A shaped bracket having a multi section bent flat plate having an elevated abutment member having an oval cutout that permits projections or lugs on the post to be secured therein, such flat plate configured to fit the surface of the T-shaped post, and, thus, functions to enable a metal post bracket assembly configured to securely affix fence rails to T-shaped posts, more specifically, a single piece bracket that is easily attached and easy to install to the T-shaped post, provides neat or hidden appearance, and can be firmly secured to the steel posts capable of withstanding side winds.
obtaining one or more bracket assembly 10 as described above in FIGS 1-8

identifying a lugged fence post, such as lugged T-shaped post P to releasably affix or attach bracket assembly 10

positioning oval cutout 34 of first bracket assembly 10 of abutment section 23 around one of a plurality of lugs L formed on T-shaped post P

positioning fence rail R, or fence rail R1 and fence rail R2 proximate first connector section 21 and second connector section 25 of first bracket assembly 10

inserting screws S preferably in apertures 32

affixing bracket assembly 10 around T-shaped post P to fence rail R, or fence rail R1 and fence rail R2 by inserting screws S, thus, cinching bracket assembly 10 around T-shaped post P.

supporting rail R, or fence rail R1 and fence rail R2 in horizontal alignment relative to T-shaped post P.

FIG. 9
METAL POST BRACKET ASSEMBLY AND METHODS OF USE

TECHNICAL FIELD

[0001] The disclosure relates generally to connectors, brackets, supports, or holders and more specifically it relates to post brackets or connectors for attaching rails to a metal post.

BACKGROUND

[0002] Various anchors, brackets, holders, and supports are known in the prior art, for example, there are brackets, connectors, and clamps and brackets, connectors, and clamps for special purposes such as pipe clamps for antennas, chain link fence, and scaffolding. It is known to configure anchors, brackets, holders, and supports, in particular, by using two piece rigid assemblies drawn together by threaded bolts and nuts.

[0003] Moreover, steel fence posts having a T-shaped cross section have commonly been used for many years for supporting wire and barbed wire fence. Brackets are not generally available for fastening wood rails, boards placed end-to-end, to steel posts. Such suitable brackets or clamps ought to be easily attached, easy to install, to provide neat appearance, and be firmly secured to the steel posts capable of withstanding side winds. One previous approach includes a bent bracket devised for ratchet attachment of horizontal members to steel fence posts to form a bottom or rest on which the lower edge of a board or rail is to be placed. Another approach was to provide rail to post connector having two separate members joined by one or more fasteners and having a hinged connection between its halves, specifically adapted to a circular post having a u-shaped bracket for securing to a circular post not adaptable for application to T-shaped posts.

[0004] Therefore, it is readily apparent that there is a recognizable unmet need for a metal post bracket assembly and methods of use, wherein a single piece bracket may be configured to securely affix fence rails to T-shaped posts, more specifically, a single piece bracket that is easily attached and easy to install to the T-shaped post, provides neat or hidden appearance, and can be firmly secured to the steel posts capable of withstanding side winds.

BRIEF SUMMARY

[0005] Briefly described, in example embodiment, the present apparatus overcomes the above-mentioned disadvantage, and meets the recognized need for a metal post bracket assembly and methods of use comprising, in general, a shaped bracket having a multi section bent flat plate having an elevated abutment member having an oval cutout that permits projections or lugs on the post to be secured therewithin, such flat plate configured to fit the surface of the T-shaped post, and, thus, functions to enable a metal post bracket assembly configured to securely affix fence rails to T-shaped posts, more specifically, a single piece bracket that is easily attached and easy to install to the T-shaped post, provides neat or hidden appearance, and can be firmly secured to the steel posts capable of withstanding side winds.

[0006] Accordingly, a feature of the metal post bracket assembly and methods of use is its ability to provide a bracket configured to fit T-shaped post.

[0010] Another feature of the metal post bracket assembly and methods of use is its ability to firmly secure the bracket assembly to the T-shaped post to enable a heavy person to stand on the rail fence and/or climb the rail fence without slip, rocking, or wobbling.

[0012] Still another feature of the metal post bracket assembly and methods of use is its ability to provide a shaped bracket configured to fit the surface of the T-shaped posts.
Yet another feature of the metal post bracket assembly and methods of use is its ability to firmly secure the bracket assembly to the T-shaped post capable of withstanding side winds.

Yet another feature of the metal post bracket assembly and methods of use is its ability to be easily attached and easy to install to the T-shaped post.

Yet another feature of the metal post bracket assembly and methods of use is its ability to provide neat or hidden appearance of the bracket system.

Yet another feature of the metal post bracket assembly and methods of use is its ability to provide a versatile bracket capable of supporting one or more rails on a T-shaped post.

Yet another feature of the metal post bracket assembly and methods of use is its ability to provide a single component bracket that does not require any tools to assembly or installation.

Yet another feature of the metal post bracket assembly and methods of use is its ability to provide a bracket that does not require any tools to assembly or installation.

Yet another feature of the metal post bracket assembly and methods of use is its ability to accommodate different configuration and size T-shaped post.

Yet another feature of the metal post bracket assembly and methods of use is its ability to enable quick installation.

Yet another feature of the metal post bracket assembly and methods of use is its ability to provide variable height adjustment of fence rails according to the staggered lugs protruding from T-shaped post.

Yet another feature of the metal post bracket assembly and methods of use is its ability to provide a bracket support if a rail seam occurs where the bracket is to be attached.

These and other features of the metal post bracket assembly and methods of use will become more apparent to one skilled in the art from the following Detailed Description of the Embodiments and Claims when read in light of the accompanying drawing figures.

FIG. 7 is a side view of the post bracket assembly of FIG. 1 shown affixed to a T-shaped post supporting two or more fence rails shown in FIG. 6.

FIG. 8A is perspective view and FIG. 8B is a top view of the post bracket assembly of FIG. 1 shown affixed to a lugged T-shaped post with spacers to supporting one or more double fence rails;

FIG. 9 is a flow diagram of a method of securing a fence rail to a T-shaped post.

It is to be noted that the drawings presented are intended solely for the purpose of illustration and that they are, therefore, neither desired nor intended to limit the disclosure to any or all of the exact details of construction shown, except insofar as they may be deemed essential to the claimed invention.

DETAILED DESCRIPTION

In describing the exemplary embodiments of the present disclosure, as illustrated in FIGS. 1-9 specific terminology is employed for the sake of clarity. The present disclosure, however, is not intended to be limited to the specific terminology so selected, and it is to be understood that each specific element includes all technical equivalents that operate in a similar manner to accomplish similar functions. Embodiments of the claims may, however, be embodied in many different forms and should not be construed to be limited to the embodiments set forth herein. The examples set forth herein are non-limiting examples, and are merely examples among other possible examples.

Referring now to FIGS. 1-3, by way of example, and not limitation, there is illustrated an example embodiment of a fence post bracket, such as bracket assembly 10. Preferably, bracket assembly 10 includes stamped, shaped, bent, or formed sections such as shaped flat plate 12 having connector sections, first connector section 21 and second connector section 25, integral angled sections, such as first riser section 22 and second riser section 24, and an integral mid sections, such as abutment section 23. Preferably, abutment section 23 includes an aperture or hole, such as oval cutout 34. Moreover, first connector section 21 and second connector section 25 are preferably formed with one or more apertures 32.

Preferably, first connector section 21 and second connector section 25 extend in a common plane, such as first common plane CP1 and abutment section 23 extend in another common plane, such as second common plane CP2. Moreover, first common plane CP1 and second common plane CP2 preferably run parallel to each other. Furthermore, first riser section 22 and second riser section 24 preferably integrally connects connector section 21 and second connector section 25 to abutment section 23, and connector section 21 and second connector section 25 are preferably set at angle or curve approximately at ninety degrees relative to first common plane CP1 or to second common plane CP2.

Bracket assembly 10 is preferably formed of a suitable material, such as steel, iron, rigid plastic or plastic with metal inserts for strength, fiber, metal, aluminum, alloy, stainless steel, or the like, capable of providing structure to bracket assembly 10. Preferably, the material includes other suitable characteristics, such as durability, rust-resistance, light weight, heat-resistance, chemical inertness, oxidation resistance, ease of workability, or other beneficial characteristic understood by one skilled in the art.

It is contemplated herein that sections or integral sections of shaped flat plate 12 may include various configu-
rations, angles, and sizes and such sections may be arranged proximate one another to fit and reversibly fit one or more sizes and configurations of post, poles, or stakes utilized to support one or more fence rails.

Referring now to FIGS. 4-5, by way of example, and not limitation, there is illustrated an example embodiment of bracket assembly 10 configured to affix one or more fence rails R to a fence post, such as lugged T-shaped post P. Preferably bracket assembly 10 is mounted or positioned on lugged T-shaped post P with abutment section 23 in contact with front face FF of T-shaped post P and first riser section 22 and second riser section 24 wrapped around T-shaped post P or T-shaped post P positioned therein first riser section 22 and second riser section 24. Moreover, one of the plurality of bumps or protrusions, such as lug L staggered along the front face FF of T-shaped post P is preferably positioned therein oval cutout 34 of bracket assembly 10. Moreover, one or more apertures 32 are preferably configured to receive an attachment device, nail, bolt, or fastener, such as screw S (as shown in FIG. 5). It is contemplated herein that spaced apart apertures 32 may be configured and/or sized to accommodate various size, threaded and unthreaded screw S to affix bracket assembly 10 to fence rail R.

In use, bracket assembly 10 is preferably wrapped around T-shaped post P or T-shaped post P is preferably positioned therein first riser section 22 and second riser section 24. Preferably lug L of T-shaped post P is selected and positioned in oval cutout 34 of bracket assembly 10 of abutment section 23. Once in position, fence rail R, or fence rail R1 and fence rail R2 are preferably positioned proximate first connector section 21 and second connector section 25 wherein screws S are utilized to affix, sandwich, and/or cinch bracket assembly 10 around T-shaped post P. Moreover, oval cutout 34 is preferably sized and configured to accommodate lug L of T-shaped post P and when affixed or secured therein bracket assembly 10 around T-shaped post P in combination securely affixes fence rail R, or fence rail R1 and fence rail R2 to T-shaped post P preventing any slippage or wobble between bracket assembly 10 and T-shaped post P.

It is contemplated herein that a single piece bracket, such as bracket assembly 10 may be easily attached and/or easily secured to T-shaped post P may provide neat or hidden appearance of bracket assembly 10, and bracket assembly 10 may be firmly secured to T-shaped post P capable of withstanding side winds with.

It is contemplated herein that a single piece bracket, such as bracket assembly 10 may include one or more sizes and configurations to accommodate different post P and/or fence rails R to sandwich post P between bracket assembly 10 and fence rails R and to prevent lateral or vertical motion of bracket assembly 10 and its supported fence rails R, such as securing the height of fence rails R relative to the ground.

It is contemplated that the middle portion is elevated, such as first riser section 22 and second riser section 24 is elevated to permit T-shaped post P to be secured therein and against fence rails R, and first connector section 21 and second connector section 25 is also preferably secured to fence rails R by screws S. Moreover, first riser section 22, second riser section 24, and abutment section 23 may be configured to match T-shaped post P or other shaped post.

Moreover, bracket assembly 10 preferably is reusable, in that assembly 10 may be repeatedly affixed to any one of one or more sizes and configurations of T-shaped post P or other shaped post with lugs L or alternatively utilized to support one or more sizes and configurations of fence rails R at a variety of heights along T-shaped post P.

Referring again to FIG. 5, there is illustrated a top view of an example embodiment of bracket assembly 10 releasably affixed to an exemplary T-shaped post P and one or more fence rails R, such as fence rail R1 and fence rail R2. Preferably, screws S are preferably inserted in apertures 32 and utilized to affix, sandwich, and/or cinch bracket assembly 10 around T-shaped post P to fence rail R, or fence rail R1 and fence rail R2. It is contemplated herein that first riser section 22 and second riser section 24 are preferably sized to match the depth of T-shaped post P.

It is recognized herein that a bracket support 42 may be required if a seam between fence rail R1 and fence rail R2 occurs where bracket assembly 10 is releasably affixed to fence rail R1 and fence rail R2. Bracket support 42 may be positioned opposite side of fence rail R1 and fence rail R2 from bracket assembly 10 as shown in FIG. 5 or alternatively, bracket support 42 may be positioned between bracket assembly 10 and fence rail R1 and fence rail R2. Furthermore, bracket support 42 may be configured with matching apertures 32 to bracket assembly 10. Still furthermore, it is contemplated herein that bracket assembly 10 and bracket support 42 may be a manufactured or fabricated as a single piece.

Referring now to FIGS. 6-7, by way of example, and not limitation, there is illustrated an example embodiment of bracket assembly 10 configured to affix one or more fence rails R to a fence post, such as lugged T-shaped post P. Preferably two or more bracket assembly 10 are preferably utilized to releasably affix two or more fence rails R, such as fence rail RA and fence rail RB, each positioned at different vertical heights along lugged T-shaped post P. Moreover, two or more fence rails R, such as fence rail RA and fence rail RB are preferably releasably affixed thereto spaced apart lugs L of lugged T-shaped post P as shown in FIGS. 1-5 and configured as a post P and multi single sided rail fence. It is recognized herein, and shown in FIG. 7, that fence rails, such as fence rail RA and fence rail RB may be utilized to support vertical fence boards, such as picket fence 40 or other slat boards.

Referring now to FIG. 8A, by way of example, and not limitation, there is illustrated an example embodiment of bracket assembly 10 configured to releasably affix two or more fence rails R to a fence post, such as lugged T-shaped post P. Preferably, in FIG. 8B, screws S are inserted in apertures 32 and utilized to affix, sandwich, and/or cinch bracket assembly 10 around T-shaped post P to fence rail RX1 and second fence rail RX2. Furthermore, screws S are driven through spacers SP, such as first spacer SP1 and second spacer SP2 into fence rail RX, or first fence rail RX1 and second fence rail RX2 to releasably affix spacers SP, such as first spacer SP1 and second spacer SP2 thereto bracket assembly 10 and/or fence rail RX, or first fence rail RX1 and second fence rail RX2. Still further, screws S are driven through another fence rail R, such as fence rail RY, or first fence rail RY1 and second fence rail RY2 to releasably affix rail RY, or first fence rail RY1 and second fence rail RY2 thereto spacers SP, such as first spacer SP1 and second spacer SP2 configured as a post P and double sided rail fence.

It is contemplated herein that one or more rails R do the spanning work in fences, connecting one post P to the next post P. Preferably rails R are horizontal elements, running
parallel to the ground. Top and bottom rails R are typically found in wooden fence styles; many will also have middle rails R as well, i.e., post and rail fence.

It is contemplated herein that one or more panels or slots running perpendicular to the ground, as shown in FIG. 7, may be affixed to rails R as the chief screening component in privacy wooden fences. Such panels may be spaced, alternate side to side (on a single rail Rx, or double Rx to Ry), cover one side of a rail (i.e., RX) butted or spaced one panel against the next or cover both sides (i.e., RX and Ry) butted or spaced one panel against the next to hide bracket assembly 10, T-shaped post P, fence rail RX, and fence rail RY.

Moreover, fence rail RY may simply be a cover, slot, or picket extending a length necessary to cover bracket assembly 10, as shown in FIG. 8A.

Referring now to FIG. 9, there is illustrated a flow diagram of a method for releasably affixing fence rails R to a lugged fence post, such as lugged T-shaped post P utilizing one or more bracket assembly 10. In block or step 910, obtaining one or more bracket assembly 10 as described above in FIGS. 1-8. In block or step 915, obtaining a lugged fence post, such as lugged T-shaped post P to releasably affix or attach bracket assembly 10. In block or step 920, positioning oval cutout 34 of first bracket assembly 10 of abutment section 23 around one of a plurality of lugs L formed on T-shaped post P. In block or step 925, positioning fence rail R, or fence rail R1 and fence rail R2 proximate first connector section 21 and second connector section 25 of first bracket assembly 10. In block or step 930, inserting screws S preferably in apertures 32. In block or step 935, affixing bracket assembly 10 around T-shaped post P to fence rail R, or fence rail R1 and fence rail R2 by inserting screws S, thus, cinching bracket assembly 10 around T-shaped post P. In block or step 940, supporting rail R, or fence rail R1 and fence rail R2 in perpendicular alignment relative to T-shaped post P.

The foregoing description and drawings comprise illustrative embodiments of the present invention. Having thus described exemplary embodiments, it should be noted by those ordinarily skilled in the art that the within disclosures are exemplary only, and that various other alternatives, adaptations, and modifications may be within the scope of the present invention. Merely listing or numbering the steps of a method or a certain order does not constitute any limitation on the order of the steps of that method. Many modifications and other embodiments of the invention will come to mind to one ordinarily skilled in the art to which this invention pertains having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Although specific terms may be employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation. Moreover, the present invention has been described in detail; it should be understood that various changes, substitutions and alterations can be made thereto without departing from the spirit and scope of the invention as defined by the appended claims. Accordingly, the present invention is not limited to the specific embodiments illustrated herein, but is limited only by the following claims.

What is claimed is:

1. A bracket for engagement with a post having one or more lugs running along a front face of the post and for engagement with one or more fence rails, the bracket comprising:
a flat plate having a first connector section and a second connector section, at least one first riser section integral with said first connector section, at least one second riser section integral with said second connector section, an abutment section integral with said at least one first riser section and said at least one second riser section; wherein said first connector section and said second connector section are configured with one or more apertures therein; and wherein said abutment section is configured with a cutout therein.
2. The bracket of claim 1, wherein said flat plate is configured to wrap around the post.
3. The bracket of claim 1, wherein said cutout is configured to fit the one or more lugs.
4. The bracket of claim 2, wherein said flat plate further comprises an attachment device.
5. The bracket of claim 4, wherein each of said one or more apertures is configured to receive said attachment device.
6. The bracket of claim 4, wherein said attachment device further comprises a screw.
7. The bracket of claim 5, wherein said attachment device is configured to releasably affix flat plate to the rail.
8. The bracket of claim 1, wherein the post is configured as T-shaped.
9. The bracket of claim 1, wherein said first connector section and said second connector section and said abutment section extend in a common plane.
10. The bracket of claim 1, wherein said at least one first riser section and at least one second riser section extend in a common plane.
11. The bracket of claim 1, wherein said abutment section is configured to contact the front face of the post.
12. The bracket of claim 7, further comprising one or more spacers affixed thereto the rail.
13. The bracket of claim 12, further comprising another rail of the one or more rails affixed thereto said one or more spacers configured as a double sided rail.
14. A bracket assembly for engagement with a post having one or more lugs running along a front face of the post and for engagement with one or more fence rails, the bracket comprising:
a flat plate having a first connector section and a second connector section, at least one first riser section integral with said first connector section, at least one second riser section integral with said second connector section, an abutment section integral with said at least one first riser section and said at least one second riser section; an attachment device; wherein said first connector section and said second connector section are configured with one or more apertures therein; and wherein said abutment section is configured with a cutout therein.
15. The bracket of claim 14, wherein said flat plate is configured to wrap around the post.
16. The bracket of claim 14, wherein said cutout is configured to fit the one or more lugs.
17. The bracket of claim 15, wherein each of said one or more apertures is configured to receive said attachment device.
18. The bracket of claim 14, wherein said attachment device further comprises a screw.
19. The bracket of claim 17, wherein said attachment device is configured to releasably affix the post to the rail.
20. The bracket of claim 14, wherein the post is configured as T-shaped.
21. The bracket of claim 14, wherein said first connector section and said second connector section and said abutment section extend in a common plane.

22. The bracket of claim 14, wherein said at least one first riser section and at least one second riser section extend in a common plane.

23. The bracket of claim 14, wherein said abutment section is configured to contact the front face of the post.

24. The bracket of claim 19, further comprising one or more spacers affixed thereto the rail.

25. The bracket of claim 24, further comprising another rail of the one or more rails affixed thereto said one or more spacers configured as a double sided rail.

26. A method of supporting one or more fence rails to a post having one or more lugs running along a front face of the post, comprising the steps of:

- obtaining a bracket assembly having a flat plate having a first connector section and a second connector section, at least one first riser section integral with said first connector section, at least one second riser section integral with said second connector section, an abutment section integral with said at least one first riser section and said at least one second riser section, an attachment device, wherein said first connector section and said second connector section are configured with one or more apertures therein, and wherein said abutment section is configured with a cutout therein;
- positioning said cutout of said abutment section around one of the one or more lugs running along the front face of the post, wherein said a flat plate wraps around the post;
- positioning the fence rail proximate said first connector section and said second connector section;
- inserting one or more said attachment device in said one or more apertures;
- affixing said flat plate to the fence rail; and
- supporting the rail on the post.

27. The method of claim 26, further comprising the step of supporting two or more rails on the post.

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