

UNITED STATES PATENT OFFICE.

ALVA O. BROOKS AND PHILIP A. BOWEN, OF MILWAUKEE, WISCONSIN.

OILER FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 253,579, dated February 14, 1882.

Application filed October 1, 1881. (No model.)

To all whom it may concern:

Be it known that we, ALVA O. BROOKS and PHILIP A. BOWEN, both of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Oilers for Locomotives, &c.; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to oiling devices for locomotives and other machinery while in motion, and will be fully described hereinafter.

The figure in the drawing is a longitudinal vertical section of our device, in which A is an oil-cup, having a valve-chamber, A', that screws into an oil-reservoir, B, and this reservoir is in turn screwed into another valve-chamber, C, to which is screwed yet another valve-chamber, D. The chamber C opens up into the reservoir B through its stem *b*, and has threaded branches *c c*, connecting with pipes C' C', leading each to one of the steam-chests of the engine, (not shown,) and these pipes are opened and closed by valves *d d*, the stems of which project from wheels E. The chamber D connects the chamber C with the boiler, so that steam therefrom passing through the chamber D and the chamber C, which latter has a vertical opening through its center, may enter pipe F, and from thence pass into oil-chamber B. A valve, G, serves to close the chamber D, and another, H, serves to stop the opening between the oil cup and reservoir, and from the upper side of the latter we project a vent-tube, I, having valve *i*.

The operation of our device is very simple and effective.

When the engine is at rest and steam shut off, the valves may be oiled by closing valve G and opening valves H and *d d*. Then the oil will empty from cup A into reservoir B, and thence flow through chamber C into pipes C' and to the steam-chest; but when it is desirable to oil up while steam is on, the reservoir B must be filled from cup A, after which valves H and *i* must be closed and valves *d d* and G opened. Thereupon steam will rush into the reservoir B through pipe F and force all of the oil from the reservoir into the steam-chests through pipes C'.

Our oiler, as shown in the drawing, is double, so as to feed out to both steam-chests; but we may construct them single, and in this case we would dispense with chamber D and the opening through the center of chamber C and join pipe F to one of the branches *c* of chamber C, and to this branch we would attach, instead of an oil-pipe, a steam-pipe leading from the boiler, provided with a valve or stop-cock.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of oil-cup, reservoir having vent, the valve-chamber C, steam-inlet and oil-outlet, and valves or stop-cocks, as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 24th day of September, 1881.

ALVA O. BROOKS.
PHILIP A. BOWEN.

Witnesses:

STANLEY S. STOUT,
HAROLD G. UNDERWOOD.