

J. F. CRAVEN.

RECEPTACLE FOR CONTAINING AND DISCHARGING SEMISOLID AND PASTY SUBSTANCES.

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997,182.

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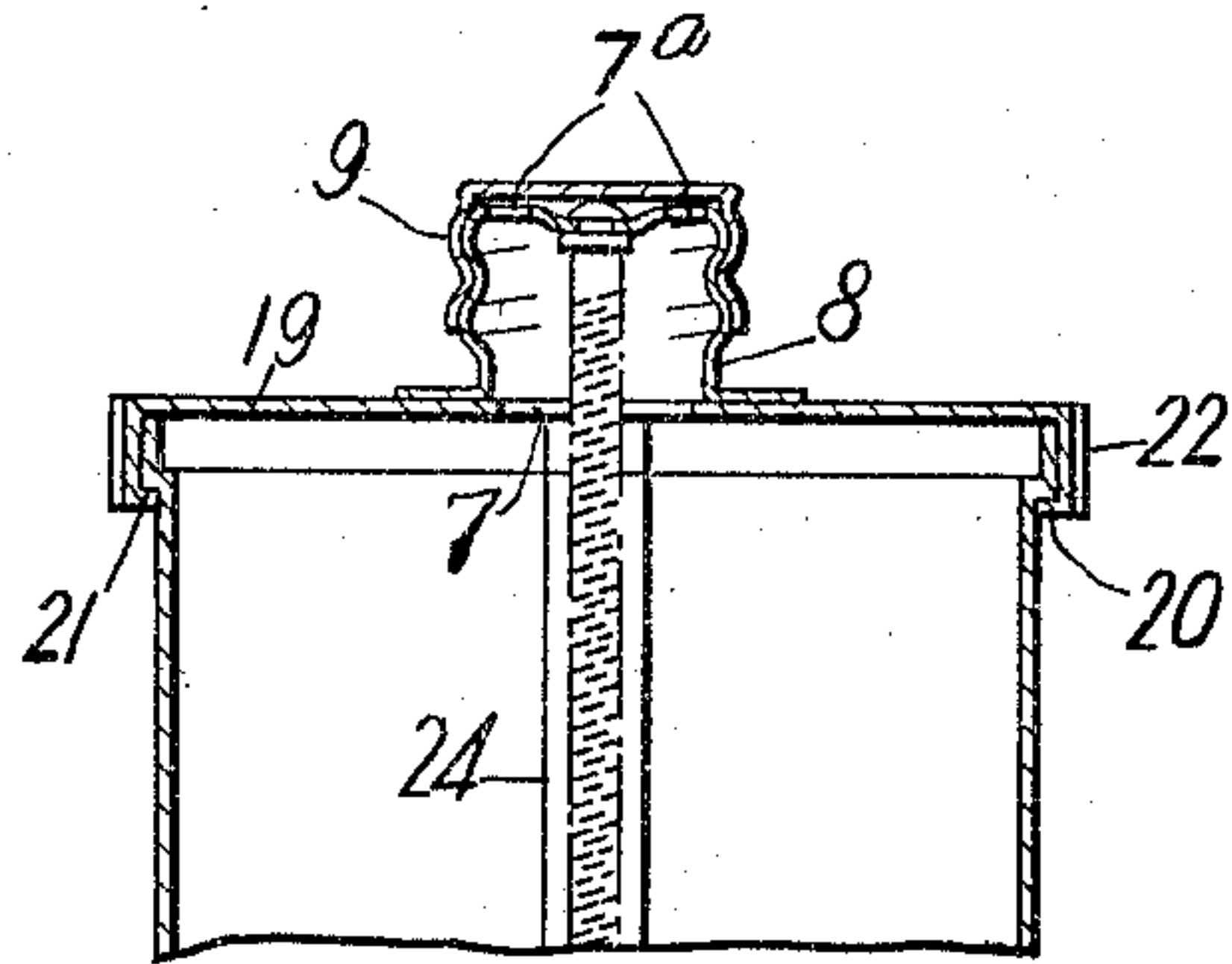


FIG. 1

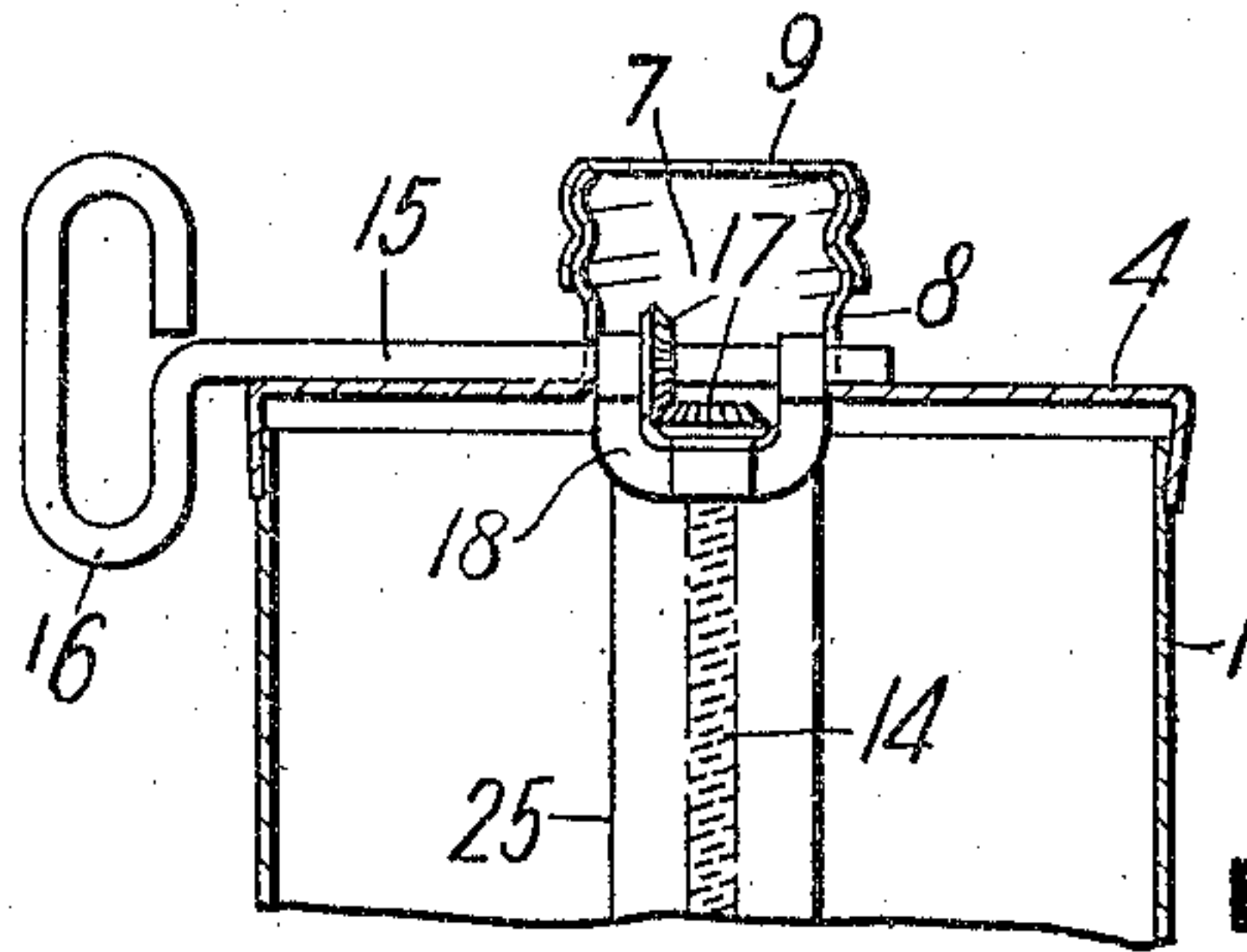
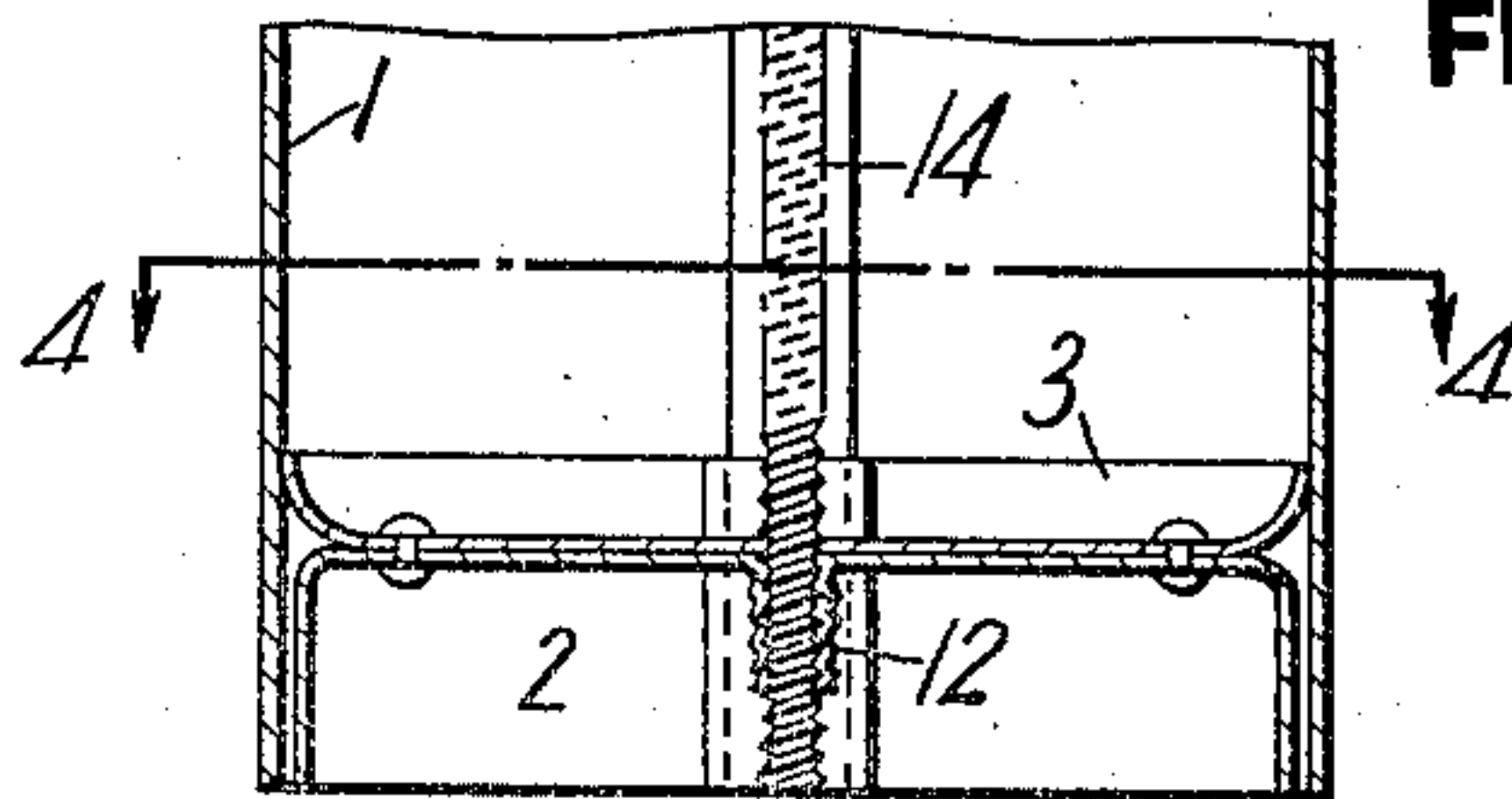


FIG. 2

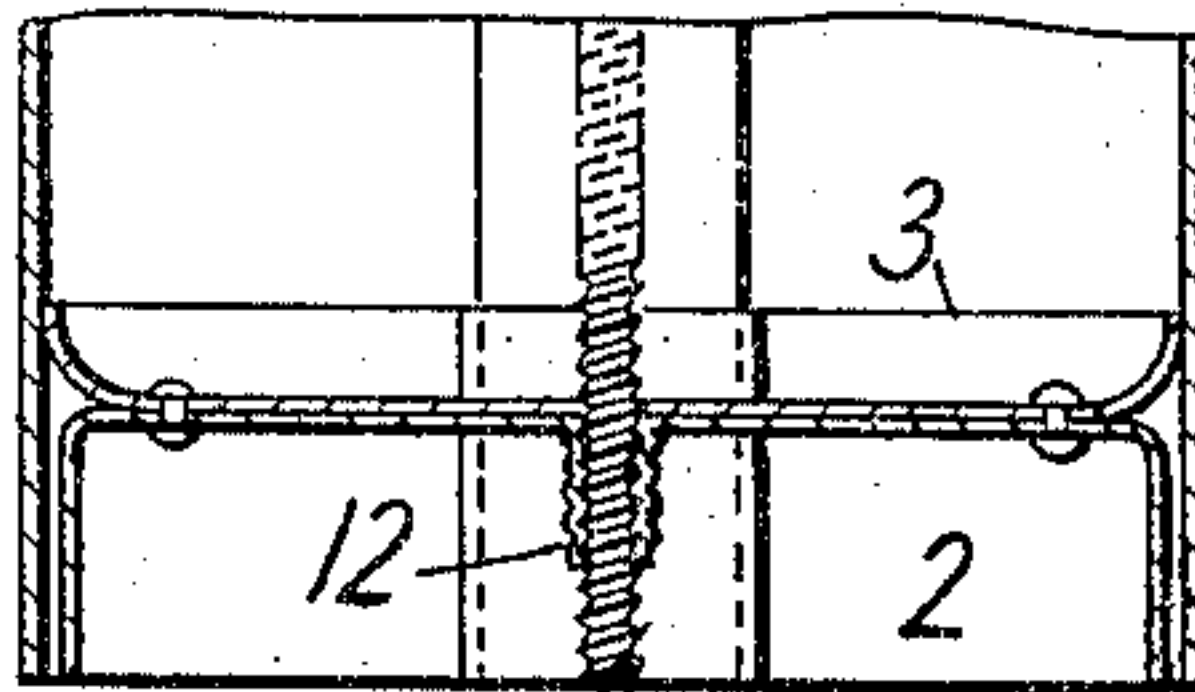


FIG. 3

WITNESSES

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RECEPTACLE FOR CONTAINING AND DISCHARGING SEMISOLID AND PASTY SUBSTANCES.

997,182.

Specification of Letters Patent.

Patented July 4, 1911.

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To all whom it may concern:

Be it known that I, JAMES F. CRAVEN, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Receptacles for Containing and Discharging Semisolid and Pasty Substances, (Case 5,) of which the following is a specification.

This invention relates to receptacles for containing, storing, transporting and discharging semi-solid and pasty substances.

The device is intended more particularly for putting up lubricants in the form of grease and discharging the same into grease cups of machines or the like, and for the purpose of enabling grease to be supplied to the bearings without liability of dirt or grit entering the bearing with the grease, and also to prevent smearing up or soiling the machine or the hands of the user. The invention, however, is not limited to this particular use, but is adapted for putting up in a substantially sealed condition any semi-solid or pasty substances and delivering the same from the container in any desired quantity or quantities.

The invention comprises the construction and arrangement of parts hereinafter described and claimed.

In the accompanying drawings Figure 1 is a vertical section through one form of the device; Fig. 2 is a similar view showing a modification; and Fig. 3 is a cross section on the line 4-4, Fig. 2.

The container or receptacle may be of any desired size or shape and may be constructed or built up in any desired way or from any desired material. As shown, the body of the receptacle is formed as a substantially cylindrical tube 1 which may be of sheet metal or other thin substance, and is shown as formed from paste or paper board in Fig. 2, and from sheet metal in Figs. 1 and 3. One end of this receptacle is entirely open but the contents are protected by means of a piston or follower 2 which is longitudinally movable in the receptacle and serves to force the material out of the same, said piston preferably having a cup leather or like expansible means to form a tight fit in the tube, said cup leather being yielding so as to maintain a tight fit in the tube in case the latter expands under the pressure of forcing out the substance contained therein.

The discharge orifice is at the end of the

tube, opposite its open end, said discharge end being provided with a head or cap closing the same. As shown in Fig. 2, said end is closed by means of the head or cap 4 which is crimped onto the paper body 1. The head or cap 4 is provided with a discharge orifice 7 leading to a short discharge sleeve or tube 8 which is externally threaded to receive the threaded closing cap 9, and also for the purpose of having secured to the discharge orifice a spout or the like for delivering the material, such as grease, to a machine bearing or the like.

The piston 2 is shown as a metal cup provided with a central threaded sleeve 12 for receiving a threaded rod or screw 14 which when rotated causes the piston to travel longitudinally in the tube. The means for rotating the rod 14 in Fig. 2 comprises a transverse shaft or key 15 extending through the outlet sleeve 8 and provided at its end with a loop or thumb piece 16 by means of which it can be rotated. Said transverse shaft or key 15 is operatively connected with the threaded rod 14 by means of inter-meshing bevel pinions 17, which are held in mesh by means of the bracket 18 forming bearings for the transverse shaft 15 and also for the threaded rod 14. The operation of this device will be readily understood.

In Fig. 1 the piston 2 is likewise moved by means of a threaded rod 14 which at its outer end is connected to the head or cap 19, which in this case is rotatable on the body 1 but lengthwise immovable with reference thereto, such as by turning its edge underneath an annular flange or shoulder 21 on the tube 1. The annular edge of the cap 19 is preferably knurled, as shown at 22, to afford a good grip when turning the same. The projection 8 in this case is closed at its outer end except for one or more discharge orifices 7^a, a plurality of such orifices being preferable on account of the screw rod 14 being attached centrally to the end of projection 8.

With the form of device shown in Fig. 1 the contents are discharged by holding the tube 1 in one hand and rotating the cap 4 with the other hand, while with the form shown in Fig. 2 the contents are discharged by holding the tube in one hand and turning the key 15 with the other hand. The piston in Fig. 1 is prevented from rotating by means of the seam 24 on the sheet metal

tube 1, which seam projects inwardly as usual and engages a groove in the piston. With a paper tube, as in Fig. 2, the same effect can be secured by pasting a strip of

5 paste board 25 on the inner face of the tube. In both forms of the device the receptacle is very simple, being entirely open at one end except so far as closed by the piston, and the contents are discharged from its op-
10 posite end. The contents can be discharged in any desired quantity, and the receptacle at all times is substantially sealed or at least tightly closed so that the contents are pro-
15 tected from dirt and odors, and the contents can be discharged therefrom without liability of soiling the hands, and in a small stream so that, in the case of lubricating grease, the grease can be gotten into the machine cups without danger of carrying
20 dirt or grit with the same.

The receptacles will be filled and closed at the factory, and since there are no pronounced projecting parts they can be conveniently and safely packed, transported
25 and stored. The means for discharging the contents does not provide any undue projections beyond the casing and this also facilitates packing and storing.

The receptacle is intended to be used only
30 once, being filled at the factory and thrown away when empty. Hence it must be of low cost, and is necessarily made of cheap and comparatively weak material and with minimum labor operations. A paper or paste
35 board tube is therefore preferred for the body of the receptacle, but if sheet metal is used it will be of the thinnest gage. On account of the cheap and light construction of the tube it is liable to expand slightly or
40 assume a slight barrel shape under the pressure of forcing a stiff grease out of the same. The cup leather 3 however is expansible and forms in effect an expansible piston or follower and maintains a tight fit against the

inner face of the tube and prevents the 45 grease from wasting by escaping past the follower.

What I claim is:

1. A device of the character described comprising a receptacle, a cap having a 50 flanged connection with one end of said receptacle and thereby rotatable but endwise immovable thereon and having thereon a tubular extension provided with a discharge orifice, a piston in said receptacle and mov- 55 able therein to force the contents through the discharge orifice, and a threaded member secured to said cap and operatively engaging said piston.

2. A device of the character described, 60 comprising a weak tube, a cap closing one end thereof and provided with a discharge orifice, a piston in said tube and longitudinally movable therein to force the contents out of the discharge orifice and provided 65 with a yielding portion cupped toward the discharge orifice, a threaded member engaging said piston and endwise immovable in said tube, and means on the end of the tube at which is the discharge orifice for rotating 70 said threaded member.

3. A device of the character described comprising a weak tube, a cap having a flanged connection with one end thereof, and thereby rotatable but endwise immovable 75 thereon, and provided with a discharge orifice, a piston in said tube and movable therein to force the contents through the discharge orifice and having a yielding portion cupped toward the discharge orifice, 80 and a threaded member secured to said cap and operatively engaging said piston.

In testimony whereof, I have hereunto set my hand.

JAMES F. CRAVEN.

Witnesses:

F. W. WINTER,
SUE B. FRITZ.