No. 875,295. PATENTED DEC. 31, 1907.

J. F. SMITH.

LIQUID FEEDING DEVICE.

APPLICATION FILED SEPT. 17, 1907.

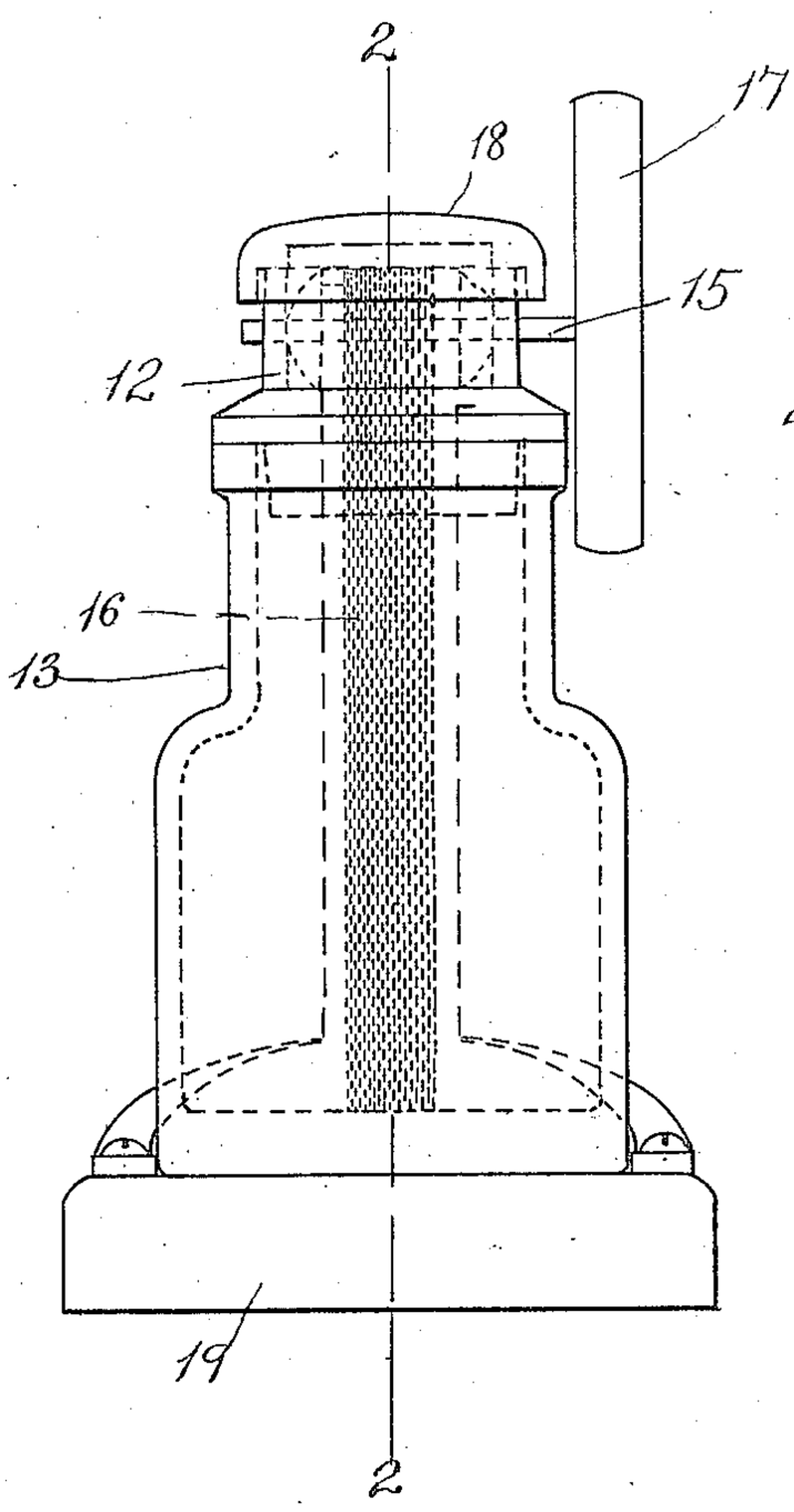

Fig. 1.

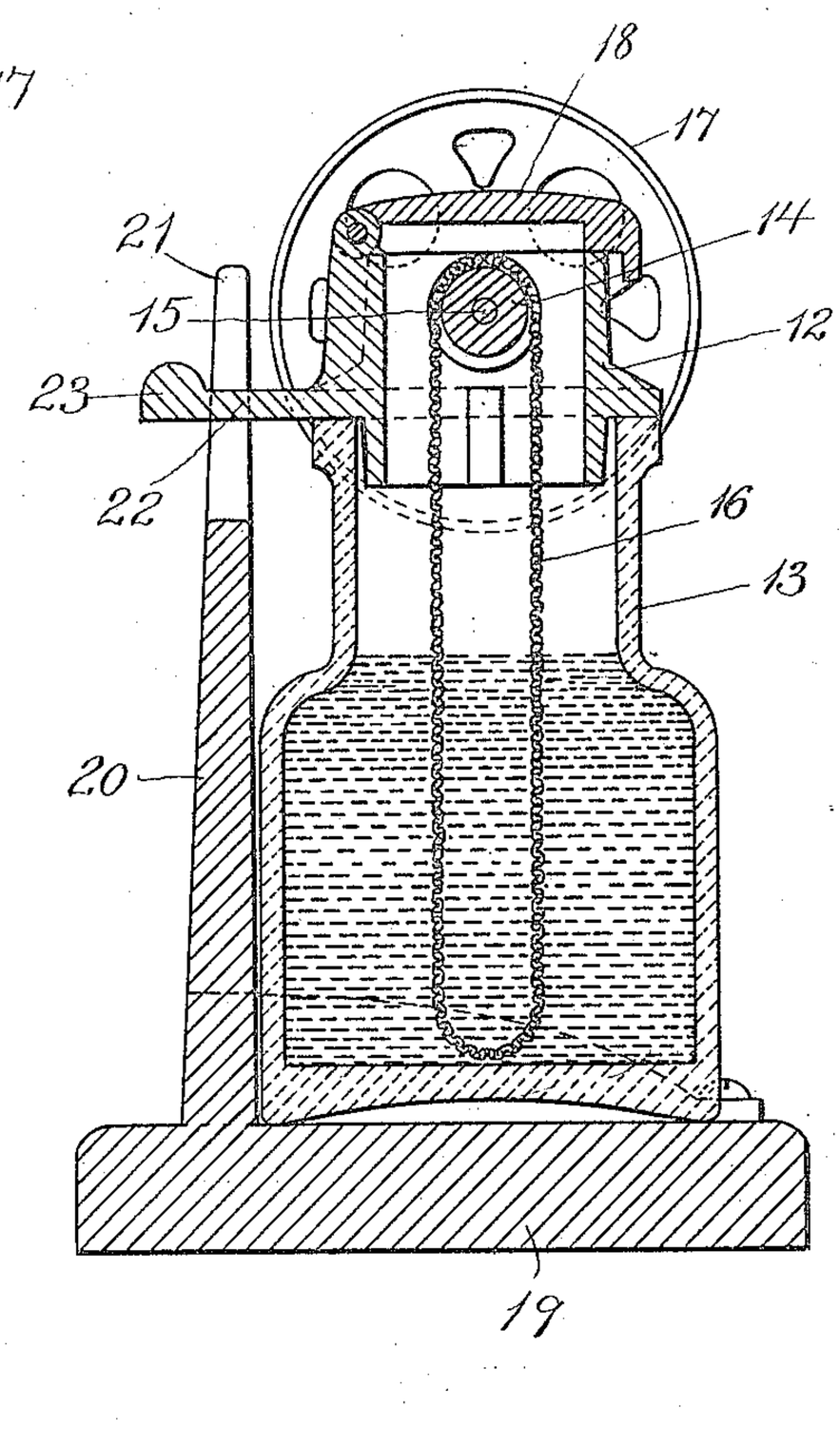

Fig. 2.

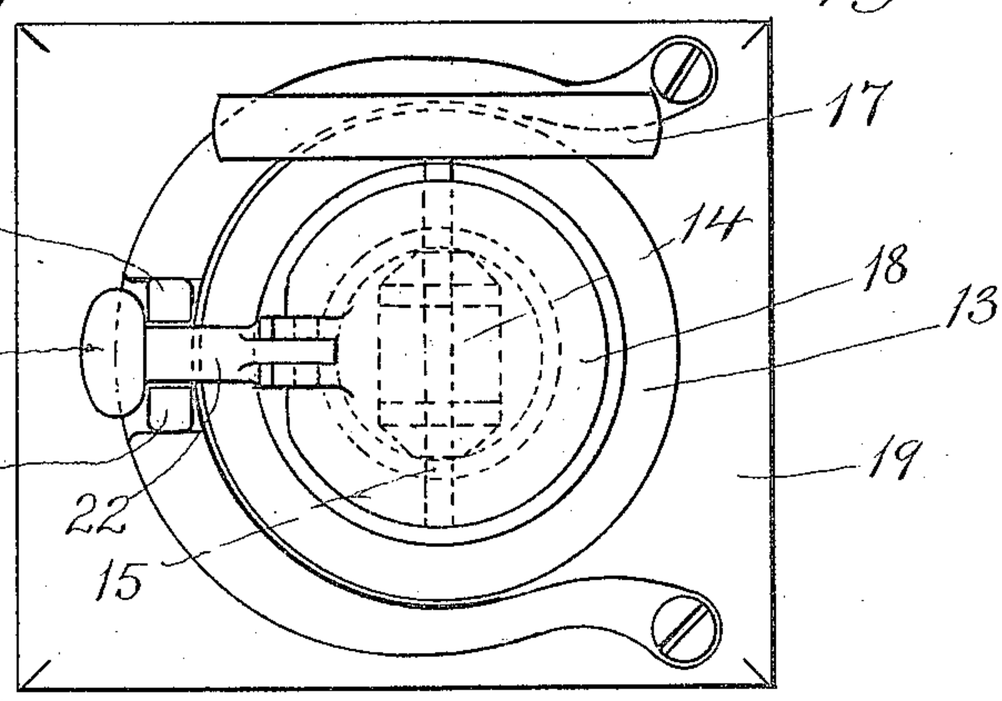

Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

JULIUS FRANCE SMITH, OF BROCKTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO ELDON B. KEITH, OF BROCKTON, MASSACHUSETTS.

LIQUID-FEEDING DEVICE.

No. 875,295. Specification of Letters Patent. Patented Dec. 31, 1907.

Application filed September 17, 1907. Serial No. 393,395.

To all whom it may concern:

Be it known that I, JULIUS FRANCE SMITH, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Liquid-Feeding Devices, of which the following is a specification.

This invention has especial reference to the removal of a relatively thick or viscous liquid from a receptacle, in small quantities and in such manner that the liquid may be removed as required, without waste, and with the minimum loss by evaporation.

The invention is embodied in a device for feeding a liquid composition which is used for filling cracks in patent leather, and particularly in toe-caps and other patent-leather parts of boots and shoes.

It not infrequently happens, that after a boot or shoe has been completed, cracks develop in the patent leather of the toe-cap and other parts. It is customary to fill these cracks with a relatively thick composition, analogous to that of which the original coating of the patent leather was made. Heretofore the filling composition has been poured out in small quantities, on a flat surface or palette, from which it is taken up by a brush or by the operator's finger, and applied to the cracks of the patent leather. This practice involves more or less waste of the composition, and is further objectionable because it is untidy.

The device in which the present invention is embodied overcomes the objections above recited.

The invention consists in the improvements hereinafter described and claimed.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a side elevation of a feeding device embodying my invention. Fig. 2 represents a section on line 2—2 of Fig. 1. Fig. 3 represents a top plan view of the device.

The same reference characters indicate the same parts in all the figures.

In the drawings,—12 represents a tubular casing or holder, which is open at both ends and is adapted to rest as a cap or cover on the mouth of a bottle or other receptacle 13 containing a liquid composition, which may be the usual composition employed for filling cracks in patent leather.

14 represents a drum or pulley affixed to a shaft 15, which is journaled in bearings in the casing 12, the arrangement being preferably such that the highest part of the pulley is substantially flush with the upper end of the casing, the latter constituting a curb which surrounds the pulley.

16 represents an endless conveyer, which surrounds the pulley 14, and depends therefrom into the receptacle 13. The said conveyer is preferably composed of metallic links of relatively fine wire, interengaged in such manner as to form a flat flexible chain, the length of which is such that it is adapted to extend substantially to the bottom of the receptacle 13. The shaft 15 may be provided with a hand-wheel 17, or other suitable device, to permit the shaft and pulley to be conveniently rotated, the rotation of the pulley causing a feeding movement of the conveyer 16, one stretch of the conveyer rising from the liquid in the receptacle, and raising a limited quantity of the liquid to the upper side of the pulley. The liquid thus raised may be removed by the operator's finger, or by a brush applied to the conveyer. Owing to the fact that the highest part of the conveyer is surrounded by the casing 12, any liquid which is not taken up by the finger or brush drops back through the casing, into the receptacle, so that waste of the material is avoided.

A conveyer composed of wire links is particularly desirable as a feature for relatively thick liquids, because the liquid while readily raised by the chain to the mouth of the casing 12, quickly drains off from the links of the chain, and falls back into the receptacle, so that the chain does not become caked by the evaporation of the composition after a period of disuse. The chain therefore is maintained in a flexible operative condition. The chain also acts to stir the liquid in the receptacle, and thus prevent sedimentation while the device is in use.

The casing 12 is preferably provided with a hinged cap or cover 18, which when closed prevents evaporation of the contents of the receptacle.

I have here shown a base or support 19 on which the receptacle rests, said base having a standard 20, the upper end of which is bifurcated to form arms 21, between which projects a shank 22 formed on the casing 12, said shank having a head or enlargement 23 at its outer end, which is wider than the space between the arms 21. A loose-joint

connection is thus afforded, between the casing and the standard 20, the casing being freely removable from the standard.

I claim:

1. A liquid-feeding device comprising a base having a standard, a receptacle resting on the base, a casing loosely connected with the standard and resting on the receptacle, and an endless conveyer depending from the casing into the receptacle.

2. A liquid feeding device comprising a base having a bifurcated standard, a receptacle resting on the base, a casing resting on the receptacle and loosely engaging the bifurcated portion of the standard, and an endless conveyer depending from the casing into the receptacle.

3. A liquid feeding device comprising a base having a bifurcated standard, a receptacle resting on the base, a casing resting on the receptacle and carrying a shank adapted to loosely engage with the bifurcated portion of the standard, and an endless conveyer depending from the casing into the receptacle.

4. A liquid feeding device comprising a base having a standard the upper end of which is bifurcated, a receptacle resting on the base, a casing carried by said receptacle, a shank projecting from said casing the end portion of which terminates in an enlarged head, said shank being adapted to loosely engage the bifurcated portion of the standard, and an endless conveyer depending from the casing into the receptacle.

5. A liquid feeding device comprising a casing provided with vertical walls, a pulley journaled in said walls and arranged so that the tops of the walls and the surface of the pulley will be substantially flush with one another, and an endless conveyer depending from said pulley.

6. A liquid feeding device comprising a base, a receptacle mounted thereon, a casing mounted on the receptacle and provided with vertical walls, a pulley journaled in said vertical walls and arranged so that its top surface will be substantially flush with the top edges of said vertical walls, and an endless conveyer depending from said pulley into said receptacle.

7. A liquid feeding device comprising a base, a receptacle mounted thereon, a casing formed to engage the mouth of the receptacle, a pulley mounted in said casing, and an endless conveyer formed of closely interengaged links of flexible material depending from said pulley and into said receptacle.

8. A liquid feeding device comprising a base carrying a standard the upper portion of which is bifurcated, a receptacle mounted on the base, a casing mounted on the receptacle and provided with a hinged cover, a shank projecting from the casing and loosely engaging with the bifurcated portion of the standard, a pulley journaled within the casing, and an endless conveyer depending from said pulley and into said receptacle.

9. A liquid feeding device comprising a casing, and an endless conveyer depending from said casing, said endless conveyer being formed of closely interengaged links of fine wire arranged to form a flat flexible chain.

In testimony whereof I have affixed my signature, in presence of two witnesses.

JULIUS FRANCE SMITH.

Witnesses:

GEO. H. LEACH,

ANNA E. MCCORMICK.