

(No Model.)

2 Sheets—Sheet 1.

E. ROST.  
LUBRICATOR.

No. 328,433.

Patented Oct. 13, 1885.

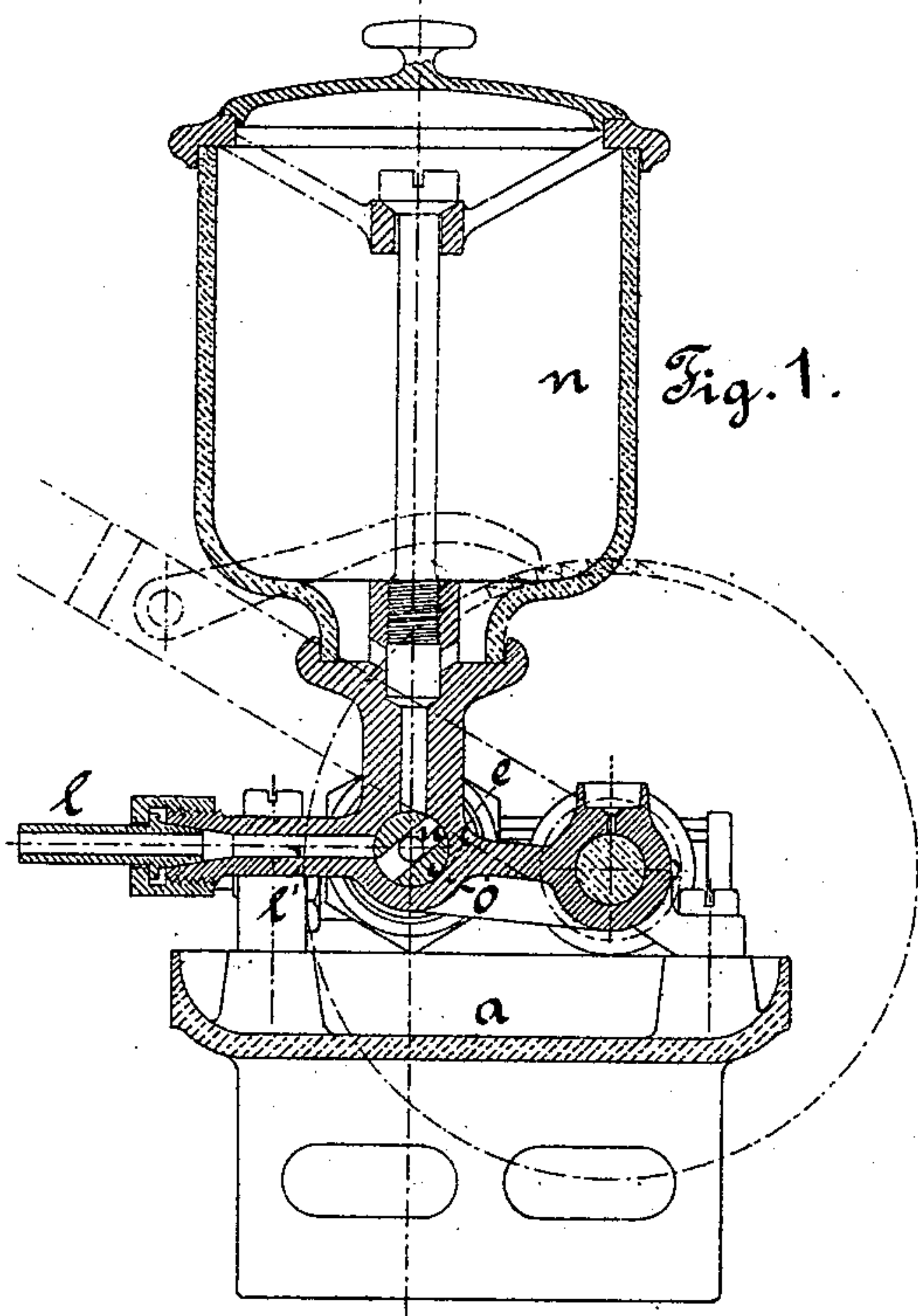


Fig. 1.

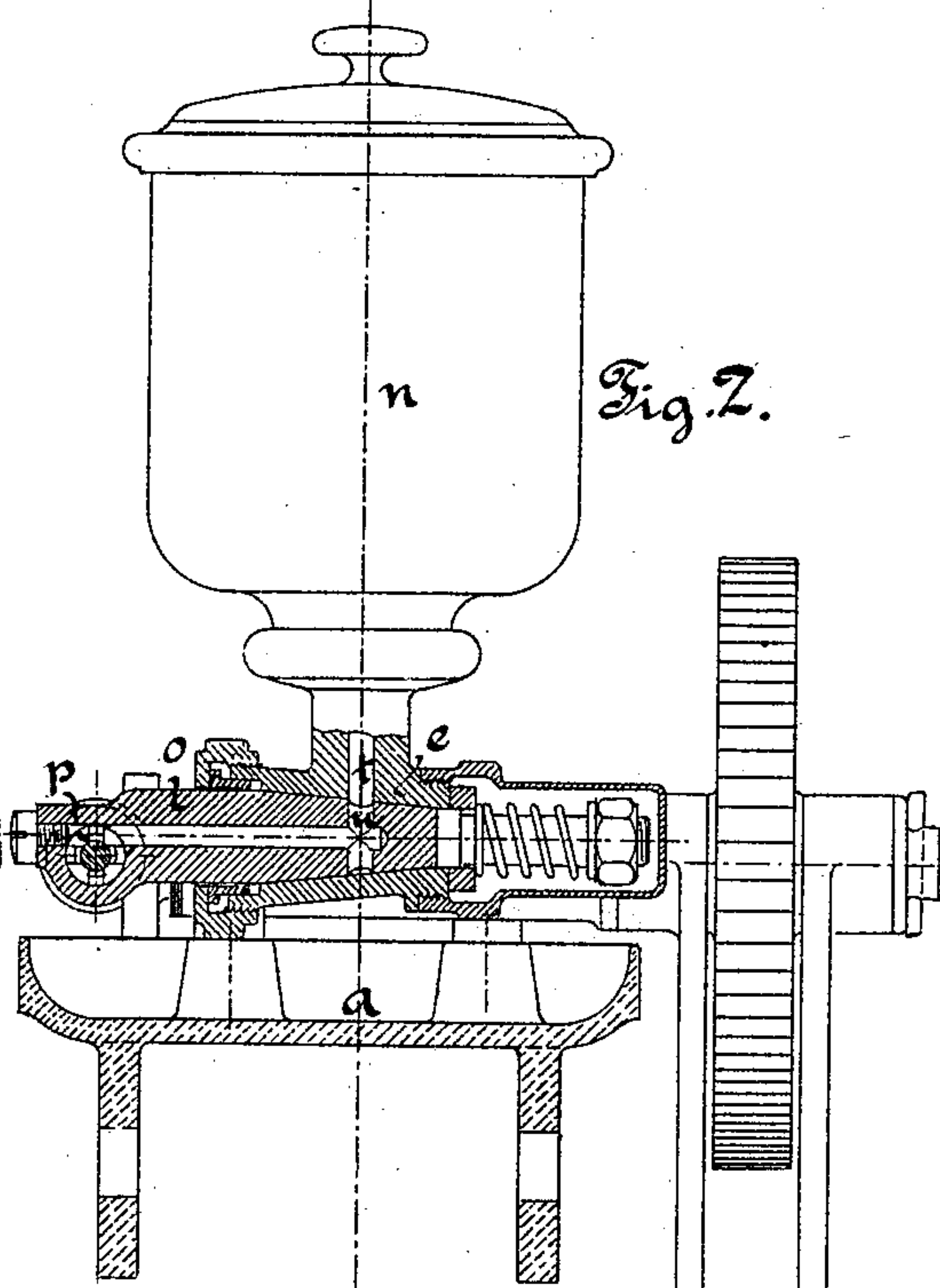


Fig. 2.

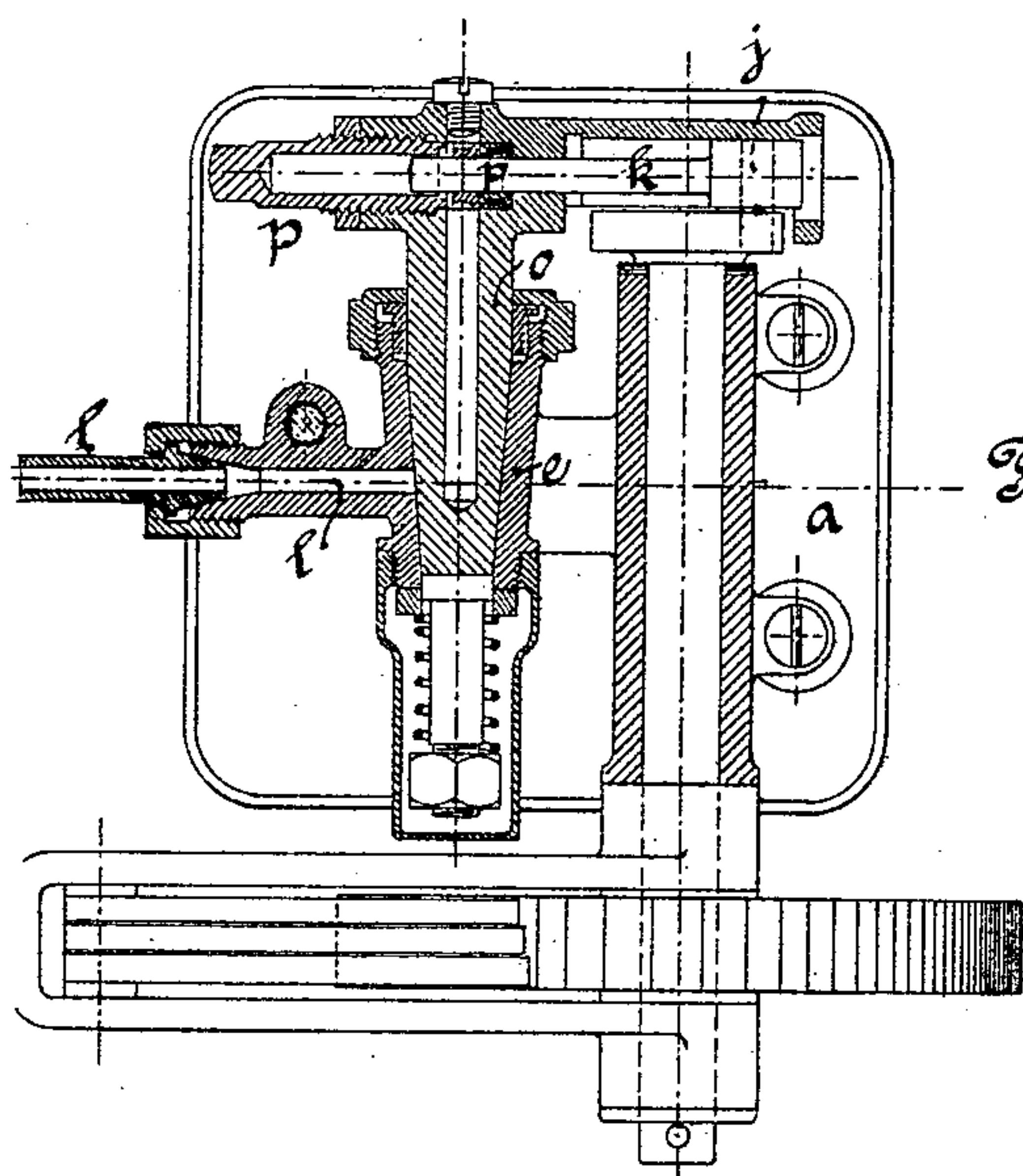


Fig. 3.

Witnesses:  
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J. H. Handford

Inventor:  
Ernest Rost  
by Marcelina Danby  
his Attorney!

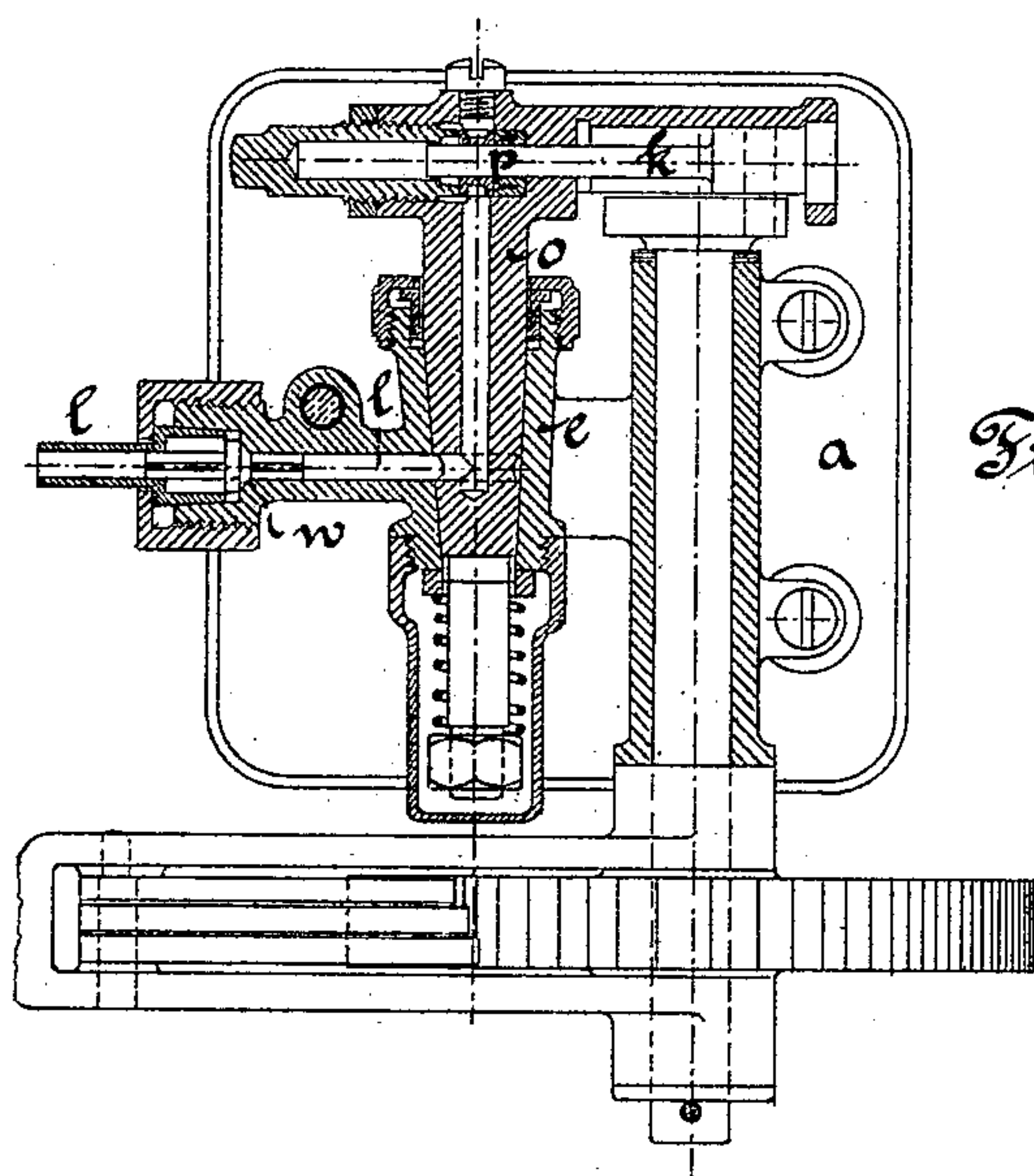
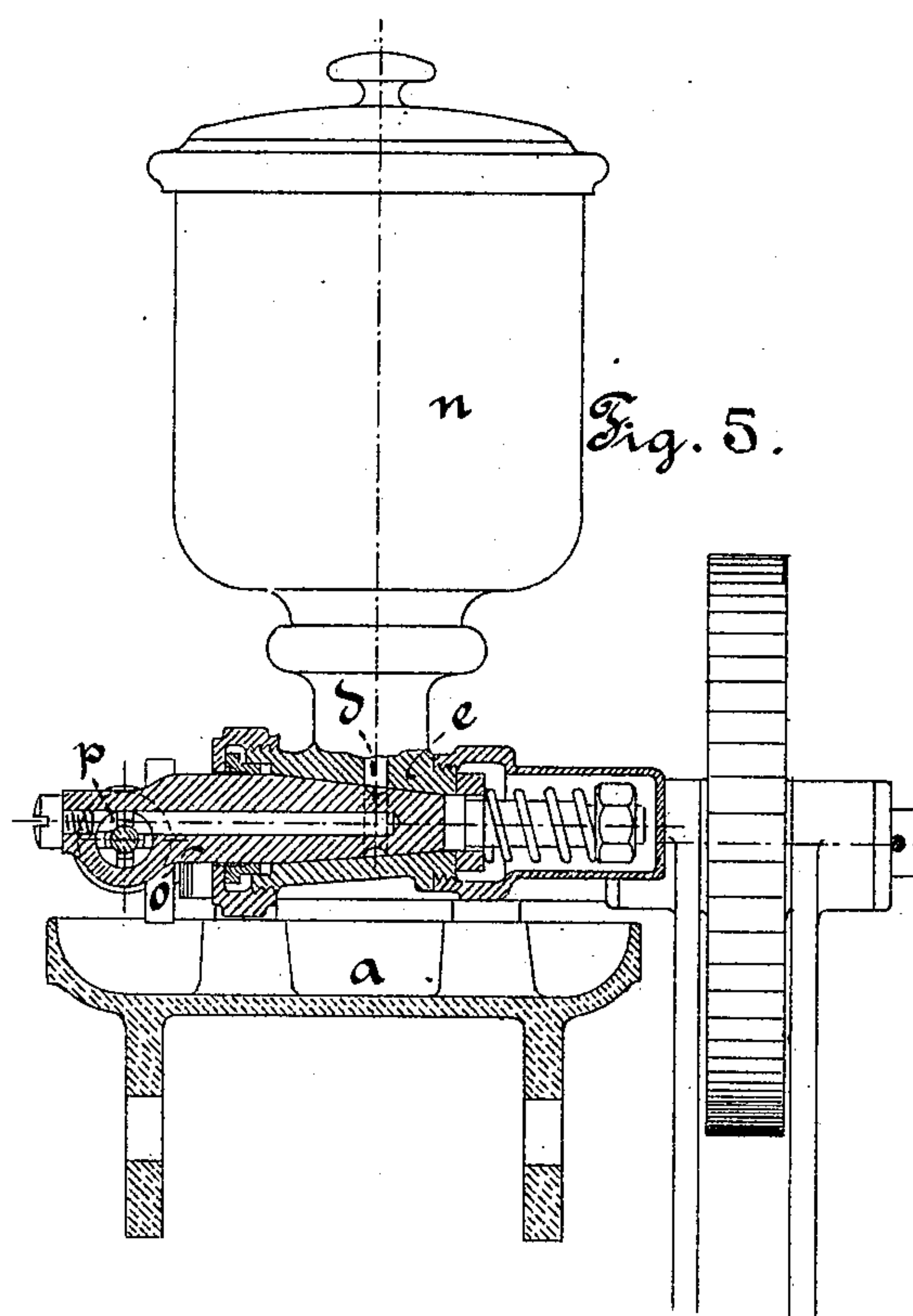
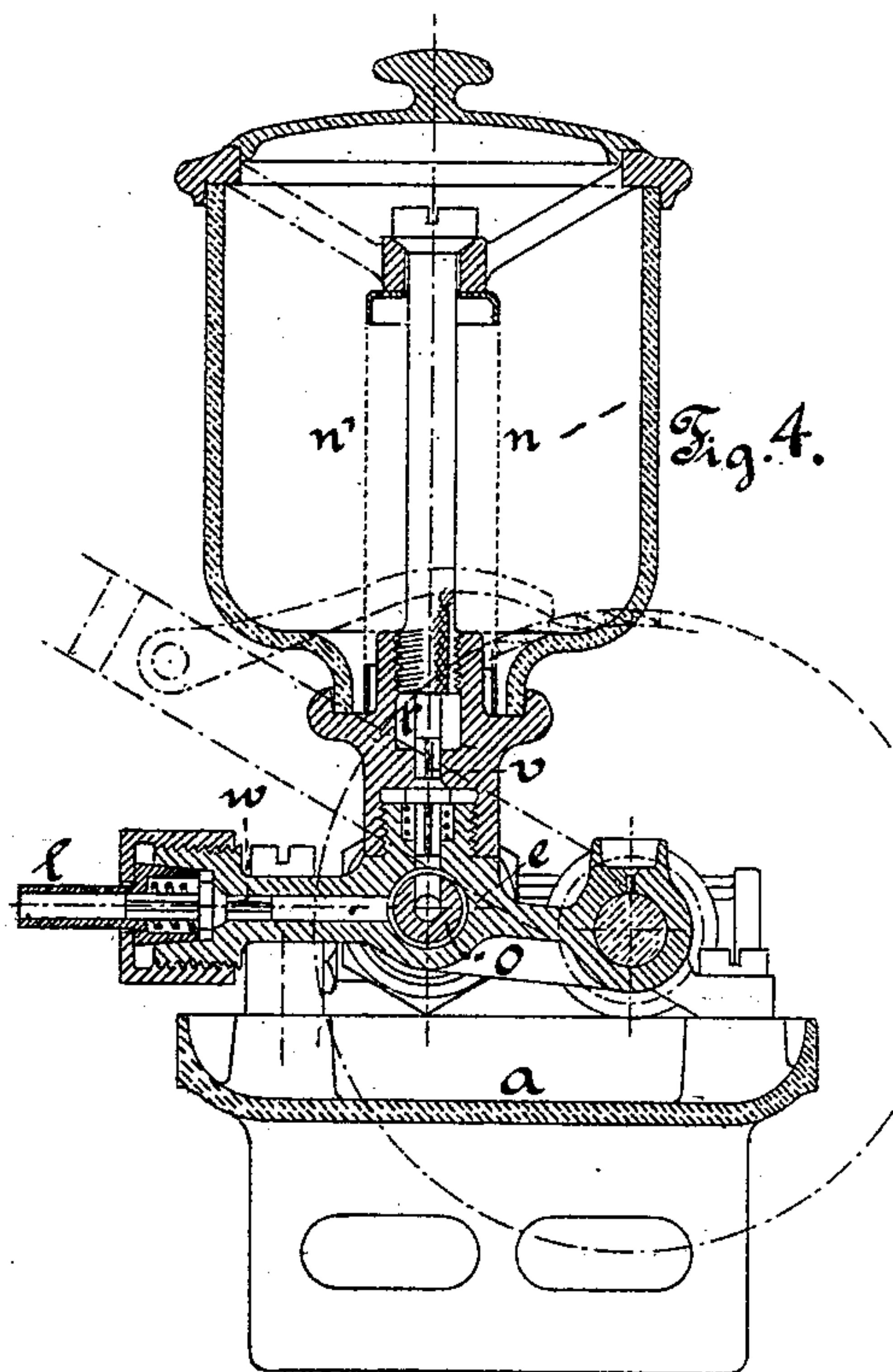
(No Model.)

2 Sheets—Sheet 2.

E. ROST.  
LUBRICATOR.

No. 328,433.

Patented Oct. 13, 1885.



Witnesses:

E. A. Rich  
J. H. Blandford

Inventor:

Ernest Rost  
by Marceline Bailey  
his attorney.



# UNITED STATES PATENT OFFICE.

ERNST ROST, OF DRESDEN, SAXONY, GERMANY.

## LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 328,433, dated October 13, 1885.

Application filed June 5, 1885. Serial No. 167,767. (No model.) Patented in Germany March 11, 1884, No. 30,425; in France June 26, 1884, No. 162,992, and in Belgium March 2, 1885, No. 68,048.

*To all whom it may concern:*

Be it known that I, ERNST ROST, a subject of the King of Saxony, and residing in Dresden, Kingdom of Saxony, German Empire, engine manufacturer, have invented new and useful Improvements in Lubricators, (for which I have obtained Letters Patent in France June 26, 1884, No. 162,992; in Germany March 11, 1884, No. 30,425, and in Belgium March 2, 1885, No. 68,048,) of which the following is a specification.

My invention relates to apparatuses serving to supply the rubbing surfaces of machines with lubricating material; and the improvements consist in combining with such apparatuses small oscillating pumps worked by suitable mechanism, and adapted to draw the lubricating medium from a reservoir and to force it to the surfaces sliding upon each other. The said pumps may be single or double acting.

On the annexed two sheets of drawings my invention is represented in two different arrangements.

Figures 1, 2, and 3 show the first arrangement, respectively, in a sectional front view, a sectional side view, and a like plan. *n* is the reservoir containing the oil or other liquid lubricant, and *l* the pipe or channel leading to the surfaces to be lubricated. The pump serving to force the lubricant into the pipe or channel *l* consists in the cylinder *p* and the piston or plunger *k*. The said cylinder is provided with a trunnion, *o*, with which it oscillates in a shell or housing, *e*, mounted on a bracket, *a*, and carrying the reservoir *n*. The piston or plunger *k* is worked by means of the crank-pin *j*, engaging with the head of *k*, and rotated upon its axle by suitable mechanical means—as, for instance, by a ratchet-wheel, a pawl, and a lever connected to a moving part of the machine to which the apparatus is applied. The trunnion *o* has a longitudinal channel and a transverse perforation, *u'*, permanently communicating with each other and with the cylinder *p*. The outer ends of the perforation *u'* form ports adapted to communicate alternately with the channel *t*, leading to the reservoir *n*, and with the channel *l*, the said ports being so arranged in respect to the channels *t* and *l* that during the outstroke of the piston or plunger *k* oil will be drawn into the pump, and during its instroke discharged through *l*.

In the second arrangement, represented by Figs. 4, 5, and 6 in three views corresponding to Figs. 1, 2, and 3, the cylinder *p* of the pump also oscillates with its trunnion *o* in the housing *e*, and the piston or plunger *k* is actuated in like manner, as before; but the communication between the pump and the reservoir on one hand and the discharge-channel *l* on the other is alternately established and broken by the valves *v* and *w*, arranged, respectively, in the suction-channel *t* and the discharge channel *l*. The central channel of the trunnion *o* permanently communicates with the inner ends of the channels *t* and *l* by means of the hole *d* and a groove turned into the trunnion. Fig. 4, moreover, shows the reservoir *n* provided with a cylinder, *n'*, made of wire-gauze, and adapted to strain the lubricating material as it passes from the reservoir to the pump. The said cylinder may be covered with flannel, felt, filtering-paper and the like for still more efficiently purifying the lubricant.

The described apparatuses are especially adapted for the lubrication of surfaces working in a medium exposed to a pressure which is higher or lower than that of the atmosphere.

I claim as my invention—

1. In a lubricating apparatus, the combination, with a reservoir, *n*, of a pump consisting of an oscillating cylinder, a piston operated by a suitable mechanism, and means for enabling the pump to draw from the said reservoir and to discharge into a channel leading to the surfaces to be lubricated, substantially as hereinbefore described.

2. In a lubricating apparatus, the combination, with a reservoir, *n*, of a pump consisting of a cylinder, *p*, with trunnion *o*, oscillating in a shell or housing, *e*, and a piston, *k*, operated by suitable mechanism, the said trunnion having a channel communicating with the cylinder *p*, and ports adapted to communicate alternately with channels leading, respectively, to the reservoir *n* and to the surfaces to be lubricated, substantially as and for the purpose specified.

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

Witnesses: ERNST ROST.  
PAUL DRUCKMÜLLER,  
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