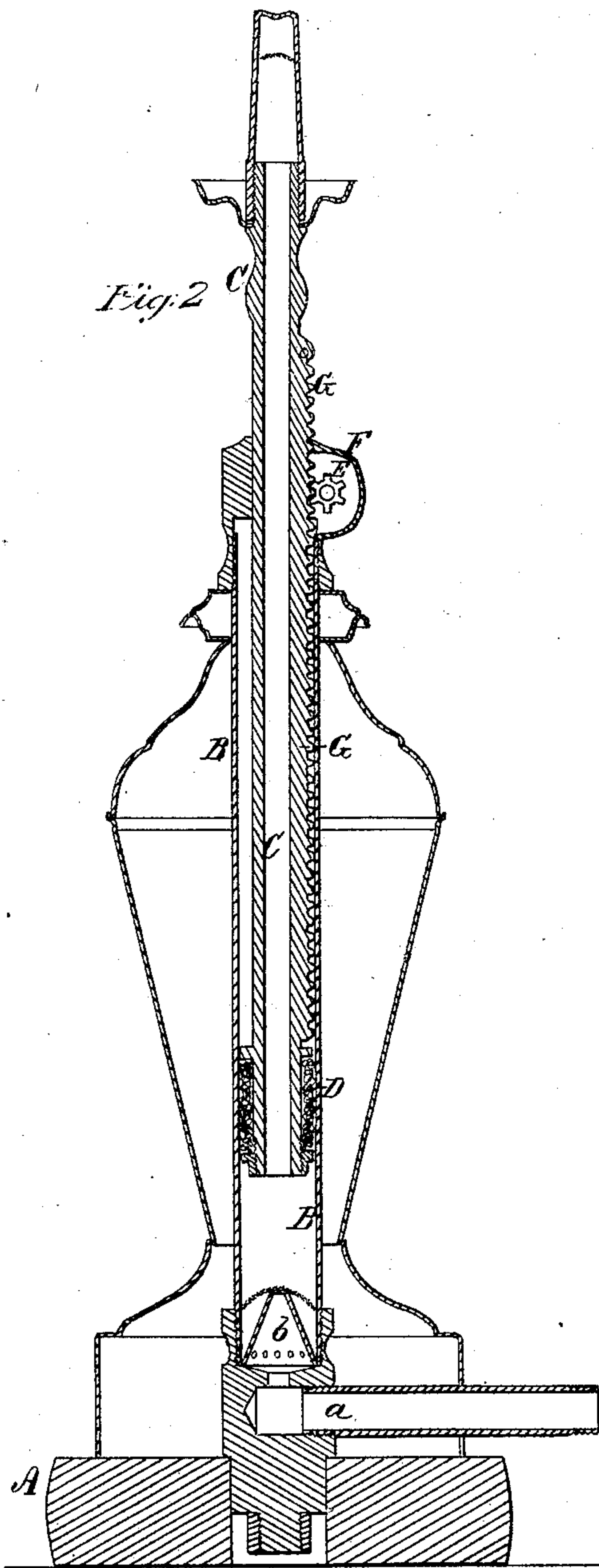
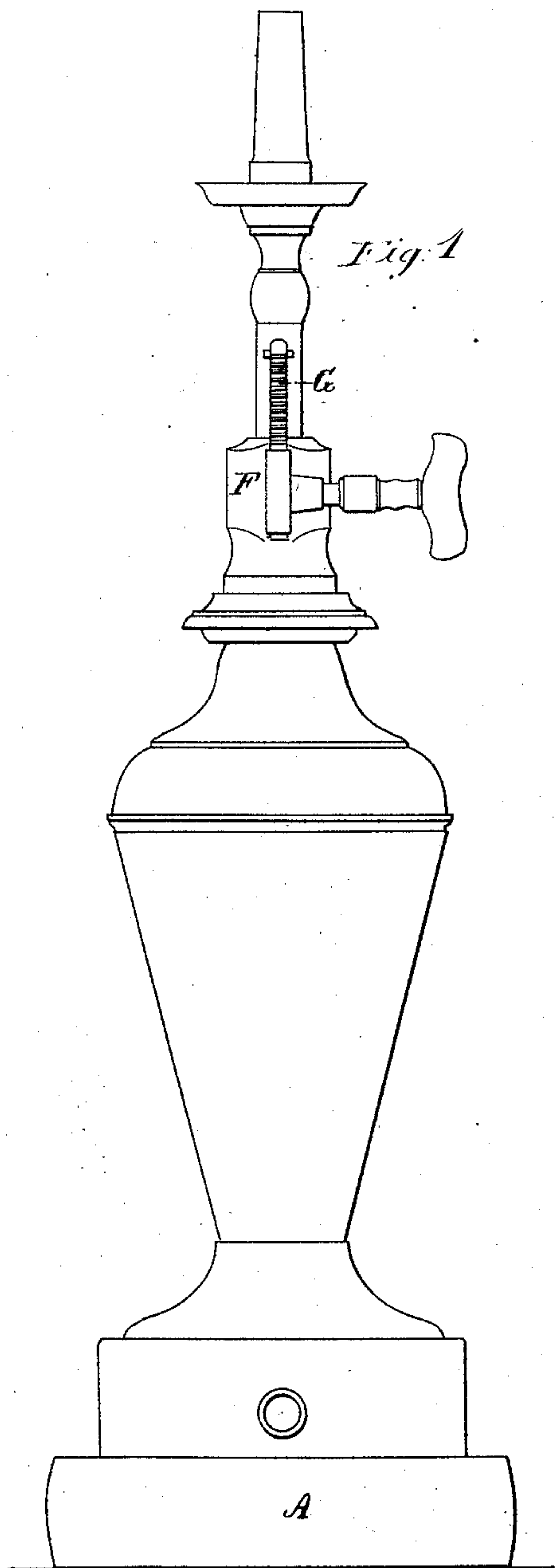


*Allen & Riddell,*

*Gas Stand.*

*No. 55,447.*

*Patented June 12, 1866.*



*Witnesses.*  
*G. A. C. Smith.*  
*J. E. Maynard.*

*Inventors*  
*Boyd Allen*  
*John Riddell*  
*by J. H. Adams*  
*Atty.*

# UNITED STATES PATENT OFFICE.

BOYD ALLEN AND JOHN RIDDELL, OF BOSTON, MASSACHUSETTS.

## IMPROVED PORTABLE GAS-STAND.

Specification forming part of Letters Patent No. 55,447, dated June 12, 1866.

*To all whom it may concern:*

Be it known that we, BOYD ALLEN and JOHN RIDDELL, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Portable Gas-Stands and Gas-Fixtures; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents an elevation, and Fig. 2 a section, of the same.

Similar letters indicate like parts in the several figures.

Our invention consists in constructing a portable gas-stand so that the burner can be readily adjusted to any required height, and also in attaching a stuffing-box to the end of the inner or sliding tube in such a manner as to avoid effectually the escape of the gas by reason of the movement of the sliding tube.

The portable gas-stands as heretofore constructed are of a fixed height, and no means have ever been devised, to our knowledge, for changing the height of the burner to suit the varying circumstances under which the light may be required for use.

In the drawings, A represents the base of the stand, made of the usual form and material. B represents an outer tube, within which is a smaller tube, C, that conducts the gas to the burner, and to the upper end of which the burner is attached. Upon the lower or inner end of the sliding tube C is a stuffing-box, D, formed of two disks attached to the tube, between which disks is a stuffing of waste india-rubber or other suitable material. The lower disk is made to screw upon the end of the tube, so that, in case the stuffing should become worn or loosened in any way, by screwing up the said disk the stuffing will expand, and thus compensate for any wear incident to frequent use. This stuffing-box may be also applied to the pendent sliding fixtures sometimes used. The ordinary way of constructing such pendent sliding fixtures is to secure a stuffing at the end of the stationary tube. This is found to be so objectionable that the use of such fixtures is in a great measure abandoned, and for the following reasons: By the continued use of the slide and its liability to vibrate at the slightest touch the inner tube becomes loosened, and when the inner tube is pushed within the larger one it is enveloped with the gas with

which the larger tube is filled, so that in drawing out the said inner tube to its full length, the odor of the gas is apt to be emitted into the room. By attaching the stuffing-box, constructed as described, to the inner end of the smaller tube these objections are obviated, the exposed part of the inner tube never coming in direct contact with the gas.

At the upper end of the outer tube of the stand is a projection, F, to which is secured a pinion, E, which is turned by means of a shaft and thumb-piece. Attached to or formed upon the inner sliding tube is a rack, G, extending the whole length of the tube, into which the pinion E gears, and by which it is raised and lowered, so that the burner may readily be elevated and held at any desired height.

Instead of a rack and pinion, a spiral groove may be formed upon the inner tube and made to engage with a pin or projection in the upper part of the stand, so that, by simply turning the said tube in one or the other direction, the burner may be raised and lowered at pleasure.

In ordinary cases the friction of the stuffing-box might be sufficient to sustain the inner tube at any required height, but the use of the rack and pinion is considered the most preferable for carrying out the objects of my invention.

a represents the pipe for conducting the gas into the lower part of the stand. At the end of the pipes in the lower part of the stand is arranged a check, b, consisting of a perforated metal plate in the form of a cone, over which is a disk of wire-gauze for the purpose of preventing the tarry residuum of the gas from entering the tube and interfering with the smooth action of the slide.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The sliding portable gas-stand constructed and operated substantially as described.

2. The combination of the stuffing-box with the inner end of the sliding tube, as and for the purpose specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

BOYD ALLEN.  
JOHN RIDDELL.

Witnesses:

DANIEL F. FITZ,  
J. H. ADAMS.