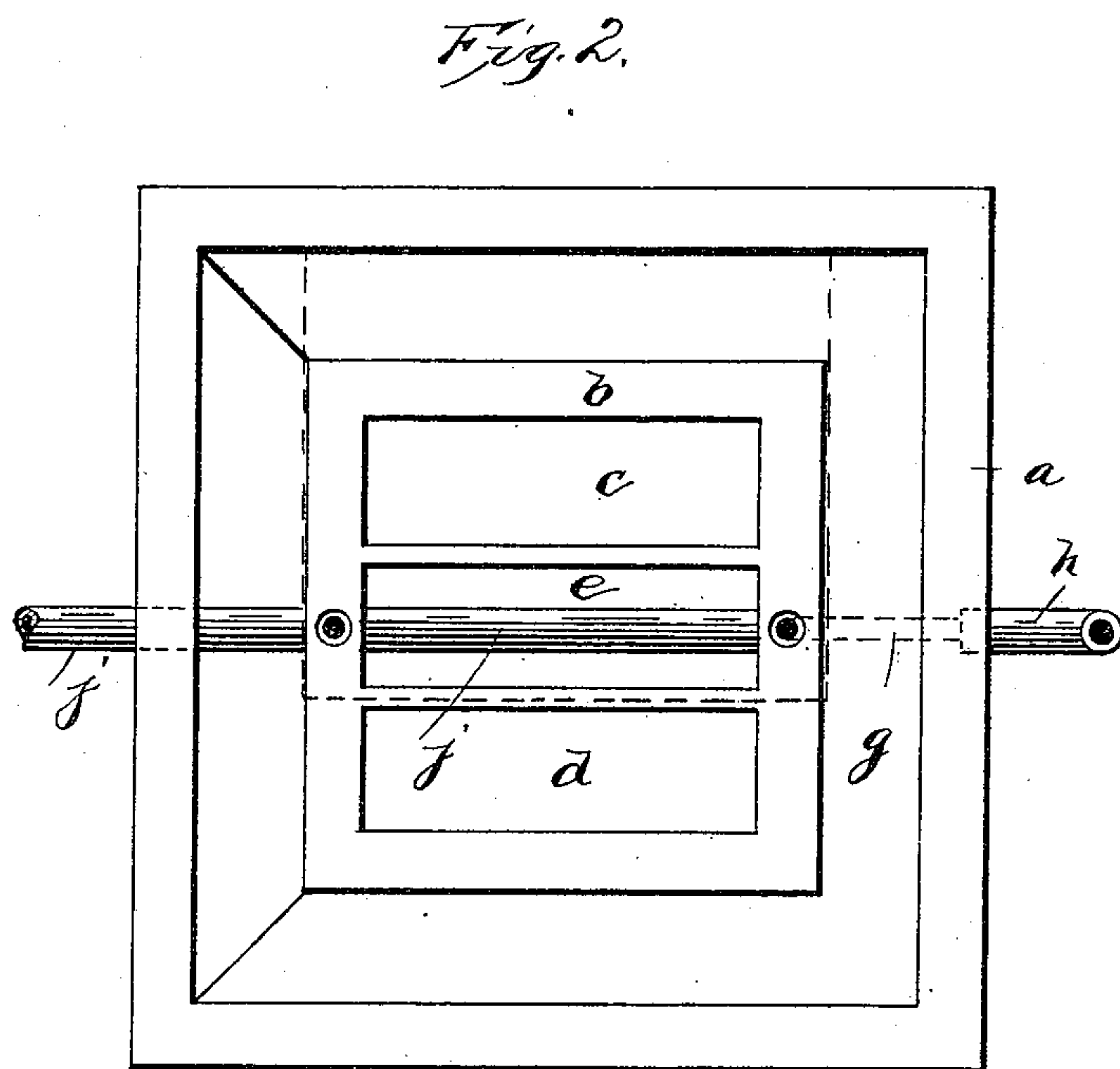
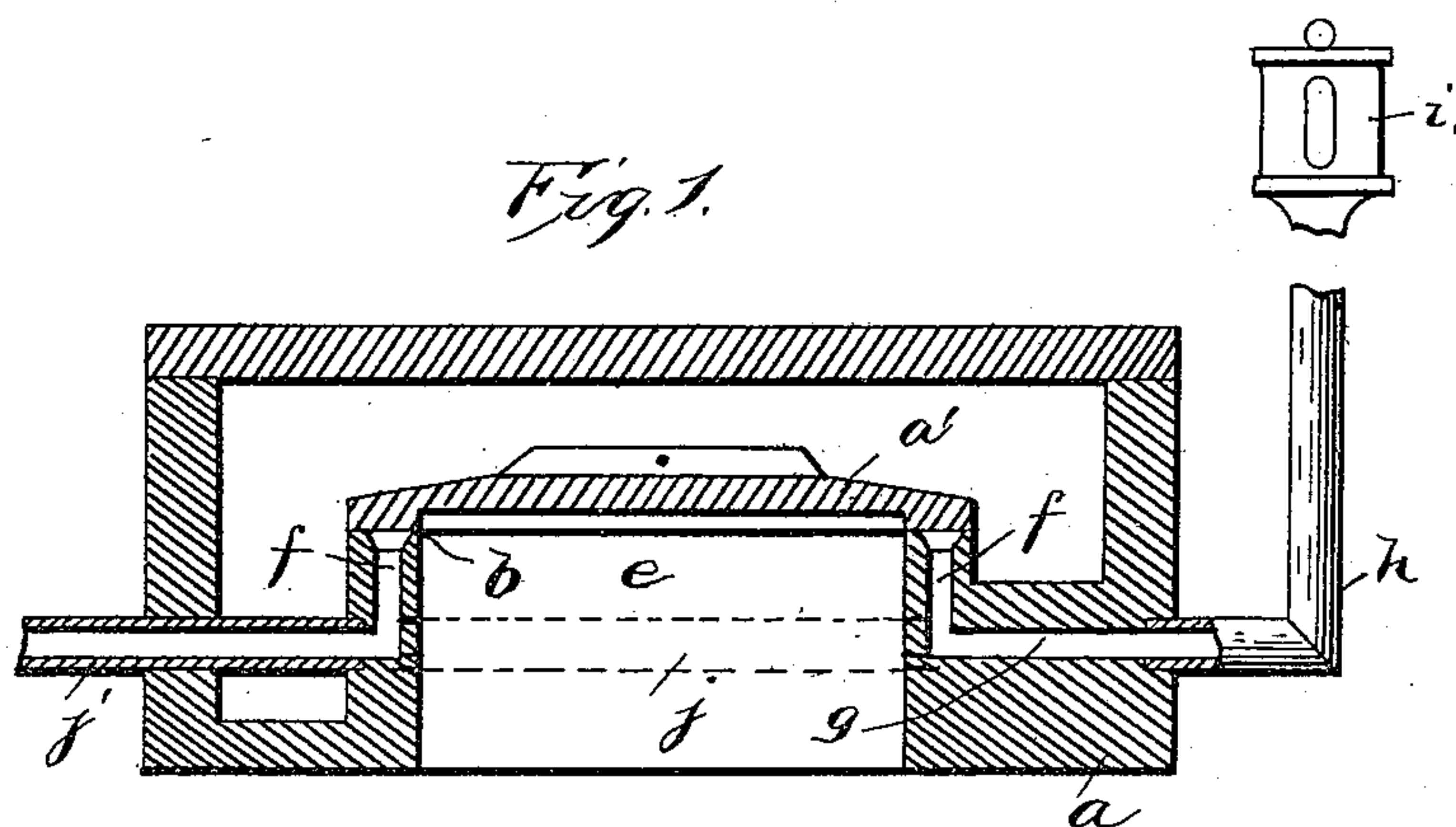


(No Model.)

I. J. LEITER.
LUBRICATOR FOR SLIDE VALVES.

No. 463,904.

Patented Nov. 24, 1891.



WITNESSES:

E. C. Duffy
H. E. Peck

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IRA J. LEITER, OF IONIA, MICHIGAN.

LUBRICATOR FOR SLIDE-VALVES.

SPECIFICATION forming part of Letters Patent No. 463,904, dated November 24, 1891.

Application filed December 30, 1890. Serial No. 376,243. (No model.)

To all whom it may concern:

Be it known that I, IRA J. LEITER, of Ionia, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Lubricators for Slide-Valves; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in lubricators for slide-valves for steam-engines.

The invention consists in the construction and arrangement herein set forth, and particularly pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a section taken through the steam-chest and valve longitudinally of the ports, showing two different constructions. Fig. 2 is a top plane, the valve being shown in dotted lines, the top of the steam-chest being removed and two constructions being shown, as in Fig. 1.

In the drawings, the reference-letter *a* indicates the steam-chest having the valve-seat *b*, upon which the valve *a'* reciprocates, as usual. The valve-seat surrounds the steam-chest *c d* and the central exhaust-port *e*. This steam-chest, the valve, and ports are of very ordinary and usual construction. The portions of the valve-seat at the ends of the exhaust-port are always covered by the slide-valve. A vertical hole *f* is drilled in said seat from the top thereof down a suitable distance, and then if the bottom of the chest is formed as usual at the right-hand side of Figs. 1 and 2, a horizontal hole *g* is drilled through the outside of the steam-chest inwardly, so as to open into the lower end of a vertical hole *f*. A tube *h* is suitably secured in the outer end of this horizontal hole *g*, and is extended upwardly and carries any suitable oil cup or receptacle *i*, discharging thereinto at the point upon the working face of the slide-valve. The upper end of the hole *f* is countersunk. Hence it will be obvious

that any suitably-valved lubricant can be supplied by the conduit to the working face of the valve-seat at the point always covered by the valve, so that the steam-pressure will not affect the flow of the lubricant or blow the same out through the supply-conduits.

The construction or form of the steam chest or valve need not be varied in any way, and no peculiar construction of the same is required, as my invention can be applied to any ordinary steam chest or valve.

Where the bottom of the steam-chest is of the construction shown on the left-hand of Figs. 1 and 2, holes are drilled through the outer wall of the steam-chest and through the inner wall of the valve-seat, registering with hole *f*, and the tube *j* is then inserted, so as to discharge from the oil-cup into said hole *f*. In some cases the tube *j* is continued longitudinally through the exhaust-port and the opposite end of the same, and there opens into the hole *f*. This tube *j* can discharge into holes *f* at both ends of the exhaust-port, or into a hole at only one end of the exhaust-port. In small engines one hole *f* is sufficient to lubricate the slide-valve. All joints and tubes are made steam-tight.

The many advantages of this invention are obvious and readily understood by those acquainted and experienced in this art.

My invention is radically different from, and I do not herein claim, a lubricating arrangement for slide-valves consisting of passages formed in the slide-valve itself and opening on the under face of the slide-valve and arranged to alternately register with passages in the valve-seat, through which said valve-passages receive oil, said valve-seat passages opening into the interior of the steam-chest, so that the oil is forced into the slide-valve by steam-pressure in steam-chest. Hence if the pressure be very great the oil is apt to be blown into the steam-chest from beneath the slide-valve.

What I claim is—

In a valve, the steam-chest and its valve-seat, the slide-valve having the imperforate under bearing-surface on said valve-seat, the vertical passages *f f* in and opening through the upper surface of the valve-seat at oppo-

site ends of the exhaust-passage and counter-
sunk at their upper ends, the pipe *h*, provided
with a source of lubricant, and a passage
from the pipe *h* to the lower ends of the pas-
sages *ff*, said passages *ff* and said passage
from the pipe *h* being closed from the steam-
chest, so that the steam exerts no influence
thereon, as set forth and shown.

In testimony that I claim the foregoing as
my own I affix my signature in presence of 10
two witnesses.

IRA J. LEITER.

Witnesses:

C. OSCAR THOMPSON,
SYRENUS LEITER.