

(No Model.)

2 Sheets—Sheet 1

J. W. ORPHY.

METHOD OF MAKING SIDE TUBES FOR LANTERNS.

No. 335,234.

Patented Feb. 2, 1886.

Fig. 1.

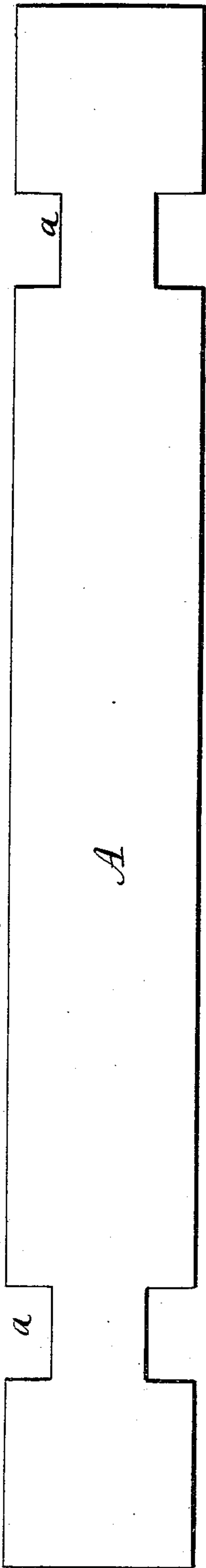


Fig. 2.



Fig. 3.



Fig. 4.

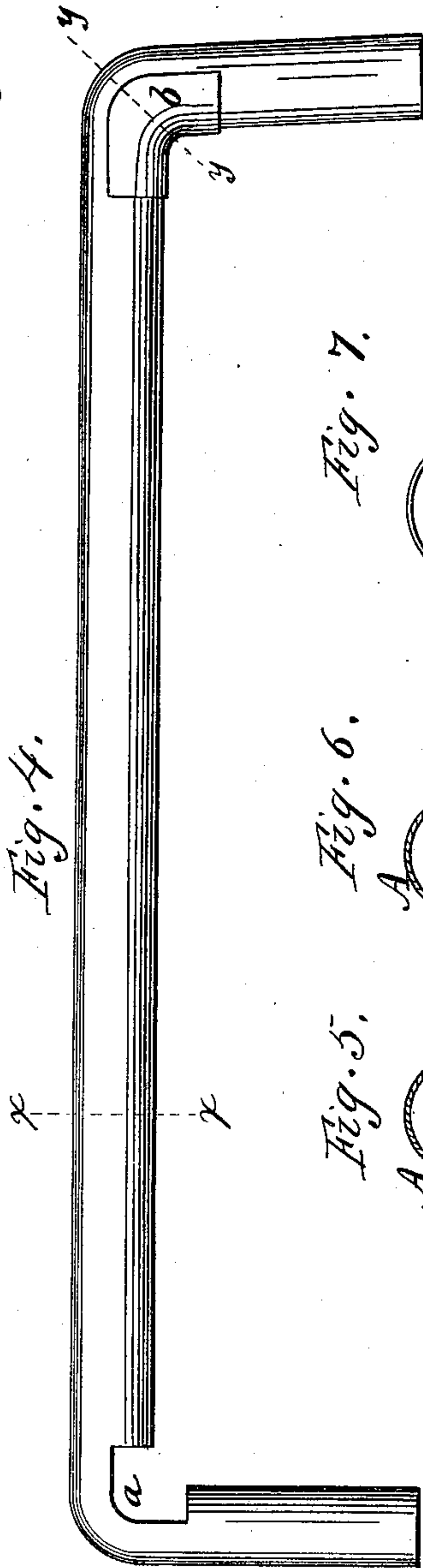


Fig. 5.

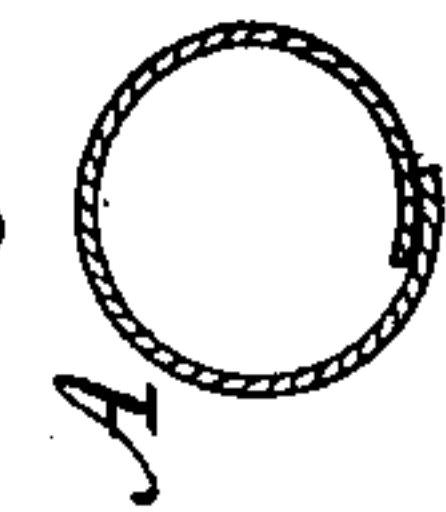


Fig. 6.

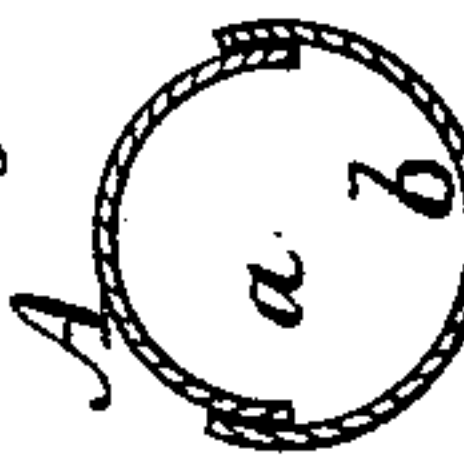


Fig. 7.



Attest.

*E. K. Adams*

*A. L. Smith*

Inventor.

*John W. Orphy,*

*per R. F. Cogswell,*

*att'y.*

(No Model.)

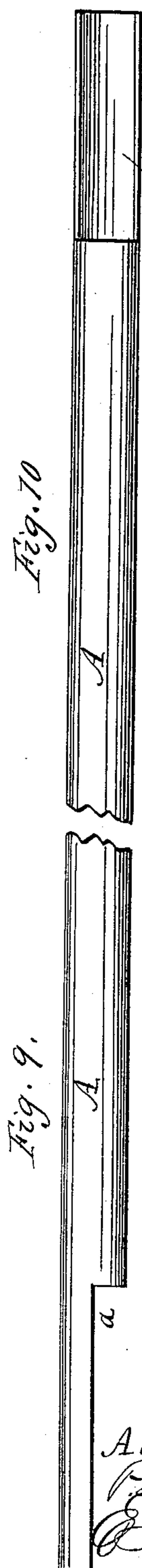
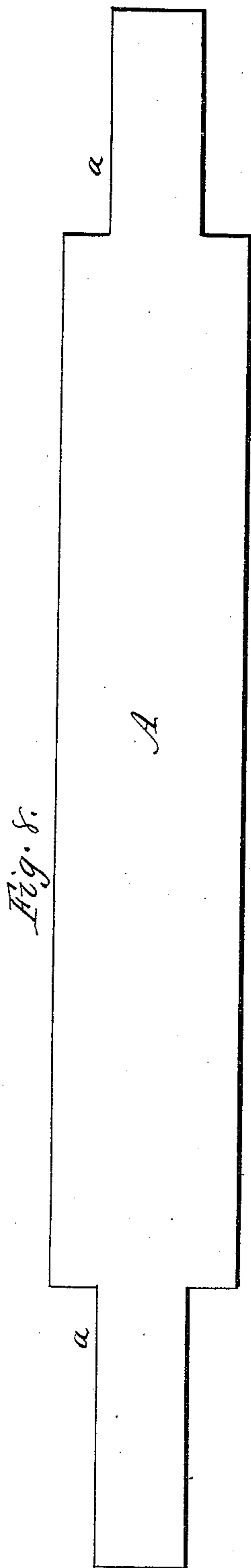
2 Sheets—Sheet 2.

J. W. ORPHY.

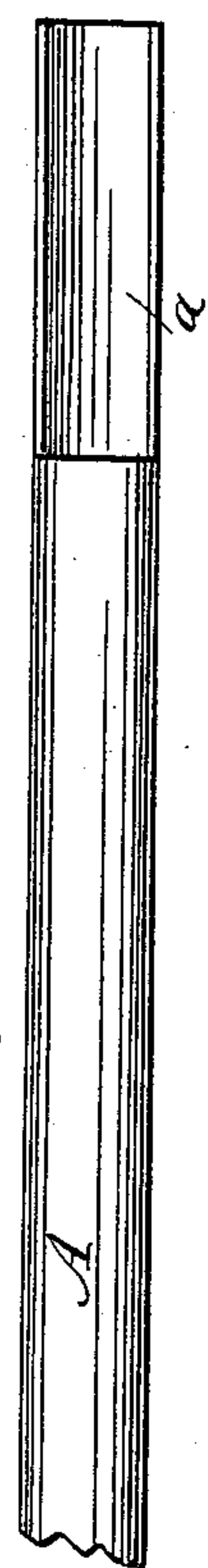
METHOD OF MAKING SIDE TUBES FOR LANTERNS.

No. 335,234.

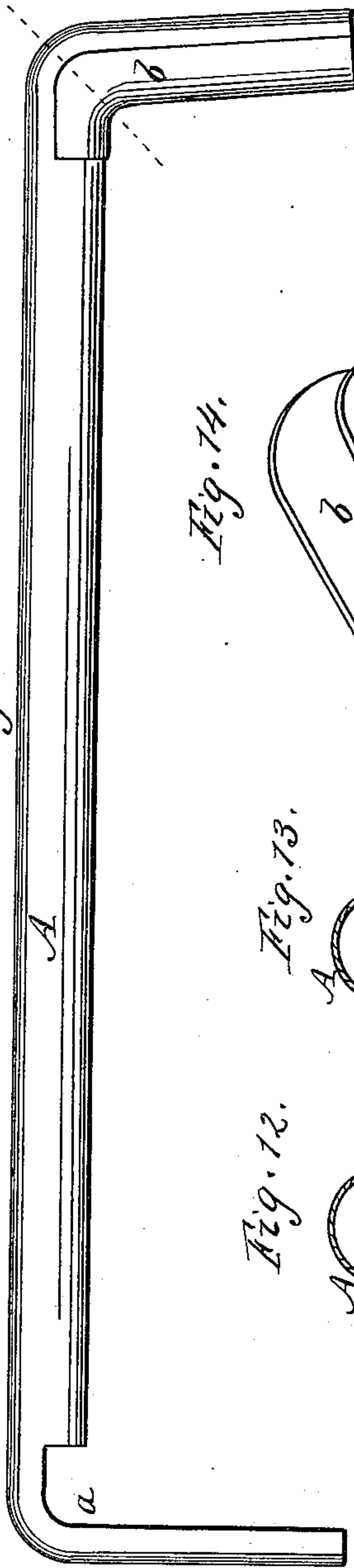
Patented Feb. 2, 1886.



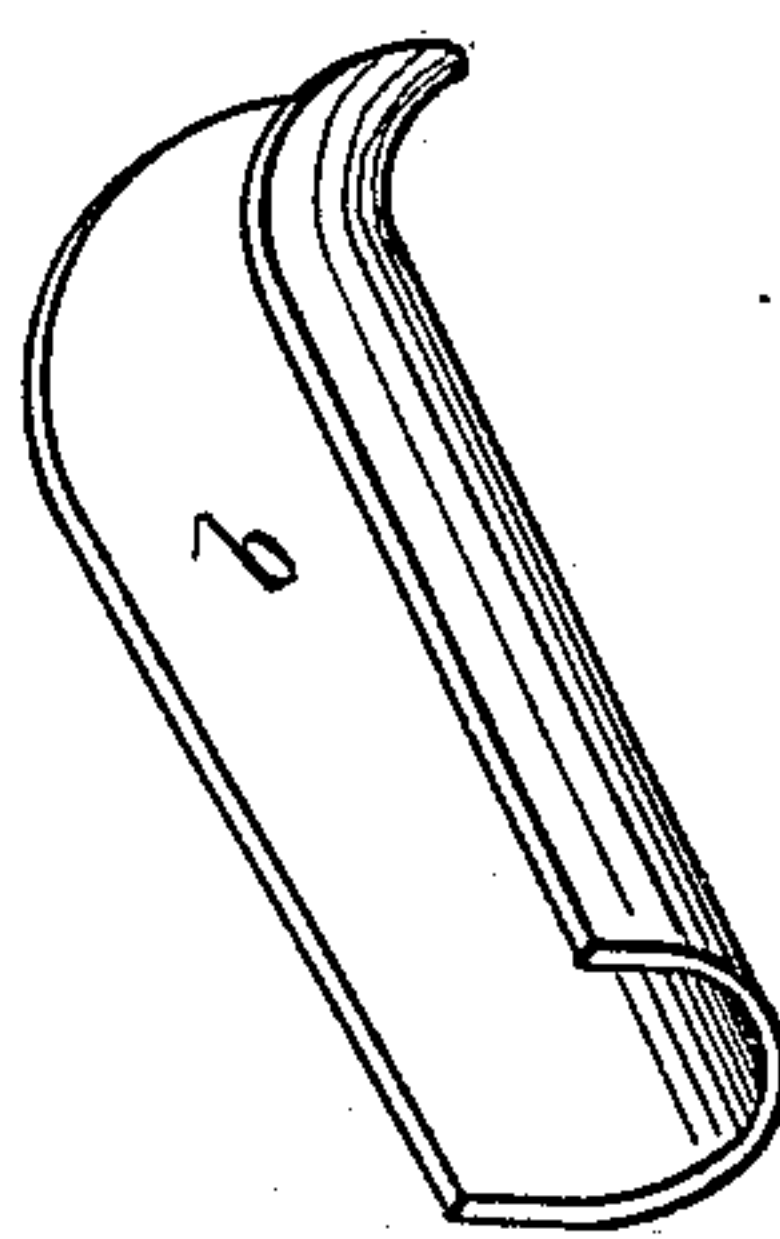
*Fig. 10*



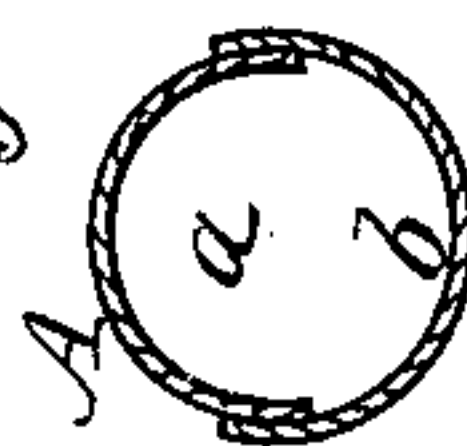
*Fig. 11.*



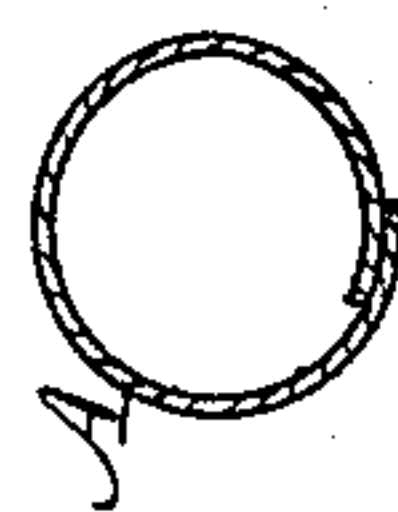
*Fig. 14.*



*Fig. 13.*



*Fig. 12.*



Attest.

*John W. Orphy,*  
*W. R. F. Osgood,*  
*Atty.*



# UNITED STATES PATENT OFFICE.

JOHN W. ORPHY, OF ROCHESTER, NEW YORK.

## METHOD OF MAKING SIDE TUBES FOR LANTERNS.

SPECIFICATION forming part of Letters Patent No. 335,234, dated February 2, 1886.

Application filed November 19, 1885. Serial No. 183,353. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. ORPHY, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain  
5 new and useful Improvement in Making Side Tubes for Lanterns; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

10 My improvement relates to the method of making side tubes for lanterns; and it consists in cutting a rectangular blank of sheet metal with notches at the points where the elbows are to be made, then rolling or folding the  
15 blank in tubular form, then bending the tube at the points where the notches are made to form the elbows, then applying patches over the notches, and finally dipping the tube in melted tin, or soldering or otherwise closing  
20 the seams, all as hereinafter described.

In the drawings, Figure 1 is a plan view of the blank. Figs. 2 and 3 are views of the same rolled into a straight tube. Fig. 4 is a view of the same bent into the form of a lantern-tube, one end showing the open notch  
25 and the other the patch. Figs. 5 and 6 are cross-sections of Fig. 4, respectively in lines *xx* and *yy*. Fig. 7 is a perspective view of the patch. Figs. 8, 9, 10, 11, 12, 13, and 14  
30 are views similar to Figs. 1, 2, 3, 4, 5, 6, and 7, but showing a modification.

In carrying out this invention a rectangular strip of sheet metal is first cut, forming the blank A. At the points where the elbows  
35 are to be bent this blank is cut with notches *a a*. The blank is then rolled around a mandrel or passed through a machine and made in tubular form, the edges overlapping each other, as shown in Fig. 5, and the notched  
40 portions making half-tubes in cross-section. The tube is then bent at the notches to form the elbows of the tube. Patches *b b* are then

applied to the tube covering the notches, and finally the tube is dipped in melted tin, soldered, or otherwise prepared to secure the  
45 seam and fasten the patches in place. The patch may be of the form shown in Fig. 4, covering simply a notch made in the angle of the tube, or of the form shown in Fig. 11, where the patch extends to the end of the tube  
50 and covers the notch extending the same length.

The advantages of this invention are that it enables the side tube to be made from one piece of metal and to be bent at the elbows  
55 without trouble, thus greatly simplifying the device, requiring less labor, and using less stock. Ordinary side tubes are made of several pieces with separate elbows, or are bent from a whole tube, which strains and breaks the  
60 metal, or are made of two strips longitudinally grooved and then seamed together.

This invention is applicable not only to side tubes of lanterns, but also to similar tubes for  
65 other purposes.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The method herein described of forming side tubes for lanterns, which consists in providing a blank, notching the same where the  
70 elbow-bends are to be made, then rolling said blank in the form of a tube, then bending the elbows, then applying patches over the notches, and finally dipping the tube in melted tin,  
75 soldering, or otherwise preparing it to close the seams, as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN W. ORPHY.

Witnesses:

R. F. OSGOOD,  
C. B. SMITH.