

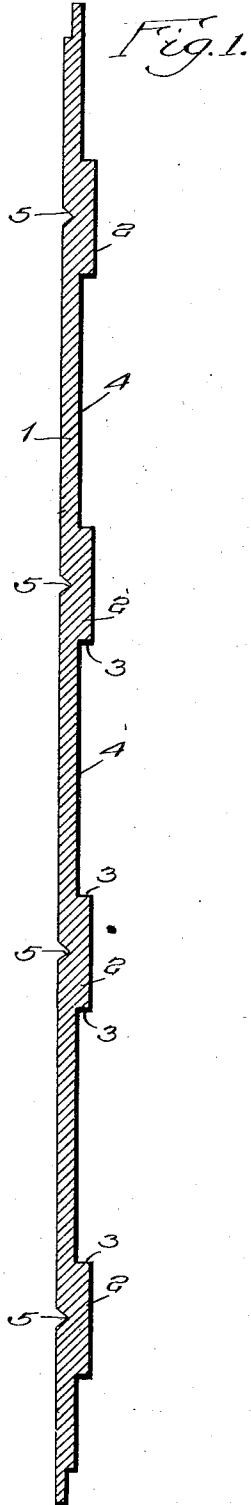
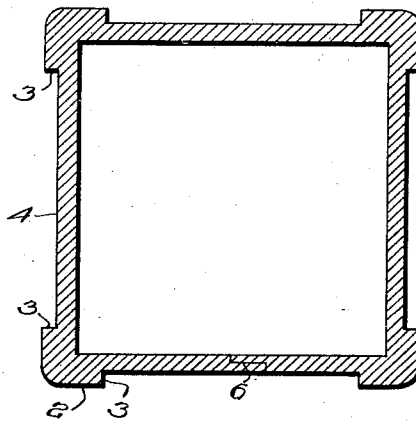
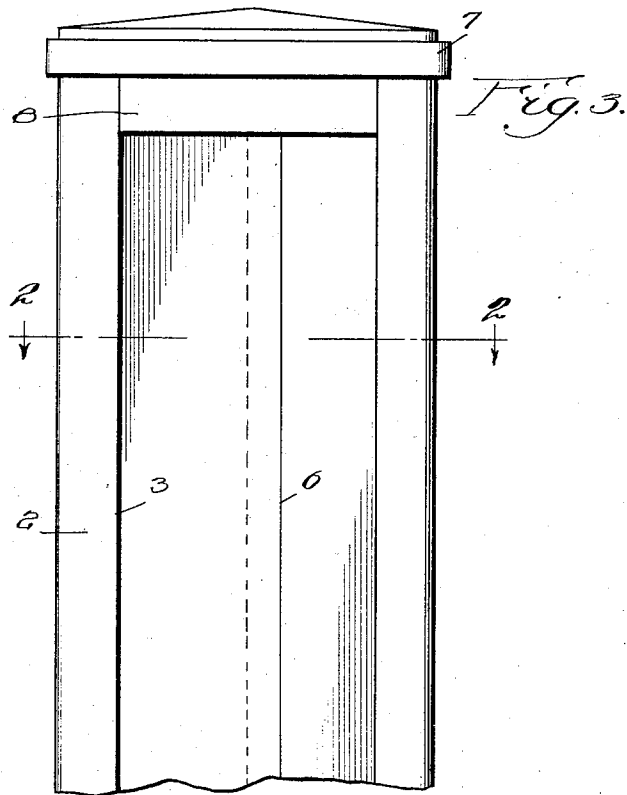
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SQUARE TUBING FOR NEWEL POSTS

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UNITED STATES PATENT OFFICE

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SQUARE TUBING FOR NEWEL POSTS

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This invention relates to substantially square steel, lap-welded tubing and the method of making the same, particularly suitable for making newel posts.

The main objects of this invention are to provide an improved form of square steel tubing having a maximum of strength and a minimum of material; to provide tubing of this character that is particularly suitable for making newel posts to be used in schools and blind institutions and the like where it is desired to have slightly rounded corners on the newels.

An illustrative embodiment of this invention is shown in the accompanying drawings in which:—

Figure 1 is a transverse section of the steel plate from which the tubing is formed.

Figure 2 is a section of the completed tubing taken on the line 2—2 of Fig. 3.

Figure 3 is a fragmentary elevation of the upper end of a newel post formed from this improved tubing.

Heretofore newel posts have been commonly made from cast iron. This method of manufacture has presented many objections, the main one of which is the high cost of the product. Cast iron newel posts also necessitate having a different pattern for each different length of post required in buildings, and these cast iron newel posts are also objectionable in that they are brittle and liable to shatter and break under strain.

In the construction shown in the drawings, a substantially flat plate 1, preferably of rolled steel, is provided on one surface thereof with a plurality of longitudinally disposed thickened portions 2 having substantially square corners 3 forming sharply defined depressed panels 4 between each of the thickened sections 2.

The opposite surface of the plate 1 is provided at a point substantially midway of each of the thickened sections 2 with V-shaped grooves 5 for weakening the plate so as to make it more readily bendable along such grooves.

The plate 1 is then bent along each of the grooves 5 in a direction toward said grooves so as to form a substantially rectangular

hollow tube as shown in Fig. 2 of the drawings, the opposite lateral edges of the plate 1 being lap-welded as shown at 6 to form a tight joint.

When this tubing is used for making newel posts, sections of the required length are cut and a cap 7 having a depending flange 8 of a width equal to the distance between the adjacent square shoulders 3 and of a thickness equal to the depth of the depressed panels 4 is welded or otherwise suitably secured to the end of the tube to make the finished newel post.

The thickened portions 2 formed on the outer surface of the plate 1 have a double function in that they add strength to the tube at the same time it permits the finished newel post to have a depressed panel which is very desirable from an ornamental standpoint as well as permitting the use of a minimum amount of metal in making a substantial post. Round corners on the post are desirable for some uses such as in blind institutions and in school houses where it is undesirable to have sharp corners exposed.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A tube of the class described made from a substantially flat steel strip, one surface thereof being provided with longitudinally extending V-shaped grooves, a longitudinally extending thickened portion on the other side of said strip positioned substantially opposite each groove for strengthening the grooved portions of said strip, said strip being bent along said grooves to form a plurality of substantially flat sides angularly disposed to one another, and the lateral edges of said strip being joined to form a hollow unitary structure.

2. A tube of the class described made from a substantially flat steel strip, said strip having a plurality of longitudinally extending grooves in one side thereof and a relatively

5 narrow longitudinally extending thickened portions on the other surface thereof substantially opposite each groove for strengthening the grooved portions of the strip, said thick-
 10 ened portions having substantially square corners so as to form sharply defined sunken panels between said thickened portions, said strip being bent along said grooves to form a plurality of substantially flat sides angu-
 15 larly disposed to one another, and the lateral edges of said strip being joined to form a hollow unitary structure.

3. A tube of the class described made from a substantially flat steel strip having a plu-
 15 rality of longitudinally extending V-shaped grooves on the inner side thereof, extending substantially through the thickness of the strip, and a relatively narrow longitudinally extending thickened portion on the other sur-
 20 face of said strip substantially opposite each groove for strengthening the grooved portions of the strip, said strip being bent along said grooves to form a plurality of substan-
 25 tially flat sides angularly disposed to one another, and the lateral edges of said strip being lap welded to form a hollow unitary structure, said lap weld being spaced away from a corner of said tube.

4. Tubing of the class described, compris-
 30 ing an integral metal strip having spaced depressions forming panels decorating the outer surface thereof and forming thickened portions between the panels, the inner sur-
 35 face of the said metal being provided with longitudinally extending V-shaped grooves having their vertices substantially at the longitudinal center lines of the thickened
 40 portions for facilitating bending at the center of the thickened portion to position adjacent parts thereof in angularly disposed planes.

5. A tubular frame of rectangular cross-section comprising an integral sheet of metal having spaced depressions forming decorative
 45 panels on the outer surface, and laterally shouldered thickened portions between said panels on the outer side of the sheet, the inner side of the sheet being provided with longitudinally extending miter grooves lo-
 50 cated between the longitudinal edges of the thickened portion, and formed to facilitate bending of the adjacent sections thereof substantially at right angles to each other, said grooves being closed when the tube is formed.

6. A blank for forming tubing, comprising a strip of metal provided on one side with spaced longitudinally extending miter
 55 grooves of a depth substantially equal to the thickness of the strip for facilitating bending thereof along predetermined lines, and a thickened laterally shouldered portion on the other side of the strip substantially opposite
 60 each groove for reinforcing the portion of the strip that is weakened by the grooves, adja-

cent thickened portions forming depressed panels in the strip.

7. A tube of the class described made from a substantially flat steel strip, one surface thereof being provided with longitudinally
 70 extending grooves presenting opposite flat surfaces arranged to abut and defining the limits of the bending of the strip, longi-
 75 tudinally extending thickened portions on the other face of the strip positioned sub-
 80 stantially opposite the said grooves and strengthening the grooved portions of the strip, said strip being bent along said grooved portion to form a plurality of abutting sides angularly disposed to one another, the thick-
 85 ened portions between the sides forming decorative panels.

Signed at Chicago this 29th day of November, 1927.

HAROLD FELSENTAL.

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