No. 762,300. PATENTED JUNE 14, 1904.

W. M. FULTON.

OIL CAN.

APPLICATION FILED MAR. 20, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 2.

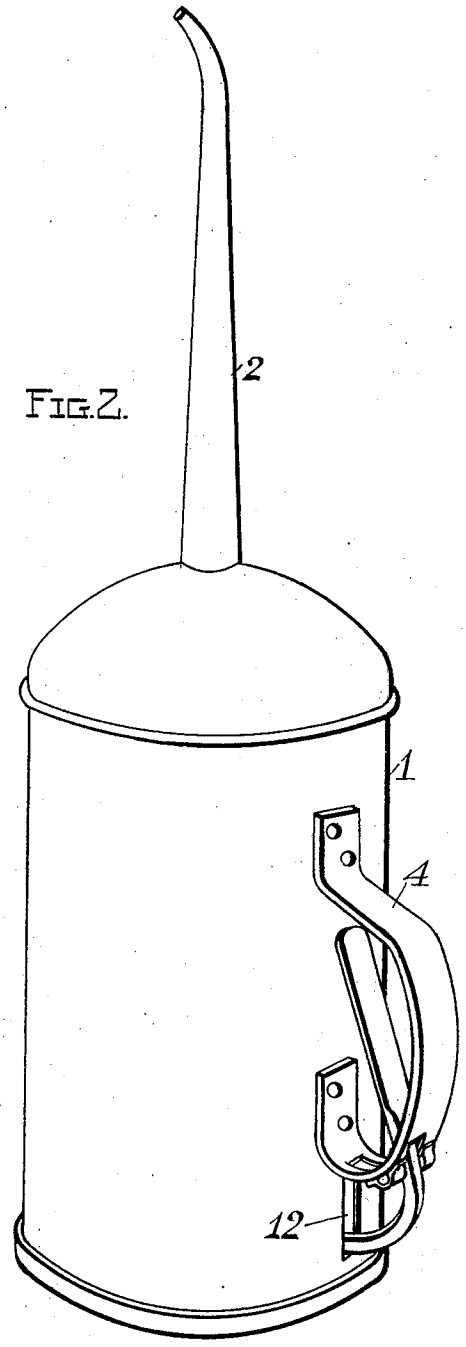
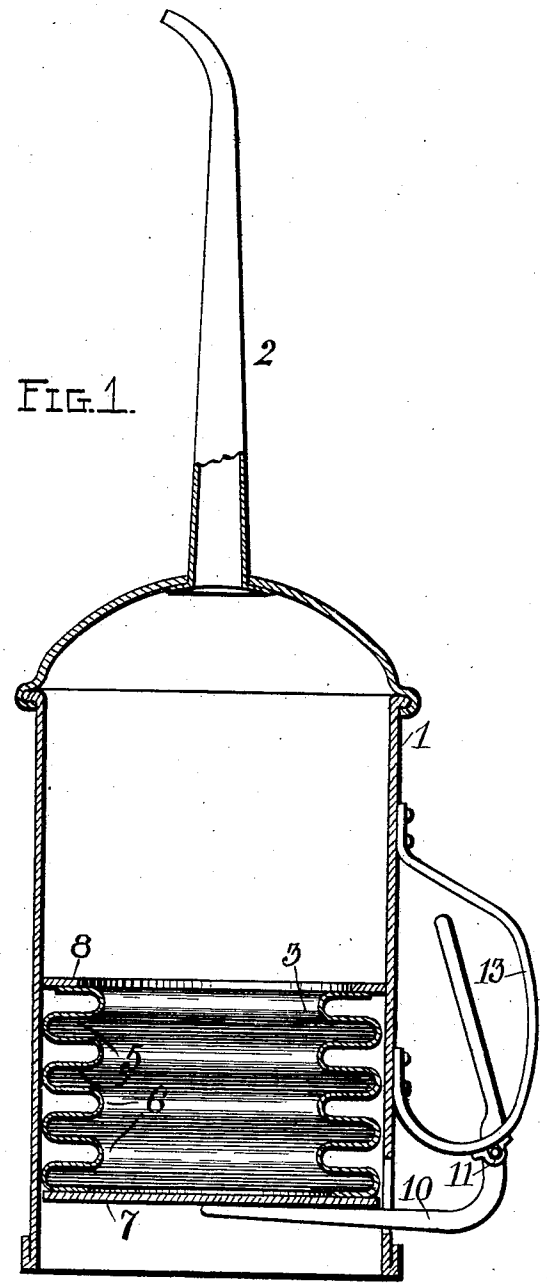


FIG. 1.



Witnesses

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NO MODEL. 2 SHEETS—SHEET 2.

FIG. 4.

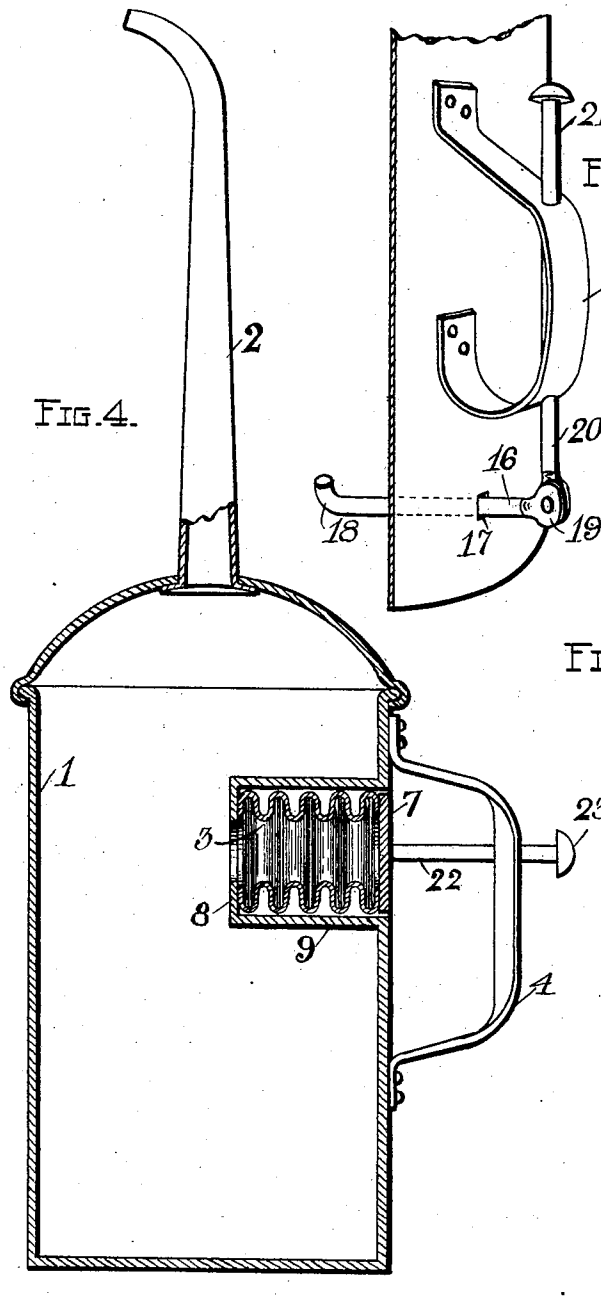
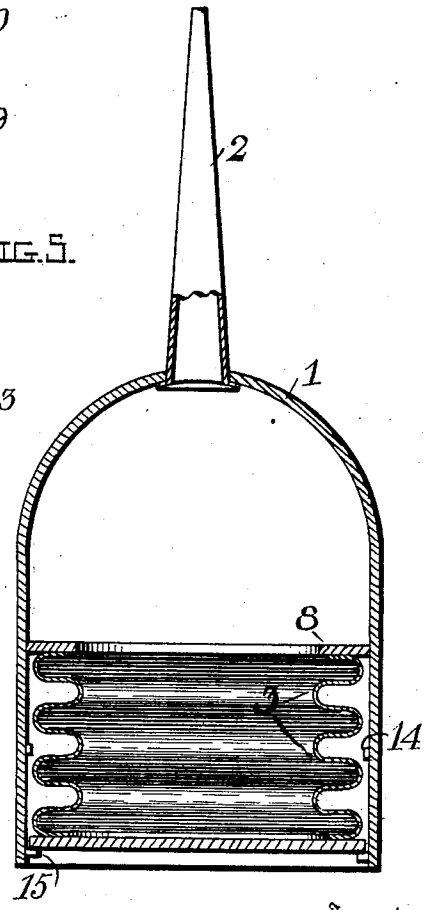


FIG. 3.

FIG. 5.



Witnesses

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No. 762,300. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

WESTON M. FULTON, OF KNOXVILLE, TENNESSEE.

OIL-CAN.

SPECIFICATION forming part of Letters Patent No. 762,300, dated June 14, 1904.

Application filed March 20, 1903. Serial No. 148,789. (No model.)

To all whom it may concern:

Be it known that I, WESTON M. FULTON, of Knoxville, Tennessee, have invented a new and useful Improvement in Oil-Cans, which invention is fully set forth in the following specification.

This invention relates to oil-cans, and particularly to that class of oil-cans or oilers used by machinists for applying lubricating-oil to machinery.

Hitherto a great variety of devices have been proposed by inventors for forcing the oil out of the can at the will of the operator. One well-known method consists in having the bottom of the can made of very thin sheet metal which when pressed will be forced slightly inward, thereby forcing the oil out of the can. The action here depends upon the well-known property of a thin sheet-metal diaphragm whereby it "gives" or yields to pressure at the center when the periphery is held rigid. Where the oil is quite viscous, this device often fails completely. In order to overcome this defect, other inventors have applied pumps of various types, all of which possess the serious objection of leakage, besides requiring considerable energy to overcome the friction of the piston in the cylinder. The present improvement is designed to overcome these objections.

It consists in attaching an improved corrugated collapsible vessel to the can, so that such collapsible vessel constitutes a part of the wall of the can, whereby the volume of the can may be made to vary at will, thereby forcing the oil out when desired.

The inventive idea may be mechanically expressed in a variety of forms, and for the purpose of illustration some of these are shown in the accompanying drawings, in which—

Figure 1 is a longitudinal section, and Fig. 2 a side elevation, of one form of the improved oil-can. Fig. 3 is a side elevational detail. Fig. 4 is a longitudinal section of another form of oil-can, and Fig. 5 is a modification of Fig. 1.

Referring to the drawings, 1 is an oil-can such as is usually employed in oiling machinery and provided with the usual tapering delivery nozzle or pipe 2. The main portion of the walls of the can 1 is of usual or any desired construction and is here shown as a cylinder slightly tapering at its top toward the pipe 2 and may be made of any suitable material, preferably sheet metal, as tin or brass. A portion 3 of the wall of the can is formed so as to be readily collapsed by slight pressure, and thereby reduce the volume of the vessel. This collapsible portion may form any part of the wall of the can that is conveniently located for the application of pressure in the act of using the can. In Figs. 1 and 5 it is shown as forming the lower portion of the walls of the can, while in Fig. 4 it is located somewhat higher up and immediately under the handle 4. This collapsible portion 3 is in the form of deep corrugations and is composed of substantially parallel portions 5, practically normal to the line of collapse, said parallel portions 5 being connected by curved portions 6, Figs. 1 and 5, the whole being thus constructed free from angles, which would cause a breaking strain to be put upon the material of the collapsible wall, which is preferably of tin, brass, or other sheet metal. The inner end of the collapsible portion 3 is in open communication with the interior and forms a part of the can proper, while the outer end of said collapsible portion is closed by a rigid part or member 7, which in the construction shown in Figs. 1 and 5 constitutes the bottom of the oil-can, and in Fig. 4 it forms a part of the side wall of the can. The inner end of this collapsible portion 3 rests upon and is secured with a sealed joint to a ledge or abutment 8, supported on the walls of the can. In Figs. 1 and 5 this ledge 8 is directly attached to the side walls, while in Fig. 4 it is carried on an inwardly-projecting tube 9, carried by the side wall.

Referring now to Figs. 1 and 2, a lever 10 is fulcrumed at 11 on the handle 4, with one of its arms bearing against the rigid end wall 7 of the collapsible portion 3 and the other arm extending within the handle in position to be grasped by the fingers of the operator and moved so as to draw the arm away from the can, and thereby compress the collapsible wall 3 and force the oil from the can through

the spout 2. The lower arm of the lever 10 passes through a slot 12, Fig. 2, in the side wall of the can, which serves as a guide and also as a stop to limit the outward expansion of the wall 3, while the interior face 13 of the handle 4 serves as a stop to limit the movement of the lever 10 in the act of compressing said wall, and hence prevents compression to an injurious degree.

In the construction shown in Fig. 5 the thumb is applied directly to the rigid wall 7 to compress the collapsible part 3, while the can is held with the nozzle 2 between the first and second fingers, a stop 14 being employed to limit the compression and a stop 15 to limit the expansion of said wall 3.

Instead of the lever 10 of Fig. 1 the construction of Fig. 3 may be employed, in which 16 is a lever fulcrumed at 17 in the wall of the can and having a knob 18, which bears against the bottom wall 7, as in Fig. 1. This lever 16 is pivoted at 19 to a rod 20, sliding in the handle 4, and having a knob or button 21 in position to be pressed by the thumb when using the can, thereby compressing the collapsible wall. The handle 4 acts as a stop to the button 21, and thereby prevents too great compression.

Referring now to Fig. 4, a rod 22 is mounted to slide through the handle 4, with its inner end bearing on the rigid closure-wall of the collapsible portion 3 and its outer end provided with button 23 outside of the handle and in position to be pressed by the thumb to compress the collapsible wall 3, the handle forming a stop, as in Figs. 1 and 3, to prevent a too great compression.

The operation of the improved oil-can is as follows: Pressure being applied to the exterior wall of the collapsible portion causes the vessel to collapse, thus forcing oil out through the spout 2. The pressure being released, the elasticity of the corrugated wall 3 will cause it to expand and return to its original position, thereby drawing air in through the spout 2, when pressure may again be applied to the collapsible wall and the operation repeated.

Having thus described the invention, what is claimed is—

1. An oil-can provided with rigid walls and a discharge-spout, combined with an elastic collapsible vessel carried by said rigid walls, a handle, and means operable from said handle for applying pressure to compress said collapsible vessel.

2. An oil-can provided with rigid walls and a discharge-spout, an annular ledge attached to said rigid walls, a collapsible wall supported at one end by said ledge, a rigid end wall closing the other end of said collapsible wall, a handle, and pressure devices operable from the handle to compress said collapsible wall.

3. An oil-can provided with rigid walls and a discharge-spout combined with an elastic collapsible vessel and means limiting the extent of compression and expansion of said collapsible vessel.

4. An oil-can provided with rigid walls, and a discharge-spout, combined with an elastic collapsible vessel, means for applying pressure thereto to compress the same, and a stop to limit the extent of such compression.

5. An oil-can provided with rigid walls, and a discharge-spout, combined with an elastic collapsible vessel, a handle, and a lever operable from the handle to compress said collapsible vessel.

6. An oil-can provided with an elastic vessel having a corrugated compressible and expanding wall, a handle, and a discharge-spout, combined with means operable from the handle for compressing said wall.

7. An oil-can provided with an elastic vessel having a corrugated compressible and expanding wall, and a discharge-spout, combined with means limiting the compression and expansion of said wall.

8. An oil-can provided with an elastic vessel having a corrugated compressible and expanding wall, a handle and a discharge-spout, combined with means operable from the handle for compressing said wall, and a stop for said means.

9. An oil-can provided with rigid walls and a discharge-spout, an elastic collapsible vessel located within such can and in open communication therewith, a handle, and means operable from such handle to compress said vessel.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WESTON M. FULTON.

Witnesses:
J. W. CURRIER,
C. R. BURRIER.