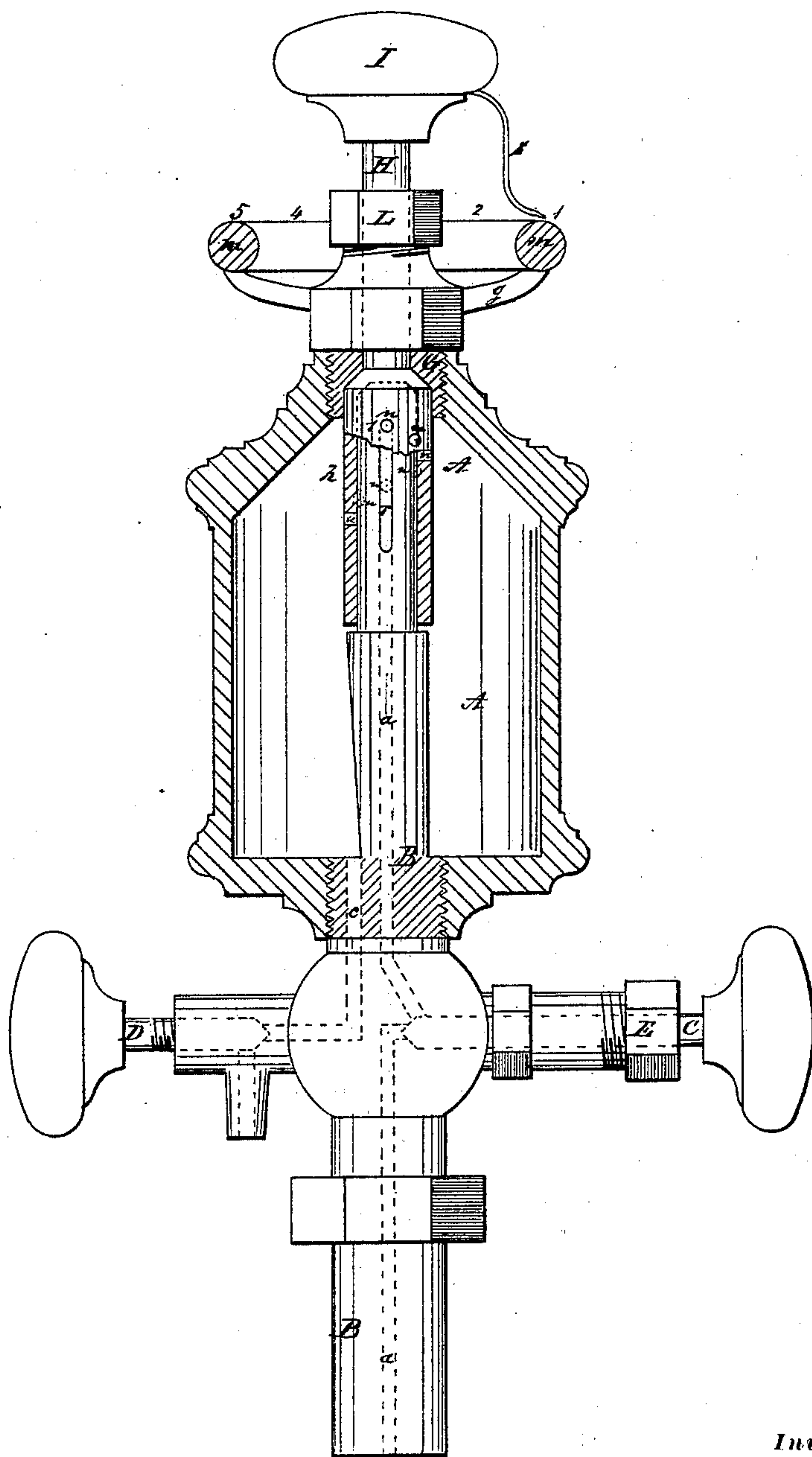


(Model.)

S. H. JENKS.
Automatic Lubricator.

No. 232,039.

Patented Sept. 7, 1880.



Witnesses:

O. P. Cowl
R. H. Cluwell.

Inventor:

Stillman S. Jenks
by M. Morris Smith atty

UNITED STATES PATENT OFFICE.

STILLMAN H. JENKS, OF IONIA, MICHIGAN.

AUTOMATIC LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 232,039, dated September 7, 1880.

Application filed July 31, 1880. (Model.)

To all whom it may concern:

Be it known that I, STILLMAN H. JENKS, of Ionia, in the county of Ionia and State of Michigan, have invented an Improvement in Automatic Lubricators, of which the following is a specification.

The object of this invention is to simplify the construction and facilitate the adjustment of the condensing-space in that class of lubricators susceptible of such adjustment by external means while under pressure of steam; and it consists in the combination of a revolving sleeve-tube provided with a series of holes arranged spirally around it, or with a spiral slot, with a stationary tube provided with a vertical slot, as hereinafter more fully described.

In the accompanying drawing, representing a partly-vertical section of my improved lubricator, A represents the oil-chamber, which is for the most part of cylindrical form, with its upper portion conical on its interior. In the lower end of this chamber is screwed a plug, B, extending centrally upward to the apex of the cone. Through this plug is a passage, *a*, from its upper to its lower extremity, as represented by dotted lines. This passage is controlled by a screw-valve, C, having a stuffing-box, E, around its stem to prevent leakage. Another passage, *c*, controlled by the screw-valve D, communicates with the lower portion of the chamber A, by means of which the water of condensation may be drawn off previous to recharging the chamber with oil or other lubricant. The lower extremity, B', of this plug is to be connected by screw or otherwise to the valve-box or cylinder-head of the steam-engine.

At the apex of the cone A' is secured a plug, G, which forms the cover, and is to be removed only for replenishing the chamber with oil. Passing vertically through this plug is a stem, H, provided with a knob or other suitable device, I, at its upper end, by which it may be rotated. It is also provided with a stuffing-box, L, to prevent leakage. The lower portion, *h*, of this stem forms a sleeve fitting steam-tight over and around the upper cylindrical portion

of the plug B, which latter has a vertical slot, *r*, in one side, communicating with the central passage, *a*, while the sleeve *h* has a series of holes, *n*, arranged spirally around it, the upper one of which is on a level with the upper end of the slot *r*, near the apex of the conical portion A' of the oil-chamber, and the lowest one is on a level with the lower end of said slot and about level with the base of said conical portion. Instead of this series of holes *n*, and I think preferably, a spiral slot may be substituted.

To the upper portion of the plug G is attached by three or more arms, *g*, a rim or ring, *m*, by which it may be screwed in or out of the chamber A. The upper side of this ring is graduated and marked in as many equal parts as there are holes *n* in the circumference of the sleeve *h*, while an index, *s*, attached to the spindle or stem H, pointing to any one of these marks, indicates which one of the holes *n* registers with the slot *r*, No. 1 being the uppermost and No. 8 the lowest, which latter is not seen in the drawing. The spiral slot will act in the same manner, the intersection of the vertical slot by said spiral being the point of discharge.

In using this apparatus, first close the valves C and D, remove the plug G, and fill the chamber A with oil or other lubricant to near the base of the cone A', and replace the plug G. Then open the valve C, when a jet of steam will pass up into the cone at every stroke of the piston of the engine, and, condensing there, will sink to the bottom, raising the oil in the chamber until it reaches the level of the hole *n*, that is over the slot *r*, when it will begin to feed down into the cylinder of the engine to lubricate its piston and valves. The quantity supplied will be equal to the quantity of water produced by condensation of the steam injected into the cone at each stroke of the engine-piston, which, it will be seen, may be nicely adjusted by simply rotating the knob I to bring a higher or lower portion of the spiral to intersect the vertical slot *r*, thus enlarging or diminishing the area of the condensing-chamber.

When the oil is all exhausted the valve C may be closed, the water of condensation drawn off by opening the valve D, and the chamber refilled with oil, as before described, without stopping the engine.

What I claim as new, and desire to secure by Letters Patent, is—

The rotating sleeve *h*, provided with a series

of holes, *n*, arranged spirally around it, or with a spiral slot, in combination with the fixed tube B, having a vertical slot, *r*, substantially as and for the purpose set forth.

STILLMAN H. JENKS.

Witnesses:

C. O. THOMPSON,
E. E. HALL.