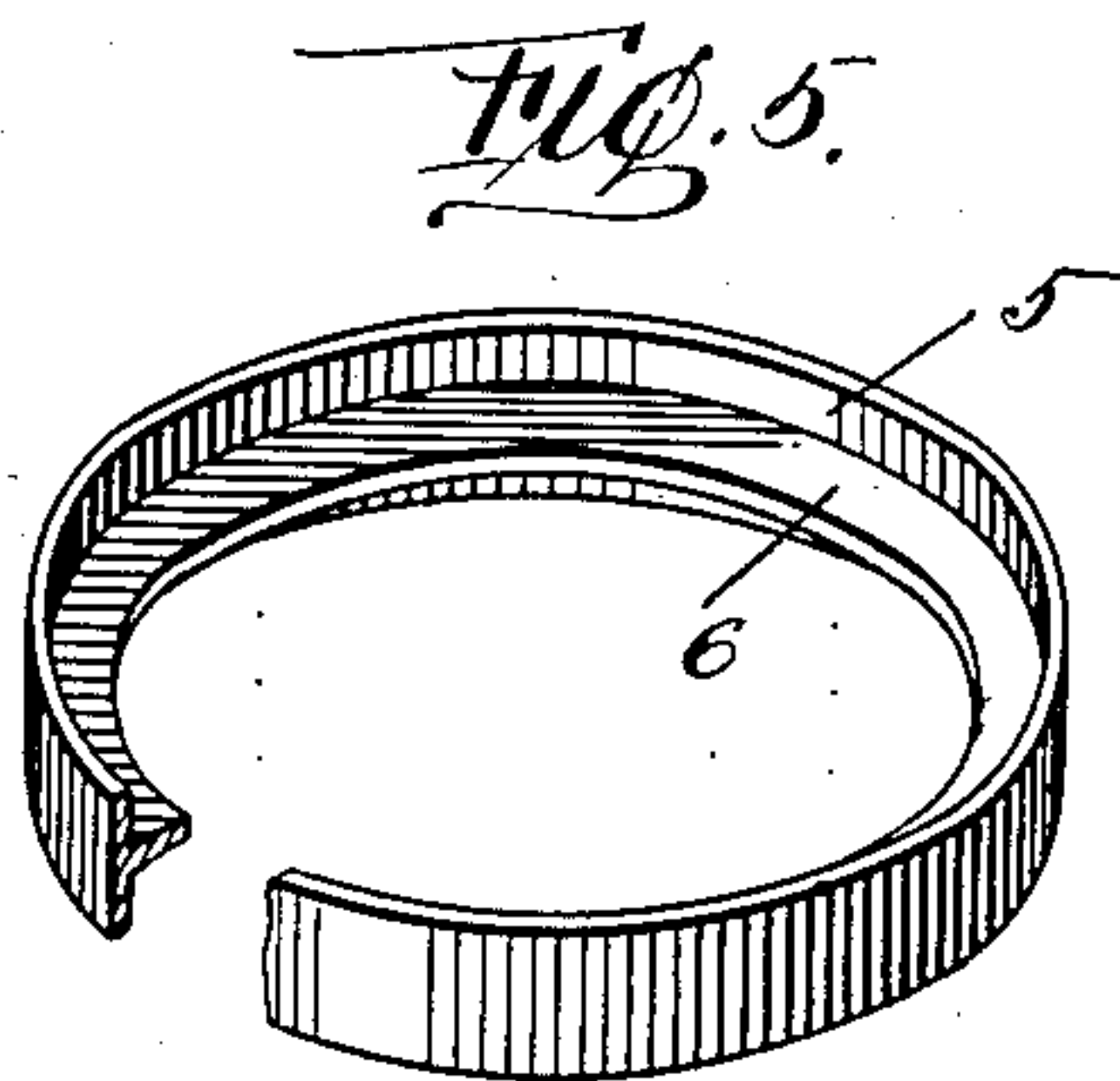
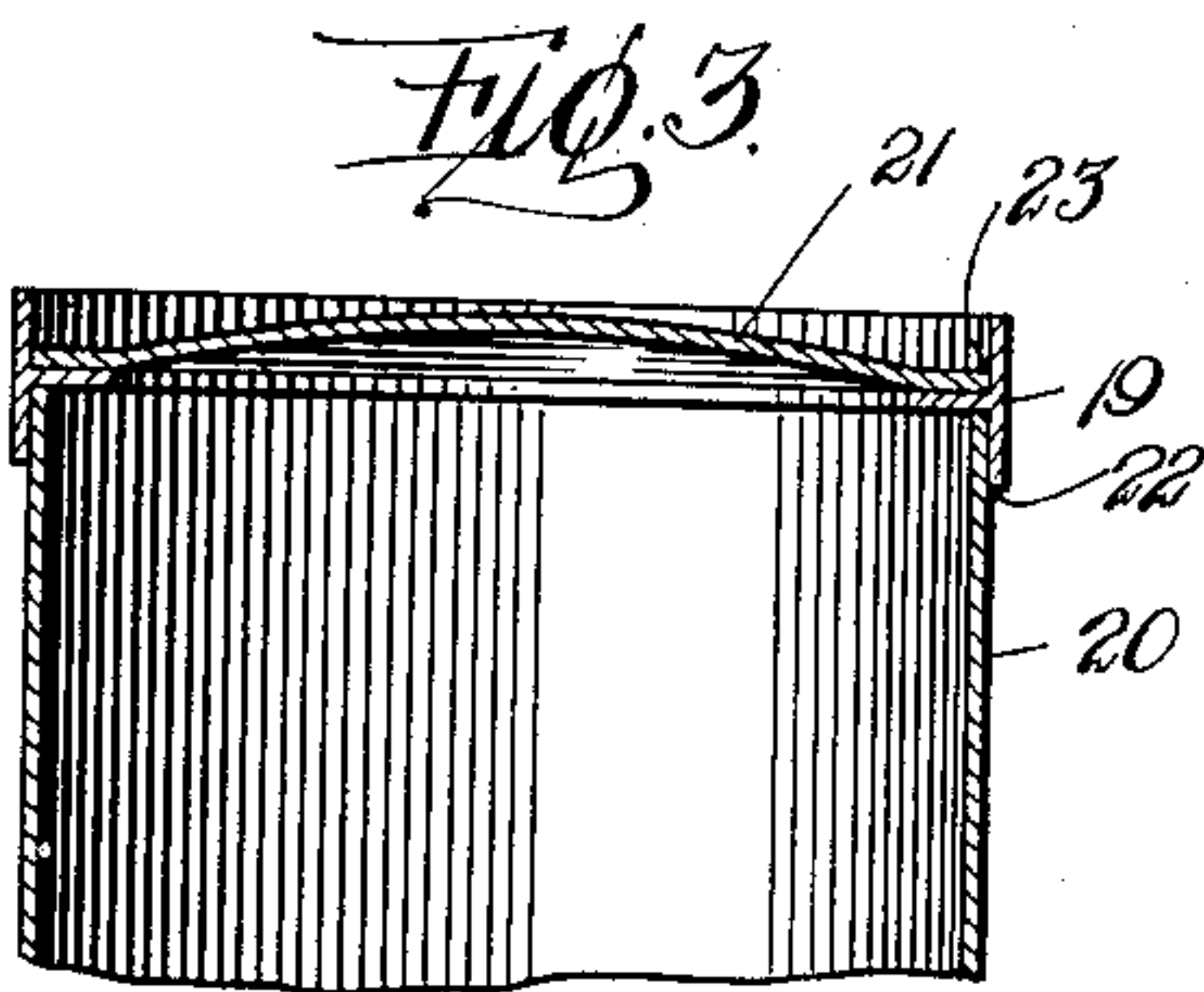
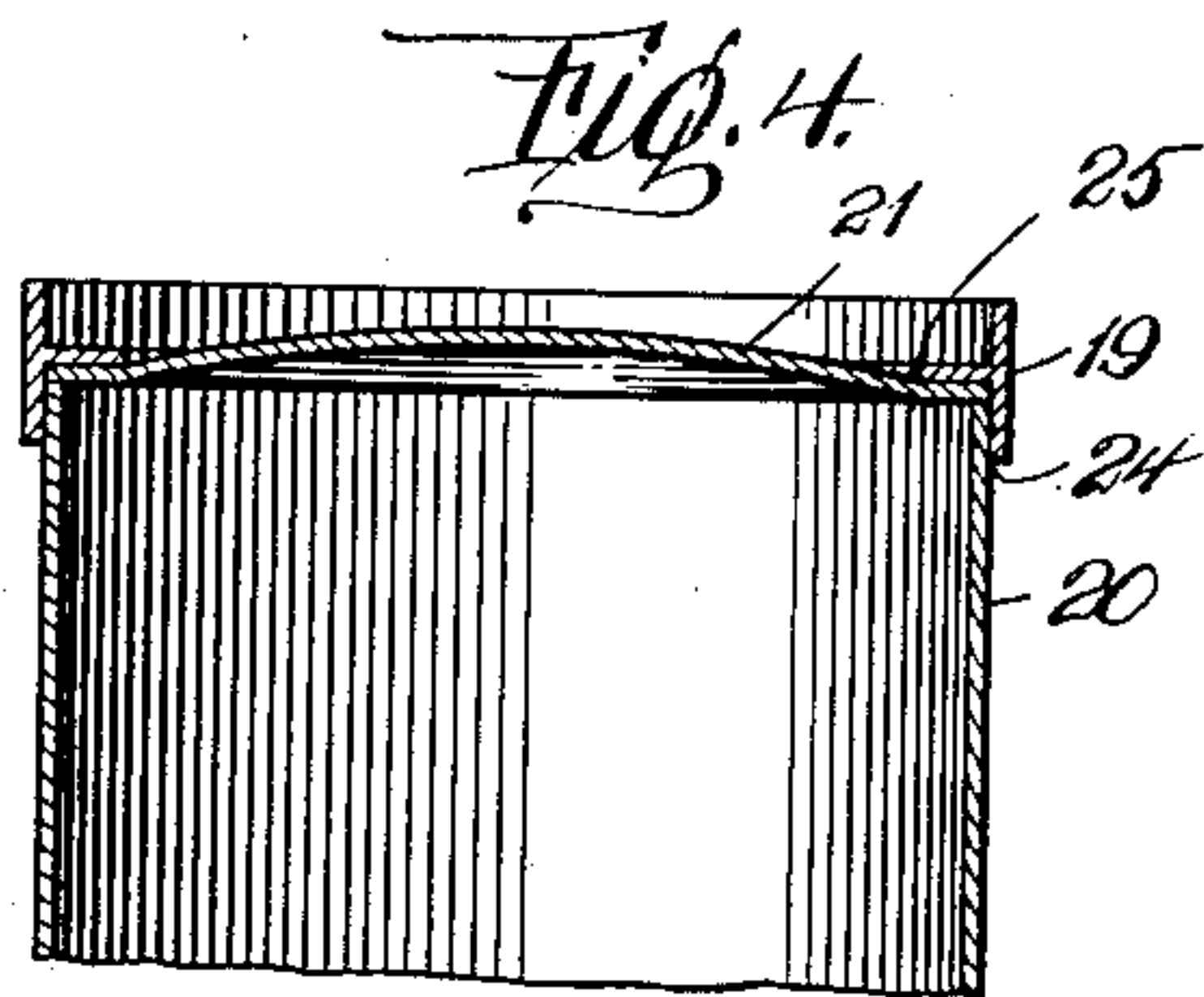
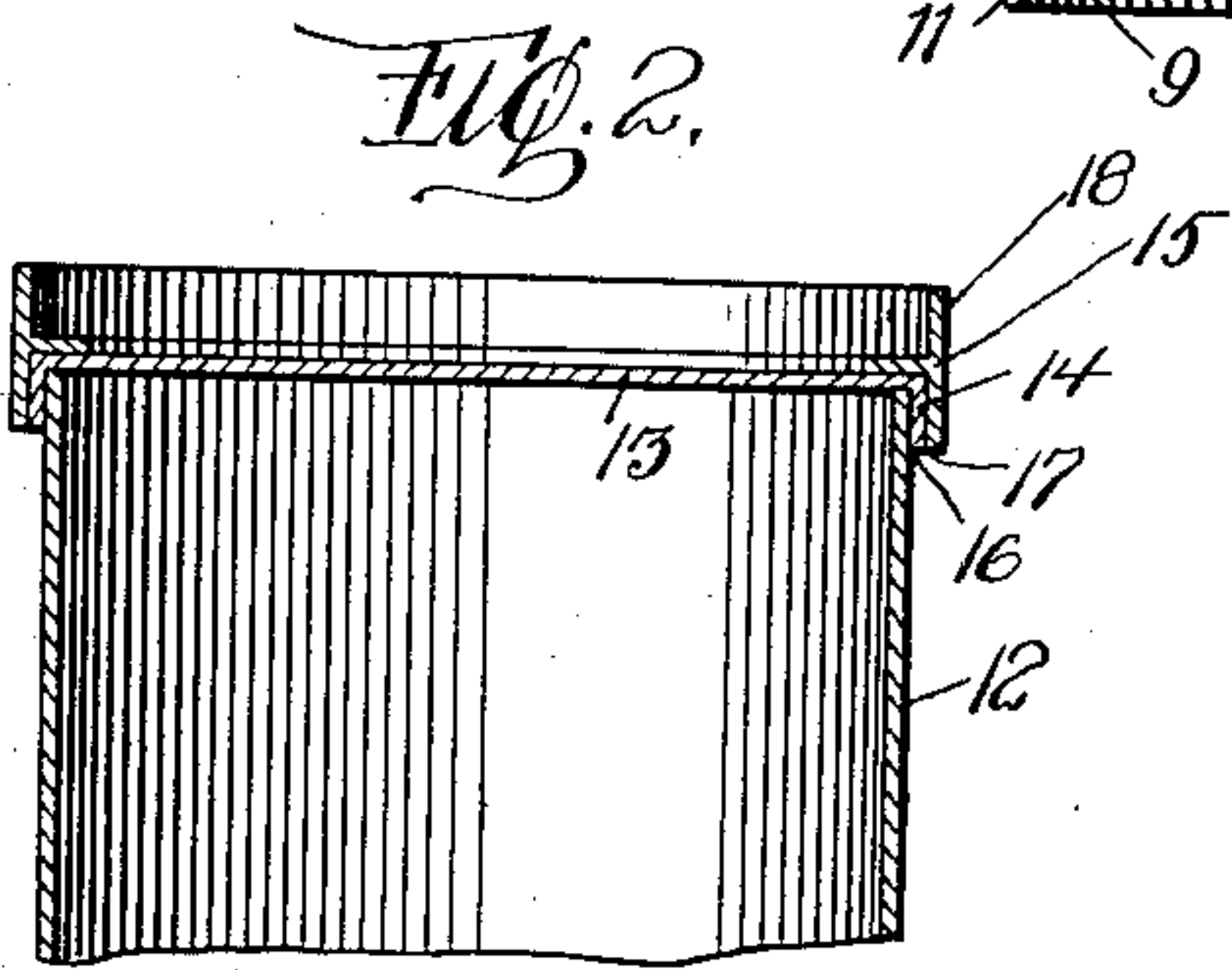
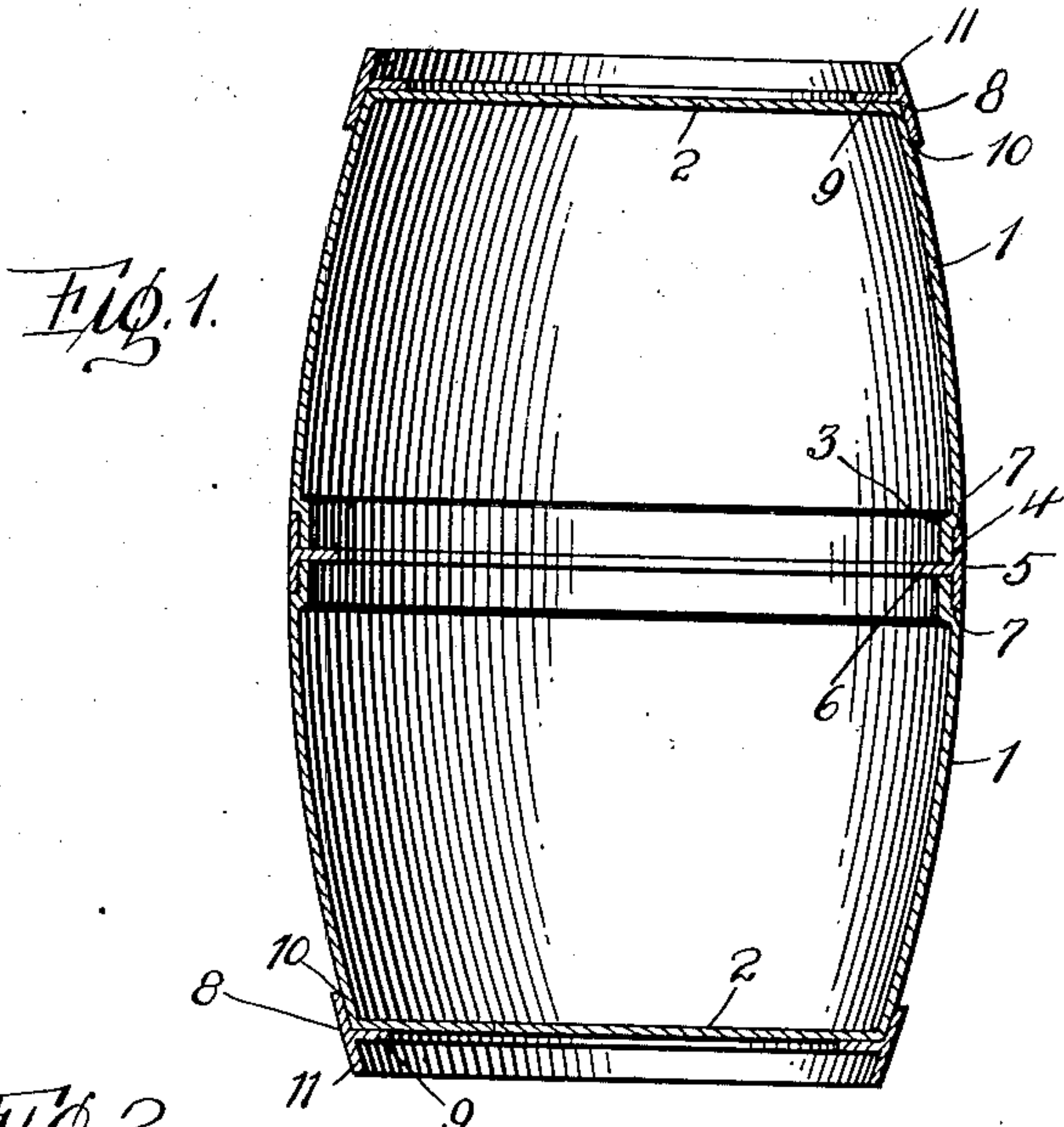


E. R. WILLIAMS.
METALLIC RECEPTACLE.
APPLICATION FILED AUG. 28, 1908.

935,440.

Patented Sept. 28, 1909.



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METALLIC RECEPTACLE.

935,440.

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To all whom it may concern:

Be it known that I, EDWARD R. WILLIAMS, a citizen of the United States of America, residing at Sharpsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Receptacles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to metallic receptacles, and more particularly to that class known as metallic shipping and storing vessels.

The object of my invention is to provide a novel connection, joint, and reinforcements for the parts of a barrel, cask, drum or cylinder formed of two or more metallic sections united circumferentially by a ring or coupling-piece of suitable form, the whole being so united and constructed as to present a receptacle that will be light in weight, easy and simple to manufacture, yet strong and durable.

My invention is particularly designed for metallic shipping and storing vessels, employed for liquids or fluids, especially those that are heavy. I am aware that vessels have been heretofore designed for this purpose, but considerable trouble has been experienced in maintaining the vessels tight and in a non-leakable condition, such trouble being principally due to the fact that the seams and joints of the vessels were left unprotected, exposed, and made of such a shape that in handling the vessels, the seams and joints are often fractured, indented and subjected to stresses and strains that cause the vessels to leak, rendering the same practically useless for the transportation of liquids.

My invention aims to obviate the above defects first, by providing a novel ring or coupling-piece for a two-part vessel. This ring or coupling-piece is arranged to brace the confronting edges of the vessel parts and relieve the welded, brazed or riveted parts of the vessel of any stresses or strains to which the vessel may be subjected. Second, by providing a novel reinforcing protecting ring for the chimes of a barrel, which is arranged to protect the closed ends of the barrel, whether the same is closed by an integral head or a fabricated head, the former being stamped, drawn or spun from sheets or blanks of metal into the required tub-like

shape, while the latter conforms to a disk adapted to be welded, brazed or riveted to the ends of a barrel.

In order that my invention may be fully understood, I have illustrated in the accompanying drawing the preferred embodiments of my invention, and reference will now be had to this drawing.

Figure 1 is a vertical sectional view of a barrel constructed in accordance with my invention. Fig. 2 is a similar view of a portion of a vessel having the ends thereof closed in accordance with my invention. Fig. 3 is a similar view illustrating a slight modification. Fig. 4 is a similar view illustrating another arrangement of the elements shown in Fig. 3, and Fig. 5 is a perspective view of a ring or coupling-piece forming part of my invention, a portion of the ring being broken away to show the cross sectional view of the same.

To put my invention into practice, in accordance with the embodiments shown in Fig. 1, I provide two tub-shaped parts cask sections 1 that can be stamped, drawn or spun from sheets or blanks of metal into the required shape, one of these parts being inverted and placed upon the other part, whereby their confronting edges can be connected together to form a barrel or cask-like structure. Since each part can be made by the well known process of cupping disks of metal, it is obvious that each part will consist of a single piece of metal without seams, each part having, when connected together, an integral barrel head 2. The open ends of the parts or sections are reamed or bent inwardly, as at 3, whereby when the parts are placed together, an annular groove 4 will be formed intermediate the integral heads 2 of the barrel. A ring or coupling-piece 5 is interposed between the ends of the parts, this ring or coupling-piece being T-shaped in cross section, whereby the ends of the parts 1 will engage with the inwardly projecting flange 6 of the ring or coupling-piece, while the ring proper will seat in the groove 4 and engage the annular shoulder 7 formed by the reamed or inwardly bent ends of the parts 1. After the parts 1 and the coupling-piece have been assembled, these parts can be secured together by welding or brazing, but in practice, I preferably braze the edges of the coupling piece to the shoulders 7, whereby

the barrel will have a smooth and uninterrupted exterior surface and a non-leakable structure will be formed.

Before considering the protection of the closed ends or integral heads of the barrel, I desire to call attention to the fact that the brazed connection or joint between the coupling-piece and the parts 1 is entirely relieved of stresses and strains by the edges of the parts 1 bearing against the inwardly projecting flange 6 of the coupling-piece.

In connection with the closed ends and integral heads 2 of the barrel, I use protecting rings 8, these rings being substantially T-shaped in cross-section, with the inwardly projecting flange 9 designed to rest upon the integral heads 2. These protecting rings are shaped to fit upon the ends of the barrel and are secured thereon by brazing the edges 10 of the protecting rings to the barrel, while the opposite edges 11 of the ring form the chimes of the barrel and protect the integral heads 2. As in the case of the flange 6 of the coupling-piece 5, the flange 9 of the protecting ring 8 is adapted to receive stresses and strains exerted upon the chimes of the barrel, consequently relieving the brazed edges 10 of the protecting ring. This feature of my invention is more clearly understood in connection with a metallic cylinder, drum, cask or vessel having separate heads, and reference will now be had to Figs. 2 to 4 inclusive.

In Fig. 2 I have illustrated a portion or the end of a cylindrical vessel 12 upon which is placed a flanged disk 13 having an annular depending flange 14 for snugly engaging the end of the vessel. Adapted to fit upon the flange 14 of the disk 13, is a protecting ring 15, constructed similar to the coupling-piece 5, previously mentioned. The flange 14 of the disk 13 is brazed to the vessel 12, as designated at 16, and the inner flange of the protecting ring 15 is brazed to the flange 14 of the disk 13, as at 17, while the outer flange of the ring 18 forms one of the chimes of the vessel. This manner of connecting the disk, ring and vessel can be readily accomplished, but I would have it understood that the inner flange of the ring and the flange of the disk can be welded to the vessel in one operation. It is apparent that if the chime receives a blow, the same will be sustained by the inwardly projecting flange of the ring 15, the disk 13 and the end of the vessel, without affecting the brazed edges of the disk and the ring, consequently a non-leakable and air-tight connection is established between the vessel 12, disk 13 and ring 15.

A modification of the invention is shown in Fig. 3 of the drawings, wherein a protecting ring 19 is mounted directly upon the

end of a vessel 20, and then a disk or head 21 placed within the ring upon the inwardly projecting flange thereof. The ring 19 is brazed to the vessel, as designated at 22, and the disk or head is similarly connected to the ring 19, as at 23, and it is obvious that the chime of the vessel 20 can receive a blow without affecting the brazed connections or joints between the vessel 20, ring 19 and disk or head 21.

A re-arrangement of the above mentioned elements is shown in Fig. 4 of the drawings, wherein the disk or head 21 is mounted directly upon the end of the vessel 20, and then the ring 19 mounted upon the peripheral edges of the head or disk 21. In this arrangement, the ring 19 is brazed to the vessel, as designated at 24, and said ring is brazed to the head or disk, as at 25.

Barrels or vessels constructed in accordance with my invention will of course be provided with the usual bung and vent for the purpose of filling and emptying the same, and hoops or bands can be used, particularly in connection with a drum or cylinder.

I reserve the right to make the ring or coupling-piece of any size or thickness, or to make one flange or edge a different thickness from the remaining edges.

Having now described my invention what I claim as new, is:

A metallic cask formed in two similar cask sections each closed at one end and open at the other end, a coupling and protecting ring substantially T-shaped in cross-section within which the open ends of the cask sections are received, the outer face of said ring being flush with the periphery of the cask, rings on the closed end of said cask, said end rings being substantially T-shaped in cross-section to provide a horizontal flange and oppositely-projecting flanges on each side of the horizontal flange, the horizontal flange of said ring engaging the closed ends of the cask, each end ring having the flange on one side of the horizontal flange of said ring overlying the periphery of the cask, at the ends of the latter and the flange on the other side of said horizontal flange projecting beyond the end of the cask to form a chime therefor, the flanges of the coupling ring and those of the end rings being of equal thickness throughout and both flanges being of the same thickness, the flanges on the opposite sides of the horizontal flange projecting an equal distance on each side thereof.

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

EDWARD R. WILLIAMS.

Witnesses:

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A. J. TRIGG.