March 26, 1940. C. BAUER 2,195,072

FENCE STRUCTURE

Filed June 24, 1937 3 Sheets-Sheet 1

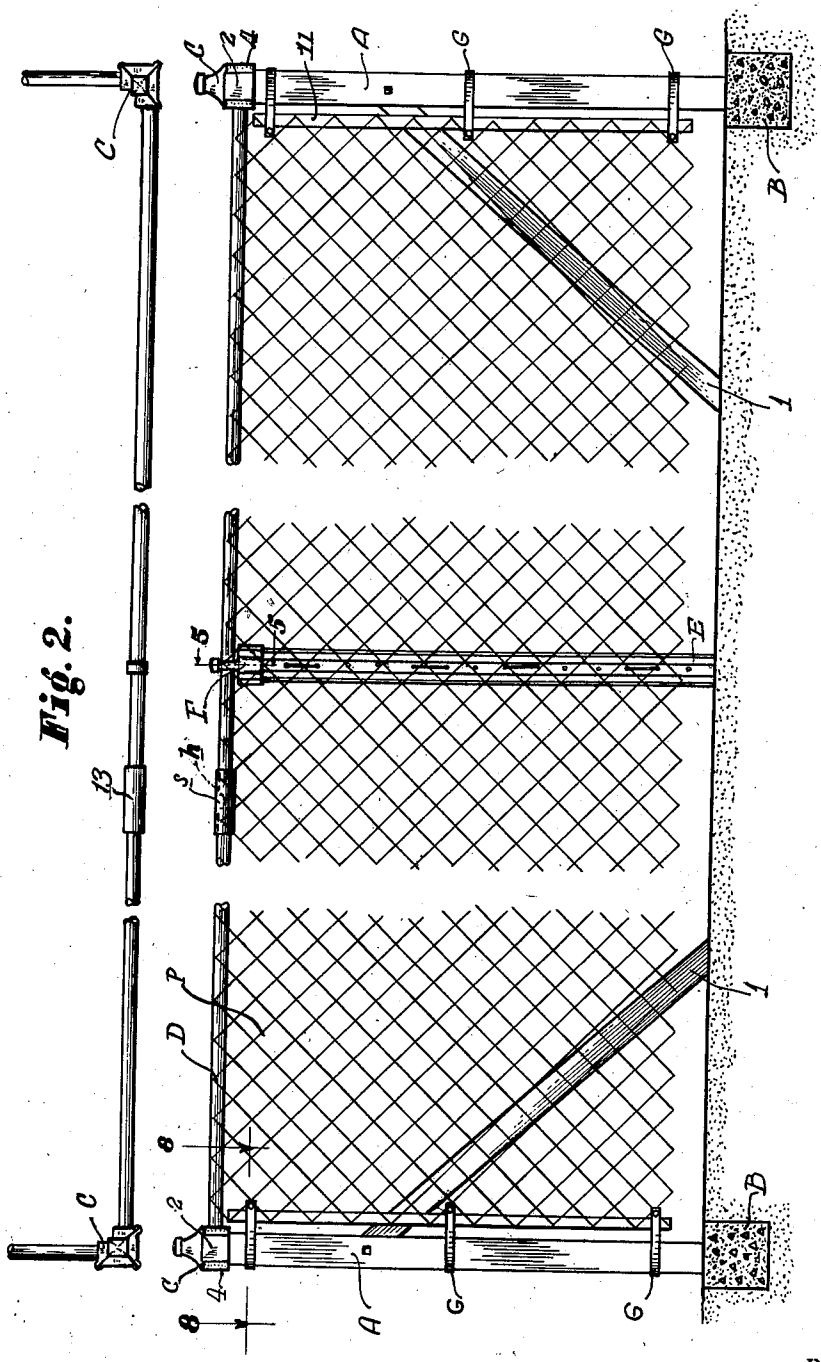


Fig. 2.

Fig. 1.

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FENCE STRUCTURE

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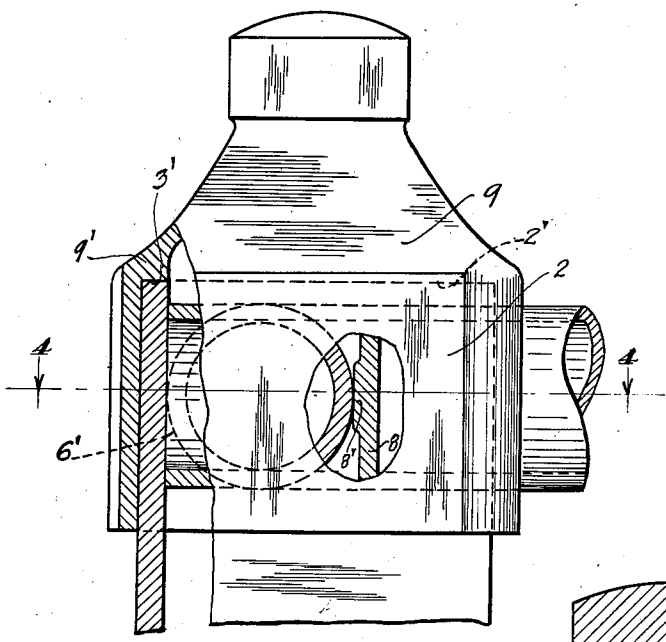


Fig. 3.

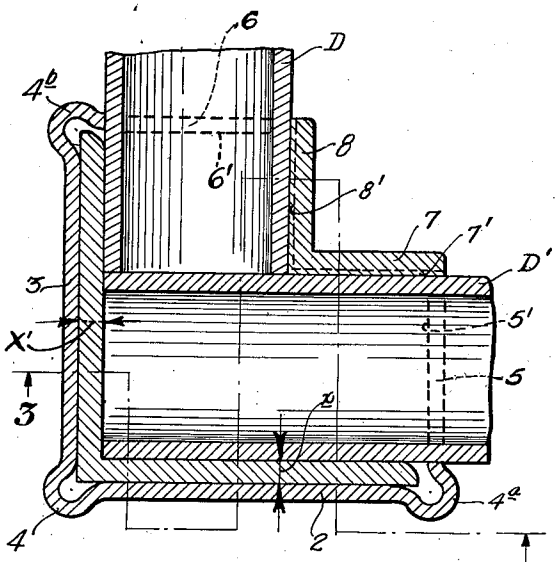


Fig. 4.

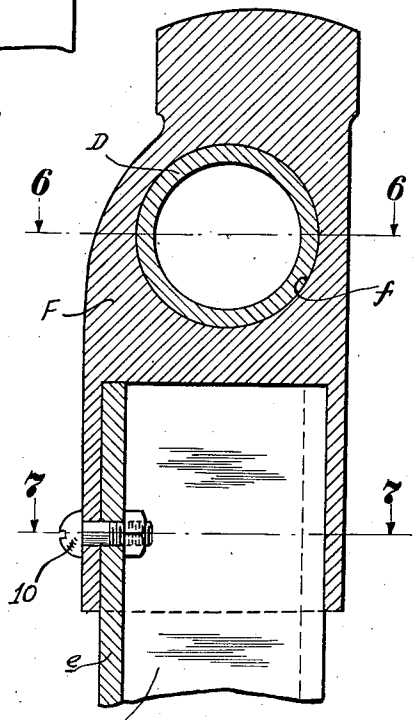


Fig. 5.

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FENCE STRUCTURE

Filed June 24, 1937 3 Sheets-Sheet 3

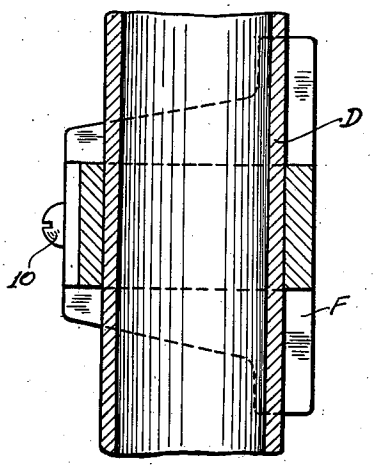


Fig. 6.

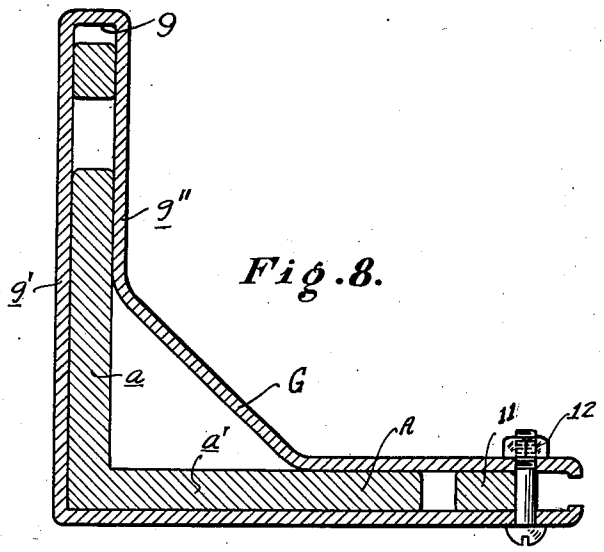


Fig. 8.

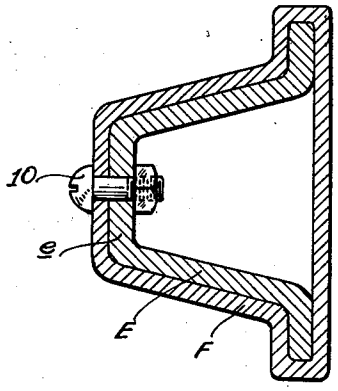


Fig. 7.

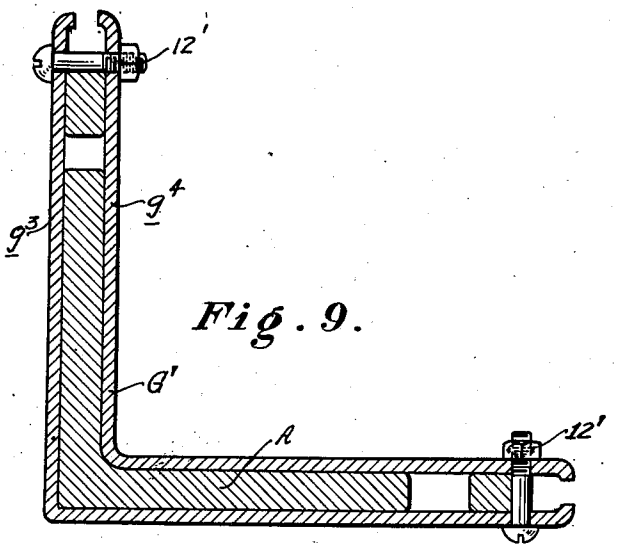


Fig. 9.

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Patented Mar. 26, 1940 2,195,072

UNITED STATES PATENT OFFICE

2,195,072

FENCE STRUCTURE

Carl Bauer, St. Louis, Mo., assignor to Missouri Rolling Mill Corporation, St. Louis, Mo., a corporation of Missouri

Application June 24, 1937, Serial No. 150,134

10 Claims. (Cl. 256—65)

This invention relates to certain new and useful improvements in fence structures.

My present invention has for its primary object the provision of a fence structure, which is simple and economical in construction, which is exceptionally strong and durable, which presents a highly pleasing and artistic effect in its finished form, which is fabricated from a plurality of interfitting co-operative parts readily and quickly assembled with a minimum of labor and in a variety of different ways to meet various conditions with respect to the size and shape of the enclosure to be fenced, and which is highly efficient and satisfactory in the performance of its intended functions.

And with the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts presently described and pointed out in the claims.

In the accompanying drawings (3 Sheets),—

Figure 1 is a broken front elevational view of a fence structure embodying my present invention;

Figure 2 is a broken fragmentary top plan view of the structure;

Figure 3 is an enlarged fragmental elevational view, partly broken away and in section approximately along the line 3—3, Figure 4, of one of the corner-posts of the structure;

Figure 4 is an enlarged horizontal cross-sectional view of said corner-post, taken approximately along the line 4—4, Figure 3;

Figure 5 is an enlarged fragmentary vertical sectional view of one of the intermediate supporting posts of the structure, taken approximately along the line 5—5, Figure 1;

Figures 6 and 7 are enlarged horizontal sectional views of said intermediate supporting post, taken approximately along the lines 6—6 and 7—7, respectively, Figure 5;

Figure 8 is an enlarged horizontal sectional view of the structure, taken approximately along the line 8—8, Figure 1, showing one of the fence-fabric attaching clamps; and

Figure 9 is a plan view of a slightly modified form of fence-fabric attaching clamp of my invention.

Referring now in more detail and by reference characters to the drawings, which illustrate a preferred embodiment of my invention, the fence structure comprises a plurality of corner posts A each preferably fabricated of angle iron of equilateral cross-section and each of suitable predetermined length, size, and structural strength.

The posts A are disposed in parallel relation and spaced one from the other as may be required in "fencing" the particular enclosure, each post A being mounted at its lower extremity in, and extending vertically upwardly from, a preferably conventionally formed concrete or other suitable post foundation B with its opposed flanges or legs *a*, *a'*, positioned to project right-angularly in the direction of the respective intersecting or meeting sides of the particular enclosure.

Secured as by means of a bolt or other suitable attaching member at its one extremity to, and intermediate the ends of, each respective post A and extending angularly downwardly and outwardly therefrom for embedment at its lower extremity in the ground or foundation at a suitable predetermined distance right-angularly from the post foundation B, as best seen in Figure 1, is a preferably angle-iron brace-member 1.

Mounted on the upper extremity of each of the respective posts A, is a hollow or shell-like, open-bottomed cap-member C preferably cast from malleable iron and having the unique form and contour best seen in Figures 3 and 4, each cap C comprising vertically extending front walls 2, 3, integrally joined together in right-angular disposition the one to the other by a vertically extending arcuate corner-pillar 4, a side wall 5 disposed in parallel relation to the front wall 3 and integrally joined to the outer margin of the wall 2 by an arcuate corner-pillar 4*a*, a second side wall 6 disposed in parallel relation to the opposite front wall 2 and integrally joined to the outer margin of the wall 3 by an arcuate corner-pillar 4*b* and rear walls 7, 8, angularly disposed the one to the other and joining the side walls 5, 6, the wall 7 being in spaced parallel relation to the one front wall 2 and the wall 8 being in parallel relation to the other front wall 3, and each of said walls 7, 8, being provided upon its inner face with an inwardly presented boss 7', 8', respectively, as best seen in Figures 3 and 4. Surmounting and preferably integrally formed with said several front, side, and rear walls, is a preferably decoratively designed top wall 9 thickened at its base, as at 9', relatively to the front walls 2, 3, to provide respective shoulders 2', 3', at the juncture-line therebetween interiorly of the cap, as best seen in Figure 3, all for purposes presently appearing.

The side walls 5, 6, are provided with respec-

tive annular apertures, as at 5', 6', respectively, diametrically sized for snugly accommodating the respective end-portions of preferably tubular top or cross bars or rails D, D', which, in the building of the fence, are suitably inserted endwise or axially into the cap C, for purposes presently more fully appearing and as best seen in Figures 3 and 4.

The aperture 5' is positioned in the cap side wall 5 in such manner with respect to the cap front wall 2 that the distance x between the inner face of the wall 2 and the parallel outer cylindrical face of the rail D' is slightly less than the thickness of the adjacent flange a' of the particular post A. Similarly, the aperture 6' is positioned in the cap side wall 6 in such manner with respect to the cap front wall 3 that the distance x' is likewise slightly less than the corresponding thickness of the opposite flange a of said particular post A. Also the inwardly presented faces of the respective bosses 7', 8', are tangent, as it may be said, to the adjacent margins of the apertures 5', 6', for flatwise abutment with the inserted rails D, D', as best seen in Figures 3 and 4.

Accordingly, in the building of the particular fence, the tubular rails D, D', are inserted endwise into the cap C through the respective apertures 5', 6', and the cap C then driven downwardly upon the upper extremity of the post A until the upper transverse margins of the rails are in tight abutment against the downwardly presented faces of the respective cap-shoulders 2', 3'. Under the driving force so applied upon the cap C, since the respective distances x, x', are slightly less than the thickness of the respective flanges or legs a, a', of the post A, as stated, the tubular bars or rails D, D', will be squeezed or "jammed" between the inner faces of the walls 2, 3, respectively, and the inwardly presented faces of the bosses or shoulders 7', 8', resulting in an exceptionally tight and rigid frictional engagement or so-called drive or "pressed fit" simultaneously securing the cap C rigidly to the post A and the top-bars D and D' securely to and endwise within the cap C.

Disposed at suitably spaced intervals intermediate the corner posts A, is a suitable plurality of intermediate preferably metallic supporting posts E each substantially U-shape in cross-section, as best seen in Figure 7, the several posts E being driven or otherwise embedded at their respective lower extremities in the ground and extending vertically upwardly for subjacent supporting connection at their respective upper ends with the respective top bars or rails D, D', as by means of a suitable cap-like casting F having a lower portion interiorly formed or molded for snug embracing engagement with the upper end, and being secured as by means of a suitable bolt 10 to the web e of the particular post E, as best seen in Figures 5, 6, and 7, the casting or cap F in its generally solid upper portion being provided with a transeverse aperture f for sleevewise accommodating the particular rail D or D', as the case may be.

Suitably marginally engaged with a top rail D or D', as the case may be, and stretched between the corner posts A, is a section of fencing fabric P, which may be formed in any desired length and width from any suitable or conventional fence material, such as screen, woven wire, reticulated sheet metal, or the like. The fabric P is equipped at its opposed vertical margins with flat strips or rods 11, each of which is, in turn, secured to a corner post A by means preferably of a plurality of vertically spaced attaching clamps G each comprising a continuous band of strap iron or other suitable bendable material doubled upon itself intermediate its ends, as at g, in the formation of a loop for embracing one of the rods or strips 11, one leg g' then extending flatwise along the outer face of the respective legs a, a', of the post A and somewhat therebeyond, and the other leg g'' extending flatwise partially along the inner face of one leg a of the post, then diagonally crosswise of the post to the opposite leg a', then flatwise along the remainder of the inner face of the leg a' of the post and also somewhat therebeyond for registration with the extended end of the first leg g' in the formation of a second so-called loop for engaging the strip 11 of an adjacent fabric section P, all as best seen in Figure 8, the extended ends of the clamp being apertured in registration for accommodating a securing bolt 12.

If desired, the fabric attaching clamp, as G', Figure 9, may be formed to include a pair of companion L-shaped strap iron members g^3, g^4, approximately parallel throughout, as shown, for substantially complete conformation to the shape of the angle post A, and their free ends similarly provided with respective tightening or securing bolts 12'.

It may be here stated that, since metallic fences of the present type have an appreciable coefficient of expansion responsive to changes in atmospheric temperature, it is conventional practice to provide some sort of expansion joint at convenient intervals along each stretch of fencing, such as the expansion joint s, which may be formed by cutting a gap h in the tubular cross members D, D', and forming a sliding connection thereacross through a sleeve 13, into which opposed portions of the bar members or rails are snugly but slidably fitted.

Thus, by my present invention, I provide a fence structure, which is extremely rugged and structurally strong and which is exceptionally economical both in initial manufacturing cost and also in the cost of subsequent erection incident to actual use.

It will further be apparent that the several parts of the fence may be quickly and readily assembled to meet the dimensional requirements of a particular enclosure and may, with almost equal facility, be disassembled for removal and subsequent use about a second enclosure. Further, in the event of accident or damage to any section of a fence so constructed, the particular damaged section may be readily removed for replacement or repair without necessitating extensive alteration or disassembly of undamaged adjacent portions.

It should be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts of the fence may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

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

1. In a fence-structure, an upstanding post, a tubular cross-rail, and a hollow shell-like cap having an aperture in a wall thereof for receiving an end of the rail in spaced juxtaposition to a cap-wall adjacent to said apertured cap-wall, said post being sized for driven tight frictional engagement between said adjacent cap-wall and the rail.

2. In a fence-structure, an upstanding post, a pair of abutting cross-rails disposed in angular relation to each other, and a hollow shell-like cap having apertured walls for receiving and holding the respective ends of the rails in spaced juxtaposition to selected cap-walls, the post being sized for tight frictional engagement between the selected cap-walls and the rails.

3. In a fence-structure, an upstanding post, a pair of tubular cross-rails disposed endwise in angular relation the one to the other, and a hollow shell-like cap having angularly opposed and apertured walls for receiving and holding the respective ends of the rails in spaced juxtaposition to selected cap-walls, the post having driven tight frictional engagement between the selected cap-walls and the rails.

4. In a fence-structure, an upstanding post having oppositely presented faces, a hollow cap mounted upon the upper extremity of the post in engagement with a face thereof, and a cross-rail having an end portion disposed within the cap in tight frictional engagement with the opposite face of the post.

5. In a fence-structure, an upstanding post of angle cross-section, a hollow cap mounted upon the upper extremity of the post, and a rail having an end portion disposed within the cap in tight frictional engagement with the inner face of a flange of the post.

6. In a fence-structure, an upstanding post of angle cross-section, a hollow cap mounted upon the upper extremity of the post, and a tubular cross-rail having an end portion disposed within the cap in tight frictional engagement with the inner face of a flange of the post.

7. In a fence-structure, an upstanding post of angle cross-section, a hollow cap having angularly opposed apertured walls mounted upon the upper extremity of the post, and a pair of angularly opposed tubular cross-rails having respective end portions disposed through said apertures and within the cap in tight frictional engagement with the inner face of the respective flanges of the post.

8. In a fence-structure, in combination, an upstanding angle-post, a cap-member fitted upon, and having shoulders engaging the upper end of the post, and angularly disposed cross-rails co-operatively mounted in the cap-member for holding the post tightly against the inner face of the cap-member and in endwise abutting engagement with the shoulders thereof.

9. A corner cap for a fence structure having a downwardly presented aperture having two obliquely extending branches and opening into a correspondingly shaped recess including two legs extending along the respective fence lines on either side of the corner for respectively receiving the fence rails.

10. A corner cap for a fence structure having a downwardly presented aperture having two obliquely extending branches and opening into a correspondingly shaped recess including two legs extending along the respective fence lines on either side of the corner, said recess being adapted for receiving the fence rails and corner post in mutually interlocking frictional engagement.

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