

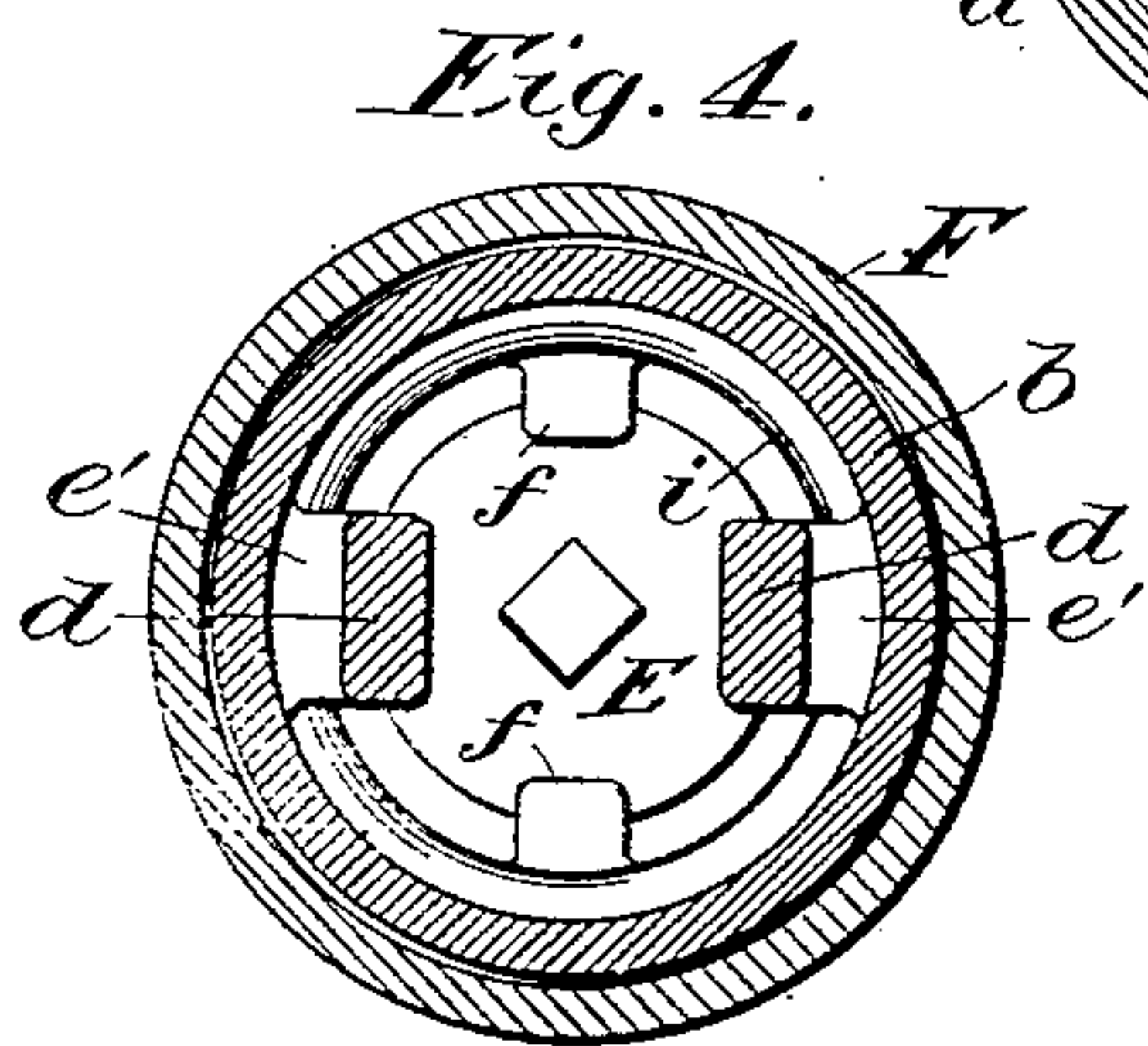
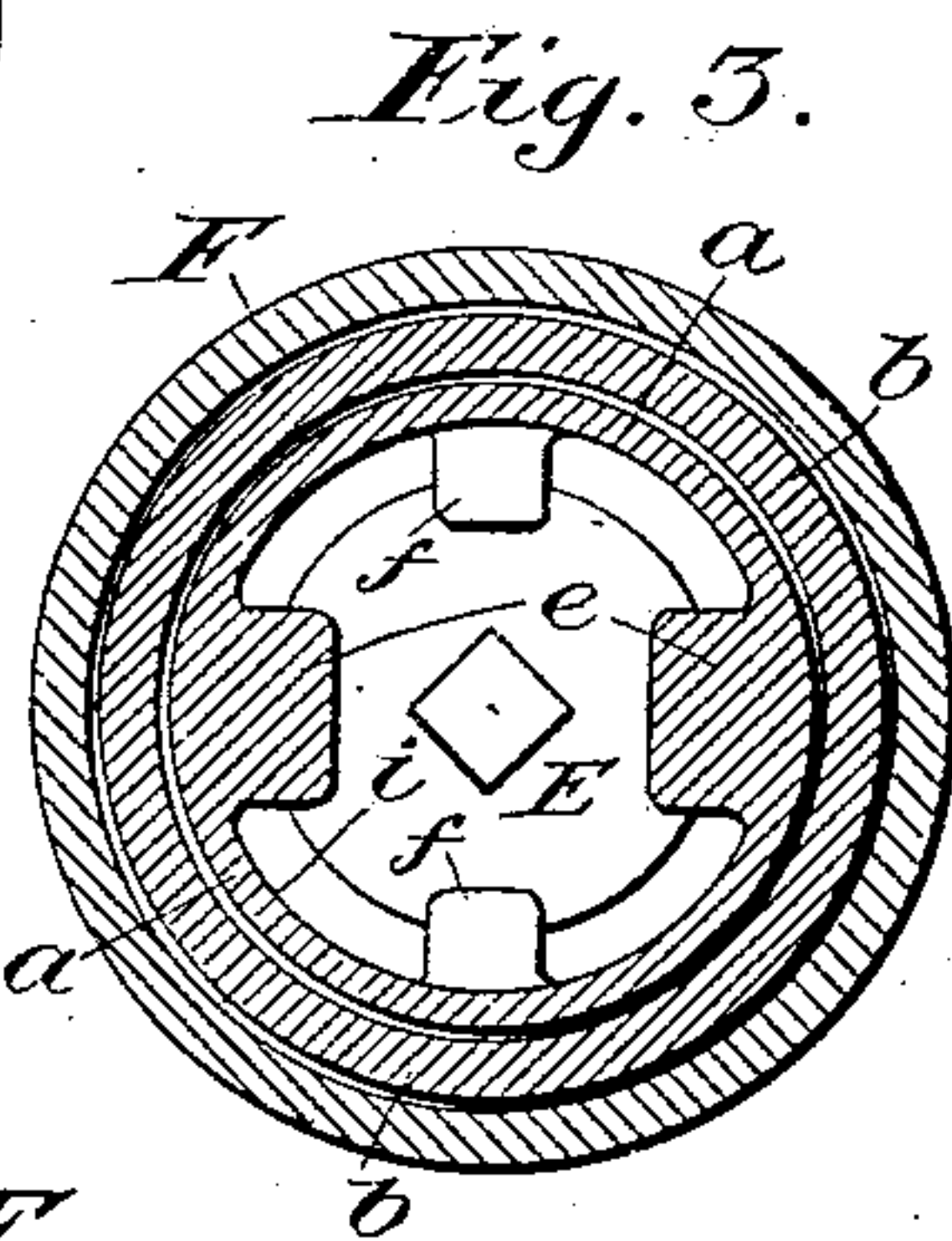
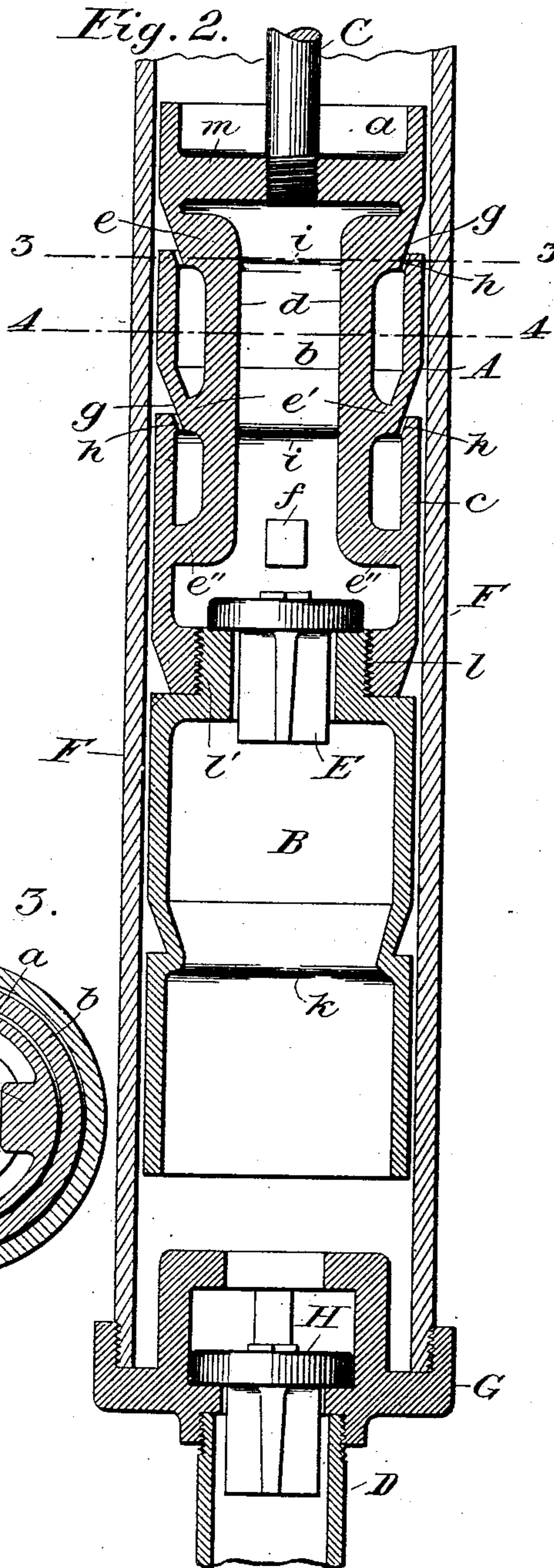
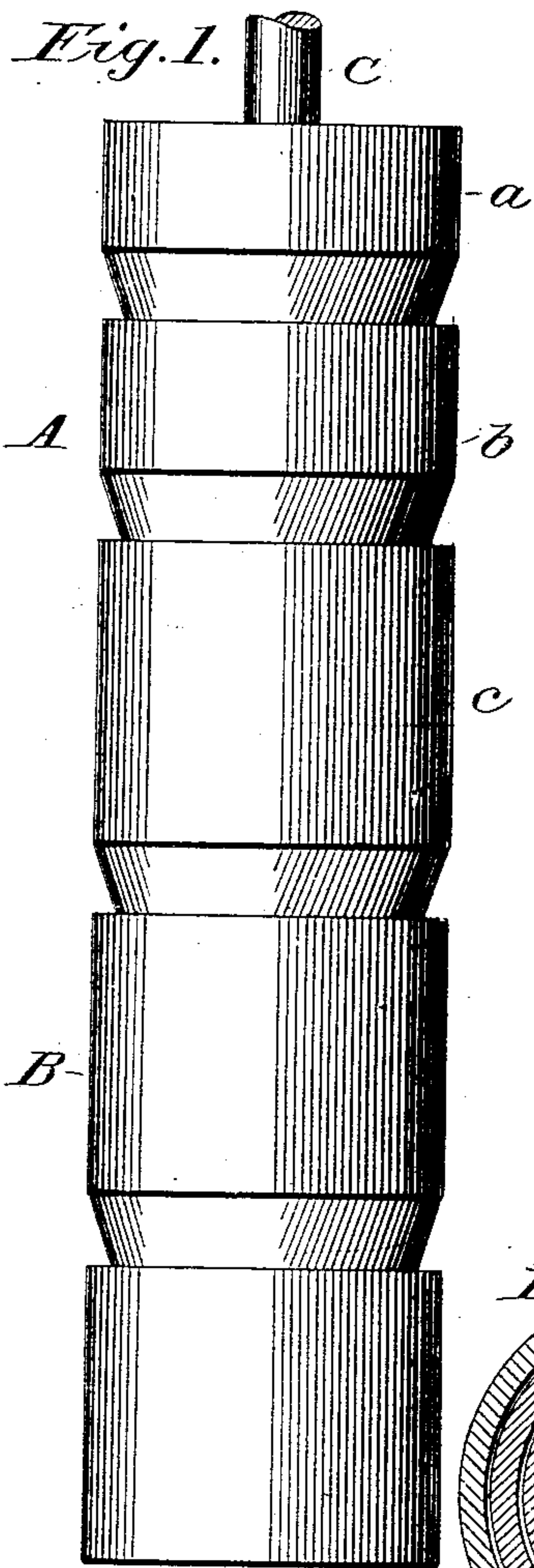
No. 751,651.

PATENTED FEB. 9, 1904.

H. JONES.
PUMP.

APPLICATION FILED MAY 19, 1903.

NO MODEL.



Witnesses:
Geo. E. Smith
William O. Ray

Inventor:
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UNITED STATES PATENT OFFICE.

HARRY JONES, OF RICHMOND, INDIANA.

PUMP.

SPECIFICATION forming part of Letters Patent No. 751,651, dated February 9, 1904.

Application filed May 19, 1903. Serial No. 157,818. (No model.)

To all whom it may concern:

Be it known that I, HARRY JONES, a citizen of the United States, residing at Richmond, county of Wayne, and State of Indiana, have
5 invented a new and useful Improvement in Pumps, of which the following is a specification.

My invention relates to improvements in water-packed pump plungers or buckets; and
10 my objects are, first, to provide a plunger with two or more annular peripheral slots; second, to connect the three or more parts separated by the said slots by means of two or more longitudinal bars, so that the liquid
15 will have an unobstructed passage, and, third, to construct the plunger or bucket of one casting. I attain these objects by the means shown in the accompanying drawings, in which—

20 Figure 1 is an elevation of the plunger complete. Fig. 2 is a vertical central section of the plunger inside a pump-cylinder. Fig. 3 is a cross-section of the plunger and cylinder on the line 3 3 of Fig. 2. Fig. 4 is a cross-
25 section of the plunger and cylinder on the line 4 4 of Fig. 2.

Similar letters refer to similar parts throughout the several views.

This invention relates to pump plungers or
30 buckets which are "water-packed"—that is, plungers having no rubber, leather, or other solid packing to make the plunger fit perfectly in the cylinder. It is adapted alike to force-pumps and lifting-pumps, both single and
35 double acting.

The accompanying drawings illustrate my invention as applied to a single-acting lifting-pump.

40 My invention consists in constructing a water-packed plunger composed of three hollow cylindrical parts separated from each other by annular peripheral slots and connected by longitudinally-extending bars, which are connected to each of the said cylindrical parts.
45 This entire device may be in one casting.

In the accompanying drawings, A represents the upper part of the plunger, in which are the annular slots *h h*.

50 B is the lower part of the plunger and is attached to A by means of the internally-screw-threaded opening *l* and the screw-threaded part *l'*.

C is the pump-rod, which screws into the cross-bar *m*.

F is the pump cylinder or barrel. G is the
55 lower end of the pump-cylinder and contains a seat for the valve H and a nipple, into which is screwed the pipe D.

A is divided into three parts *a b c* by the annular slots *h h*. These parts are connected
60 and held rigidly in place by means of the longitudinal ribs *d d*, which are connected with the said parts by the webs *e e' e''*.

g g are annular grooves at the bottoms of which are cut the slots *h h*.
65

i i are inwardly-projecting ridges formed by the thickening of the plunger-wall and enabling the slots *h h* to be cut therein. *k* is a similar ridge in the part B.

f f are stops for the valve E.
70

I am aware that prior to my invention plungers have been constructed which provide for an annular film of liquid passing from the inside through a slot against the encircling cylinder. I therefore do not claim this feature as
75 peculiar to my invention; but

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

1. A water-packed plunger composed of three hollow cylindrical portions separated
80 by annular slots, longitudinal bars within said cylindrical portions, connected to each of them and located near the periphery of the inclosed cylindrical space; whereby a clear space is left in the interior of the plunger for the pas-
85 sage of water; said bars and cylindrical portions being cast integral, substantially as described.

2. A water-packed plunger composed of three hollow cylindrical portions, separated
90 by annular slots, longitudinal bars within said cylindrical portions, connected to each of them and located near the periphery of the inclosed cylindrical space, whereby a clear space is left in the interior of the plunger for the passage
95 of water.

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

HARRY JONES.

Witnesses:

GEO. E. GARRETT,
WILLIAM O. RAY.