2 Sheets—Sheet 1.

F. G. WISELOGEL.

STEAM-LUBRICATOR.

No. 182,980. Patented Oct. 3, 1876.

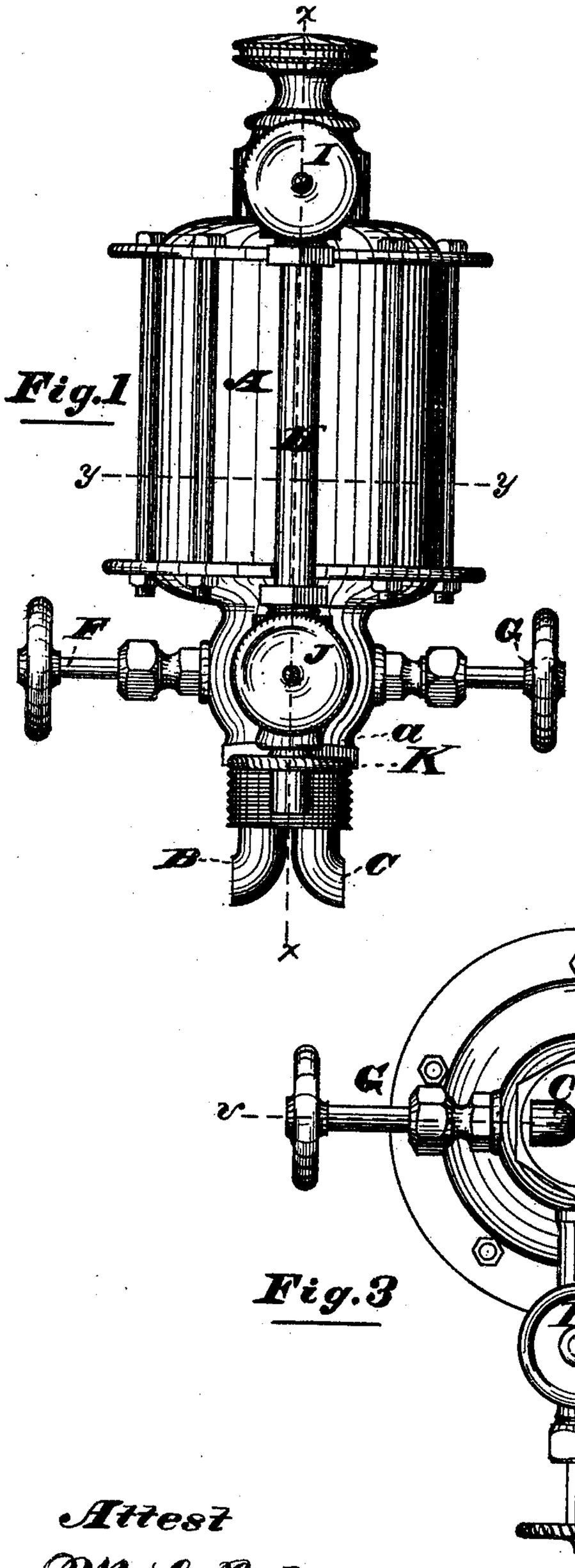

Fig. 1

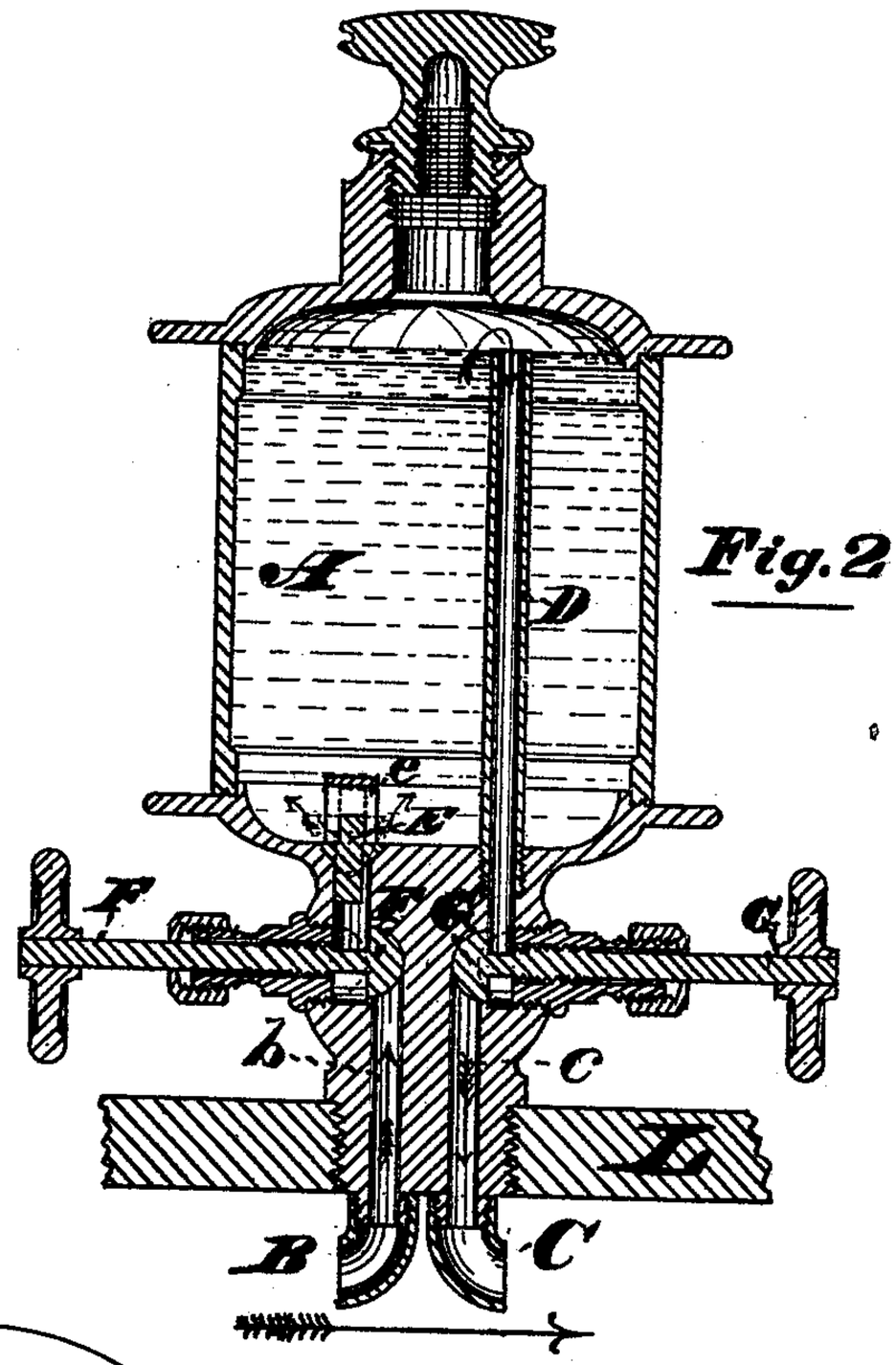

Fig. 2

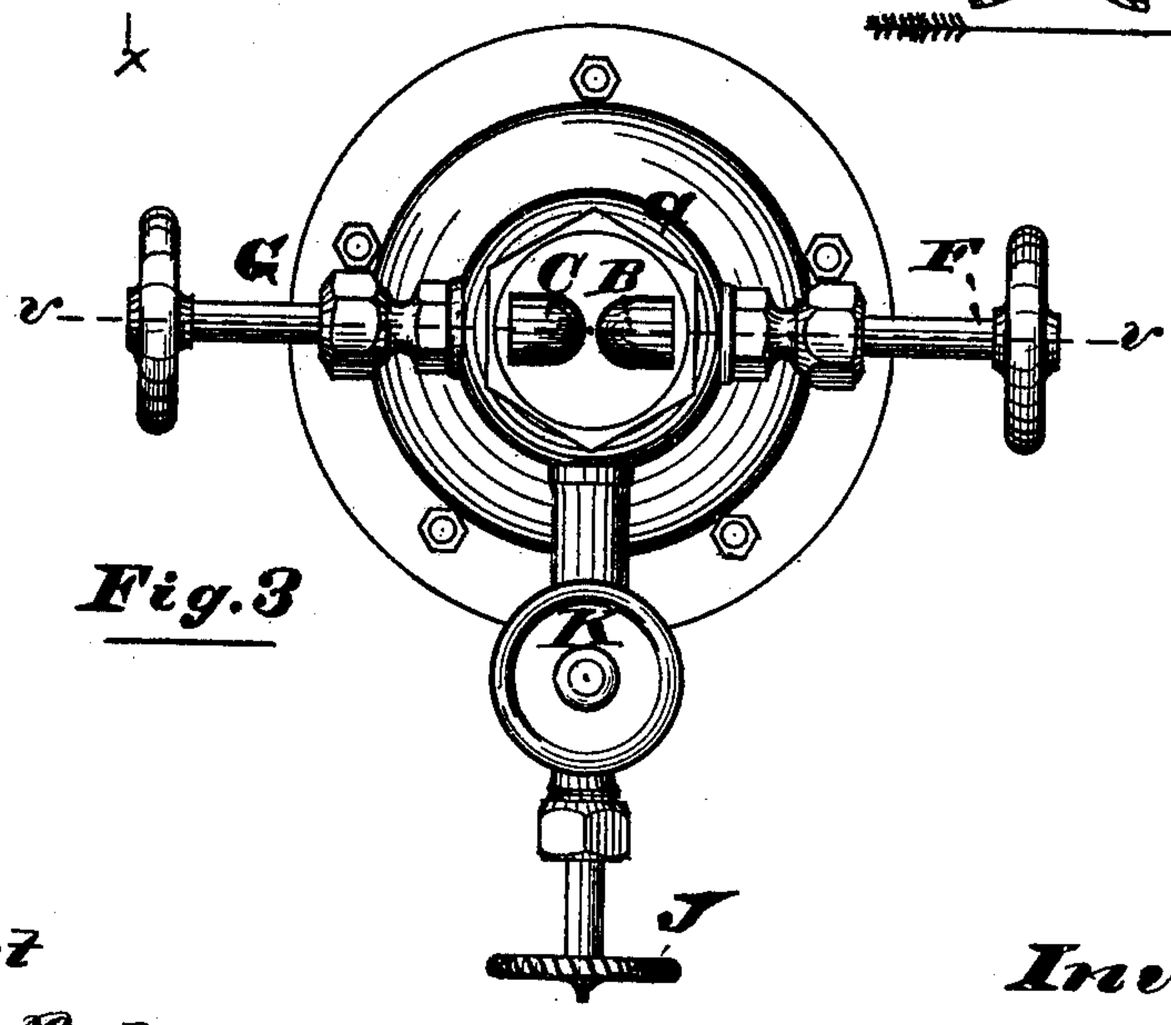

Fig. 3

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2 Sheets—Sheet 2.

F. G. WISELOGEL.

STEAM-LUBRICATOR.

No. 182,980. Patented Oct. 3, 1876.

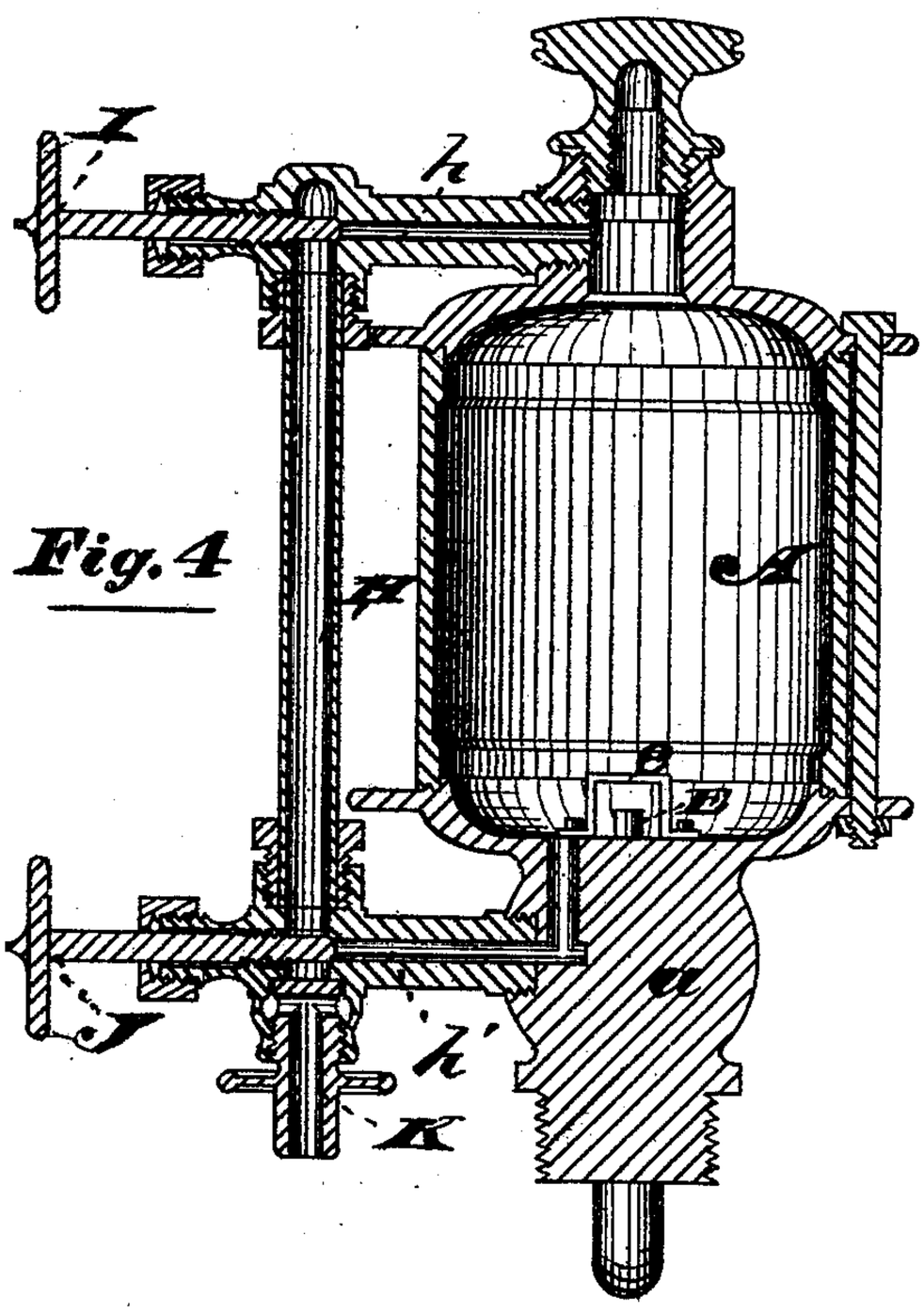

Fig. 4

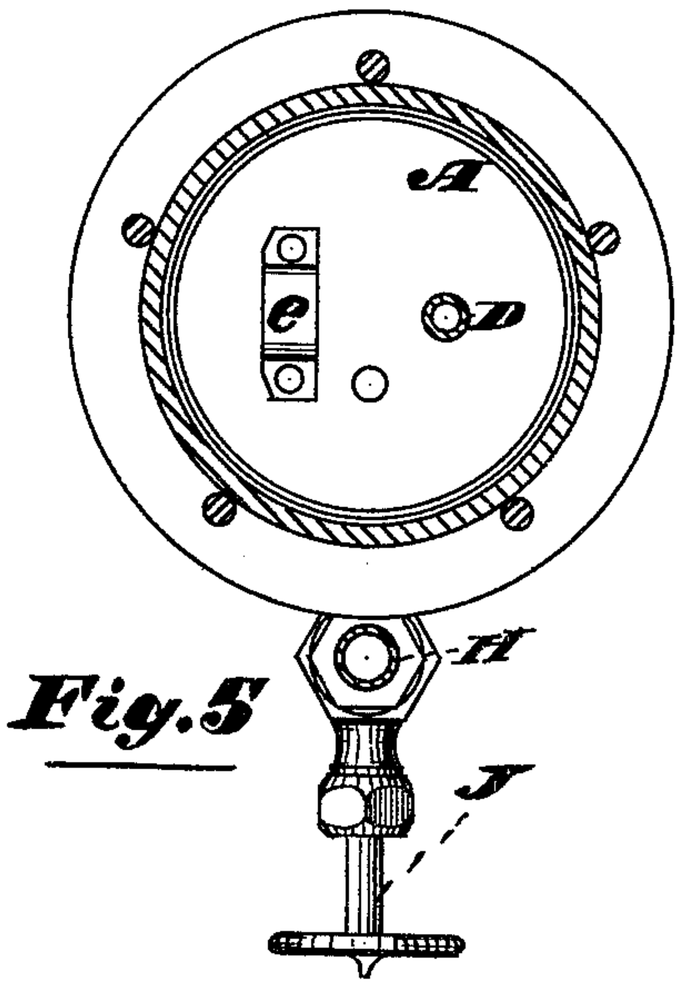

Fig. 5

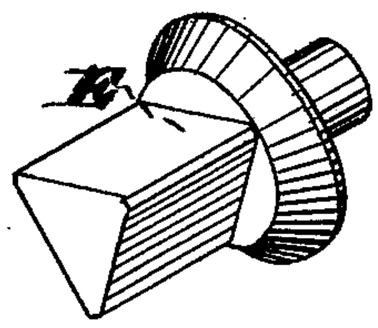

Fig. 6

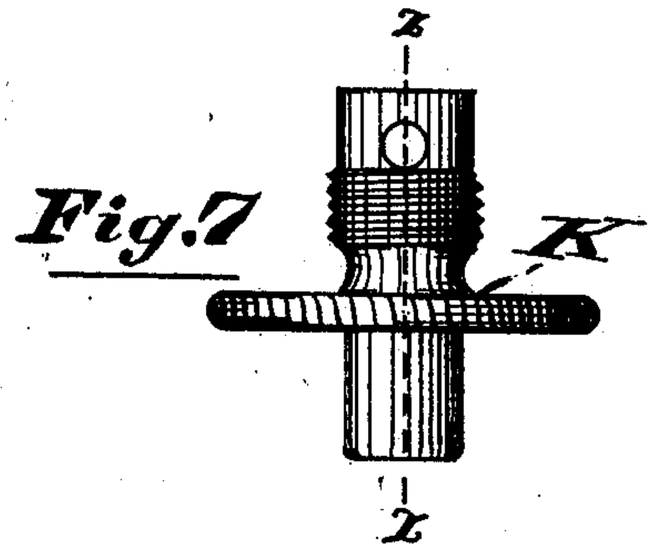

Fig. 7

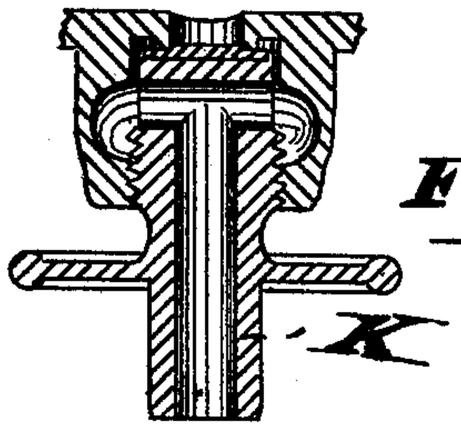

Fig. 8

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UNITED STATES PATENT OFFICE.

FREDERICK G. WISELOGEL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN STEAM-LUBRICATORS.

Specification forming part of Letters Patent No. **182,980**, dated October 3, 1876; application filed July 29, 1876.

To all whom it may concern:

Be it known that I, FREDERICK G. WISELOGEL, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Steam-Lubricators, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of my lubricator; Fig. 2, a vertical section of Fig. 1, taken on the line *v v*, Fig. 3; Fig. 3, a plan view of the bottom of the lubricator; Fig. 4, a vertical section taken on the line *x x*, Fig. 1; Fig. 5, a cross-section taken on the line *y y*, Fig. 1; Fig. 6, a perspective view of the check-valve, connecting the steam-passage into the oil-chamber; and Figs. 7 and 8, plan and sectional views of the screw-cock at the lower end of the gage.

My invention relates to a device for lubricating the interior of cylinders, governors, &c., when the oil is carried in with the steam.

The invention consists in the peculiar arrangement of the lubricator upon the steam-pipe, so that the opening of the steam inlet-pipe will be turned in the direction of said current, and also in providing the steam inlet-pipe with a check-valve, which closes the opening in the pipe whenever the pressure of the steam is removed.

In the drawings, A represents the oil cup or reservoir, which is of ordinary construction, and is provided with a stem, *a*, at its lower end, upon the extremity of which a screw-thread is cut. At the lower end of the stem *a* two pipes or tubes, B and C, are attached, the ends of which are bent outward in opposite directions, so that the mouths of the two pipes will stand opposite each other. The pipe B is intended to admit steam to the bottom of the oil-chamber, and communicates with a passage, *b*, extending up through the stem *a*, and opening directly into the bottom of the oil-chamber A. The pipe C is intended for the outlet-pipe, through which the lubricating material escapes, and communicates with a passage, *c*, which also extends up through the stem *a*, and is prolonged by a tube, D, in the interior of the oil-chamber, which is attached to the stem *a*, and extends nearly to the top of the oil-reservoir A, as shown in Fig. 2 of the drawings. A check-valve, E, is placed in the upper end of the passage *b*. This valve I prefer to make of the form shown in Fig. 6 of the drawings. It sets loosely in the upper end of the duct or passage *b*, to which it is fitted, and is prevented from rising entirely out of its seat by a loop, *e*, fastened to the stem *a*, and extending over the top of the valve at such a distance above it as to permit it to be raised sufficiently to admit steam into the chamber A. The duct or passage *b* is fitted with a valve, F, by means of which the size of the openings may be regulated at pleasure. A similar valve, G, is fitted in the duct *c* for a similar purpose.

An ordinary gage, H, is attached to the lubricator, which communicates with the oil-chamber A, both at the top and bottom, by passages *h h'*, as shown in Fig. 4 of the drawings. This operates in the usual manner to indicate the amount of lubricating fluid in the chamber A.

The passages *h h'* are controlled by suitable valves I and J, and by opening the lower passage and turning a cock, K, in the bottom of the gage-tube, the lubricating fluid may be drawn off from the chamber A.

From the above description it is evident that if live steam is admitted to the chamber A through the pipe B and duct *b*, the pressure of the steam will force the lubricating material out through the tube D, passage or duct *c*, and pipe C.

To secure this operation I attach the lubricator to the steam-pipe by screwing the lower end of the stem into a suitable hole in the pipe, as shown in Fig. 2 of the drawings, in which L represents a section of a steam-pipe.

The arrow below, Fig. 2 of the drawings, indicates the direction of the steam in the steam-pipe, and the lubricator should be arranged as shown in this figure, with the mouth of the pipe B turned toward the current of steam, while the pipe C is turned in the opposite direction. The ducts *b* and *c* being opened by turning the valves F and G, the steam will be forced into the pipe B, up the duct *b*, and raising the check-valve E, will enter the chamber A. The pressure of the steam is thus brought within the chamber A, and, acting

upon the lubricating fluid, will force it out through the pipe C, as above described, where it is taken up by the passing current of steam, and carried into the cylinder or governor.

As soon as the steam is shut off, or its pressure is for any reason greatly diminished, the check-valve E will immediately drop into its seat, and prevent the escape of any oil through the passage *b*. The pressure of the steam in the oil-chamber, and the amount of lubricating material flowing out through the passage *c*, are regulated to a nicety by means of the valves F and G.

The lubricator should be set in the steam-pipe as near as possible to the cylinder, governor, or other device to which steam is admitted, and which it is desired to lubricate.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the steam-pipe L and the lubricator A, constructed with a short steam-duct, *b*, and a long oil-duct, *c* D, and bent pipes B and C at the bottom of the stem, and arranged in the steam-pipe so that the pipe B will open toward the current of steam, and the pipe C from said current, substantially as and for the purpose set forth.

2. The combination of the oil-chamber A, passages or ducts *b c* in the stem *a*, tube D, bent pipes B C, and check-valve E, substantially as and for the purpose set forth.

FREDERICK G. WISELOGEL.

Witnesses:

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L. M. HARRIS.