

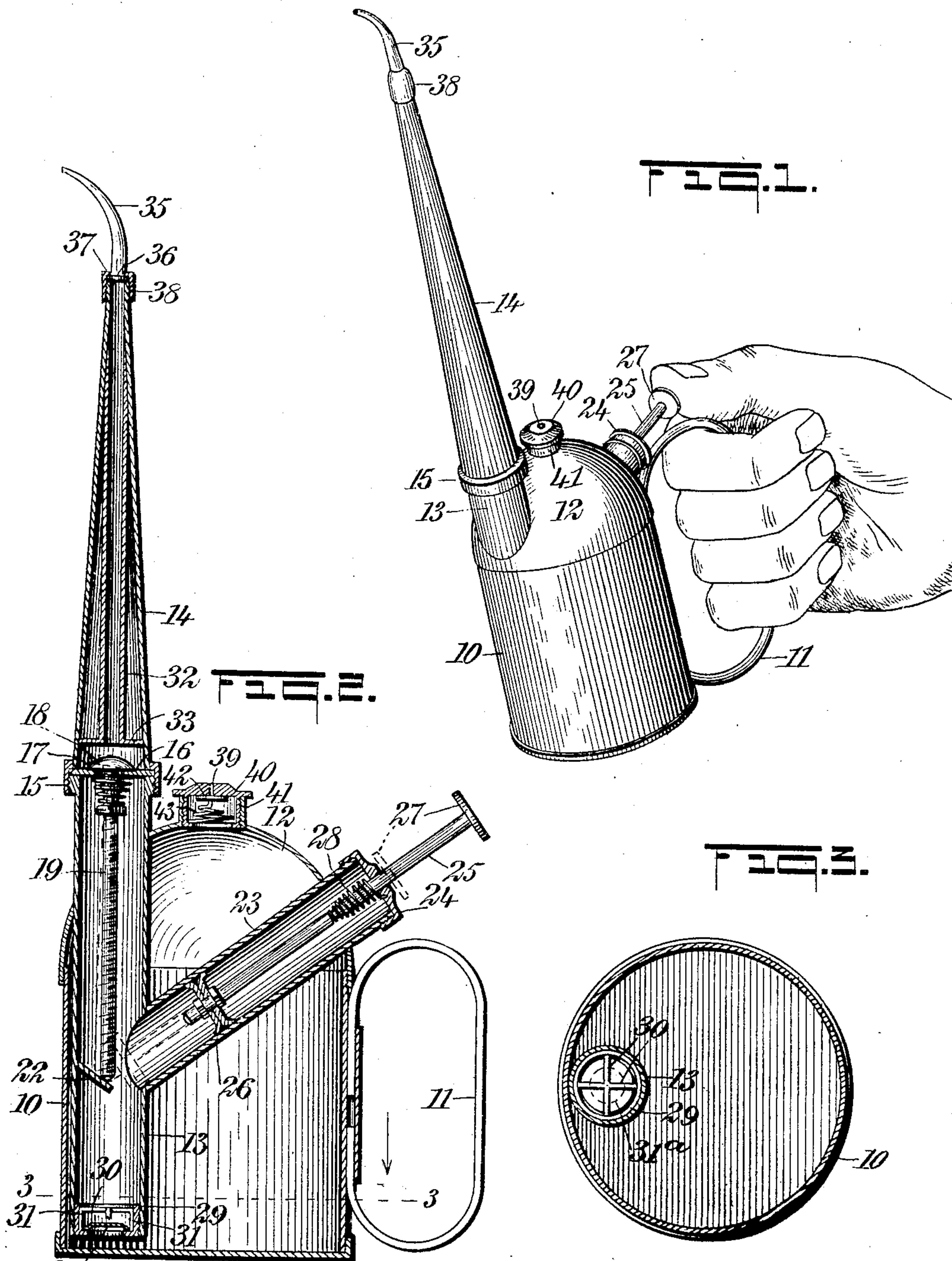
No. 804,009.

PATENTED NOV. 7, 1905.

W. L. HOWLAND.

OILER.

APPLICATION FILED JAN. 24, 1905.



31<sup>a</sup> WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM LINCOLN HOWLAND, OF MONMOUTH, ILLINOIS.

## OILER.

No. 804,009.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed January 24, 1905. Serial No. 242,488.

*To all whom it may concern:*

Be it known that I, WILLIAM LINCOLN HOWLAND, a citizen of the United States, and a resident of Monmouth, in the county of Warren and State of Illinois, have invented a new and Improved Oiler, of which the following is a full, clear, and exact description.

My invention relates to oiling apparatus, and more particularly to cans provided with a force-feed. It has for its principal object the provision of an effective apparatus of this character.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 shows a perspective view of one embodiment of my invention in use. Fig. 2 is a central vertical section taken in the plane of the spout and feed-chamber, and Fig. 3 is a horizontal section on the line 3 3 of Fig. 2.

10 designates a can, which may be provided with a handle 11 and a removable top 12. Carried by this top and extending into the can in proximity to its bottom is a delivery-tube 13, which is continued by an extension in the form of a tapered spout 14. The tube and spout may be connected by a union, the outer sleeve 15 of which is threaded upon the tube and has a flange contacting with a projection or flange furnished by a plate 16, secured to the inner end of the spout. This plate has a central opening 17 and furnishes a seat for a valve 18, from which a stem 19 depends through the opening 17, and is preferably threaded to receive a nut 20. Between this nut and the plate 16 is a compression-spring 21, serving to normally hold the valve to its seat. Within the delivery-tube is a contact member, conveniently consisting of an inclined wall 22, against which the valve-stem may rest. Opening into the delivery-tube in proximity to the contact member is a feed-chamber, consisting of a tube 23, extending from the delivery-tube through the top of the can. Outside the top the feed-tube has a removable head 24, through an opening in which passes a rod 25, carrying within the tube a piston 26 and at its outer extremity a finger-piece 27. A spring 28 is attached to the piston-rod conveniently by having its inner end forced into a groove therein, while its outer end is fixed to the head 24. This spring exerts its tension to hold the piston normally outward. At the bottom of the delivery-tube is a perforated head or closure 29, which may

be screwed in place, and within the tube is a retaining member, which may consist of crossed bars 30, having spring ends or fingers 31, here shown as adapted to press against the inside of the head to hold the retaining member in position. Between the closure and retaining member is a valve 31<sup>a</sup>, which operates against the closure as a seat. This arrangement of valve allows it to be readily removed and cleaned in event of its becoming clogged.

To reduce the capacity of the spout, a filling-tube 32 may be inserted, having at its inner end a flange 33, secured to the wall of the spout. At the end of the spout is preferably located a curved nozzle 35, having a flange 36 resting against the end of the spout, with which flange coöperates a flange 37 upon a sleeve 38, having suitable engagement with the outside of the spout. This sleeve enables the nozzle to be turned at various angles about the spout and there clamped, thus facilitating the introduction of the nozzle into otherwise inaccessible places.

The can being filled, the handle may be grasped as is illustrated in Fig. 1 and the piston-rod reciprocated by the pressure of the thumb and by the opposing force of the spring. The outward movement draws the oil from the can through the valve 31<sup>a</sup>, which is raised from its seat, while the return movement puts this charge under pressure, the valve preventing it from flowing back to the can. The spring 21 normally exerts sufficient force upon the valve 18 to hold it to its seat, thus retaining the oil within the delivery-tube until the pressure generated by the piston raises the valve and forces out said oil. In its pumping movement the piston does not contact with the valve-stem; but when it is desired to pour oil through the nozzle the finger-piece is pressed to its inmost position, as is indicated by dotted lines in Fig. 2 of the drawings. At this time the piston or the end of its rod contacts with the valve-stem, forcing it up the inclined surface and raising the valve 18, it being canted to one side. The oil is then free to flow by gravity through the spout and nozzle. Upon releasing the piston-rod the stem slides down the incline, causing the spring to seat its valve and cut off the flow. To admit air to the can above the surface of the oil and thus break the vacuum which would be produced by the action of the pump, a vent-opening 39 is provided, it being here shown as located in a cap 40, engaging a flange 41, extending from the cover. The opening is nor-



mally closed by a valve-disk 42, forced into coaction with the cap by a spring 43. This produces an absolutely tight closure until the pressure of the atmosphere exceeds that within the can and the resistance of the spring, when the valve frees the opening and the can is vented.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 1. The combination with a can having a delivery-tube, of a valve controlling the flow through the tube, and a feed device movable in the can independently of the valve and contacting with said valve.

15 2. The combination with a can having a delivery-tube, of a valve controlling the flow through the tube, a stem connected with the valve, and a feed device movable in the can and contacting with the stem.

20 3. The combination with a can having a de-

livery-tube, of a valve controlling the flow through the tube, a stem connected with the valve, a member having an inclined face with which the stem contacts, and means for moving the stem over said inclined face. 25

4. The combination with a can having a delivery-tube, of a valve controlling the flow through the tube, a stem connected with the valve, a member having an inclined face with which the stem contacts, a spring normally 30 holding the valve upon its seat, and means for moving the stem over the inclined face and the valve against the tension of the spring.

In testimony whereof I have signed my name to this specification in the presence of two sub- 35 scribing witnesses.

WILLIAM LINCOLN HOWLAND.

Witnesses:

RALPH JOHNSTON,

BEULAH JAMESON TAPPING.