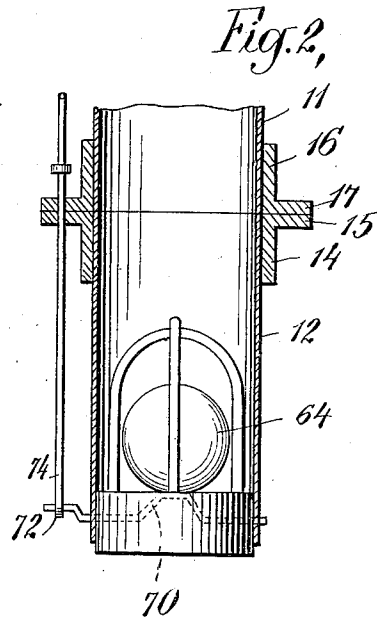
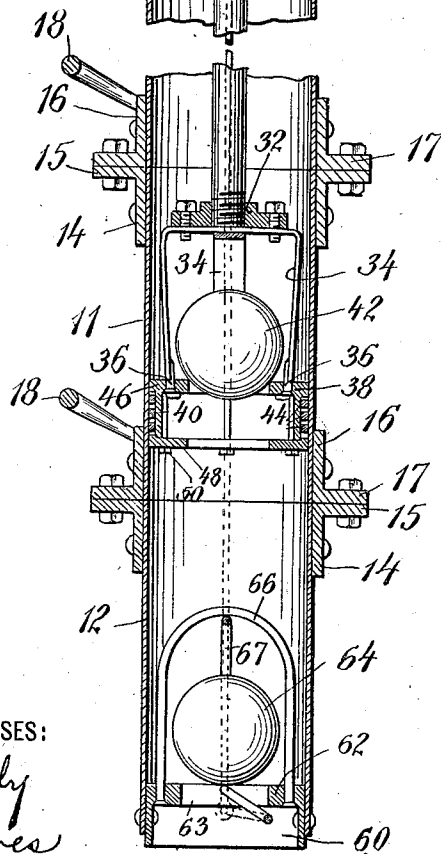
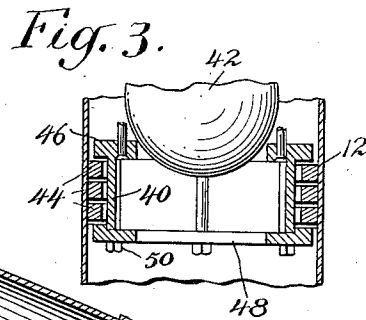
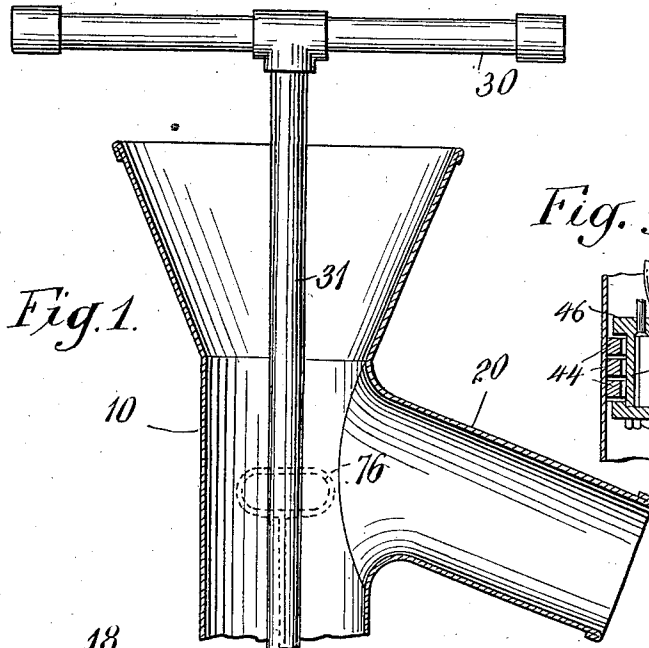


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 ASPHALT PUMP.
 APPLICATION FILED FEB. 8, 1912.

1,054,722.

Patented Mar. 4, 1913.



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ASPHALT-PUMP.

1,054,722.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed February 8, 1912. Serial No. 676,337.

To all whom it may concern:

Be it known that I, WILLIAM P. TARRANT, a citizen of the United States of America, and a resident of Saratoga Springs, county of Saratoga, and State of New York, have invented certain new and useful Improvements in Asphalt-Pumps, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The object of the invention is to provide a pump for viscous liquids such as heavy oils or hot liquid asphalt which can be subjected to hard usage and has its plunger and other parts so constructed that when it becomes clogged with hardened asphalt or the like, it may be thrown upon a fire and burned clean.

I will describe my invention in the following specification and point out the novel features thereof in the appended claims.

In the accompanying drawings: Figure 1 is a central vertical section of the pump. Fig. 2 is a fragmentary side elevation of the pump showing the device for tilting or raising the lower ball valve. Fig. 3 is a sectional elevation of a portion of the pump plunger drawn on a somewhat enlarged scale.

As illustrated in the drawing the pump comprises a casing composed of a plurality of sections 10—11 and 12, preferably made of heavy galvanized iron. The sections 11 and 12 are provided at their upper ends with annular bands 14 having laterally projecting flanges 15; and the lower ends of the sections 10 and 11 are provided with similar bands 16 having flanges 17 which are adapted to be bolted to the flanges 15. Handles 18 are provided by means of which the pump may be steadied or lifted from the receptacle containing the liquid which is being pumped, as for example, hot liquid asphalt. These handles are preferably cast integrally with the bands 16. A spout 20 extends laterally from the upper section 10 of the pump casing. Although only three sections are shown as comprising the casing, it will be understood that any desired number may be employed.

The plunger of the pump comprises a handle 30 to which a depending rod 31 is affixed, the lower end of said rod being threaded into a spider 32, having ears or lobes extending at right angles to each other. The ears of the spider are bolted to inverted

U-shaped straps 34 placed at right angles to one another and provided at their lower ends with tongues 36 which are riveted into an inwardly extending flange 38 of an annular member 40. The annular member 40, together with the straps 34, constitutes a cage for retaining an iron ball 42 which is adapted to seat on the flange 38.

Loosely surrounding the annular member or cylinder 40 are a series of split piston rings 44 which are held in place by an external flange 46 on the upper end of cylinder 40, and a ring 48 secured to the lower end of said cylinder by bolts 50. The rings 44 surround the cylinder 40 loosely and have sufficient spring to bear lightly against the interior of the pump casing. The cage, valve, and rings are constructed of malleable iron or steel and of heavy pattern to withstand rough usage and burning clean in a fire.

A secondary valve is provided in the lower end of the pump casing, which affords protection to the plunger valve and to the lower end of the pump. This valve comprises a cylindrical shell 60 which is adapted to be secured within and project below the lower end of the pump casing 12. The upper end of the cylinder 60 is formed with an inwardly extending annular flange 62 provided with an opening 63 which forms a seat for an iron ball 64. A pair of inverted U-shaped wire-rods 66—67 are crossed at right angles to one another and have their lower ends riveted in the flange 62 to form a cage for the ball valve 64.

To empty the pump after use, so that it may be more readily removed from a tank or other receptacle, I provide means for raising the ball 64 from its seat, comprising a tilter 70 composed of a pivotally mounted wire bent into an inverted V, and formed at one end into a crank 72. The crank 72 is pivotally connected to a rod 74, which is guided in the flanges 15—17 or any other suitable bearings, and provided at its upper end with an operating handle 76. This lifter construction is provided for the purpose of opening the lower or secondary valve to allow a free passage of asphalt therethrough, and although it is simple and durable and has but few parts, and has no slot through the pump cylinder, yet it is strong, effective and durable.

What I claim is:

1. A pump for hot viscous liquids comprising a casing, a valved plunger movable

in said casing, a protecting shell at the bottom of said casing provided with a valve seat, a ball valve adapted to engage said seat, a lifter for manually raising the ball
5 from the seat comprising a pivotally mounted V-shaped wire having a crank at one end outside of said casing, and a rod pivotally connected to said crank.

2. A plunger for asphalt pumps, comprising a cylinder having an internal flange forming a valve seat, and an external flange, a pair of inverted U-shaped straps crossed at right angles to one another and having their lower ends provided with tongues
10 which are connected to said internal flange to form a cage, a spider secured to the upper side of said cage crossed straps, an iron ball valve in said cage arranged to engage said seat, a plurality of iron rings loosely surrounding said cylinder and held in place by
20

said flanges, and a ring secured to the lower end of said cylinder to hold said rings in place.

3. A pump for hot viscous liquids comprising a casing composed of tubular sections secured in alinement, a plunger with-
25 in said casing comprising a cylinder having an annular groove and provided with a valve seat, a cage, a ball within the cage adapted to engage the valve seat, and a plu-
30 rality of independent rings loosely fitted into the casing and loosely surrounding the plunger cylinder and longitudinally movable in the annular groove thereof, the parts of said plunger being made of rough ma-
35 terial which is uninjured by heat and flame.

WILLIAM P. TARRANT.

Witnesses:

JAS. M. DUNLAVEY,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents
Washington, D. C."