W. STAEHLEN.

Drop-Lights and Hangers.

No. 146,104. Patented Dec 30, 1873.

Fig. 1.

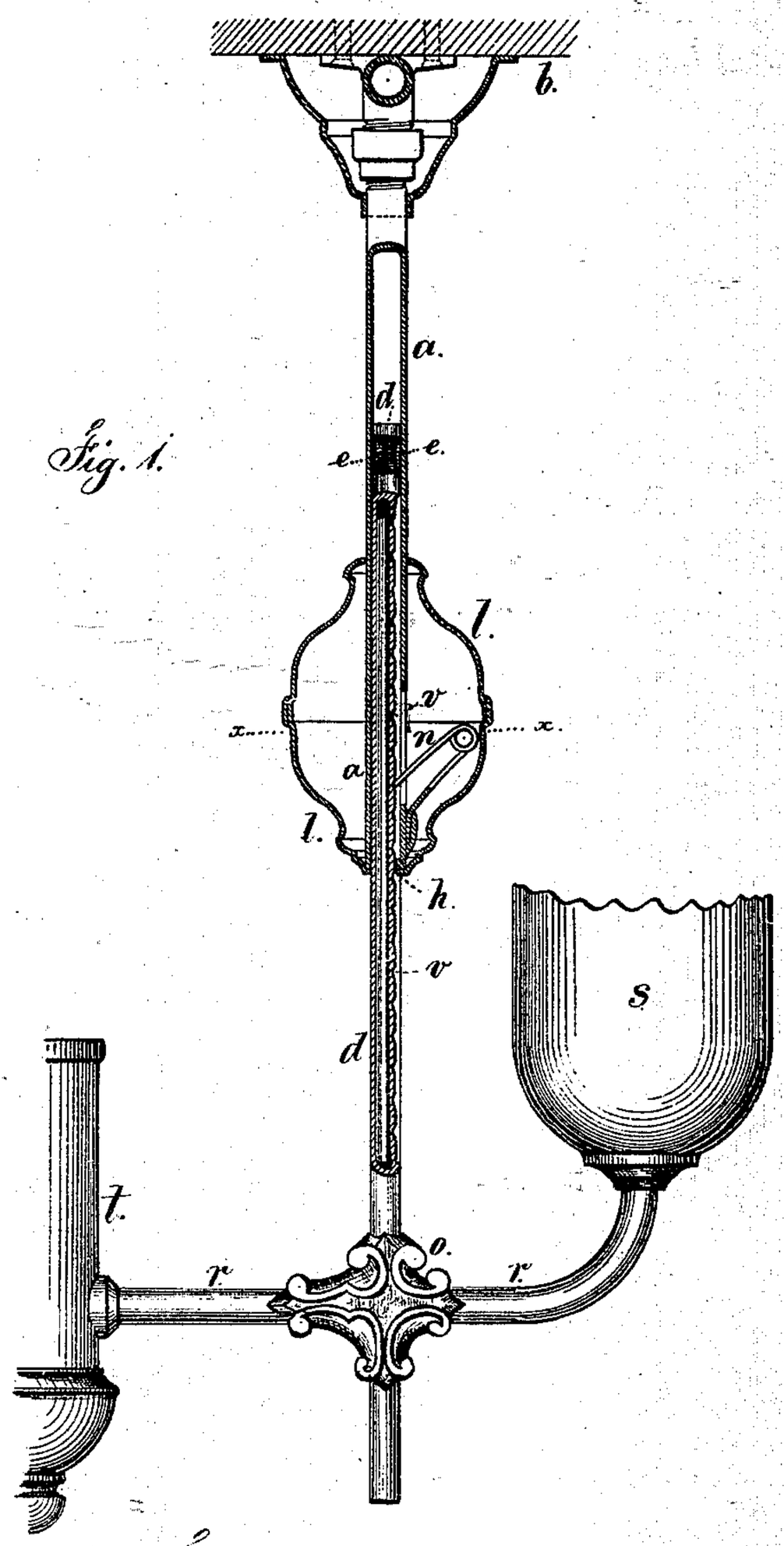
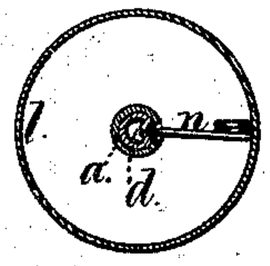


Fig. 2.



Witnesses,

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per Lemuel W. Serrell

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UNITED STATES PATENT OFFICE.

WILLIAM STAEHLEN, OF BROOKLYN, E. D., NEW YORK, ASSIGNOR TO CHARLES F. A. HINRICHS, OF SAME PLACE.

IMPROVEMENT IN DROP-LIGHTS AND HANGERS.

Specification forming part of Letters Patent No. **146,104**, dated December 30, 1873; application filed October 11, 1873.

To all whom it may concern:

Be it known that I, WILLIAM STAEHLEN, of Brooklyn, E. D., in the county of Kings and State of New York, have invented an Improvement in Extension Hanging Standards for Lamps and other Articles, of which the following is a specification:

The object of this invention is to sustain a lamp, gas-jet, or other article in any position to which it may be moved, either up or down.

Tubes have been made for this purpose, one sliding within the other, and sustained by friction; but the surfaces in contact, being smooth, rapidly cease to furnish the required friction. I make use of a spring-pawl constructed in such a manner that it causes very little friction or resistance as the lower part of the standard is pushed up, and increases the friction and clamping action as the standard is drawn down; and, by employing depressions in connection with this clamping-pawl, the standard is adapted to sustain considerable weight at any point to which it may be raised or drawn down.

In the drawing, Figure 1 is a vertical section of the hanging standard, and Fig. 2 is a sectional plan at the line *x x*.

The tube *a* is attached to the ceiling *b*, or to a gas-pipe, by a T, in any convenient manner. Within this tubular standard *a* is the extension *d*, made as a tube or rod, with a groove in one side longitudinally; and where this standard is to be used for gas, the interior of the tube *a* is to be smooth, and a packing provided at the upper end of the tube *d*, as seen at *e*. At the lower end of the standard *d* is to be a hook or other device for attaching the article to be suspended. I have shown the socket *o* to receive the tube *r*, that extends from a reservoir, *s*, to the burner well or tube *t*, as in my Patent No. 125,852. In the ornament *l*, at the lower end of the tube *a*, there is a coiled lever-spring, *n*, one arm of which is attached to the ornament *l*, or the standard *a*, and the other end passes through a slot in the tube *a*, and enters the longitudinal groove in the tube or rod *d*. This prevents said tube or rod *d* revolving, and, as an additional precaution, a key upon the inside of this tube *a*, at the lower end, enters this standard-groove, as at *h*. The lever-spring is made in such a manner that its moving end presses with force against the rod or tube *d*, and as the tube is drawn down the friction, acting against the moving end of the springs, moves that end and winds up the spring, increasing its power and frictional pressure against the side of *d;* but, when the standard tube or rod *d* is pushed up, the spring is partially unwound, and its pressure relieved, so that the standard can be pushed up freely, but it requires greater force to draw it down. Hence, with a lamp or other weight, the force required to move the same either way is nearly equal.

By making depressions or cavities, *v*, in the bottom of the groove in the standard *d*, for the end of the spring, the resistance in drawing the same down will be increased.

This standard may be inverted and form a support for articles in show-windows, &c., the position of the spring *n*, relatively to the standard *d*, being also inverted.

I claim as my invention—

1. The spring *n*, in combination with the grooved standard *d* and tube *a*, substantially as and for the purposes set forth.

2. The spring *n*, in combination with the grooved standard *d*, with depressions, the tube *a*, and the packing *e*, substantially as set forth.

Signed by me this 7th day of October, A. D. 1873.

W. STAEHLEN.

Witnesses:
GEO. T. PINCKNEY,
CHAS. H. SMITH.