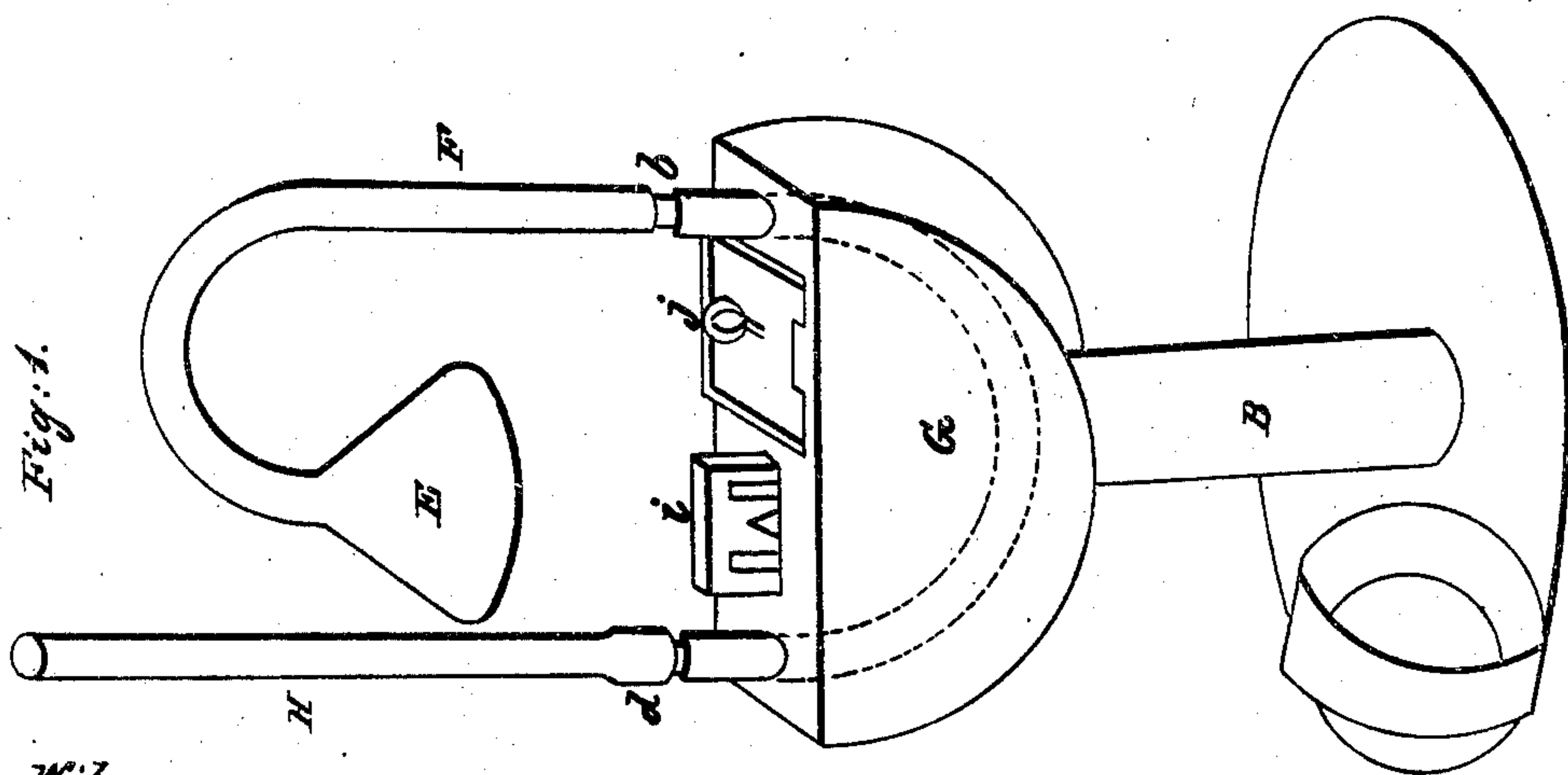
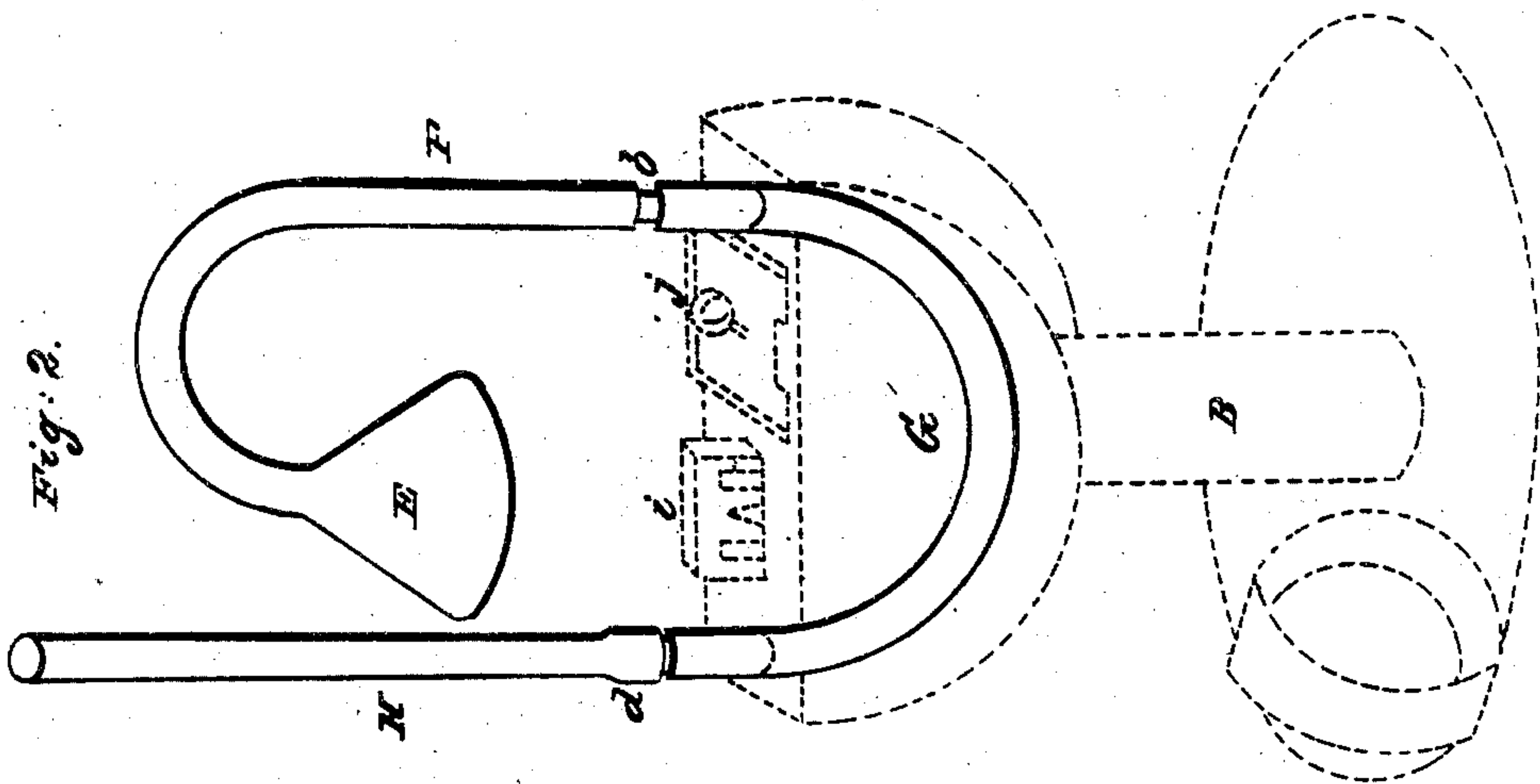


Z. SWOPE.

Lamp.

No. 27,500.

Patented March 13, 1860.



Witnesses:

Henry Schaeferman  
William D. Sprecher  
Henry F. Sprecher  
Geo D. Sprecher.

Inventor:

Zachariah Swope.

# UNITED STATES PATENT OFFICE.

ZURIEL SWOPE, OF LANCASTER, PENNSYLVANIA, ASSIGNOR TO HIMSELF, H. D. MUSSELMAN, AND WM. D. SPRECKER, OF SAME PLACE.

## LAMP.

Specification of Letters Patent No. 27,500, dated March 13, 1860.

*To all whom it may concern:*

Be it known that I, ZURIEL SWOPE, of the city of Lancaster, in the State of Pennsylvania, have invented a new and useful Improvement in Lamps for Burning Tallow, Lard, and Oils for Illuminating Purposes; and I do declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 represents the radiating tube passing through the body of the lamp.

The nature of my invention consists in placing above the flame of the lamp a funnel connected to a tube passing down into and through the body of the lamp, and extending up through the top for the purpose of radiating and conducting the heat of the flame down into the lamp to heat and melt the tallow, lard, or oils.

To enable others skilled in the art to make and use my invention I will proceed to describe the construction and operation; reference being had to the accompanying drawings, the same letters designating like parts on each of the same figures.

In Fig. 1 the black lines represent the contour or outline of the lamp, and the dotted lines those portions of the radiating tube and of the burner or wick-holder which lie within the body of the lamp. In Fig. 2 the dotted lines represent the contour or outside of the lamp and the external portions of the burner, and the black lines represent the funnel and tube throughout its whole length.

In Fig. 1, A represents the body of the lamp resting upon the support B, which again rests upon the bottom D. The body A of the lamp is formed by having two concentric and parallel semicircles with space between them and joined together by a plate of metal at right angles to their edges, the top being coincident with the diameter of the semicircle. All those parts may be made of any suitable size, form and material. Upon the top of the body of the lamp is the burner or wick-holder I of an oblong

form extending a little distance above the top of the lamp and any suitable distance downward within the body of the lamp. It may be made of any desirable form other than an oblong and is furnished with small apertures for inserting a pin to raise and lower the wick. On the top and at the side of the burner is an aperture used in filling the lamp with the material used for illuminating. It is furnished with a lid J which may be opened and closed at pleasure. At a suitable height above the flame is placed the funnel E which is secured to the section F of the radiating tube. This section slides and fits into the curved or bent section G which lies within and passes through the body of the lamp A, and upon the other extremity of this latter section is fitted at the section of the tube H, which also slides thereon. The funnel E and sections F and H of the tube may be removed when desired and thereby make the lamp much like an ordinary one. The extremities of the middle or bent section of the tube are a little above the top of the lamp. It is curved in a semicircular form corresponding to and concentric with the curved bottom and sides of the lamp. Any other form may be given to it. The first of the section F after it leaves the funnel E is also curved to make it join with the middle section at b.

The mode of operation of this lamp is that the heat and volatile products of combustion arising from the flame of the lamp pass into the funnel and through the entire length of the tube, composed of the sections F G H. The heat is imparted to the tallow, &c., in the lamp.

The advantages of this lamp are that the illuminating material need not first be melted before it can be used to fill the lamp. Without impairing the efficiency of the lamp, its waste heat is applied to melt the tallow, &c., keep it in a high temperature.

The combustion of thoroughly fluid and well-heated material in a lamp secures more perfect combustion and gives a more brilliant light. At low temperature more carbonaceous matter passes off unconsumed, which clogs combustion, dims the light, and is a waste of material.



This arrangement is more cleanly, produces a more steady light and less smoke than ordinary devices.

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

Arranging the funnel E, and pipes F, G, and H, with such relation to the wick tube I, that heat may be taken from the flame and passed down into the lamp under the wick

tube so that the heated oil will rise toward 10 the flame and around the wick, substantially as and for the purpose specified.

ZURIEL SWOPE.

Witnesses:

HENRY D. MUSSELMAN,  
WILLIAM H. SPRECKER,  
GEO. D. SPRECKER,  
HENRY F. SPRECKER.