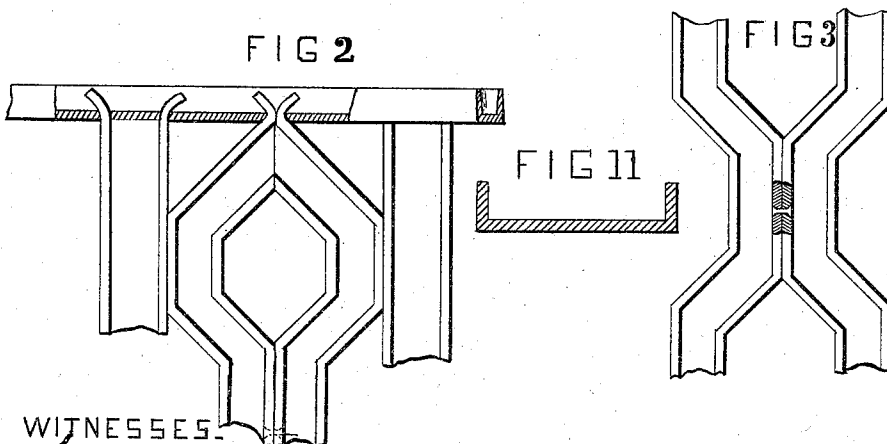
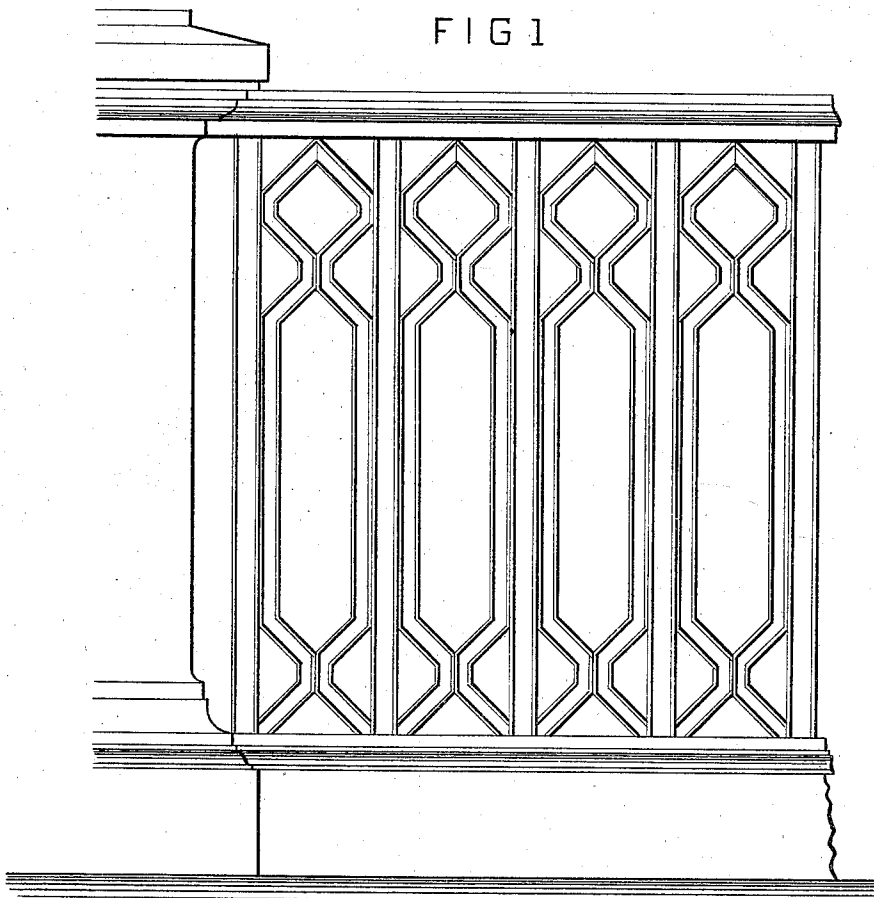


S. SELLERS & M. M. MANLY.
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No. 138,049.

Patented April 22, 1873.



WITNESSES.
Watson R. Lewis
Robt. P. Manly

INVENTORS.
2 M. M. Manly
1 Saml. Sellers

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FIG 4

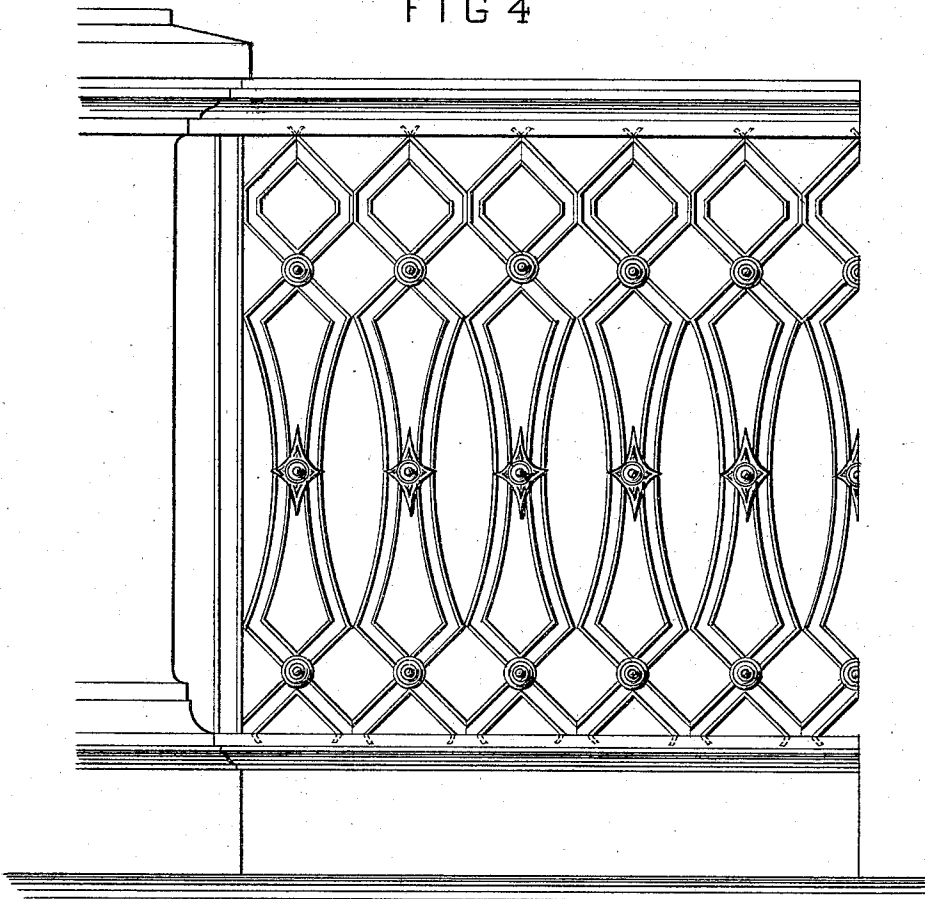
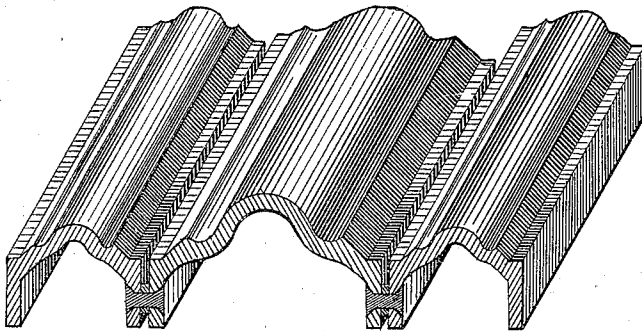


FIG 7



WITNESSES.

Robt. P. Manly
Watson R. Lewis

INVENTORS.

2 M. M. Manly
1 Saml Sellers

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FIG 5

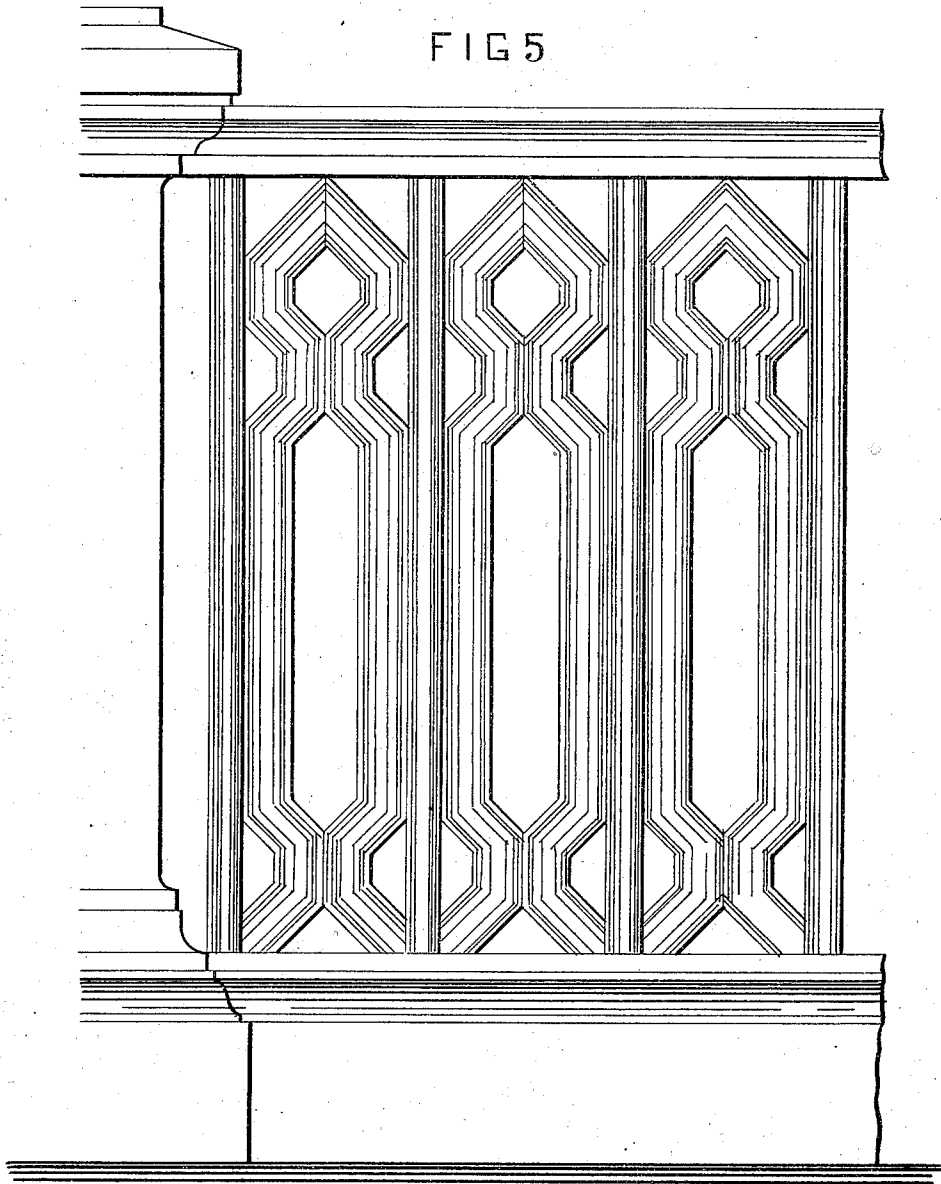
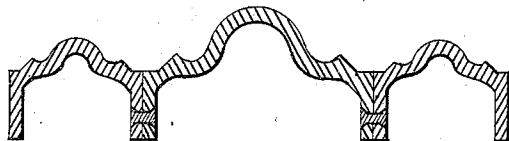


FIG 6



WITNESSES.

Watson, R. Lewis
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S. M. Manly
Sam'l Sellers

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FIG 8

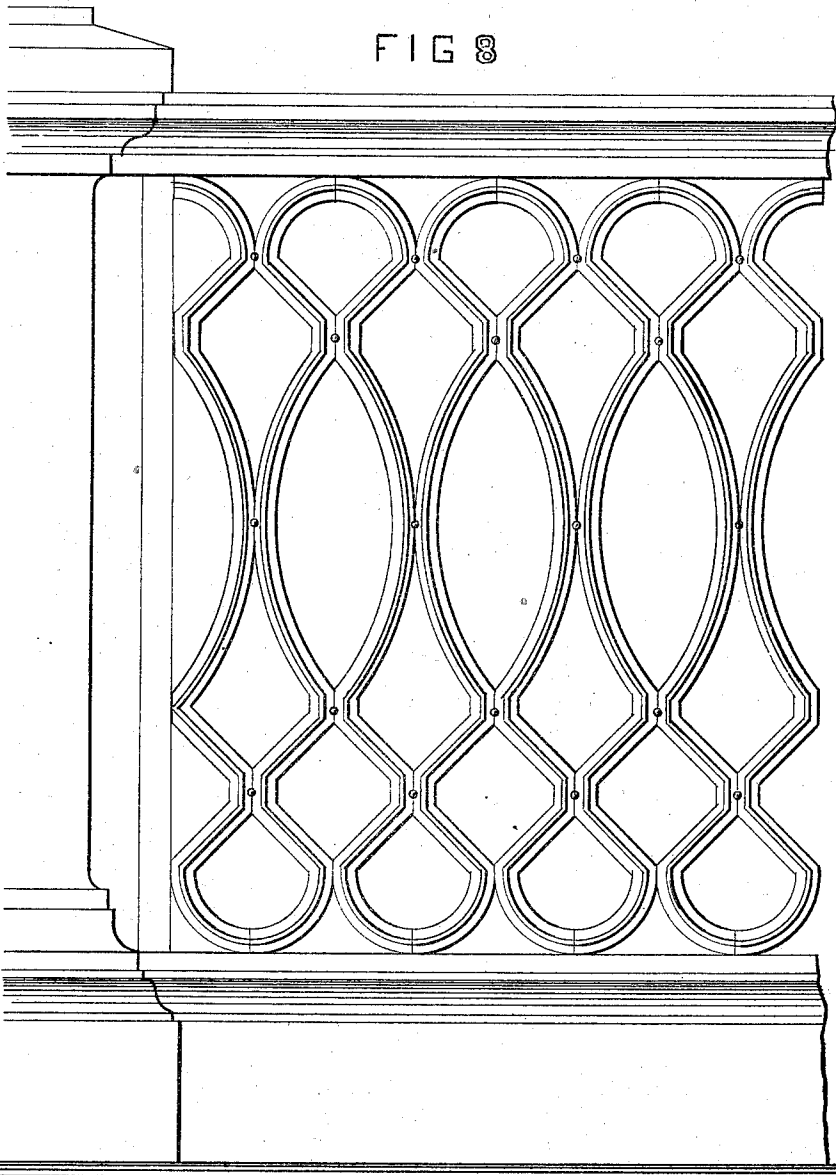
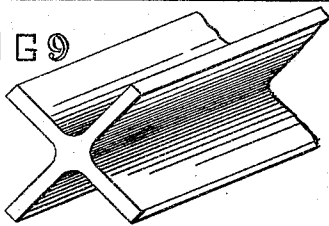


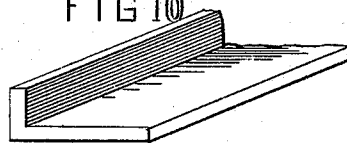
FIG 9



WITNESSES.

Walter R. Lewis
Robt. C. Manly

FIG 10



INVENTORS.

S. M. Manly
S. Sellers

S. SELLERS & M. M. MANLY.

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FIG 12

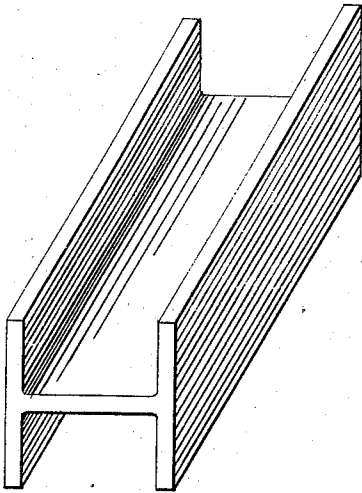


FIG 13

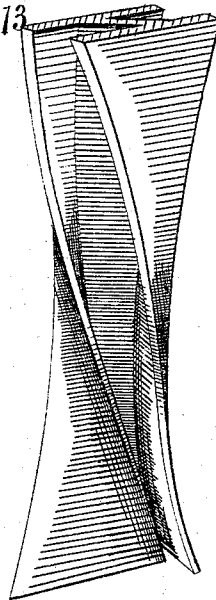


FIG 16

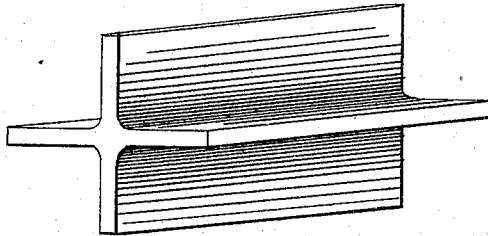


FIG 14

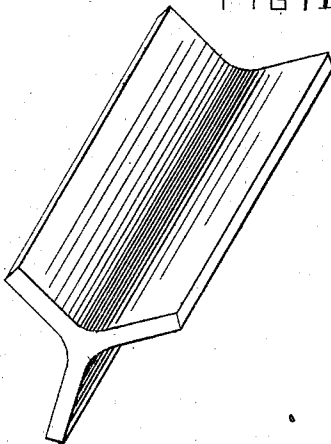
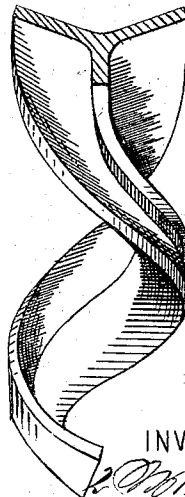


FIG 15



WITNESSES.

Robt P Manly
W M Sailer

INVENTORS.

M M Manly
Saml Sellers

UNITED STATES PATENT OFFICE.

SAMUEL SELLERS AND MARCUS M. MANLY, OF PHILADELPHIA, PA.

IMPROVEMENT IN BALUSTERS FOR IRON-BRIDGE RAILINGS.

Specification forming part of Letters Patent No. **138,049**, dated April 22, 1873; application filed January 29, 1873.

To all whom it may concern:

Be it known that we, SAMUEL SELLERS and MARCUS M. MANLY, both of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Wrought-Iron Railing for Bridges and other purposes; and our invention relates to that portion of the railing occupying the space between the bottom and top bars, or the base and hand-rail of the railing which we style "balusters;" and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawing making a part thereof, in which—

Figures 1, 4, 5, and 8 are side elevations, showing a variety of forms in which rolled moldings and flanged iron or steel may be made to form the balusters. Figs. 2 and 3 are enlarged and broken views, showing the mode of fastening the moldings and flanged iron together, and to the top and bottom bars. Figs. 4 and 8 show another mode of fastening by means of cast or swaged rosettes, or other ornament. Fig. 7 is a perspective view of molding forming the balusters of Fig. 5. Fig. 9 is a perspective view of flanged iron used for balusters of Fig. 8. Fig. 11 is a cross-section of flanged iron or steel forming the balusters of Figs. 1 and 4. The other figures show various other modifications.

Our invention consists of a new article of manufacture or novel combination of parts, whereby greater strength is obtained with a smaller amount of iron, and where the appearance of a heavy railing is obtained with light material.

Heretofore when wrought-iron has been used to form this part of a railing, it has been used in solid bars, (usually round,) not capable of being used so as to present a heavy and

ornamental appearance without increasing the weight very much.

The lighter weight of our railing gives it increased value on bridges by its diminished strain on the superstructure.

To enable others to make and use our invention who are skilled in the art, we will proceed to describe its construction.

The molding or flanged iron being rolled of the required size and form, a strip is taken of sufficient length to form the various angles and curves in the desired pattern, as shown in Figs. 1, 4, 5, and 8, and to extend from the bottom to the top bar. After receiving the required shape by heating and bending, clinches are made on top and bottom by cutting away all the metal except the flat sides or flanges, as shown in Fig. 2, then holes are punched in the flat sides or flanges for rivets to secure the parts together. The strips are then arranged to form the panel inserting the clinches in holes in the top and bottom bars previously punched, then the sides of the separate strips are riveted together and their ends clinched. Where the strips are fastened by means of rosettes or ornaments, the usual mode is adopted of riveting the rosettes together.

We do not confine ourselves to the various arrangements or forms shown, as the forms in which they may be combined are innumerable.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, the balusters of bridges and other railings, made of rolled moldings and of rolled flanged iron or steel, substantially as specified.

SAML. SELLERS.

M. M. MANLY.

Witnesses:

ROBT. P. MANLY.

WATSON B. LEWIS,