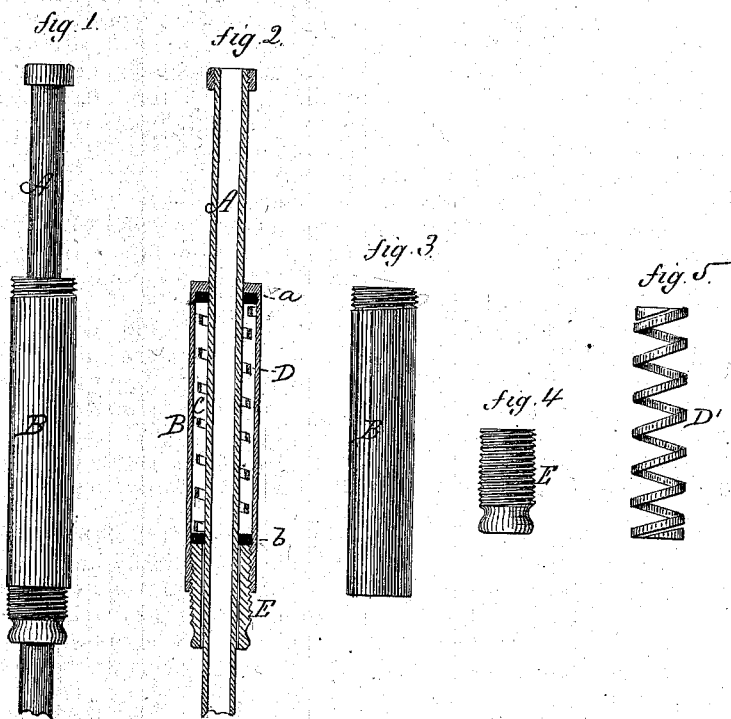


JAMES CUNNINGHAM.
 Improvement in Standards for Drop-Lights.
 No. 115,442. Patented May 30, 1871.



Witnesses
 J. H. Shumway
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UNITED STATES PATENT OFFICE.

JAMES CUNNINGHAM, OF WEST MERIDEN, CONNECTICUT, ASSIGNOR TO
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IMPROVEMENT IN STANDARDS FOR DROP-LIGHTS.

Specification forming part of Letters Patent No. 115,442, dated May 30, 1871.

To all whom it may concern:

Be it known that I, JAMES CUNNINGHAM, of West Meriden, in the county of New Haven and State of Connecticut, have invented a new Improvement in Standard for Drop-Light; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a side view; Fig. 2, a vertical central section; Fig. 3, a side view of the packing-cylinder; Fig. 4, the plug; and in Fig. 5, the lubricating and packing spring.

This invention relates to an improvement in packing device for slides, especially adapted for drop-lights of gas-fixtures, but applicable for other purposes. Various devices have been employed for this purpose, but in all there are some objections—either leaking of the gas, or too much or too little friction, and also an unequal lubrication. To overcome these difficulties is the object of my invention, which consists in combining with a standard a cylinder, through which the said standard passes, and within which cylinder, around the said standard, is arranged a spiral spring bearing against a packing at one end, with a similar packing at the other end adjusted by a screw-plug screwing into the cylinder to compress the spring.

I represent my invention as applied to a gas-fixture. A is the standard or tube of the drop-light, which passes through a cylinder, B, to the upper end of which the gas-pipe is attached, the tube A running up into the gas-pipe. The cylinder B is closed at the upper end around the tube, and is of such relative diameter to the tube A as to form a chamber,

C, within the cylinder around the said tube. A packing, *a*, fitting closely the tube A, is inserted against the upper head of the cylinder B. Then into the cylinder, and bearing against the packing, a spring, D, is inserted, the said spring shown detached in Fig. 5, and is formed, by preference, from square wire of a size to nearly fill the chamber within the cylinder, and formed at both ends to give a direct bearing on the packing entirely around the cylinder. The spring inserted, the lubricating material is introduced with it, completely filling the chamber, or nearly so. Then onto this a packing, *b*, is set, and the plug E screwed into the tube, as seen in Fig. 2, compressing the spring until the requisite amount of friction is attained to support the burner attached to the tube A. The spring, at the same time that it serves to adjust the friction, serves also to distribute the lubricating material around the tube.

It will be observed that this manner of packing may be applied to shafting and various other purposes where a tube or shaft is to work through or into a cylinder, and, therefore, when I use the expression tube, describing the part A, I wish to be understood as embracing, also, a rod or shaft.

I do not wish to be understood as broadly claiming the arrangement of a spring and packing within the cylinder, as such, I am aware, is not new.

I claim as my invention—

In combination with the tube A and cylinder B, the spring D arranged within the cylinder, the packing *a b*, and adjusting-plug E, substantially in the manner herein set forth.

JAMES CUNNINGHAM.

Witnesses:

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