E. FULDA.

METALLIC POLE, GIRDER, &c.

APPLICATION FILED AUG. 13, 1915.

1,259,844. Patented Mar. 19, 1918.

Fig. 1.

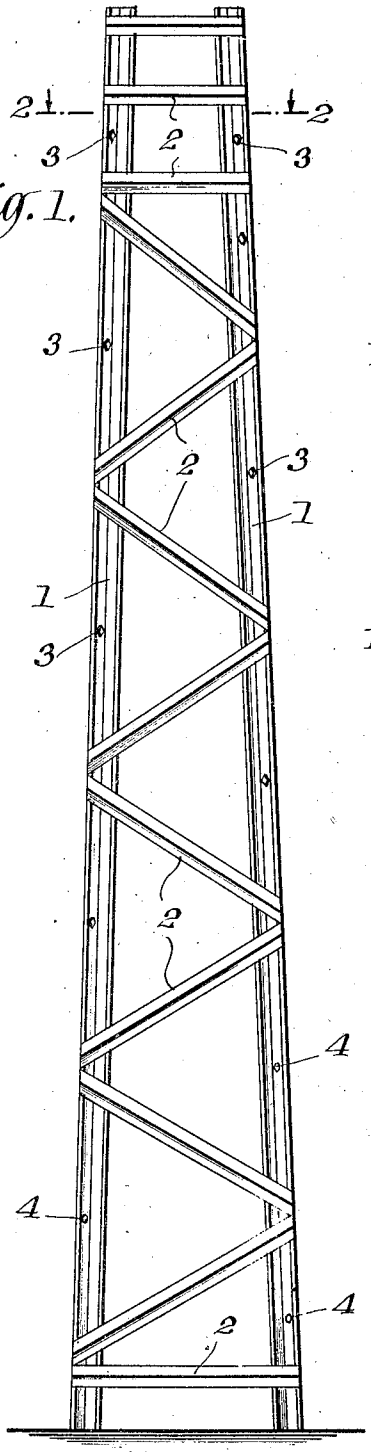


Fig. 2.

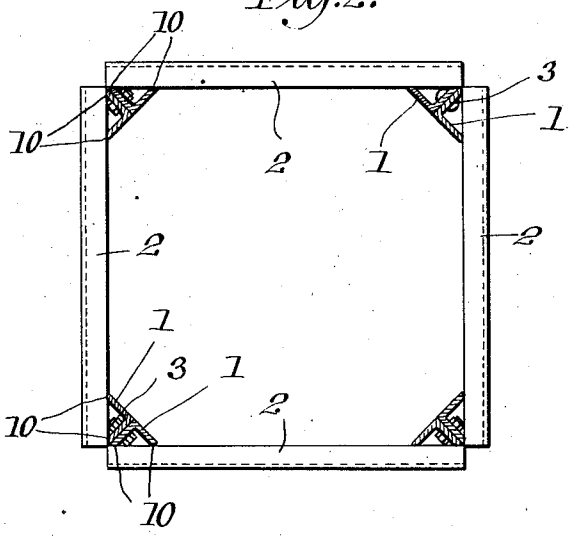
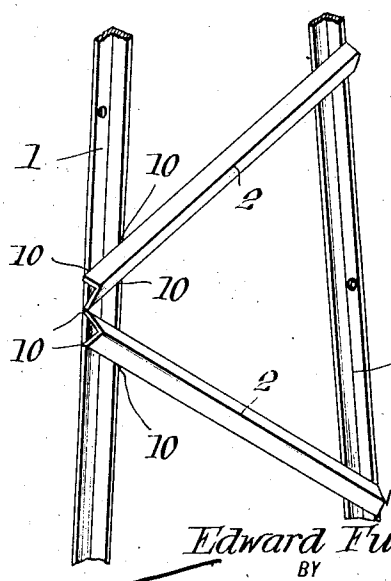


Fig. 3.



INVENTOR

Edward Fulda

BY

Townsend & Sutter

ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD FULDA, OF NEW YORK, N. Y.

METALLIC POLE, GIRDER, &c.

1,259,844. Specification of Letters Patent. Patented Mar. 19, 1918.

Application filed August 13, 1915. Serial No. 45,276.

To all whom it may concern:

Be it known that I, EDWARD FULDA, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Metallic Poles, Girders, &c., of which the following is a specification.

My present invention relates to skeleton metallic structures fabricated of bars, flanged members, angles and the like and adapted to be used as columns, poles, girders, beams and as reinforcement for concrete.

The object of the invention is to produce a cheap and quickly assembled structure capable of withstanding heavy loads or strains.

In accordance with this invention the structure may have any desired number of sides and each side is made as a complete unit *per se*, and if desired each is a duplicate of the other, so that the same may be shipped in disassembled condition, the parts being so shaped and arranged that the sides are readily and quickly joined to each other to complete the structure either before shipment or at the place of installation.

A use to which the invention is particularly adapted is metallic telephone poles and when embodied in such structures the pole preferably tapers from the base to the top although it will be understood that the invention is not limited to a tapered pole or to any particular article and the structure obtained may be used in skeleton form or as a reinforcement for concrete.

Numerous objects and advantages accruing from the invention will readily appear from the subjoined description and to these ends the invention consists in the new and novel structure hereinafter more particularly described and then specified in the claims.

In the accompanying drawings:

Figure 1 is a side elevation of a tapered telegraph pole constructed in accordance with this invention.

Fig. 2 is an enlarged horizontal section through the same taken on the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of a part of one of the side units.

By preference the members of which the sides of the structure is composed are of angle iron or V-shaped material as this shaped stock is easily and comparatively cheap to obtain yet produces a light, strong structure. When made of this material the members of the side units may be efficiently joined together by electrically welding them by their intersecting edges preferably in the manner shown and described, particularly in connection with Figs. 17 and 18, in the patent to L. S. Lachman for process of electric welding, No. 1,085,089, dated Jan. 20th, 1914. This renders unnecessary the formation of special ridges on the members and a strong, quick union of the parts is obtained. Also by utilizing this shaped material especially for the longitudinal members of each side unit the units may be quickly and easily secured together as will presently appear.

For the purpose of illustration the invention is shown in the drawings and will be herein described as applied to a square telegraph or telephone pole structure tapered from the base to the top. Each side is separately built as a complete unit and the whole then assembled by joining the longitudinal or upright members of adjacent units.

Each side unit comprises longitudinal or upright members 1 which are preferably angle or V-shaped metal bars held in proper spaced relation by transverse members 2 also preferably angle or V-shaped bars or straps. The transverse members may be disposed at any desired angle or in any arrangement and preferably so that the free edges engage and intersect the free edges of the members 1 in which position they are electrically welded, as at the points 10, in the manner described in the above mentioned patent. Each side unit is thus complete and the parts rigidly secured in fixed correlation to each other, the part being simple to manufacture in a welding machine owing to its flat condition.

To assemble the structure adjoining sides are brought together and the adjacent longitudinal members brought into side contact along the surface of one of the flanges thereof and when in this position the members are secured together in any desired manner as for instance by rivets or bolts 3 or spot welds indicated at ' in the spaces of the longitudinal members 1 between the transverse members 2. For the purposes of convenience of illustration the joining of the units is indicated at some places as rivets or bolts and others by welds. Thus the flanges of the angle iron members 1 are

united whereby a T-shaped section appears in each corner or angle of the structure.

By arranging the angle iron longitudinal members as shown with their free edges projecting outward from the center of the finished structure, the flanges thereof which are secured together can be easily reached for riveting or welding. Obviously by inclining the side longitudinal bars of each unit toward each other the result in the finished structure is a tapered pole.

By practising this invention of completing each side unit *per se* and then joining the units, all the difficulty of properly locating individual straps or bars when the structure is made up by a sort of building operation, that is piece by piece, is avoided and a great improvement thereover is the result.

If desired additional longitudinal members may be employed in each unit and additional bracing members used, the arrangement shown being, as above stated, for the purpose of illustrating the invention only.

What I claim as my invention is:—

1. A metallic pole, girder or the like each side of which is a unit comprising V-shaped longitudinal members and transverse members welded to the free edges of said longitudinal members and having the longitudinal members of each unit welded to the corresponding member of an adjacent unit in the space between the transverse members.

2. A metallic pole, girder or the like each side of which is a unit comprising V-shaped longitudinal members and transverse members welded to the free edges of said longitudinal members, said V-shaped longitudinal members being disposed with their free edges projecting toward the outside of the finished structure and adjacent longitudinal members of adjoining units contacting with each other and joined together in the spaces between said transverse members.

3. A metallic structure comprising a plurality of independent side units each comprising V-shaped longitudinal bars and V-shaped transverse bars welded together at their free edges, adjacent longitudinal bars of adjoining units contacting and means joining said contacting bars.

Signed at New York in the county of New York and State of New York this 4th day of August A. D. 1915.

EDWARD FULDA.

Witnesses:
LILLIE VREELAND,
F. B. TOWNSEND.