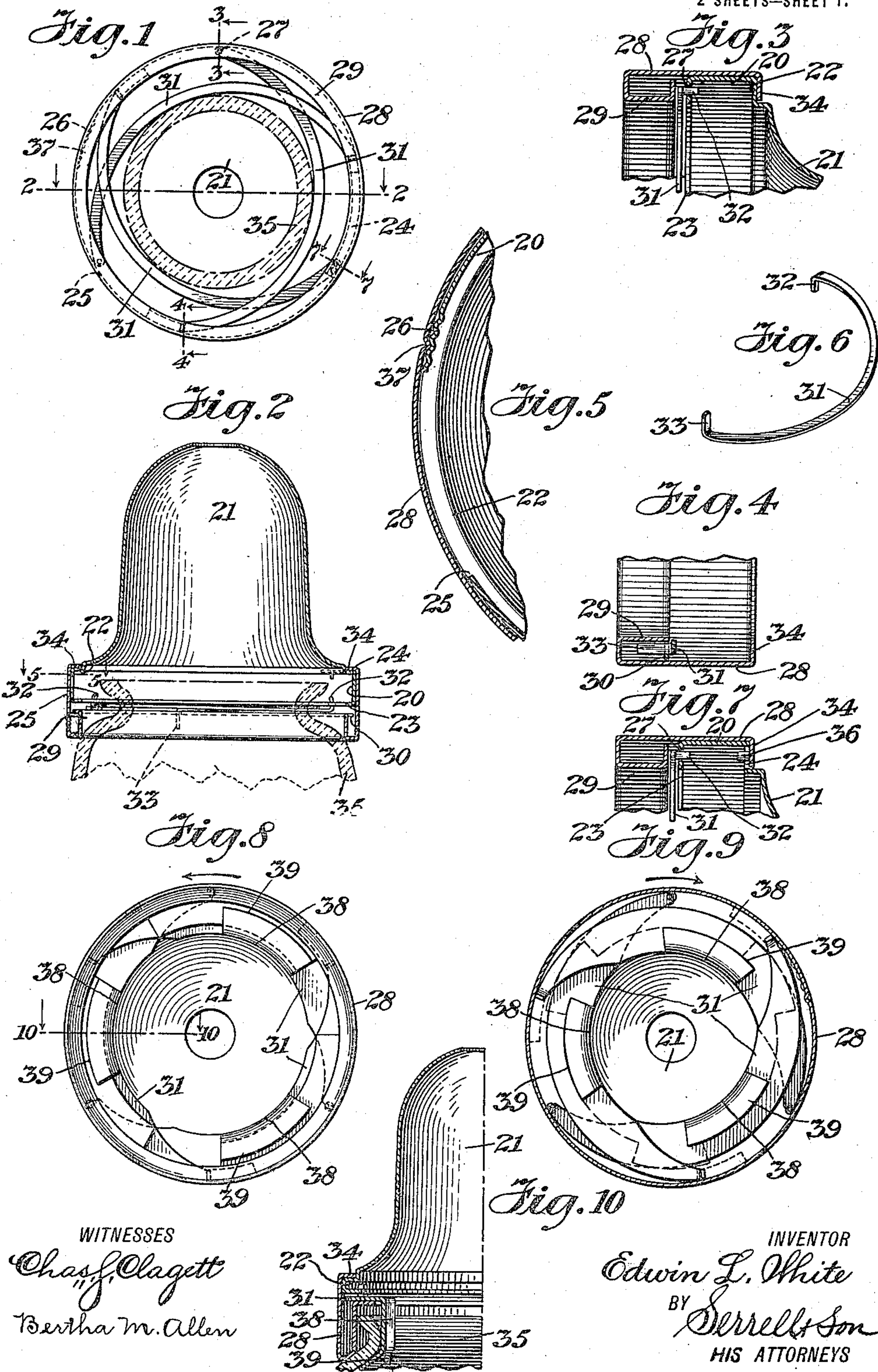


1,155,117.

Patented Sept. 28, 1915.

2 SHEETS—SHEET 1.



WITNESSES
Chas. Clagett
Bertha M. Allen

INVENTOR
Edwin L. White
BY Serrell & Son
HIS ATTORNEYS

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2 SHEETS—SHEET 2.

Fig. 11

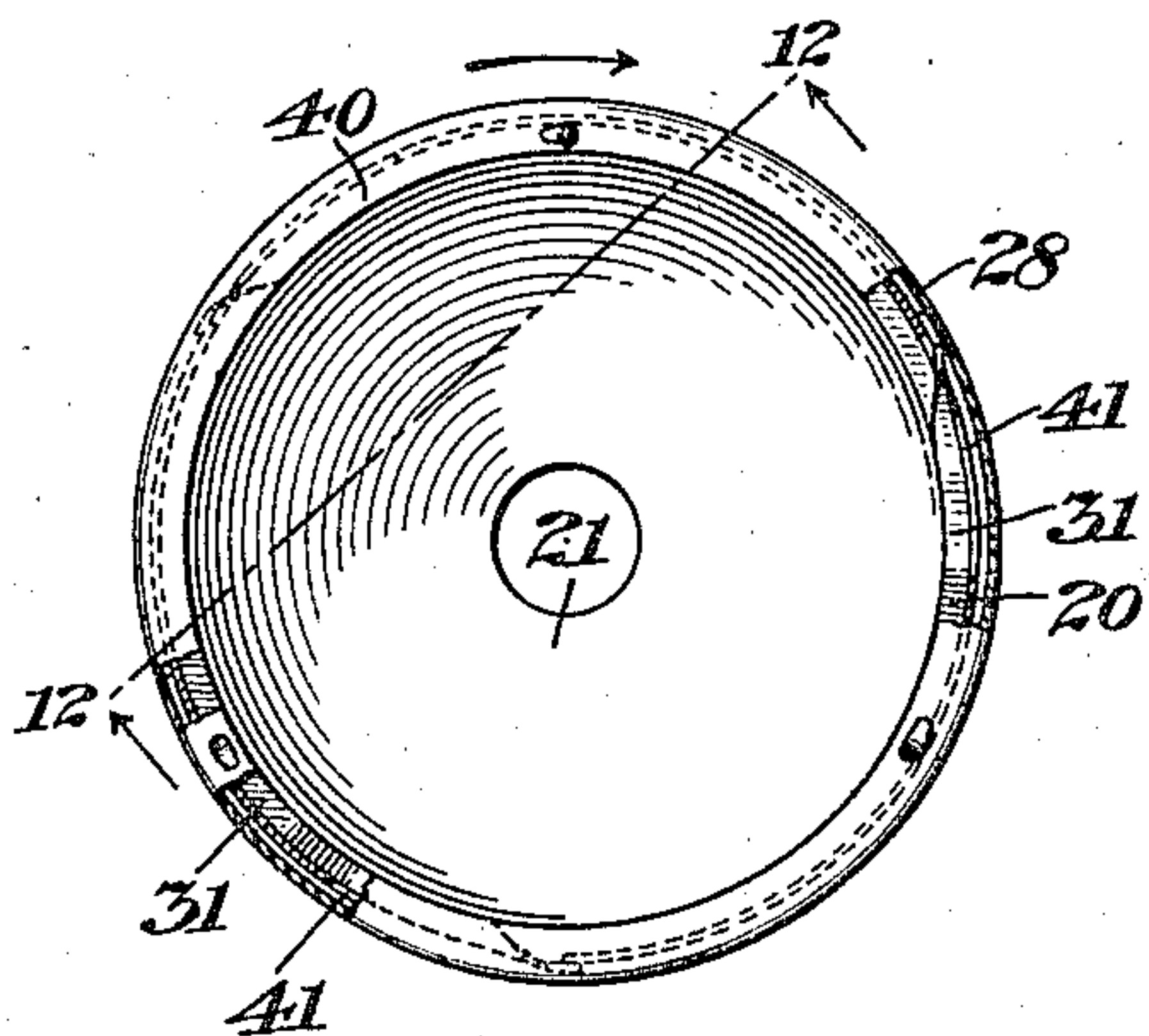


Fig. 15

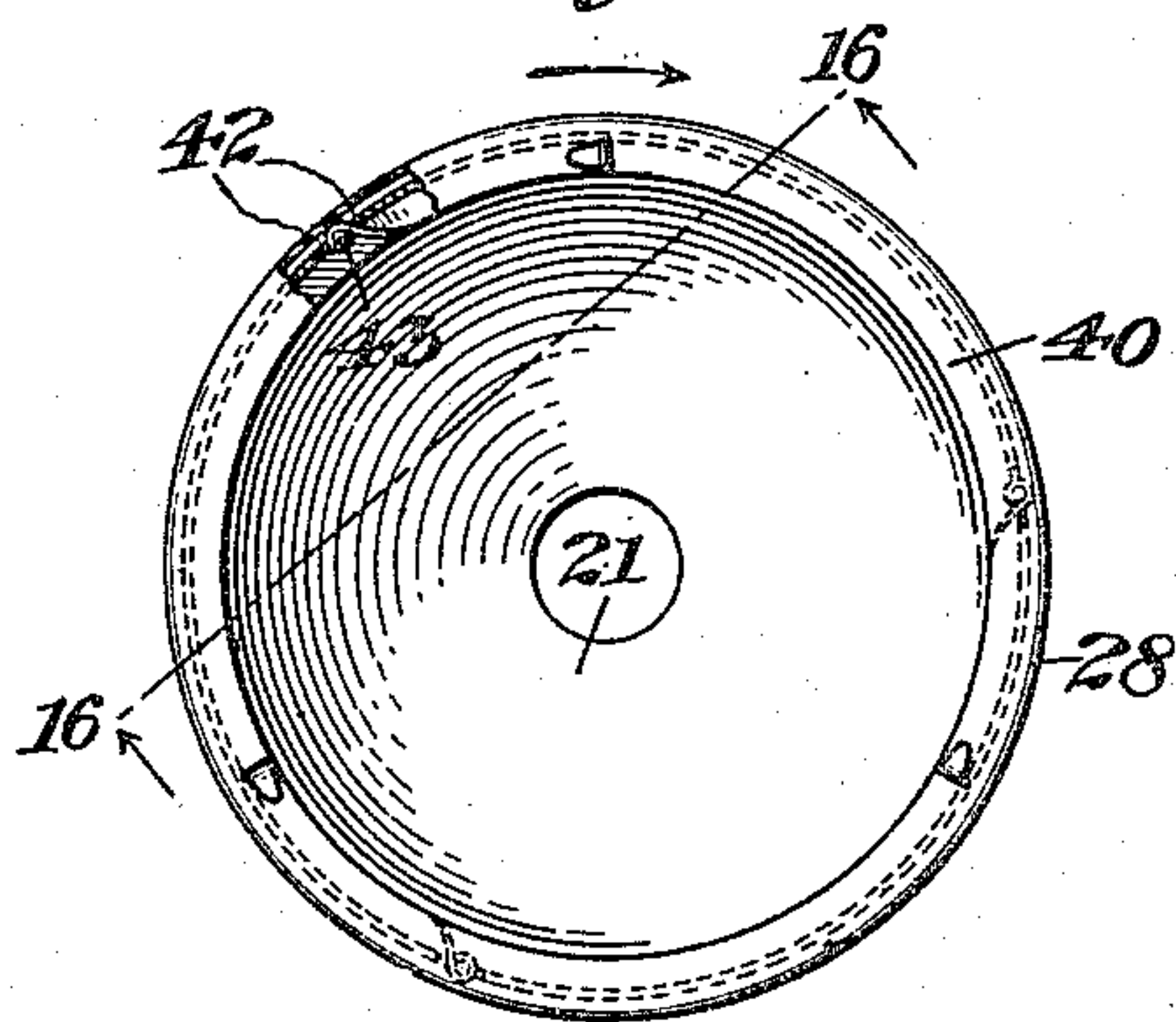


Fig. 12

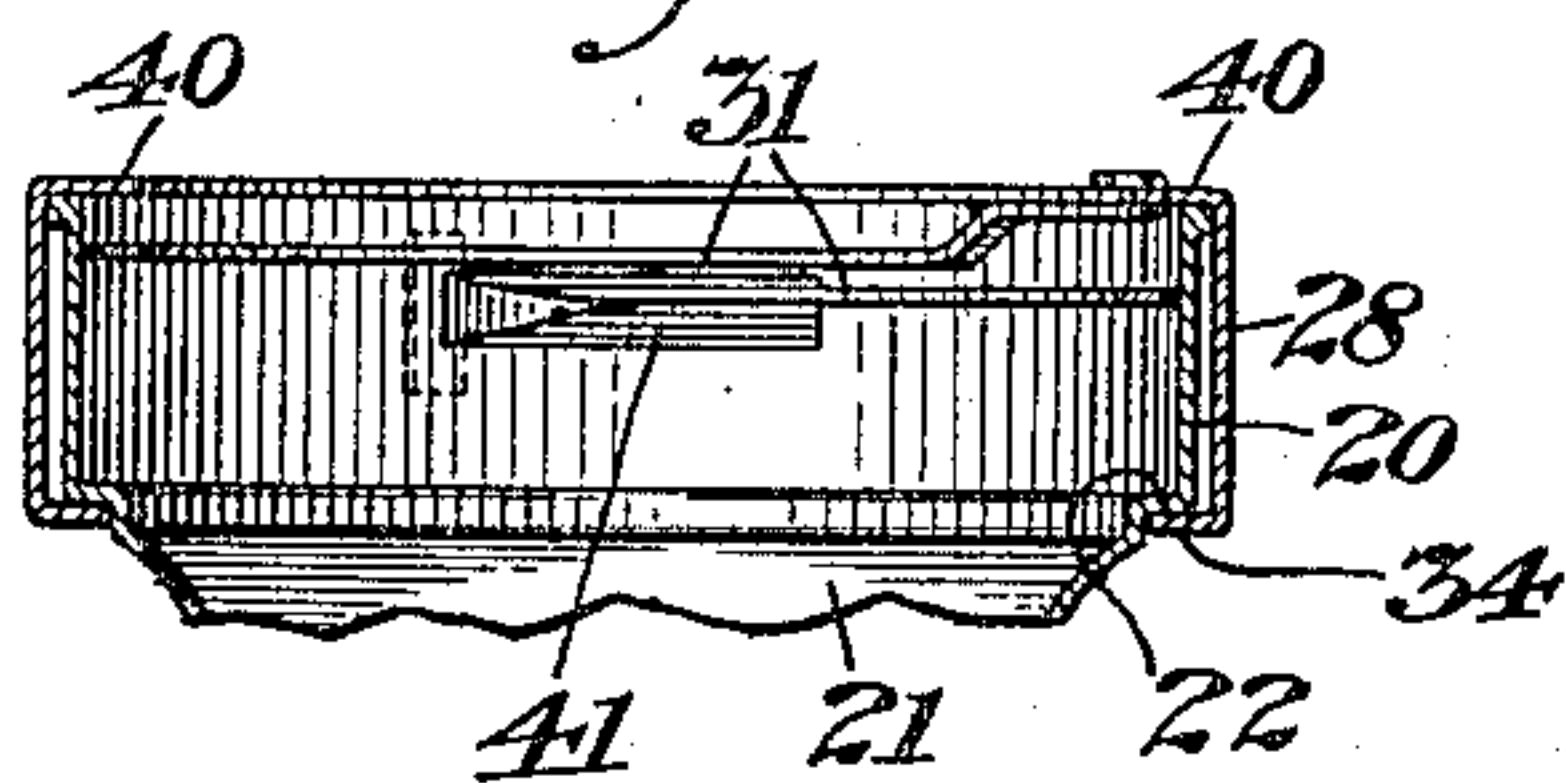


Fig. 16

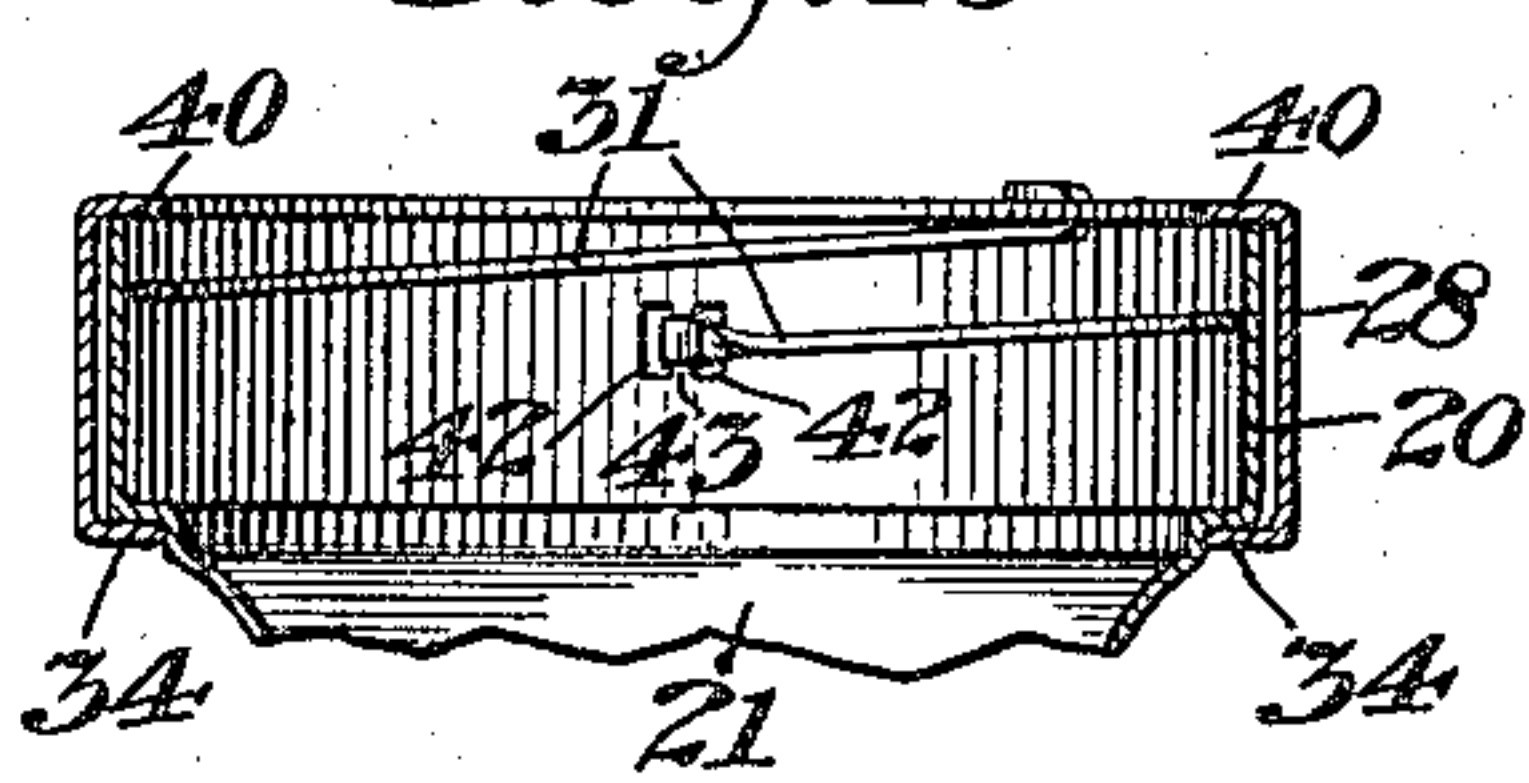


Fig. 13

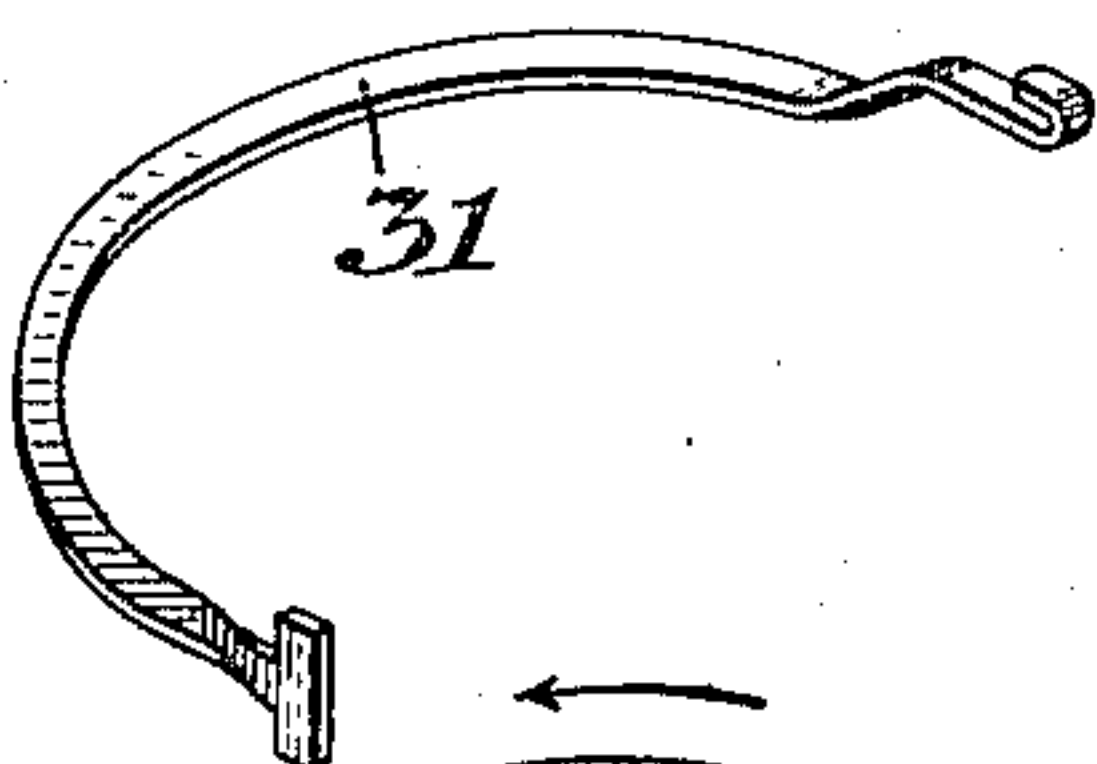


Fig. 17

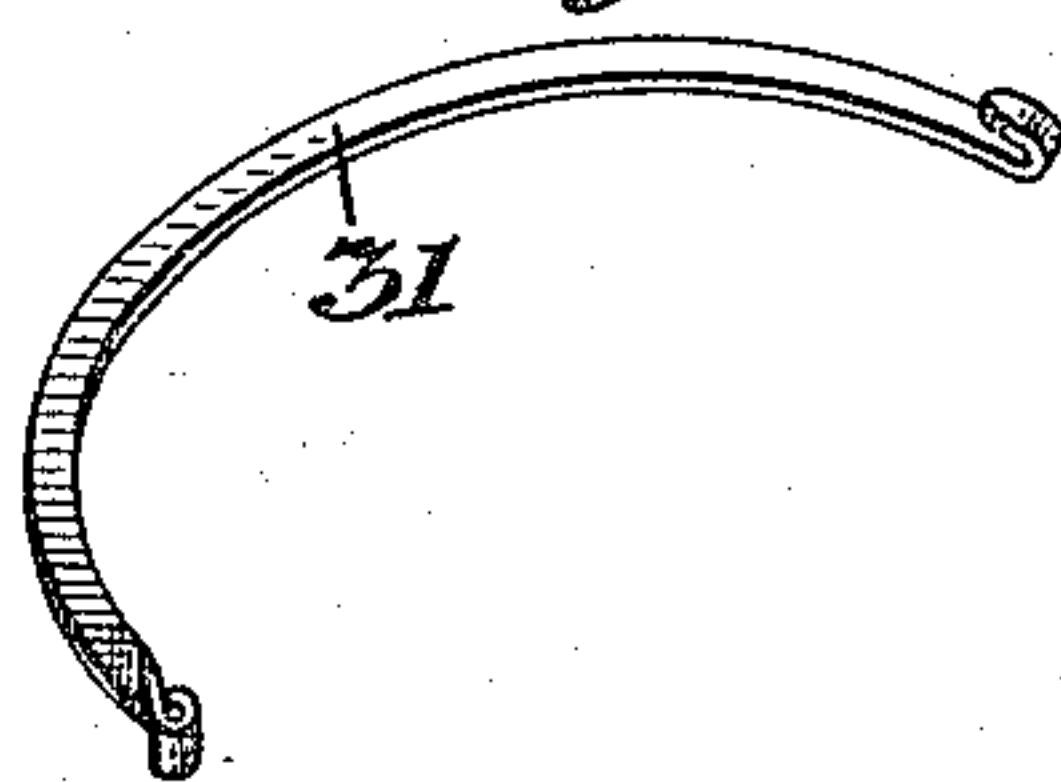


Fig. 14

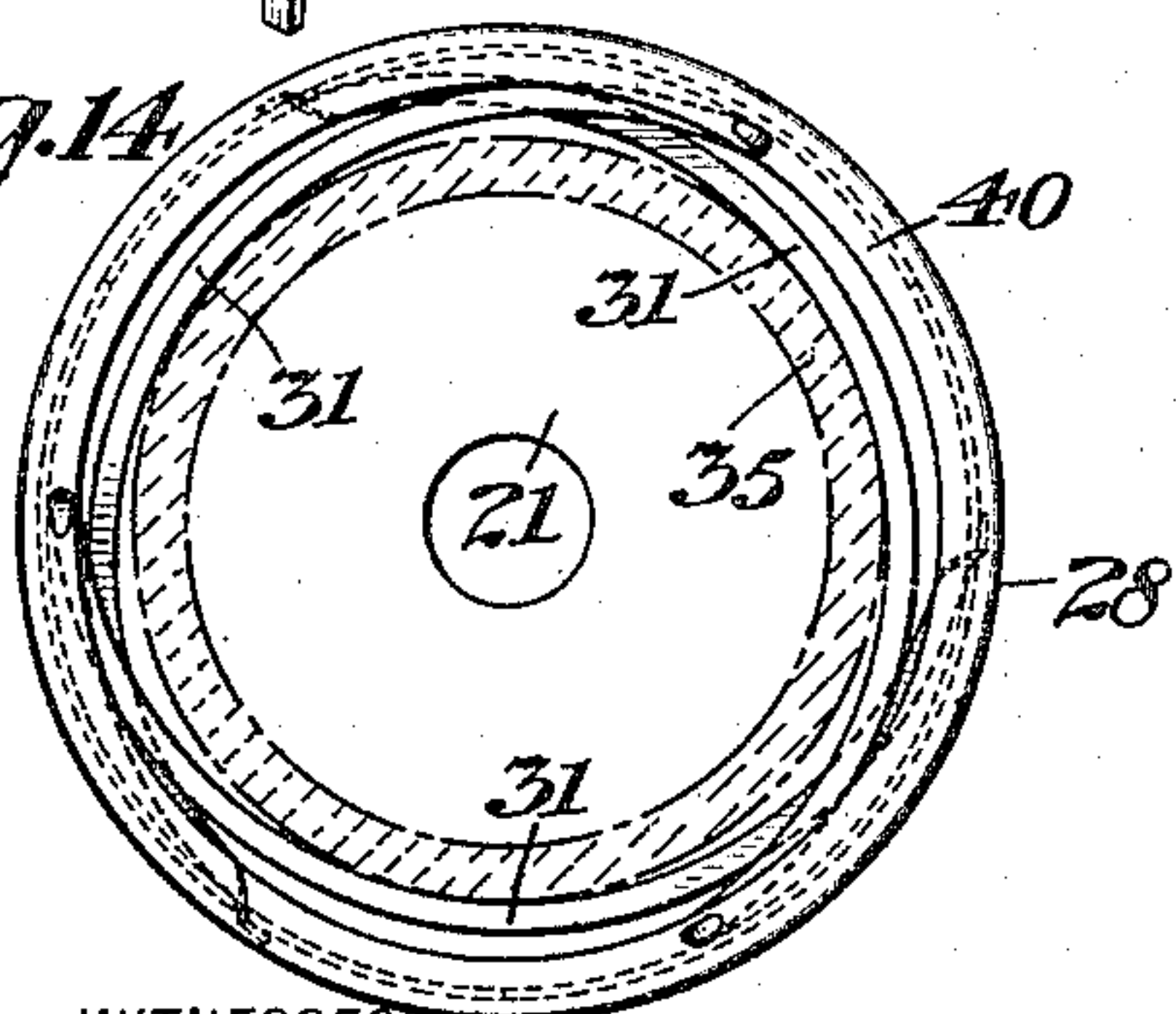
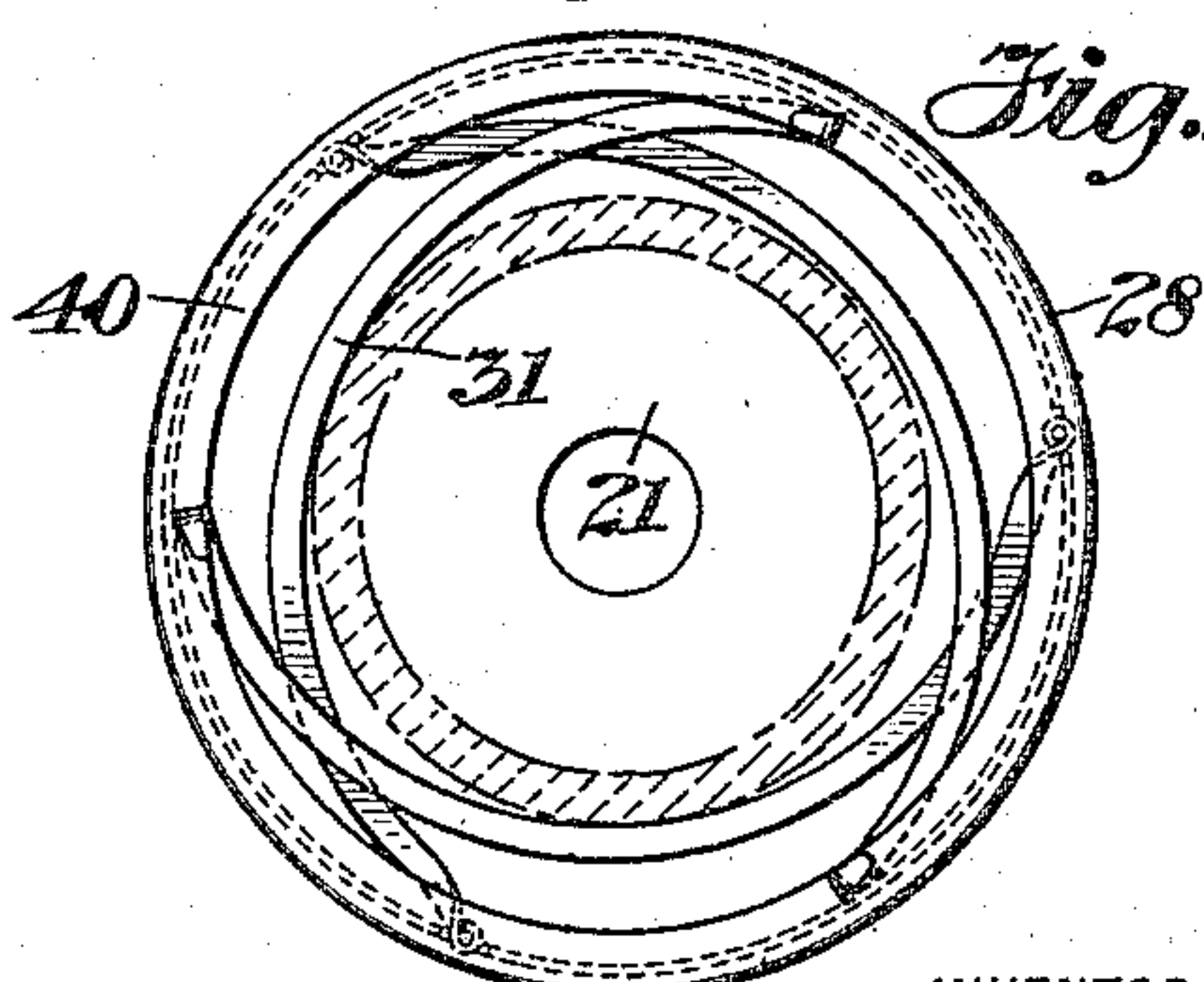


Fig. 18



WITNESSES

Chas. J. Clagett

Bertha M. Allen

INVENTOR

Edwin L. White

BY

Serrells Son

HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWIN L. WHITE, OF NEW YORK, N. Y., ASSIGNOR TO J. H. WHITE MANUFACTURING COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

SHADE-HOLDER.

1,155,117.

Specification of Letters Patent.

Patented Sept. 28, 1915.

Application filed January 25, 1915. Serial No. 4,184.

To all whom it may concern:

Be it known that I, EDWIN L. WHITE, a citizen of the United States, and a resident of the borough of Brooklyn, in the county of Kings, city and State of New York, have invented an Improvement in Shade-Holders, of which the following is a specification.

My present invention relates to an improvement in holders particularly adapted for holding shades or globes in lighting fixtures, although it is applicable for other purposes, and it consists essentially in two concentric rings and a plurality of curved arms, each having one end connected with the inner ring and the other end connected with the outer ring in such manner that by a partial rotation of one ring the arms are moved in a uniform manner to engage and hold an article.

The inner ring may have a body portion of any desired character extending above the top of the outer ring such as a socket cover or other shell, the integral lower part of the shell forming such inner ring as shown in some of the figures of the drawings, or it may be provided with any suitable means for holding it in a fixed position while the outer ring is being partially rotated in either direction.

The details of the invention are herein-after particularly described.

In the accompanying drawings, in which like reference characters denote like parts in all the views:—Figure 1 is a bottom plan view showing the curved arms in the position they occupy after the outer ring has been given a partial rotation to the right, and clamping a shade (shown in section). Fig. 2 is a section on the broken line 2, 2, of Fig. 1. Fig. 3 is an enlarged section on the broken line 3, 3, of Fig. 1. Fig. 4 is an enlarged section on the broken line 4, 4, of Fig. 1. Fig. 5 is an enlarged section on the broken line 5, 5, of Fig. 2. Fig. 6 is a perspective view of one of the curved arms detached. Fig. 7 is an enlarged section on the broken line 7, 7, of Fig. 1. Fig. 8 is a bottom plan view showing a modification with the curved arms in the position they occupy after the outer ring has been given a partial rotation to the right. Fig. 9 is a similar view showing the curved arms in the position they occupy after the outer ring has been given a partial rotation to the left. Fig. 10 is a section on the broken line 10, 10,

of Fig. 8. Fig. 11 is a bottom plan view partially in section of another modification. Fig. 12 is a section on the line 12, 12, of Fig. 11. Fig. 13 is a perspective view of one of the curved arms employed in the modified form shown in Figs. 11 and 12, and detached. Fig. 14 is a plan view of the modified form shown in Figs. 11 and 12, after the outer ring has been given a partial rotation to the right. Fig. 15 is a bottom plan view partially in section showing another modification. Fig. 16 is a section on the broken line 16, 16, of Fig. 15. Fig. 17 is a detached perspective view of one of the curved arms employed in the modification shown in Figs. 15 and 16, and Fig. 18 is a bottom plan view of the modification shown in Figs. 15 and 16, showing the curved arms in the position they occupy after the outer ring has been given a partial rotation to the right, and clamping a shade (shown in section).

In the preferred form of my invention, shown in Figs. 1 to 7, inclusive, 20 indicates the inner ring having an extending body portion 21, which is shown in the form of a socket cover. At the point of connection with this ring and its body there is an annular shoulder 22. The lower edge of the ring 20 is bent over inwardly at right angles forming an annular flange 23. There is an elongated slot 24 in the shoulder 22, and in one side of the ring 20, approximately opposite said slot there is a similar slot 25, adjacent which there are a number of short ribs or corrugations 26. At predetermined spaced points in the flange 23, there are small holes 27.

28 denotes the outer ring, the bottom of which is turned inward; then upwardly with its edge bent over at right angles to such upwardly turned portion forming an annular shoulder 29. At predetermined spaced points in this shoulder 29, there are slots 30.

31 indicates three separate and like arms, each having their respective end bent at right angles in opposite directions, forming the projections 32 and 33. The projections 32 are inserted into the holes 27 in the flange 23 of the inner ring 20, while the projections 33 are inserted into the slots 30 in the shoulder 29 on the outer ring 28. The top edge of the outer ring 28 is now bent over the annular shoulder 22, as shown at 34, thus locking the parts in their relative op-

erative position. The arms 31 are curved to conform to the shape of the rings 20 and 28, and in their inoperative position occupy the space between the flange 23 on the ring 20 and the shoulder 29 on the ring 28.

5 It will be seen that when the inner ring 20 is held stationary and the outer ring 28 given a partial rotation the arms 31 will be moved uniformly so that their center portions will approach the center of the rings and grip an object placed therein such as the shade 35, as illustrated in Figs. 1 and 2. The slots 30 in the shoulder 29 of the ring 28 permit a certain degree of movement before the arms 31 begin to assume the position shown in Figs. 1 and 2.

15 36 indicates a downwardly projecting pin or lug upon the bent over upper portion 34 of the ring 28, which pin or lug enters and slides within the elongated slot 24 in the shoulder 22 of the ring 20, by which means the rotation of the ring 28 is limited.

20 I make an indentation in the outer ring 28, forming a slight rib or projection 37 on its inner surface. This rib normally occupies a position in the slot 25, in the side of the inner ring 20, but when the outer ring 28 is rotated this rib is forced into connection with the corrugations 26 on the side of the ring 20, and holds the ring 28 and curved arms 31 in the desired position.

25 There is sufficient resiliency in the sheet metal of which the rings are made to allow the rib to be sprung into and out of engagement with said corrugations with comparatively slight pressure, but the rib will hold between the raised portions until such pressure is applied, and the clicking sound produced in snapping the rib over the corrugations enables the operator to know when the desired degree of rotation has been given to the ring 28.

30 In Figs. 8, 9, and 10 of the drawings, I have shown a modified form of holder adapted to act upon the interior surface of a shade or globe. In this modified form the curved arms 31 are made of a width considerably greater than in the other forms of my device, and at the central part of the inner edge of each arm there is a right angled lug or projection 38, extending toward the bottom of the outer ring 28, the free end of each of said lugs being bent at an inclination in the direction of the arms. These lugs 35 are slightly concave to conform to the curvature of the arms and the inner surface of the shade.

40 Fig. 8 shows the parts in their normal relative positions. By giving the outer ring 28 a partial rotation to the left or in the direction indicated by the arrow, the parts are brought into the position shown in Fig. 9, in which position a shade may be inserted into the ring 28 when the lugs 38 on the arms 31 will pass into the opening in the shade.

Now by giving the ring 28 a partial rotation to the right or in the direction of the arrow, the lugs 38 and their curved or inclined ends 39 will contact with the inner surface of the shade 35, and support the same from the inside, as illustrated in Fig. 10.

In the modification shown in Figs. 11 to 14, inclusive, the outer ring 28 is simply provided with an inturned flange on both edges. The bottom of the inner ring 20 rests upon the lower flange 40 while the upper flange 34 rests upon the shoulder 22 as in the other forms. In this modification one end of each of the curved arms 31 is secured to the flange 40 of the ring 28, the other end of each arm being T-shaped and inserted into somewhat elongated spaced slots 41, cut in the side of the inner ring 20. Figs. 11 and 12 show the parts in a normal position and Fig. 14 shows the parts in their relative position when holding a shade 35 and after the outer ring has been given a partial rotation.

90 In the modification illustrated by Figs. 15 to 18, inclusive, the outer ring is of the same formation as in the modification shown by Figs. 11 to 14, and one end of each of the curved arms 31 is secured to the flange 40 of the ring 28 in the same manner, the only difference between this form and that shown in Figs. 11 to 14, being the manner of connecting the ends of the curved arms to the inner ring 20. In this instance the arms have a hinge-like or pivotal connection with the inner ring.

As a simple and economical manner of forming such a connection, I, at predetermined spaced points in the side of the ring 20, cut two slightly spaced slots 42, which leaves a vertical strip or bar of metal 43 between them and around this the free ends of the curved arms are bent. Figs. 15 and 16 show the parts in their normal positions, and Fig. 18 shows their relative positions when holding a shade 35 and after the outer ring 28 has been given a partial rotation.

By the employment of my invention, a shade or globe can be readily attached securely in position, or easily removed therefrom, and it is obvious that it makes no difference as to whether the fixture upon which it is used occupies one position or another.

I claim as my invention—

1. A device of the character described, consisting of two concentric rings, the inner ring having an annular inturned flange at its top and bottom edges and an elongated slot in one side with a number of adjacent short ribs or corrugations, the lower flange of said ring being provided with spaced holes, the outer ring having its bottom edge inturned and provided with spaced slots, a plurality of curved arms each having their

5 respective ends bent at right angles in opposite directions, one of which bent ends, in each arm, is inserted into one of the holes in the lower flange of the inner ring while the other ends are inserted into the said slots in the inturned bottom portion of the outer ring, a rib or projection on the inner surface of the outer ring which normally is within the said slot in the side of the inner ring, the outer ring being rotatable whereby when rotated said rib is forced into connection with said ribs or corrugations on the side of the inner ring and acts to hold the rings and arms in the desired position.

15 2. A shade holder consisting of two concentric rings, the inner ring being provided with an inturned flange on both edges, a slot in one of said flanges and a projecting body portion integral with the same flange, spaced holes in the other flange, a slot in one side of said ring and adjoining corrugations, the outer ring having one edge bent over the flange containing the slot on the inner ring, a lug upon said bent over portion of the

outer ring projecting into said slot in the flange of the inner ring, a rib or projection upon the inner surface of the outer ring projecting into said slot in the side of the inner ring and adapted to be moved into engagement with said adjoining corrugations, the other edge of said outer ring being bent inwardly and upwardly and then at right angles toward the inner surface of said ring, spaced slots in said right angled portion, and a plurality of curved arms, each having their ends bent at right angles in opposite directions with one of said right angled bends inserted into one of said spaced holes in the flange of the inner ring, and the other right angled bend inserted into one of said spaced slots in the bent over portion of the outer ring.

Signed by me this 21st day of January, 1915.

EDWIN L. WHITE.

Witnesses:

B. M. ALLEN,
J. B. LE BLANC.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."