

(No Model.)

E. M. BUTZ.

METAL COLUMN, PILASTER, OR GIRDER.

Patented Sept. 9, 1884.

No. 304,790.

Fig. 1.

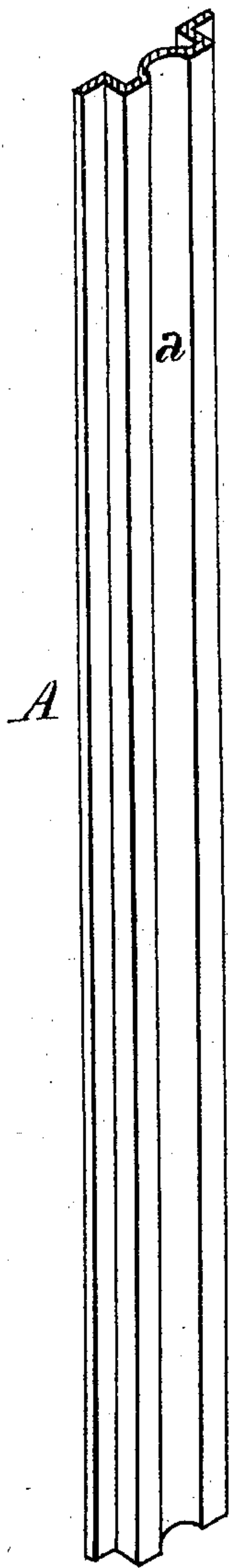


Fig. 3.

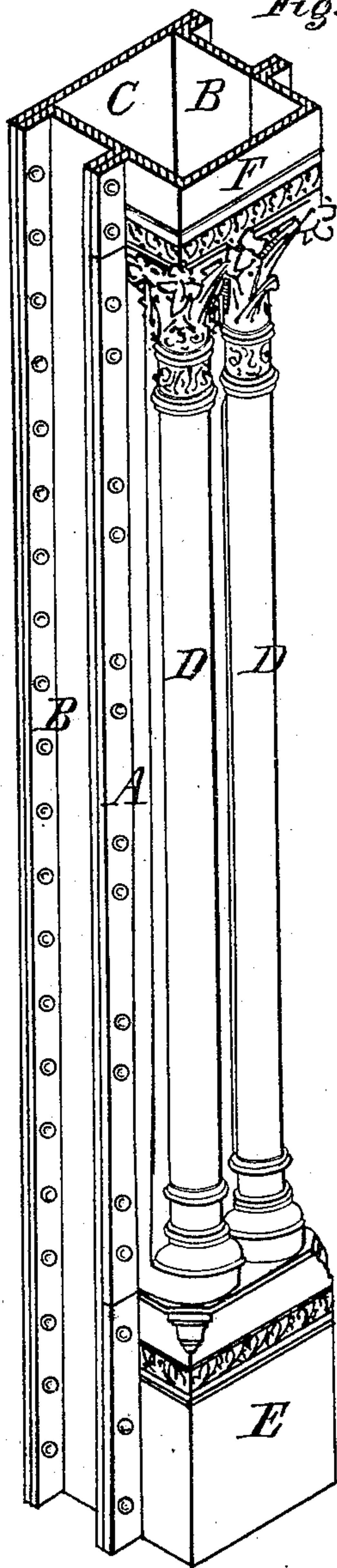


Fig. 4.

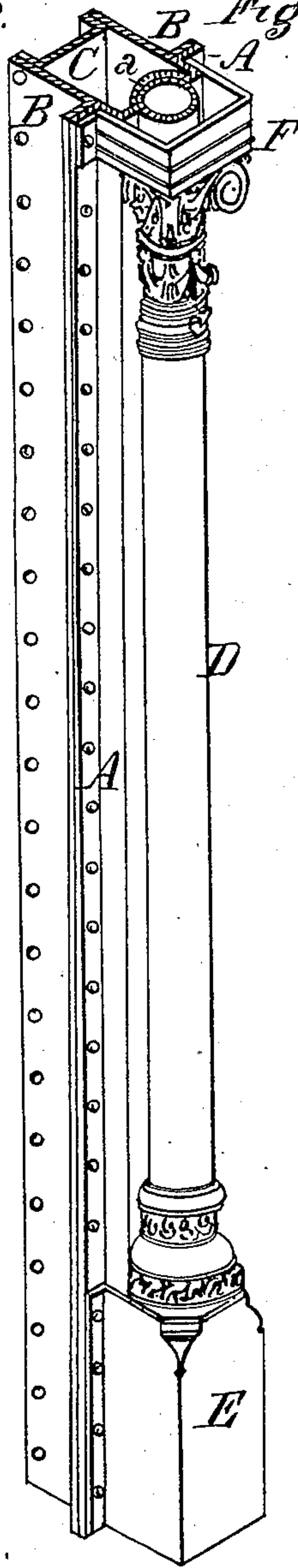


Fig. 2.

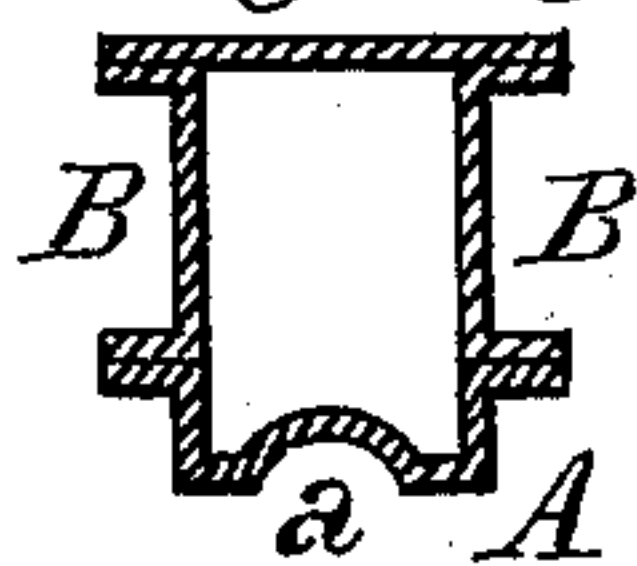


Fig. 5.

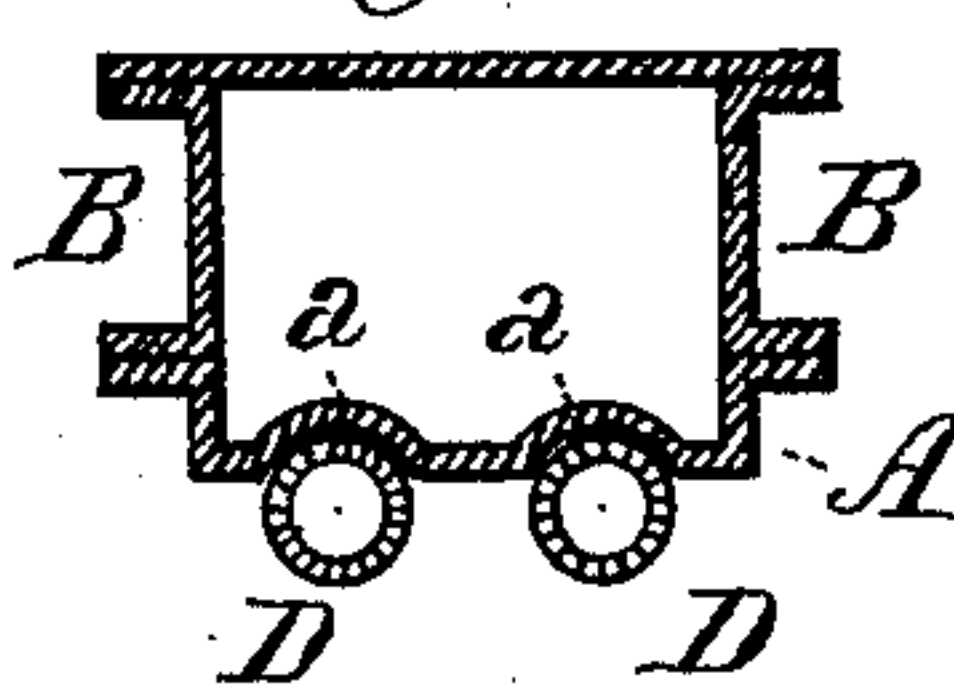
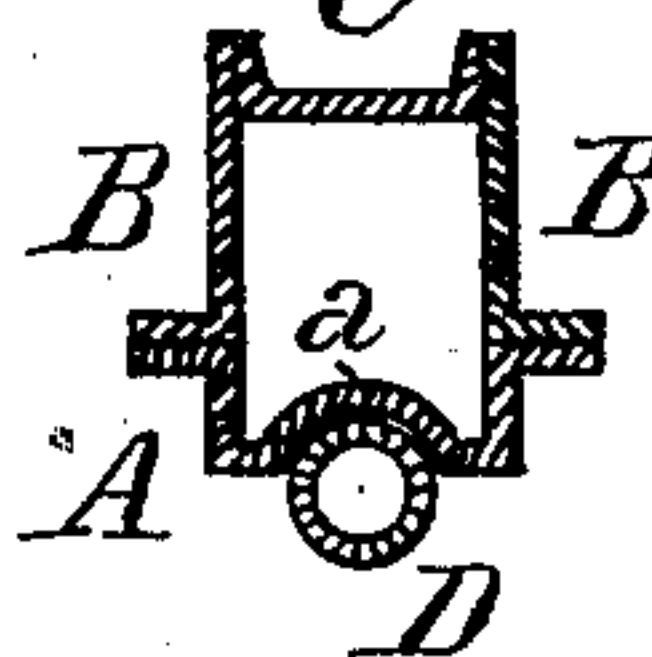


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD M. BUTZ, OF ALLEGHENY, PENNSYLVANIA.

METAL COLUMN, PILASTER, OR GIRDER.

SPECIFICATION forming part of Letters Patent No. 304,790, 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 a column, illustrating an application of the same; Figs. 3 and 4, perspective sections of columns, illustrating modified forms of my invention; and Figs. 5 and 6, plane transverse sections through the columns of Figs. 3 and 4, respectively.

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 recesses, *a*, in its body or web and a flange at each of its sides.

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. Fig. 2 shows a column formed of a shape, A, having a single recess, *a*, in its face, united to two channel side plates, B B, and a plane back plate, C. In Fig. 5 the shape A has two recesses in its face, and is connected to side and back plates of corresponding section with those of Fig. 2; and in Fig. 6 a shape, A, having a single recess in

its face is connected to two side plates of L section and a channel back plate having its flanges turned outwardly.

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 tubular metallic shaft or shafts, D, fitting in the recess or recesses of the plate A, and connected to a base, E, and capital F, which may either fit over and be connected to the plate A, as in Fig. 4, or be connected to prolongations of the side plates, B, of the pilaster below and above said plate A, as in Fig. 3.

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 recesses in its body and a flange at each of its sides, 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, with one or more segmental recesses in its body and a flange at each of its sides, 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 recesses in its web and a flange at each of its sides, a tubular shaft or shafts fitting in the recess or recesses of the plate, a base and capital adjoining the ends of said shaft or shafts, 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:

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R. H. WHITTLESEY.