June 17, 1924. 1,498,127

P. W. SOMMER

FENCE STRUCTURE

Filed Dec. 10, 1921

FIG 3

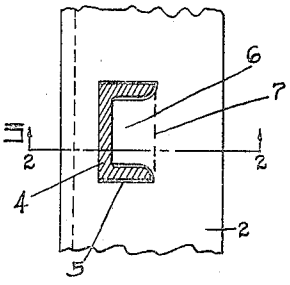


FIG 6

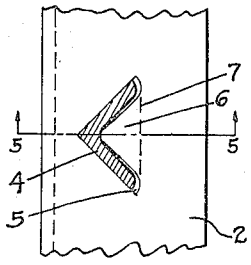


FIG 2

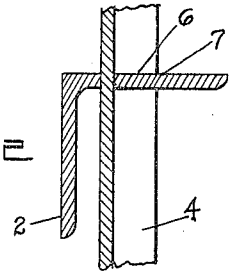


FIG 5

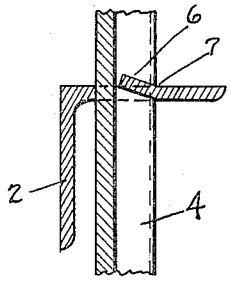
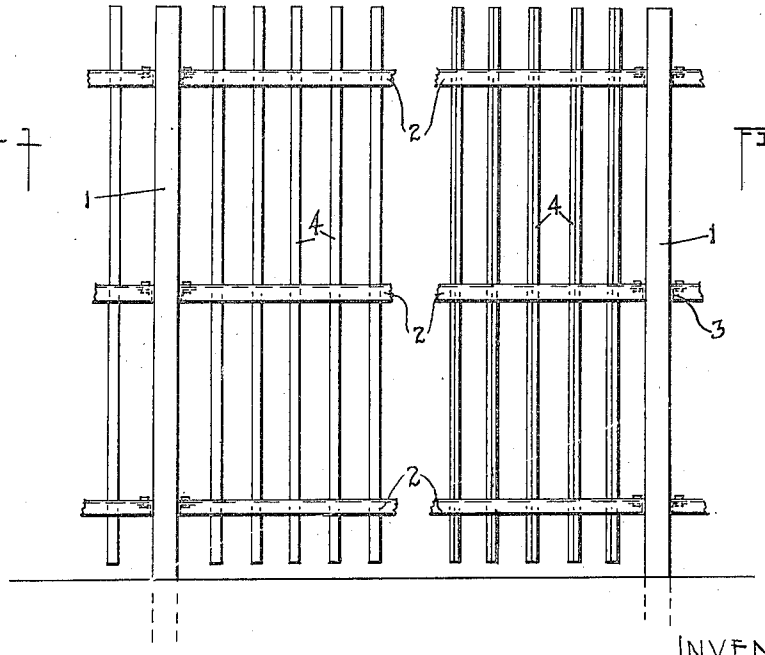


FIG 1

FIG 4



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By Albert G. LaPorte

ATTY

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UNITED STATES PATENT OFFICE.

PETER W. SOMMER, OF PEORIA, ILLINOIS, ASSIGNOR TO KEYSTONE STEEL & WIRE COMPANY, OF BARTONVILLE, ILLINOIS, A CORPORATION OF ILLINOIS.

FENCE STRUCTURE.

Application filed December 10, 1921. Serial No. 521,497.

To all whom it may concern:

Be it known that I, PETER W. SOMMER, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented new and useful Improvements in Fence Structures, of which the following is a specification.

This invention has reference to fence structures and particularly to metallic structures including a plurality of longitudinal metal bars connected by vertically arranged, suitably spaced metallic stays.

The invention has for one of its objects to produce a metallic fence structure which is comparatively heavy and rigid, being preferably made of a plurality of longitudinal metal bars connected at their ends to the posts supporting such structure, and such longitudinal bars being connected by vertically arranged and suitably spaced metallic stays. The posts may be metallic channel bars, or of any other material and design, the longitudinal bars of the structure perferably angle iron bars, and the stays of channel or angle iron bars as may be desired.

The invention has for a further object to provide a new and novel means for securing the stay bars to the longitudinal supporting bars, without the use of rivets, bolts or similar attaching means. Such securing means consisting in slotting the horizontal webs of the longitudinal supporting bars and bending up lips in such horizontal webs, which are subsequently caused to be brought into a firm frictional impinging relation with the vertical stay bars which are passed thru the slots in the longitudinal supporting bars. This form of attachment provides a very firm lock and one which affords an easy and convenient attaching means for the vertical stay bars with the longitudinal supporting bars when assembling the fence structure.

A fence structure such as herein disclosed may have many and varied uses; such for instance, as an ornamental picket fence for residential purposes, as an enclosure for zoological parks, for factory purposes, etc.

That the invention may be more fully understood, reference is had to the accompanying drawings, forming a part of this description, illustrating a preferred embodiment of the invention, in which:—

Fig. 1 is an elevation, on a greatly reduced scale illustrating a metallic fence structure embodying my invention where the longitudinal supporting bars are angle iron bars, and where the stays or pickets are channel bars;

Fig. 2 is a detailed vertical cross-section of a longitudinal supporting bar and a stay or picket, as the same would appear if taken on the line 2—2 of Fig. 3, the lip of the horizontal supporting bar having been moved into a firm impinging locking relation with the stay or picket;

Fig. 3 is a cross-section in plan of Fig. 2;

Fig. 4 is an elevation, on a greatly reduced scale illustrating a metallic fence structure embodying my invention where the longitudinal supporting bars are angle iron bars, and where the stays or pickets are also angle iron bars;

Fig. 5 is a detailed vertical cross-section of the supporting bar and stay or picket, both of which are made of angle iron bars, the locking lip in this instance is shown bent up in its original form and before it is brought into firm impinging locking relation, as the locking lip appears in Fig. 2, the view being as the same would appear if taken on the line 5—5 of Fig. 6, and

Fig. 6 is a cross-section in plan of Fig. 5.

Like characters of reference denote corresponding parts thruout the figures.

In the drawings the supporting posts designated 1 would preferably be metallic channel bars in cross-section.

The fence structure supported by the posts 1 includes a plurality of suitably spaced longitudinal supporting bars 2, preferably angle iron bars. These bars may be secured at their opposite ends to the supporting posts 1 in any suitable manner, altho one form of support might comprise the angle supporting clips 3, shown in dotted line, secured to the posts 1 and to which the supporting bars 2 are attached. Also the vertically arranged suitably spaced stays or pickets 4. In Figs. 1, 2 and 3 these stays or pickets are preferably metallic channel bars in cross-section, whereas in Figs. 4, 5 and 6 they are preferably

shown as angle iron bars. These two forms of bars are shown merely for the purpose of illustrating that the particular cross-sectional design of the stays or pickets is not altogether material, and that various structural shapes may be used not only for the stays or pickets, but also for the longitudinal supporting bars.

I am aware that it is not new to provide a fence structure including longitudinal supporting bars and stays or pickets where structural shapes are used both for the supporting bars and the stays or pickets. I am only concerned with the manner and means for attaching or securing the stays or pickets to the longitudinal supporting bars. Heretofore, so far as my knowledge extends, the stays or pickets have been attached to the longitudinal supporting bars by rivets, bolts or some other separate and distinct attaching means, which is not only inconvenient but is expensive, both in the use of materials and in labor costs.

My improved means of connecting the stays or pickets to the longitudinal supporting bars, consists in slotting the horizontal webs of the longitudinal supporting bars 2 as at 5. These slots may be spaced from each other at any suitable distance desired for the spacing of the stays or pickets from each other, and such slots may take the form of the channel bar in Figs. 1, 2 and 3, or the angle iron bar in Figs. 4, 5 and 6, or the form of any other structural shape which may be used for the stays or pickets 4. Said slots being of a width and designed for the insertion of the stays or pickets therethru, as it is believed will be understood. At the time of the cutting or forming these slots in the longitudinal supporting bars lips 6 are bent or struck up on the line 7, see Figs. 2, 3, 5 and 6; such lips being preferably within the confines of the slots as shown.

When assembling the fence structure the lips 6 are found in the struck up position shown in Fig. 5 and after the insertion of the stays or pickets thru the slots in the supporting bars and when properly positioned, the person assembling the structure will tap the lips 6 with a hammer or with any other suitable tool pressing the same down into the position shown in Fig. 2, where the lip is shown brought into a firm impinging locking relation with the body of the stay or picket the latter being firmly held between the walls of the slot in the supporting bar, one wall of which comprises the lip as shown.

From the foregoing it should be obvious that I have not only provided a fence structure which is sufficiently heavy for the purposes intended, but have provided a very simple, convenient and efficient locking means for connecting the stays and pickets to the supporting bars when assembling the structure.

What I claim is:—

In a metallic fence structure, a unit including in combination, a plurality of spaced longitudinally disposed bars each provided with a plurality of spaced correspondingly located angular slots and struck-up lips conforming to said slots, and a plurality of vertically disposed stay-bars extending upwardly through the slots in said longitudinal bars and secured thereto by said lips firmly locked against a face of said vertical bars.

PETER W. SOMMER.