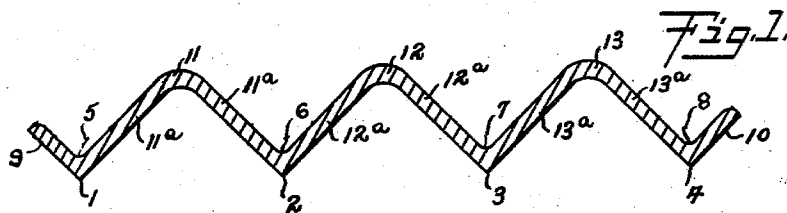
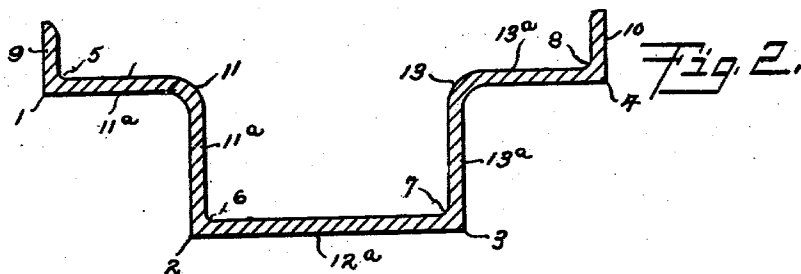
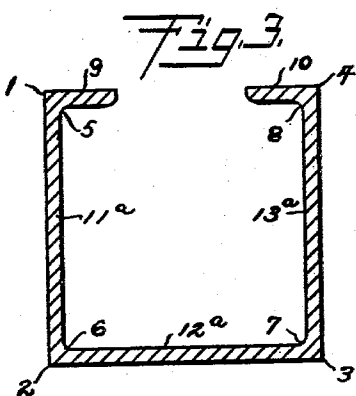
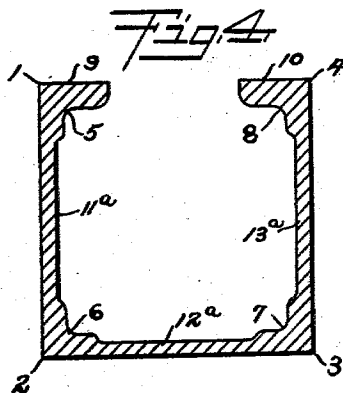


No. 739,650.

PATENTED SEPT. 22, 1903.

J. F. CLUTTER.
METHOD OF MAKING METALLIC COLUMNS.
APPLICATION FILED APR. 8. 1902.

NO MODEL.



WITNESSES:
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BY
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his ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH F. CLUTTER, OF OMAHA, NEBRASKA.

METHOD OF MAKING METALLIC COLUMNS.

SPECIFICATION forming part of Letters Patent No. 739,650, dated September 22, 1903.

Application filed April 3, 1902. Serial No. 101,965. (No specimens.)

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 Methods of Making Metallic 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 methods of producing rolled or pressed metal columns; and it is the object thereof to provide a method of making hollow metallic columns of polygonal external form and having a longitudinally-extending slot in one side thereof.

In the accompanying drawings I have illustrated the different steps in the formation of a rectangular column of the above type, and, my method being similar for columns of any number of sides, I will describe the same with reference to the rectangular column shown.

The column is rolled or pressed from a sheet, plate, or slab of metal, and the first intermediate sectional form thereof is shown in Figure 1. Fig. 2 is a similar view showing the second intermediate form, and Figs. 3 and 4 are similar views showing variations of section in the completed column.

In the production of a column according to my invention a slab of metal is passed through rolls or presses, which are so formed as to bend and draw the slab into a substantially corrugated section. In this step in the operation the external corners 1, 2, 3, and 4, Fig. 1, and the internal corners 5, 6, 7, and 8 are given the form it is desired them to have in the finished column. The external corners 1, 2, 3, and 4 are preferably angular and the internal corners 5, 6, 7, and 8 filleted or reinforced, as shown. At this step in the operation the said corners point in substantially the same direction, and the ends 9 and 10 or sides of the slab are formed and finished, the same being preferably of approximately the proportions shown.

Intermediate between the corners 1 and 2, 2 and 3, and 3 and 4 the metal is formed into rounded corners 11, 12, and 13, which corners point in a direction opposite to the corners 1, 2, 3, and 4. The metal at the corners 11,

12, and 13 is made somewhat thicker than the metal 11^a, 12^a, and 13^a intermediate between the said corners and the corners 1, 2, 3, and 4. The purpose of this extra thickness of metal at these corners is to allow the straightening of the same without weakening or thinning the same during the straightening operation. In the next step in the operation the corrugated section is passed through presses and rolls, which press and straighten out the bend 12 and make the portions 12^a a continuous straight plate between the corners 2 and 3. The sectional form of the metal at this step in the operation is shown in Fig. 2. Continuing, the metal is passed through other presses and rolls, which straighten out the bends 11 and 13 and make the portions 11^a and 13^a straight and continuous sides, thus producing the finished column, as shown in Fig. 3. The internal corners 5, 6, 7, and 8 may be reinforced and the sectional area of the column increased by filling in the said corners, as indicated in Fig. 4.

It is obvious that the method herein disclosed of forming columns might be applied to the formation of columns having a greater number of sides than are herein shown and described, and five, six, or eight sided columns might be produced with almost equal facility.

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

1. The method of producing hollow, rolled metal columns of substantially polygonal external form, consisting in rolling a slab of metal into a substantially corrugated section and then straightening the alternate bends of the corrugated section.

2. The method of producing integral, hollow, polygonal, metal columns consisting in rolling a slab into a substantially corrugated section having the alternate bends thereof rounded and thickened, and then straightening by pressure said alternate bends into sides of uniform thickness.

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

JOSEPH F. CLUTTER.

Witnesses:

MAUDE LANGDON,
D. O. BARNELL.