

Samuel J. Reeves

Construction of Wrought-Iron Shafts or Columns

Patented June 17, 1862

No 35,582.

Fig. 4.

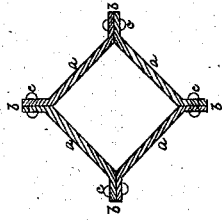


Fig. 3.

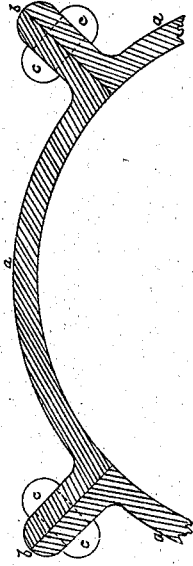


Fig. 7.

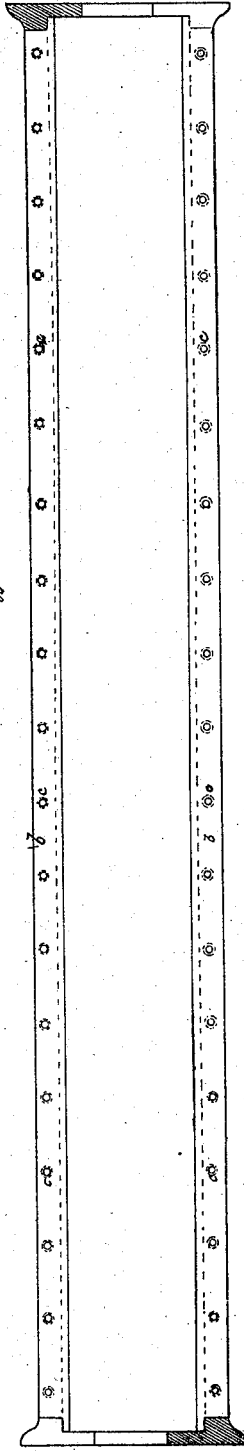
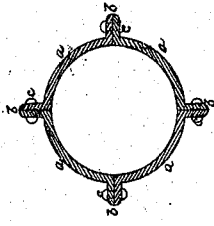


Fig. 2.



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Witnesses:
Henry H. Rice
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UNITED STATES PATENT OFFICE.

SAMUEL J. REEVES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN THE CONSTRUCTION OF COLUMNS, SHAFTS, BRACES, &c.

Specification forming part of Letters Patent No. **35,582**, dated June 17, 1862.

To all whom it may concern:

Be it known that I, SAMUEL J. REEVES, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in the Construction of Wrought-Iron Shafts or Columns, Braces, or Chords for Houses, Piers, Bridges, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a shaft or column partially in section. Fig. 2 represents a transverse section through the same. Fig. 3 represents a portion of a transverse section on an enlarged scale. Fig. 4 represents a transverse section of a column in a modified form.

I have invented a novel mode of making a shaft or column of wrought-iron, which combines the advantage of being useful as a vertical post, horizontal brace, or compression-chord in the construction of houses, piers, bridges, and other structures, and at the same time admitting (where several of them are to be used together to form a truss, as in a bridge, pier, or observatory) of a convenient and cheap arrangement for fastening the ties and braces.

I use three or more wrought-iron bars, similar to those marked *a a a* in the annexed drawings, to which reference is hereby made, of such shapes and dimensions, that when arranged together in the direction of their length, and fastened by rivets or bolts *c* through their flanges *b*, they shall form a hollow shaft or column. When it is intended to use two or more of these shafts in combination with ties

or braces, instead of bringing the flanges in contact with each other, I interpose washers of any desired thickness for the purpose of admitting the ends of the ties and braces between the flanges, and of riveting or bolting them together, thus uniting the whole in the most suitable manner and at small expense. The pieces *a a a* are so designed that they can be rolled, by raising or depressing the rollers, to any desired thickness without increasing the external diameter of the column proposed to be made, so that a series of columns resting one upon another may be made of different interior diameters and weights proportioned to the loads to be sustained, but having the external appearance of one uniform shaft.

The stiffness and strength of columns made in this manner may be increased at a very moderate expense by setting plain bars of iron between the flanges of the bars *a a a* and riveted to them, and extending outward from the center, thus in effect increasing the diameter of the column.

What I claim, and desire to secure by Letters Patent, is—

The uniting together three or more pieces of wrought-iron made with flanges, in the direction of their length, so that they shall form a column or shaft to be used as posts, and also as braces or compression-chords, in the construction of buildings, bridges, piers, or other structures.

SAML. J. REEVES.

Witnesses:

GEORGE GERRY WHITE,
R. LLOYD LEE.