

G. M. CLAPP.

CAN.

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953,595.

Patented Mar. 29, 1910.

Fig. 1.

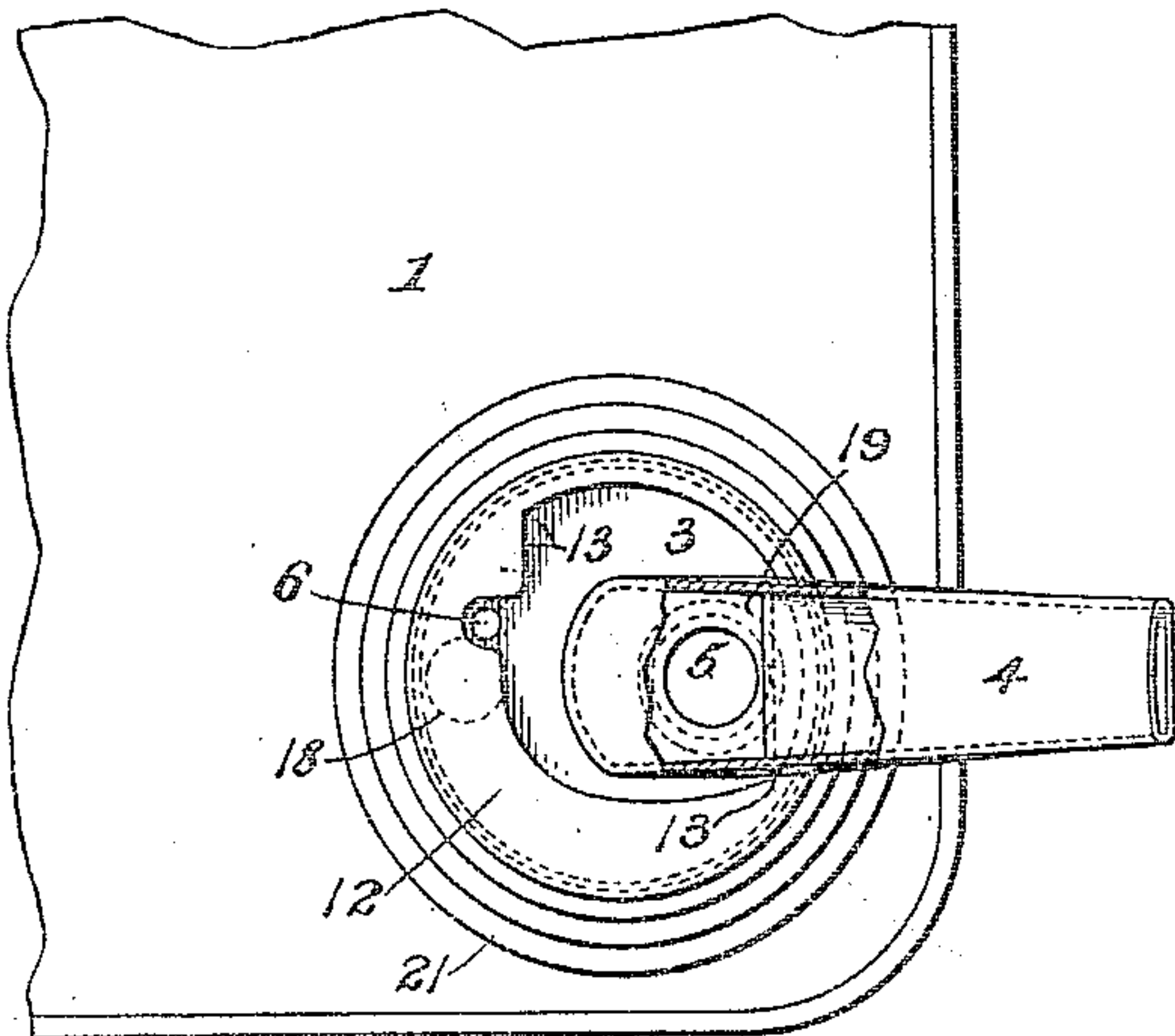


Fig. 2.

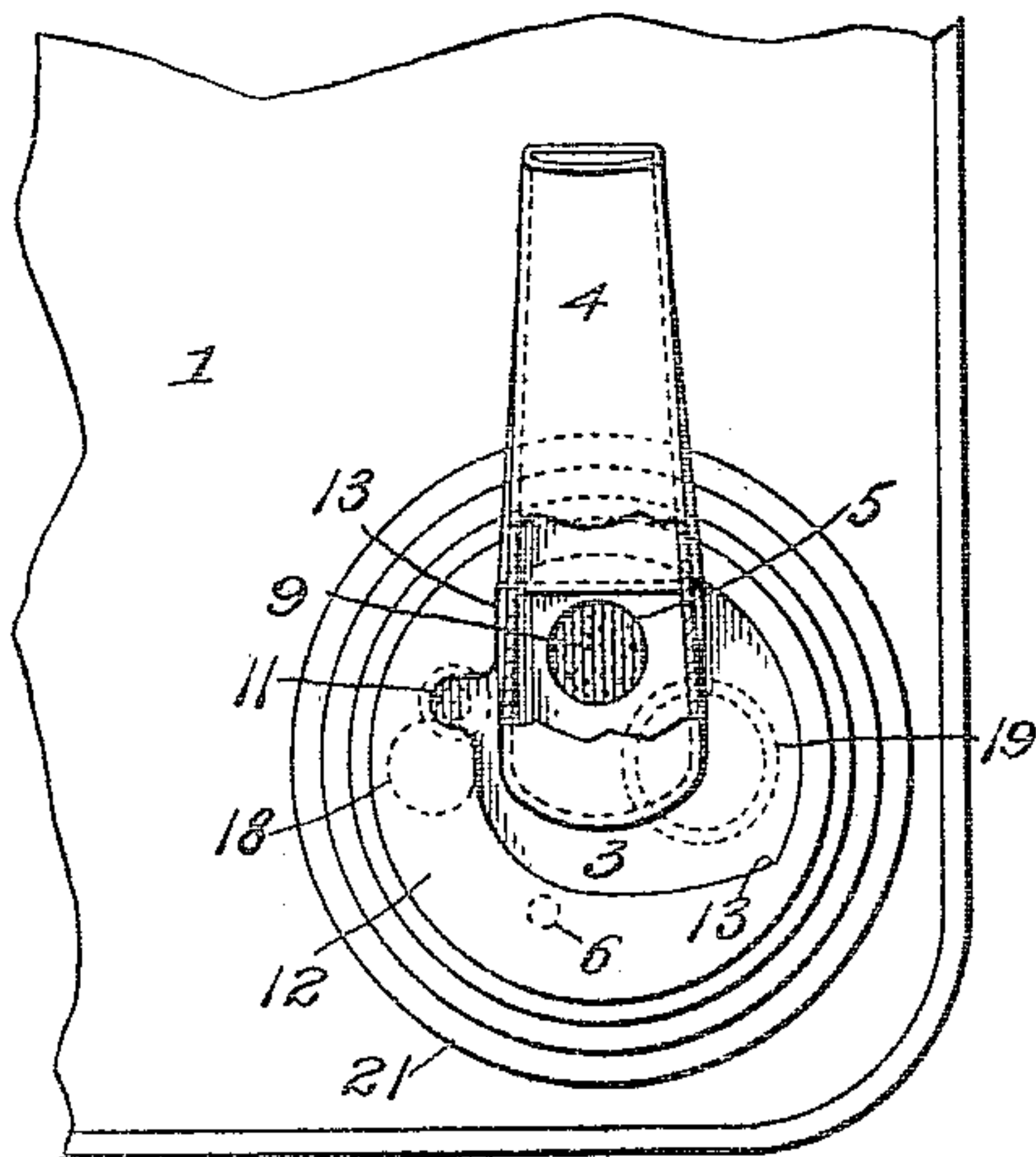


Fig. 3.

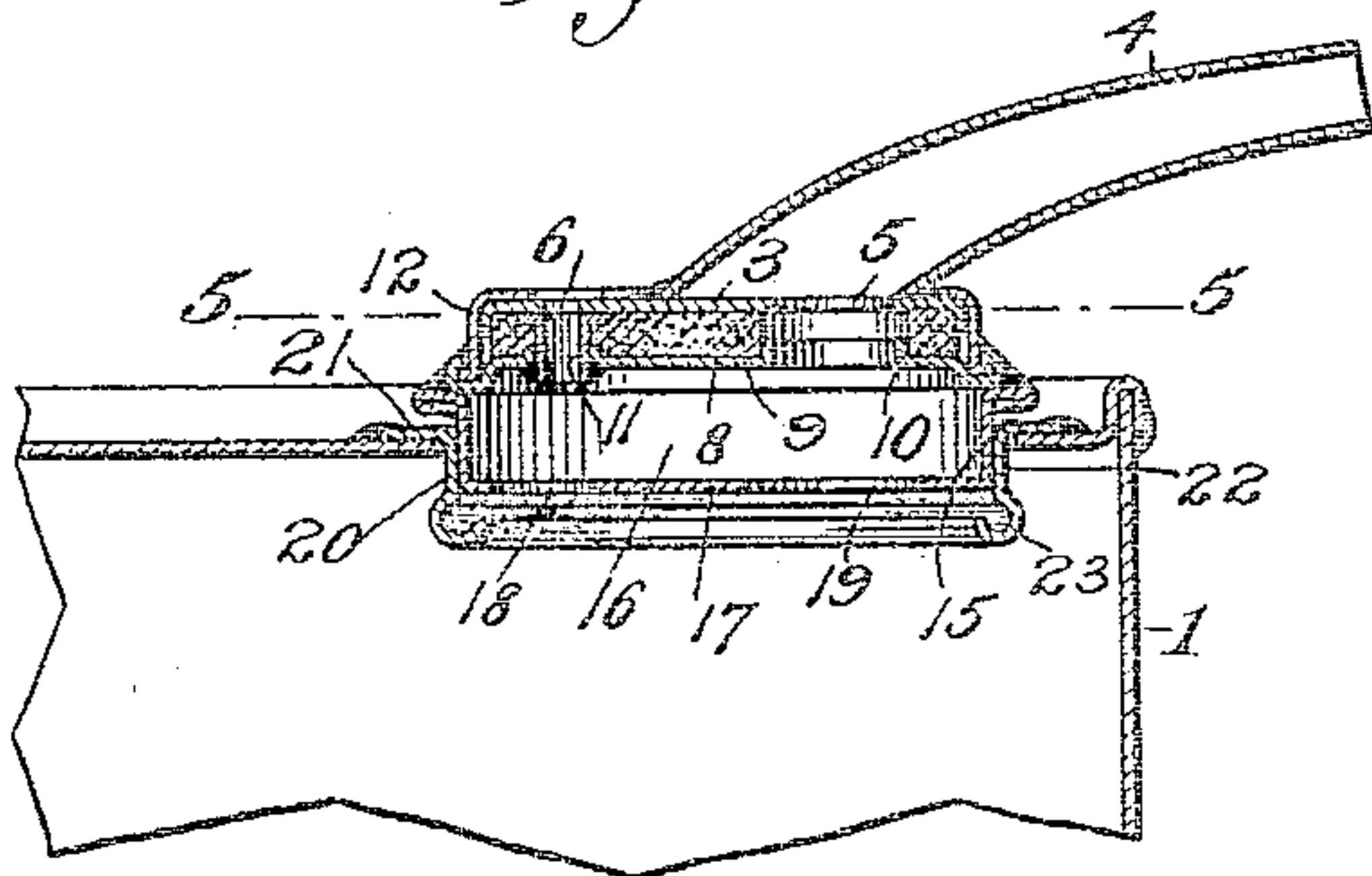


Fig. 4.

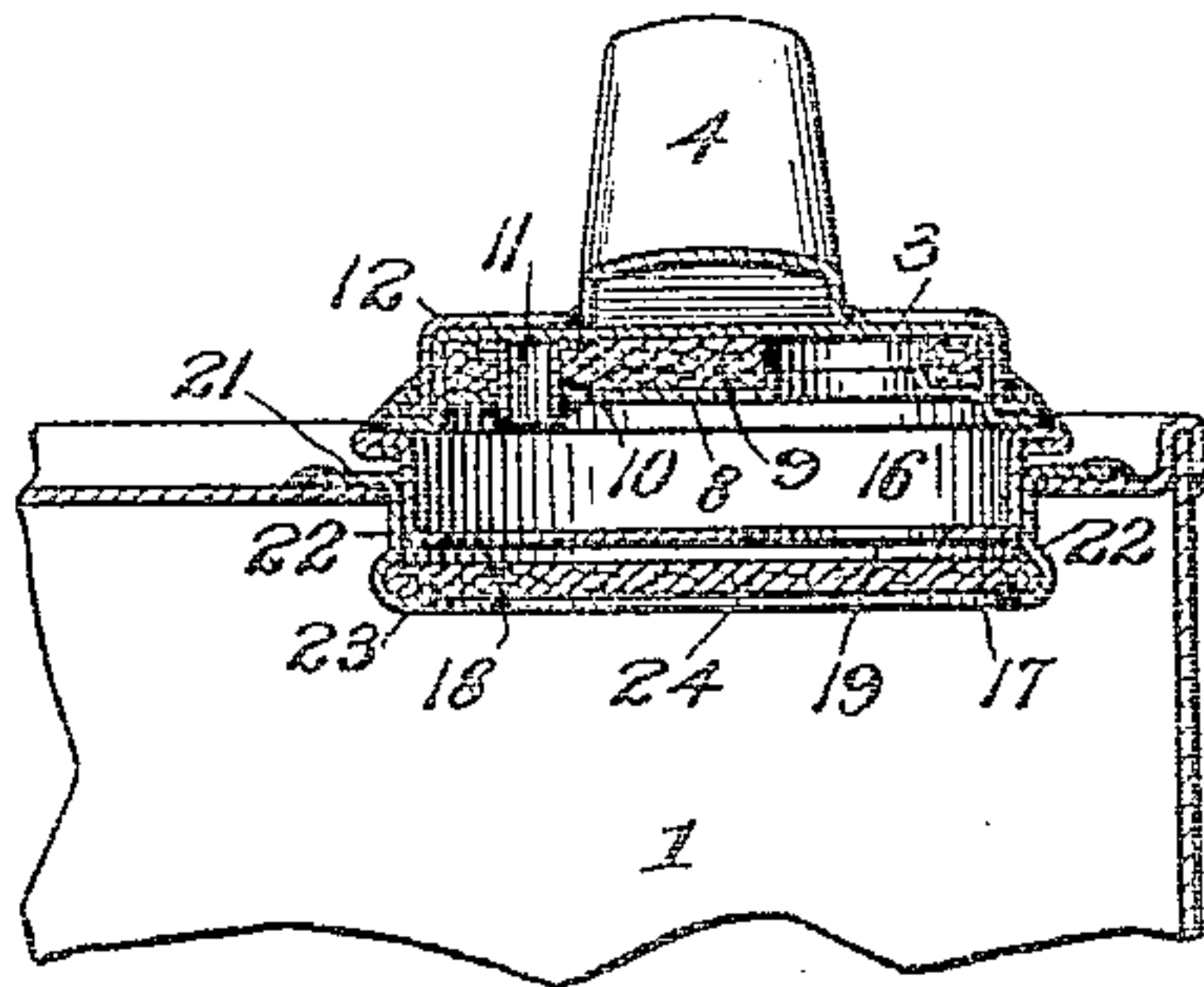


Fig. 5.

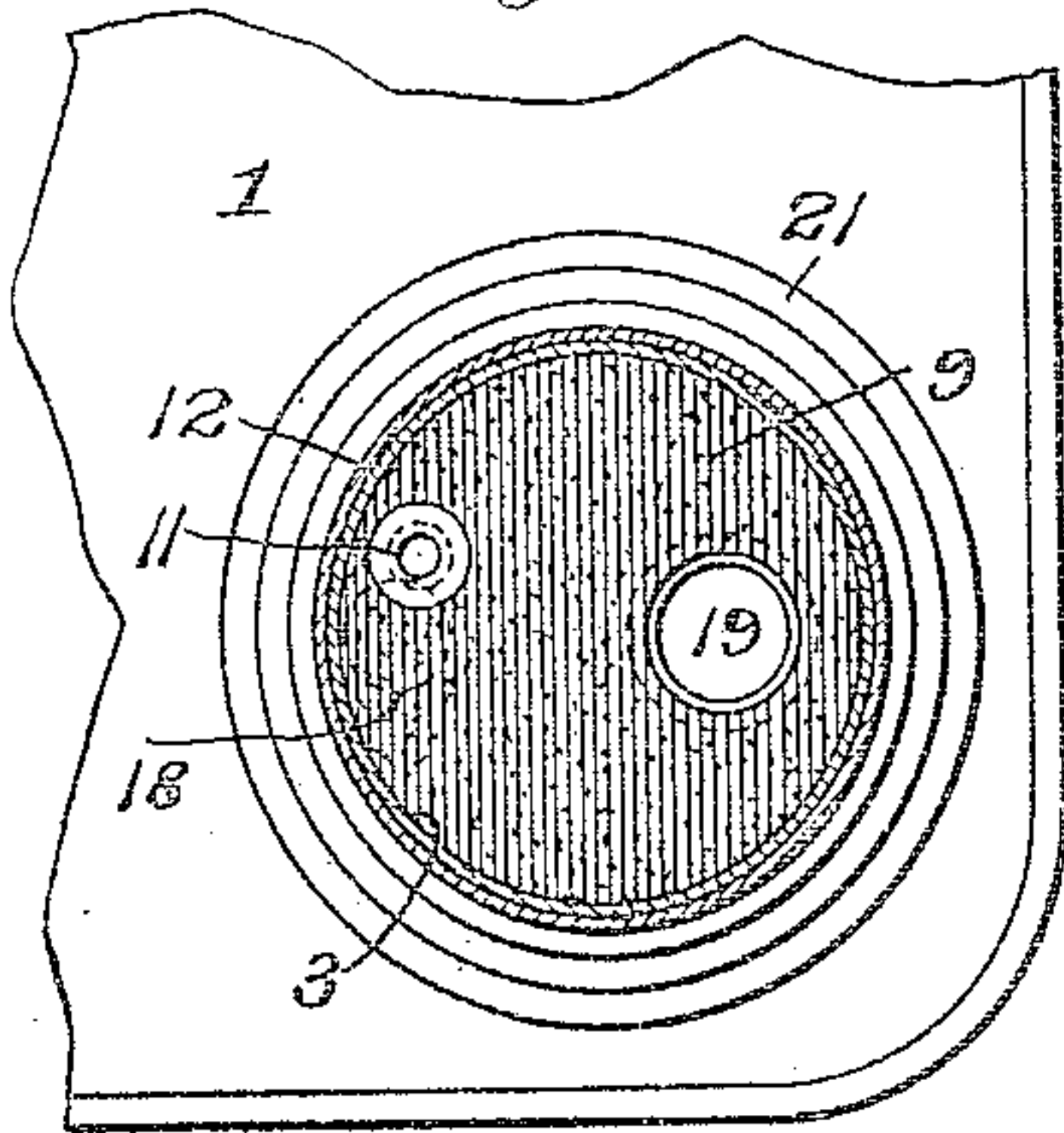
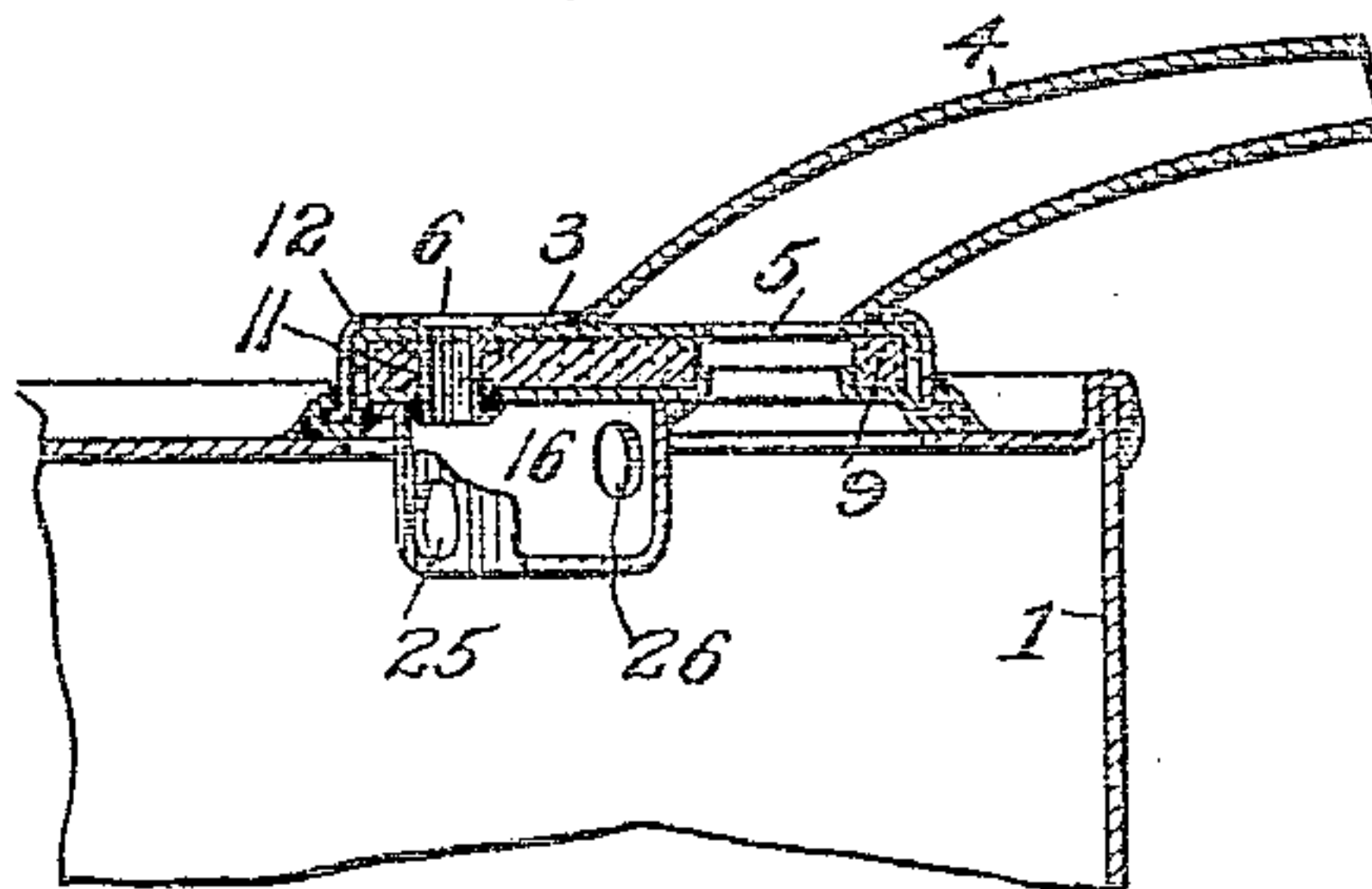


Fig. 6.



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# UNITED STATES PATENT OFFICE.

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953,595.

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*To all whom it may concern:*

Be it known that I, GEORGE M. CLAPP, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Cans, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to certain improvements in cans for oil or other liquids and similar other liquid containing receptacles.

It is one object of the invention to provide a spout by which a steady stream of liquid may at all times be obtained from such cans or receptacles during the pouring operation and which will prevent any liquid from coming out of or passing through the air vent of the spout during such pouring operation.

It is a further object of the invention to provide a spout of such character through which liquid may be passed to fill a can or other like receptacle.

It is a further object of the invention to provide a spout of this character which may, if desired, be held in position in a can frictionally and at the same time tight so as to prevent leakage of liquid from the can.

For obtaining these desired objects a spout of novel construction is provided, a preferred embodiment of which is illustrated in the accompanying drawings, attached to an oil can.

In said drawings:—Figure 1 is a top view of a can partly broken away showing the improved spout in position, the spout being shown ready for the pouring operation. Fig. 2 is a similar view, the spout being shown in closed or non-pouring position. Fig. 3 is a cross section of the construction shown in Fig. 1. Fig. 4 is a cross section of the construction shown in Fig. 2. Fig. 5 is a plan view partly in section taken on line 5—5 of Fig. 3. Fig. 6 is a cross sectional view of a slightly modified form of spout attached to a can, the spout shown being particularly adapted for passing liquid through it to fill the can.

Referring now to said drawings, the spout is shown as attached to an oil can which is indicated by numeral 1, this oil can being provided with an opening or mouth which is closed by the spout. This spout is indicated generally by the numeral 2, and will in-

clude a base or floor which has secured thereto a casing, which casing will inclose an air chamber, this casing being positioned with respect to the base, so that when the spout is put on the can the casing will be located below the plane of the base and between the base and the contents of the can. This casing will be provided furthermore with a plurality of holes or apertures so that a circulation through said air chamber will be secured.

In the particular construction illustrated the spout 2 comprises a member 3 in the form of a cap, which member or cap has secured thereon, as for instance by soldering, a pouring or discharge nozzle 4, this discharge nozzle connecting with a discharge vent 5. This member 3 has also an air vent 6 located adjacent to the nozzle 4, this air vent being of considerably less area than the discharge vent 5. There is also provided a base 8, which base is provided with an air vent and a discharge vent which correspond in position to the discharge vent and air vent in the member 3 when the spout is in pouring position. The base 8 is separated from the member 3, and the space formed between them is filled with suitable packing 9, this packing being provided with air and discharge vents corresponding to the air and discharge vents in the base. This packing is secured on the base in any suitable manner. As shown the edges around the air and discharge vents in the base are slightly inturned, as illustrated at 10, these inturned edges gripping the packing and holding it in position. As an additional securing means for the packing and to positively prevent it from turning on the base there is provided a hollow eyelet or stud 11, which stud is passed through the packing and the base being on its upper end flush with the top surface of the packing. This eyelet furthermore serves to connect the air vent in the base and the air vent in the member 3, before referred to.

Suitable means are provided whereby the discharge vent 5 and air vent 6 in the member 3 may be closed when the spout is in inoperative or non-pouring position. In the particular construction illustrated the member 3 is arranged so that it can be rotated relatively to the base 8 as by means of the pouring nozzle 4 secured thereon, so as to take the air vent or discharge vent out of



alignment with the air vent and discharge vent in the base and the egress of liquid from the can prevented.

In order that the member 3 on which the discharge nozzle 4 is secured may be tightly held against the packing and thus prevent leakage, there is provided a casing 12, this casing 12 having its upper edge intumed so as to extend over and seat on the top side of the member 3. The lower edge of this casing is securely fastened to the base 8, the edges of the two being crimped together under pressure and then soldered, or they may be secured in any other suitable manner.

In the construction so far described it is apparent that by rotating the discharge nozzle 4 the discharge vent and the air vent in the member 3 may be closed and opened. It is desirable that this opening and closing movement of the member 3 be positively controlled so that the operator may be assured that when the member is rotated to the full extent of its movement in one direction the spout is in open or pouring position, and when it is rotated in the other direction said spout is in closed position. In the particular construction provided for this purpose and as illustrated, a portion of the top of the casing 12 is formed to provide stops or shoulders 13 against which the discharge nozzle 4 is adapted to abut and have its rotating movement stopped, these stops or shoulders 13 being so arranged that when the discharge nozzle 4 abuts against one the spout is in open or pouring position, and when it is operated so as to abut against the other it is in closed or non-pouring position.

As before referred to the improved spout will be so constructed as to provide an air chamber, which air chamber is so located as to be between the base 8 of the spout and the contents of the can when the spout is in position on the can. This air chamber may be variously formed or constructed. In the construction shown in Figs. 3 and 4, this air chamber is of sufficient dimensions to cover and inclose both the air vent and the discharge vent in the base 8. As shown in these figures this air chamber is formed within a casing 15, which casing is secured to the base 8 in any suitable manner, as for instance, by soldering, being preferably soldered thereto at the same time the base is soldered to the casing 12, before referred to, thus forming a unitary construction which is liquid tight. The casing 15 is of sufficient depth to form an air chamber 16 of the necessary or desired dimensions. This casing is provided with a bottom or floor 17 in which bottom is located a plurality of holes or openings. In the particular construction illustrated there are two of these holes or openings 18, 19. These openings are not of

the same area, but are proportioned to provide a proper circulation through the chamber. The opening 19 is, in the particular instance shown, the larger and is adapted for the passing of liquid from the can through the chamber and out through the discharge nozzle 4, being for this purpose located substantially in line with the discharge vent 5, before referred to. The other opening 18 in this particular instance acts as an air vent. The provision of this air chamber, located as described below the plane of the base 8 and between it and the contents of the can and provided with a plurality of holes or openings affords a free circulation of oil or liquid from the can and insures a steady stream at all times during the pouring operation, and this air chamber at the same time prevents any egress of liquid from the can through the vent during such pouring operation.

For convenience in placing the spout in position and removing the same from the can, the spout may be arranged to be seated in the can frictionally. With this end in view there is provided a friction ring 20 of any suitable material, which friction ring at its upper end is provided with a flange 21, which flange is adapted to rest on the top of the can around the mouth thereof, being secured thereon by soldering. The side walls 22 of this friction ring are of such an internal diameter that the side walls of the casing 15 will fit snugly in the same and be tightly held therein frictionally, the spout being put into position by pressing it into the ring. This construction is desirable, in that the spout can be readily inserted in the case and be removed therefrom by prying. In order to prevent the spout being forced accidentally out of the can by impact of the liquid in the can due to sudden shock or for any other reason, while the can, filled with liquid, is being shipped, for instance, there is provided a closure which is adapted to take up such impact. This closure may be of any suitable character, and secured in any suitable manner. In the construction illustrated, the side walls 22 of the friction ring are provided at their lower extremity with a bead 23, in which bead is adapted to be forced a closing medium 24 of any suitable material, as paraffined pasteboard, this paraffined pasteboard being forced into the bead 23 and being removed from the can when it is desired to take the contents from the same.

In the construction so far described the air chamber has been defined as of dimensions sufficient to inclose both the discharge vent and the air vent in the base 3, this construction being particularly desirable in that it permits of the securing of the spout in the can frictionally. To secure the result of a steady flow at all times during the



pouring operation, this air chamber need not be of such dimensions as to inclose both the air vent and the discharge vent in the base or to cover the whole floor of the base, but it may be arranged so that it will inclose and cover only the air vent in the base 3. Such modification is illustrated in Fig. 6 of the drawings, and in the construction therein shown the discharge nozzle 4, member 3, base 8, cover casing 12 and packing 9 are constructed and arranged similarly to the construction hereinbefore described. In this modification the air chamber 16 is of considerably less dimensions than the air chamber before referred to, and in the particular construction illustrated covers and incloses only the vent port in the base. In this construction the air chamber will, however, be provided with a plurality of holes or apertures 25, 26, which holes or apertures are preferably of different dimensions, being proportioned to provide the necessary and desired circulation through the chamber. The construction shown in this modification with the discharge vent uncovered or not inclosed by the air chamber, is particularly adapted for filling the can through the spout, as there is a free path for the oil or other liquid through the spout into the can, such oil or liquid not having to pass through the air chamber.

It will be understood that the construction hereinbefore described and claimed is that preferred. It is obvious, however, that changes and variations may be made in the same without departing from the invention, and that the invention is not to be limited to such specific construction.

What is claimed is:—

1. A spout for cans and the like, comprising a base having air and discharge vents, a member having an air vent and a discharge nozzle through which liquids may be discharged from the can, said base and member being rotatable relatively to each other, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing one of the vents in the base and located below the plane of the base.

2. A spout for cans and the like, comprising a base having air and discharge vents, a member having an air vent and a discharge nozzle through which liquids may be discharged from the can, said base and member being rotatable relatively to each other, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing the air vent and the discharge vent in the base and located below the plane of the base.

3. A spout for cans and the like, comprising a base having air and discharge vents, a cap having an air vent and a discharge nozzle

through which liquid may be discharged from the can, said cap being rotatable relatively to the base, a cover secured to the base and partially covering said cap and provided with stops for stopping the rotation of the cap in predetermined positions, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing one of the vents in the base and located below the plane of the base.

4. A spout for cans and the like, comprising a base having air and discharge vents, a cap having an air vent and a discharge nozzle through which liquids may be discharged from the can, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing one of the vents in the base and being secured to the base so that it is located below the plane of the base.

5. A spout for cans and the like, comprising a base having air and discharge vents, a cap having an air vent and a discharge nozzle through which liquids may be discharged from the can, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing the air vent in the base and being secured to the base so that it is located below the plane of the base.

6. A spout for cans and the like, comprising a base having air and discharge vents, a cap having an air vent and a discharge nozzle through which liquid may be discharged from the can, packing between the cap and the base, a cover secured to the base inclosing the packing and partially covering said cap, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing the vents in the base and being secured to the base so that it is below the plane of the base.

7. A spout for cans and the like, comprising a base having air and discharge vents, a cap having an air vent and a discharge nozzle through which liquids may be discharged from the can, and a casing provided with a plurality of openings in communication with the interior of the can, said casing inclosing the air vent and the discharge vent in the base.

8. The combination with a can, of a spout comprising a base having air and discharge vents, a discharge nozzle through which liquids may be discharged from the can, and a casing provided with a plurality of openings in communication with the interior of the can and located below the plane of the base, said casing covering the floor of the base and having walls adapted for frictional engagement with the can mouth.

9. The combination with a can, of a friction ring secured in the can mouth, a spout including a discharge vent and an air vent,



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a discharge nozzle through which liquid may be discharged from the can, a casing provided with a plurality of openings in communication with the interior of the can, 5 said casing covering the floor of said base, the walls of said casing being adapted for frictional engagement with the friction ring for holding the spout in position.

10 10. The combination with a can, of a friction ring secured in the can mouth provided at its inner extremity with a bead, a closure seated in the bead, a spout including a base having air and discharge vents, a discharge nozzle through which liquid may 15 be discharged from the can, and a casing provided with a plurality of openings in communication with the interior of the can, said casing being secured to the base and being located so as to be below the plane of 20 the base and covering the floor thereof, the walls of said casing being adapted for frictional contact with the friction ring, where-

by the spout is frictionally secured in the can.

11. A can provided with an air vent and 25 with a discharge vent and nozzle, and with a casing located below said vents and inclosing one of them, said casing having a plurality of openings in communication with the interior of the can. 30

12. A can provided with an air vent and 30 with a discharge vent and nozzle, and with a casing located below said vents and inclosing them, said casing having a plurality of openings in communication with the in- 35 terior of the can.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

GEORGE M. CLAPP.

Witnesses:

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P. B. PHILIPP.