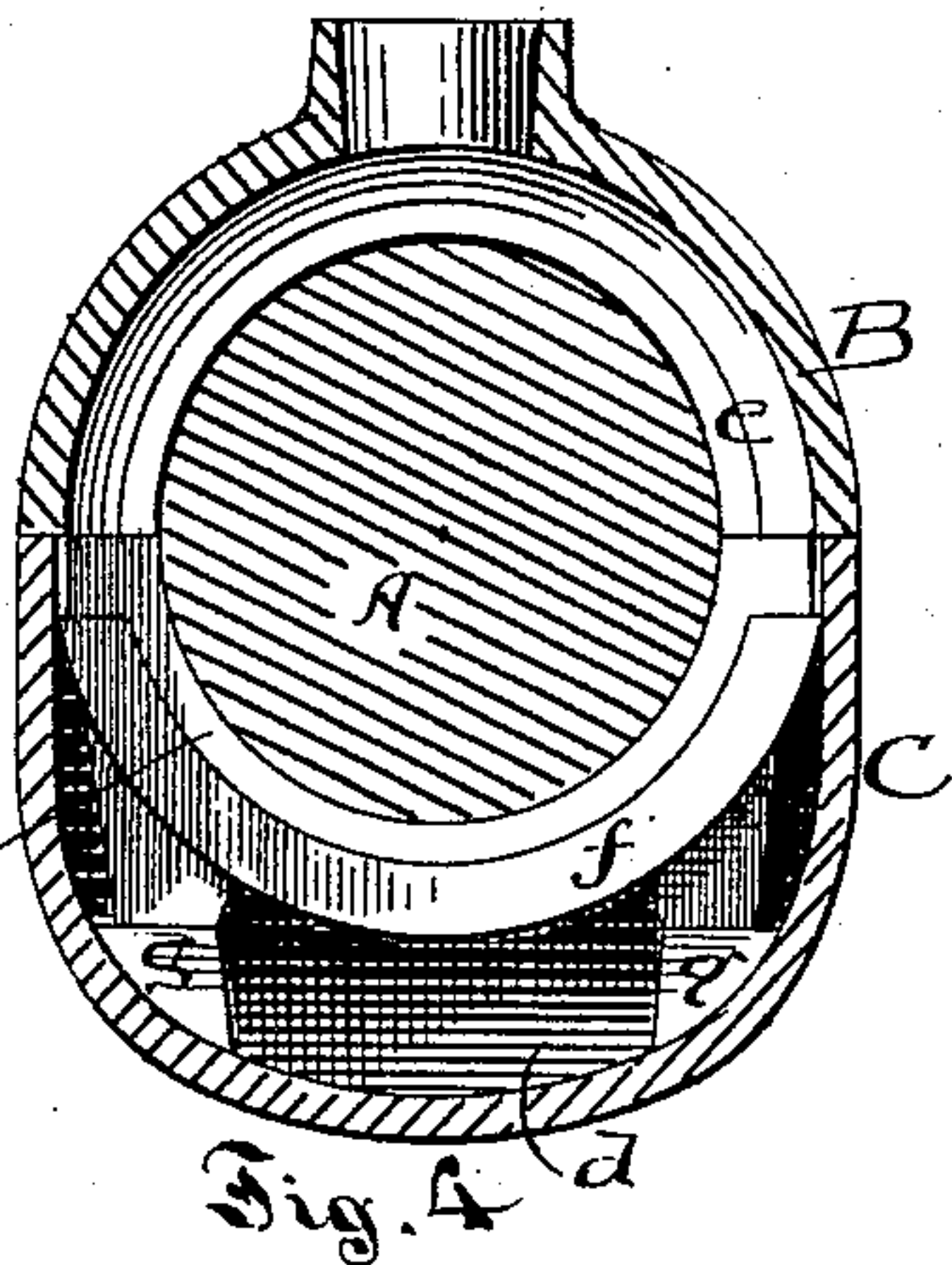
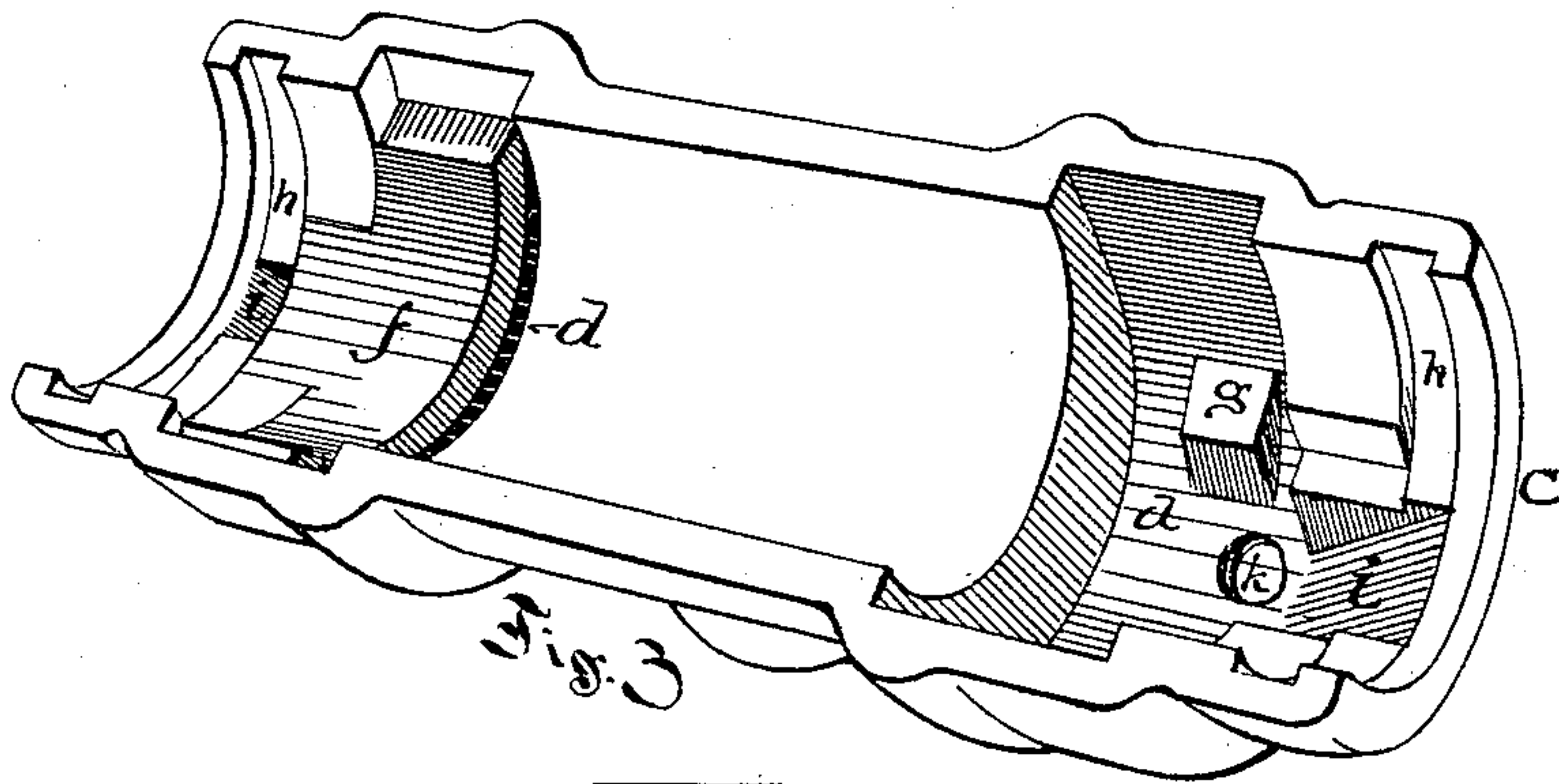
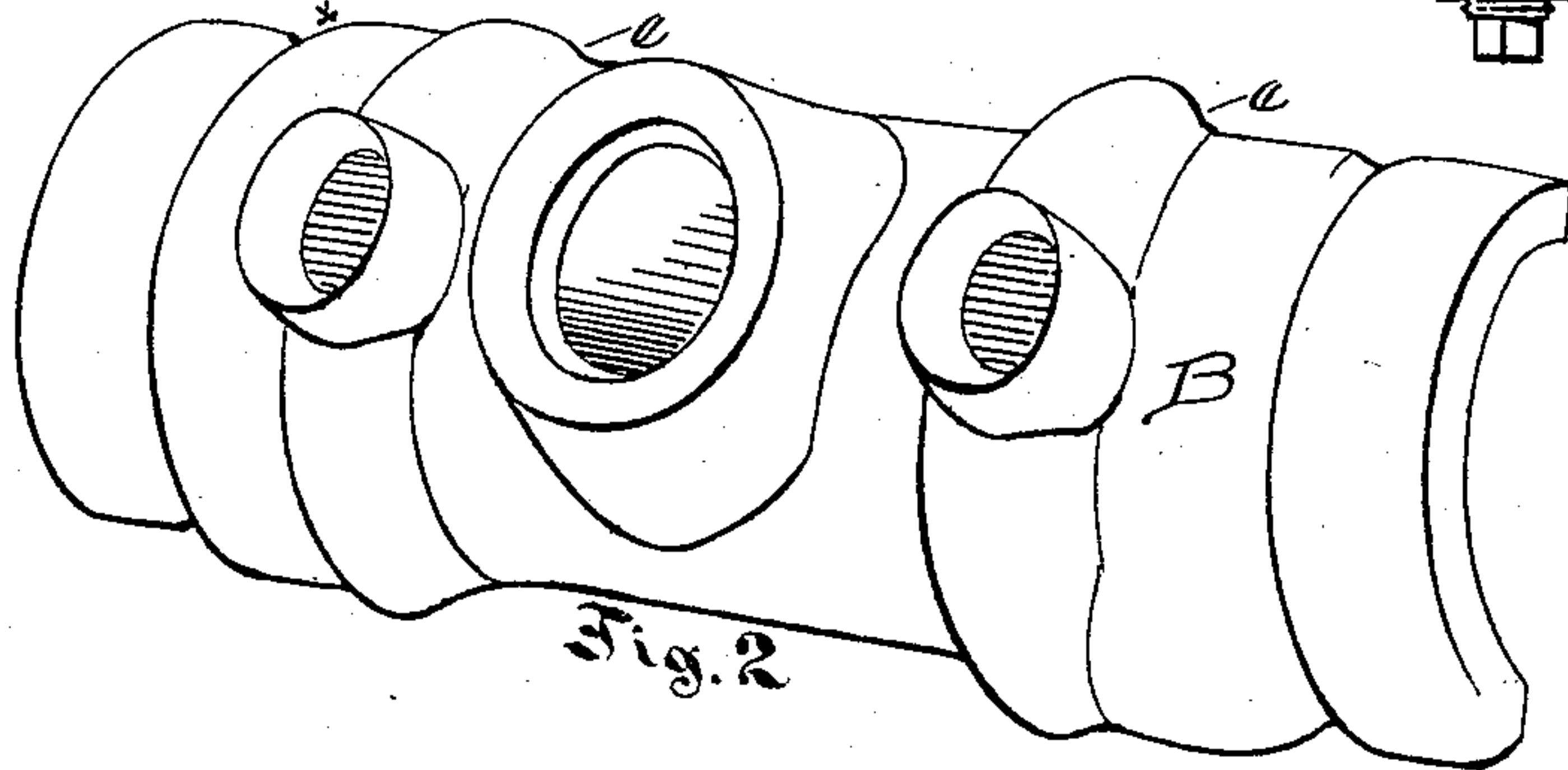
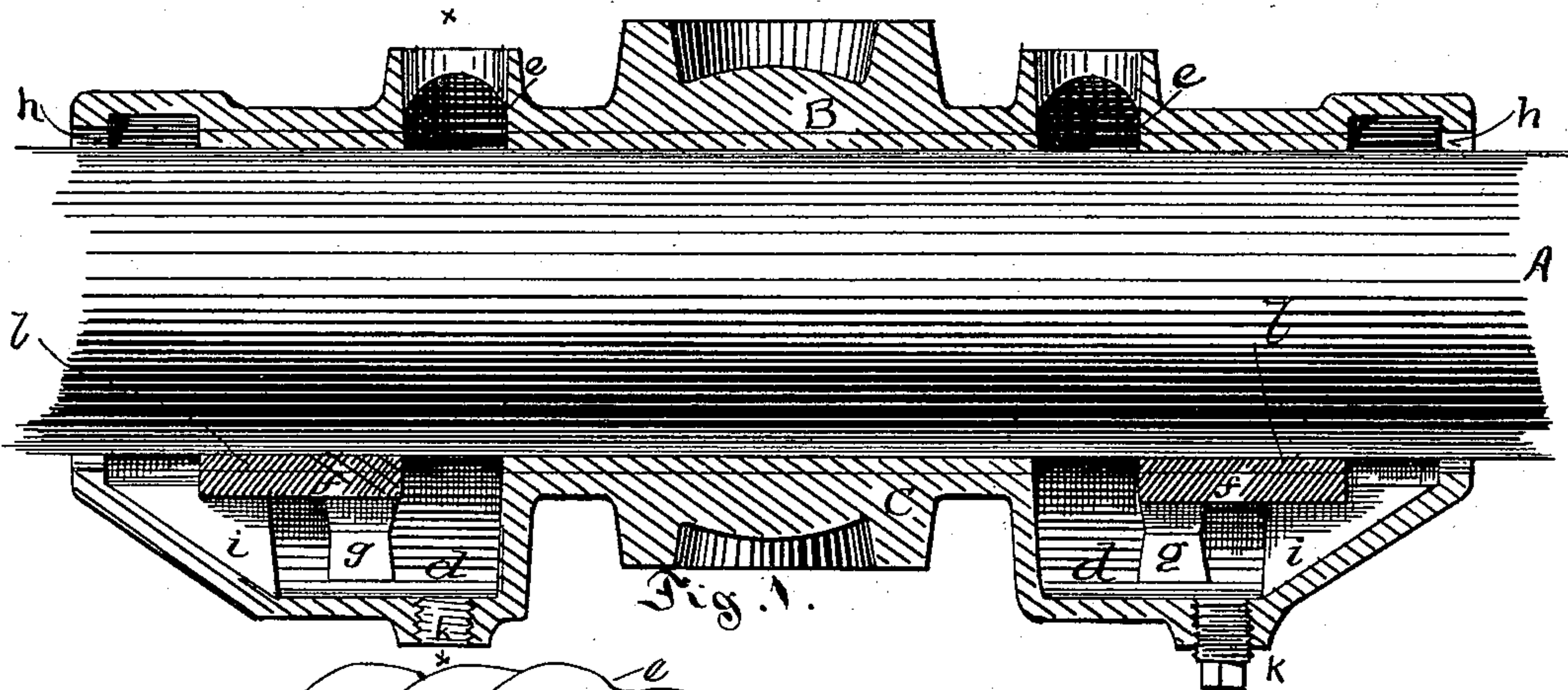


(No Model.)

R. D. O. SMITH.
LUBRICATING JOURNAL BOX.

No. 488,800.

Patented Dec. 27, 1892.



Attest
J. F. Fischer
C. W. Gier

Inventor.
R. D. O. Smith

UNITED STATES PATENT OFFICE.

ROBERT D. O. SMITH, OF MISHAWAKA, INDIANA.

LUBRICATING JOURNAL-BOX.

SPECIFICATION forming part of Letters Patent No. 488,800, dated December 27, 1892.

Application filed April 15, 1892. Serial No. 429,352. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. O. SMITH, of Mishawaka, in the county of St. Joseph and State of Indiana, have invented new and useful Improvements in Journal-Boxes; and I do declare that the following is a full and accurate description of the same, reference being had to the accompanying drawings, wherein—

Figure 1 is a longitudinal section of a box complete with the shaft in place. Fig. 2 is a perspective view of the box cap. Fig. 3 is a perspective view of the lower part or half with one pocket cover removed. Fig. 4 is a transverse section of the box through one of the oil pockets.

This invention relates to that class of journal boxes, known as self oiling journal boxes, wherein there is near each end, a pocket in the lower part and a groove in the upper part, to receive and hold a volume of oil, which is continuously raised and distributed upon the shaft by a small chain or ring which hangs upon and runs with the shaft dipping into the oil in the pocket. The groove in the box cap and the opening for the ring or chain in the lower part of the boxes, must be only wide enough to permit free motion to said ring or chain, but to hold a useful quantity of oil, it is necessary that the opening in the lower part shall be enlarged below the bearing surface of the box. Heretofore this enlarged pocket has been produced in casting the box by means of an enlarged sand-core, which method would be entirely satisfactory, were it not for the difficulty of removing from the inner surface of the pocket every particle of sand or scale, which otherwise, would afterward be liable to come up with the oil and cut the shaft. My invention obviates this difficulty, which is almost insuperable in practice, by casting the box with an open pocket, which is accessible and visible at every point for thorough and effectual cleaning, and by closing over said pocket with a separate plate. The joints being thoroughly covered and said plate being locked in place by the Babbitt lining of the box.

Having now described the nature of my invention, I will particularly describe the structure of it as I have used it, without intending to be limited to the details as shown—

Referring to the drawings, A is the shaft which is supported in the journal box.

B is the cap of the box and C is the lower or bearing part of the same. The part C is fashioned with a recess or pocket *d* preferably one near each end, and the cap B is provided with a groove *e*, corresponding with the proposed slit opening into the pocket below. A lubricating device such as an endless chain or ring hangs upon the shaft resting within the groove *e* and extending down into the oil pocket *d*. A plate *f* is fitted within the part C to cover the pocket *d* except a space along one margin where a slit opening into said pocket is left, corresponding with the groove *e*. Suitable supports *g* may be arranged within the pocket integral with the box or with the plate *e* as preferred to prevent any elastic yielding of said plate under the pressure of the shaft, and to support it from the bottom of the pocket.

A groove *h* within each end of the box is provided, to catch the oil which escapes at the end of the bearing box and a channel *i* leading from said groove back into the pocket *d* is provided to conduct said drip oil into the pocket and thus dispense entirely with the use of hanging drip cups. The channel *i* is cast open as shown in Fig. 3 and is covered to the margin of the groove *h* by an extension of the plate *f* as is also shown in said Fig. 3.

A discharge outlet *k* is placed in the bottom of each pocket so that the spent oil may be drawn off when ever necessary.

The Babbitt lining *l* covers the plate *f* and locks it securely in place.

Having described my invention I claim

1. A lubricating journal box provided with an open recess or pocket for the lubricant and adapted to receive a lubricating device, and a separate cover plate to partly close the same.

2. A journal box provided with an open recess or pocket *d* cast integral with said box and adapted to receive the lubricant and a lubricating device, and a separate cover plate *f* adapted to rest in said box and partly close and cover said pocket, substantially as set forth.

3. A lubricating journal-box half C provided with open pockets *d* near each end for the

lubricant and adapted to receive a lubricating device, and plates *f* adapted to be supported within said box and partly cover and close said pockets, as set forth.

- 5 4. A lubricating journal box half C provided with an open pocket *d* for the lubricant and adapted to receive a lubricating chain or ring, a separate plate *f* to partly cover and close said pocket, and interior supports *g* to sustain
10 said plate upon the bottom of the pocket.

5. A lubricating journal box provided with a drip groove *h* within the box and close to each end, open pockets *d* for the lubricant and adapted to receive a lubricating ring or

chain, drip channels *i*, and separate plates *f* 15 having extensions to partly cover said pockets and channels, as set forth.

6. A lubricating journal box provided with an open recess or pocket for lubricant, a separate cover plate fitting in the recess and leaving a space for the oiler ring or chain, and an anti-friction lining, such as Babbitt metal extending over and supported by said plate, substantially as set forth. 20

R. D. O. SMITH.

In presence of—

J. F. TASCHER,

C. W. GILL.