

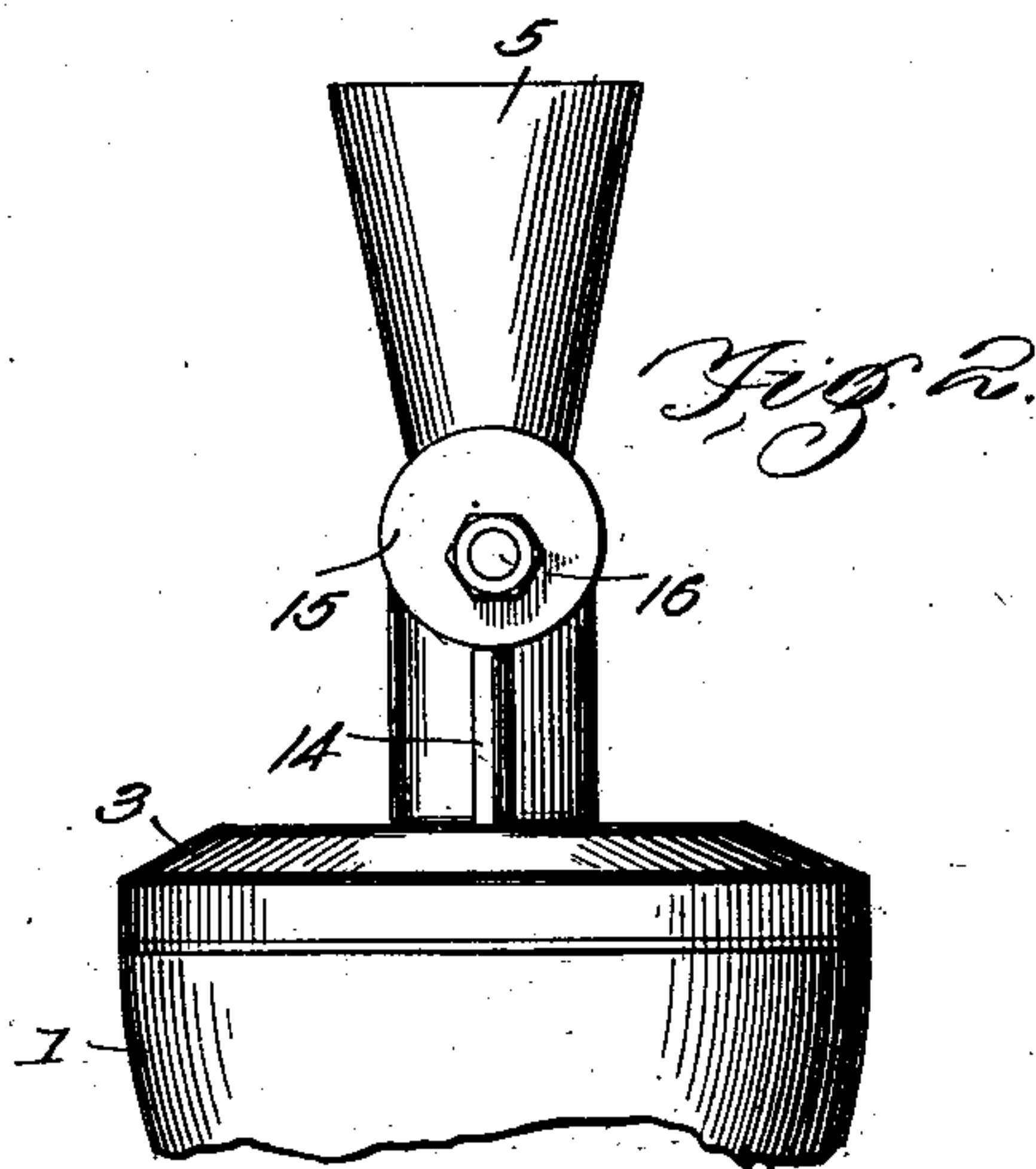
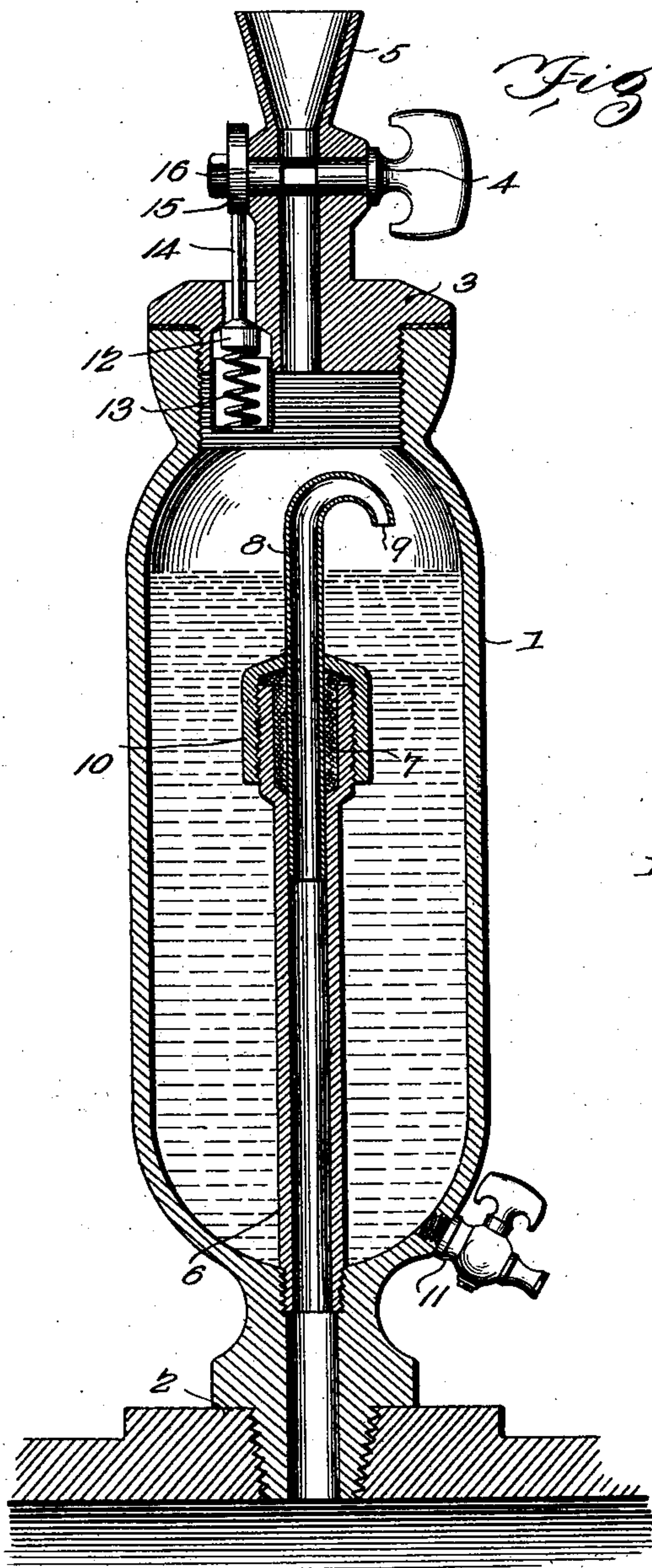
No. 701,567.

Patented June 3, 1902.

H. HARRIS.
LUBRICATOR.

(Application filed May 31, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

HART HARRIS, OF WASHINGTON, PENNSYLVANIA.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 701,567, dated June 3, 1902.

Application filed May 31, 1901. Serial No. 62,607. (No model.)

To all whom it may concern:

Be it known that I, HART HARRIS, a citizen of the United States, residing at Washington, in the county of Washington and State of Pennsylvania, have invented a new and useful Lubricator, of which the following is a specification.

This invention relates to lubricators, more particularly to those employed in lubricating steam-cylinders and other apparatus employing steam; and the invention consists in the construction, combination, and arrangement of parts, as hereinafter shown and described, and specifically pointed out in the claim.

In the drawings, Figure 1 is a vertical sectional elevation. Fig. 2 is a side elevation of the upper part of the device, illustrating the construction of the vent-valve-operating mechanism.

The casing or shell 1 will be attached to the steam chest or cylinder of a steam-engine, steam-pump, or other apparatus by its lower end, as at 2. The casing will be provided with a closure 3 at its upper end, the closure being provided with stop-cock 4 and rising into a funnel 5 above the plug of the cock, as shown. By this means the oil will be introduced into the casing and the whole interior of the casing also rendered accessible by removing the closure. The closure 3 will preferably be connected to the casing by being screwed therein, as shown. Rising into the casing from its lower end is a tube 6 and connecting with the cylinder or steam-chest with which the casing is engaged and preferably enlarged at its upper end to provide a cavity for a packing 7. Fitting down into the upper end of the tube 6 is a smaller tube 8, with its upper end turned over and contracted at its outlet 9, so as to cause the outlet 9 to open downwardly.

10 is a gland engaging the upper end of the tube 6 and adapted to compress the packing 7 around the tube 8 and forming a stuffing-box between the tubes 6 and 8. By this means the tube 8 is supported in the tube 6 with sufficient force to resist any strains to which it would be subjected when in use. The tube 8 can be readily adjusted vertically by removing the closure 3 and applying a

pulling or pushing force upon it sufficient to overcome the resistance of the packing 7.

11 is a petcock in the lower part of the casing to provide for the removal of the condensed water when required.

12 is a vent-valve in the closure 3 and adapted to be maintained normally closed by a spring 13 and with a stem 14 rising upward and adapted to be engaged by a cam 15 on the stem 16 of the stop-cock 4, so that when the plug of the stop-cock is turned to open it the cam will force the valve 12 open, and thus provide a vent to the casing to permit the escape of the air as the oil flows in. Then when the casing is recharged the closing of the stop-cock will likewise turn the cam 15 and release the vent-valve, which will at once be closed by its spring 13.

The oil will be allowed to flow into the casing until it rises nearly to the outlet 9 of the curved tube 8, as indicated by dotted lines in Fig. 1. Then when the steam from the cylinder escapes through the tubes 6 and 8 into the space above the oil it will be condensed, and water of condensation, being of greater specific gravity than the oil, will sink through the oil and cause the latter to rise and flow over into the tubes 6 and 8, and thus find its way to the mechanism with which the device is connected and automatically lubricate them. The tube 8 may be adjusted in accordance with the quantity of oil and condensed steam in the lubricator, the withdrawal of a quantity of water through the petcock necessitating a depression of the tube unless an equal amount of oil be added.

By contracting the outlet 9 of the pipe 8 an effectual means is provided for preventing the clogging of the pipe, as any small foreign particles which would pass through the contracted portion 9 would freely pass through the larger area of the pipe without clogging it.

What I claim as new is—

In a lubricator having a receptacle for the oil, means for feeding the oil from said receptacle, a removable closure to said receptacle enlarged into a funnel and a stop-cock between said funnel and receptacle, a vent-valve in said closure adapted to release air

from said receptacle, and having a stem rising through said closure, and a cam upon the plug of said stop-cock adapted to engage said valve-stem, and open said valve when said
5 valve-plug is actuated, substantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in the presence of two witnesses.

HART HARRIS.

Witnesses:

S. A. HOWDEN,

S. W. HALL.