J. H. BERTRAM.

OILER.

No. 186,658. Patented Jan. 30, 1877.

Fig. 1.

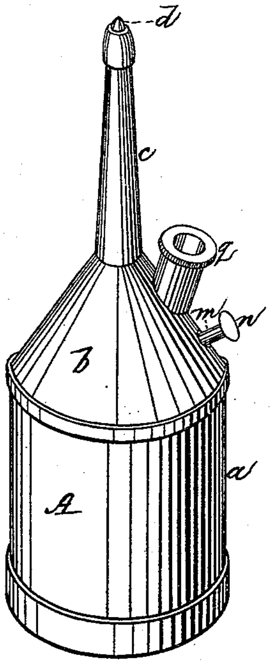


Fig. 2.

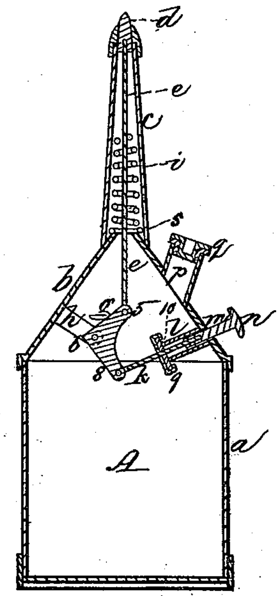
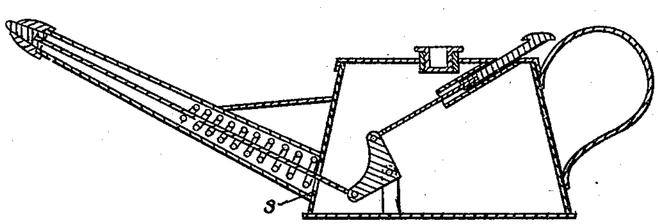


Fig. 3.



Witnesses;
G. C. Lane
W. J. Cambridge

Inventor,
Joseph H. Bertram
by his Attys. Teschemacher & Stearns.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOSEPH H. BERTRAM, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN OILERS.

Specification forming part of Letters Patent No. **186,658**, dated January 30, 1877; application filed December 23, 1876.

To all whom it may concern:

Be it known that I, JOSEPH H. BERTRAM, of Lawrence, in the county of Essex and State of Massachusetts, have invented an Improvement in Oilers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of an oiler constructed in accordance with my invention. Fig. 2 is a vertical section through the center of the same. Fig. 3 is a central longitudinal section through an oiler of a different form, especially adapted for locomotive-engines.

My present invention consists in an oiler in which the opening and closing of a valve at the outer or upper end of the nozzle is controlled by a push-pin connected therewith by means of a lever and a rod or wire, a spring being employed for keeping the valve closed when the oiler is not in use, by which construction the exact quantity of oil desired is delivered, and, as the valve is automatically closed before being withdrawn from the parts lubricated, all waste of oil is thereby effectually avoided, and none can escape in case of the oiler being accidentally inverted or overturned.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In Figs. 1 and 2 of the said drawings, A represents an oil-can of the form best adapted for ordinary use, the lower portion *a* being cylindrical, and the upper portion *b* conical or nearly so, and provided with a long tapering spout or nozzle, *c*, the outer or upper end of which is closed by a tapering pin or plug, *d*, having a smooth exterior surface corresponding to that of the interior of the end of the nozzle, so as to fit snugly therein and form a valve, the outer extremity of this pin *d* being pointed, and extending out a short distance beyond the end of the nozzle. To the bottom of this pin is attached the upper end of a connecting rod or wire, *e*, the lower end of which is secured to one arm, 5, of a bent lever, *g*, pivoted at 6 to a lug, *h*, projecting from the inside of the conical portion *b* of the oiler. *i* is a coiled spring located within the nozzle, the lower end of the spring being secured to the shoulder *s* on the top of the conical portion *b*, at the junction of the lower end of the nozzle therewith, the upper end of the spring being soldered to the connecting-rod *e*, which passes up through it.

To the other arm 8 of this bent lever *g* is secured the inner end of a short rod, *k*, which passes through a tube, *l*, projecting in from the side of the conical portion *b* of the oiler, and is connected with a push-pin, *m*, moving within the tube *l*, and extending outside the oiler through an opening formed therein, in line with the tube, the outer end of this push-pin being provided with a head, *n*, by means of which the pressure of the thumb can be applied to force in the push-pin, and through the connections described draw in the pin *d*, so as to allow the oil to flow from the point of the nozzle, as desired.

Secured to the short rod *k* is a flat plate, 9, provided with a rubber packing, 10, the position of this plate being such that its packing will close the inner end of the tube *l* when the valve at the outer end of the nozzle is closed, so as to prevent the escape of oil through the tube *l*.

The diameter of the push-pin is a little less than that of the interior of the tube *l* and of the opening through the side of the oiler, in order that air may be admitted to its interior when the plate 9 is forced away from the inner end of the tube *l* by pressing in the push-pin.

From the foregoing it will be seen that when the oiler is not in use the action of the spring (through the connections described) keeps the valves closed, and forces out the push-pin, the position of the parts being as seen in section, Fig. 2, in which position no oil can escape from the oiler should it be overturned.

When it is desired to use the oiler, the nozzle is directed to the part to be oiled, and pressure is applied to force in the push-pin *m*, causing the valve at the end of the nozzle to be opened, and the plate 9 removed from the inner of the tube *l* to admit the air necessary to permit the flow of the oil, the quan-

tity escaping being regulated by pressing in the push-pin more or less, which varies the size of the the discharge-orifice.

On the removal of the thumb from the push-pin the valve at the end of the nozzle is automatically closed, thus preventing any drip therefrom, and consequent waste of oil, while the dropping of oil on surfaces where it is not required, incident to oilers as heretofore constructed, is entirely avoided.

If desired, the plate 9 with its packing may be dispensed with, but I prefer to employ this device as the possibility of leaking is thereby more effectually prevented.

p is the opening through which the oil is introduced into the can, this opening being closed by a screw-plug, *q*.

In the oiler shown in Fig. 3, which is particularly adapted for locomotive-engines, the push pin is located at the top, the construction and relation of the parts to each other being the same as in the oiler first described.

I am aware that a self-closing valve has been applied to the end of the nozzle of an oiler, and operated by contact with the part to be oiled; but such oiler cannot be used where the surface to be oiled lies a little beyond the reach of the nozzle, or where the oil is to be introduced into an aperture, and I therefore do not claim this feature, broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

In a self-closing oiler, the plug *d*, located in the extreme point of the nozzle *c* on the rod *e*, surrounded by a coiled spring, *i*, resting on the shoulder *s*, in combination with bell-crank *g*, post *h*, and push-pin *m*, all constructed, arranged, and operated as set forth.

Witness my hand this 19th day of December, A. D. 1876.

JOSEPH H. BERTRAM.

In presence of—
JOHN OGILVIE,
HAMLET A. HOWARTH.