E. F. SOUTHWARD.

Frame for Open work, Signs and Banners.

No. 162,203. Patented April 20, 1875.

Fig. 1.

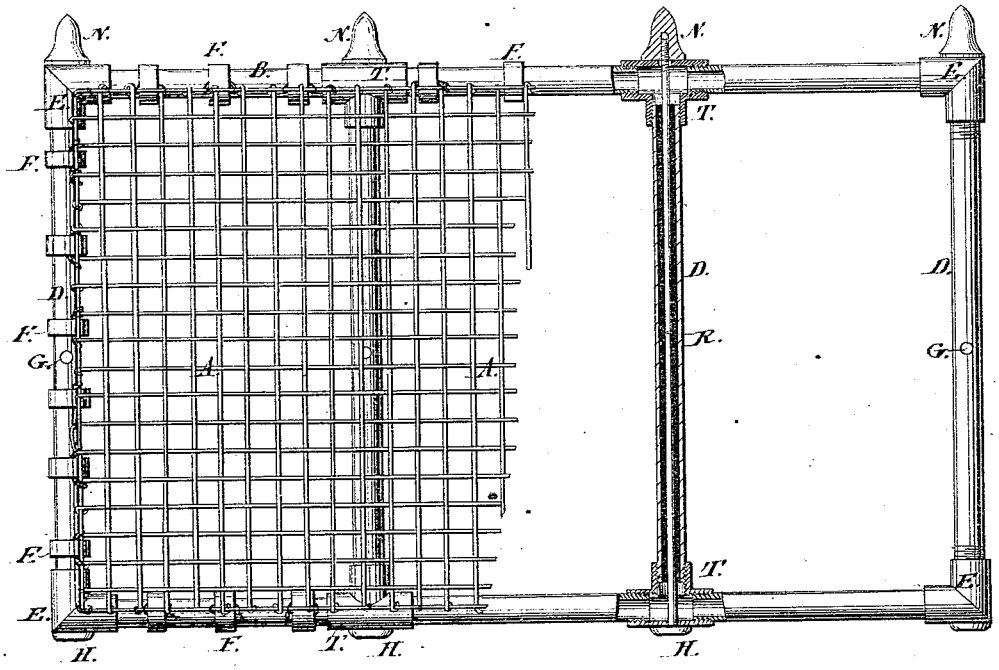
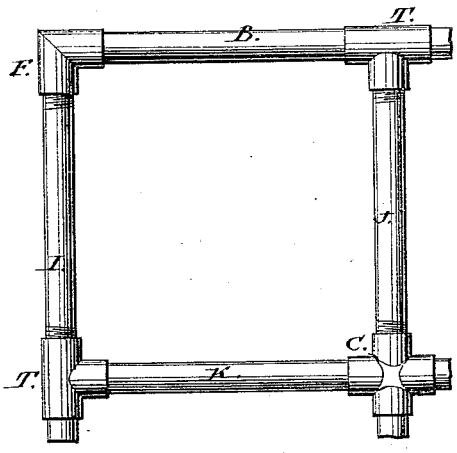


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

ELI F. SOUTHWARD, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FRAMES FOR OPEN-WORK SIGNS AND BANNERS.

Specification forming part of Letters Patent No. **162,203**, dated April 20, 1875; application filed March 20, 1875.

To all whom it may concern:

Be it known that I, ELI F. SOUTHWARD, of Boston, in the State of Massachusetts, have invented a new and useful Frame for Open-Work Signs and Banners; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved jointed frame for signs. Fig. 2 is a similar elevation of another form of said frame.

The same letter marks the same part in both the figures.

Letters Patent No. 77,695 were granted to Simon Wing and myself May 5, 1868, for an improvement in signs and banners, which consisted in making the ground of signs or banners of an open-work or net-work of twine, thread, silk, cord, wire, or other material that will allow the free passage of air. Signs and banners made under that patent have been very extensively introduced, and are now in constant demand. They were originally unprovided with supporting frame-work, and it was soon found desirable to add such a frame, as when the frame was used the signs were entirely free from flapping, and made a much better display of their inscriptions; but, on the other hand, when large signs had to be shipped to distant points, it was found that a frame made in the ordinary manner was inconvenient to pack and transport. The object of my present invention is to provide a frame which shall, when inserted, afford an ample support to the sign, and which can be readily withdrawn, taken apart, and packed for transportation when required.

The nature of my invention consists in making a frame-work for net or open work signs of metallic tubes having right and left screw-threads cut on their ends, and held together by threaded angle-couplings of various forms, said tubes being strengthened, when required, by rods passed through them, and fastened by heads and screw-nuts, the sign being attached to the frame by means of rings or ferrules hung to the edges of the net-work, and strung upon the exterior tubing, all as hereinafter more particularly set forth.

In the drawings, A marks the net-work of the sign; B B, horizontal and D D vertical joints of tubing, forming the frame. For these I usually employ common gas-pipe, galvanized; but, where the sign is small and in a situation to be closely inspected, I sometimes use brass tubing, silvered or nickel-plated. These tubes have right and left hand screw-threads cut upon their ends, so as to enable them, by turning in one direction, to be united by the angle or union couplings E T C, which are threaded to receive their ends. At the corners of the sign I use the elbow-couplings E or the T-couplings, as preferred. Where branches are to be inserted I employ the T-couplings, and where four tubes meet, as in Fig. 2, I adopt the cross-coupling C. A simple union-coupling would be used where a mere lengthening of the tube is required. The threads in these couplings are cut to correspond with those on the ends of the tubes which they are respectively intended to receive. When extra strength is required I run through the couplings and tubing a rod, R, having a head, H, on one end, and receiving a nut, N, on a screw-thread at the other. The net-work is provided at its edges with rings or ferrules F, which receive the outside tubes of the frame, and form the connection between the sign and the frame. They turn loosely in the net-work and on the tubes. Where great strength is required, as in roof and fixed projecting signs, I provide the frame with interior braces, as shown at J K in Fig. 2. The inner ends of these braces are screwed into the cross-coupling C. Holes G are made in the tubes for the reception of a rod or lever, by which the tube may be turned when screwing the parts of the frame together. The ordinary gas-fitters' tongs may also be used for this purpose.

The frame herein described can be readily put together and taken apart, and its parts can be made of convenient lengths for packing and transportation. The net-work is packed and transported in a separate roll, and is readily strung upon the tubes by means of the rings. These rings, being loosely attached to the net-work, relieve it of any tendency to break at the edges.

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

In combination with a net-work sign or banner, provided on its edges with rings or ferrules, a jointed frame formed of metallic tubing with threaded ends, united by screw-couplings, substantially in the manner and for the purpose described.

The above specification of my said invention signed and witnessed, at Boston, this 18th day of March, A. D. 1875.

ELI F. SOUTHWARD.

Witnesses:
E. S. MOTTE,
JAMES SCHOULER.