

(No Model.)

J. GÜNTHER.

LUBRICATOR.

No. 321,597.

Patented July 7, 1885.

fig. 1.

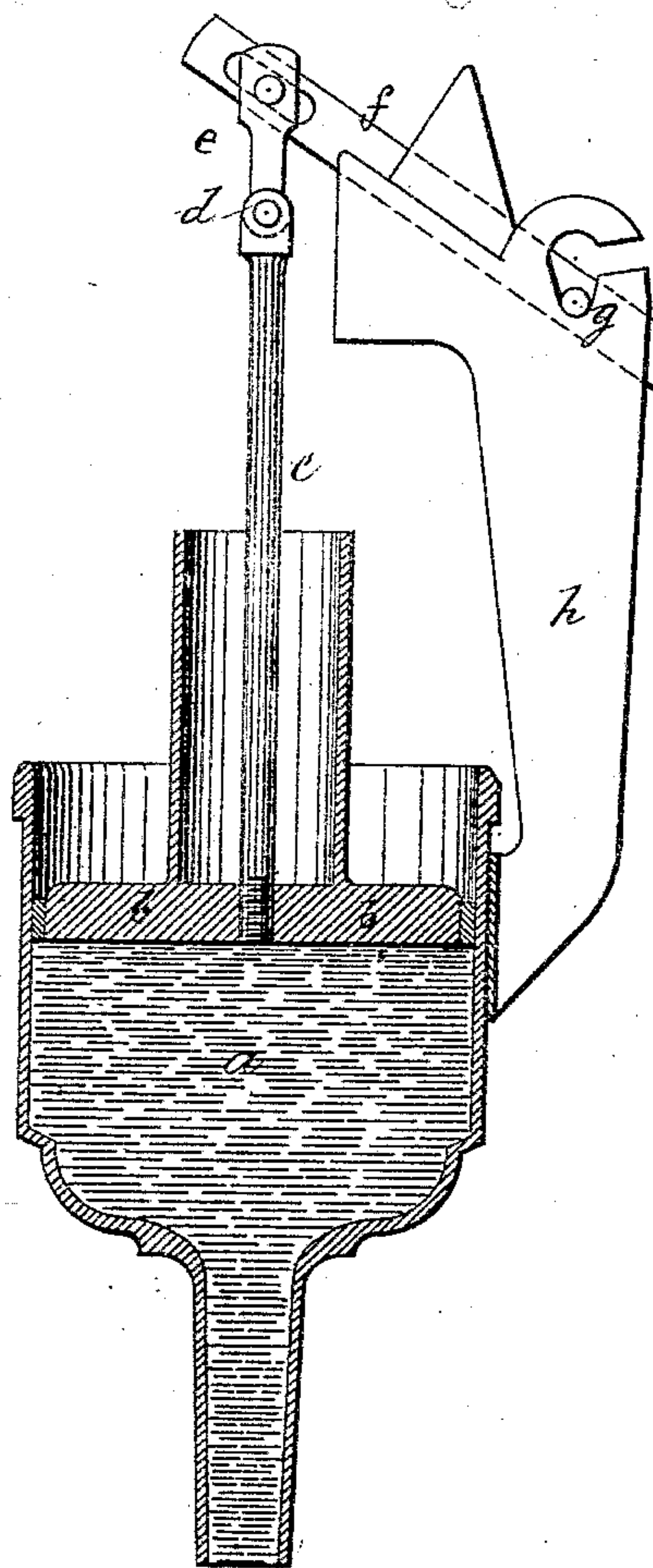


fig. 3.

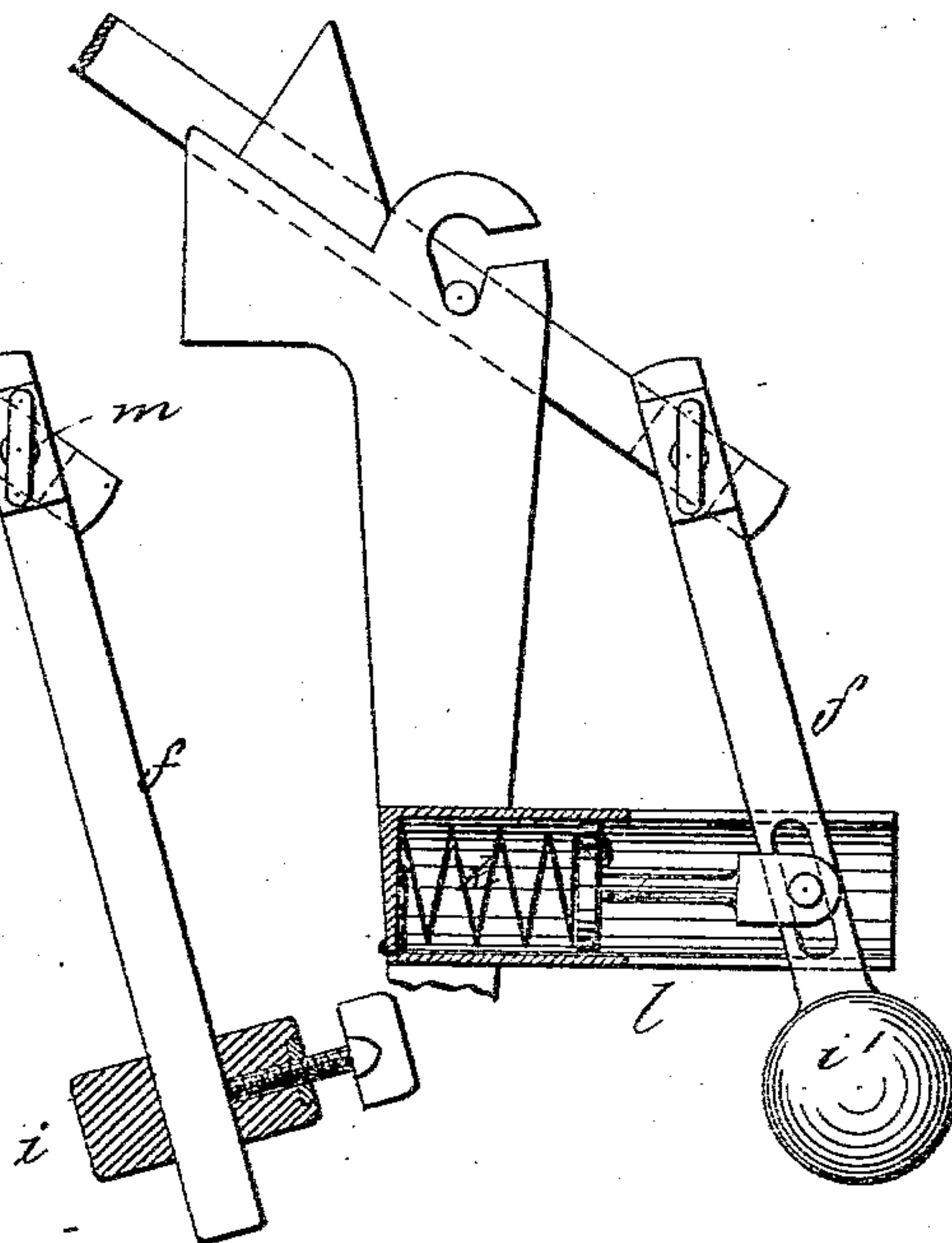


fig. 4.

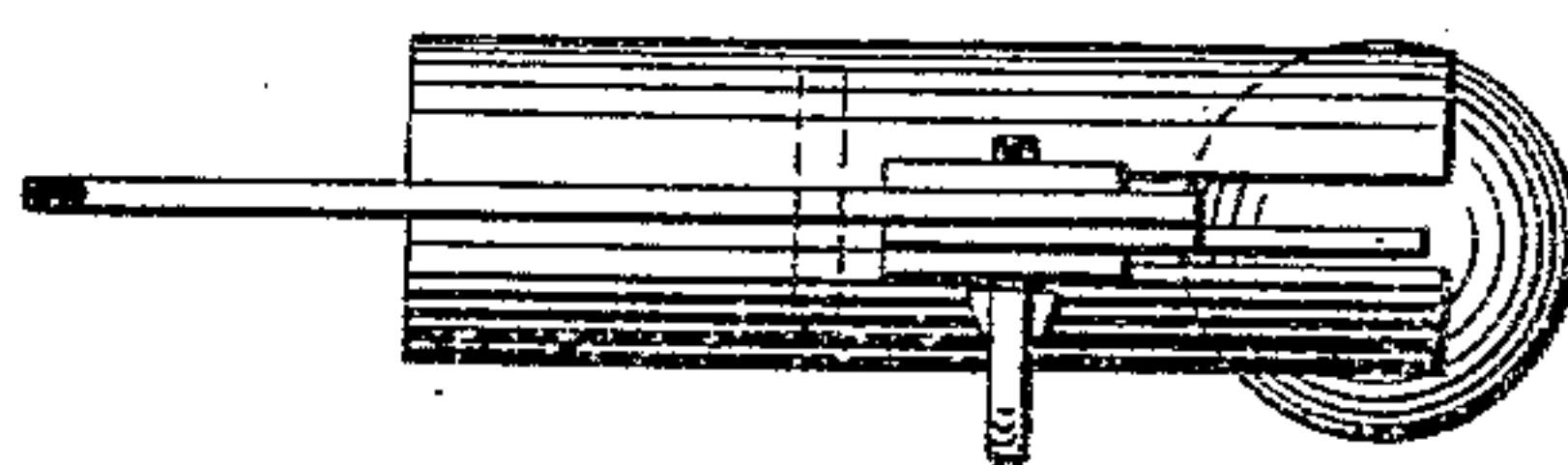
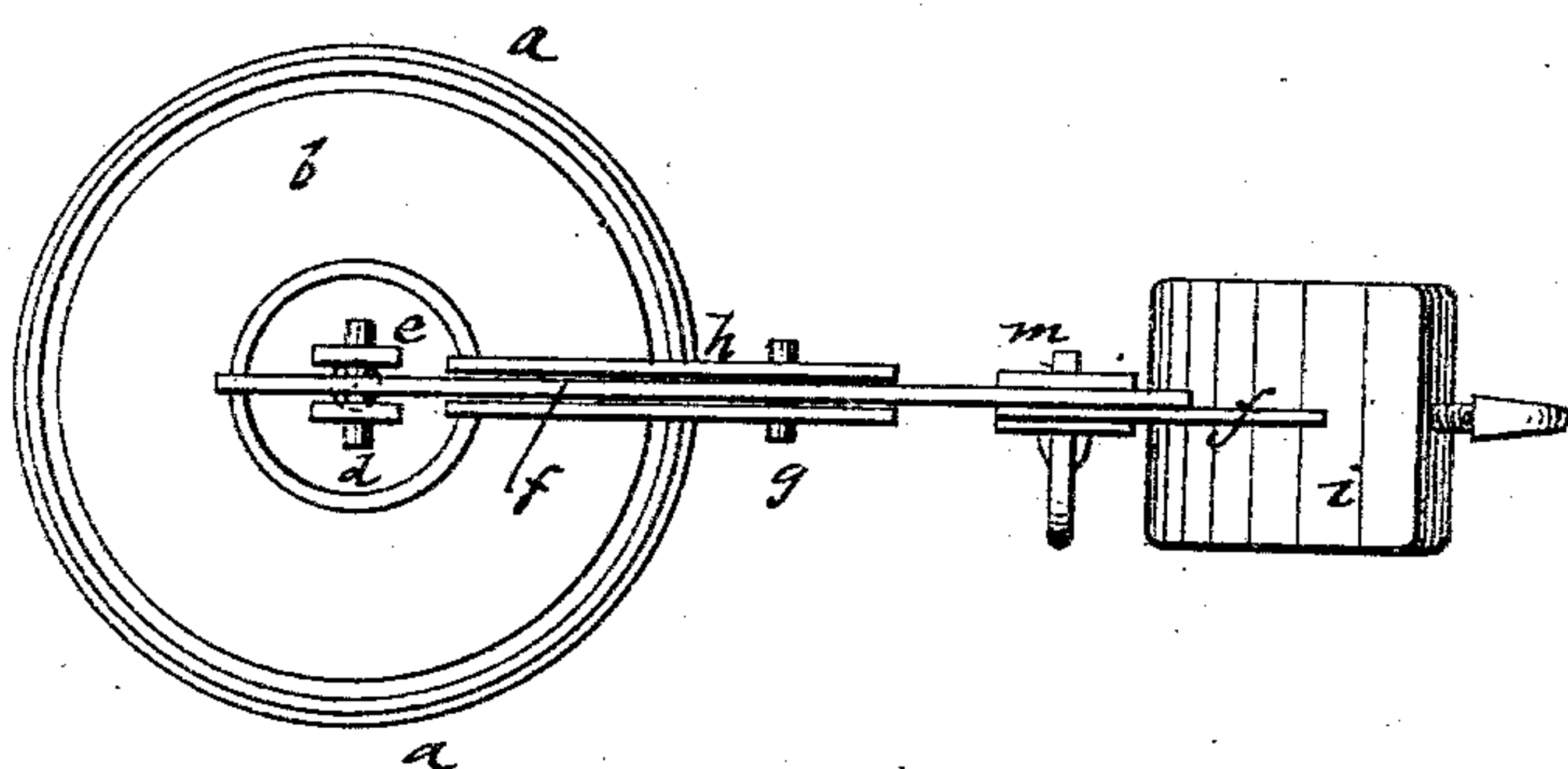


fig. 2.



WITNESSES
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JULIUS GÜNTHER, OF NAKEL, PRUSSIA, GERMANY.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 321,597, dated July 7, 1885.

Application filed March 19, 1885. (No model.) Patented in Belgium March 7, 1885, No. 68,120.

To all whom it may concern:

Be it known that I, JULIUS GÜNTHER, of Nakel, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Lubricators, of which the following is a specification.

This invention has reference to an improved lubricator of that class in which grease or other consistent lubricating substances are used, and in which a gradual reduction of pressure on the lubricant is produced as the quantity of the same is decreased.

In the accompanying drawings, Figure 1 represents a vertical central section of my improved lubricator. Fig. 2 is a plan of Fig. 1. Figs. 3 and 4 are a sectional side elevation and a plan of a modified construction.

Similar letters of reference indicate corresponding parts.

In the drawings, *a* represents a lubricating-cup of cylindrical shape, which is filled with grease or other lubricant of suitable consistency. A weighted piston, *b*, presses on the upper part of the lubricant. The piston-rod *c* of the piston *b* is connected, by a pivot, *d*, and link *e*, with a weighted lever-arm, *f*, of angular shape, that is supported by a fulcrum, *g*, on a recessed standard, *h*, attached to the cup *a*. To the lower end of the angular lever *f* is applied an adjustable weight, *i*, by which the piston *b* is counterbalanced to some extent. The exact degree of counterbalancing of the same is obtained by adjusting the weight at the lower part of the lever *f*. The piston *b* itself is weighted to such an extent that a sufficient pressure is exerted on the lubricating material in the cup. As the quantity of lubricating material in the cup is diminished the piston moves downward, while the lower end of the lever *f* is moved away from the cup, so that thereby the counterbalancing action of the weight *i* on the piston is gradually increased according as the quantity of grease in the cup is diminished. The pressure of the piston on the lubricating material is reduced by the counterbalancing device in proportion as the quantity of lubricating material, and with it the friction with the cup, is dimin-

ished, so that the grease is uniformly supplied through the discharge-opening of the cup to the place of use.

The lever *f* is made of two parts, which are connected by clamp-screw *m*, by which the angle of the lever *f* can be altered.

In place of the adjustable weight shown in Fig. 1, a lever, *f*, with a fixed weight can be used, as in Fig. 3. The lever *f* is in this case connected with a piston, *i'*, that is guided in a fixed cylindrical casing, *l*. A spiral spring, *k*, is attached to the piston *i'* and casing *l*, and serves to exert an increased tension on the lever *f* the lower the piston *b* sinks in the cup *a*.

For filling the cup the piston is removed, together with the weighted lever or spring, and replaced after filling. The lubricator works in a reliable economical manner, as the supply of lubricating material is uniform, until the same is entirely consumed.

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

1. The combination of an oil-cup, a piston movable therein, and a fulcrumed jointed weighted lever connected to the piston-rod of said piston, one member of said lever being adjustably connected to the other member, substantially as described.

2. The combination of an oil-cup, a piston movable therein, a pivoted weighted lever connected with the piston-rod of said piston, an adjustable extension connected with said lever, and a weight adjustable on said extension, substantially as described.

3. The combination of an oil-cup, a piston movable therein, a fulcrumed weighted lever, a bifurcated link connecting one end of said lever with the rod of said piston, and a weighted extension adjustably connected to the other end of said lever, substantially as described.

4. The combination of the oil-cup *a*, provided with the upright standard *h*, the piston *b* within said cup, provided with the rod *c*, a lever, *f*, pivoted in said standard, link *e*, connecting one end of said lever with said piston-rod, an adjustable extension connected

with said lever by means of a set-screw, *m*, and the weight *i* on said extension, substantially as described.

5 5. The combination, with an oil-cup, of a piston movable therein, a fulcrumed weighted lever provided with a slot, a piston-rod connected with said lever by means of a pin passing through said slot, and a weighted extension adjustably connected to said lever,
10 substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JULIUS GÜNTHER.

Witnesses:

RICHARD ZIEGER,
THEO. V. WYNGAERT.