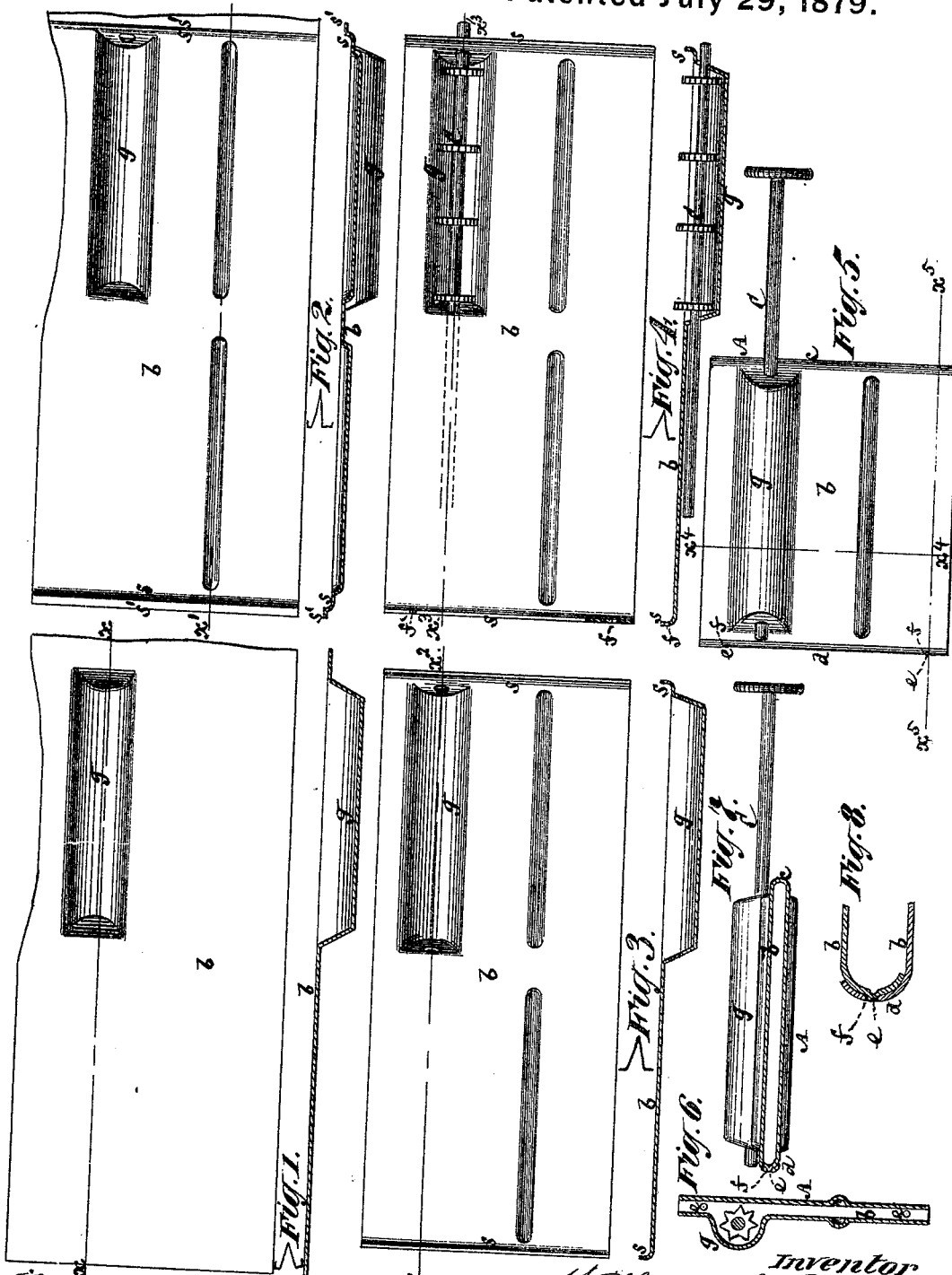


W. O. LINCOLN.
Wick-Tube.

N o. 218,037.

Patented July 29, 1879.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM O. LINCOLN, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE
BRIDGEPORT BRASS COMPANY, OF SAME PLACE.

IMPROVEMENT IN WICK-TUBES.

Specification forming part of Letters Patent No. **218,037**, dated July 29, 1879; application filed
May 14, 1879.

To all whom it may concern:

Be it known that I, WILLIAM O. LINCOLN, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Wick-Tubes, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention, although more especially designed for the burners of oil-stoves, is also applicable to wick-tubes of other burners.

The invention consists in a wick-tube formed of a single piece of sheet metal doubled or folded over intermediately of its length, also having the housing for the feed wheel or wheels struck up out of said piece, and having the ends of the latter united, preferably by turning or bending them to fold or lap one over or within the other, and by indentations or teats, substantially as hereinafter described, whereby a cheap and secure wick-tube may be produced with important economy of material and a reduced number of seams or joints, and without the aid of solder.

In the accompanying drawings, Figure 1 represents a face view and a longitudinal section, on the line $x x$, of the blank from which the wick-tube is made in the first or early stage of its formation; Fig. 2, a face view and a longitudinal section, on the line $x^1 x^1$, of said blank in the next stage of its manufacture; Fig. 3, a face view and a longitudinal section on the line $x^2 x^2$, showing a still further shaping of the blank; and Fig. 4, a face view and a longitudinal section on the line $x^3 x^3$, showing a yet more complete shaping of the blank and the feed wheel or wheels, as arranged within the housing formed in or on the blank. Fig. 5 represents a side view of a flat wick-tube constructed in accordance with the invention, and having the feed wheel or wheels arranged within it; Fig. 6, a vertical section of the same on the line $x^4 x^4$; Fig. 7, a horizontal section thereof on the line $x^5 x^5$; and Fig. 8, a horizontal section, in part, upon a larger scale, in illustration of the manner in which the joint is made up one of the narrow sides of the wick-tube.

The flat wick-tube A, Figs. 5, 6, and 7, is formed of a single plate or piece of sheet metal, b ,

doubled or folded over about midway or intermediate of its length, as shown at c , to form the two broad sides and one narrow side of the tube, and said piece having its ends or edges turned or bent so as to fold or lap one over or within the other, as shown at d , Figs. 5, 7, and 8, to form the other narrow side of the wick-tube, and the lap-joint thus produced up one narrow side of the wick-tube, afterward united by indenting the inner lapping edge or end of the plate from the inside of the tube, and causing the indentations or teats e to enter holes f , previously made in the outer lapping end of the plate. Thus the two narrow sides of the wick-tube are made close and secured without the aid of solder, and only one of said sides has a seam or joint.

The housing g , too, of the wick-feeding wheel or wheels C, which is struck up, is formed of or from the same single plate or blank b as the rest of the wick-tube, whereby the wick-tube may be more economically produced than by forming it, as heretofore, of two pieces of sheet metal meeting or folding one within, over, or around the other at both narrow sides of the tube, and one of which pieces has the housing struck up out of it, inasmuch as the operation of forming the whole piece with housing and turning the ends of said piece is no greater than forming one-half only of the wick-tube and housing thereon, and one joint at least is dispensed with.

This improved wick-tube, composed of a single piece of sheet metal and with the housing for the feed wheel or wheels formed out of the solid, is or may be produced first by striking up the housing g in a plain blank, as shown in Fig. 1, then by bending and flanging the ends of the plate or blank, as at $s s'$, Fig. 2, afterward trimming off the flanges or surplus end portions, s' , as in Fig. 3, then inserting the wick-feeding wheel or wheels C in the housing g , and forming the holes f in one bent end of the plate, as shown in Fig. 4, and subsequently bending or folding over the plate or blank about midway of its length, as at c in Figs. 5 and 7, and fitting and uniting its turned or bent ends, as hereinbefore described, and shown at d in Figs. 5, 7, and 8.

By making the whole wick-tube with its housing for the wick-feeding wheel or wheels of a single piece, as herein described, not only is one seam or joint up the narrow sides of the tube dispensed with, but all soldering of the tube is or may be avoided, and the lap-joint at the one narrow side of the tube is or may be firmly and closely secured by the teats or indentations *e*, fitting within the holes *f*, thus not only economizing the construction of the tube, but adding to its strength and safety.

An important economy of metal is effected by a wick-tube of this construction, as compared with a wick-tube made of two parts and having the housing struck up on one of them, for when a housing is struck up with its end close to the edge of the metal the portion of the edge opposite it is drawn inward considerably, and necessitates the trimming off of the edge to render it straight again, thereby entailing a loss of metal. As in a wick-tube made in one piece and having a housing struck up on it one edge will be so far from the housing as not to be drawn inward and need trimming, considerable metal will be saved.

I am aware that a wick-tube has been made in one piece, folded at about the middle and having its ends lapped to form a seam oppo-

site the fold; and I am also aware that a wick-tube composed of two pieces, having their edges lapped over each other to connect them, and one having a housing struck up on it is old; hence I do not claim these as my invention.

I claim—

1. A flat wick-tube with a feed-wheel housing, the whole made of a single piece of sheet metal, which is folded at or near the middle of its length to form the two broad sides and one narrow side of the tube, and which has the feed-wheel housing struck out from that portion of it on one side of the fold, and the ends of which are turned inward and lapped together to form the other narrow side of the tube, substantially as herein described.

2. A flat wick-tube formed of a single piece of sheet metal doubled or folded over intermediate of its length, with the housing for the wick-feeding wheel or wheels struck up out of it, and said piece having its ends turned or bent to fold or lap one over and within the other, and secured by indentations or teats, substantially as shown and described.

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Witnesses:

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