openings, locking bars adapted to engage said transverse openings, and means in said locking post for locking said bars thereto.

2. A binder comprising covers, guiding and locking posts carried thereby, bars adapted to engage said posts, and means carried by the locking post for locking the said bars thereto.

3. A binder comprising covers, impaling posts carried thereby, latches in one of said posts, and bars for fastening said posts to said covers and adapted to be locked in engagement with said posts by said latches.

4. A binder comprising a cover, impaling posts carried thereby, latches slidable in the ends of one of said posts, a spring interposed between said latches, and locking bars engaging said posts and locked thereto by said latches.

5. A binder comprising a cover, impaling posts carried thereby, latching means in one of said posts, and locking bars held in engagement with said posts by said latching means.

6. A binder comprising a cover, hollow-impaling posts carried thereby, and provided with aligned transverse openings, latching means in one of said posts adjacent the transverse openings therein, and locking bars passed through said openings and provided with reduced portions which are engaged by said latching means.

7. A binder comprising a cover, hollow-impaling posts carried thereby and provided with transverse openings, latches in one of said posts and provided with a notch, a spring for normally holding said latches so that their notched portions are in alinement with the openings in said post, and locking bars passed through said openings and engaged by the notched portions of said latches.

8. A binder comprising a cover, impaling posts carried thereby, said posts provided with transverse end openings, latches in each end of one of said posts, a spring for holding said latches in locking position, bars passed through said openings and engaged by said latches, and means for disengaging said latches from said bars.

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

GUS LARSEN.

Witnesses:

H. C. SCHROEDER,  
F. P. SCHROEDER.