A. GOULD & W. M. HAYDEN.

Lubricator.

No. 168,984. Patented Oct. 19, 1875.

Fig. 1.

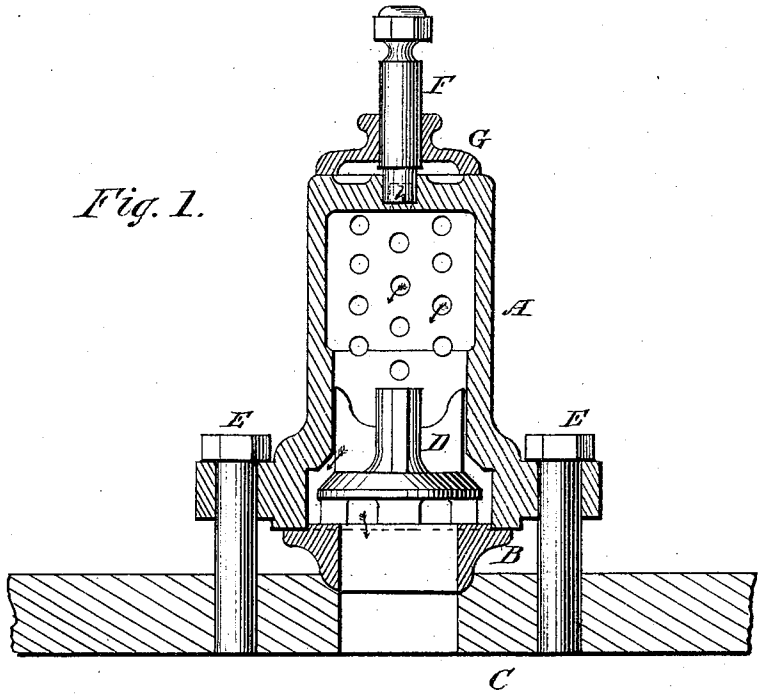
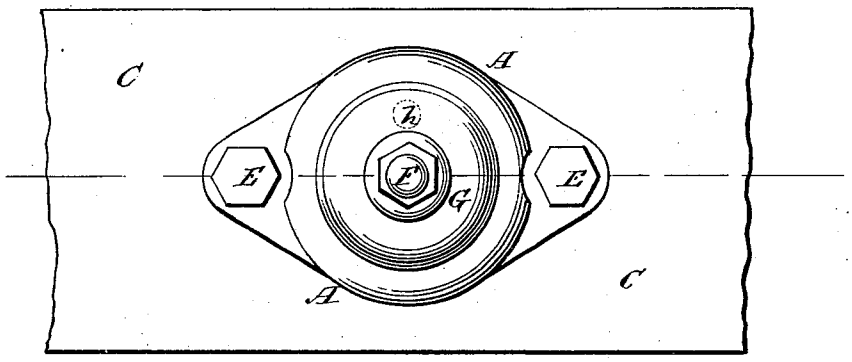


Fig. 2



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UNITED STATES PATENT OFFICE.

AMOS GOULD AND WALTER M. HAYDEN, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN LUBRICATORS.

Specification forming part of Letters Patent No. **168,984**, dated October 19, 1875; application filed July 30, 1875.

To all whom it may concern:

Be it known that we, AMOS GOULD and WALTER M. HAYDEN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Combined Air-Valve and Oil-Cup; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of our invention consists in the construction and arrangement of a combined oil-cup and air-valve for locomotive-engines, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a central vertical section of our invention. Fig. 2 is a plan view of the same

A represents the oil-cup and air-receiver, provided with perforations *a a*, as shown. B is the conical ring that makes the joint between the bottom of the cup A and the steam-chest cover, the cup being fastened thereto by bolts E passing through ears or projections on the cup, as shown. The ring B also forms a stop for the valve D, which opens to admit the oil and air. F is a guide in the top of the oil-cup for the cap G, which is to be raised to admit oil into the cup A. *h* is the inlet-hole for the oil, which is to be poured in when the engine is not using steam, the movable top or cap G keeping the sparks and dirt of any kind from falling into the cup. The valve D closes the cup when the pressure is in the steam-chest, and drops of itself when the engine is not using steam, being consequently automatic.

By the dropping of the valve when the engine is not using steam, the holes in the side of the cup admit sufficient air into the steam-chest and cylinder to maintain a circulation through the blast-pipes, and prevent the piston from sucking in the gas, smoke, dirt, &c., that is found in the smoke-arch of a locomotive-engine at all times.

When the engine is running on the road and not using steam, by preventing this suction of the dirt, gas, smoke, &c., into the cylinders, the pistons, packing, valves, &c., are kept clean, and the oil is not dried up, therefore keeping the cylinder and valves properly lubricated, and saving a large quantity of oil, causing the engine to work more freely, and to accomplish more with the same pressure of steam.

The current of air through the blast-pipes does away with the clogging up of the pipes by an accumulation of dirt, oil, smoke, soot, &c., which is drawn in from the smoke-arch, and which accumulation prevents a proper and regular action of the blast-pipes.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the perforated oil-cup A, conical ring B, and valve D, constructed and operating substantially as and for the purposes herein set forth.

2. The combination of the oil-cup A, having inlet-hole *h*, the guide-rod F, and removable cap G, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

AMOS GOULD.
WALTER M. HAYDEN.

Witnesses:
L. H. SANFORD,
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