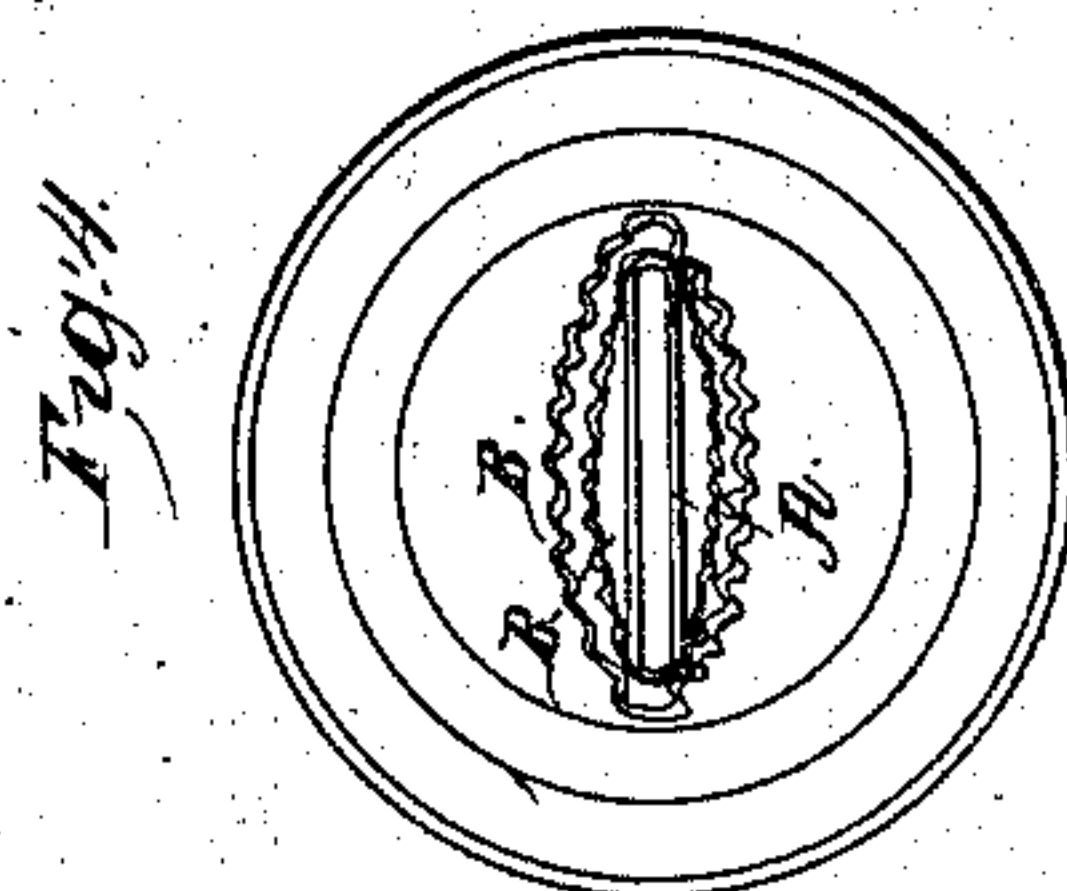
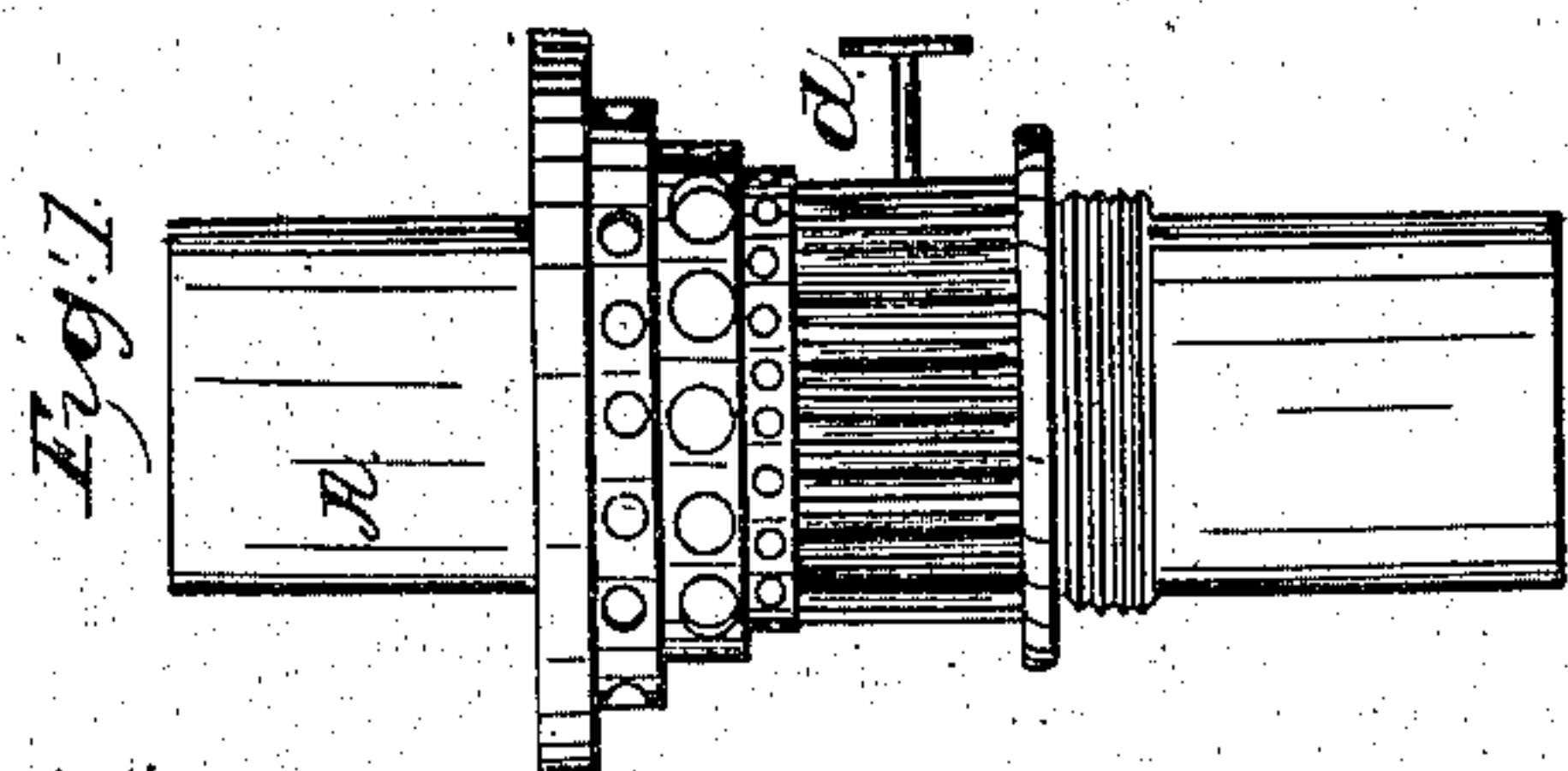
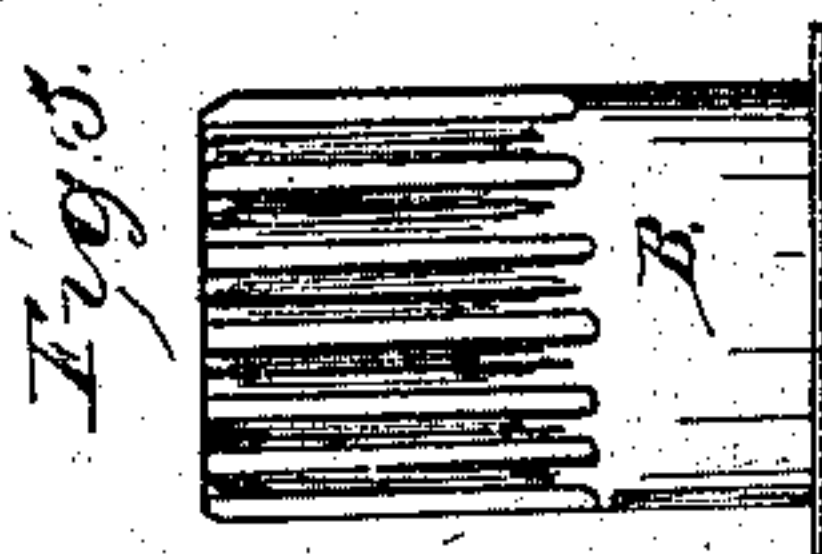
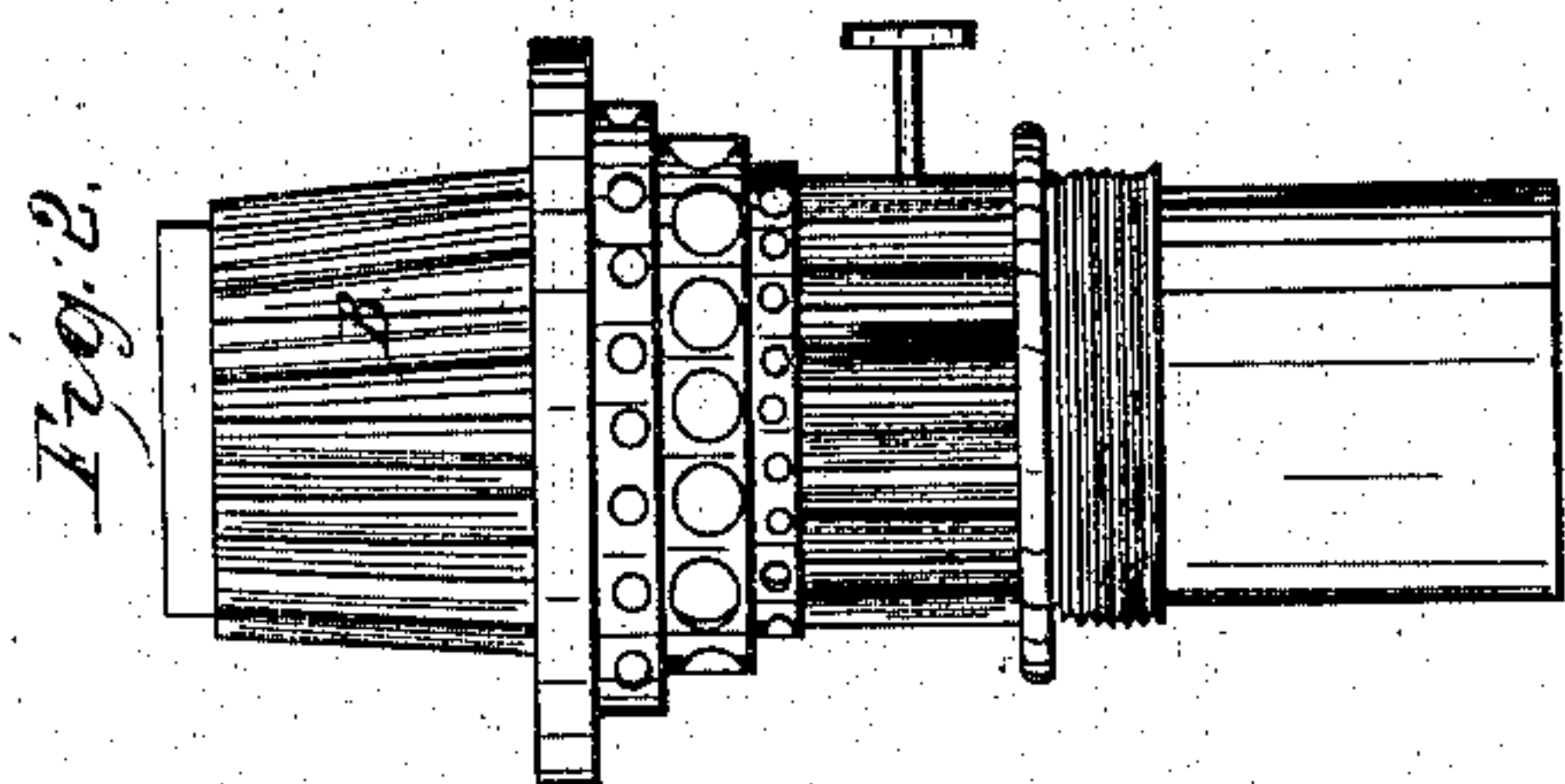
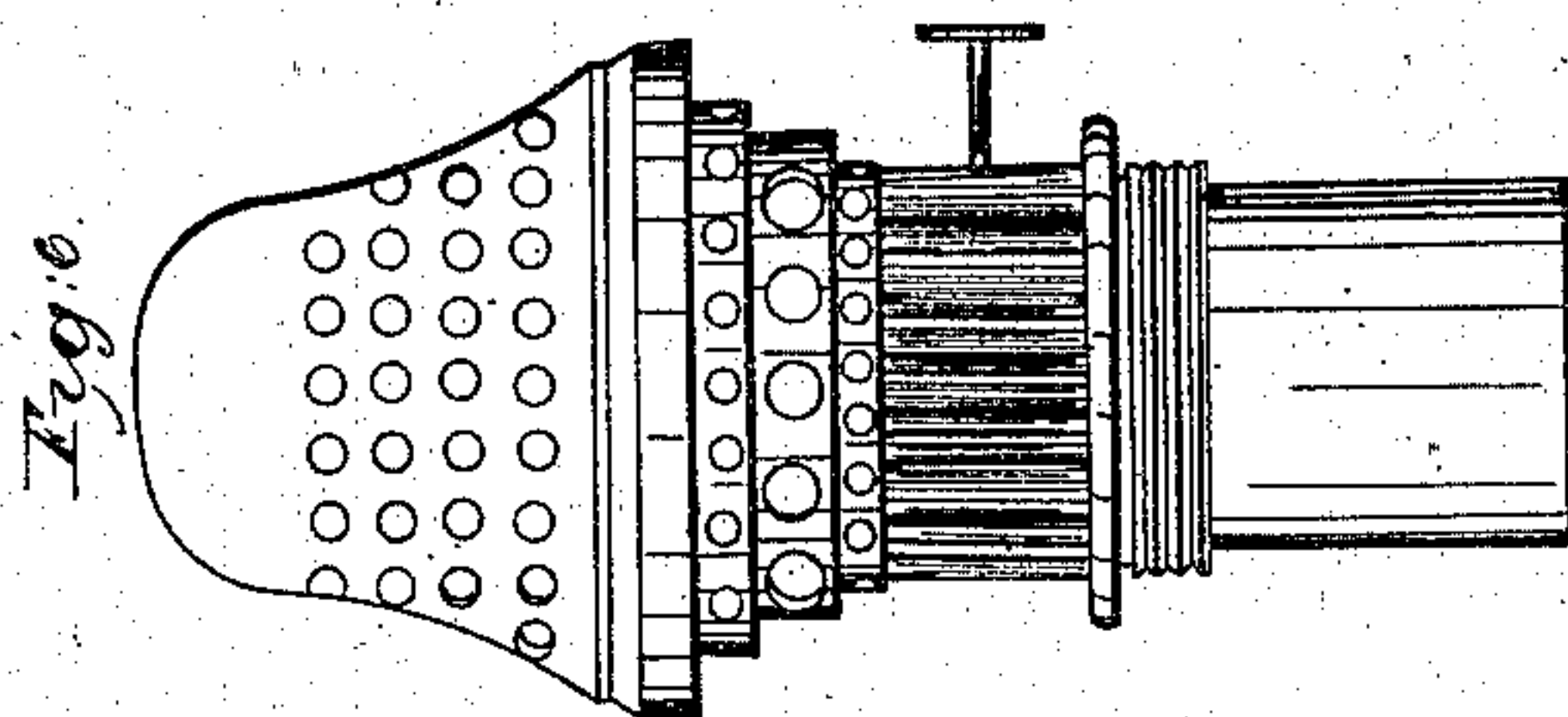
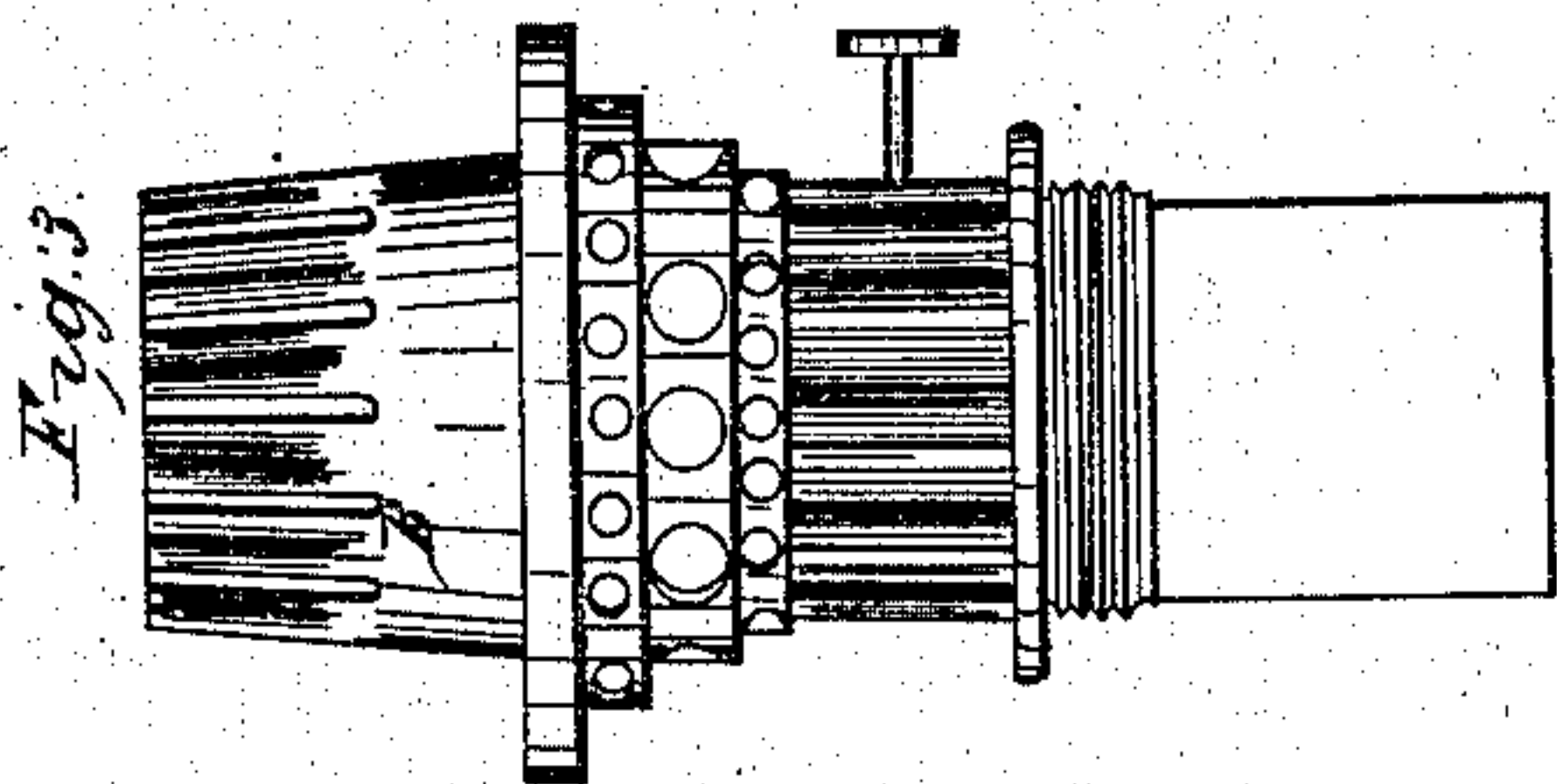


*F. Heidrick,  
Lamp Burner.*

*N<sup>o</sup> 32,248.*

*Patented May 4, 1861.*



*Witnesses:  
S. H. Alexander  
Jm. Ruyter*

*Inventor:  
F. Heidrick*

# UNITED STATES PATENT OFFICE.

FREDERICK HEIDRICK, OF PHILADELPHIA, PENNSYLVANIA.

## LAMP.

Specification of Letters Patent No. 32,248, dated May 7, 1861.

*To all whom it may concern:*

Be it known that I, FREDERICK HEIDRICK, of Philadelphia, in the State of Pennsylvania, have invented certain new and useful  
5 Improvements in Coal-Oil Lamps; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked  
10 thereon, in which—

Figure (1) represents the body of the wick tube divested of the sheaths and cap. Fig. (2) represents one sheath upon the wick tube. Fig. (3) represents the second  
15 sheath over the first coming as will be observed full up to the mouth of the wick tube. Fig. (4) is a plan view of the top, showing the wick tube, and also the corrugations in the sheaths. Fig. (5) represents the mode  
20 of constructing the sheaths. Fig. (6) represents the whole arrangement put together and ready for use.

The nature of my invention consists in the employment and arrangement of such  
25 devices as will be hereinafter fully set forth.

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

In Fig. (1) (A) represents the wick tube  
30 or burner the lower part of which is provided with perforations, as fully shown, and also as usual the wick pinion (a). The object of the perforations will be more fully appreciated hereafter. It would be well to  
35 observe that the collar which surrounds the lower part of the wick tube should be provided on its inner side with steps, as it were, for the sheaths to rest upon.

(B) represents the sheath, which should  
40 be annular at its lower end, and gradually tapering to an ellipse at its upper end, as shown in Fig. (5), said sheath should be corrugated, which corrugation must extend

up around the mouth of the ellipse. I employ two sheaths, though a greater or less  
45 number may be used, without very materially changing the effect. My object in thus constructing these sheaths is to feed the flame at the point of combustion with the greatest quantity of oxygen, as it is well known that  
50 just in proportion as the flame is supplied with oxygen, just in that proportion is produced an economical and brilliant light.

Now by constructing my sheaths as already described, and slipping one over the wick  
55 tube so that its smaller end will come pretty near the top of the tube, and then putting the other over the first so that its end will come up full, to the end of which tube I supply the flame, with currents of oxygen  
60 around its entire body. The sheaths act as chimneys for creating drafts, for as the heated air around the flame ascends, these sheaths admitting fresh air at their bottom convey it up in small currents, thus  
65 constantly supplying the flame at the point of combustion with the requisite quantity of oxygen.

Over the mouth of the wick tube I use the cap (F) but do not confine myself to any  
70 particular construction of said cap, as I use several of different forms and shapes.

I do not claim broadly the corrugated sheaths, as they have been known before; but  
75

What I do claim and desire to secure by Letters Patent is—

So arranging said sheaths, that the outside one will come up even with the top of the wick tube, and the top of the 2nd a  
80 little below that of the 1st in the manner and for the purpose specified.

FREDR. HEIDRICK.

Witnesses:

T. H. ALEXANDER,  
WM. HUGHES.