S. BRANDEIS.

Metallic Columns.

No. 142,201. Patented August 26, 1873.

Fig. 1.

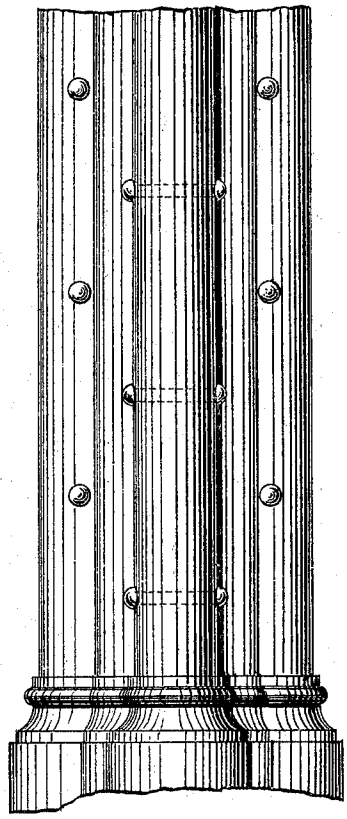


Fig. 2.

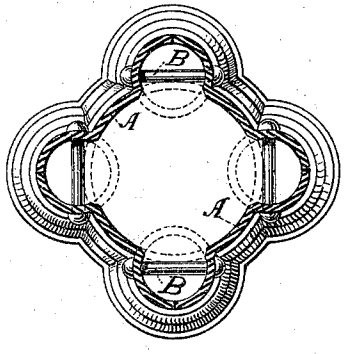


Fig. 3.

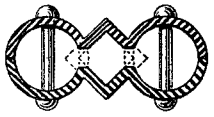


Fig. 4.

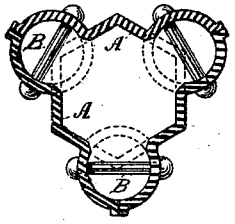
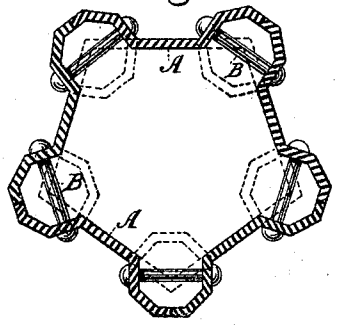


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

SEMI BRANDEIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF, JONATHAN R. JONES, AND SAMUEL T. BENNER, OF SAME PLACE.

IMPROVEMENT IN METALLIC COLUMNS.

Specification forming part of Letters Patent No. **142,201**, dated August 26, 1873; application filed July 25, 1873.

To all whom it may concern:

Be it known that I, SEMI BRANDEIS, late of the city of Prague, in the Empire of Austria, now residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Metallic Columns, of which the following is a specification:

The object of my invention is to provide a tubular metallic column suited for use in the construction of bridges, buildings, and other structures, in which the distribution of material around its axial line, and the form and manner of connecting the segments of which it is composed shall be such as to combine ample strength with a highly ornamental appearance; to which end my improvements consist in combining two or more segment-plates, rolled or bent into such form that when united by bolts or rivets they shall form a column, the cross-section of which will be a central circle, ellipse, or polygon, having a series of segments of circles or polygons symmetrically disposed around its periphery, or, in other words, a main shaft and a series of lateral columns united in a cluster or group, as hereinafter more fully set forth.

In the accompanying drawing, Figure 1 is view in elevation of a portion of a tubular metallic column embodying my improvements; Fig. 2, a transverse section of the same; and Figs. 3, 4, and 5 are similar sections of my improved columns, showing, respectively, different forms of cross-section.

To form a tubular metallic column in accordance with my invention I provide two or more segments, A, rolled or bent into any of the various forms shown in the drawings, or any other form embodying the same principle, the distinguishing characteristic of these segments, as regards their cross-section, being that the central portion of each forms a portion of the central shaft of the column when complete, and each of the ends forms half of one of the lateral columns which are disposed around it. The segments are united by bolts or rivets B, which pass through the centers of the circles or polygons formed by the union of the end portions of the respective segments, and bind the segments firmly together. Thimbles or sockets may be used upon the rivets, if deemed necessary. The segments may be rolled of any desired thickness, according to the strength and dimensions required for the column, and, obviously, may be made of numerous different designs of cross-section without departing from the spirit of my invention. Thus, in Fig. 2, the section of the column shows a central circular shaft intersected by four smaller circles; Fig. 3, a square and two circles; Fig. 4, a hexagon and three circles; and Fig. 5, a pentagon and five circles. The central shaft may be made elliptical, circular, or in the form of any regular or irregular polygon, and the lateral columns may be grouped around it in such manner as the skill and judgment of the constructor may suggest. In cases where the metal of the segments is thin it may be advisable to form small projections upon their meeting-faces, in order to increase their bearing-surfaces, as shown in Fig. 4.

From the manner of disposing the metal around the axis of the column it will be seen that its value, as a compression member, is very fully utilized, at the same time that desirable facilities for connecting the segments are presented by the projection of the lateral columns; and, from the variety of forms in which the column may be constructed, it is susceptible of high ornamentation, and can be used to produce good architectural effect in a structure.

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

A tubular column composed of two or more metallic segment-plates, rolled or bent into such shape as, when united, to present the cross-section herein shown and described—to wit, a central circle, ellipse, or polygon, having a series of segments of circles or polygons symmetrically disposed around its periphery, substantially as set forth.

SEMI BRANDEIS.

Witnesses:

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