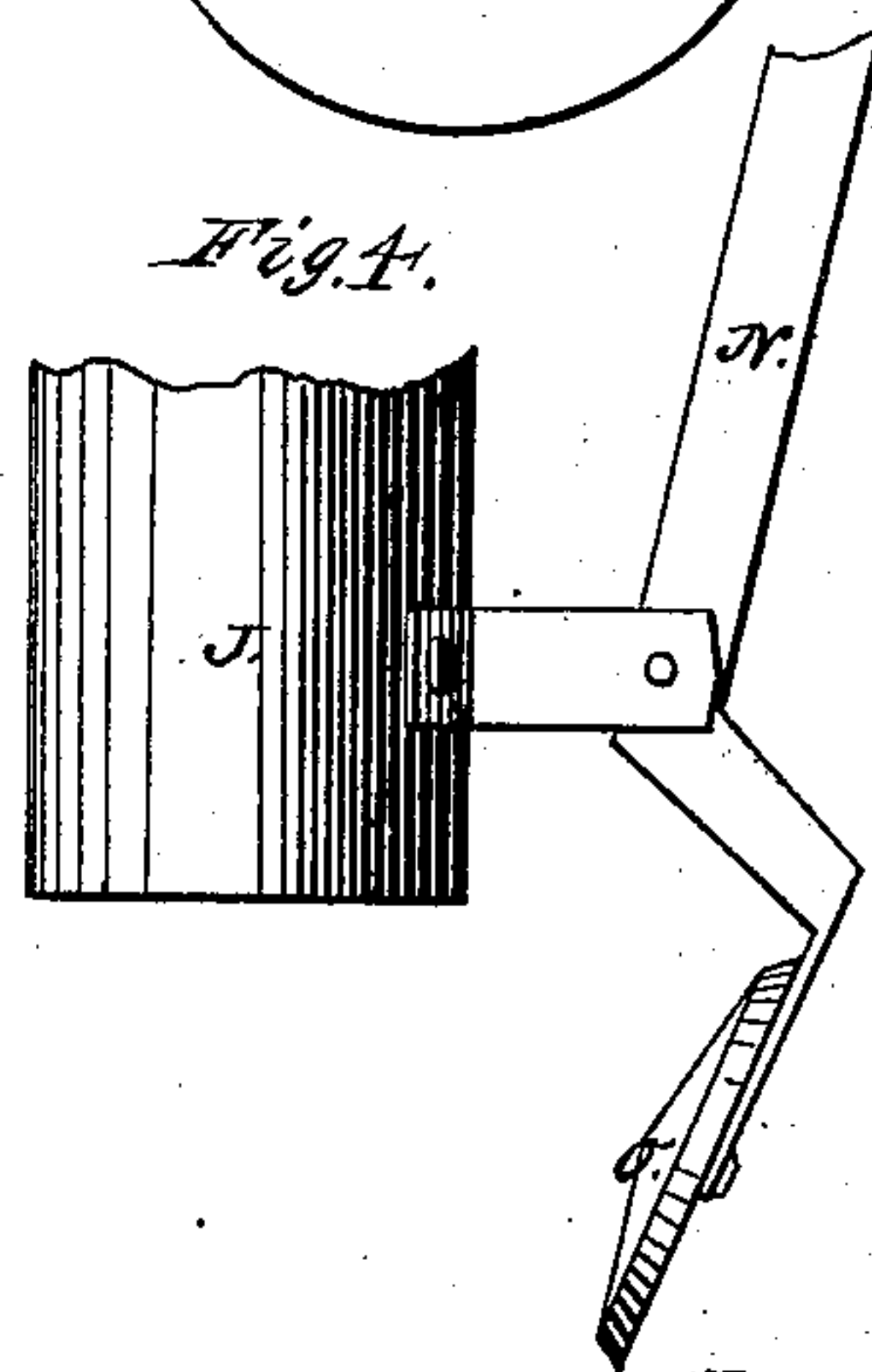
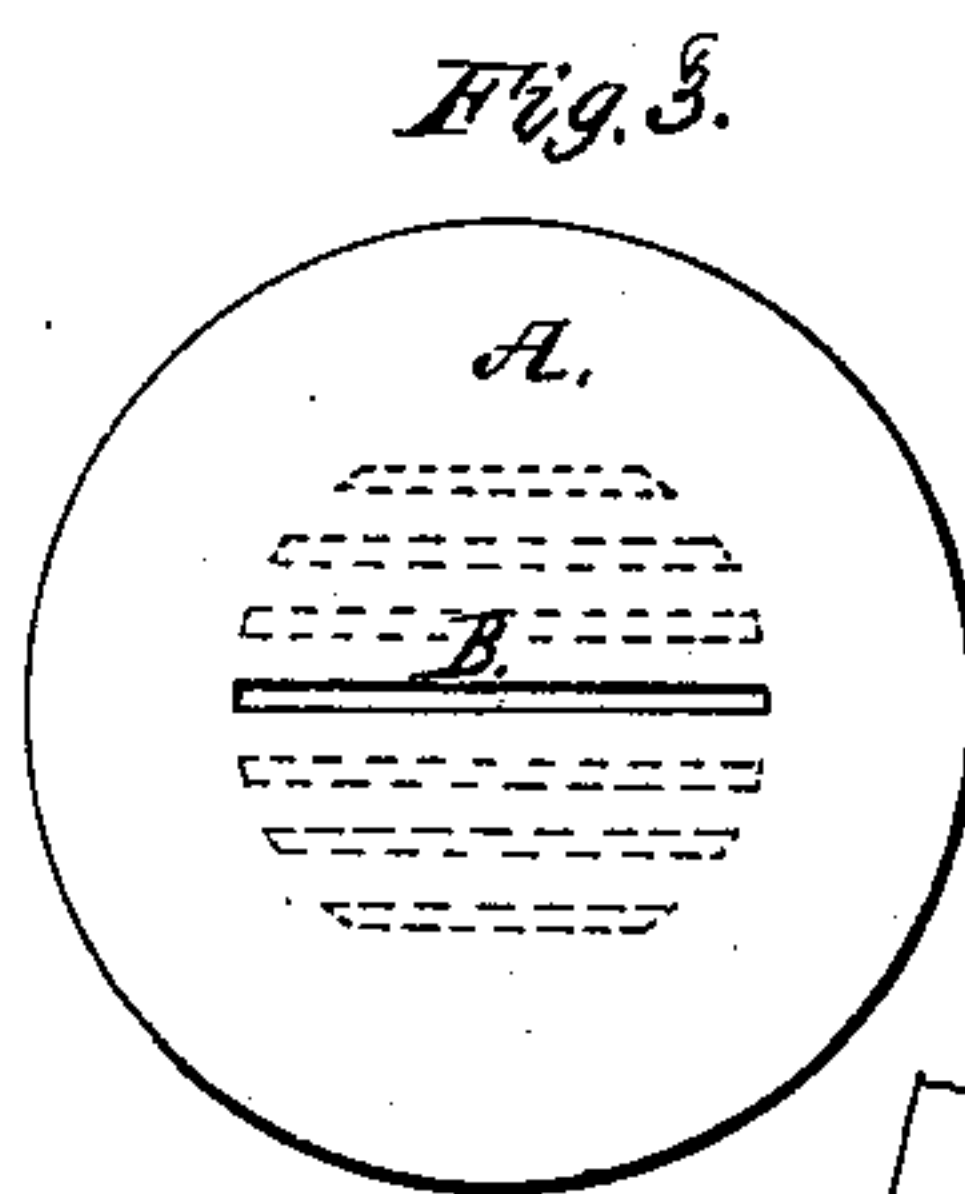
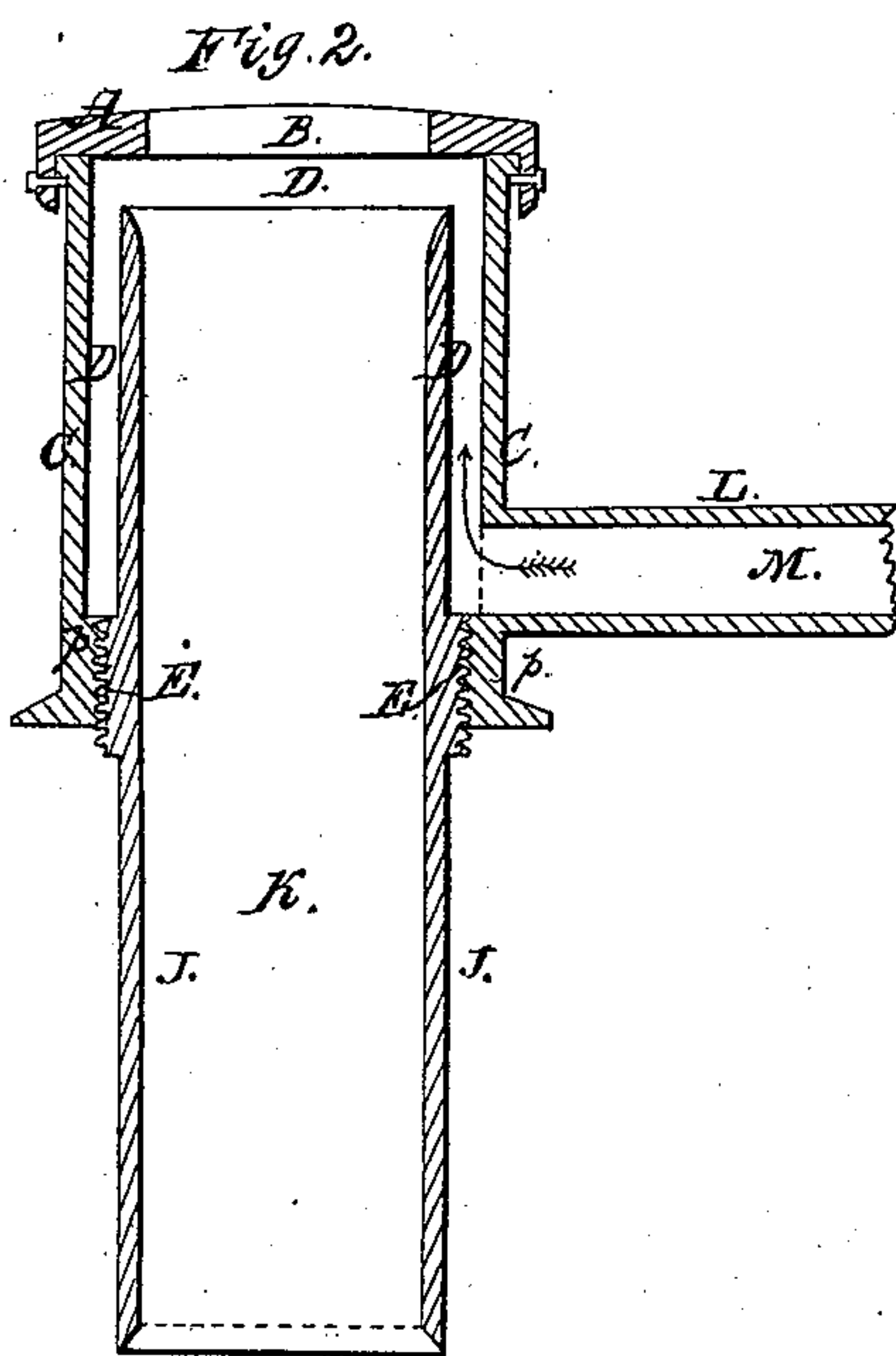
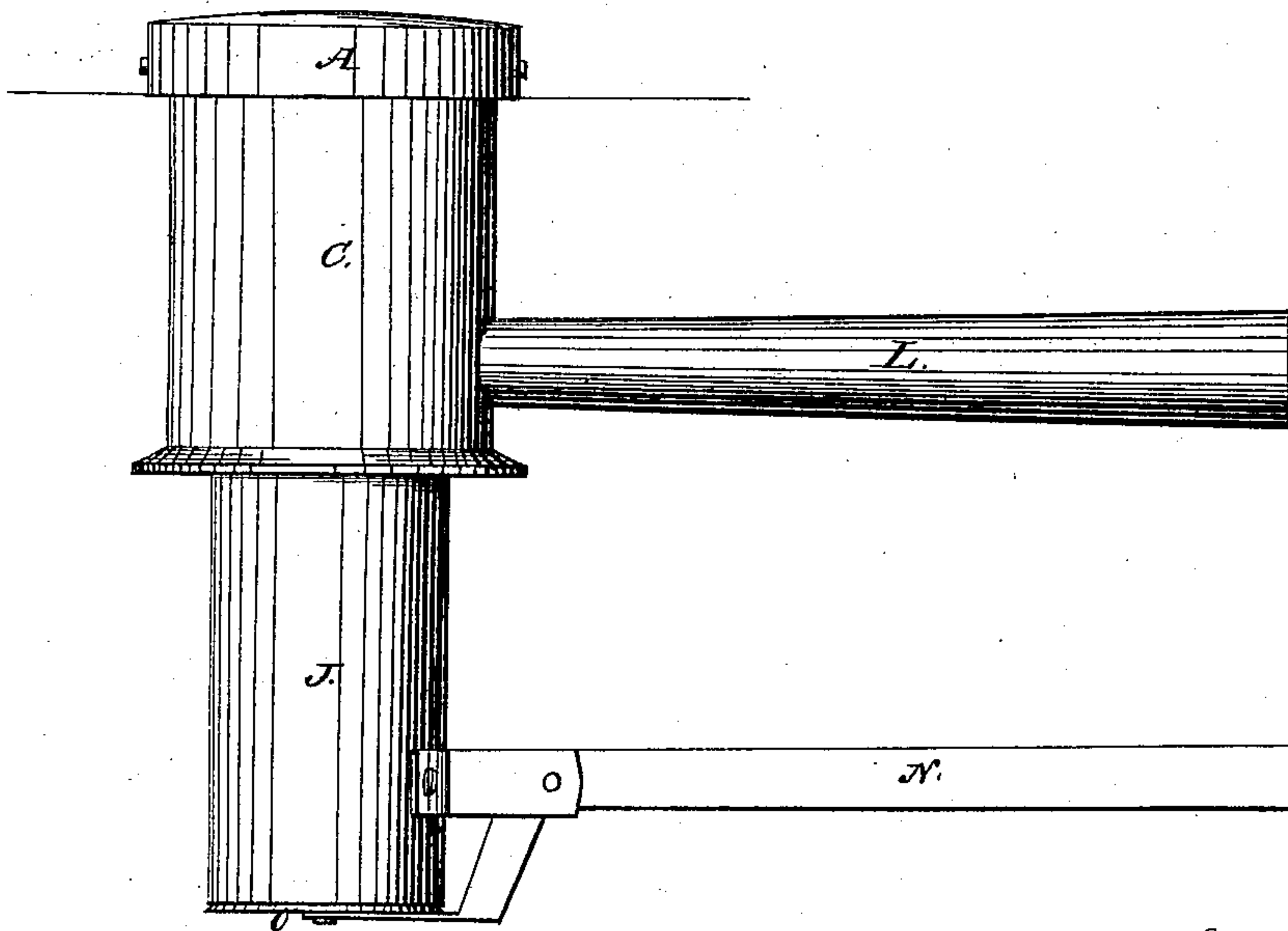


L. Donnell,

Tuyere.

N^o 77,178, Fig. 1.

Patented Apr. 28, 1868.



Witnesses
A. H. Evans
J. C. Evans

Inventor:
LEWIS DONNELL.

United States Patent Office.

LEWIS DONNELL, OF COLUMBUS, OHIO.

Letters Patent No. 77,178, dated April 28, 1868.

IMPROVEMENT IN TUYERES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, LEWIS DONNELL, a citizen of Columbus, Ohio, have invented a new and useful Tuyere-Iron; and I do hereby declare that the following is a clear, full, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure I is a perspective view of the whole tuyere-iron.

Figure II is a sectional view.

Figure III is a view of the revolving top, with its slots.

Figure IV represents the bottom valve open.

The nature of my invention consists in an easy mode of regulating the draught, securing an intense heat on the spot to be heated without shifting the iron about in the fire, and of relieving the tuyere-iron of cinders and dirt.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my tuyere-iron with a revolving top, A, so that the slots B may be brought across or immediately under the metal to be heated, (Fig. III,) thus securing an intense heat on any required spot without shifting the position of the iron to be heated.

The lower or inner cylinder, J, is made with a screw, *p*, at the point of contact, E, with the upper or out cylinder, and this screw fits in a female screw, by which the lower cylinder is raised or lowered, thus increasing or diminishing the draught D, the air to be carried between the inner and the outer cylinders. The lower end of the inner cylinder, J, is fitted with a closing-valve, O, worked with a bent lever, N, by which the cinders and dirt can be easily thrown from the cylinder. The lever or handle, N, also acts as the lever by which to turn the lower cylinder in order to regulate the draught.

Claim.

What I claim as my invention, and desire to secure by Letters Patent, is—

A combination of the screw *p* with the revolving top A, the valve O, the cylinder C and J, and the handle or lever N, constructed and operated substantially as and for the purpose set forth.

LEWIS DONNELL.

Witnesses:

THOMAS E. TAYLOR,

JOHN D. WELLS.