No. 738,163. PATENTED SEPT. 8, 1903.

J. F. CLUTTER.

METAL COLUMN.

APPLICATION FILED JUNE 30, 1902.

NO MODEL.

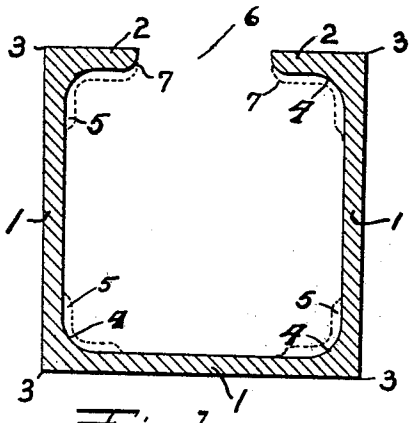


Fig. 1

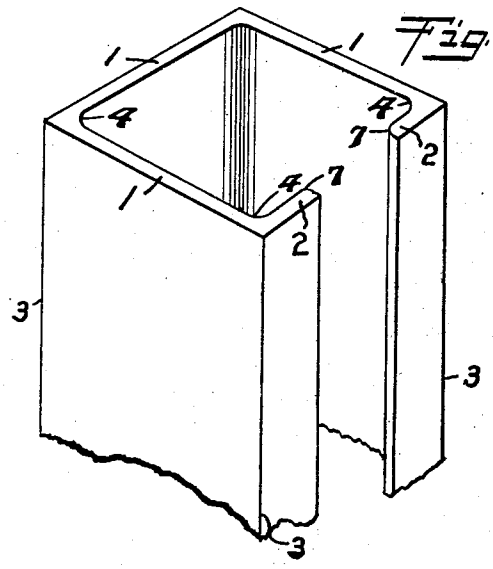


Fig. 2.

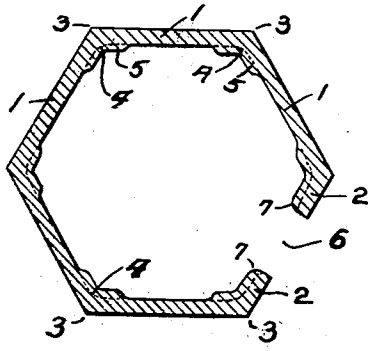


Fig. 3

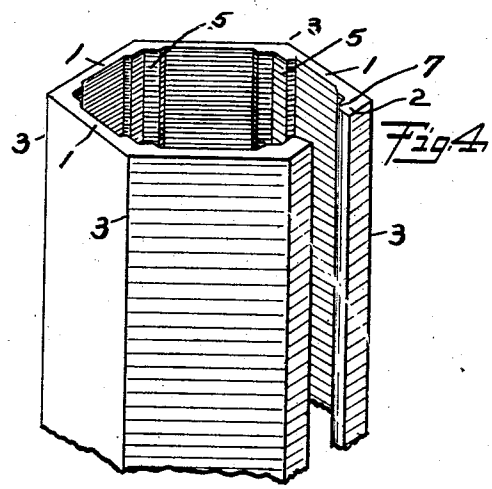


Fig. 4

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No. 738,163. Patented September 8, 1903.

UNITED STATES PATENT OFFICE.

JOSEPH F. CLUTTER, OF OMAHA, NEBRASKA.

METAL COLUMN.

SPECIFICATION forming part of Letters Patent No. 738,163, dated September 8, 1903.

Application filed June 30, 1902. Serial No. 113,872. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH F. CLUTTER, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Metal Columns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to metallic columns, and particularly to integral rolled-metal columns.

It is the object of my invention to provide a hollow integral rolled-metal column having means of access to the interior thereof for riveting when other constructions are to be secured thereto or for painting when the column is used in bridges or other open or exposed structures.

A further object of my invention is to provide a column of the above type having the greatest possible strength with the least weight of metal therein, this being accomplished by reinforcing the inner corners of the column by extra metal, as hereinafter set forth.

My invention contemplates the construction of columns having any desired number of sides; but as the essential features are the same for a column of any number of sides I will describe the same with reference to the forms shown in the accompanying drawings, in which—

Figure 1 is a transverse section of a rectangular column constructed according to my invention. Fig. 2 is a perspective view of the same. Fig. 3 is a transverse section of a hexagonal column constructed according to my invention, and Fig. 4 is a perspective view of the same.

My column comprises the straight sides 1, having the metal therein of substantially uniform thickness, and the open or slotted side 2. The external corners 3, formed by the junction of the said sides, are pointed or angular, as shown. The internal corners 4 are rounded or filleted, as shown in Fig. 1, or where greater reinforcement than a fillet is needed the extra metal 5 is placed at the internal corners and extended a little way along the inside of the sides 1 and along the side 2 to the longitudinal slot 6 therein, as shown in Figs. 3 and 4 and by dotted lines in Fig. 1. The inner corners 7 at the sides of the slot are rounded, as shown, thus making a smoother opening and facilitating access to the interior for painting, riveting, &c.

Columns constructed as described are adapted to a great diversity of uses. The rectangular column of this type is particularly adapted to bridge construction, and when so used the longitudinal slot may be partly closed and the column further strengthened by riveting stay-plates at intervals across the open side thereof or by "lacing" said open side with diagonally-extending strips.

I am aware that it is old to form a composite beam or column with a longitudinal slot in one side thereof having non-reinforced inner corners and the interior thereof filled with wood or similar material and that such construction is shown in patent to Martin, No. 320,079, issued June 16, 1885; but my invention does not contemplate such construction.

I am also aware that it is old to form from sheet metal a tube-section having an open side, flanges overhanging said open side, rounded corners, and the metal throughout the tube-section of substantially uniform thickness and that such construction is shown in patent to Macphail, No. 686,816, issued November 19, 1901; but my invention does not contemplate such structure.

My invention relates solely to integral or one-piece internally-reinforced metal columns adapted to be rolled, pressed, or drawn from a slab of metal, as described in my pending application, filed April 8, 1902, Serial No. 101,965.

Now, having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A hollow, rolled-metal column of substantially polygonal external form, one side thereof being open in the form of a longitudinally-extending slot, and the inner corners thereof being reinforced by extra material, said reinforcing material being extended along the sides of the column, substantially as described.

2. A hollow, rolled-metal column of polygonal external form, having angular external

corners, a longitudinal slot in one face thereof and the inner corners reinforced, said reinforcement being extended along the sides of the column, substantially as described.

3. A hollow, integral, rolled-metal column of substantially polygonal external form, having angular external corners, one side thereof open in the form of a longitudinal slot, and reinforcing metal in the inner corners, said reinforcing metal on the open side of the column extending to the edges of the longitudinal slot, substantially as described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOSEPH F. CLUTTER.

Witnesses:
D. O. BARNELL,
HARRY S. SMITH.