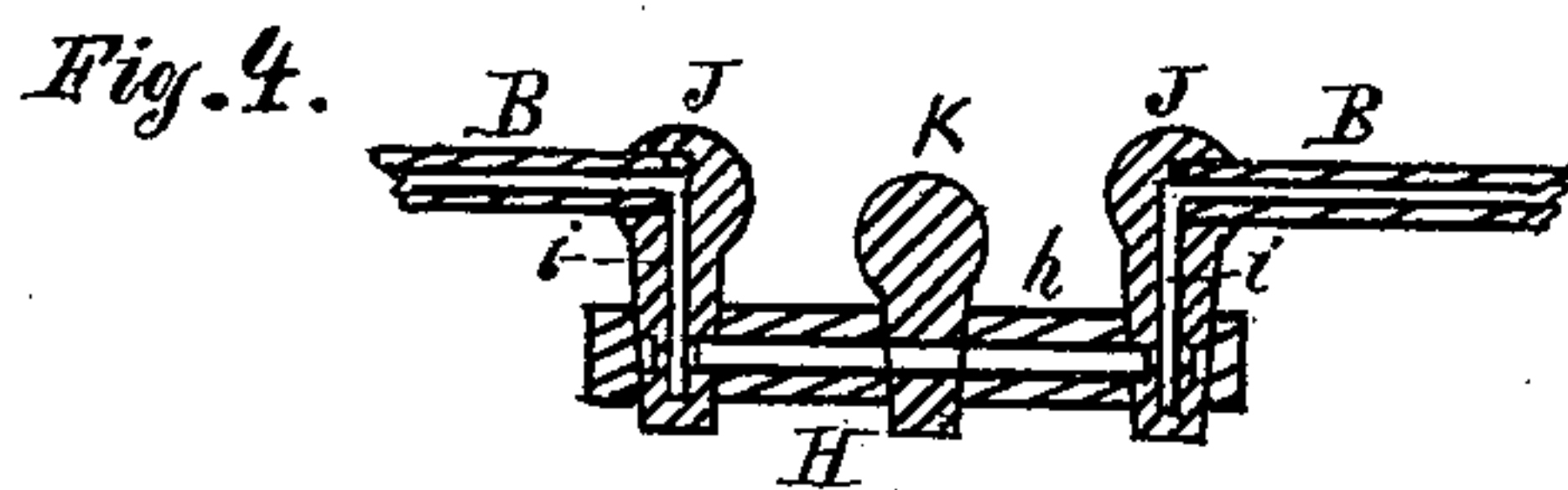
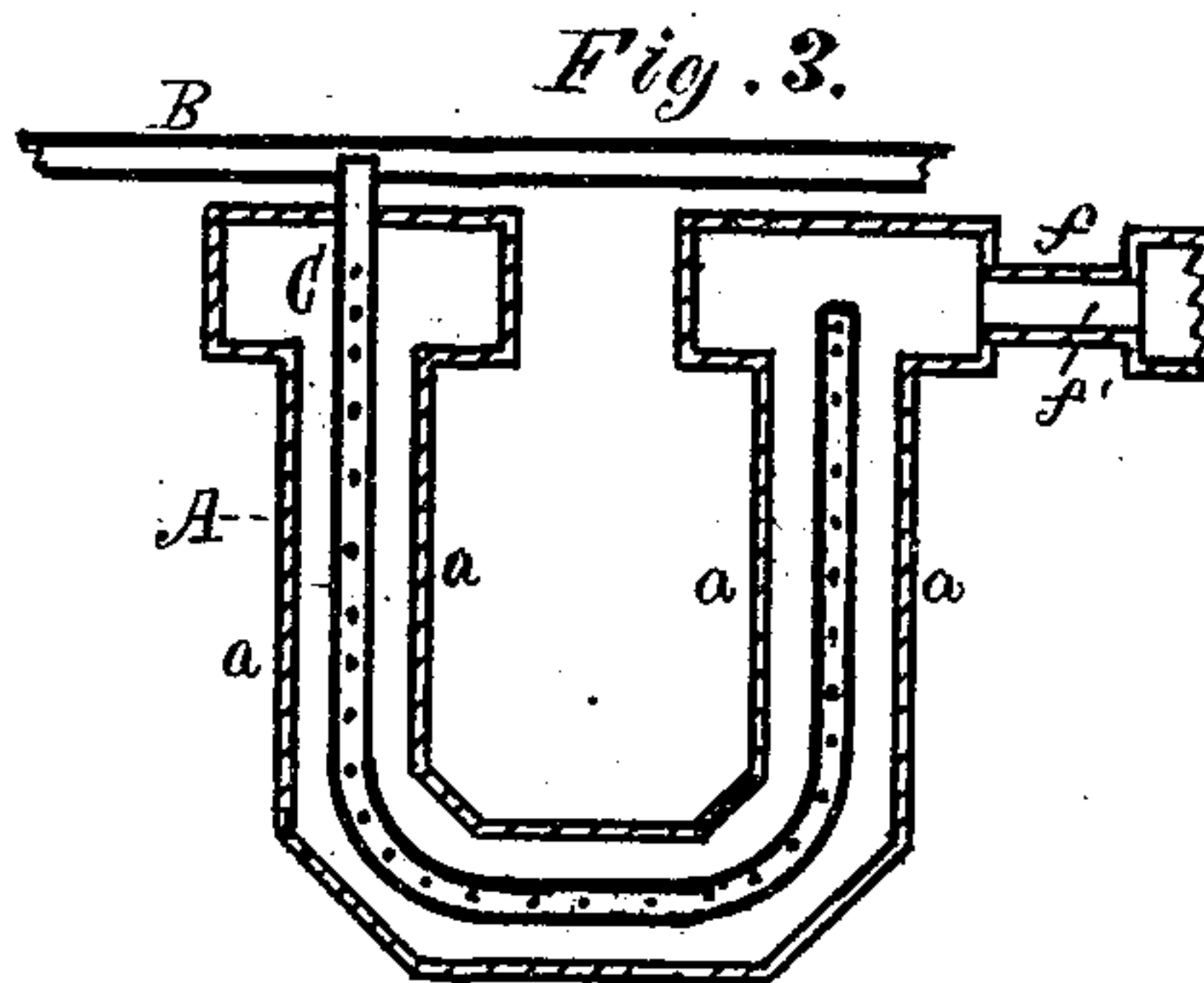
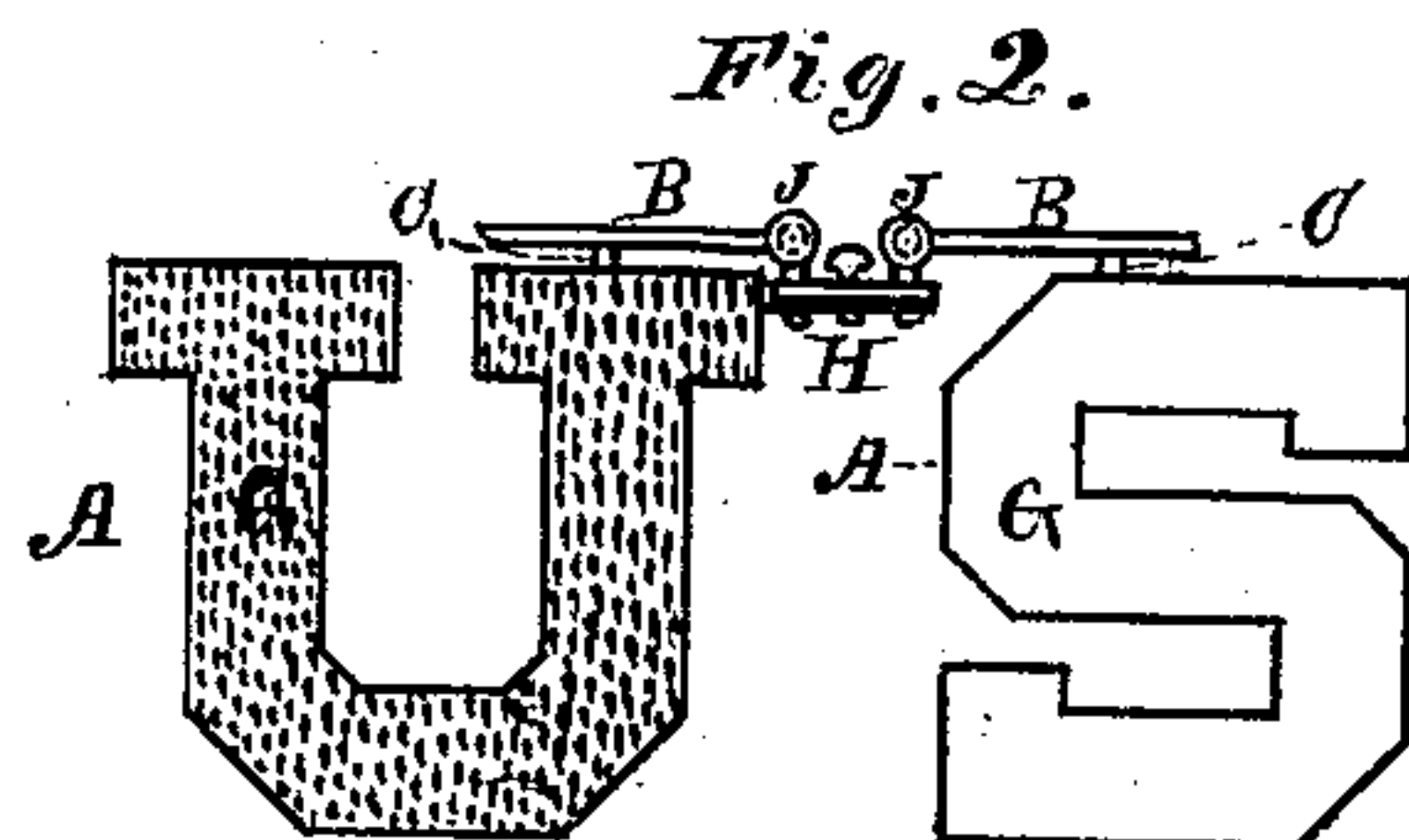
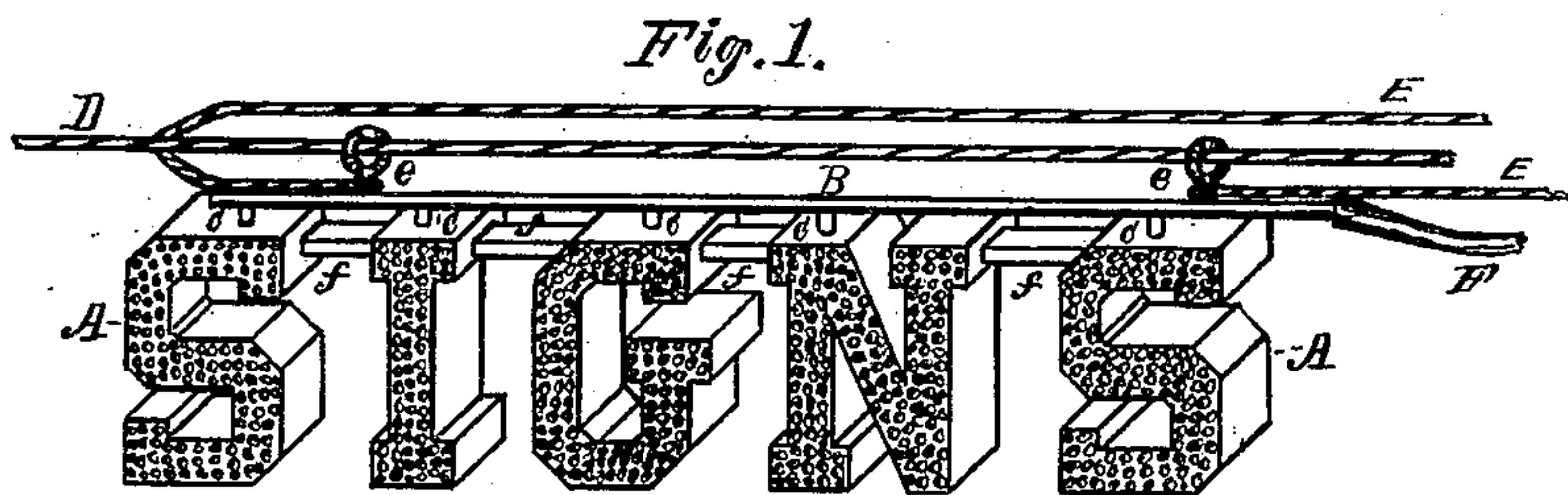


A. L. BRUMFIELD.  
ILLUMINATED SIGNS.

No. 178,506.

Patented June 13, 1876.



Witnesses:  
*A. H. Sherburne.*  
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Inventor:  
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# UNITED STATES PATENT OFFICE.

ALONZO L. BRUMFIELD, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN ILLUMINATED SIGNS.

Specification forming part of Letters Patent No. 178,506, dated June 13, 1876; application filed December 23, 1875.

*To all whom it may concern:*

Be it known that I, ALONZO L. BRUMFIELD, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Illuminated Signs, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the said improvements, reference being had to the accompanying drawing, forming a part hereof, and in which—

Figure 1 represents an isometrical view of a sign embodying my invention, showing the means employed to connect the several letters each to the other. Fig. 2 represents a front elevation of two of the letters, showing a modified means of connecting them. Fig. 3 represents a sectional elevation of one of the letters enlarged; and Fig. 4 represents an enlarged central section of the coupling.

Like letters of reference indicate like parts.

My invention relates more particularly to the class known as "hanging signs"; and the object of my invention is to provide an illuminated sign, consisting of a series of hollow letters or figures, having one or both faces made of transparent or translucent materials, and so arranged that the chamber of each letter or figure communicates with the other, so that when the gas is ignited at one point the explosion thereby produced will cause the flame to ignite the gas in the next adjacent letter throughout the sign, or series of letters or figures, simultaneously; also, to provide a means of connecting the pipe communicating with the gas-jet within the letters, so that the letters or figures may be turned to any desired angle, one to the other, without so affecting the joint connecting the pipe between the letters as to cause them to leak, thereby enabling the sign, when suspended in a position which will not admit of one letter communicating with the other, to be folded to a position which will allow of lighting the gas in the several letters from one point. To that end my invention consists in the arrangement of the several parts, as will be more fully understood from the following description and claims.

In the drawing, A represents the letters constituting the sign proper, and B the supply-

pipe, which is permanently attached to the upper end of each letter, as shown in Fig. 1. C C' are depending pipes, permanently attached to pipe B, and bent in proper shape to pass centrally through each letter, as shown in Fig. 3. D is the rope, from which the sign is suspended by means of suitable rings *ee* attached to the supply B. This rope extends across the street in the usual manner, and the arrangement of the rings is such as to allow the sign to be moved toward or from the center of the street by means of the adjusting-cords E E. F is a flexible pipe, made of rubber or other suitable flexible material. One end of this flexible pipe is attached to the gas-supply pipe within the building, and the other end to supply-pipe B of the sign, and its length is such as to allow the sign to be moved to a point immediately over the center of the street, if desired. The object of making the pipe F of flexible material is to allow of the sign being drawn to the building, when necessary to light the gas, without disturbing the connections of the pipe. That portion of the pipe C within each letter is perforated, to allow the gas to escape into the chamber of the letter. The side walls *a* of the letters are made of any suitable sheet metal of the proper thickness to insure the required strength, and are bent in proper shape to describe the outlines of the letter. G represents the face of the letter, which is made of perforated sheet metal, cut in the form of the letter, and permanently attached to the edges of the walls *a* in any suitable manner, and covered with any transparent or translucent material, so arranged as to allow air to pass through the perforations in the face of the letter. Permanently attached to the walls, and between each letter, is a tube, *f*. The arrangement of these tubes is such as to firmly connect the letters together, and to communicate with the interior thereof, so as to thereby form an unobstructed passage, *f'*, from the chamber of one letter to the chamber of the next adjacent letter through the entire series, the object being to allow the gas escaping from the pipes, and before being ignited, to pass from one letter to the other, so as to allow the flame, when the gas is ignited at one point, to pass from one letter to the other through the series. The object of



perforating the face of the letter is to furnish the necessary openings for the egress of the light, and for the admission of the air necessary to feed the flame.

If desired, the face of the letter may be covered with glass or other suitable transparent material, permanently attached to the walls *a* of the letter, and the walls perforated to admit the necessary supply of air.

To light the gas in the several letters or figures of the sign, it is only necessary to draw the sign to the building by means of the adjusting-cords, so as to enable the person lighting them to reach the bottom of the letter nearest the building, or point where he is standing. When the gas is admitted into the chamber of the several letters through the pipes, and when partially filled with gas, it is ignited through the opening *g*, when the explosion produced thereby forces the flame through tubes *f*, and igniting the gas in the several letters simultaneously.

It is sometimes found necessary to arrange the sign in a position which will not admit of connecting the several letters together by the tubes *f*, so as to allow the gas to pass from letter to letter, in which case it becomes necessary to light the gas in each letter separately. To accomplish this I connect the supply-pipe *B* to a coupling, *H*, located between the letters, as shown in Fig. 2. This coupling consists of a short piece of pipe, *h*, made tight at its ends, and provided with vertical uprights *J J*, into which the ends of the supply-pipe are tightly fitted, as shown in Fig. 4. These uprights are each provided with a cavity, *i*, communicating

with the cavity of the supply-pipe and pipe *h*, by which means the gas is allowed to pass from one section of the supply-pipe to the other, through the uprights on pipe *h*. The central portion of pipe *h* is provided with a stop-cock, *K*, arranged to admit of being opened or closed at will, and of stopping the flow of gas into the letters, when desired.

The arrangement of the parts constituting the coupling is such as to bring each letter in the same horizontal plane, and to allow the letters to be turned to any desired angle, one to the other, without loosening the joints or preventing the flow of gas, and so as to allow the folding of the letters, and bring each of them in a proper position to ignite the gas therein from one point.

Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an illuminated sign, the hollow letters *A*, having one or both faces covered with transparent or translucent materials, and connected one to the other by the tubes *f*, whereby the chambers of the several letters communicate with each other, as and for the purpose specified.

2. In an illuminated sign, the combination of the hollow letters *A*, connected one to the other by the tubes *f*, supply-pipes *B C*, and flexible pipe *F*, substantially as and for the purpose specified.

ALONZO L. BRUMFIELD.

Witnesses:

F. F. WARNER,  
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