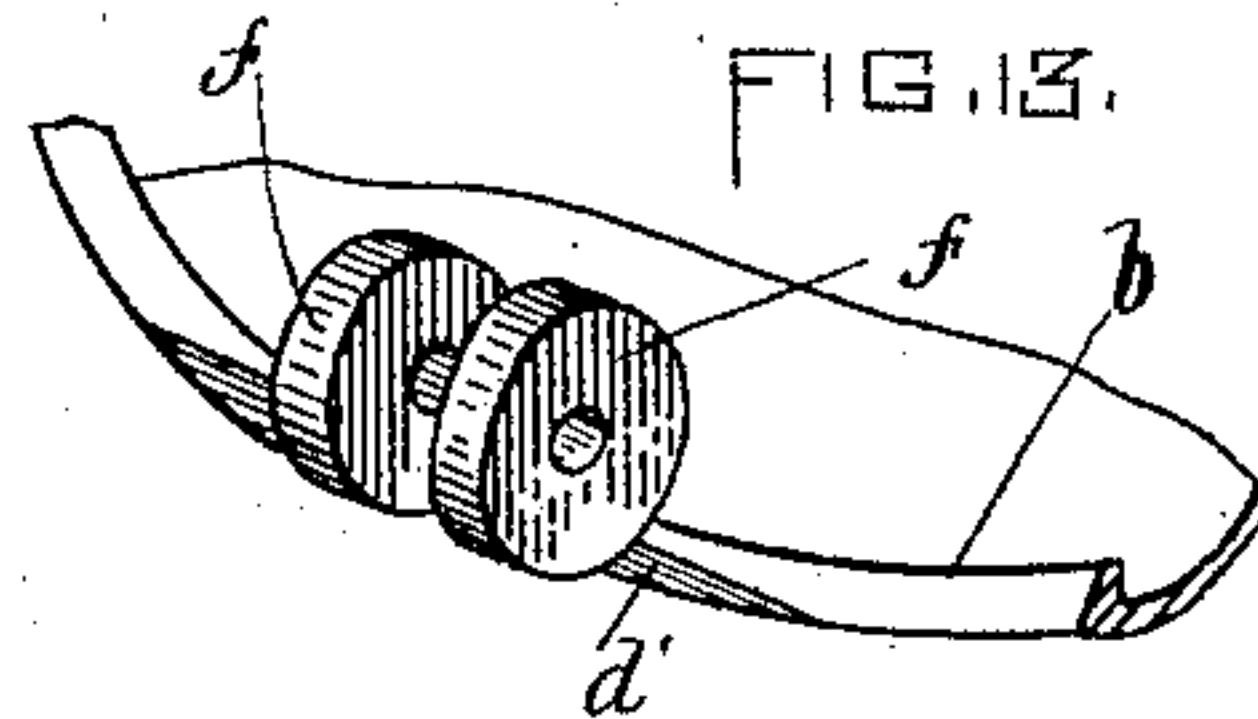
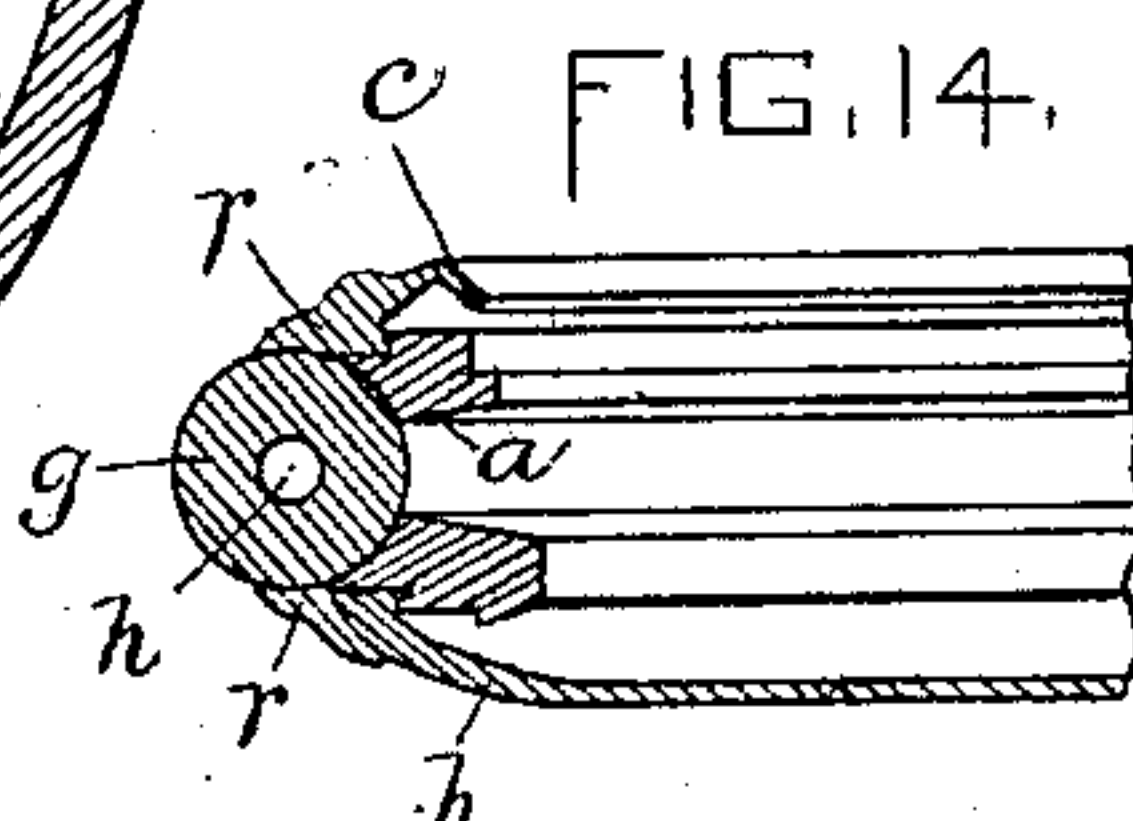
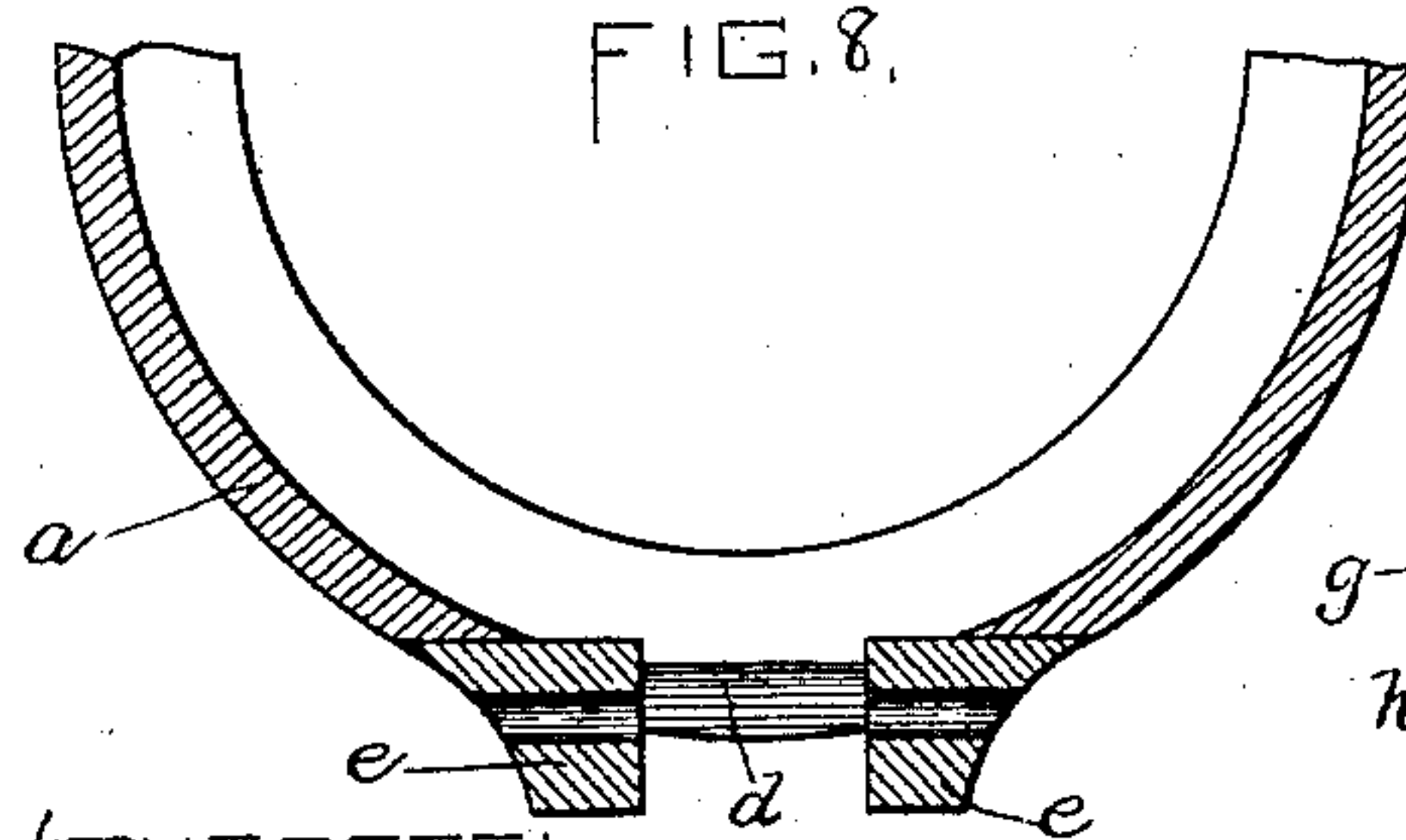
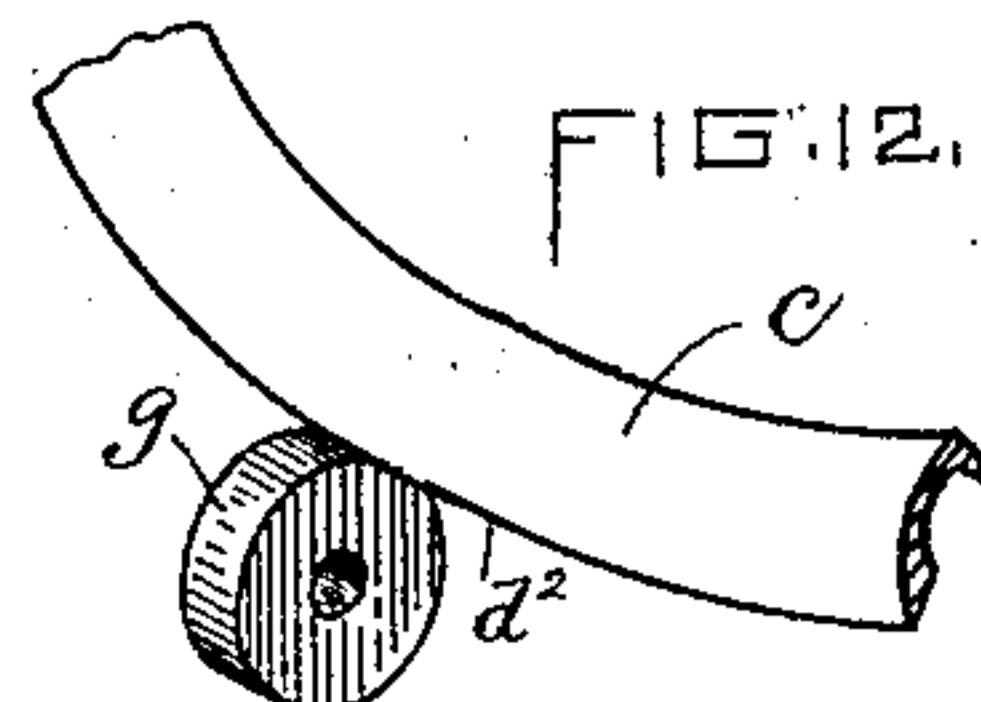
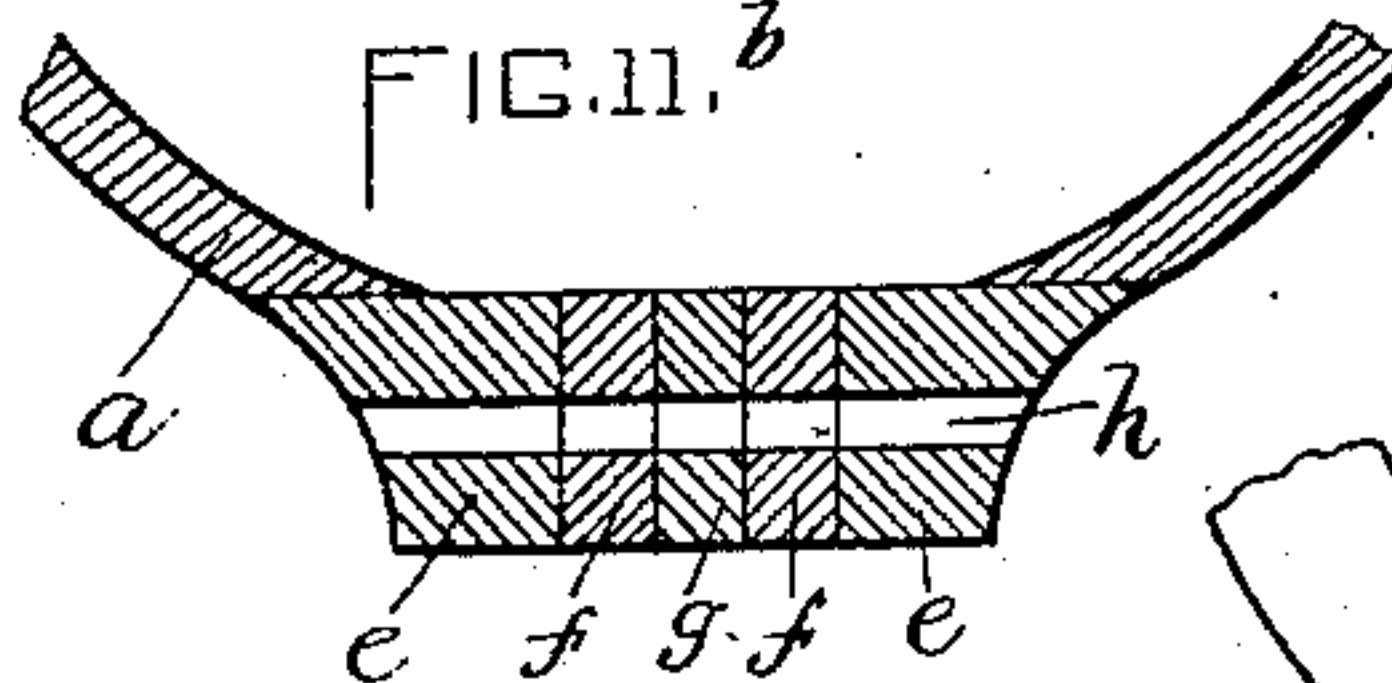
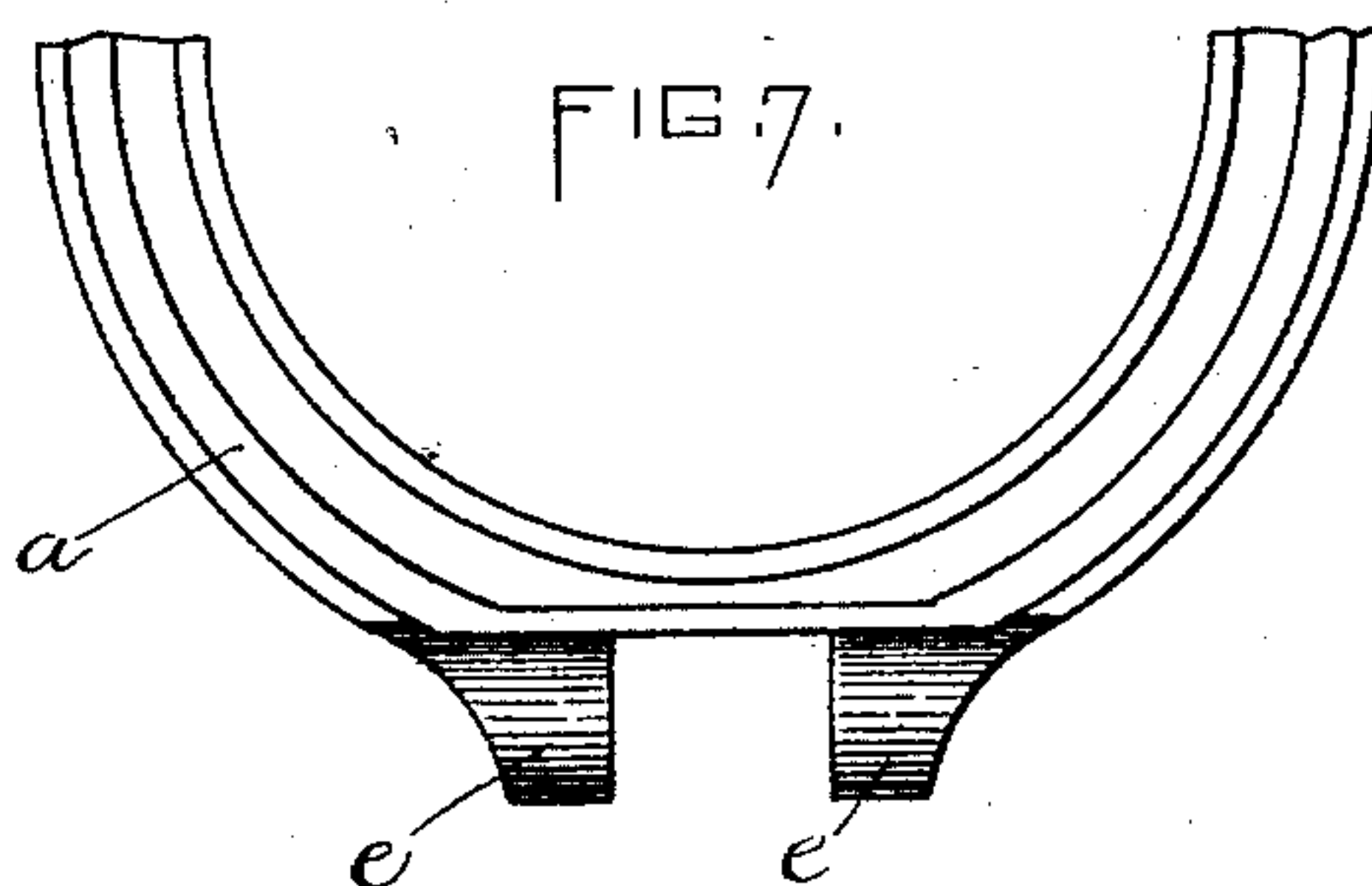
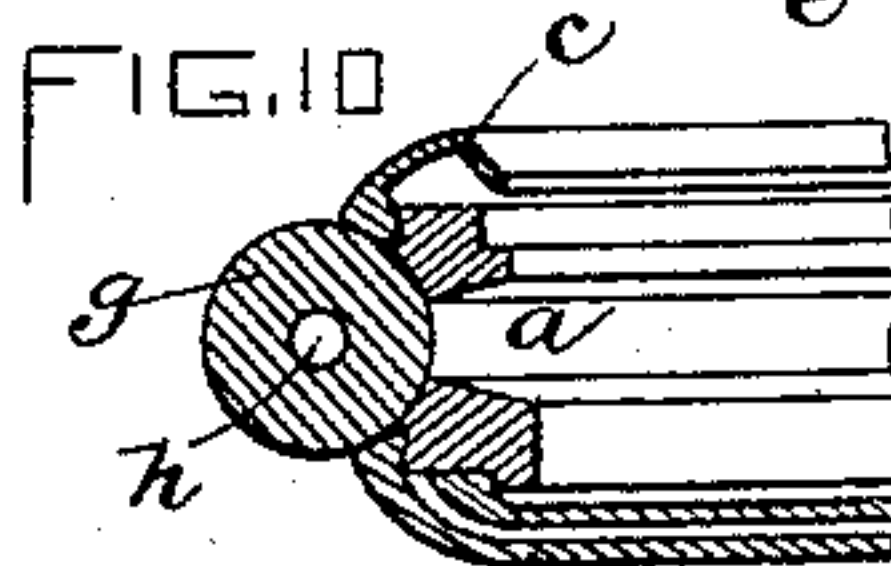
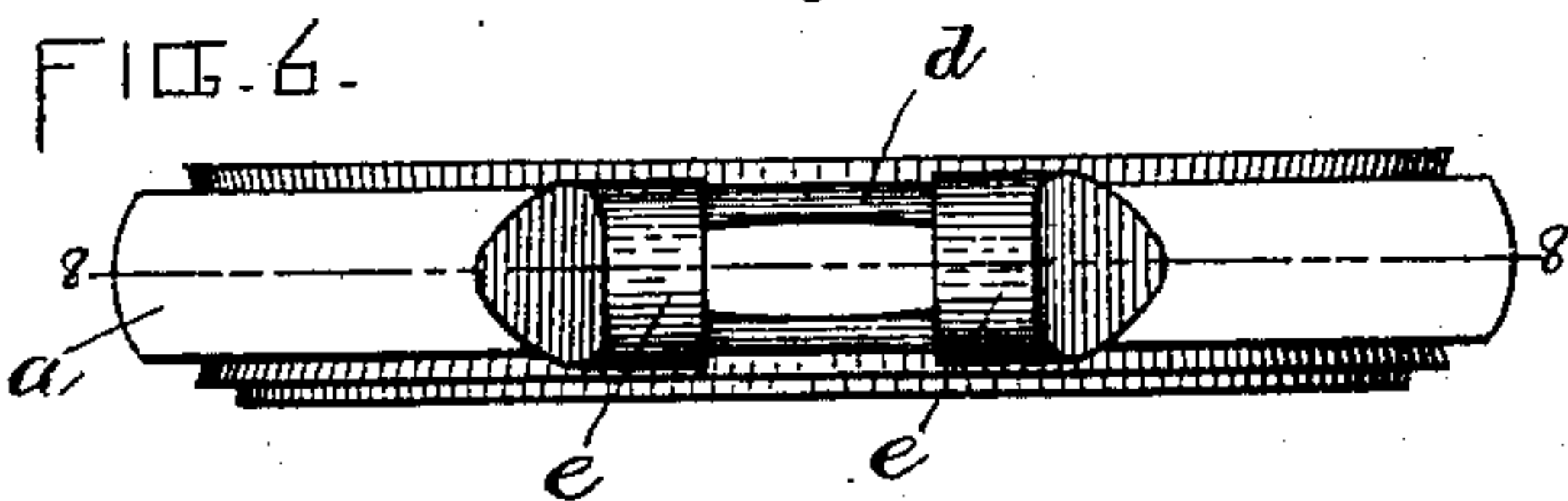
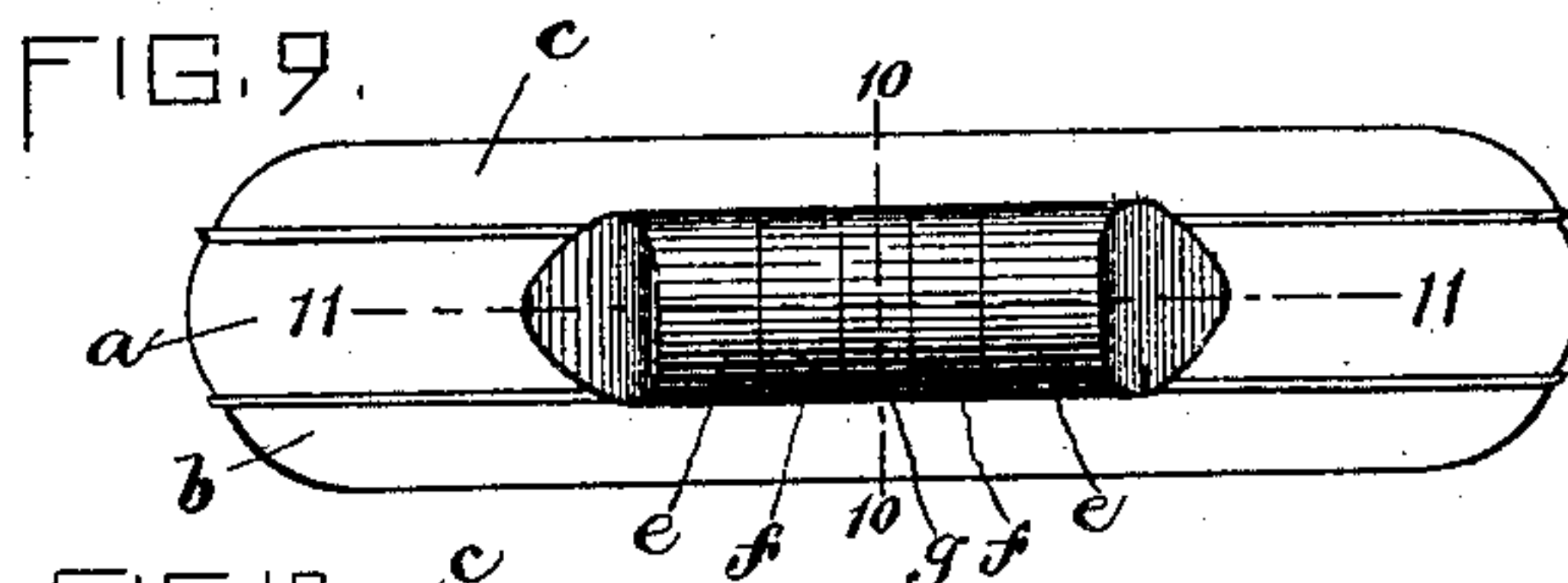
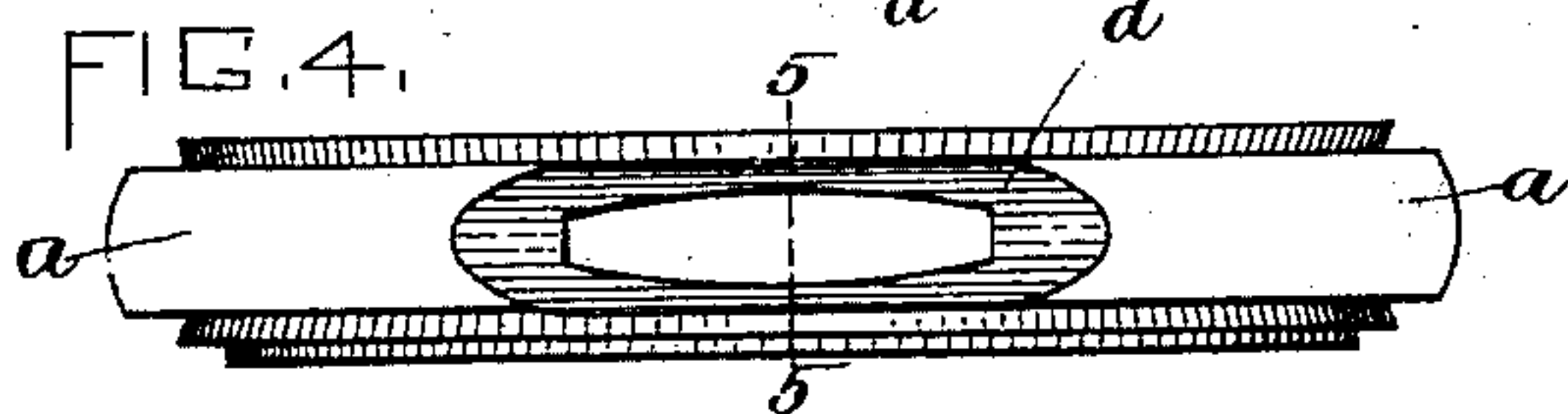
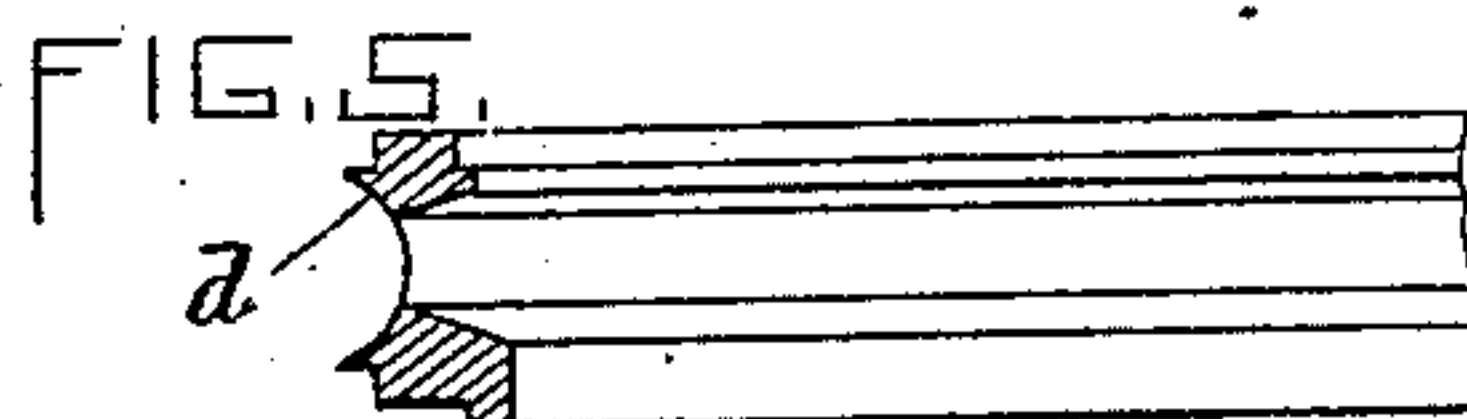
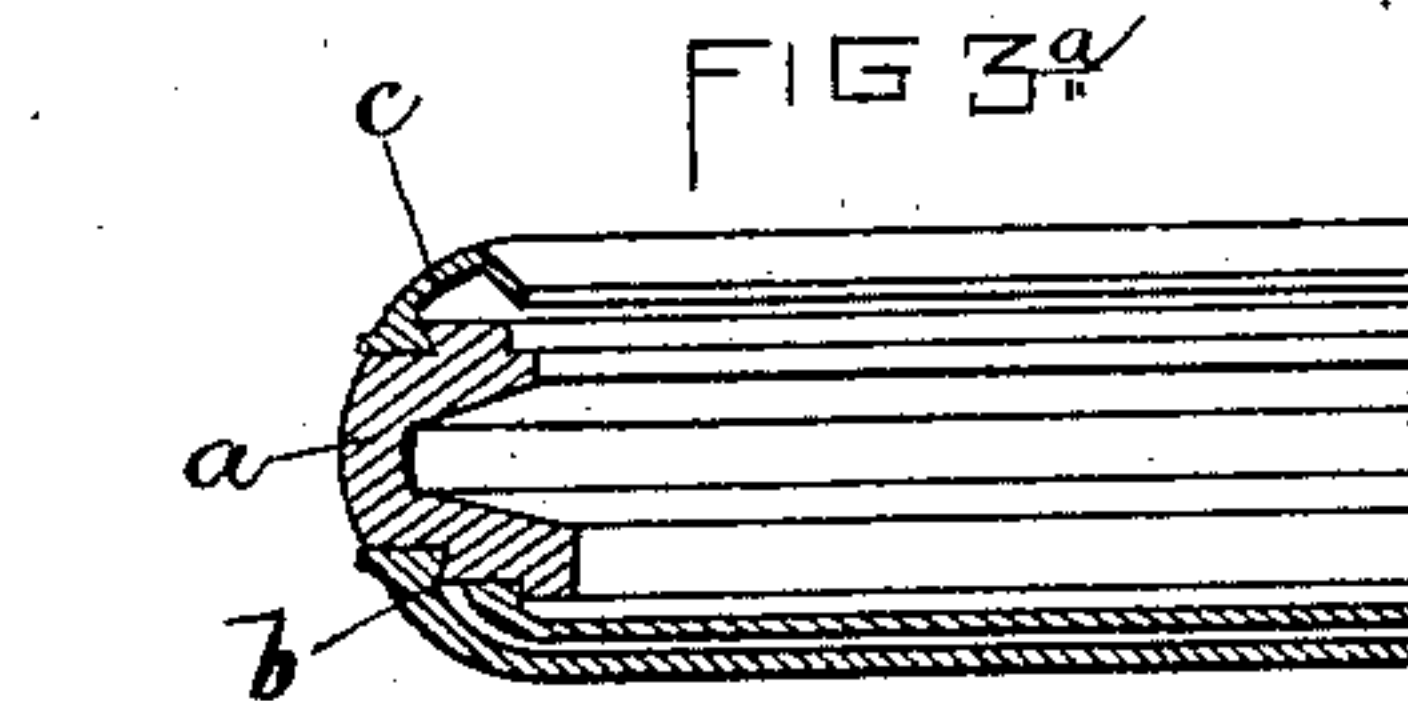
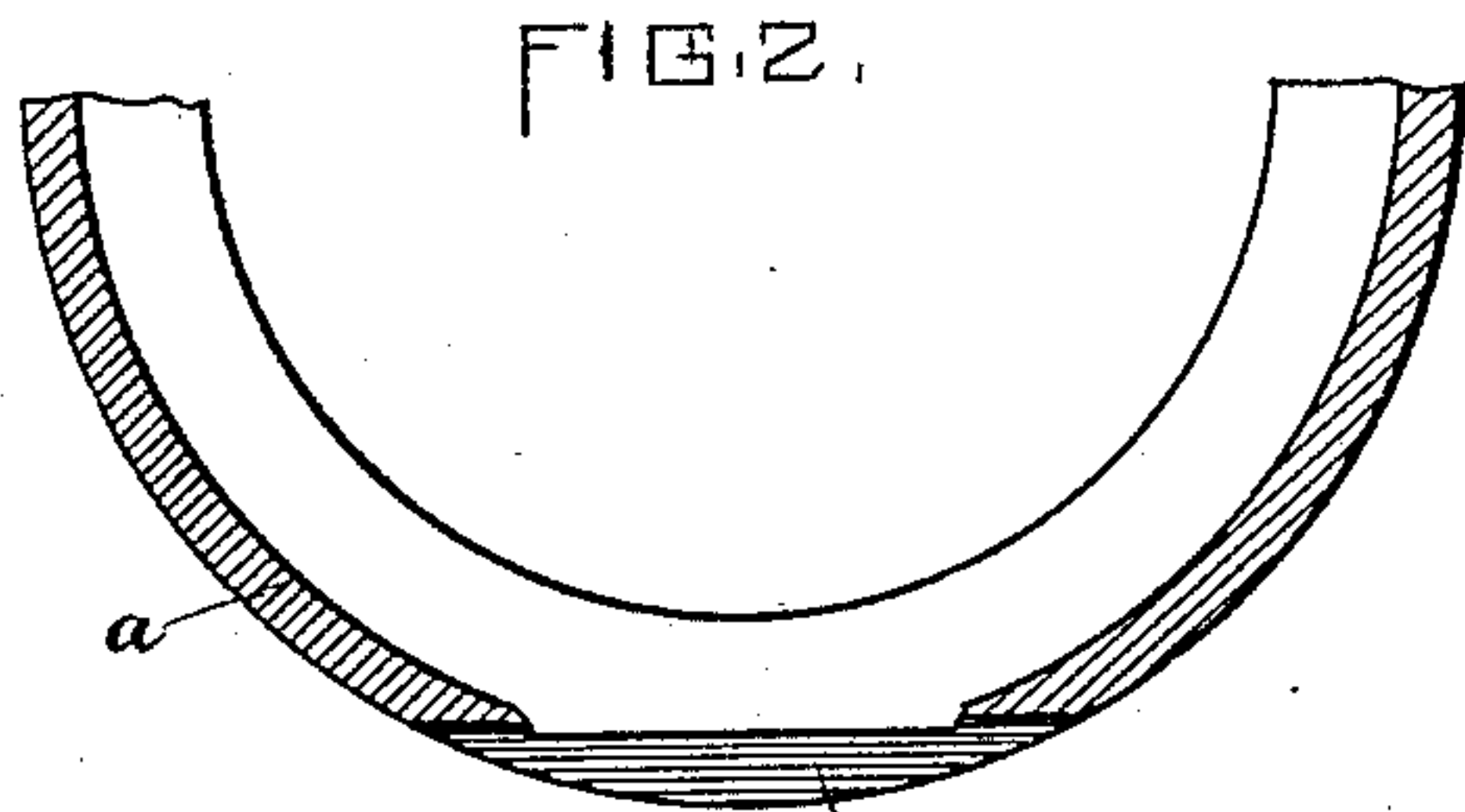
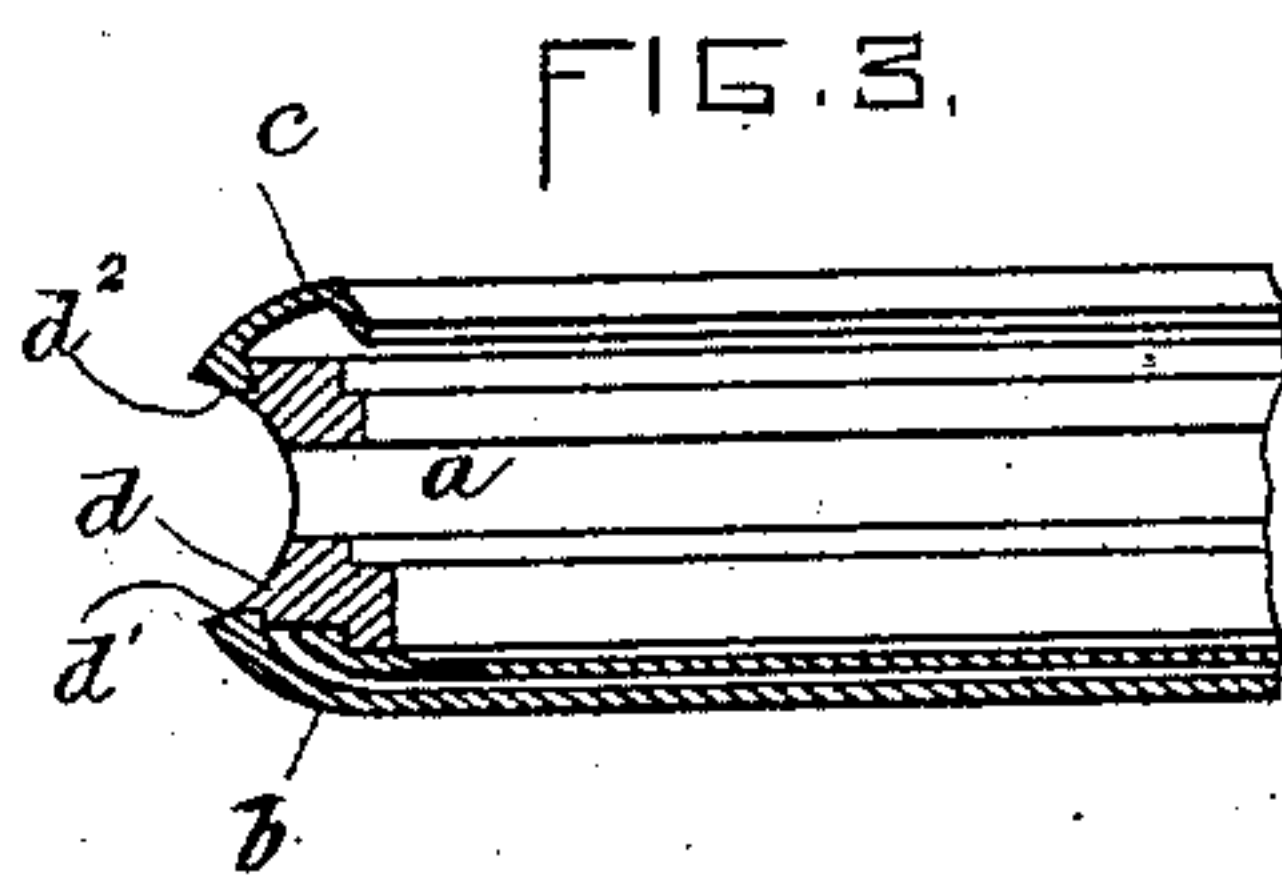
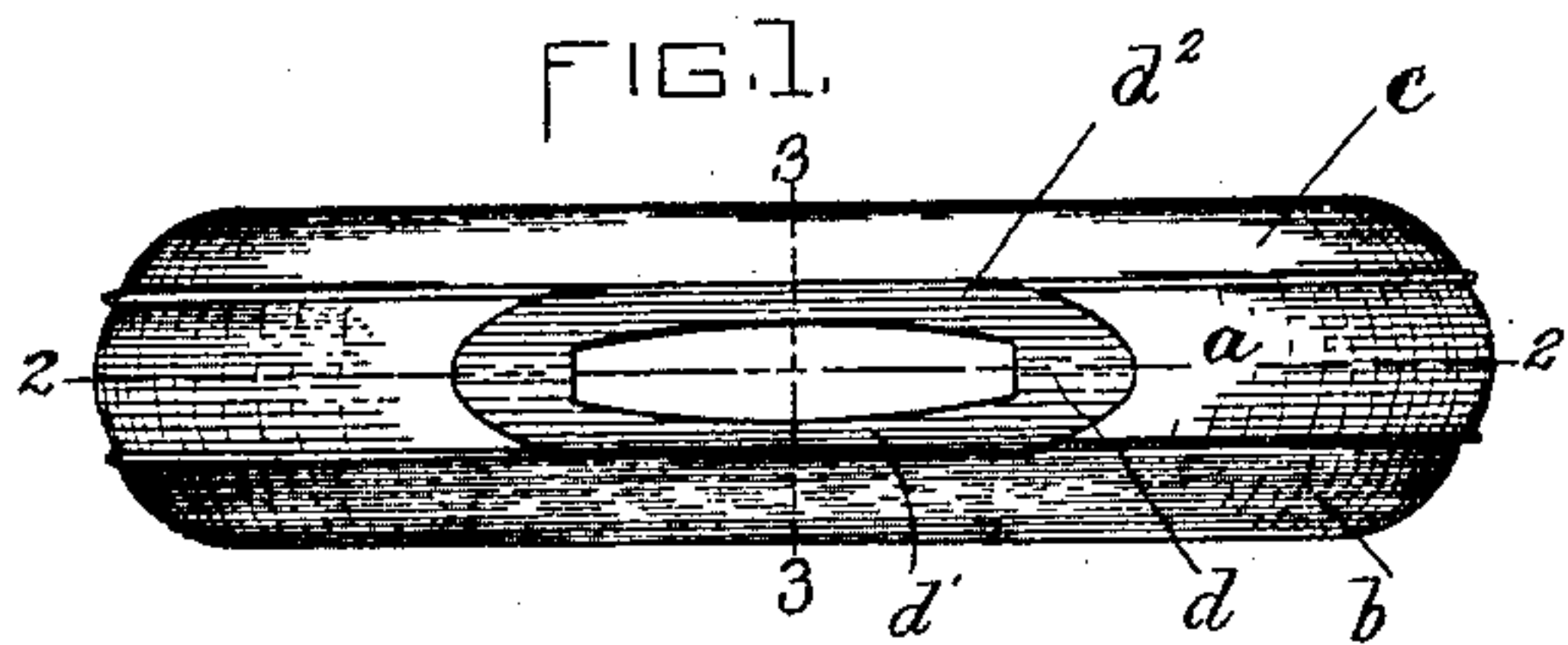


(No Model.)

D. O'HARA.
WATCH CASE.

No. 433,693.

Patented Aug. 5, 1890.



WITNESSES:
A. S. Harrison.
H. C. Brown.

INVENTOR:
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Attys.

UNITED STATES PATENT OFFICE.

DANIEL O'HARA, OF WALTHAM, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN WALTHAM WATCH COMPANY, OF SAME PLACE.

WATCH-CASE.

SPECIFICATION forming part of Letters Patent No. 433,693, dated August 5, 1890.

Application filed December 13, 1889. Serial No. 333,661. (No model.)

To all whom it may concern:

Be it known that I, DANIEL O'HARA, of Waltham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Watch-Cases, of which the following is a specification.

This invention has for its object to simplify the construction of watch-cases with respect to the hinge-connection of the back and cover in hunting-case watches and of the back and bezel in open-face watches to the case-center.

My improvement is particularly intended for open-face cases, and I shall therefore in the following description allude to the bezel and not to the cover or the lid that covers the bezel in a hunting-case, although it is to be understood that my invention may be applied to either style of case. Heretofore the back and bezel have always been connected to the case-center by independent hinges, (excepting, of course, cases in which the back and bezel are not hinged, but are screwed upon the case-center.)

My invention consists in a watch-case center having a single hinge-seat formed in its marginal portion between the inwardly-projecting flanges on which the back and bezel have their bearings, and ears or bosses soldered to said seat to serve as hinge members, combined with a back and bezel provided with ears or hinge members formed and arranged to fit said seat and connected to the fixed hinge members on the case-center by a suitable pivot-pin, the said hinge members and pin constituting a hinge serving for both the back and bezel, as I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an edge view of a watch-case center with the back and bezel in place thereon and the hinge-seat formed in the center, said seat extending partly into the edge of the back and bezel.

Fig. 2 represents a section on line 2 2, Fig. 1. Fig. 3 represents a section on line 3 3, Fig. 1. Fig. 3^a represents a section on line 3 3, Fig. 1, before the operation of forming the hinge-seat. Fig. 4 represents an edge view of the case-center with the back and bezel removed. Fig. 5 represents a section on line 5 5, Fig. 4.

Fig. 6 represents an edge view of the case-center with the fixed ears or hinge members applied thereto. Fig. 7 represents a side view of the case-center as shown in Fig. 6. Fig. 8 represents a section on line 8 8, Fig. 6. Fig. 9 represents an edge view of the completed case. Fig. 10 represents a section on line 10 10, Fig. 9. Fig. 11 represents a section on line 11 11, Fig. 9. Figs. 12 and 13 represent perspective views of portions of the back and bezel, showing the ears or hinge members thereon. Fig. 14 represents a section similar to Fig. 10, showing a modification.

The same letters of reference indicate the same parts in all of the figures.

In the drawings, *a* represents the case-center, *b* the back, and *c* the bezel.

In carrying out my invention I form a seat *d d' d²* in the marginal portion of the case while the back and bezel are in place on the case-center, said seat being concave in cross-section, as shown in Fig. 3, and straight in longitudinal section, as shown in Fig. 4. The seat is made of such width that it extends partly into the edges of the back and bezel, the part formed in the case-center being designated *d*, while the parts formed on the back and bezel are designated, respectively, *d'* and *d²*. (See particularly Figs. 1 and 3.) The main portion of the seat is in the case-center, and its longitudinal center is midway between the opposite sides of the case-center, as shown.

e e represent cylindrical ears, which are soldered in the main portion *d* of the hinge-seat at such distance apart as to leave a space between them for ears *f f* and *g*, which are soldered to the seat portions of the back and bezel, the ears *f f* being soldered to the seat *d'* on the back, while the ear *g* is soldered to the seat *d²* on the bezel. Said ears *f f* and *g* are arranged to occupy the space between the ears *e e*, and are connected to the latter and to each other by a pin or pivot *h*, inserted in all the ears, as shown in Fig. 11.

It will be seen that the ears *e e* and the pin *h* are hinge members, which are common to both the back and bezel, each of said parts—viz., the back and bezel—swinging on the same center. By thus connecting the back and bezel to the case-center by one hinge, I decrease the labor required in hinging said parts

together and obtain a stronger hinge-connection, because the members of the hinge are larger and heavier than the members of the independent hinges heretofore used. Moreover, the single hinge constructed as here shown forms an ornamental projection on the margin of the case at a point opposite the pendant.

By extending the hinge-seat so that parts of it are formed on the back and bezel I am enabled to securely solder the ears *ff* and *g* to the back and bezel without re-enforcing said parts. The seat may be made of smaller diameter, however, so that it will not extend outside of the case-center, as shown in Fig. 14, in which the back and bezel will necessarily be provided with external re-enforcements *rr* to support the ears *ff* and *g*, said ears being soldered to the said re-enforcements.

It is obvious that in a hunting-case watch the part that is here called the "bezel" would be the front cover or lid.

I claim—

1. In a watch-case, the combination of a back, a bezel or its equivalent, a case-center, and a hinge connecting said parts and composed of ears or members attached to the case-center and projecting outwardly therefrom, ears attached to the back and bezel and arranged in line with the ears on the case-center, and a pin or pivot connecting said ears, as set forth.

2. The combination of a watch-case center having ears or hinge members rigidly attached to the case-center and projecting outwardly from the periphery thereof, a hinge-seat between said ears, and a back and bezel having ears formed and arranged to occupy the space between the ears on the case-center, said ears being connected by a pin or pivot common to all the ears, as set forth.

3. The combination of a watch-case center, a back and a bezel fitted thereto, said parts having a single hinge-seat formed partly in the case-center and partly on the back and bezel, ears or hinge members rigidly attached to the case-center and projecting outwardly from the periphery thereof, corresponding ears or hinge members rigidly attached to the seat portions of the back and bezel and fitted to turn in the portion of the seat that is formed in the case-center, and a single pin connecting the ears attached to the case-center with those attached to the back and bezel, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 25th day of November, A. D. 1889.

DANIEL O'HARA.

Witnesses:

E. A. MARSH,
D. H. CHURCH.