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C. BLONDER
TERMINAL FITTING

3,092,407

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FIG. 1

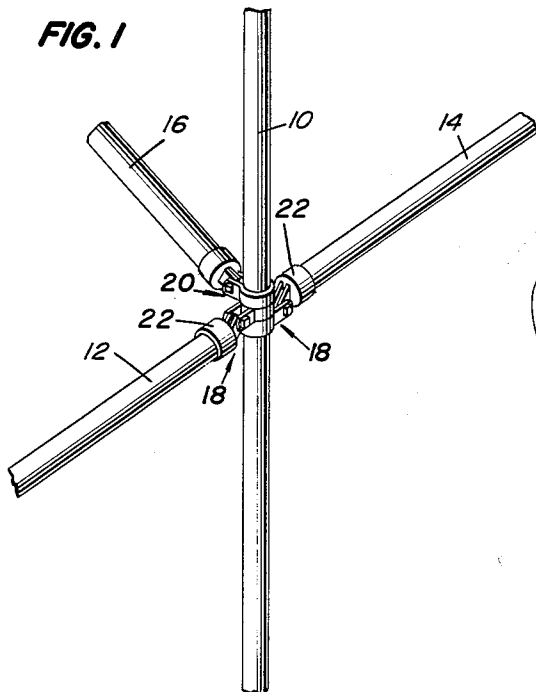


FIG. 4

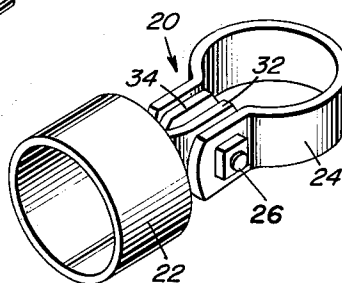


FIG. 5

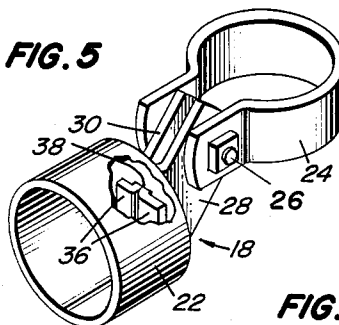


FIG. 2

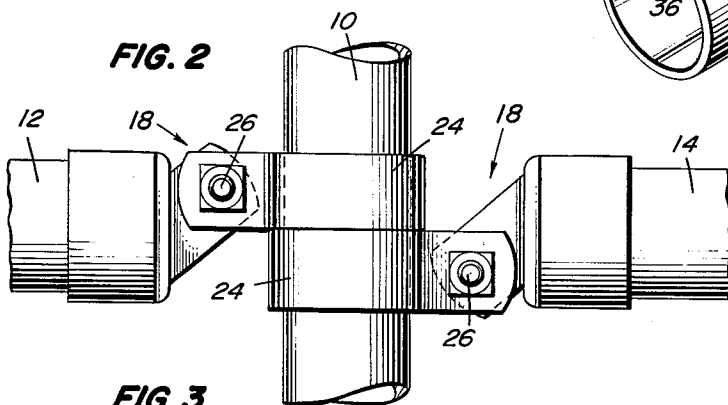


FIG. 6

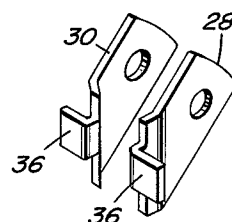
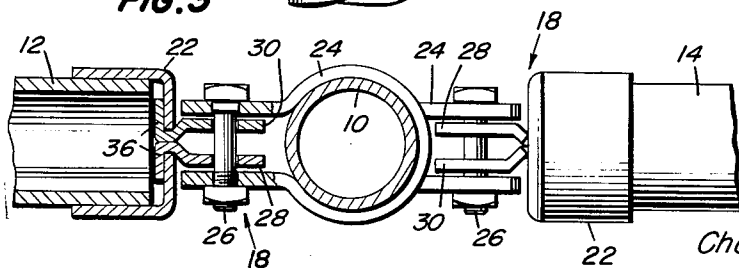


FIG. 3



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1

3,092,407

TERMINAL FITTING

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4 Claims. (Cl. 287—54)

This invention relates generally to structures, and more particularly it pertains to terminal fittings for individual structural members utilized in connection with fence structure.

An object of this invention is to provide socketed terminal fittings for the attachment of tubular brace rails to line posts which are of light weight construction, inexpensive and easy to manufacture and which are versatile in adaption to various situations of installation.

Another object of this invention is to provide an off-set clamp for a terminal fitting which when utilized in pairs will support opposing brace rails in colinear position upon a line post.

And still another object of this invention is to provide a two-piece bolting ear for a pipe or rail cap which locks itself in place.

Yet another object of this invention is to provide a pipe or brace rail terminal fitting which is readily changeable from an axial to an off-set clamp arrangement.

These and other objects and advantages of this invention will become more readily apparent and understood from the following detailed specification and single sheet of accompanying drawings in which:

FIG. 1 is a perspective view of a three-way line post junction for fence brace rails mounting fabric meshed material and incorporating features of this invention;

FIG. 2 is an enlarged elevation of a two-way junction of colinear opposing brace rails utilizing terminal fittings of this invention;

FIG. 3 is a plan view, partly in section, of the two-way junction of the brace rails of FIG. 2;

FIG. 4 is a perspective view of a novel in-line or axial terminal fitting;

FIG. 5 is a perspective view, partly broken away, of a terminal fitting similar to that of FIG. 4 with adaption to off-set installation; and

FIG. 6 is a perspective view of a detail of off-set ears for the terminal fitting of FIG. 5.

Referring now to the details of the drawings, in FIGS. 1 and 2 there is shown a vertical tubular frame member 10 which may, for example, be a line post for a fence. This vertical member 10 is shown braced in three directions by tubular brace rails 12, 14, and 16. These tubular brace rails 12, 14, and 16, in addition to supporting and bracing the tubular frame member 10, are used to support wire fabric meshed fence material or other types of similar material. The brace rails 12 and 14 are terminated and socketed in a pair of off-set terminal fittings 18 and the brace rail 16 is received and terminated in a straight-through terminal fitting 20.

As best shown in FIGS. 4 and 5, these terminal fittings 18 and 20 are alike in that each is provided with a cap 22, a strap 24 and a nutted bolt 26. They differ only in that the terminal fitting 20, as illustrated in FIGS. 1 and 4, is provided with straight-through bolting ears 32 and 34 while fitting 18 is provided with off-set or angle bolting ears 28 and 30, as best illustrated in FIGS. 2, 3, and 5.

These ears 28, 30, 32, and 34 are provided with identical inwardly and outwardly bent tabs 36 of reduced width for interchangeable assembly in pairs through a slot 38 provided in the ends of the caps 22. The tabs 36 are formed straight across the center lines of the straight bolting ears 32 and 34 for terminal fitting 20 while they

2

are formed at an angle thereto for the angle bolting ears 28 and 30 for the terminal fitting 18. The latter pair of ears 28 and 30 for terminal fitting 18 thus results in opposite right and left configurations as shown best in FIG. 6.

When the strap 24 is placed around the frame member 10, the ears 28 and 30 of terminal fitting 18 (or ears 30 and 32 of terminal fitting 20) are captivated between its ends, thus preventing the tabs 36 from withdrawal from the cap 22. The previously mentioned bolt 26 is passed through holes or apertures provided in both the strap 24 and ears 28 and 30 (or ears 32 and 34), thus serves simultaneously as a tightening and pivotal member.

It will be noted that with but one set of caps 22 and straps 24 in his tool kit, a mechanic can easily make up either an off-set terminal fitting 18 or a straight through type terminal fitting 20 by merely selecting the angle bolting ears 28 and 30 or the straight ears 32 and 34 as required.

Further, it is pointed out, by mounting one off-set terminal fitting 18, inverted with respect to the other, in a junction of two brace rails 12 and 14 as shown in FIG. 2, the resulting assembly is a neat, axially colinear extension of one brace rail 14 to the other brace rail 12.

It is to be noted that the terminal fittings 18 and 20 can be formed of light weight material, such as aluminum, and that the caps 22 can be of circular, square, or elongated shape for receiving the ends of corresponding shaped posts, rails, or other types of structural members as would be obvious to those skilled in the art.

It is also to be pointed out that the terminal fittings 18 can be adapted for bringing the brace rails 12, 14, 16 into the post 10 at any angle with respect to each other (colinear as well as non-colinear) as well as any angle with respect to the post 10 as will also be obvious to those skilled in the art due to the pivot mounting of the ears 28 and 30.

Obviously many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims the invention may be practiced otherwise than as specifically described.

What is claimed is:

1. A coupling device, comprising, a tubular cap open at one end for receiving and terminating one end of a first structure, the opposite end of said cap having a transverse inner wall with a slot provided therein, means including a pair of complementary members, each said complementary member having a web and a transversely arranged tab, said web terminating in an intermediate portion offset angularly therefrom and then a restricted neck forming a shoulder between said web and transversely arranged tab and arranged substantially parallel and laterally offset from said web, said complementary member having an aperture provided therein, the tabs of said complementary members being received in said slot in said transverse inner wall of said cap and extending in opposite directions adjacent to and parallel to the inner wall of said cap, with said webs of said complementary members being spaced parallel with respect to each other when said shoulders thereof are abutted together, a ring shaped strap element for encompassing a second structure, and through bolt means extending through said apertures in said complementary members and connected to said ring shaped strap element for coupling said structures together.

2. A coupling device for joining a rail to a post, comprising, a tubular cap open at one end for receiving and terminating one end of a rail, the opposite end of said cap having a transverse inner wall with a slot provided therein, means including a pair of complementary members, each said complementary member having a web and

3

a transversely arranged tab, said web terminating in an intermediate portion offset angularly therefrom and then a restricted neck forming a shoulder between said web and flange and offset substantially parallel to said web, said complementary member having an aperture provided therein, the tabs of said complementary members being received in said slot in said transverse inner wall of said cap and extending in opposite directions adjacent to and parallel to the inner wall of said cap, with said webs of said complementary members being spaced parallel with respect to each other when said shoulders thereof are abutted together, a ring shaped strap element for encompassing a post, and through bolt means extending through said apertures in said complementary members and connected to said ring shaped strap element for coupling said rail and post together, with said spaced webs providing spaced bearing areas for said through bolt means.

3. A coupling device as recited in claim 2, wherein

4

the longitudinal direction of said web is positioned substantially perpendicular to the plane of its respective transversely arranged tab.

4. A coupling device as recited in claim 2, wherein the longitudinal direction of said web is positioned at an inclined angle to the plane of its respective transversely arranged tab.

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