

H. H. UPHAM, J. GARRETT & J. TULLY.

Wire Sign and Banner.

No. 168,687.

Patented Oct. 11, 1875.

Fig. 1.

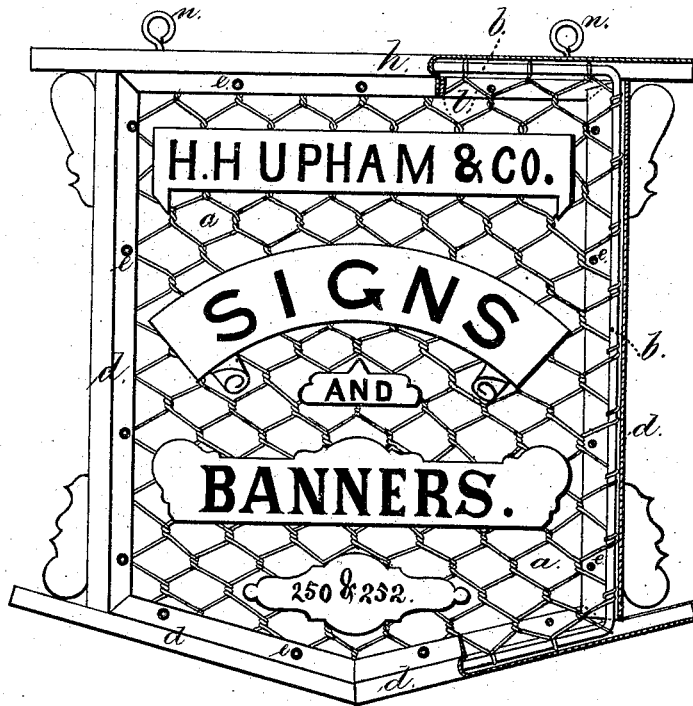


Fig. 2.

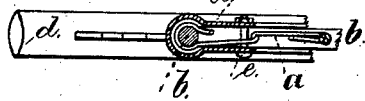


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN WIRE SIGNS AND BANNERS.

Specification forming part of Letters Patent No. **168,687**, dated October 11, 1875; application filed August 23, 1875.

To all whom it may concern:

Be it known that we, HENRY H. UPHAM, JOHN GARRETT, and JOHN TULLY, of the city and State of New York, have invented an Improvement in Open-Work Wire Signs and Banners, of which the following is a specification:

Open-work signs and banners have been made in which the names and letters are upon strips or sheets attached to the open-work or netting, and the same have been surrounded by a wooden frame, which is heavy, cumbersome, and weak at the joints. Gas-tubing has also been used for such frame, but the same is heavy in proportion to the strength, because the strain upon such frame is principally inward from the tension of the wires, and the tubular frame possesses the same strength in all directions, and is not adapted to the special strain incident to its use with open-work signs and banners.

Our invention is made for obtaining the requisite strength in the required direction, so as to obtain great lightness in proportion to the strength and size of the frame.

In the drawing, Figure 1 is an elevation of the open-work sign with part of the sheet-metal frame removed. Fig. 2 is a section through the side frame, and Fig. 3 is a section through the top frame.

The open work of wire *a* is of any desired character, and may receive letters, numbers, or tablets, or strips, upon which the letters or numbers are placed. The frame of metal rods at *b* serve to receive the ends of the wires *a*, and form a border to such open-work wire sign. This alone, however, would not be strong enough, and the tension of the wires *a* would bend the rods *b*.

We make use of a frame, *d*, of sheet metal, the section of which is U-shaped, said sheet metal being folded of this shape to receive the rod *b* and the wire of the sign that extends therefrom, so that the tension of the open-work wire will be upon the sheet-metal strip toward the edges thereof, and the strain of the wires will act as tension toward the edges of the folded strip, and by compression at the

folded portion thereof, where there is great strength to resist any force tending to change the shape of the sheet-metal strip; hence the strength and stiffness required for the frame can be obtained, and the parts will be very light. The pins *e*, inserted through the folded sheet metal, serve to retain the wire open work when stretched. These may have nuts at the ends, so as to be removable, when required, for tightening up the wires. At the top of the sheet-metal frame there is a removable head-piece, *h*, made similar to one of the sides, *d*, and this is adapted to setting over the strips *l* that connect the upper ends of the side frames *d*.

By this construction the entire frame of sheet metal is made ready to receive the open-work sign or banner and its surrounding rods *b*, and these are slipped into place from the top, after which the head-piece *h* is put in place and fastened to the other parts *d* *l* by the pins or bolts *e*; or the sheet metal may be soldered to strengthen the connection, after which the wire open work is to be strained, as aforesaid. The rings *n* attached to the head-piece *h* serve for suspending the sign or banner.

We claim as our invention—

1. The sheet-metal frame made of a folded strip, in combination with the open-work wire sign or banner and its surrounding rod *b*, substantially as set forth.

2. The removable head-piece *h* and rings *n*, in combination with the sheet-metal frame *d*, wire open work *a*, and rods *b*, as set forth.

3. The pins or screws *e* passing through the folded strips *d* of sheet metal forming the frame, in combination with the wire open-work sign or banner *a*, as and for the purposes set forth.

Signed by us this 19th day of August, A. D. 1875.

H. H. UPHAM.
JOHN GARRETT.
JOHN TULLY.

Witnesses:

GEO. T. PINCKNEY,
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