

No. 705,173.

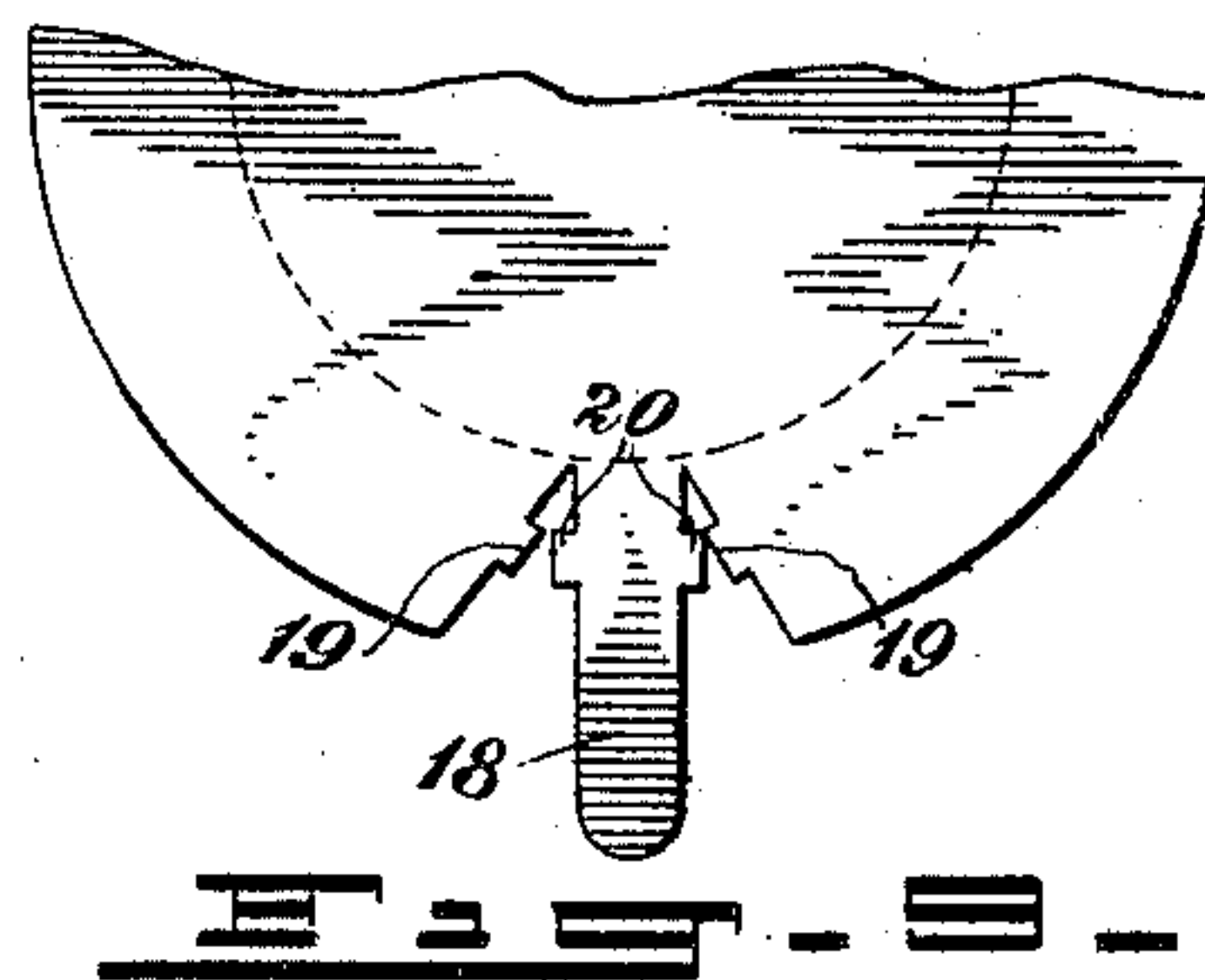
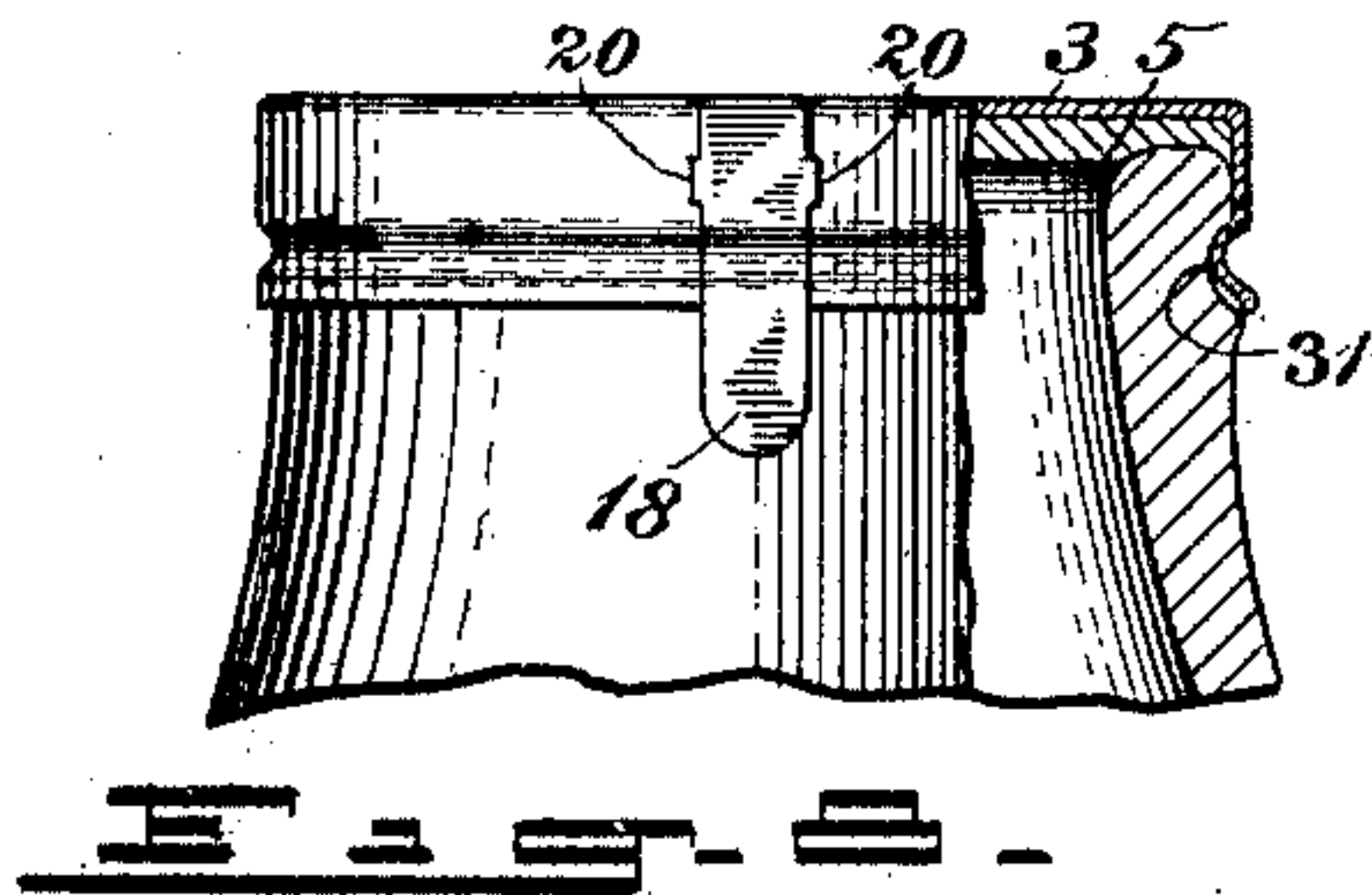
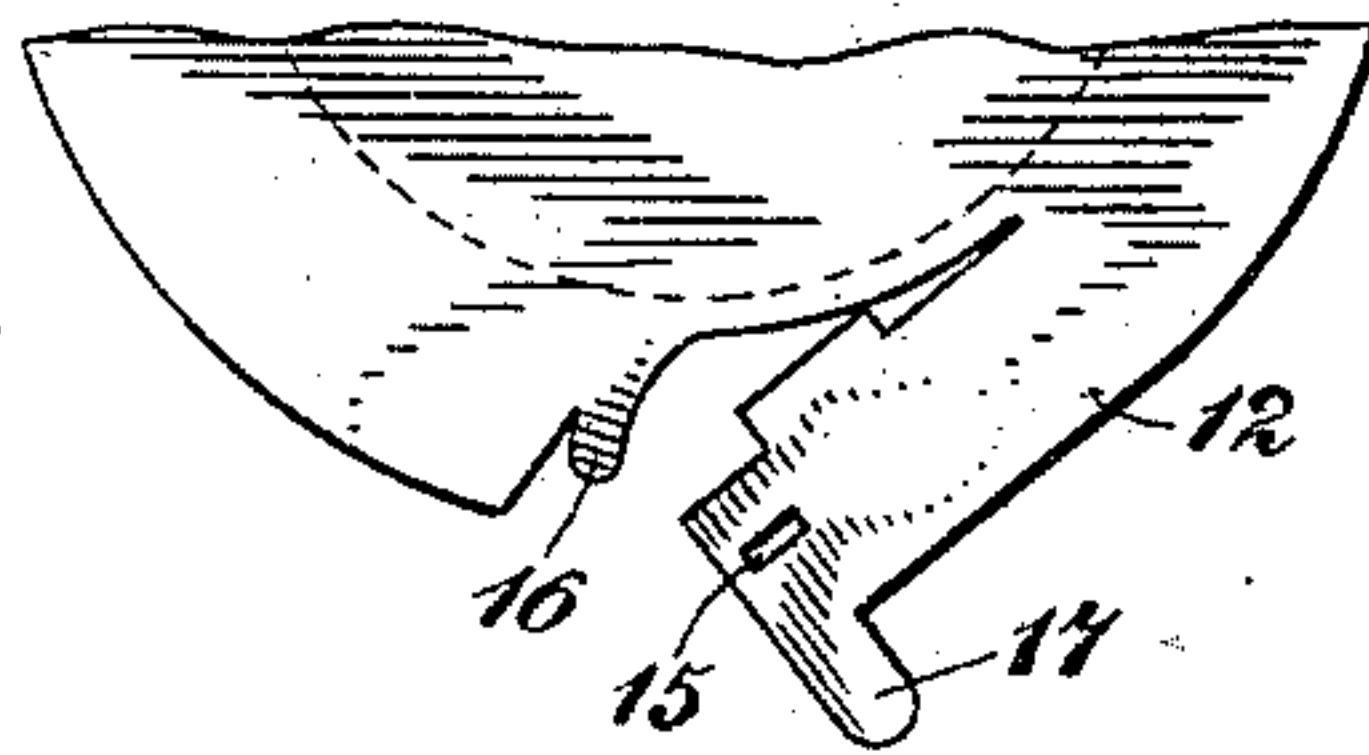
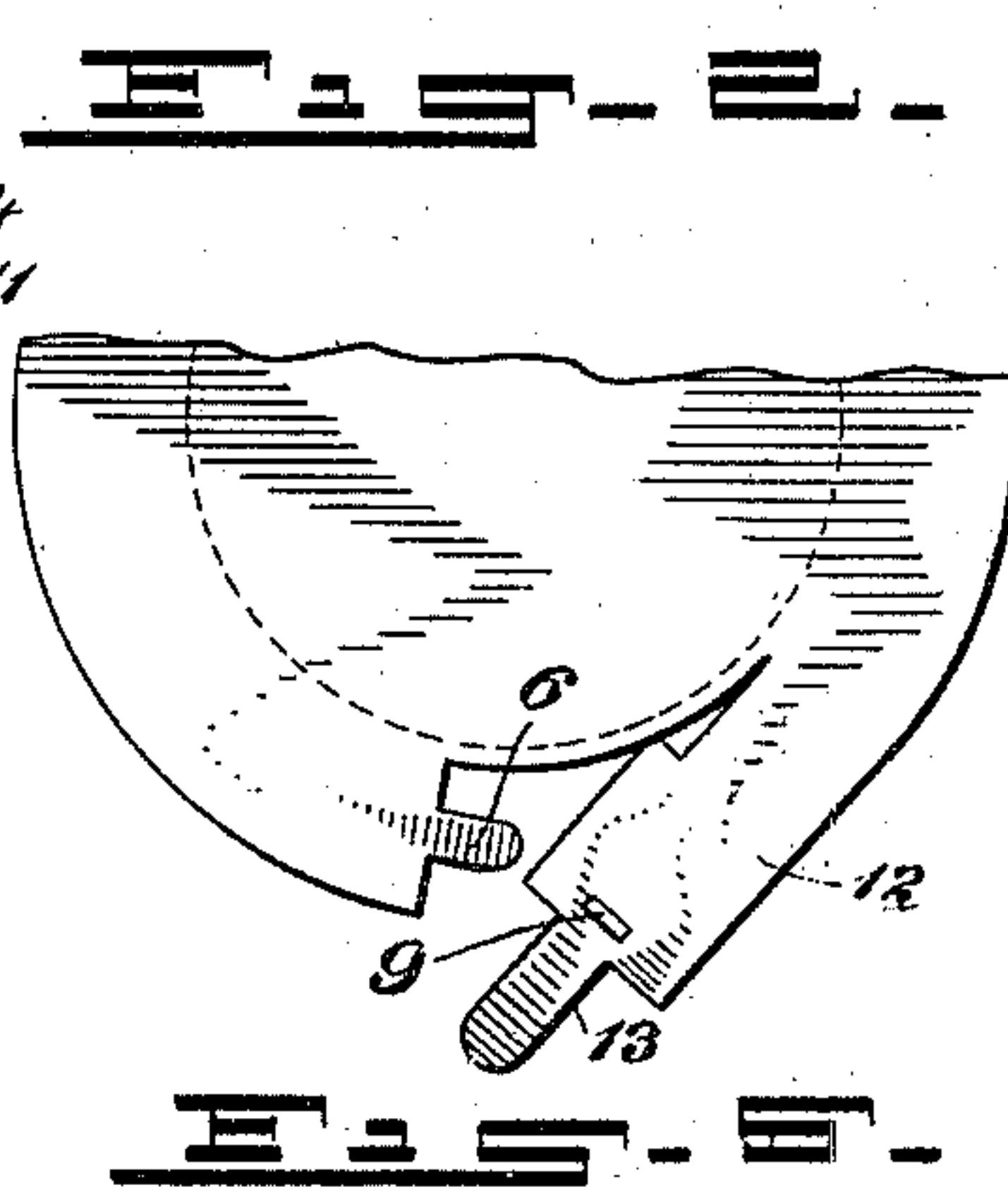
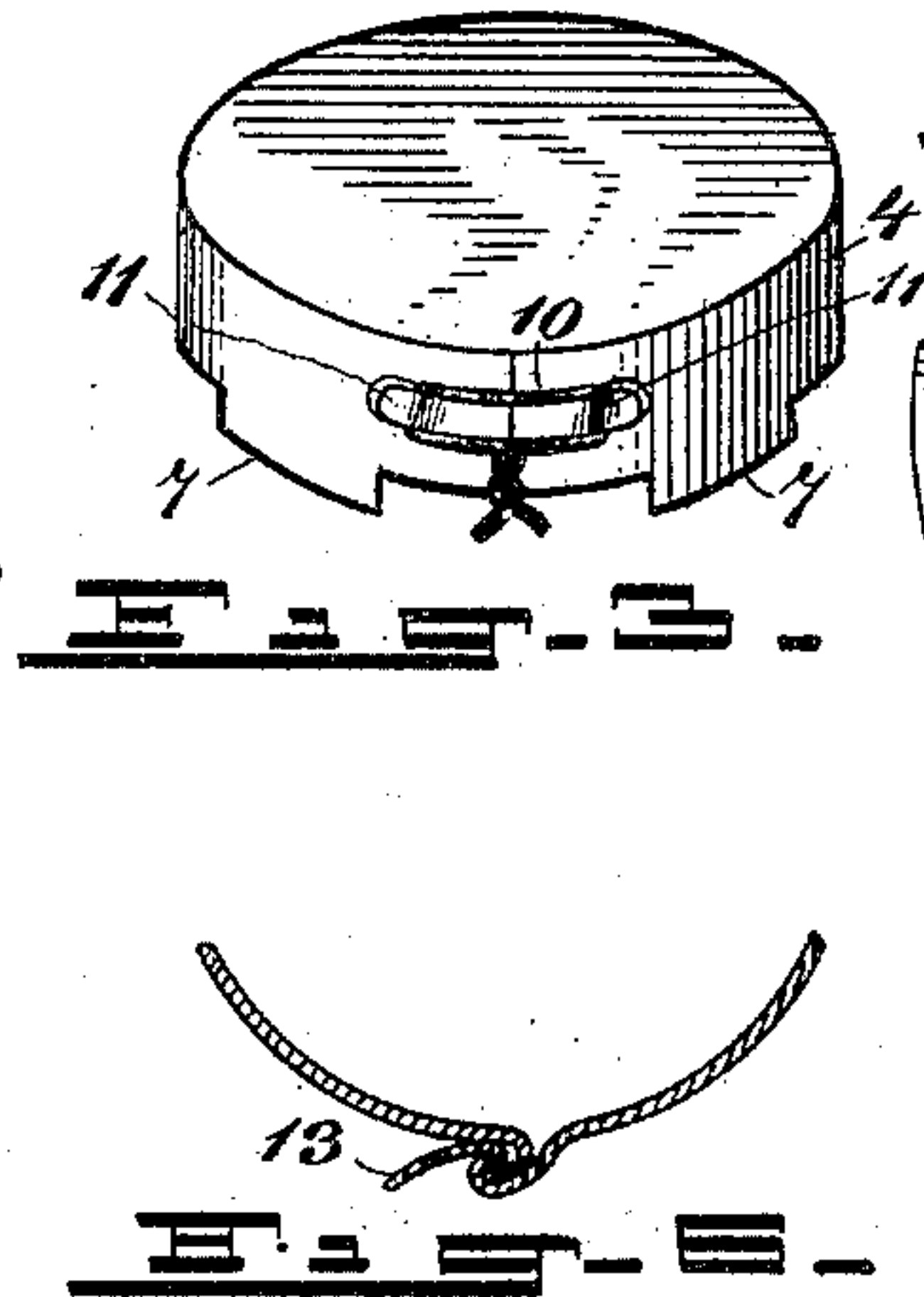
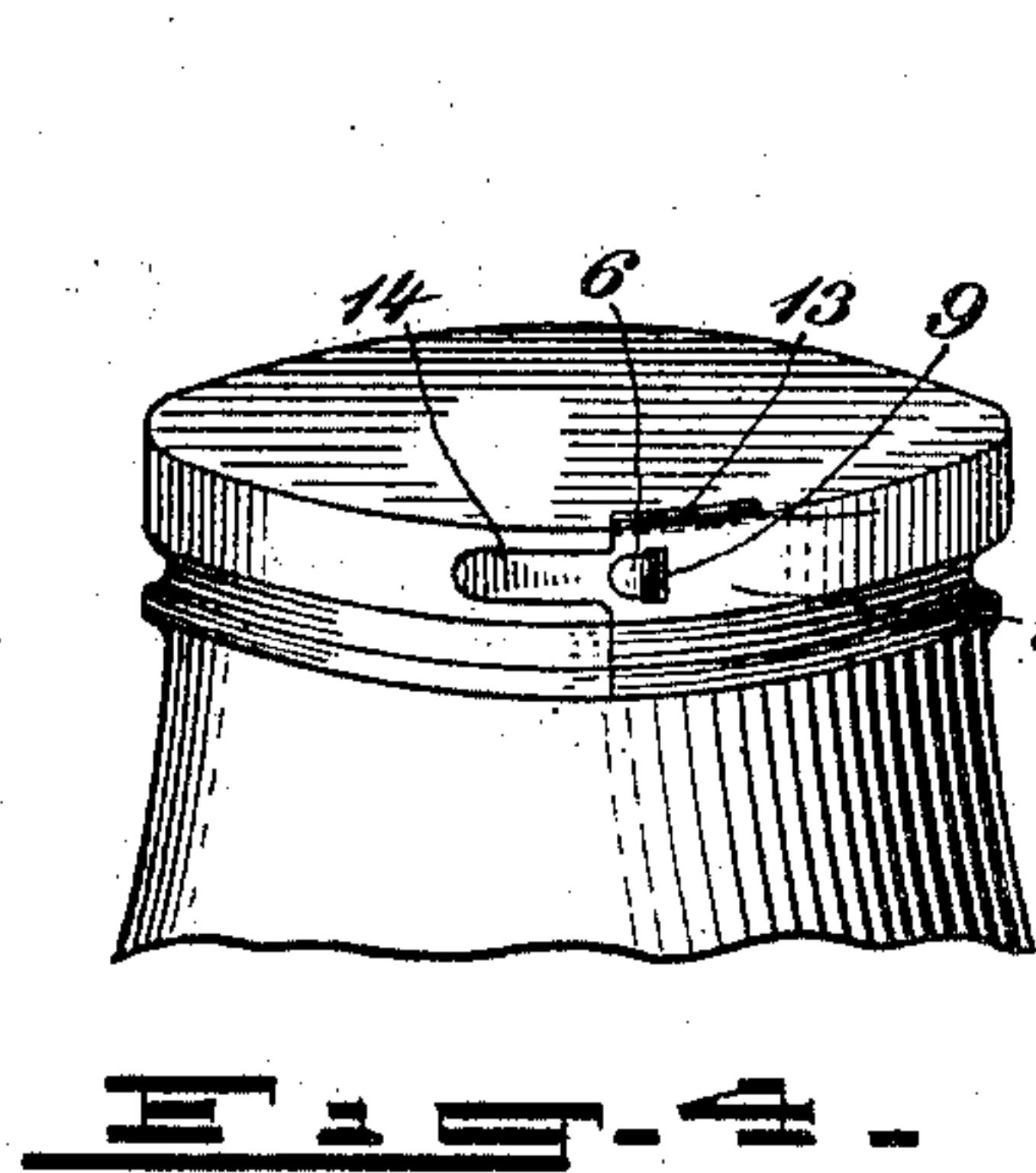
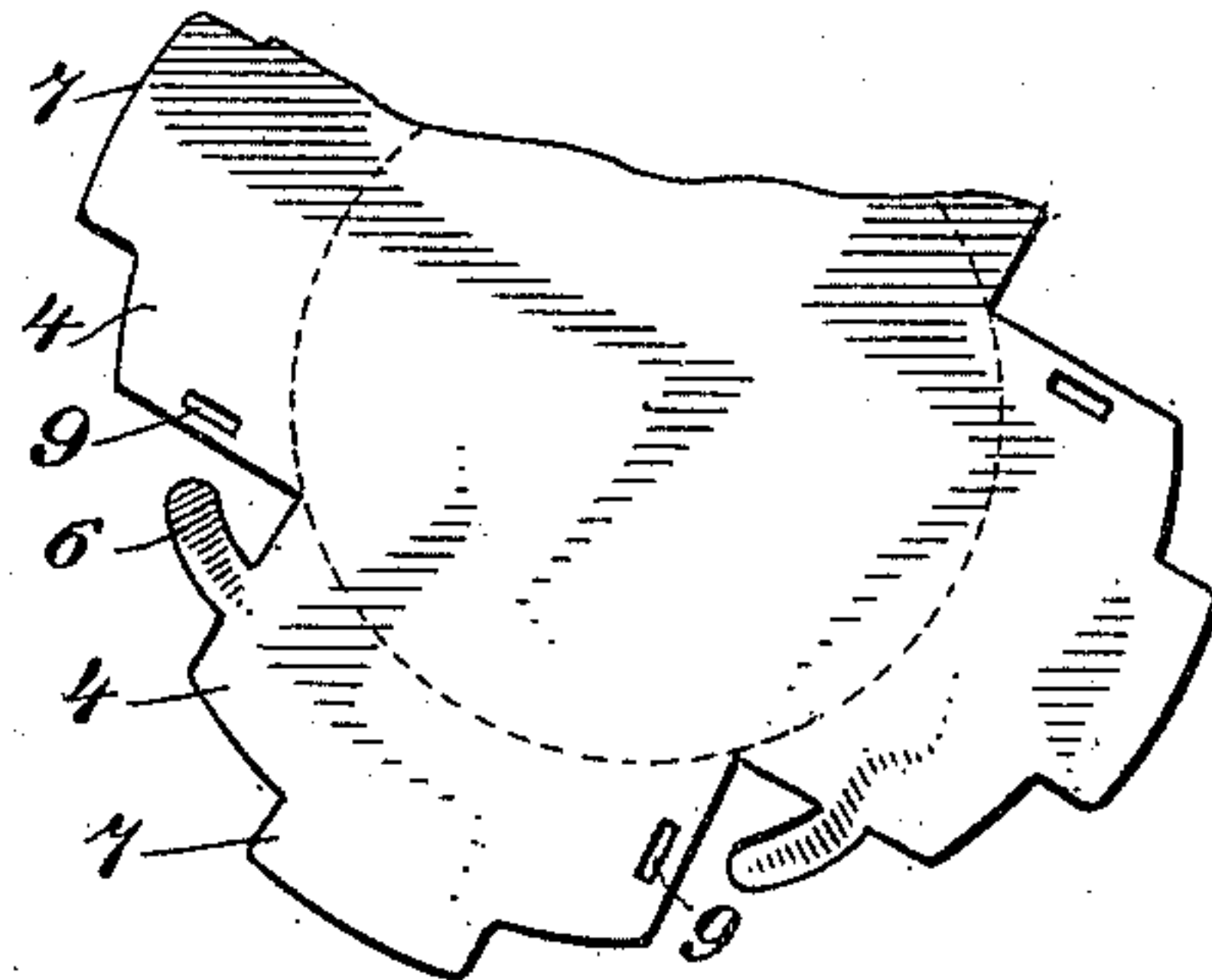
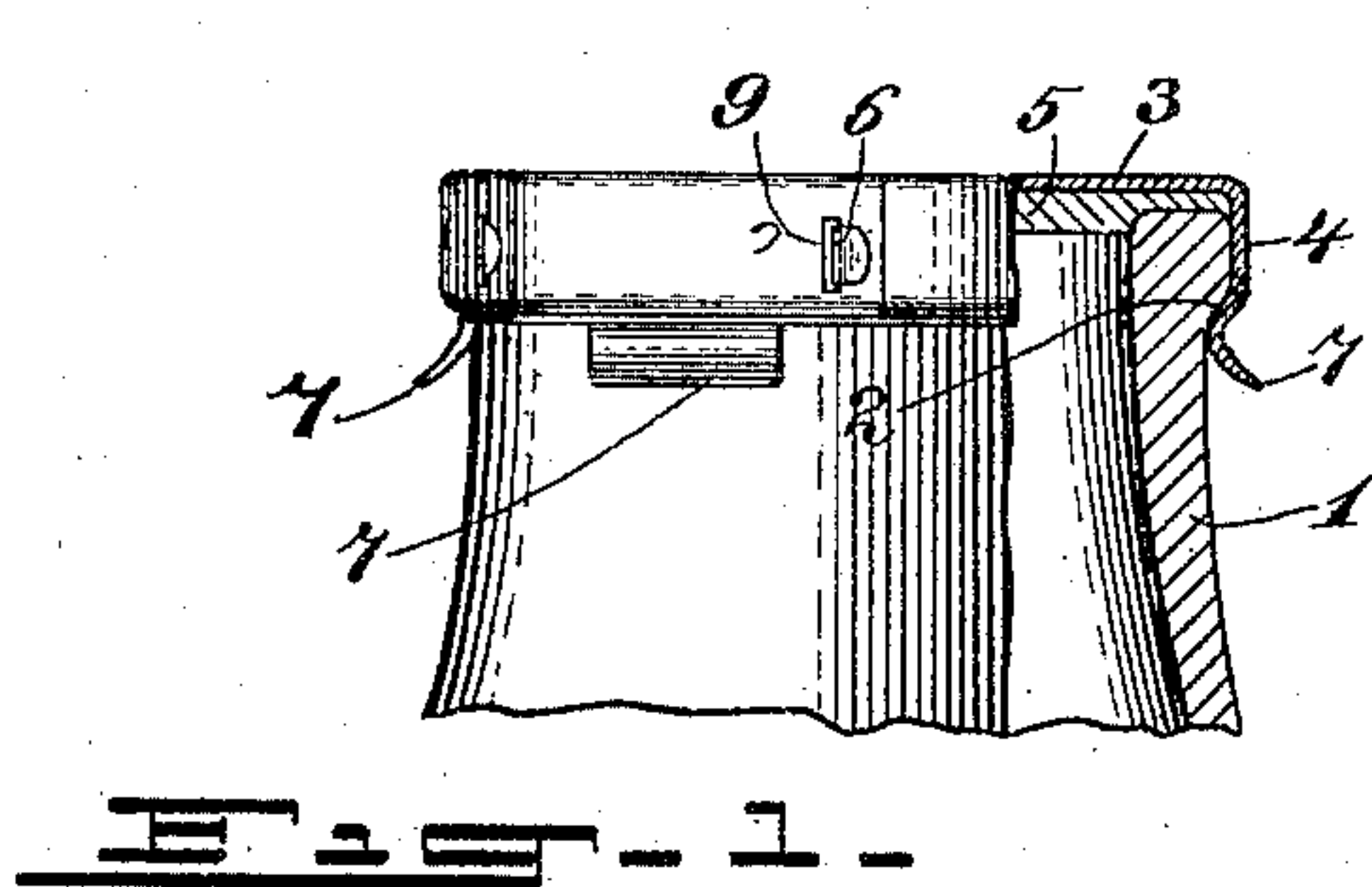
Patented July 22, 1902.

A. L. WEISSETHANNER.  
CLOSURE FOR BOTTLES, JARS, &c.

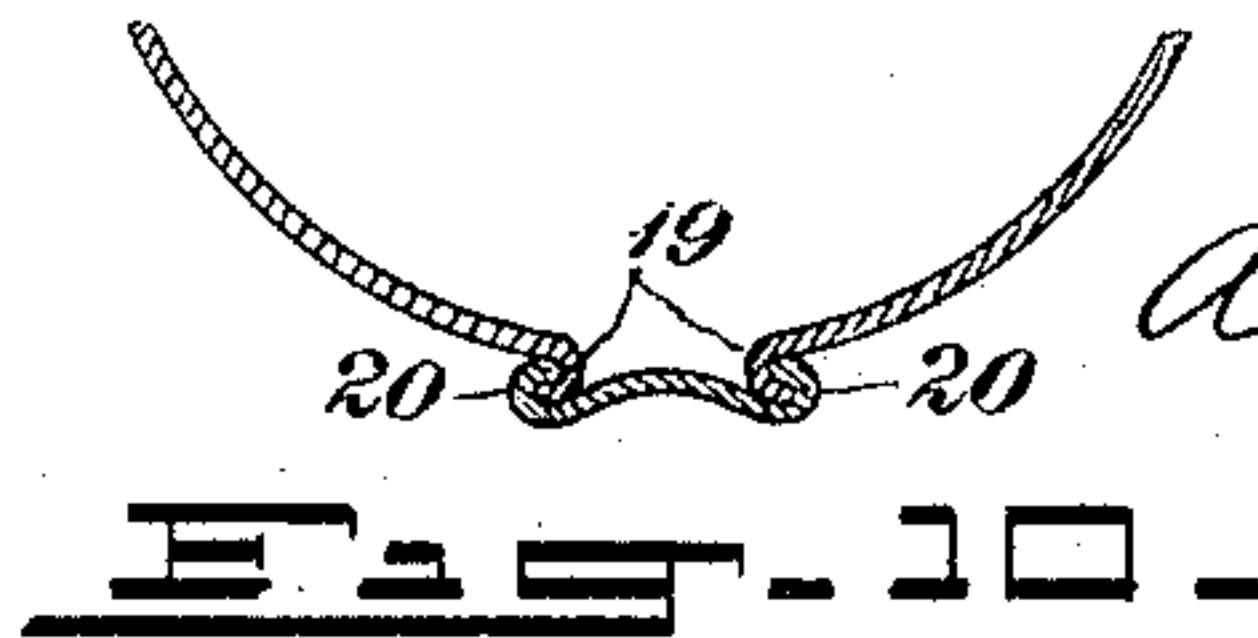
(Application filed Oct. 16, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:  
*F. N. Roehrich*  
*Geo. Lewis*



INVENTOR  
*Alfred L. Weisenthanner*

BY *Philip H. Hays*  
ATTORNEY

No. 705,173.

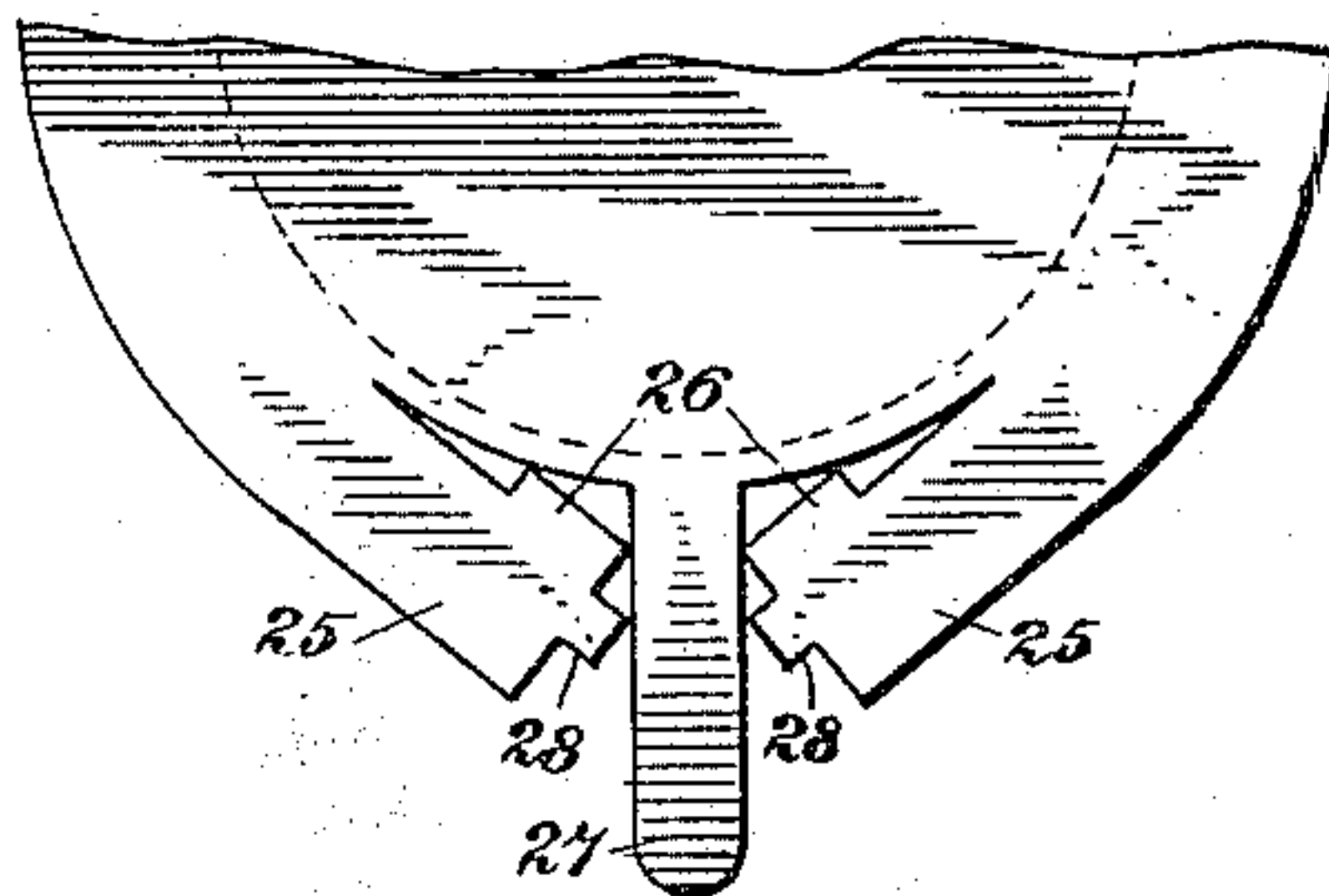
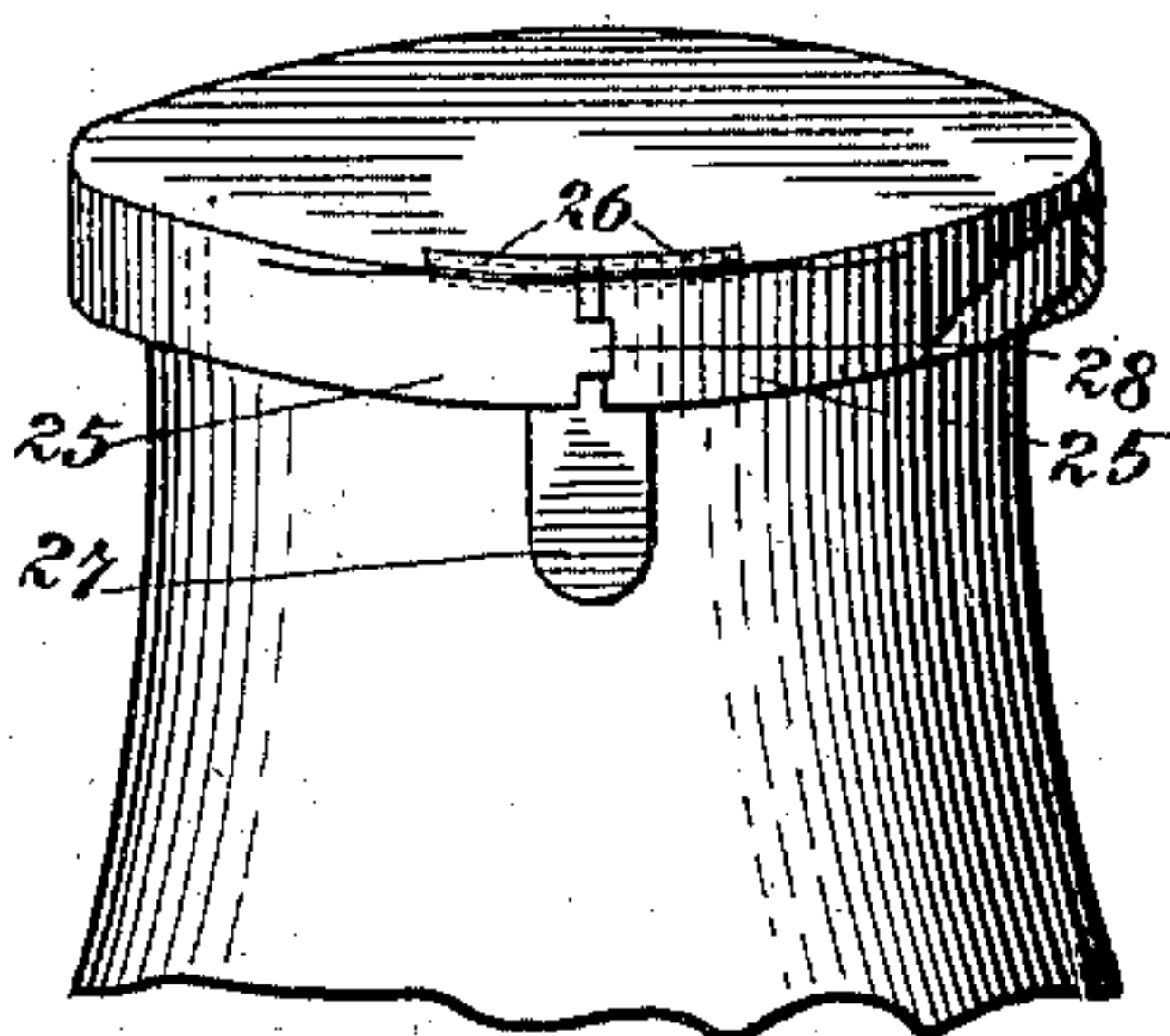
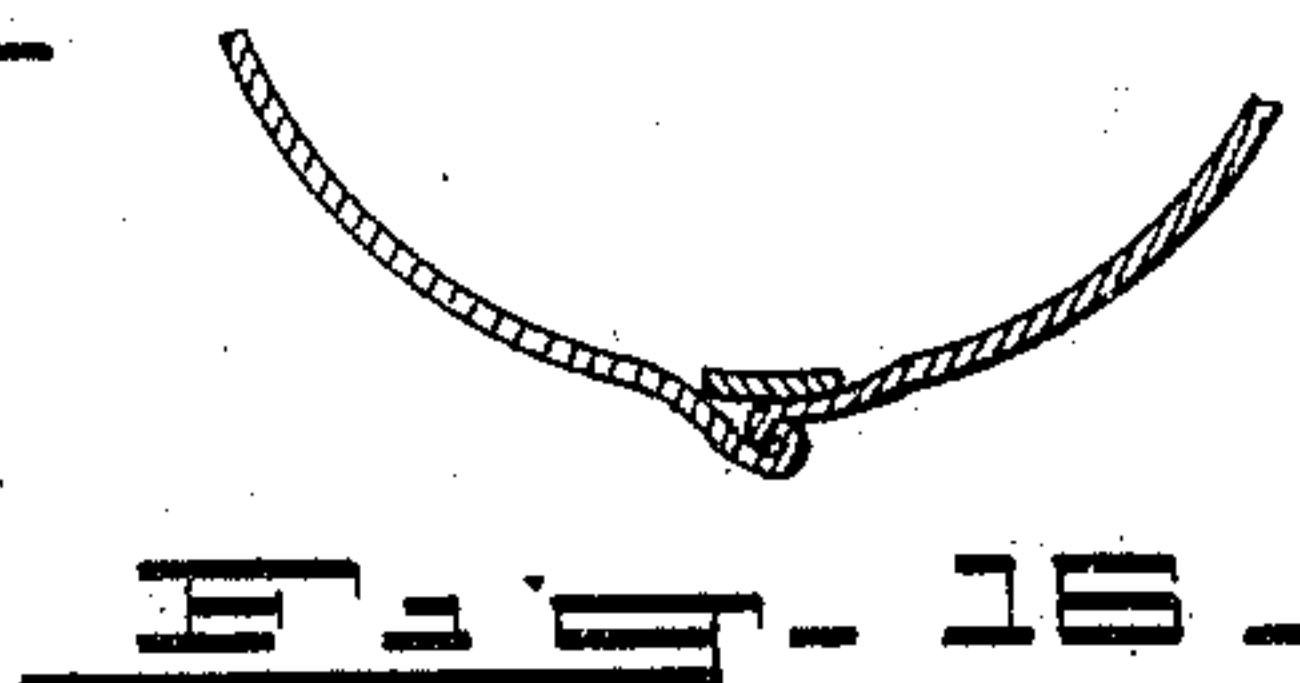
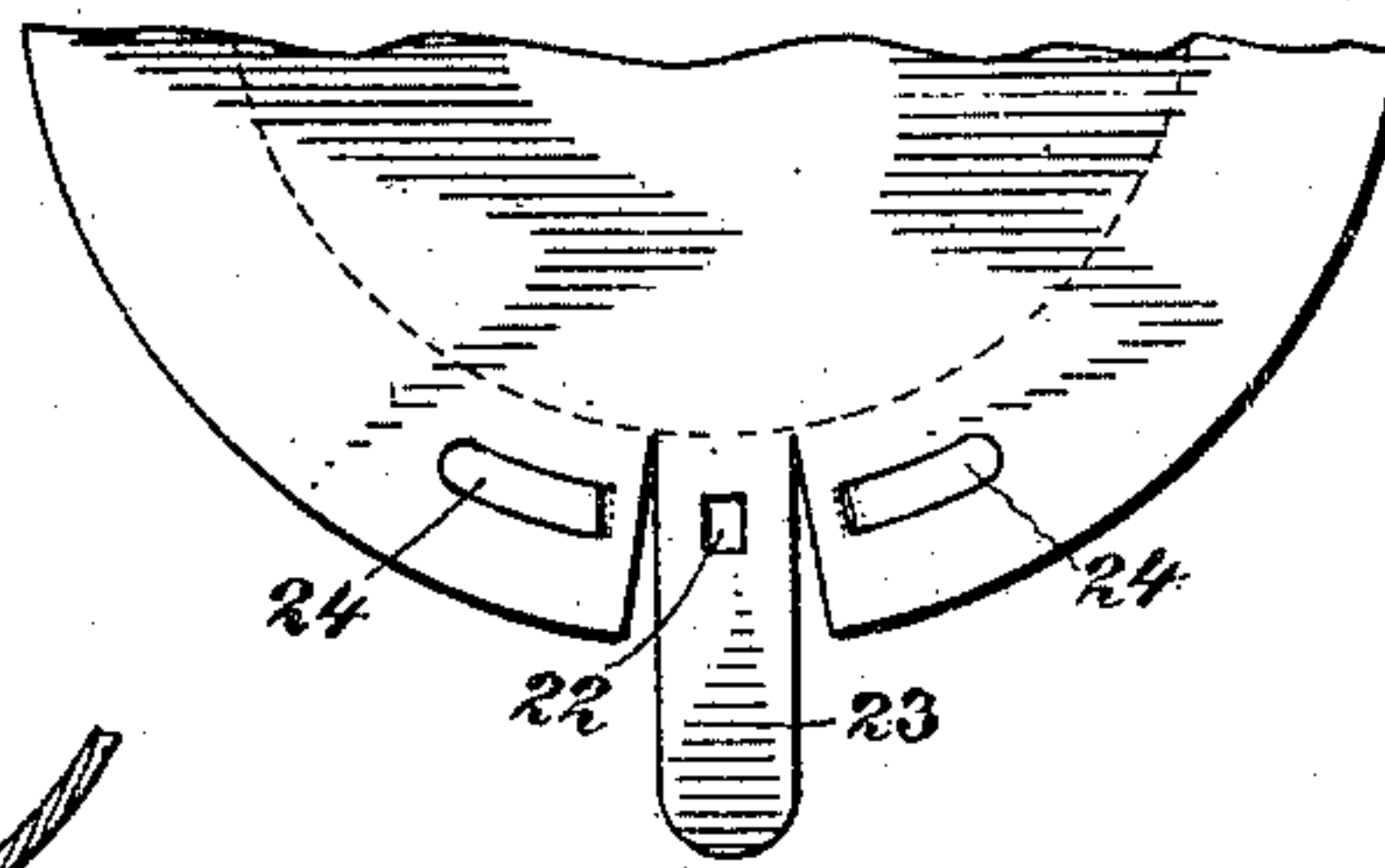
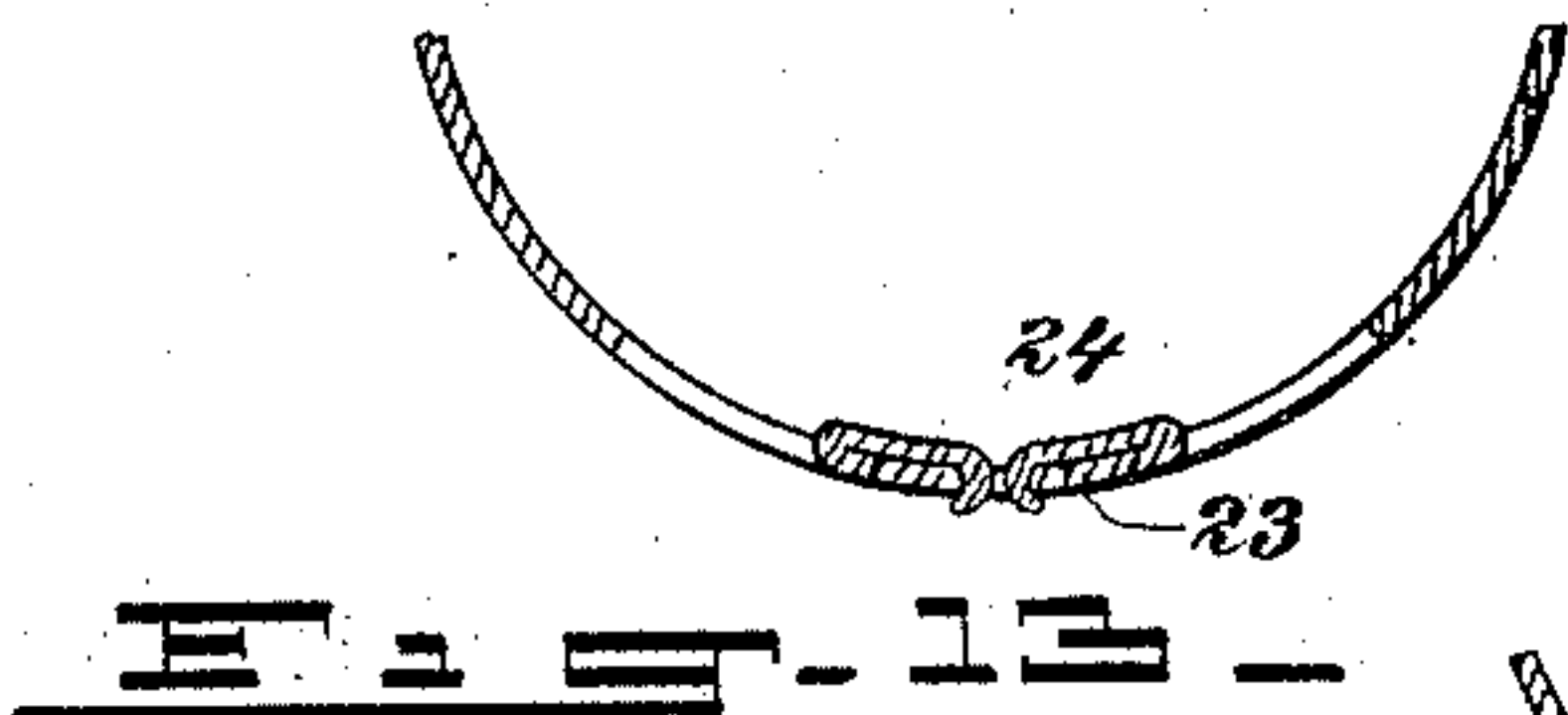
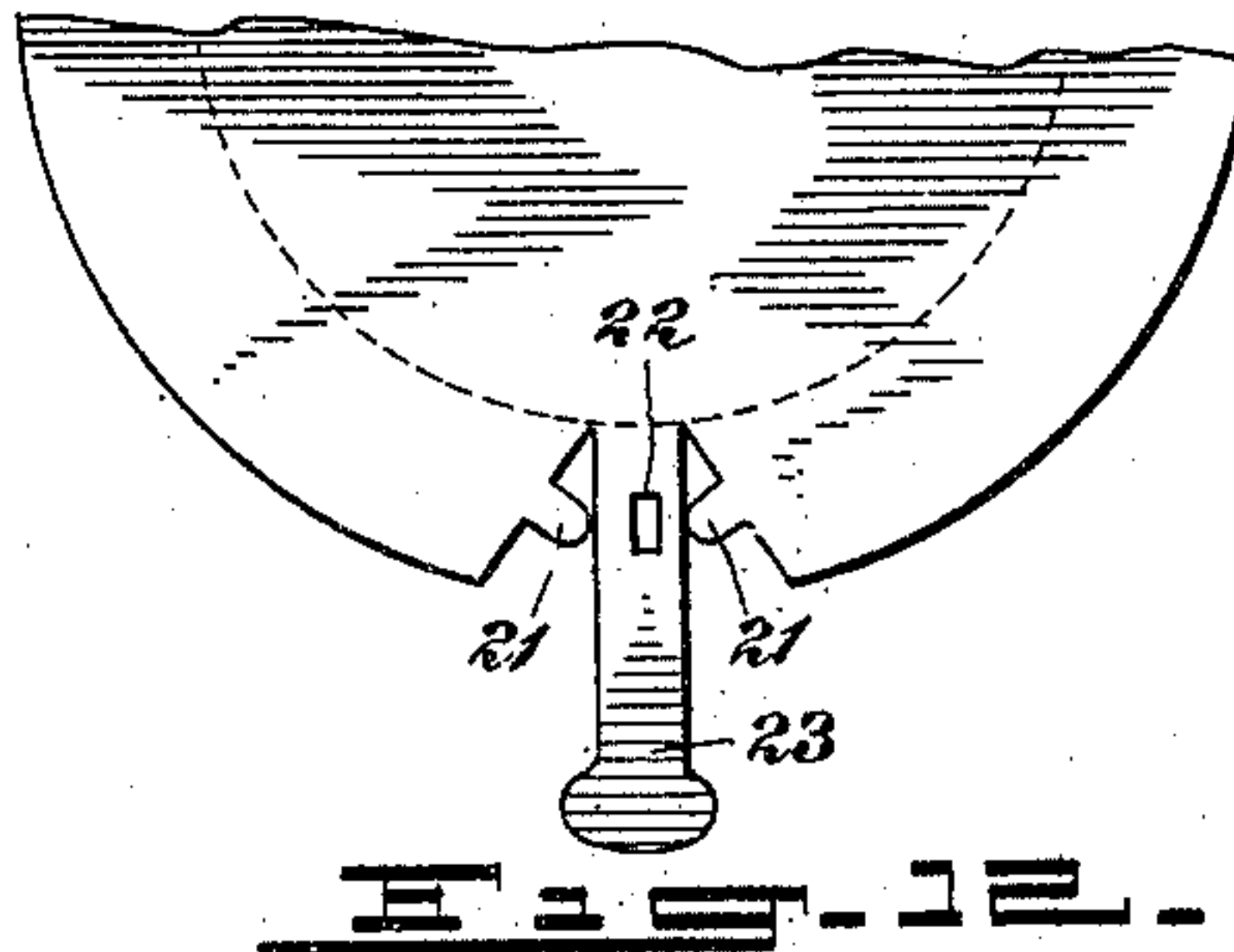
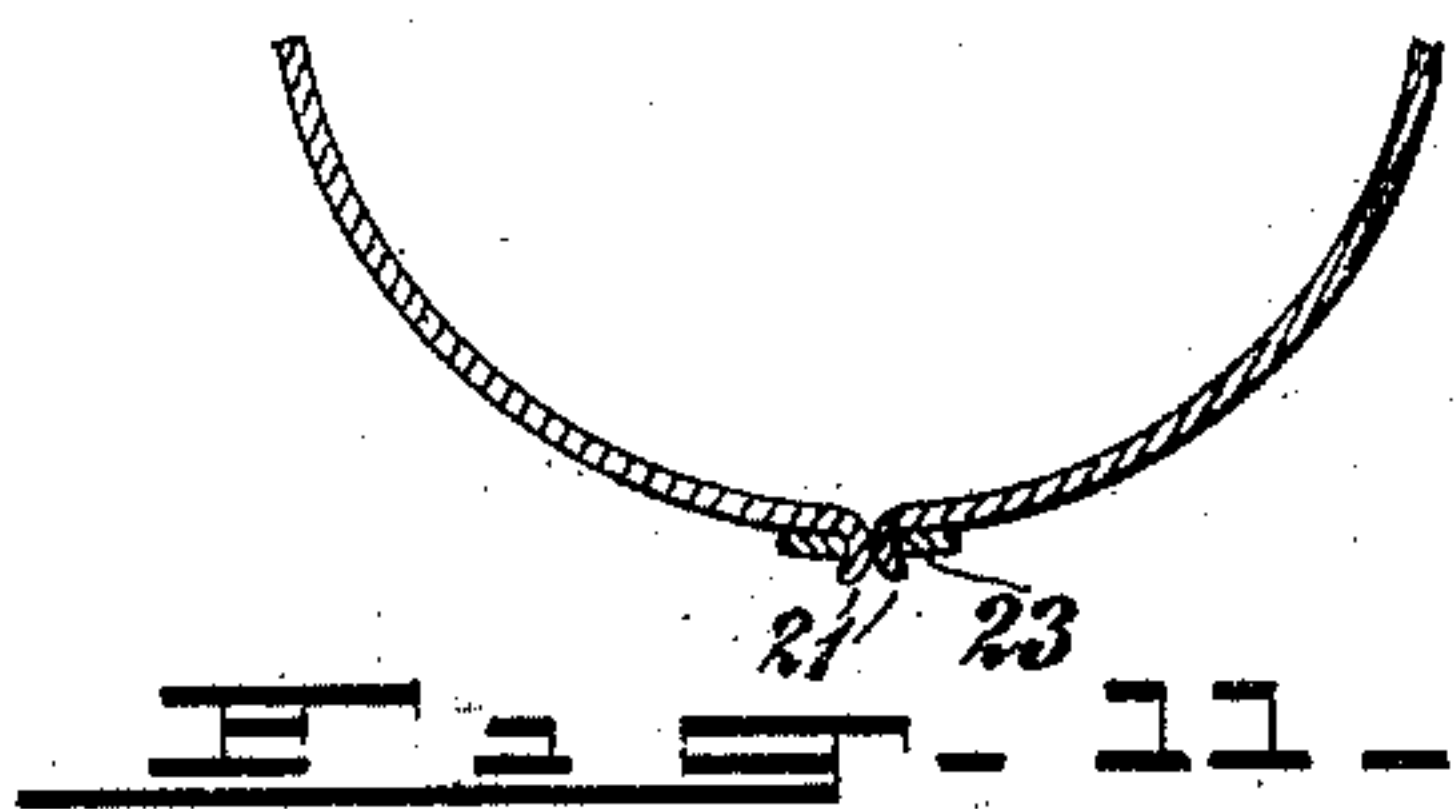
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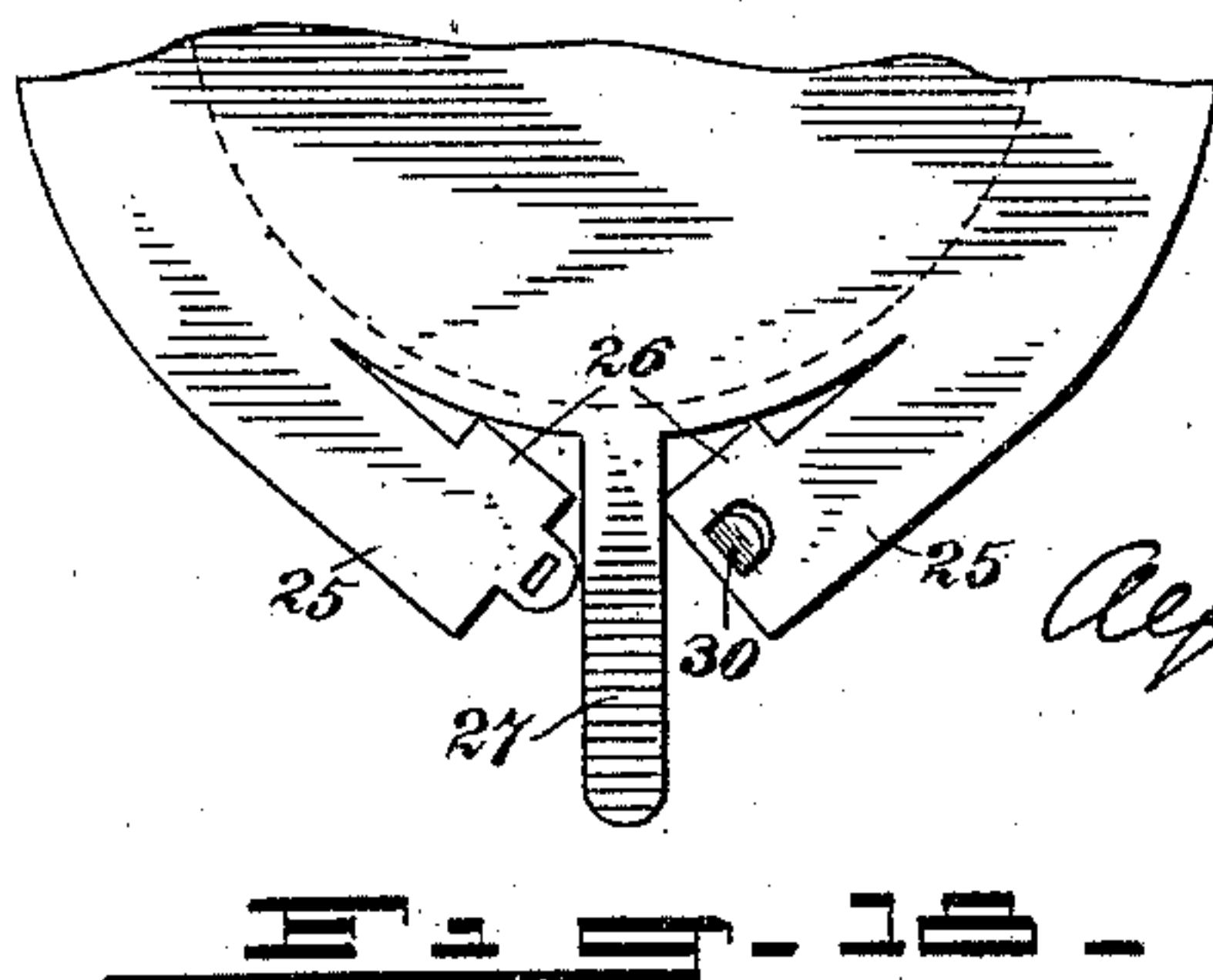
(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

*J. N. Roebuck*  
*John Lewis*



INVENTOR

*Alfred L. Weissenhanner*

BY

*Philip H. Brown*

ATTORNEY



# UNITED STATES PATENT OFFICE.

ALFRED L. WEISSENTHANNER, OF NEW YORK, N. Y.

## CLOSURE FOR BOTTLES, JARS, &c.

SPECIFICATION forming part of Letters Patent No. 705,173, dated July 22, 1902.

Application filed October 16, 1901. Serial No. 78,870. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED L. WEISSENTHANNER, a resident of New York, State of New York, have invented a new and useful  
5 Improvement in Closures for Bottles, Jars, &c., which invention is fully set forth in the following specification.

My invention relates to closures for bottles, jars, and similar receptacles, and more particularly to that type of closure consisting of a metallic cap or cover having a depending flange which is bent into engagement with a  
10 suitable shoulder on the receptacle to secure the closure in place.

15 An object of my present invention is to provide a closure which may be quickly and easily removed from the receptacle without the necessity of resorting to the use of tools or special implements for that purpose. This  
20 and other objects of my invention will more clearly appear from the following description.

My invention consists in the novel parts, improvements, and combinations herein shown  
25 and described.

The accompanying drawings, which are referred to herein and form a part hereof, illustrate several embodiments of my invention and serve, in connection with the description  
30 herein, to explain the principles of my invention and the best mode contemplated by me of applying those principles.

Of the drawings, Figure 1 is a view, partly in elevation and partly in section, showing  
35 one form of closure in place on a receptacle. Fig. 2 is a plan view showing the blank from which the closure shown in Fig. 1 is made. Fig. 3 is a perspective view illustrating a modified form of closure. Fig. 4 is a similar  
40 view illustrating still another form of closure embodying my invention. Fig. 5 is a plan view of the blank from which the closure shown in Fig. 2 is made. Fig. 6 is a sectional view illustrating a modified form of fasten-  
45 ing for the closure shown in Fig. 4. Fig. 7 is a plan view illustrating another form of fastening for the same closure. Fig. 8 is a view similar to that of Fig. 1, illustrating another form of closure. Fig. 9 is a plan view of the  
50 blank from which the closure shown in Fig. 8 is made. Fig. 10 is a sectional detail of the

same closure. Figs. 11 and 12 are a sectional detail and a plan view, respectively, illustrating a modification of the closure shown in Fig. 10. Figs. 13 and 14 are similar views  
55 illustrating another modification of the same. Fig. 15 is a perspective view illustrating still another form of closure. Fig. 16 is a sectional view of the fastening for the same. Fig. 17 is a plan view of the blank for the  
60 closure shown in Fig. 15, and Fig. 18 is a similar view illustrating a modified form of fastening for the same.

In accordance with my invention the closure comprises a cover or cap having an integral depending flange adapted to be bent  
65 into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, and detachable connections between  
70 the severed portion of flange. Preferably means are provided on the closure for disengaging the flange from the shoulder on the receptacle and also for loosening the connections between the severed portions of the  
75 flange. In accordance with the preferred embodiment of the invention the means for disengaging the flange also constitutes the means for loosening the connections between the  
80 severed portions of the flange.

Referring now to the drawings in detail and at first to the form of closure shown in Figs. 1 and 2, 1 is a receptacle, having a shoulder 2 just below its mouth. 3 is a cover or cap, having a flange 4 depending from its outer  
85 edge, the cap being secured in place by pressing the same, with an interposed washer 5, onto the mouth of the receptacle and then setting the flange into engagement with the shoulder 2. The flange 4 is severed or di-  
90 vided at one or more points, and the severed portions are detachably connected by any suitable means. The means shown consists of a tongue 6, which is connected to one part of the flange and is bent into engagement  
95 with a suitable recess in the adjacent part of the flange. The flange 4 is preferably provided at or near the severed portions with a suitable tongue 7, which may be readily en-  
100 gaged by the fingers of the user and forced outwardly and upwardly to disengage the flange 4 from the shoulder 2 and remove the



closure, this operation being facilitated by the breaking or loosening of the connections between the severed portions of the flange.

The blank from which the closure shown in Fig. 1 is made is illustrated in Fig. 2. As here shown, a V-shaped cut is made in the blank between the portions which are to form the flange 4, provision being thus made to form the tongue 6 integrally with one portion of the flange. The eye which is engaged by the tongue 6 is formed near the opposite side of the V-shaped recess, as indicated at 9. When the blank has been passed through suitable dies, the opposite edges of the recess will be brought into contact, or nearly so, a substantially circumferentially continuous flange being thus formed.

In accordance with the form of the device shown in Fig. 3 the severed portions of the flange are detachably secured by a piece of wire 10, which is passed around the oppositely-arranged tongues 11, which are struck up from the sheet metal forming the flange. This fastening may be removed, if desired, by pulling the twisted ends of the wire. The tongues 7 may be used, however, to break the fastening, as well as to disengage the flange from the shoulder on the receptacle.

In accordance with the construction shown in Fig. 4 one of the divided portions of the flange is severed from the top of the cover for a short distance along its upper edge, and it is provided with a lip 13, which is adapted to overlap the upper surface of the cover. In this form of device the same form of connection between the severed portions of the flange may be used as is used in the previous form. In this form, however, the tongue 14 is preferably formed directly on the severed portion 12 of the flange, so as to act first to loosen the connection and then to facilitate the disengagement of the flange from the shoulder on the bottle.

Instead of passing the tongue 6 through the opening 9 it may be bent backwardly upon itself and then engaged by a corresponding hook portion formed in the tongue 13, the end of the tongue 13 being left free to be grasped by the fingers, as indicated in Fig. 6. Instead of making the opening 9 on vertical lines it may be made horizontal, as indicated at 15 in Fig. 6, the tongue 16 being in this instance made to fold upwardly instead of horizontally. With this construction the loosening-tongue 17 preferably extends downwardly from the portion 12 of the flange at or near its free end.

In the form of the device shown in Figs. 8, 9, and 10 the severed portions of the flange are indirectly secured together by being detachably secured to the intermediate tongue portion 18. The form of connection shown in these figures consists of the projections 19, formed on the severed portions of the flange, which are bent outwardly, so as to engage

the corresponding inwardly-bent projections 20, formed on the tongue 18. By pulling the tongue 18 outwardly and upwardly the connections between the tongue and the flange are broken, thus rendering the removal of the closure easy by a simple upward pull on the tongue 18. This operation is facilitated by the fact that in this and other forms of the device the tongue is connected to the closure at or near the edge thereof, so that all the force applied to the tongue is localized on one portion of the flange and on the portion thereof which has been weakened.

According to the form of connection between the severed portions of the flange and the tongue (shown in Figs. 11 and 12) the small tongues 21, formed on the severed portions of the flange, are bent into engagement with an opening 22, centrally formed on the tongue 23.

In Figs. 13 and 14 small tongues 24 and 25 are struck up from the metal of the flange and are bent inwardly toward each other and then outwardly at their ends to engage the opening 22 in the tongue 23.

In accordance with the construction shown in Figs. 15, 16, 17, and 18 both of the divided portions 25 are cut away from the cover for a short distance along their upper edges and are provided with lips 26, which are adapted to engage the upper surface of the cover. In this form of the device the severed or divided ends of the flange are secured directly to each other on the outer side of the tongue 27, so that when that tongue is forced outwardly and upwardly the connection between the severed portions of the flange are broken, thus facilitating the removal of the closure. Any suitable form of detachable connection may be provided between the divided portions of the flange. As shown in Figs. 16 and 17, each portion is provided with projection 28, which may be bent so as to hook together, as indicated in Fig. 16. As shown in Fig. 18, an eye 29 in one portion of the flange is slipped over a short tongue 30, struck up from the other portion.

An important feature of my invention is found in the form of connection between the closure and the receptacle. (Best shown in Fig. 8.) According to this improvement the flange 4 is bent at some distance above its bottom into engagement with a comparatively small recess 31, formed on the receptacle. By reason of this construction exactly the same amount of metal will be bent during each sealing operation, and thus a very uniform sealing of the bottles will result. This closure also may be readily reused to keep the bottles sealed after they have been once opened.

My invention in its broader aspects is not limited to the precise forms of construction shown herein or to the particular construction by which it may be carried into effect,



as many changes in such structure other than those herein suggested may be made without departing from the main principles of my invention or without sacrificing its chief advantages.

I claim—

1. In a closure for receptacles, a non-resilient sheet-metal cover or cap having an integral depending practically continuous flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, and detachable connections between the severed portions rendering the flange practically continuous.

2. In a closure for receptacles, a non-resilient sheet-metal cover or cap having an integral depending practically continuous flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, detachable connections between the severed portions rendering the flange practically continuous and means for disengaging the flange from the shoulder on the receptacle.

3. In a closure for receptacles, a non-resilient sheet-metal cover or cap having an integral depending practically continuous flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, detachable connections between the severed portions rendering the flange practically continuous, and means for loosening said connections.

4. In a closure for receptacles, a non-resilient sheet-metal cover or cap having an integral depending practically continuous flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, detachable connections between the severed portions rendering the flange practically continuous, and means connected to said cap for loosening said connections.

5. In a closure for receptacles, a non-resilient sheet-metal cover or cap having an integral depending practically continuous flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, detachable connections between the severed portions rendering the flange practically continuous, and a tongue on the cap associated with the connections between the severed portions and whereby said connections may be loosened and the flange dis-

gaged from the shoulder or recess on the receptacle.

6. In a closure for receptacles, a non-resilient sheet-metal cover or cap having an integral depending practically continuous flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one or more places, detachable connections between the severed portions rendering the flange practically continuous, and a tongue integral with the cap associated with the connections between the severed portions and whereby said connections may be loosened and the flange disengaged from the shoulder or recess on the receptacle.

7. In a closure for receptacles, a cover or cap of non-resilient sheet metal having an integral depending flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being severed or divided at one point and detachable connections between the severed portions.

8. In a closure for receptacles, a cover or cap of non-resilient sheet metal having an integral depending flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being divided at one point and a tongue integral with the cap whereby it may be disengaged from the receptacle.

9. In a closure for receptacles, a cover or cap of non-resilient sheet metal having an integral depending flange around its edge adapted to be bent into engagement with a shoulder or recess on the receptacle to secure the cap in place, said flange being divided at a plurality of points, and a detachable connection between parts of the flange at one of said points of division.

10. In a closure for receptacles, a cover or cap of non-resilient sheet metal having an integral depending flange around its edge adapted to be bent into engagement with the shoulder or recess on the receptacle to secure the cap in place, said flange being divided at a plurality of points, a detachable connection between parts of the flange, and a tongue integral with the cap and associated with said detachable connection whereby the latter may be loosened to disengage the cap from the receptacle.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALFRED L. WEISSENTHANNER.

Witnesses:

THEODOR J. REINHARDT,  
JULES H. DOMMERGUE.