

(No Model.)

E. M. BUTZ.

METAL COLUMN, PILASTER, OR GIRDER.

No. 304,791.

Patented Sept. 9, 1884.

FIG. 3.

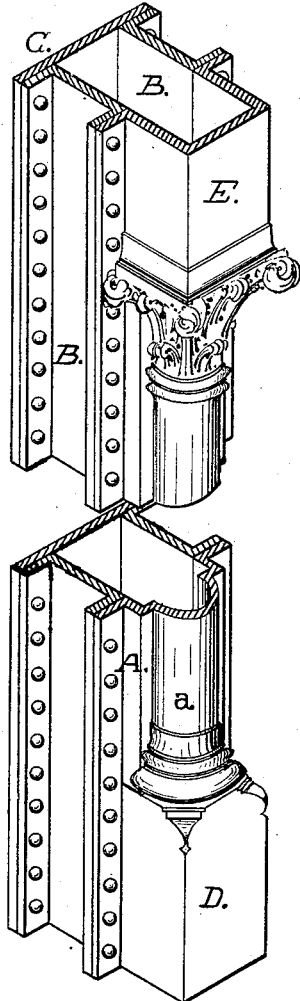


FIG. 6.

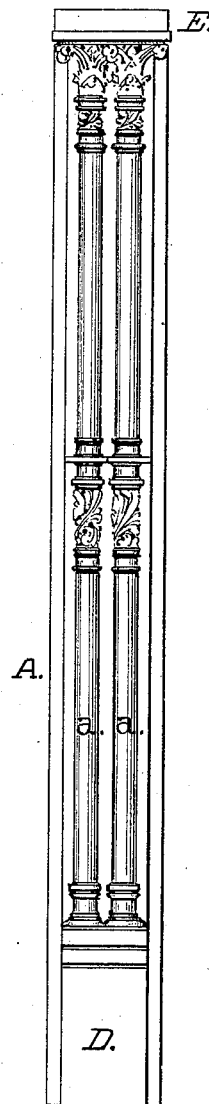


FIG. 1.

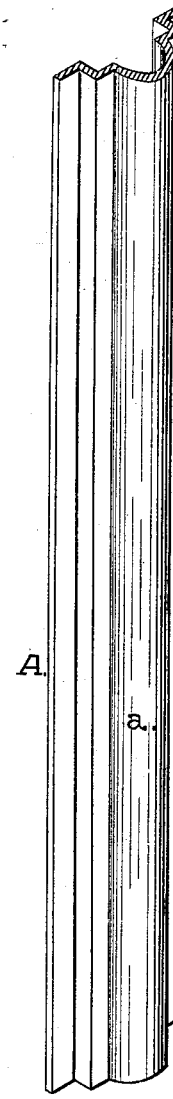


FIG. 4.

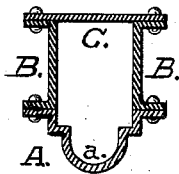


FIG. 5.

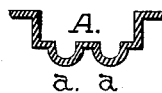


FIG. 2.



WITNESSES:

*John Den Pell.*  
*George H. Howard.*

INVENTOR

*Edward M. Butz.*

# UNITED STATES PATENT OFFICE.

EDWARD M. BUTZ, OF ALLEGHENY, PENNSYLVANIA.

## METAL COLUMN, PILASTER, OR GIRDER.

SPECIFICATION forming part of Letters Patent No. 304,791, dated September 9, 1884.

Application filed January 10, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD M. BUTZ, a citizen of the United States, residing at Allegheny, county of Allegheny, State of Pennsylvania, have invented or discovered a new and useful Improvement in Metal Columns, Pilasters, or Girders; and I do hereby declare the following to be a full, clear, concise, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—like letters indicating like parts—

Figure 1 is a perspective section of a metal shape plate or bar adapted for use in columns or girders embodying my invention; Fig. 2, a plane transverse section through the same; Fig. 3, a perspective section of a column, illustrating an application of the same; Fig. 4, a plane transverse section through said column; Fig. 5, a similar section through a column, illustrating a modification of my invention; and Fig. 6, a front view in elevation of the same.

My invention relates to the construction of rolled-metal columns, pilasters, or girders for buildings, bridges, and other structural uses; and my improvements consist in a rolled-metal plate or bar, of shape or section as herein shown and described, and in a composite column, pilaster, or girder, having one or more of its webs formed of a plate of said section, all as hereinafter fully set forth.

To carry out my invention, I form of rolled iron or steel a plate or bar, A, the form of which is that of a hollow-backed tongue, face, or rib, having one or more segmental portions, *a*, projecting from the surface of its body or web, and a flange at each of its sides, said flanges being in line one with the other.

In the construction of a column, pilaster, or girder the plate A is connected by bolts or rivets to one or more rolled plates, which may be either of similar or of any other desired section. Figs. 3 and 4 show a column formed of a shape, A, having a single projection, *a*, on its face, united to two channel side plates, B B; and a plane back plate, C. The front plate of the column (shown in Fig. 6) is formed of a shape, A, Fig. 5, having two projections on its face, and a greater number may be used if desired.

My invention is particularly applicable in the construction of pilasters for wrought-metal fronts for buildings; and in such application I provide a pilaster which serves both as a supporting member and an element of architectural design, by combining therewith a base, D, and capital E, which are connected to the ends of the projection or projections *a*, and to the side plates of the pilaster below and above the same.

I claim herein as my invention—

1. A structural rolled-metal plate, of shape or section as described, adapted to serve as a member of a column, pilaster, or girder, said plate being in the form of a hollow-backed tongue, face, or rib, having one or more segmental portions projecting from the surface of its body, and a flange at each of its sides, said flanges being in line one with the other, and each being separated by an angular part of the body of the plate from the segmental portion thereof, substantially as set forth.

2. A composite column, pilaster, or girder formed of rolled-metal plates united at their edges, and having upon one of its faces a web formed of a plate, the transverse section of which is a hollow-backed tongue, face, or rib, having one or more segmental portions projecting from the surface of its body, and a flange at each of its sides, said flanges being in line one with the other, and each being separated by an angular part of the body of the plate from the segmental portion thereof, substantially as set forth.

3. The combination, in a rolled-metal pilaster, of a front plate having a hollow-backed tongue, face, or rib, with one or more segmental projections on its web, and a flange at each of its sides, a base and capital adjoining the ends of the projection or projections of the front plate, and one or more side and back plates connected to the flanges of the front plate, substantially as set forth.

In testimony whereof I have hereunto set my hand.

EDWARD M. BUTZ.

Witnesses:

J. SNOWDEN BELL,  
R. H. WHITTLESEY.