A. BONZANO.

Improvement in Wrought-Iron Columns.

No. 127,019. Patented May 21, 1872.

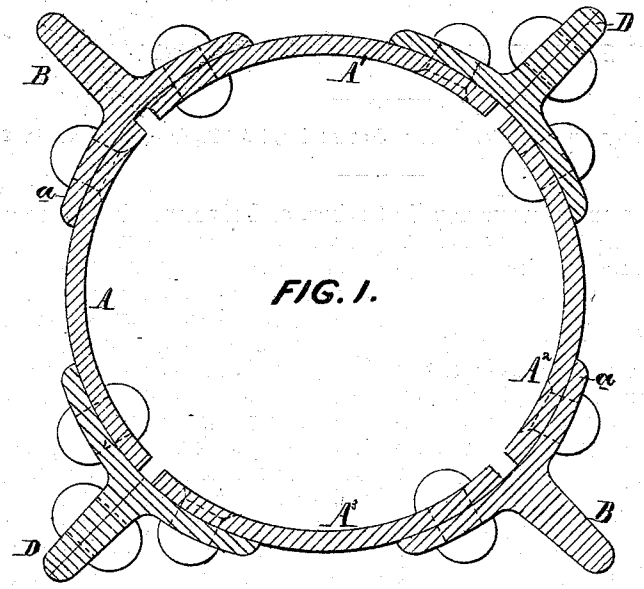


FIG. 1.

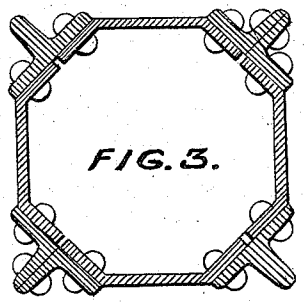

FIG. 3.

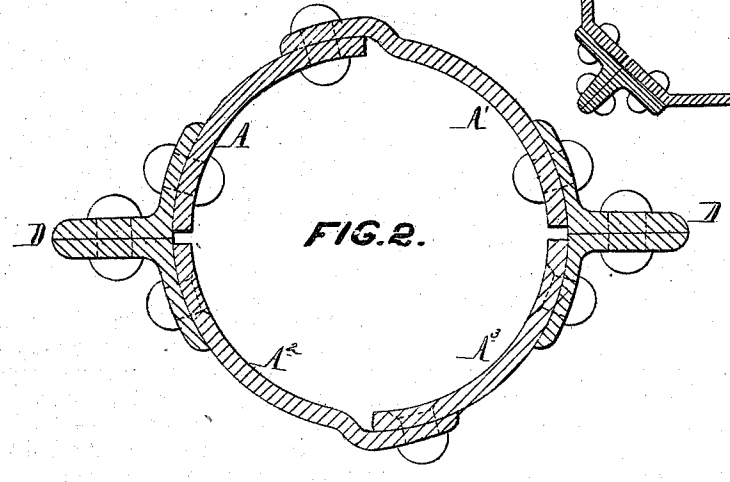


FIG. 2.

WITNESSES { John Parker
Thos. McIlvain

A. Bonzano
by his Attys.
Howson and Sons

AM. PHOTO LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

# UNITED STATES PATENT OFFICE.

ADOLPHUS BONZANO, OF PHŒNIXVILLE, PENNSYLVANIA, ASSIGNOR TO CLARKE REEVES & CO., OF SAME PLACE.

## IMPROVEMENT IN WROUGHT-IRON COLUMNS.

Specification forming part of Letters Patent No. 127,019, dated May 21, 1872.

Specification describing an Improvement in Wrought-Iron Columns, invented by ADOLPHUS BONZANO, of Phœnixville, Chester county, Pennsylvania.

*Improvement in Wrought-Iron Columns.*

My invention relates to an improvement in the construction of wrought-iron columns, composed of rolled bars riveted together; my improvement, which is too fully explained hereafter to need preliminary description, having for its object economy in construction and ready means of painting the interior of the column.

In the accompanying drawing, Figure 1 is a transverse section of my improved wrought-iron column; Fig. 2, a modification of the same; and Fig. 3, another modification drawn to a reduced scale.

In the manufacture of wrought-iron columns it has been the practice to employ flanged bars riveted together to form a unit, these bars being made by costly rolls, especially constructed for the purpose. An instance of such a column is to be found in the patent granted to S. R. Reeves on the 17th day of June, 1862.

In constructing my improved column I dispense with these flanged bars, which are more or less costly to be made, and use a number of plain bars, four such bars marked A $A^1$ $A^2$ $A^3$, being shown in Fig. 1, and these bars being, in the present instance, bent to a segmental form in accordance with the diameter of the column, as seen in the drawing; the bars may, however, be rolled to a different sectional form, as explained hereafter.

In constructing the column, Fig. 1, I first make it in two equal parts, one part being composed of two bars, A and $A^1$, united by the T-iron B; and the other half of two bars, $A^2$ and $A^3$, united by a similar T-iron, B′; one flange, *a*, of the said iron being riveted to each bar. To the edges of each semi-cylindrical half of the proposed column I rivet an angle-iron, D, and I complete the column by riveting the angle-irons of one-half to those of the other. If desired, angle-irons may be substituted for the T-irons, but I prefer the latter. In the modification, Fig. 2, I secure the two bars, which form each half of the column, together, by permitting one bar to overlap the other, and riveting the two together, as shown in the drawing, the junction of the two halves being effected by means of angle-irons and rivets, as in the column illustrated in Fig. 1.

It is not necessary that the bars A $A^1$, &c., should be of a segmental sectional form; they may, for instance, be sections of polygons, as shown in Fig. 3, but it is essential, no matter how many bars be used, in carrying out my invention, that the two halves of the column should be completed separately before being united by means of the angle-irons.

It will be seen, without further description, that I produce by simple bars, which can be produced at any rolling-mill, a column which, owing to the presence of the ribs of the angle and T irons, is capable of withstanding transverse strains, to which it may be subjected, and this at less cost than a column made of flanged bars which demand special rolling machinery.

By making the column in two halves, as described, I am enabled to easily paint the interior before the junction of the said halves, and it will be noticed that the bars composing each half can be easily riveted, either together or to the T or angle irons, and that the two halves can be riveted by external operation and in full view of the riveters; and this is not the case in several wrought-iron columns, in constructing which the heads of rivets have to be introduced into their holes from the inside of the column and there held during the process of riveting.

In most cases I make the column in two halves, but a larger column may be made of three parts, each part being composed of two bars riveted or bolted together.

I claim as my invention—

A wrought-iron column made in two or more parts, each part being composed of the within-described rolled bars riveted or bolted together, and the parts being united by means of angle-irons and rivets or bolts, all as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADOLPHUS BONZANO

Witnesses:

WM. A. STEEL,

LOUIS BOSWELL.