

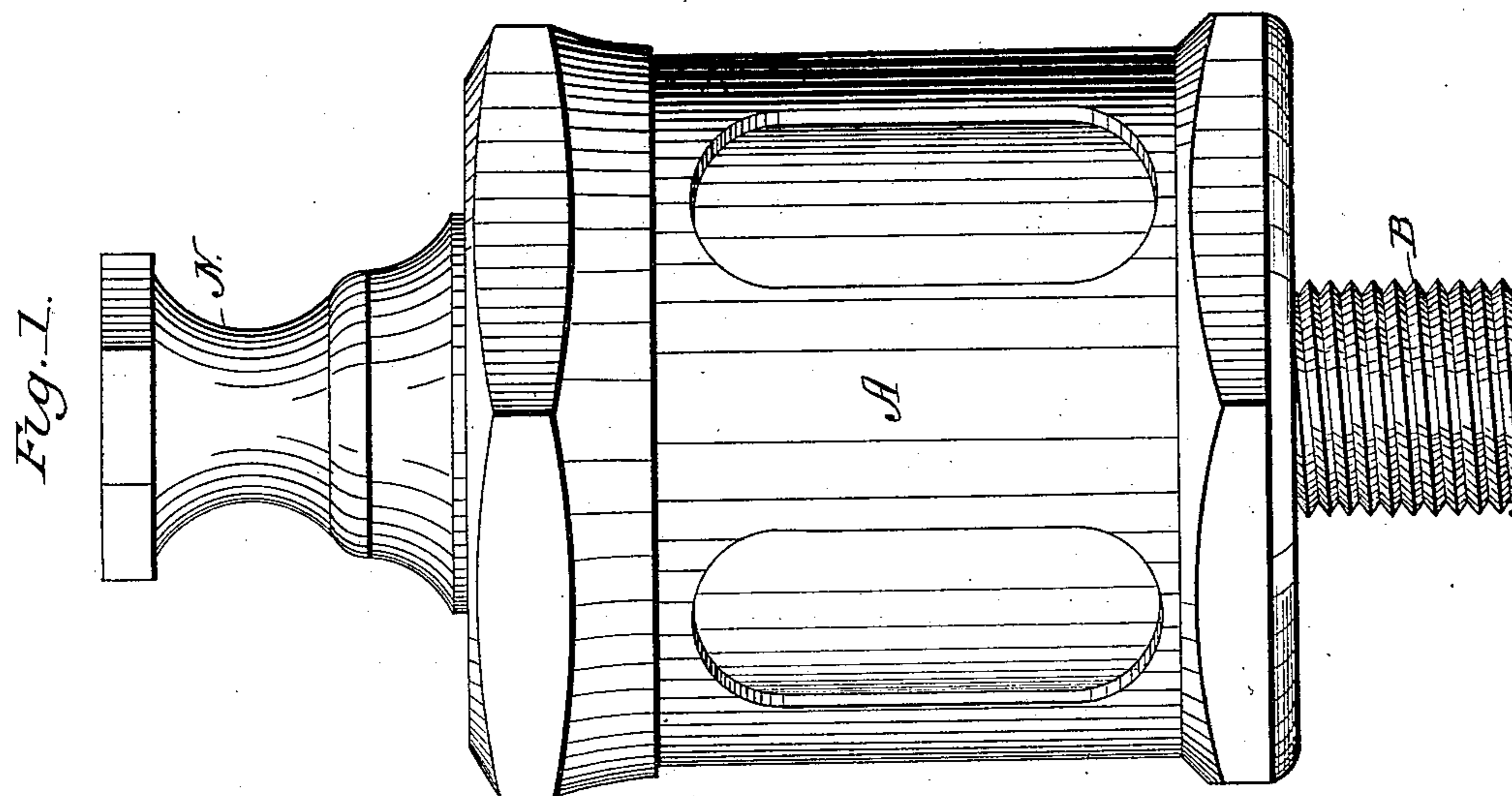
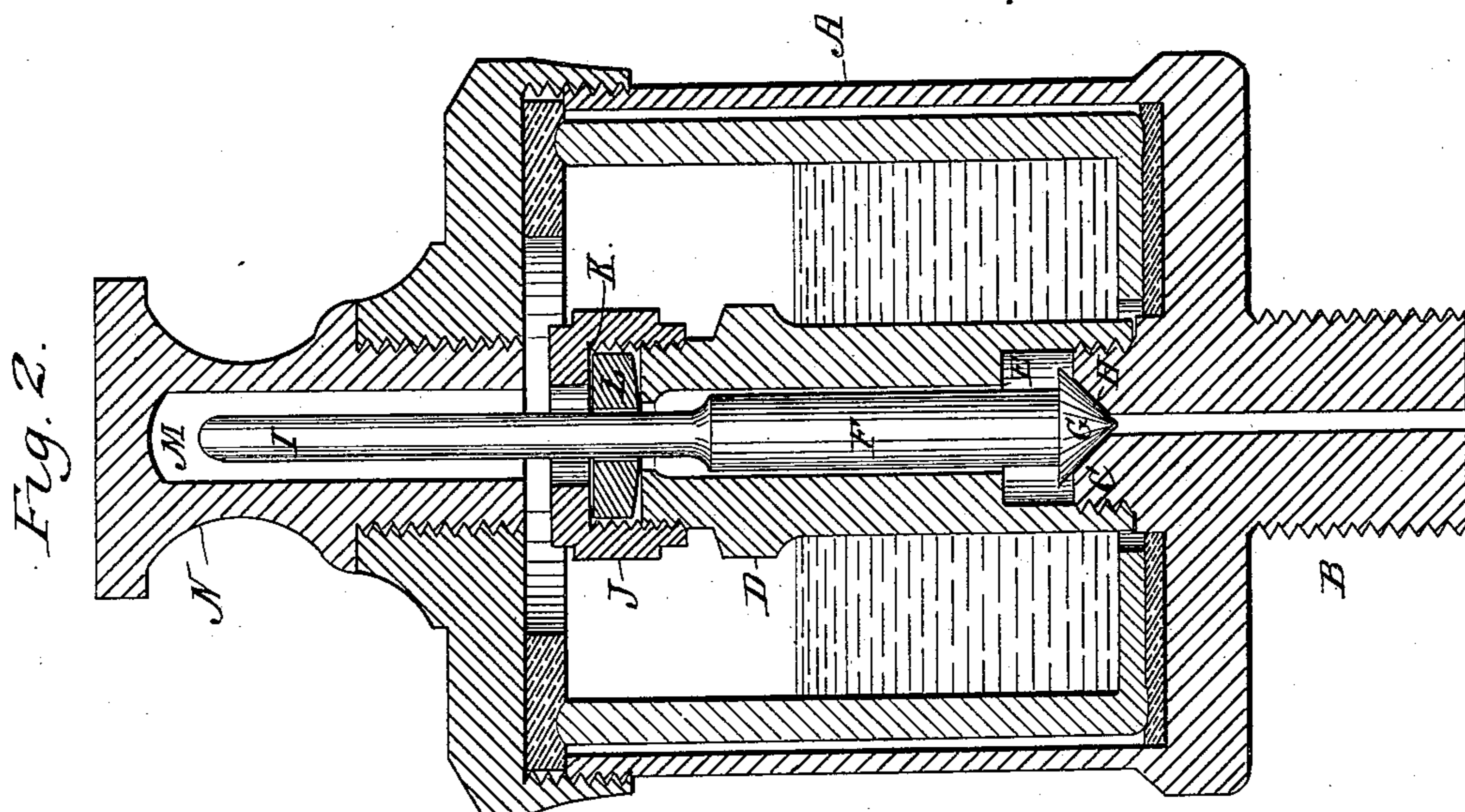
(No Model.)

J. E. WORSWICK.

OIL CUP FEEDER.

No. 297,483.

Patented Apr. 22, 1884.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES E. WORSWICK, OF MONTGOMERY, ALABAMA, ASSIGNOR OF ONE-HALF TO ARTHUR T. HANNON, OF SAME PLACE.

OIL-CUP FEEDER.

SPECIFICATION forming part of Letters Patent No. 297,483, dated April 22, 1884.

Application filed January 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. WORSWICK, of Montgomery, in the county of Montgomery and State of Alabama, have invented a new and useful Improvement in Oil-Cup Feeders for Lubricators, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

My invention relates to oil-cups for machinery, particularly engines, in which the feeders are operated by the motion of the machinery; and the invention consists of the novel construction hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation, and Fig. 2 is a vertical section, of a lubricator embodying my invention.

A indicates an oil-cup of a well-known design, which I have chosen simply as a convenient one in which to illustrate my invention.

As is well understood, the motion of the part of a machine on which the lubricator is fixed by the shank B—such as the rod-strap of an engine-wheel—will cause the feeding-pin to reciprocate in the outlet in the shank B, and thus feed the oil to the bearing to be lubricated.

I provide the boss C with an external thread, and screw over the same a short tube, D, which is provided with an internal shoulder, E, by which the feeding-pin F is confined therein. The pin has a conical head, G, at its lower end, which is adapted to be seated in a cavity, H, in the upper end of the boss C, and communicating with the outlet, to give the said head the effect of a valve, and which pin is provided with a reduced portion, I, which projects above said tube. The head bears upward against the shoulder E and downward against the seat H when the pin is reciprocated by the motion of the cup in actual use, and the larger portion of the pin, which is fitted in the upper part of the tube D, serves to guide the lower end of the pin, so that the head shall fall plumb on the seat. The pin is to have a vertical movement or play of about one-eighth of an inch.

On the upper end of the tube D is screwed

a collar, J, which projects about the same to support the upper end of the pin F, and to take the wear caused by the lateral throw of the pin when the cup is in motion. This collar has an internal shoulder, K, at its upper end, against which is fitted a perforated disk or washer, L, which is inserted into the collar at the lower end thereof. The perforation of the disk is of the size of the pin F, which it receives, and the said disk takes the entire lateral wear caused by the throw of the pin. This disk is of such a size as to fit snugly in the collar J. When the disk becomes too much worn, it is taken out and a new one is put in its place, the lubricator being thus quickly and inexpensively repaired without removing the same from its working position, and without any material damage to other parts of the device. The upper end of the pin projects above the collar J into a cavity, M, in the inlet-plug N, where it can be easily touched by the engineer, when the plug is removed to refill the cup with oil, in order that he may know that the pin is free and in proper working condition. The splashing of the oil against the upper end of the pin causes it to be fed gradually down through the tube along the pin and out through the bore in the shank to the part to be lubricated. When the cup is full of oil, the weight of the pin causes it to act as a valve to close the outlet when the device is at rest.

What I claim is—

1. The combination of the tube, the pin loosely arranged therein, and the removable collar secured to the upper end of the tube, and a removable perforated disk contained within the collar to form a bearing for the upper end of the pin, substantially as shown and described.

2. As a removable bearing for the feeding-pin of an oil-cup, a disk having a perforation adapted to form a bearing for the pin, and being made of a size adapted to be fitted in a holding-collar, substantially as shown and described.

JAMES E. WORSWICK.

Witnesses:

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ARTHUR T. HANNON.