

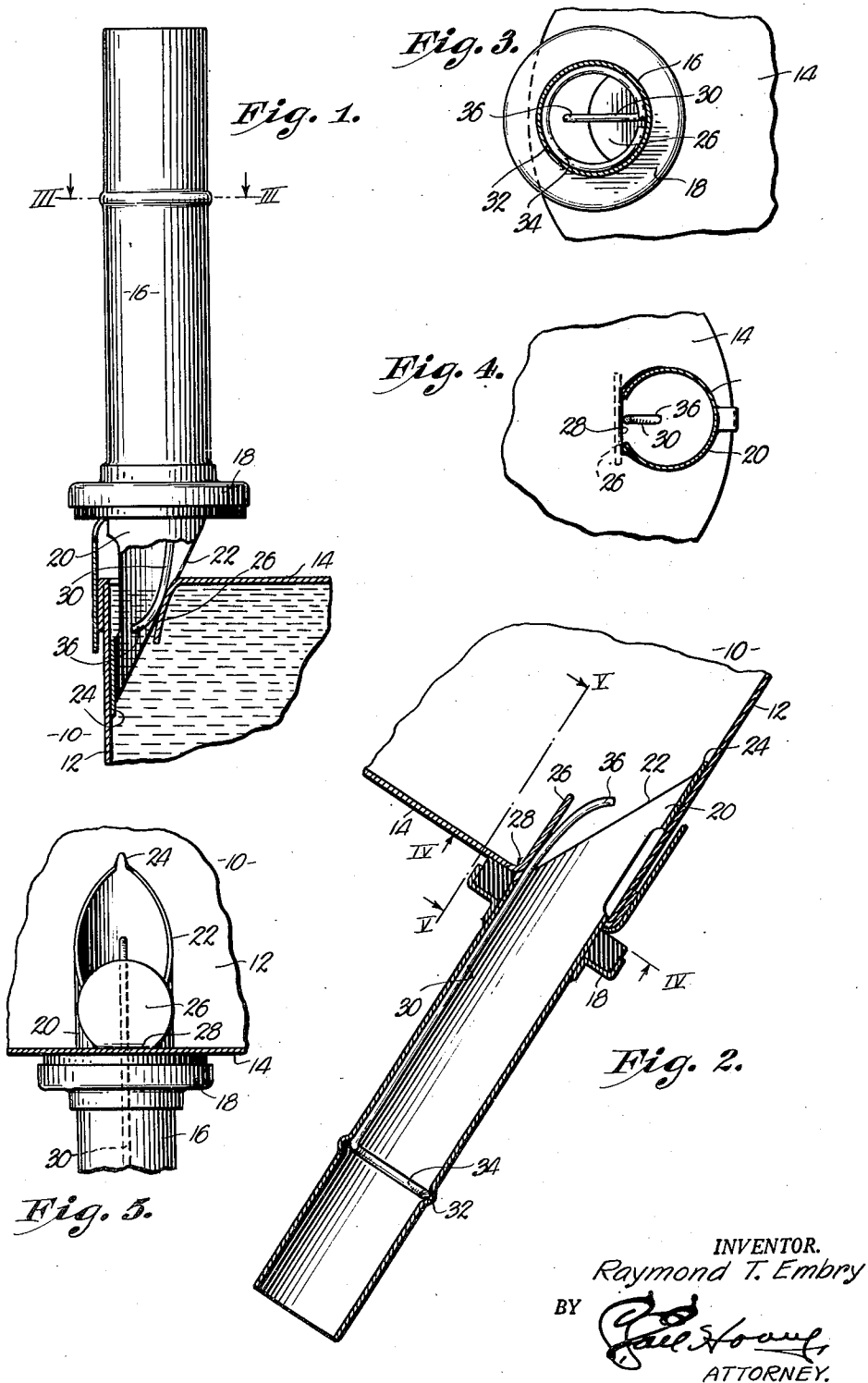
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RECEPTACLE OPENING AND POURING SPOUT

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RECEPTACLE OPENING AND POURING SPOUT

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5 Claims. (Cl. 222-81)

This invention relates to pouring devices for normally closed and sealed receptacles, and has for a primary object, the provision of a combined receptacle opening and pouring spout, the character of which insures that the cut away portion of the receptacle wall will be held in a position where it will not retard the flow of liquid.

One of the important aims of this invention is to provide an instrument particularly useful in combination with receptacles formed of fibrous material rather than metal, as has heretofore been employed. The scarcity of tin has forced suppliers of liquid to the use of cardboard or similar fibrous substance, the inherent stiffness whereof is much less than that of previously used metal. Difficulty has therefore been encountered because a small cut away lip of the receptacle wall has a tendency to be drawn into the stream of escaping liquid as it is poured and thereby stop the exit of the liquid.

This invention, therefore, has for one of its important aims to provide the conventional opening and pouring spout, that has heretofore been used with tin cans, for example, with a resilient finger or similar means for holding the cut away portion of the receptacle wall out of the stream of escaping liquid when the latter is being poured.

Minor objects of the invention will appear during the course of the following specification, referring to the accompanying drawing, wherein:

Fig. 1 is a side elevational view of a receptacle opening and pouring spout embodying the invention.

Fig. 2 is a longitudinal central sectional view through the device showing the same in operative position with a receptacle, a fragment of which is illustrated.

Fig. 3 is a cross sectional view taken on line III-III of Fig. 1.

Fig. 4 is a fragmentary sectional view taken on line IV-IV of Fig. 2; and

Fig. 5 is a fragmentary detailed sectional view taken on line V-V of Fig. 2.

The conventional receptacle 10 with which the opening and pouring spout may be used is constructed as has heretofore been the practice with a cylindrical wall 12 and a flat wall 14, one of which is disposed at each side of receptacle 10. It is one of the said walls 14 which is usually pierced when lubricating oil, for example, is to be poured from receptacle 10.

Filling stations have consistently used quick opening and pouring instruments in the general nature of that illustrated, but heretofore the

problem of holding the cut away portion of end wall 14 has not been satisfactorily solved.

The preferred embodiment is exemplified in the drawing and comprises a tubular body 16 having a suitable stop 18 to limit the longitudinal, inward movement of body 16 when the piercing portion 20 is forced through wall 14.

This piercing portion 20 is provided with inclined arcuate edges 22 converging to a point 24 to create a cut away portion 26, having the general configuration of that illustrated in Fig. 5. A segment 28 exists between cut away portion 26 and the wall 14, to provide a hinge permitting cut away portion 26 to swing inwardly to the condition shown in Fig. 2.

With fibrous material forming receptacle 10, this cut away portion 26 would be limp and free to move back toward its normal position and into a place where the passage of liquid from receptacle 10 through body 16 would be at least retarded if not completely prevented.

To hold cut away portion 26 in its place, therefore, a resilient finger 30 is mounted within tubular body 16 in any number of conventional ways, one of which is here illustrated to be by means of an annular groove 32 formed by embossing the wall of tubular body 16 and securing therein the ring-shaped length 34 of finger 30.

When ring 34 is formed, it is made a diameter slightly greater than the inside diameter of groove 32, and therefore, frictional engagement between the parts just described will securely anchor resilient finger 30 in its normal position with one end thereof projecting longitudinally from body 16 at a place substantially diametrically opposed to point 24.

End 36 is arched downwardly and inwardly and terminates intermediate the ends of the inclined arcuate walls 22, as illustrated in Figs. 1 and 2. When the spout is forced to the pouring position therefore, resilient finger 30 will swing inwardly as shown in Fig. 1, and bear against the outer surface of cut away portion 26 throughout the time said portion is being created by the cutting action of edges 22. When stop 18 has limited the inward longitudinal movement of body 16, finger 30 will lie along the inner face of the body and hold cut away portion 26 in alignment therewith, as seen in Fig. 2.

Withdrawal of the receptacle opening and pouring spout will not be retarded by the presence of finger 30, but throughout the time the spout is in the position where liquid is being poured from receptacle 10, cut away portion 26

will be held out of an objectionable place in the stream of liquid.

From the foregoing, it will be obvious to one skilled in the art that material of very flexible character may be handled by a device wherein the novel means of holding the cut away portion, such as 26, is included. The invention may be embodied in apparatus having physical characteristics different from those illustrated and described, and therefore, it is desired to be limited only by the spirit of the invention and scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A receptacle opening and pouring spout comprising a tubular body having a piercing portion at one end thereof provided with inclined arcuate edges converging to a point whereby to form a cut away portion on the receptacle wall when the piercing portion is forced through the wall; and a resilient finger disposed longitudinally within the tubular body with one end thereof projecting from the body and arched toward the said point to form an outwardly curved surface for engaging the cut away portion to urge the same progressively inwardly from its normal position as the spout is forced into the receptacle.

2. A receptacle opening and pouring spout comprising a cylindrical body having a piercing portion at one end thereof provided with inclined arcuate edges converging to a point whereby to form a circular cut away portion on the receptacle wall when the piercing portion is forced through the wall; and a spring wire disposed longitudinally within the cylindrical body with one end thereof projecting from the body in opposed relation to the said point, said one end being spaced inwardly from the point whereby to follow the cut away portion of the receptacle wall and urge the same inwardly of the receptacle as the piercing portion enters the receptacle, the other end of said wire being anchored to the pouring spout.

3. A receptacle opening and pouring spout comprising a tubular body of circular cross section having a piercing portion at one end thereof provided with inclined arcuate edges converging to a point whereby to form a cut away portion on the receptacle wall when the piercing portion is forced through the wall; and a resilient finger disposed longitudinally within the tubular body with one end thereof projecting from the body in opposed relation to the said point, said one end being spaced inwardly from the point whereby to follow the cut away portion of the receptacle wall along a central line thereof and urge the said portion inwardly of the receptacle as the piercing portion enters the

receptacle, said resilient finger being anchored at its opposite end to the tubular body at a point spaced inwardly from the piercing portion of said body.

4. A receptacle opening and pouring spout comprising a tubular body of circular cross section having a piercing portion at one end thereof provided with inclined arcuate edges converging to a point whereby to form a cut away portion on the receptacle wall when the piercing portion is forced through the wall; and a resilient finger disposed longitudinally within the tubular body with one end thereof projecting from the body in opposed relation to the said point, said one end being spaced inwardly from the point whereby to follow the cut away portion of the receptacle wall and urge the same inwardly of the receptacle as the piercing portion enters the receptacle, said resilient finger being anchored at its opposite end to the tubular body at a point spaced inwardly from the piercing portion of said body, the said one end of the resilient finger being intermediate the ends of the said inclined arcuate edges whereby a length of the piercing portion enters the receptacle before the said one end imparts its force to the cut away portion of the receptacle wall, the resilient finger forcing the said portion inwardly as it is being cut to move the portion out of the cross sectional area of the spout.

5. A receptacle opening and pouring spout comprising a tubular body having a piercing portion at one end thereof provided with inclined arcuate edges converging to a point whereby to form a cut away portion on the receptacle wall when the piercing portion is forced through the wall; and a spring finger disposed longitudinally within the tubular body with one end thereof projecting from the body in opposed relation to the said point, said one end being spaced inwardly from the point whereby to follow the cut away portion of the receptacle wall and urge the same inwardly of the receptacle as the piercing portion enters the receptacle, said spring finger being anchored at its opposite end to the tubular body at a point spaced inwardly from the piercing portion of said body, the said one end of the spring finger being intermediate the ends of the said inclined arcuate edges whereby a length of the piercing portion enters the receptacle before the said one end imparts its force to the cut away portion of the receptacle wall, said spring finger being against the inner face of the tubular body when the cut away portion has been forced inwardly to a position substantially perpendicular to the receptacle wall whereby to hold said portion substantially in alignment with the tubular wall when the piercing portion of the tubular body is projected into the receptacle.

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