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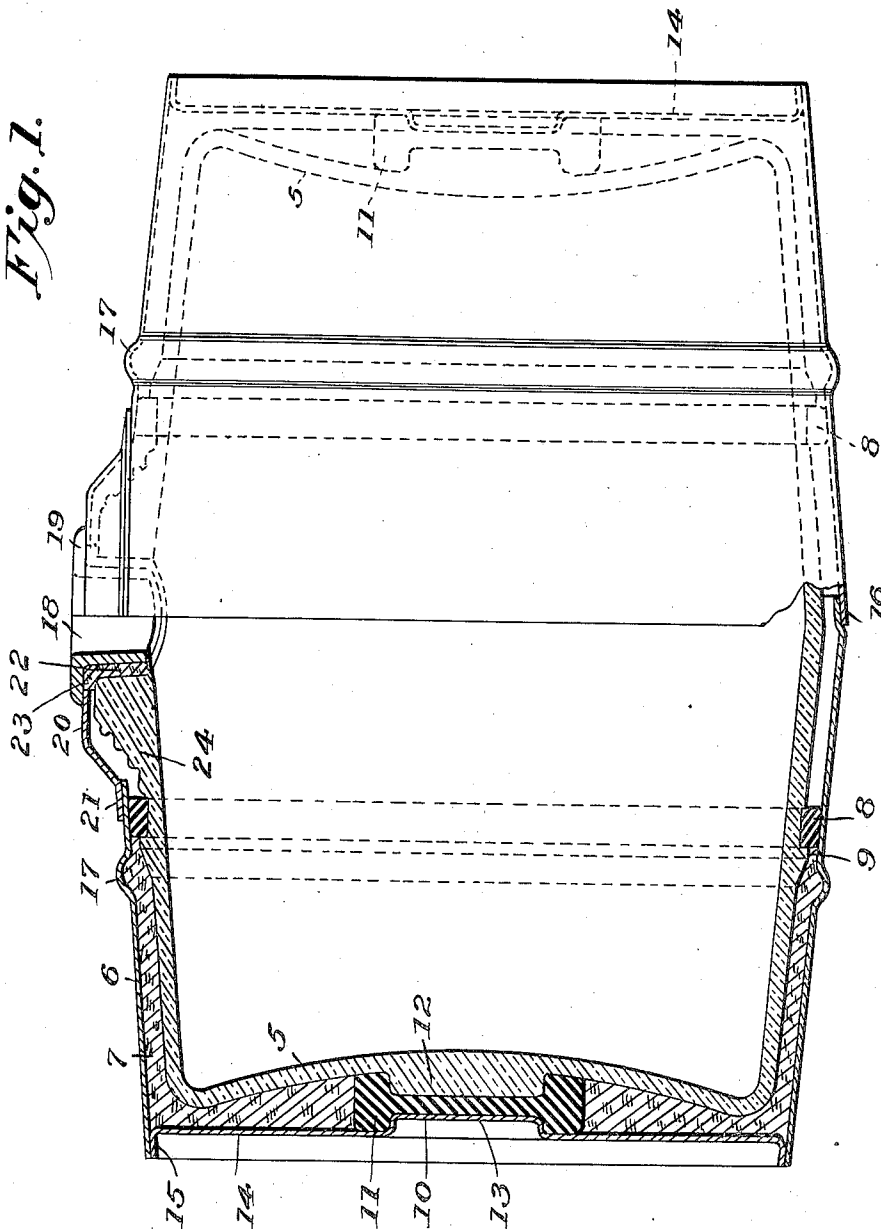
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SHIPPING AND STORING RECEPTACLE

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2 Sheets-Sheet 1

Fig. 1.



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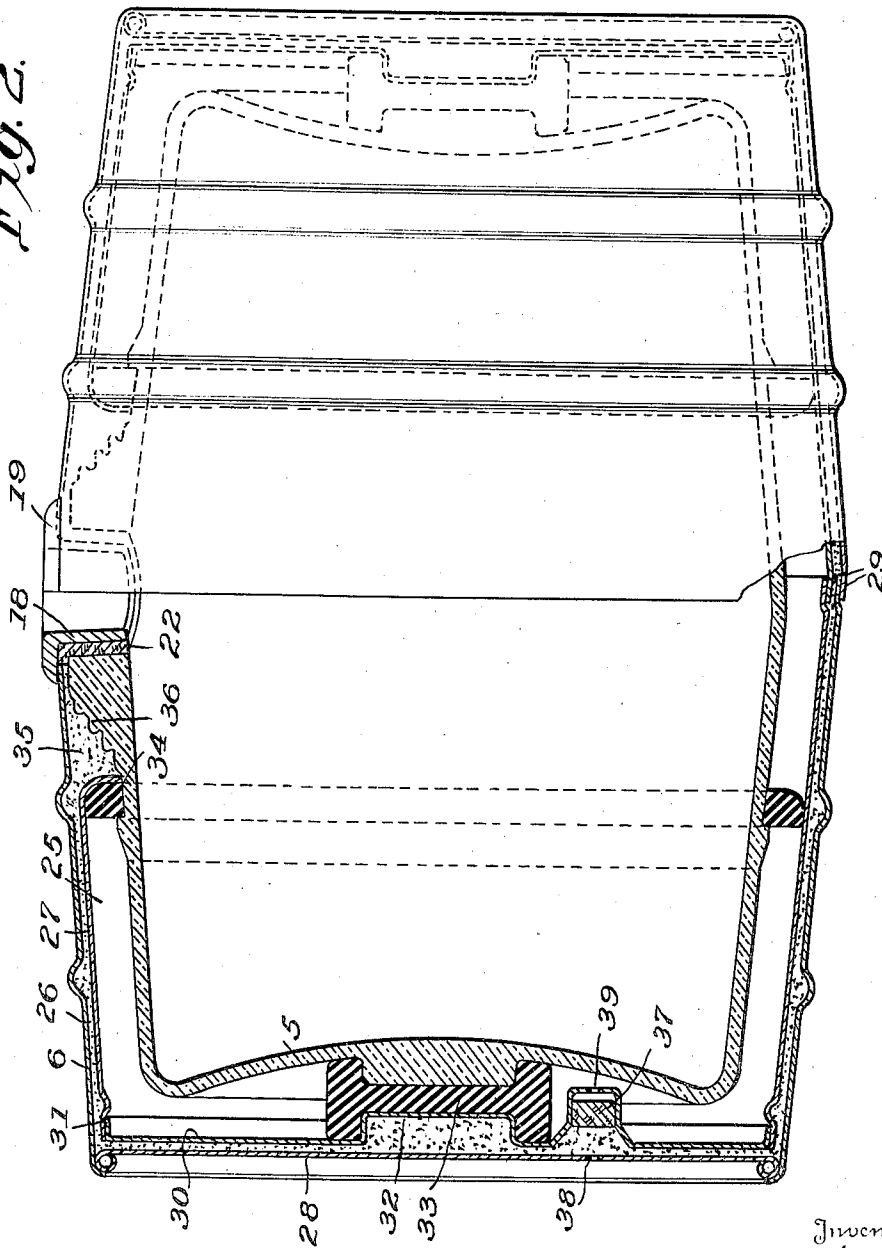
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Fig. 2.



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SHIPPING AND STORING RECEPTACLE

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Application April 28, 1934, Serial No. 722,996

1 Claim. (Cl. 220—15)

The present invention relates in general to shipping and storing receptacles and has particular reference to a receptacle of this kind in which a spaced wall or jacket is employed for insulating or otherwise protecting the contents of the inner container.

Among the objects of the invention is to provide a receptacle which may be used for storing or shipping solids or liquids while maintaining them in an insulated condition so that desired temperatures of the same may be substantially maintained.

In the accompanying drawings in which several embodiments of the invention are illustrated Figure 1 is a view in side elevation and partly in section of a barrel showing one form of the invention.

Figure 2 is a similar view of a barrel showing another form of the invention.

Referring to the form of the invention shown in Figure 1, 5 represents an inner non-corrosive container which is housed within and spaced from an outer metallic shell 6. The assembly is arranged to leave a space 7 between the inner container 5 and the shell and this space is adapted to contain an insulating medium such as cork or any other material suitable for the purpose. Since we intend that the barrel shown in Figure 1 be used for shipping and storing liquids, as for example beer, it is necessary that the inner container 5 be properly supported within the outer shell 6 so as to forestall the possibility of breakage or other damage. To this end it is proposed to suspend the container 5 in rubber or other like resilient slings, so to speak. This type of suspension for the receptacle 5 is preferably accounted for by rubber bands or ribs 8 which encircle the circumference of the receptacle 5 at spaced intervals. For all practical purposes two of these bands will be sufficient, however, more may be used if occasion demands. The thickness of the bands 8 corresponds to the thickness of the space 7 between the inner and outer receptacles and the bands are preferably held in place by means of circumferential shoulders 9 which are moulded on the container 5 at the locations where the bands are to encircle the container. Since the container 5 is barrel shaped, that is to say tapering towards its ends, it will be necessary to form one shoulder only for each band. The bands are further held in place by impinging against the inside wall of the outer shell 6.

In addition to the supporting bands 8 we also employ rubber end cushions which are preferably fashioned as circular plates 10. These plates

are moulded or otherwise formed with central countersunk areas to leave a rim 11 of a substantial thickness of rubber. The ends of the inner container 5 are concave and are formed with hub-like offsets 12 which occupy the countersunk areas on the inside of the supporting plates 10. The end walls of the outer shell 6 are stamped or otherwise formed with hubs 13 which occupy the opposite countersunk areas of the plates. In this way it will be seen that not only are the plates held in position at the barrel ends but the inner container 5 is definitely suspended by the plates as a result of the hubs 12 occupying the countersunk areas of the plates and the rims 11 of the plates embracing the shoulders provided by the hubs 12. In this way we are enabled to present a substantial thickness of rubber or other shock absorbing material at the ends of the container 5 so that any jars or blows delivered to the shell, occasioned by handling of the barrel, will be absorbed in such a manner as to prevent injury to the container.

It should be also brought out here that the manner of suspending the container 5 will not only properly absorb blows on the end of the barrel but jars or blows which may be imparted in any location on the surface of the barrel.

In order to house the inner container 5 within the outer shell 6 in a convenient and practical manner we propose to construct the shell 6 in at least two sections in addition to the separately formed ends 14. The ends 14 are made with flanged rims 15 so that when the ends are set in the shell they may be welded or otherwise fixed to the shell. In making the shell in sections as we have just mentioned we propose to divide the same intermediate its ends, as at 16, so that the filling opening is intersected along the line of division. To make a convenient assembly of the sections we propose to use an overlap which may be sealed by welding as an example. In order to add rigidity to the shell 6 we have in mind corrugating the same to leave offset ribs 17 in its thickness. As many of these ribs may be used as considered necessary. For the purpose of illustration we have shown only two and located the same on opposite sides of the filling opening.

In providing for the filling opening we prefer to employ a metallic sleeve 18 having a substantially heavy flange 19 which overlies the upstanding and separately formed disk-like cover plate 20. This cover plate is circular in shape and is adapted to cover the relatively large opening which is left in the shell 6 around the area in which the filling opening is assembled. This

cover plate may be welded or otherwise attached to the shell 6 as at 21. To reinforce the filling opening it is preferred to employ a bushing 22 which snugly fits the sleeve 18 with its flanged 5 periphery 23 bearing against the underside of the flange 19 and also bearing against the end of the cover plate 20. The thickness of the container 5 around the filling opening is materially increased as indicated at 24. In providing for 10 this reinforcement it is to be noted that the flange 23 of the bushing 22 embraces the increased thickness 24 so as to provide for a substantial water-tight fit and also prevent any breakage from occurring at this locality. In providing this filling opening and assembling the 15 parts we have taken into account the necessity of providing for sufficient give in order to compensate for the resiliency of the suspension for the container. In other words while this give, 20 so to speak, occurs only in a limited degree it has to be taken into account and the peculiar manner of assembling the filling opening is of particular advantage. It is of course understood that the filling opening is adapted to receive a 25 plug or bung.

The form shown in Figure 2 while embracing characteristic features of the form shown in Figure 1 is somewhat modified in that provision 30 is made for a vacuum space. This space is provided for as at 25 between the container 5 and the outer shell 6. In addition to this vacuum space 25 the outer shell 6 is fashioned with spaced inner and outer walls 26 and 27. The space between the walls 26 and 27 will contain an insulating material preferably an asphaltum or the 35 like composition. We have found that a material suitable for this purpose may be realized by a mixture of asphalt, latex and rosin in suitable proportions. This material when in a fluid or 40 semi-fluid condition may be poured, blown or otherwise caused to fill the space between the walls 26 and 27 so as to completely enclose the inner container 5 in an insulated jacket. It is of course understood that the ends 28 of the 45 barrel seal the insulating space. A welding operation will be suitable for this purpose. The outer shell 6 of this barrel is made in sections like the shell 6 in Figure 1. Owing to the double wall structure it is necessary to make two over- 50 lapped connections 29 instead of the single fit 16 of Figure 1.

Additional modifications may be noted in Fig. 2 in that the separately formed inside end 30, which is welded as at 31 to the inside wall of the 55 shell, is made with an inset 32 to support the rubber cushion 33 otherwise the rubber suspension is the same as in Figure 1. Still another modification occurs in the manner of terminating the inner wall 27 of the shell. The inside 60 end of this wall is curved around the rubber band or rib 34 and bears against the surface of the container 5. As a result of this operation the

space between the inner and outer walls is materially increased as at 35. The asphalt material as a result is increased in thickness at this locality and occupies the serrations or corrugations 36 formed in the increased thickness around 5 the filling opening. Not only does this increase in the quantity of the asphalt material serve to cushion the assembly at the filling opening, but it also provides an ample seal for completely sealing the vacuum space 25. In other respects the 10 filling opening is made identical with the form shown in Figure 1 and therefore carries the same reference numerals.

In order to draw a vacuum within the space 15 25 we prefer to provide a suitable valve 37. This valve is made to accommodate a needle-like instrument which pierces the self-healing material contained in the valve. There will be an opening in the end wall 28 of the shell as at 38 which 20 is in line with an opening 39 in the valve communicating with the vacuum space. The needle is extended through the opening 38 and the opening 39 and may be used for drawing the vacuum in the space 25, when it is pulled out the self- 25 healing material in the valve will close the opening 39 and the asphalt composition contained in the space between the inner and outer walls of the shell will close the opening 38.

From the above explanation it will be readily 30 seen that we have provided means for protecting various kinds of liquids or solids while they are being shipped or stored and aside from these qualities it should also be noted that we have provided a way for handling liquids in a very 35 sanitary manner and one in which the container for the liquids may be very easily washed or flushed out.

While we have shown only two ways that the invention may be reduced to practice we wish 40 it to be understood that the showing is simply illustrative and it should not be considered that the invention is confined to this particular showing except where the scope of the sub- 45 joined claim makes such interpretation necessary.

Having thus described and shown an embodi- 45 ment of this invention, what we claim and desire to secure by Letters Patent of the United States is:

A spaced wall receptacle, comprising an outer 50 metallic shell, a container within said shell and means for supporting and cushioning said container in spaced relation to the shell comprising bands of resilient material encircling the 55 container and snugly fitting the space between the shell and container and end cushions of resilient material spacing the ends of the container from 60 the ends of the shell, said end cushions having opposed counter-sunk areas and outwardly offset portions on the shell and container occupying said areas.

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