

(No Model.)

H. F. SEYBERT.

DEVICE FOR SPRAYING OIL FROM THE TUBING OF OIL WELLS.

No. 448,085.

Patented Mar. 10, 1891.

Fig. 1.

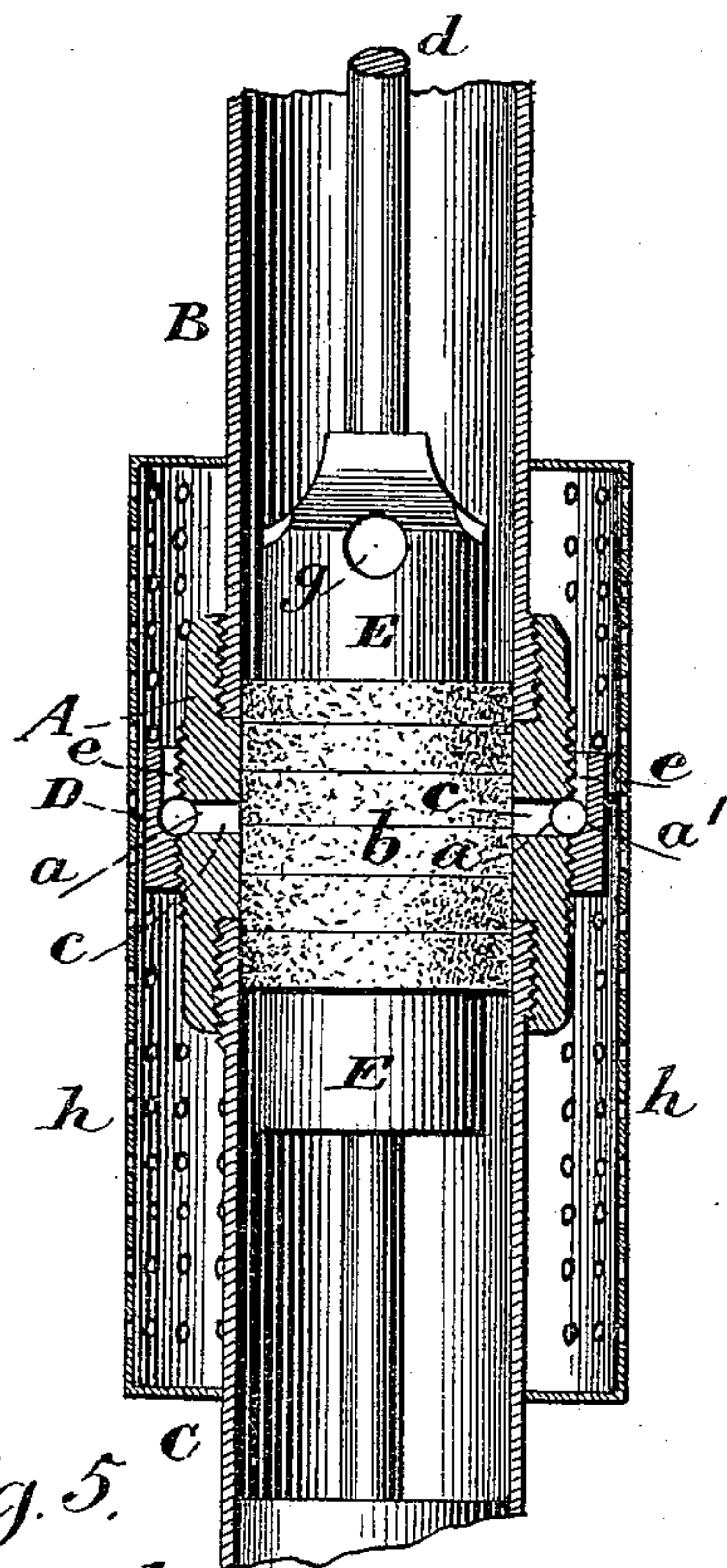


Fig. 2.

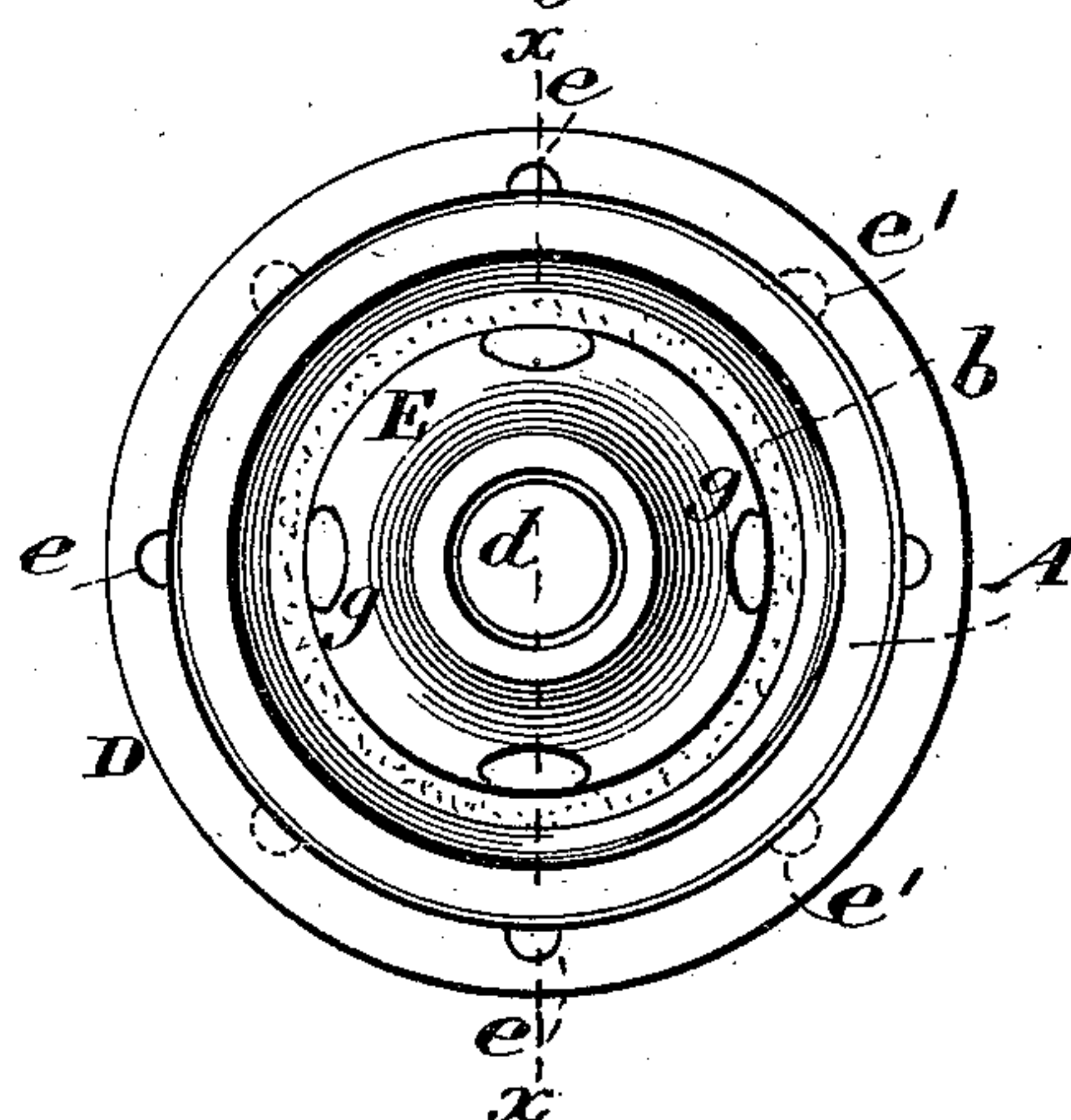


Fig. 3.

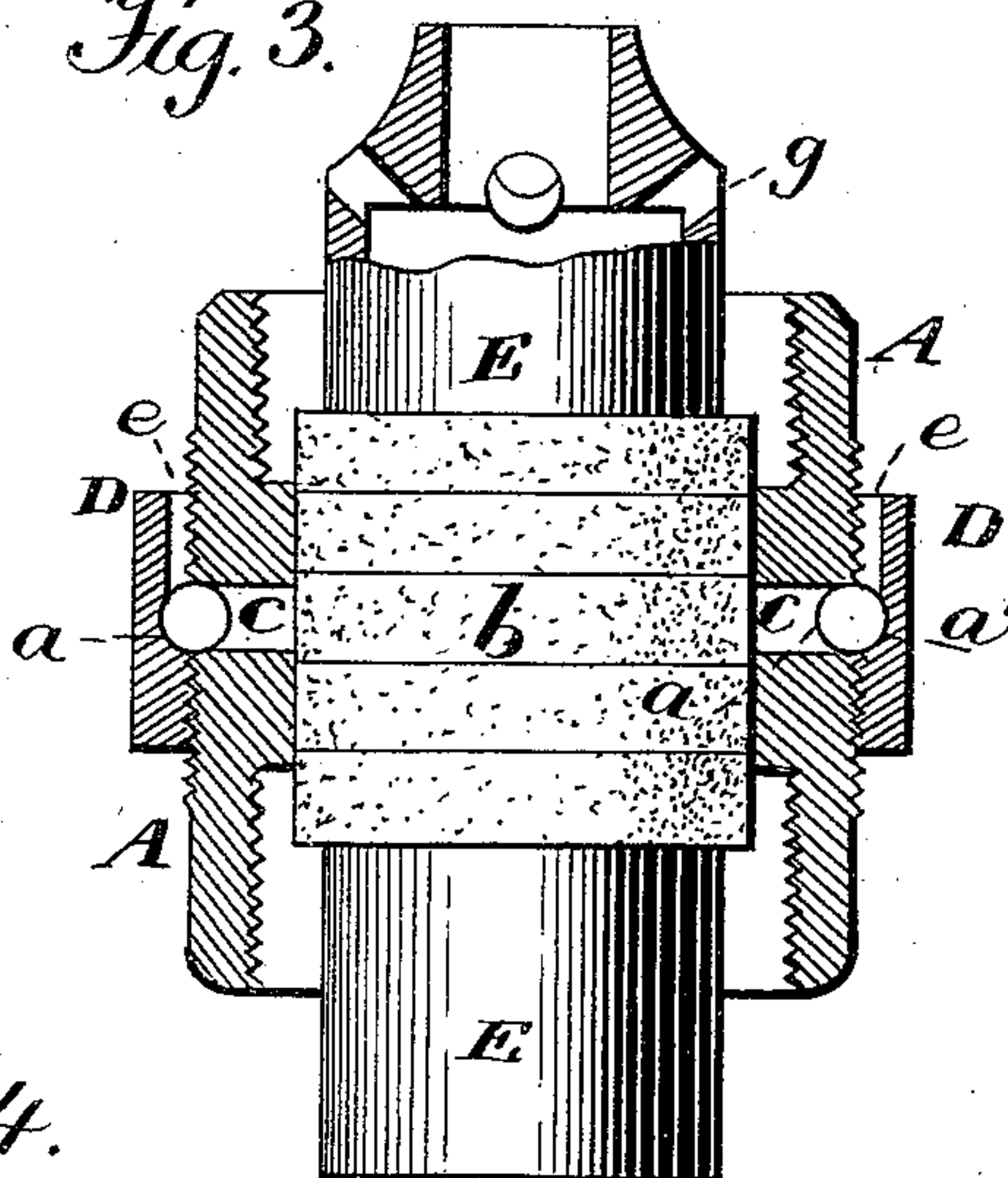


Fig. 5.

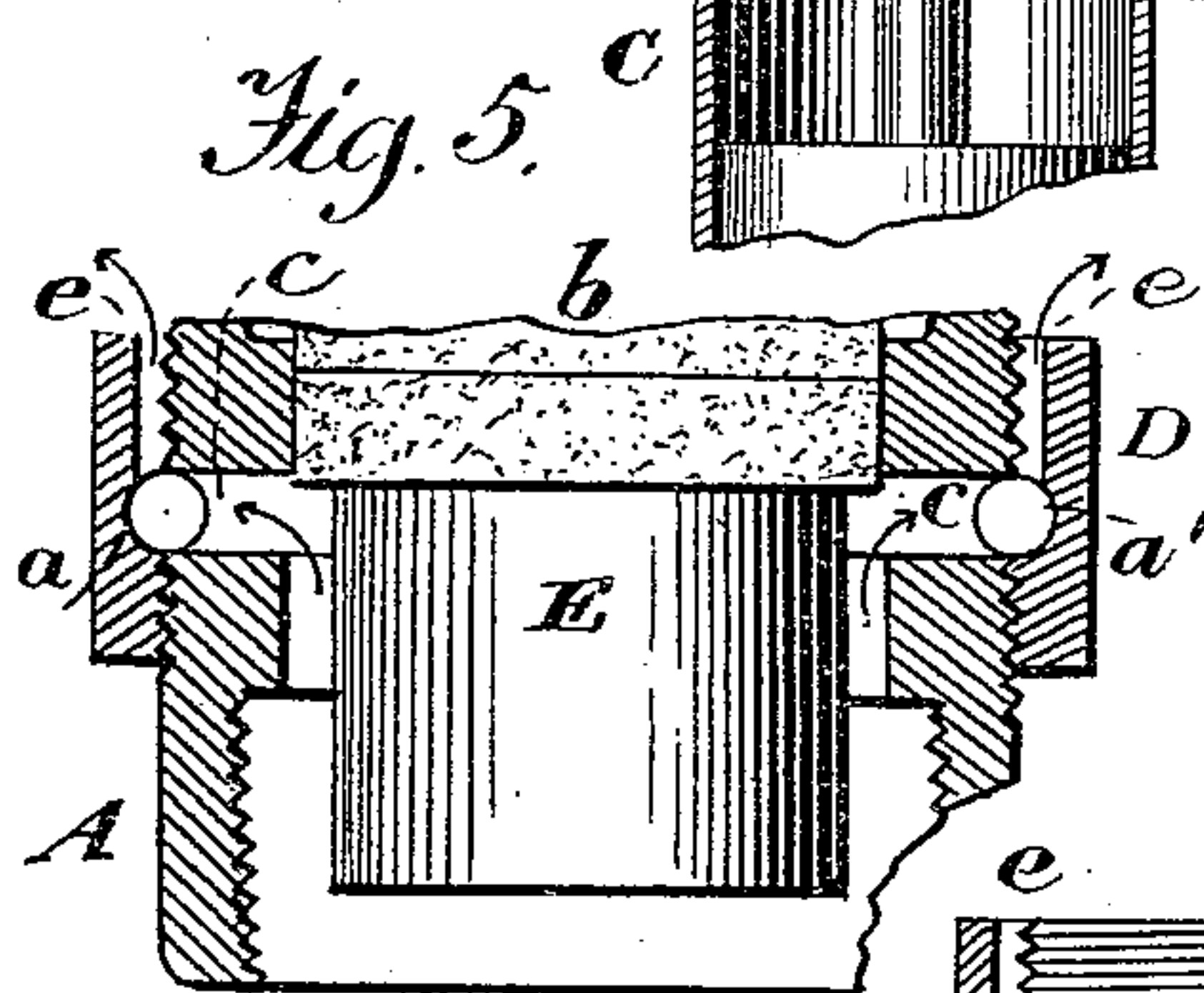
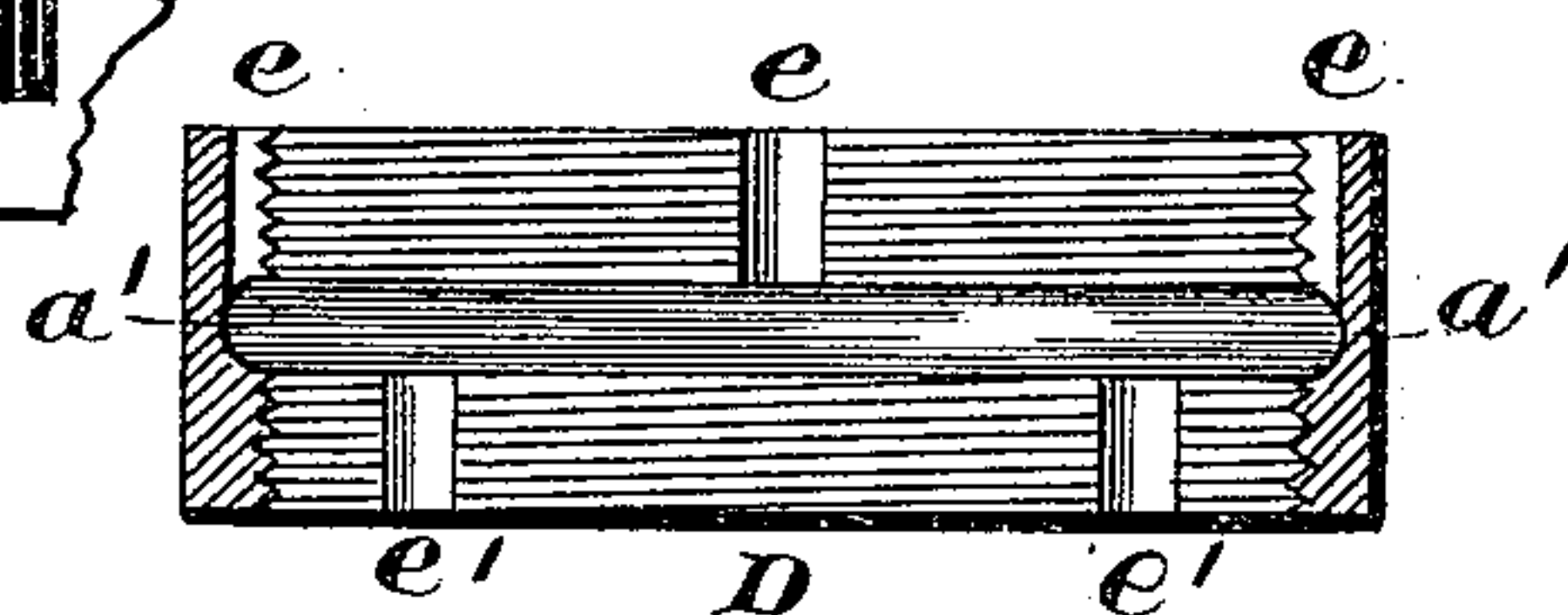


Fig. 4.



Witnesses.
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HARVEY F. SEYBERT, OF QUEENSTOWN, PENNSYLVANIA.

DEVICE FOR SPRAYING OIL FROM THE TUBING OF OIL-WELLS.

SPECIFICATION forming part of Letters Patent No. 448,085, dated March 10, 1891.

Application filed September 19, 1890. Serial No. 365,470. (No model.)

To all whom it may concern:

Be it known that I, HARVEY F. SEYBERT, a citizen of the United States, residing at Queenstown, in the county of Armstrong and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Spraying Oil from the Tubing of Oil-Wells; and I do hereby declare the following to be 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.

The invention consists in certain improvements in devices for spraying the oil from the tubing of oil-wells for the purpose of mixing and removing paraffine from the walls of oil-wells, as hereinafter set forth and described.

In the accompanying drawings, Figure 1 is a sectional side view illustrating my improvements. Fig. 2 is a plan view of the spraying device. Fig. 3 is a section taken on line *x x*, Fig. 2. Fig. 4 is a section of the band or ring on the outside of the main cylinder. Fig. 5 is a vertical section showing the valve raised from its seat.

A designates a hollow cylinder forming the main part of the spraying device, the said cylinder being provided with inner screw-threads at its upper and lower extremities for connection with the lower end of the tubing B and the upper end of the working-barrel C. The said cylinder has a groove *a* made in its outside, about equidistant from its extremities, and opposite apertures *c* on the line or circle of said groove. The cylinder A is also threaded on its outside for the purpose of connection with a band or broad ring D, which is screwed thereon, the said ring being correspondingly threaded on its inside. The ring D has also an annular groove *a'* in its inside, and several grooves *e* extending upward from the groove *a'*, and similar grooves *e'* extending downward therefrom. When the ring D is screwed on the cylinder A in proper position thereon, the groove *a'* in said ring is opposite the groove *a* of the cylinder, and the two grooves form an annular passage around the cylinder for oil during the operation of spraying, as hereinafter stated.

E indicates a hollow plug, which is provided with a packing *b* of leather or other suitable material, so that the plug fits in its seat in the cylinder A. The plunger-rod *d* is passed through the plug E, which is provided with apertures *g*, through which the oil rises during the operation of pumping. During such operation the plug E is held in its seat by the packing, keeping the apertures *c* in the cylinder A closed.

When it is desired to spray the oil from the tubing, the plunger is drawn up against the lower end of the plug E. This movement of the plunger F causes the plug E to rise from its seat and the apertures *c* to be opened, when the oil will rush through the said apertures into the annular passage in the outside of the cylinder and out through the grooves *e* and *e'* to the walls of the well, mingling with and removing the paraffine from said walls.

To prevent the wearing or washing away of sand by the spraying oil, a perforated casing *h* is placed on the tubing in position to inclose the spraying device and check the force of the discharge of oil.

I claim—

1. In an oil-well, the combination, with the tubing, of a cylinder provided with apertures *c*, and an outside groove *a*, connecting with said apertures, a ring placed on said cylinder and provided with inner vertical grooves in position to connect with said groove *a*, and a hollow plug removably placed in said cylinder and adapted to close said apertures *c*, substantially as set forth and described.

2. The combination, with the tubing and working barrel, of a cylinder A, provided with groove *a* and apertures *c*, a ring D, placed on said cylinder and provided with inner vertical grooves adapted to connect with said groove *a*, a hollow plug E, provided with packing and seated in said cylinder, and a perforated casing *h*, adapted to inclose said cylinder, substantially as set forth and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

HARVEY F. SEYBERT.

Witnesses:

MARION H. JORDAN,
R. JAY KARNS.