

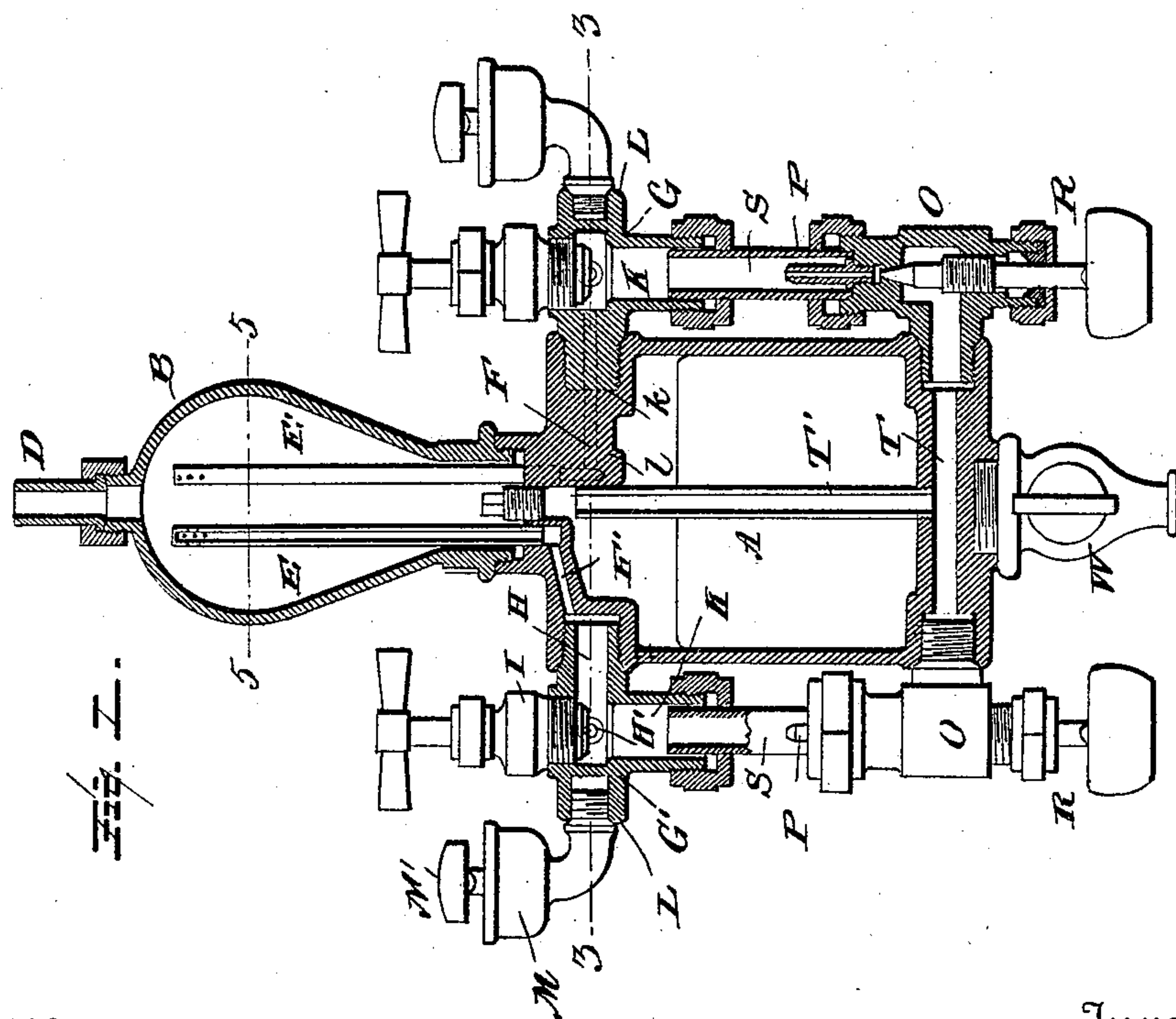
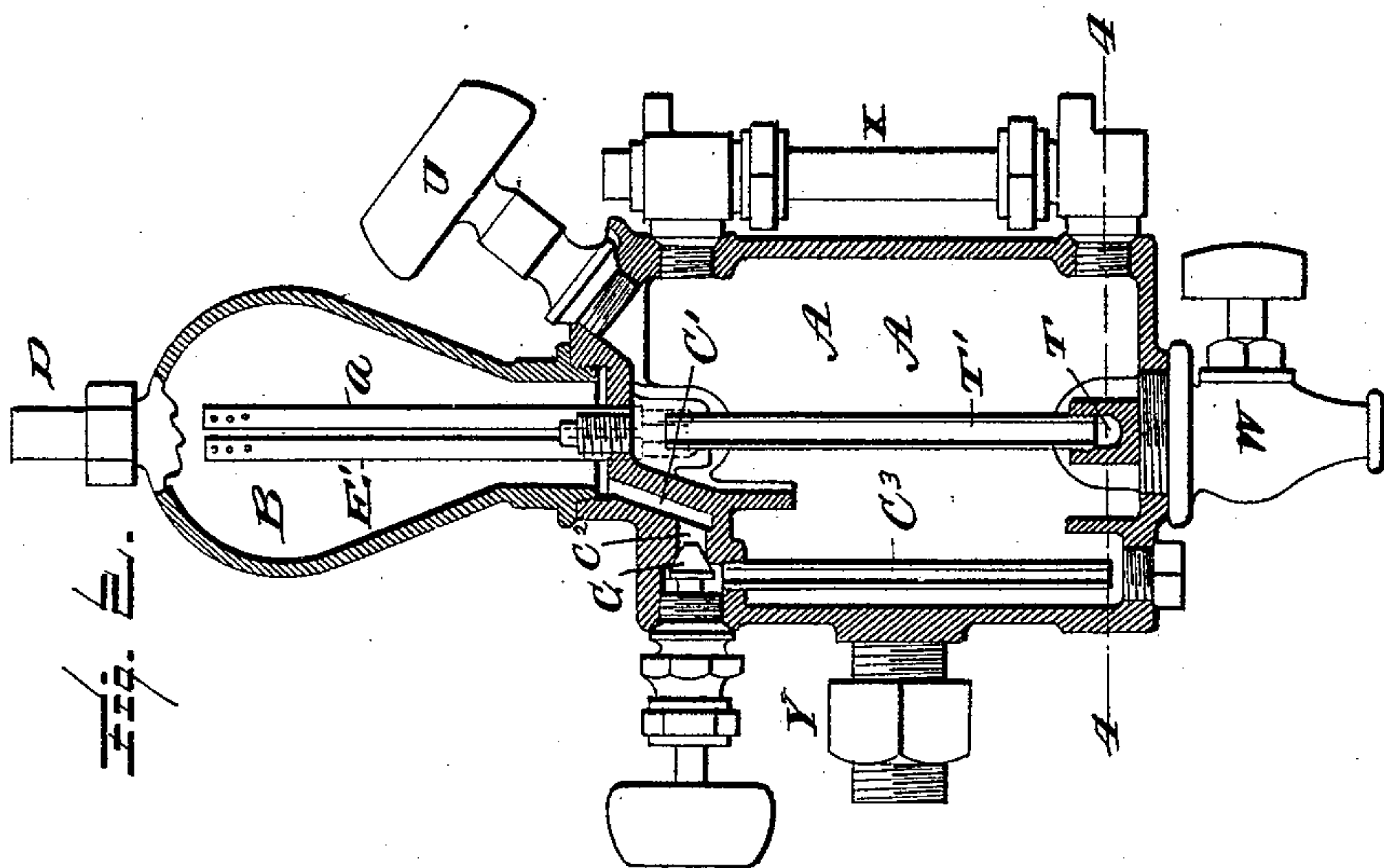
(No Model.)

2 Sheets—Sheet 1.

J. COCKFIELD.
LUBRICATOR.

No. 461,382.

Patented Oct. 13, 1891.



Witnesses

L. C. Hills.
Everett

Inventor

Joseph Cookfield
by Marshall Bailey
Attorney

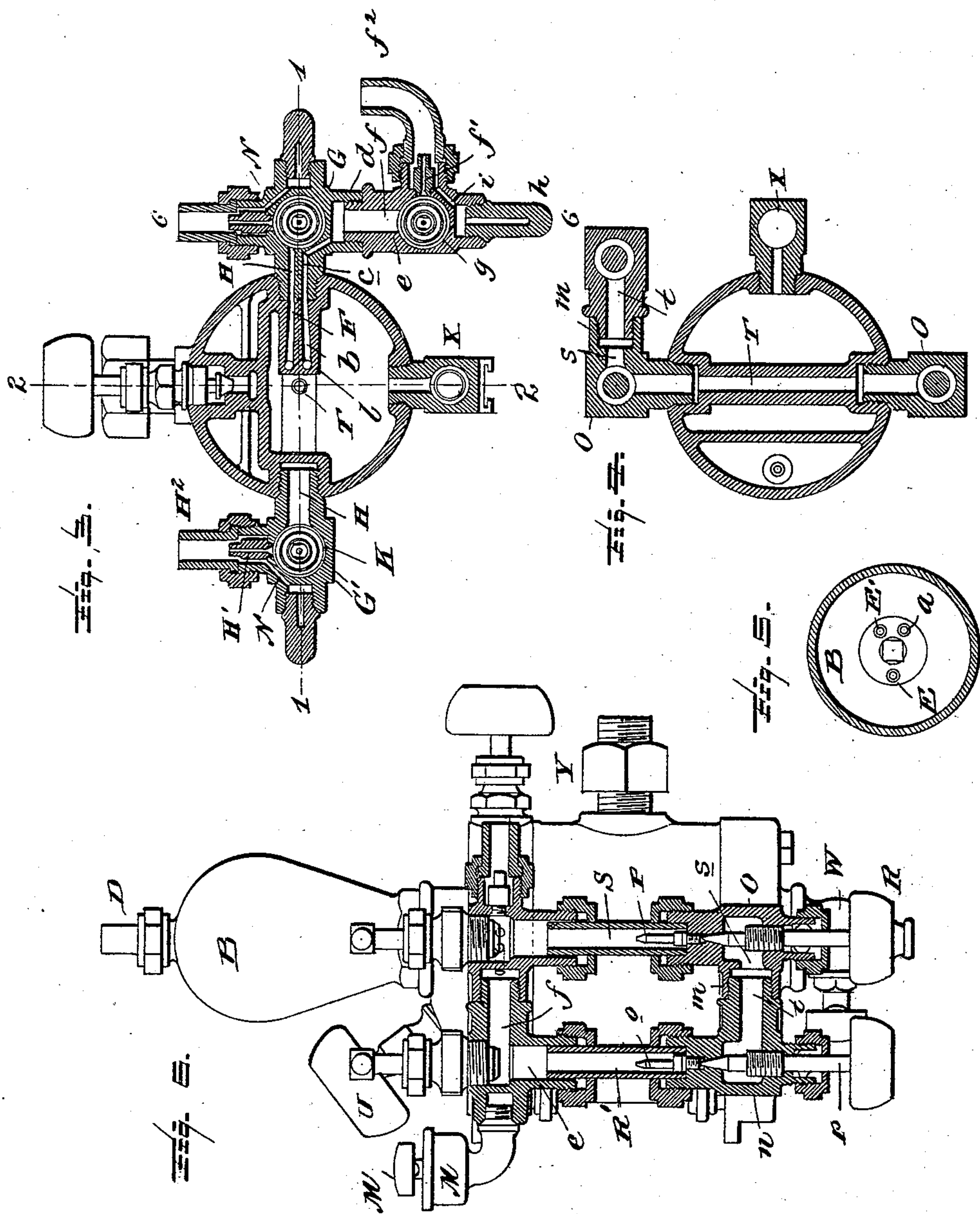
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UNITED STATES PATENT OFFICE.

JOSEPH COCKFIELD, OF CLINTON, IOWA, ASSIGNOR TO MAX NATHAN, OF NEW YORK, N. Y.

LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 461,382, dated October 13, 1891.

Application filed September 1, 1891. Serial No. 404,429. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH COCKFIELD, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented a new and useful Improvement in Lubricators, of which the following is a specification.

The invention relates to that class of lubricators (intended more particularly for use on locomotives) in which water, as a product of condensation of steam is caused to pass gradually from a condensing-chamber to the oil-chamber for the purpose of effecting the feed of the lubricant. As a rule lubricators for locomotive use are double ones—that is, the same oil-chamber serves to lubricate both cylinders of a locomotive-engine; and the more particular object of the invention is to add to these two feeds a third one for the purpose of lubricating the valves and cylinders of the air-brake pump of a locomotive-engine from the same oil-chamber, securing a device of increased effectiveness and convenience, combined with simplicity and reduced cost of construction.

In the accompanying drawings I have represented a lubricator which embodies the several features of my invention in their preferred form, and to these drawings I shall now refer in order to explain more clearly the nature of the invention and the manner in which the same is or may be carried into effect.

Figure 1 is a vertical central section of the lubricator on line 1 1, Fig. 3. Fig. 2 is a like section on line 2 2, Fig. 3. Fig. 3 is a horizontal section on line 3 3, Fig. 1. Fig. 4 is a horizontal section on line 4 4, Fig. 2. Fig. 5 is a horizontal section on line 5 5, Fig. 1. Fig. 6 is a vertical section on line 6 6, Fig. 3.

A is the oil-reservoir. B is the condenser surmounting said reservoir and communicating with the same by the passages C' C² C³, through which the water of condensation (as permitted by valve C) passes from the condenser to the lower part of the oil-reservoir.

D is a union-coupling on top of the condenser, to which is attached a pipe leading to the boiler and through which the condenser is supplied with steam from the boiler.

Within the condenser are two independent pipes E and E', which extend up nearly to

the top of the condenser, and at their upper ends are provided with openings for the entrance of steam from the condenser. Each pipescrews into the top of the oil-reservoir and there communicates with passages F and F'. Passage F leads to the upper sight-feed connection G and passage F' to the upper sight-feed connection G'. Each of these connections is like the other, so that a description of one will answer for both. Referring to these connections, (shown in section in Figs. 1, 3, and 6,) they are provided with passages H and H', these latter leading to the oil-exit pipes H², which again connect with the oil-pipes (not shown) leading to the parts to be lubricated. They are also provided with screw-valves I, which control the openings K, through which the ascending oil passes from the sight-feed tubes on its way to pipes H². The connection is also provided with a lateral extension-neck L, designed to receive a common stationary hand-oiler of well-known construction, consisting of a receptacle M and regulating-valve M'. The neck L communicates by an independent passage N with the oil-exit pipe H². With each upper sight-feed connection G or G' is combined a lower sight-feed connection O, having the usual feed-nozzle P and regulating-valve R.

S is the sight-feed tube intermediate between the two connections. At the bottom of the oil-receiver is the single cross-channel T, which connects the two lower sight-feed connections, and into this channel enters the lower end of the oil-feed pipe T', which leads from the upper part of the oil-chamber.

U is the filling-plug, W the drain-cock, and X the indicator, commonly employed to show the amount of oil in the oil-reservoir.

Y is a stud and nut by means of which the lubricator is secured to a suitable brace or bracket.

In all the foregoing particulars the lubricator is identical with the one for which Letters Patent of the United States No. 357,931 were granted February 15, 1887.

To carry into effect the improvements which form the subject of this invention, a third pipe *a* is placed within the condenser B. This pipe screws into the top of the oil-chamber, and there communicates with a passage *b*.

Passage *b* leads to passage *c* in the upper sight-feed connection *G*. This upper sight-feed connection is provided with an extension-neck *d*, designed to receive another upper sight-feed connection *e*. This upper connection is provided with passages *f* and *f'*, this latter leading to the oil-exit pipe *f*², which again connects with a pipe (not shown) leading to the cylinder or valve-chest of the air-brake pump of a locomotive-engine. A screw-valve *g* and stationary hand-oiler *h*, with an independent passage *i* leading into oil-exit pipe *f*², are also located on this upper connection *e*.

At the point *K*, where the upper connection *G*, with its passages *H* and *c*, joins the body part *l* with its passages *F* and *b*, I provide a steam-tight joint, so that the upper connections *G* and *e* will not communicate with each other, and all passages leading steam or oil into or from these connections will be entirely distinct, separate, and independent.

The lower sight-feed connection *I* also provide with an extension-neck *m* to receive the lower sight-feed connection *n*, which again is provided with the feed-nozzle *o* and regulating-valve *p*.

R' is the sight-feed tube intermediate between the connections *e* and *n*.

The lower connection *O* is made with a branch passage *s*, which communicates with a similar passage *t* in the lower connection *n*, so that it will be evident that the single oil-passage *T* will supply the oil to all lower connections.

The operation of the lubricator as herein described, the action and purpose of the pipes *E E' d* in connection with passages *F F' b* and contracted outlet-passages *H'* and *f'*, and also the operation of the stationary hand-oilers, are well known to those skilled in the art and need no further description.

I claim—

1. In a multiple-feed lubricator, the combination, with the oil-reservoir, condenser, internal equalizing steam-pipes, oil-pipe, water-pipe, regulating-valves, and auxiliary hand-oilers, of two upper sight-feed connections *G* and *e*, one being supported by the other and each being provided with independent and internal steam-inlet passages from the condenser, and independent oil-outlet passages from the main reservoir and from the hand-oilers to the parts to be lubricated, substantially as and for the purpose set forth.

2. In a multiple-feed lubricator, the combination, with the oil-reservoir, condenser, internal equalizing steam-pipes, oil-pipe, water-pipe, regulating-valves, and auxiliary hand-oilers, of an upper sight-feed connection *G*, provided with two independent steam-passages *H* and *c* to receive steam from the condenser, one of these passages *c* supplying the steam to a second upper connection *e*, which is supported by the first one *G*, substantially as and for the purpose set forth.

3. In a multiple-feed lubricator, the combination of two lower sight-feed connections, one serving as support for the other and both being supplied with oil through a common channel *T*, with two upper sight-feed connections *G* and *e*, one being supported by the other and each provided with independent steam-inlet passages from the condenser and independent oil-outlet passages from the oil-reservoir and from the hand-oiler to the parts to be lubricated, substantially as described.

In testimony whereof I have hereunto set my hand, this 27th day of August, 1891, in the presence of two subscribing witnesses.

JOSEPH COCKFIELD.

Witnesses:

C. C. MCCOLLUM,
GEORGE ROYAL.