

No. 690,510.

Patented Jan. 7, 1902.

J. C. BLEVNEY.
LUBRICATOR FOR STEAM ENGINE PISTONS.

(Application filed Apr. 7, 1900.)

(No Model.)

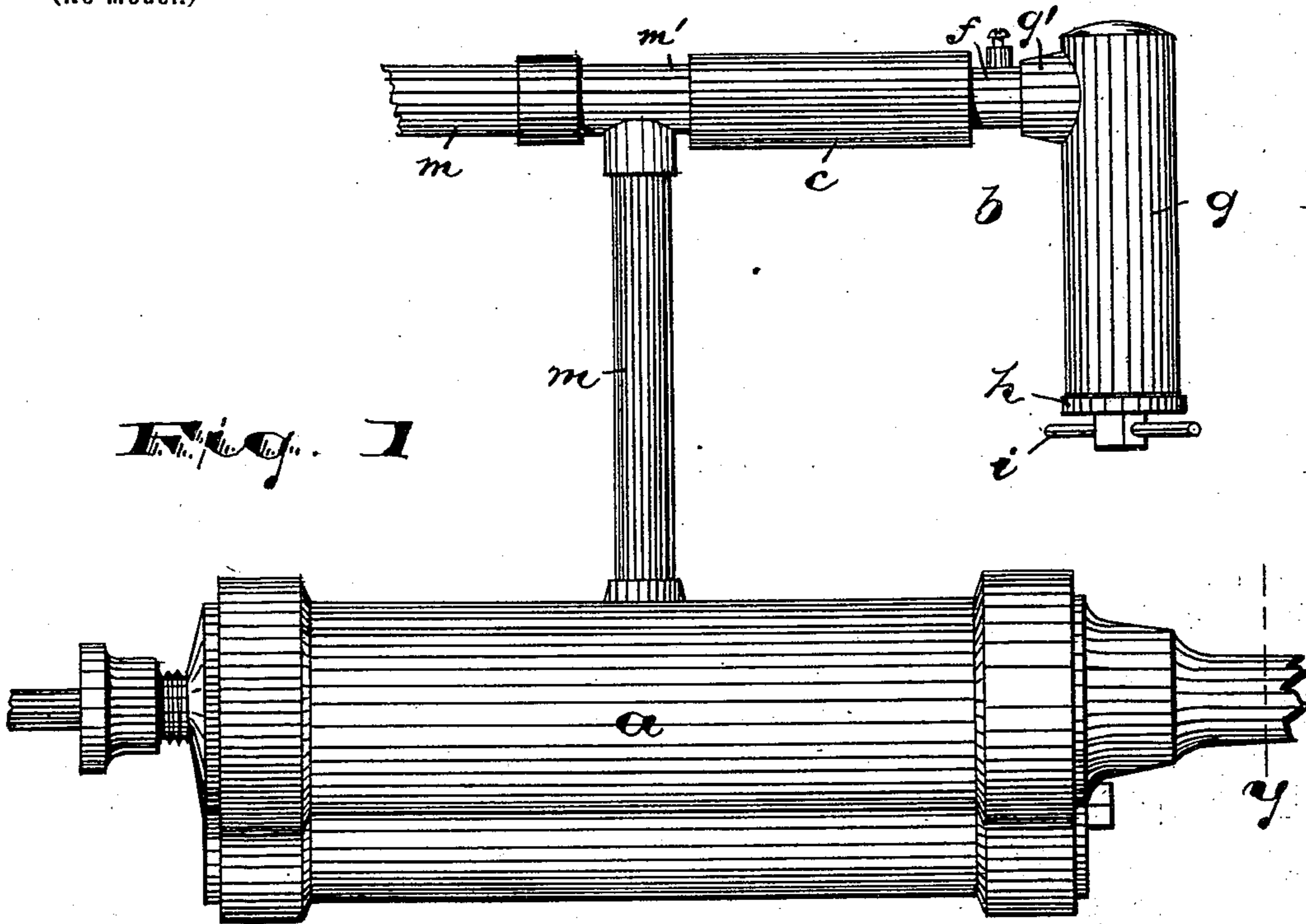


Fig. 1

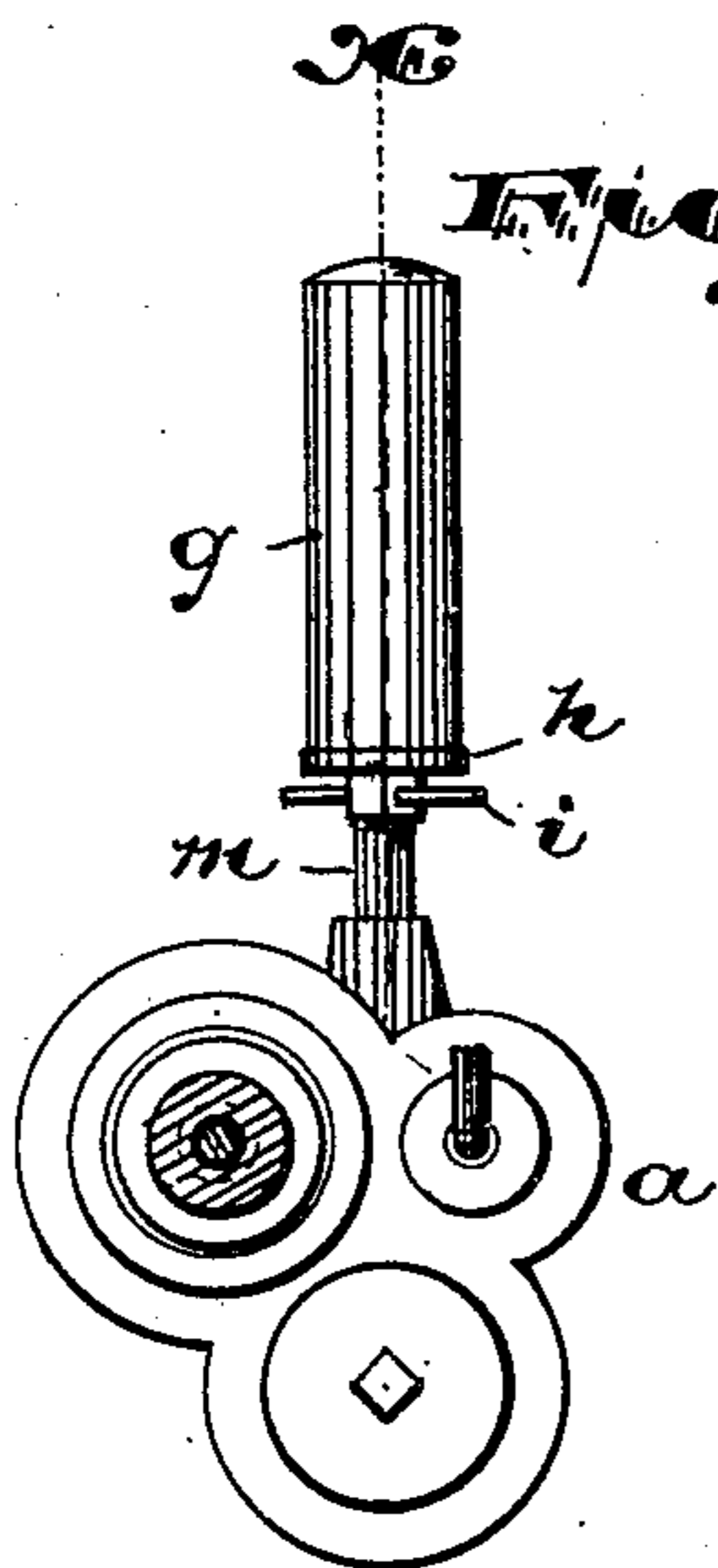


Fig. 3

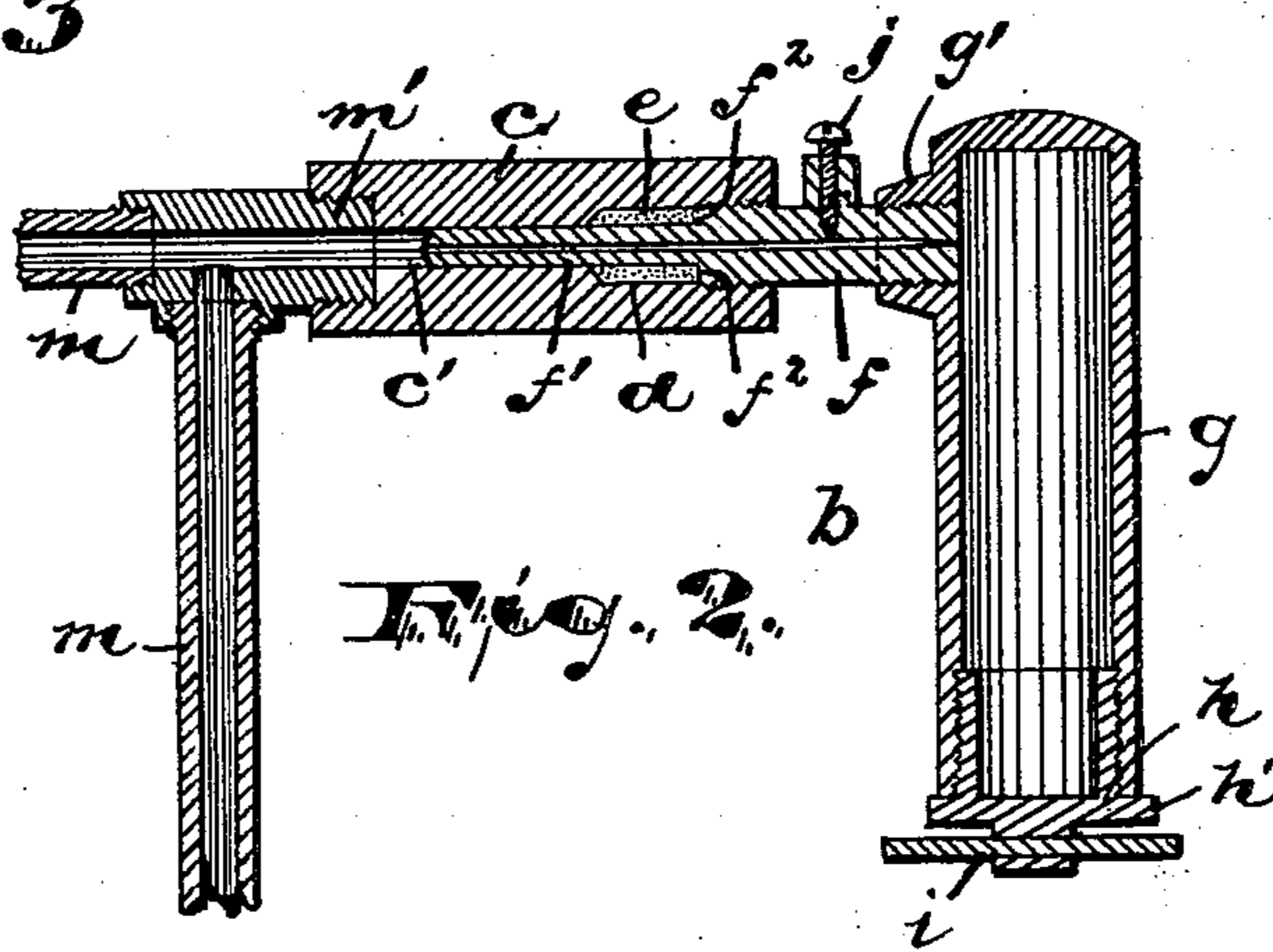


Fig. 2

WITNESSES:

Henry King

Russell M. Everett

INVENTOR

John C. Blevney,

BY

Drake & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN C. BLEVNEY, OF NEWARK, NEW JERSEY.

LUBRICATOR FOR STEAM-ENGINE PISTONS.

SPECIFICATION forming part of Letters Patent No. 690,510, dated January 7, 1902.

Original application filed January 29, 1900, Serial No. 3,138. Divided and this application filed April 7, 1900. Serial No. 11,914. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. BLEVNEY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Lubricators for Steam-Engine Pistons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The objects of this invention are to provide a device of simple construction for automatically lubricating the power-piston of a steam-engine, to secure a construction which will permit an easy refilling of the lubricator, to obtain a lubricator which will stop feeding the lubricating-oil to the engine as soon as the steam is shut off, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved lubricator for steam-engine pistons and in the arrangements and combinations of parts of the same, all substantially as will be herein-after set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1 is a side view of my improved lubricator applied to the cylinder of an engine. Fig. 2 is a central sectional view of the lubricator on line *x*, Fig. 3; and Fig. 3 is an end view of the lubricator, taken on line *y*, Fig. 1.

In said drawings, *a* indicates the cylinder of a steam-engine, such as is shown in my application Serial No. 3,138, filed January 29, 1900, and of which the present application is a division, although it will be understood that my lubricator can be applied equally well to other styles and constructions of cylinders or steam-engines.

m indicates a steam-pipe conducting steam to the cylinder *a*, said steam-pipe being branched, as at *m'*, to receive the lubricator

b. Said branch is screw-threaded at its end, and thereupon is arranged a packing union-piece *c*, centrally cored out, as at *c'*, in line with the steam-pipe and having this central passage enlarged adjacent to the outer end to form a chamber *d* to receive suitable packing *e*.

The outer end of the union-piece *c* is provided with threads upon the interior walls of the packing-chamber *d* to screw upon the correspondingly-threaded body portion of a tubular follower *f*, said follower having a reduced extension *f'*, which extends into and lies within the central passage *c'* of the union-piece. The end shoulders *f²* of the body portion of the follower *f* abut against the packing *e*, and said packing lies around the neck of the reduced extension *f'*.

The outer projecting end of the follower *f* is threaded to receive the lubricant-receptacle *g*, said follower serving by its central opening or passage to afford communication between the lubricant-receptacle and union-piece. Said lubricant-receptacle *g* comprises a short tubular piece closed at its normally upper end and having a lateral threaded branch *g'* near said closed end which receives the threaded outer end of the follower *f*. The opposite open end of the receptacle is threaded to receive a correspondingly-threaded cap or plug *h*, preferably having a flange *h'* overlying the said end of the receptacle and a handle *i* for turning said cap. In filling the said lubricant-receptacle the same is turned upward from its normal position, the union of parts *c* and *f* permitting such turning, so that the receptacle extends upward from the follower *f* and the cap *h* is at the top. Any water in the receptacle may be removed prior to the turning by opening the plug or cap *h*, and the receptacle is thus emptied for a new supply of lubricant. After filling the receptacle in its upright position and closing the cover or cap *h* the receptacle is again turned into its depending position. (Shown in the drawings.) When steam is then admitted through the horizontal steam-pipe *m* and into the vertical pipe *m³*, connecting with the engine-cylinder *a*, a portion of steam flows to the lubricant-receptacle through the branch *m'*, union *c*, and follower *f*. The condensation of this

steam and the consequent gravitation of the water in the receptacle *g* causes a corresponding elevation of the lubricant in the receptacle, and said lubricant is thus forced out
 5 through the passages of the follower *f* and union *c* to the steam-pipe *m*, from whence it passes down to the piston in the cylinder *a*, as will be understood upon reference to Fig. 1.

The oil and steam passages through the follower *f* and union *c* are preferably made of suitable size to secure the desired amount of outflow of oil; but I may under some conditions provide a regulating-screw *j*, such as is shown in Fig. 2, and by means of which the
 10 oil-passage may be reduced or enlarged.

Various slight changes in the forms and positions of parts may be made without departing from the spirit and scope of the invention, and I do not wish to be limited by positive descriptive terms employed except as
 20 the state of the art may require.

Having thus described the invention, what I claim as new is—

1. The improved automatic oiler herein described, comprising a tubular connection
 25 adapted to be tapped into the cylinder of a steam-engine, having at its extremity distant from the engine, a branch *m'*, a union-piece *c*, provided with threads to engage said branch and to receive a threaded follower, said threaded
 30 follower arranged in said union-piece and provided with a regulating-screw *j*, at a point between said union and the lubricant-receptacle, and a reversible receptacle for oil ar-

35 ranged upon the end of said follower, said receptacle having open communication, when in connection with the engine, with the steam-chamber of the cylinder, substantially as set forth.

2. The improved automatic oiler herein described comprising an oil-receptacle having at the lower end a cap or plug, and at the upper end a lateral threaded opening adapted to receive a threaded follower, said follower and a stuffing-box, the follower having a
 45 tubular extension passing through said stuffing-box, the stuffing-box and follower permitting a pivotal movement of the oil-receptacle, substantially as set forth.

3. The improved automatic oiler herein described comprising a steam-pipe having a threaded branch *m'*, on which is arranged a stuffing-box or packing-union *c*, and a steam-passage *c'*, a longitudinally-open follower having a small end in the passage *c'*, and an enlargement to enter the packing-chamber, the
 55 said follower being threaded at its outer end to enter a lateral opening at the top of the receptacle, and said receptacle having said lateral opening and at the bottom a cap or
 60 plug, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of March, 1900.

JOHN C. BLEVNEY.

Witnesses:

CHARLES H. PELL,
 C. B. PITNEY.