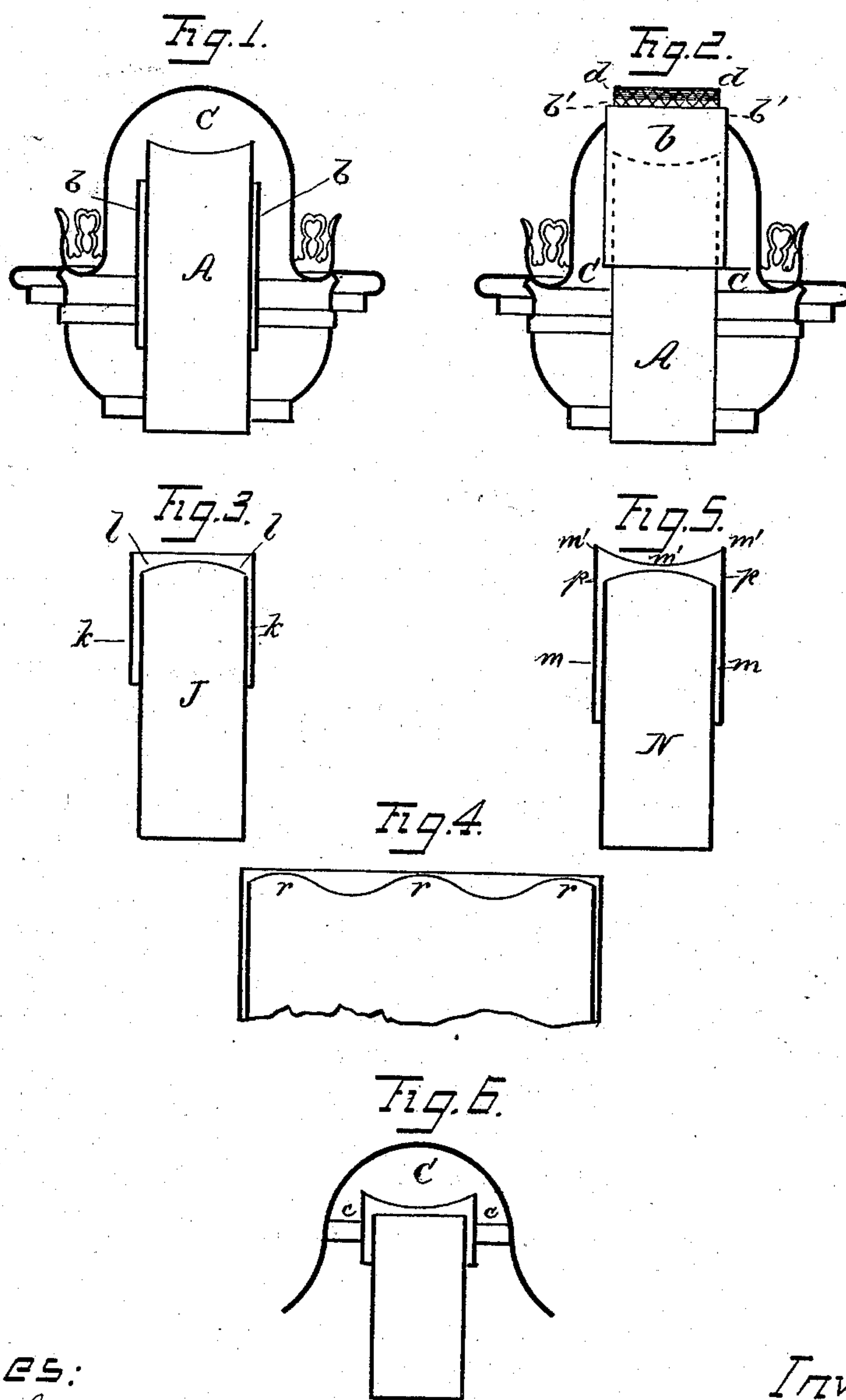


(No Model.)

A. THURLOW.  
Lamp Burner.

No. 241,755.

Patented May 17, 1881.



Witnesses:  
H. C. McArthur,  
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# UNITED STATES PATENT OFFICE.

ALFRED THURLOW, OF ATHERSTONE, COUNTY OF WARWICK, ENGLAND.

## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 241,755, dated May 17, 1881.

Application filed January 7, 1881. (No model.) Patented in England December 2, 1880.

*To all whom it may concern:*

Be it known that I, ALFRED THURLOW, of Atherstone, in the county of Warwick, England, have invented new and useful Improvements in Lamp-Burners for Burning Various Kinds of Oils, which are set forth in and by the following specification and drawings.

My invention has for its object improvements in lamps, and has reference, in particular, to that part of the lamp known as the "wick-case," and to lamps where one or more flat wicks are used.

Hitherto it has been the custom in flat-wick lamps to trim the wick slightly round or convex for the purpose of producing a convex or round-topped flame, and there is more or less variation caused in the flame of such lamps, because it is practically impossible to always trim the wick exactly right, so that there is a variation in the flame and in the light produced and in the smoke created by such lamps, and a constant maximum perfection is not always obtained.

My invention consists in the combination, in a lamp-burner, of a wick-tube and inclosing-sleeve, either having a curved upper edge, that of the other being straight.

Instead of cutting the wick convex in shape, I make the top of the wick-tube concave, either of a regular or concentric curve, or a parabolic or other curve; but in either and every case the effect is to produce a convex flame from a wick cut flat.

It will readily be understood that a wick may be cut quite flat without variation; but to avoid even the risk of any slight variation I provide an outer case or cases, whether there be one or more wick-tubes, to slide up and over the wick-tubes by a lever, spring, or other convenient device, so that when the outer case is lifted up to a little above the cone or top of the burner it forms a guide for the scissors, and it is very easy, therefore, to cut the wick level to it, and thus insure an absolutely regular flat shape for the wick.

In case of lamps requiring to burn without chimneys, I make the top of the wick-tube convex and cover it with an outer slide, so as to regulate the flame.

I will now describe my invention, having respect to the accompanying sheet of drawings.

Figure 1 is a sectional elevation of a burner suitable for burning volatile oils—such as kerosene or petroleum—and is shown with the wick-tube A concave, being formed to the curve of a parabola, which will have the effect of producing a flame of convex form, but also to the curve of a parabola, which I have found to be the best in practice. Now, as there might be some difficulty in cutting the top of the wick quite square and flat, I have shown the outside sliding case, b, which is made to rise above the burner C, as shown clearly by Fig. 2, with the charred wick d d ready to be cut off to the top edge, b' b', of the case b, after which the case b would be lowered to its normal position, as shown in Fig. 1.

Fig. 3 illustrates a wick-tube, J, suitable for burning less volatile oils—such, for instance, as sperm, or colza, or benzoline—and it is provided with the outer case, k k, which fits the wick-tube J quite tightly, and is set near the top, thus leaving the corners l l of the wick exposed to the flame, by which means I am enabled to burn such oils without a chimney, and almost without the slightest smell, and with a clear and beautiful light.

Fig. 5 is a modification of the one shown by Fig. 3, and would answer the same purpose very nearly. In this view the outer slide, m m, on the wick-case N is hollowed at the top part, m' m' m', which exposes the corners p p of the wick in a similar manner to the previous figure; or the wick-tube N might be made quite flat, and all the hollow produced in the outer case, m.

Fig. 4 is another modification, showing an arrangement by which I can make a flame almost of any desired width by forming a series of curves or corrugations, r r r.

In Fig. 6 is shown a modification in which the wick-tube is flat on top, and serves as the guide in cutting the wick, while the curved slide is secured to the burner by feathers c c.

My invention is equally applicable to lamps having more than one wick, which will be readily understood by any practical lamp-maker.

The various lamp-burners shown may also be used in stoves for heating purposes.

Having now described my said invention of improvements in lamps, I would have it clearly understood that I do not confine myself to the exact shapes shown in the drawings for the va-



rious parts, nor to the amount of curve given to the wick tubes and cases, as these may be considerably varied, according to the design of the lamp and the various oils to be used.

5 I am aware that a wick-tube having a concave top or upper edge is not broadly new, and such I do not claim; but

What I do claim is—

1. The combination, in a lamp-burner, of a  
10 wick-tube having a curved upper edge, as set forth, with an inclosing-tube having a straight upper edge, whereby the shape of the flame is determined and facility afforded for severing the wick on a line at right angles to its edges.

2. In a lamp-burner, a wick-tube having its  
15 upper edge cut to a parabolic curve, in combination with an inclosing-tube, one of said tubes being arranged to slide vertically upon the other, as set forth.

In testimony that I claim the foregoing as  
20 my own I affix my signature in the presence of two witnesses.

ALFRED THURLOW.

Witnesses:

JAMES EVERITT,

MARK MINGAY,

*Both of Atherstone.*