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B. ROSENBERG

REMOVABLE FILTER FOR TUBES

Filed Feb. 12, 1921

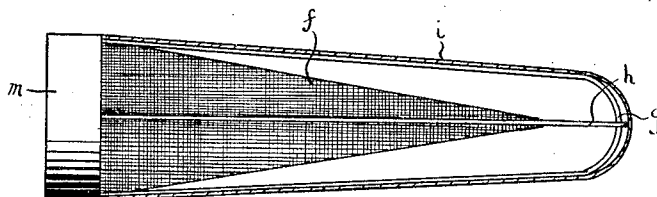


Fig II

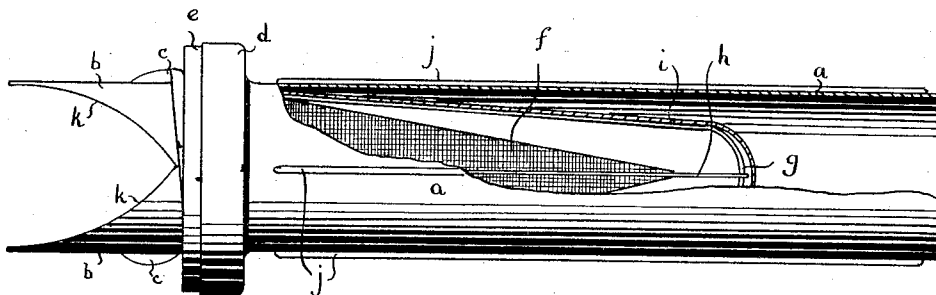


Fig I

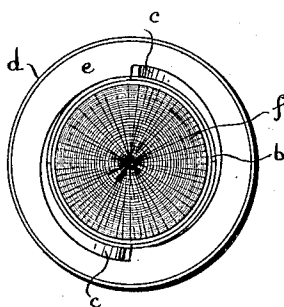


Fig III

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REMOVABLE FILTER FOR TUBES.

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The present invention has reference to spouts adapted to be attached to petrol, oil and other tins or containers for the purpose of assisting in pouring the contents of the same.

The invention provides such a spout which is easily fixed in a secure manner to the tin and which in its preferred form constitutes also a filter and strainer for the petrol and other liquid.

The spout comprises a stem formed of a piece of tube, the end of which is cut away in a V notch so as to leave two pointed parti-cylindrical wings, or it may be cut so as to form one pointed wing only. The edges of said wing or wings are sharpened to form cutting edges. Immediately above the notch there is provided on the outside of the tube a deep thread or worm, the lower end of which is tapered off and curved to enter the hole made in the tin by the wing. Above said worm again is provided a flange carrying a resilient washer.

Beyond the flange the spout is suitably formed according to the use it is to be put to, for instance, for pouring petrol it may conveniently be continued as a plain tube open at its upper end. Fitting into the lower end of the tube there is provided a cage comprising a cone of fine metal gauze and outside of said cone a wire support on which a bag of chamois leather is attached. By this means the petrol is filtered and strained as it is poured. In a spout for pouring oil, the filter and strainer may be omitted and the upper end of the tube may be directed at an angle to facilitate the pouring of the oil into the usual feed orifice of an engine.

The open end of the tube may be formed for the attachment of a hose or like flexible member and for this purpose the ends may be formed with a pressout bead. A disc of wire gauze or similar filtering or straining material may be inserted into the tube and held by said bead.

The tube may be provided with corrugations on its exterior to prevent slipping or it may have a hole in it to permit the insertion of a bar or the like to facilitate turning.

The invention is illustrated in the accompanying drawings in which—

Fig. I shows a view partly in section of the spout.

Fig. II shows a view of the filter, and

Fig. III shows an end view of Fig. I.

a is a tube having one of its ends cut away so as to form two pointed parti-cylindrical wings *b*, *b* the edges *k*, *k* being provided with a cutting edge. Above these wings are formed two worm-like projections *c*, *c* each being of such a length as to extend approximately round half the perimeter of the tube the two projections being on opposite sides of the tube and the bottom portions of the projections being bent in such a manner as to cause them to enter the hole in the tin readily. Above these projections is formed a flange *d* rigidly fixed to the tube *a* and carrying a resilient washer *e*.

Inside the tube *a* and fitting friction tight in it is a cone-shaped gauze filter *f* stiffened by a ring *m* at its base and carrying a wire cage *g*, *h* on which a bag of chamois leather *i* is carried. *j*, *j* are wires soldered to the exterior of the tube in order to prevent it slipping in the hand to the user.

In use the pointed ends of the wings are thrust into the tin and pressed down (and if necessary rotated) to cut out of the tin a hole of the size of the tube. The whole device is then rotated to cause the worm to pass within the hole thus formed and to engage the metal below the same whereby the resilient washer is screwed down tightly onto the metal at the upper face of the hole and forms a joint with the tin.

I claim—

1. A filtering device comprising a ring, a cone-shaped gauze filter secured at its base to said ring, a wire cage attached to said ring and surrounding said filter, and a filter bag supported by said wire cage.

2. A filtering device comprising an annular base member, a cone-shaped screen carried by said base member, a wire cage comprising a plurality of U-shaped wires having their free ends secured to said base member and positioned to surround said screen, and a flexible bag of filtering material removably positioned over said wire

cage and terminating adjacent said base member.

3. A filtering device comprising an apertured base, an elongated tapered wire cage
5 secured at one end to said base, sheaths of filtering material closed at one end and adapted to be removably positioned on opposite sides of said cage with their open ends in abutting relation to said base.

10 4. A filtering device comprising an annular base, an elongated tapered wire cage

consisting of a pair of angularly-disposed U-shaped wires joined together at the U-bend and having their free ends secured to the side edge of said base, a conical screen 15 secured to said base and enclosed by said wire cage, the apex of said screen terminating adjacent the U-bend of said cage, and a filter bag of chamois carried by said cage.

In testimony whereof I affix my signature. 20

Dated the 5th day of January, 1921.

BARNEY ROSENBERG.