

No. 704,555.

Patented July 15, 1902.

B. H. LOCKE.
LUBRICATING DEVICE.
(Application filed Nov. 20, 1900.)

(No Model.)

Fig. 1.

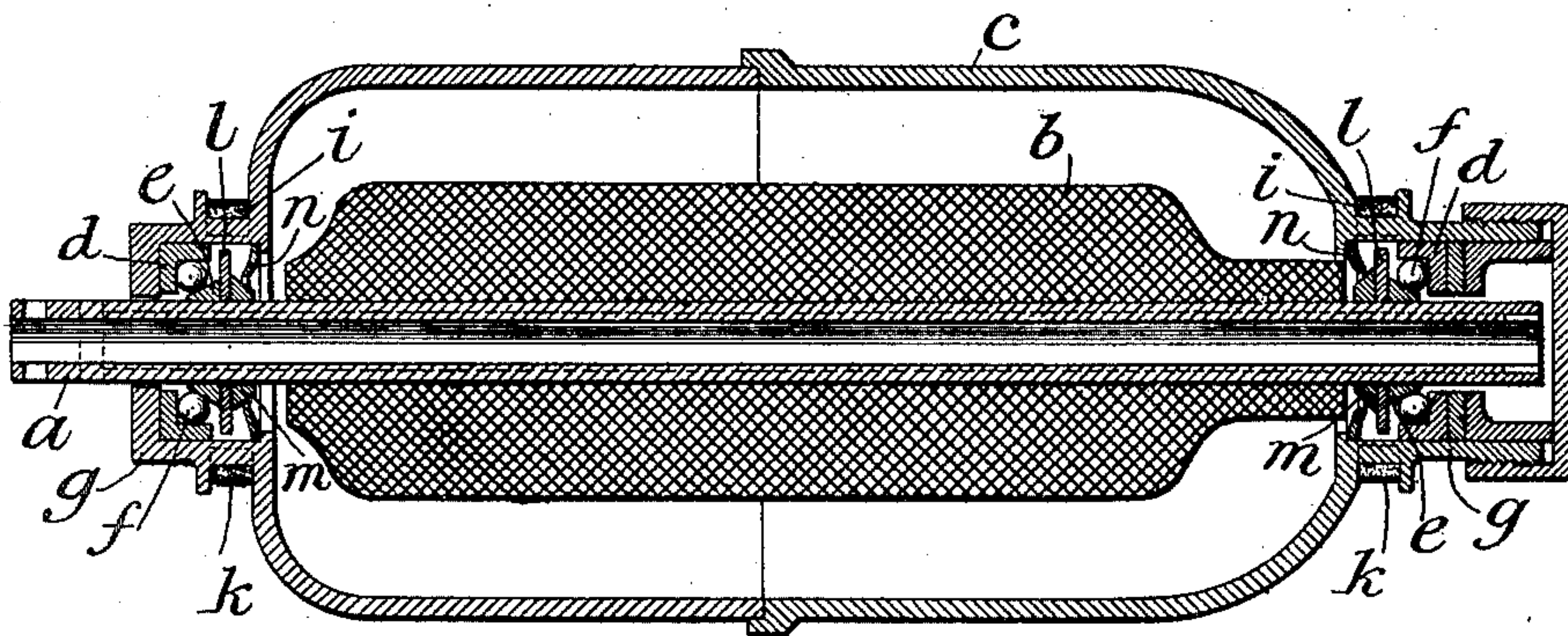


Fig. 2.

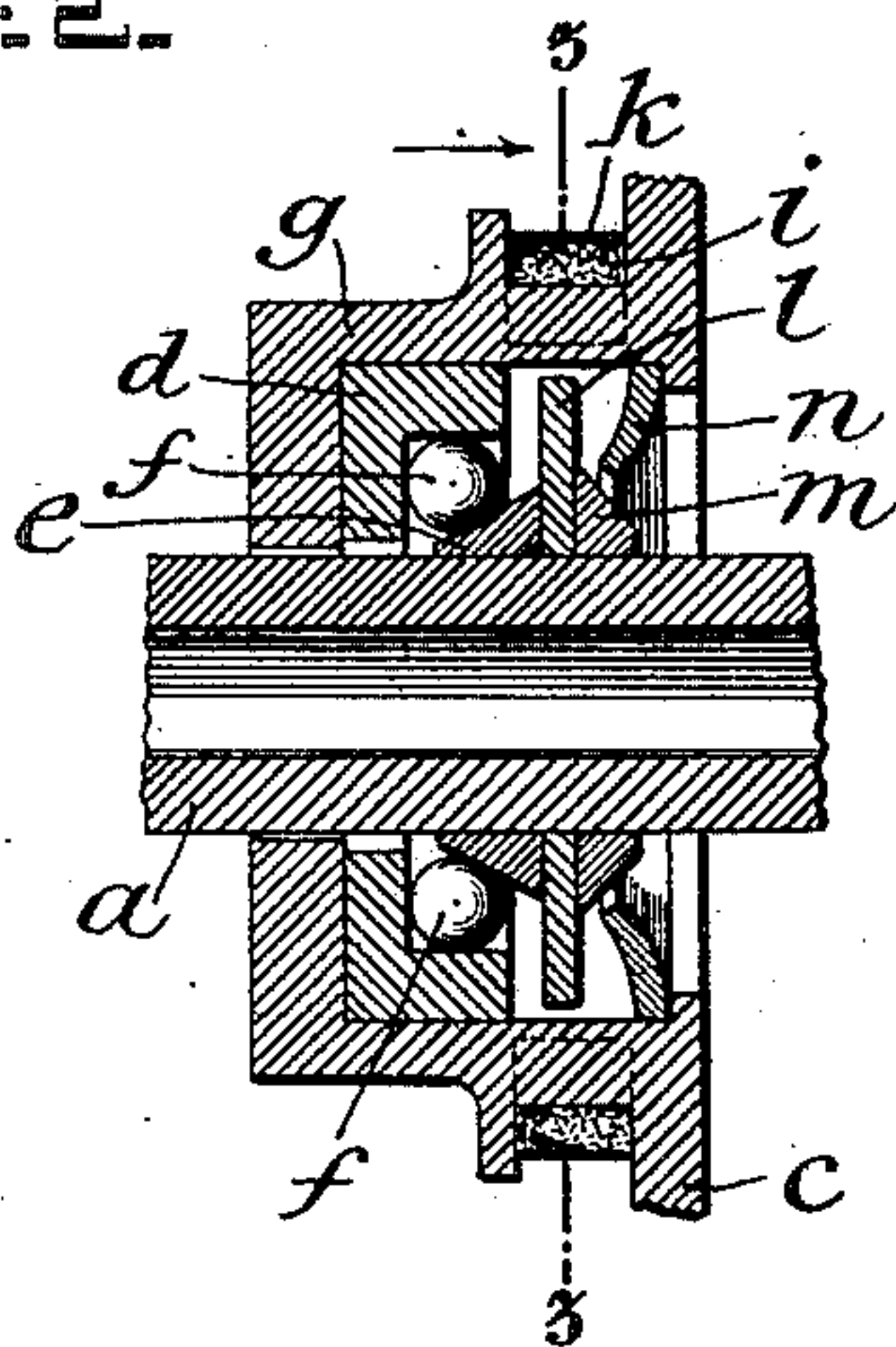
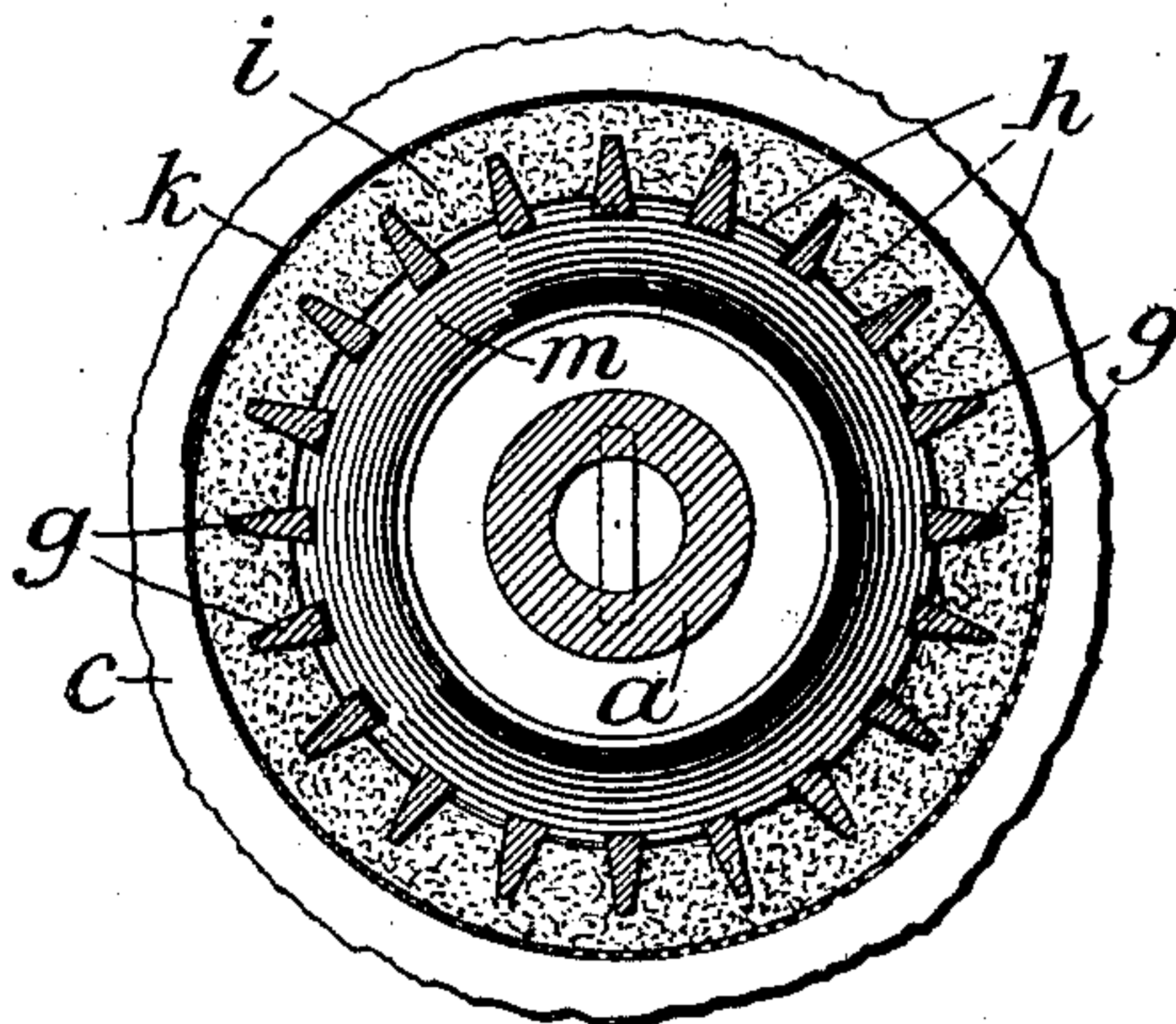


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BRADFORD H. LOCKE, OF DENVER, COLORADO.

LUBRICATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 704,555, dated July 15, 1902.

Application filed November 20, 1900. Serial No. 37,093. (No model.)

To all whom it may concern:

Be it known that I, BRADFORD H. LOCKE, a citizen of the United States, residing in Denver, county of Arapahoe, State of Colorado, have invented certain new and useful Improvements in Lubricating Devices for Electric Motors, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

The object of this invention is to provide means to prevent the access of lubricating-oil to the wiring of an electric motor, although the oil be applied freely to the bearings of the motor and although the motor be placed in any position.

The invention will be more fully described hereinafter with reference to the illustration thereof presented in the accompanying drawings, in which—

Figure 1 is a view in longitudinal section showing an electric motor equipped with the invention. Fig. 2 is a detail sectional view on a larger scale than that of Fig. 1. Fig. 3 is a transverse section on the plane indicated by the line 3 3 of Fig. 2.

In the construction represented in the drawings the shaft *a* of the motor, carrying the armature-windings *b*, is shown as mounted in ball-bearings in the reduced ends of the casing *c*, which usually supports the field-windings. (Not shown.) The ball-races *d* are represented as secured within the reduced ends of the casing and the cones *e* as mounted upon the armature-shaft, the balls *f* being disposed between the cones and races in the usual manner. The parts thus far referred to may be arranged in any usual or desired manner.

It is well understood that it is desirable as far as possible to prevent the oil used in lubricating the bearings from working into the wiring of the motor, and the means herein described have been devised with the view of preventing this, not only under ordinary circumstances of use, but especially under such conditions of use as may require the position of the motor to be changed. Accordingly the reduced end *g* of the motor-casing is slotted or perforated, as at *h*, and around the reduced end, in line with the slots or perforations, is placed a ring of felt or other suitable absorbent material, as indicated at

i, this ring being preferably cut or otherwise formed so as to enter the slots or perforations *h*, as clearly shown in Fig. 3. The absorbent material may be covered by a flat spring-ring *k*, which serves to hold the absorbent in place.

On the shaft *a* in line with the circumferential series of slots *h* is placed a ring *l*, which may be supported on one side by the ball-cone *e*. Against the other side of the ring *l* is placed a tapered ring or sleeve *m*. Obviously the rings *l* and *m* might be made in one piece or in two pieces suitably secured together. Within the inner end of the reduced portion *g* of the motor casing or bearing is secured a dished ring *n*, which preferably overlaps the tapered ring or sleeve *m* somewhat. Any excess of oil which escapes from the ball-bearings or from such other bearings as may be employed will be thrown out by the rapidly-revolving ring *l* against the felt or other absorbent *i*, by which it will be taken up. Should any oil pass beyond the ring *l* toward the windings of the motor, as when the motor is at rest, the return of such oil to the ring *l* to be thrown outward by the same will be facilitated by the tapered ring *m*, and any oil which may ooze from the absorbent will be directed by the dished ring *n* upon the same tapered ring *m* or toward the annular disk or ring *l*.

Although the foregoing description relates in terms to a single lubricating device, it will be understood that such device may be applied at each of the two ends of the motor, as shown in the drawings. It will also be understood that various changes in the details of construction and arrangement may be made without departing from the spirit of the invention.

I claim as my invention—

1. In a motor, the combination of an outer sleeve or casing slotted or perforated circumferentially, an absorbent mass covering the circumferential series of slots or perforations, and a ring secured to the motor-shaft and adapted to throw outward against said absorbent mass any oil which may reach the same, substantially as shown and described.

2. In a motor, the combination of an outer sleeve or casing slotted or perforated circumferentially, an absorbent mass covering the

circumferential series of slots or perforations,
a ring secured to the motor-shaft within said
circumferential series of slots or perforations,
and a tapered sleeve or ring secured to the
5 motor-shaft and adapted to lead toward the
first-named ring any oil which may reach said
tapered sleeve or ring, substantially as shown
and described.

3. In a motor, the combination of an outer
10 sleeve or casing slotted or perforated circum-
ferentially, an absorbent mass covering the
circumferential series of slots or perforations,

a ring secured to the motor-shaft within said
circumferential series of slots or perforations,
and a dished ring secured in said outer sleeve 15
or casing and directed toward the first-named
ring, substantially as shown and described.

This specification signed and witnessed this
12th day of November, A. D. 1900.

BRADFORD H. LOCKE.

In presence of—

A. N. JESBERA,
W. B. GREELEY.