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(54) **TONGUE JACK AND COUPLER ASSEMBLY**

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(52) **U.S. Cl.**

CPC ***B60D 1/40*** (2013.01); *B60D 1/465* (2013.01); ***B60S 9/04*** (2013.01); ***B60D 1/66*** (2013.01)

(57) **ABSTRACT**

A system for connecting a tongue jack to a trailer coupler includes a coupler, a jack plate, and a lower plate. The coupler defines a slot configured to receive an outer tube of a tongue jack. The lower plate defines an aperture configured to receive and laterally restrain the outer tube of the tongue jack. The jack plate defines an aperture configured to receive and laterally restrain the outer tube of the tongue jack and a hanger configured to be received by the slot of the coupler and supported by the coupler adjacent the slot.

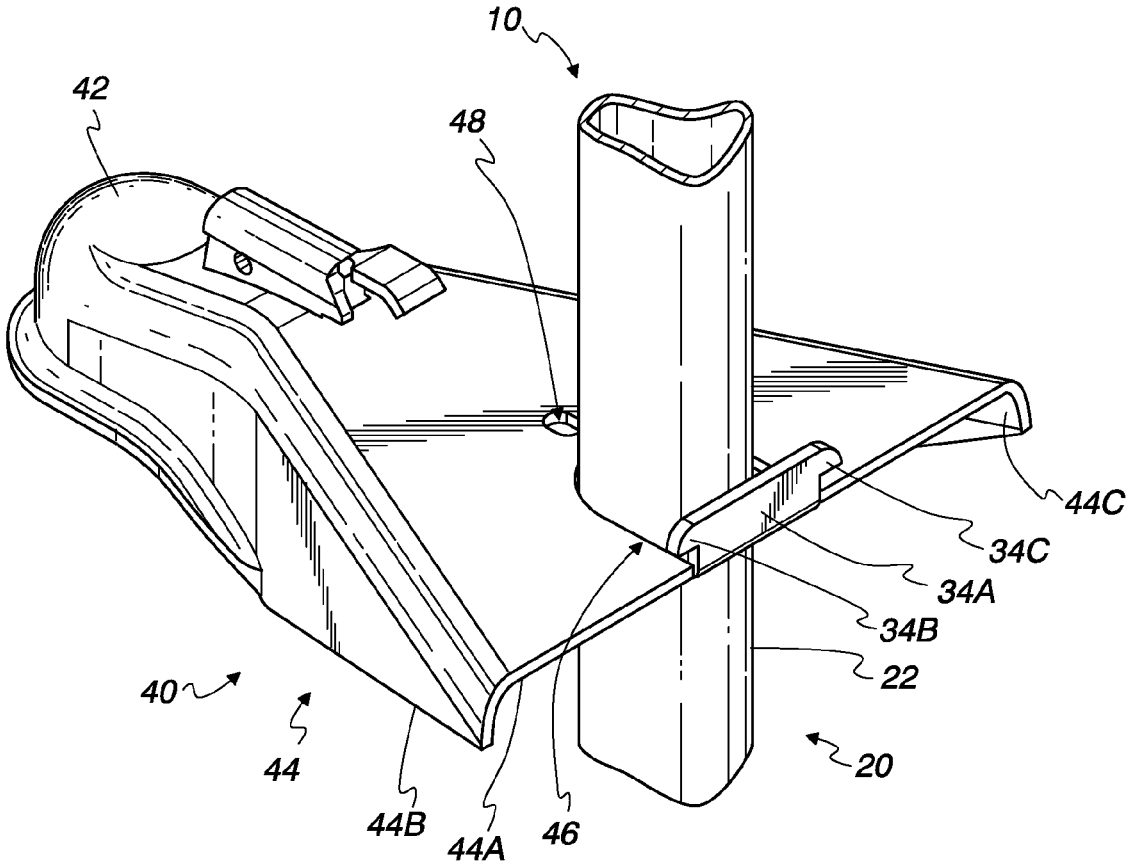


Fig. 1

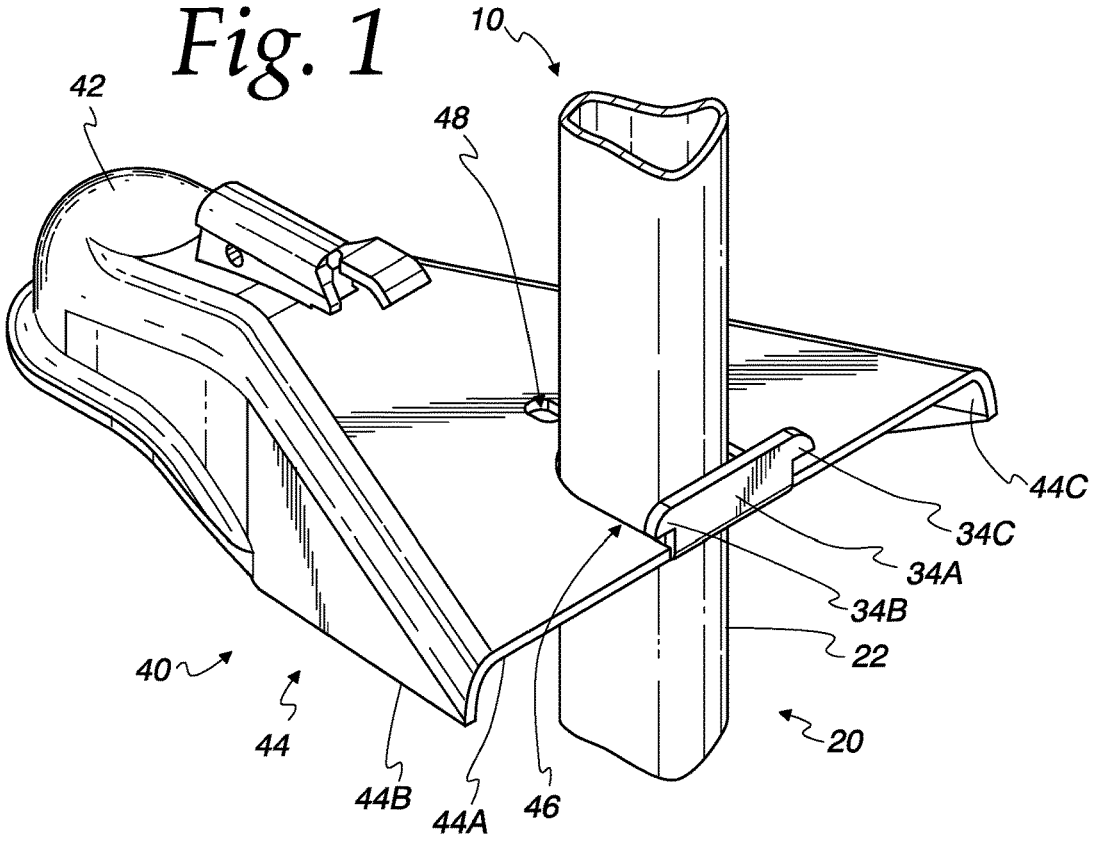

10
42
48
44C
34C
34A
34B
22
40
44
20
44B
44A
46

Fig. 2

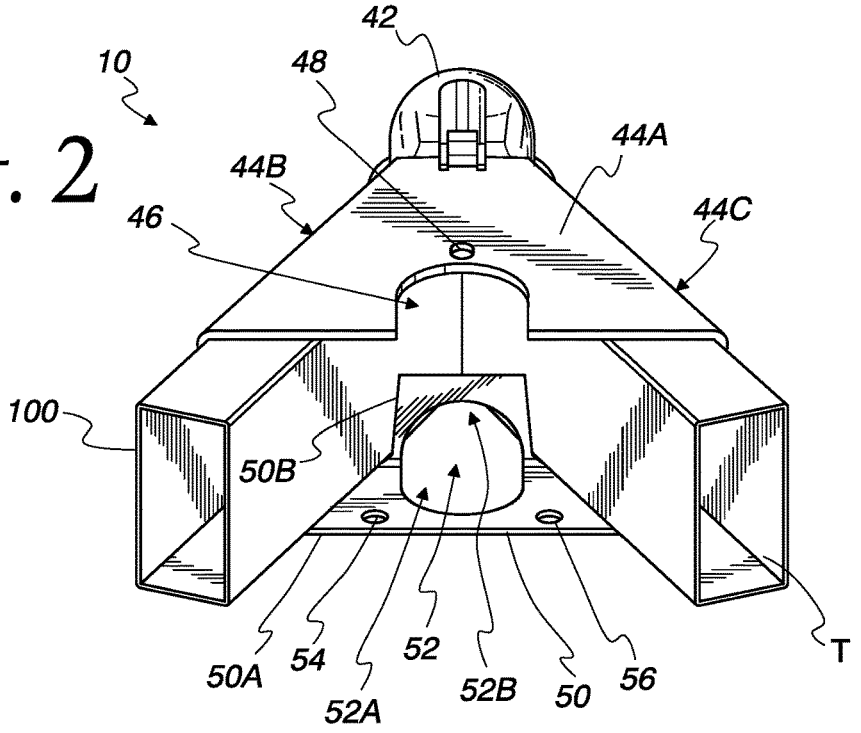

42
10
48
44A
44B
44C
46
100
50B
50A
54
52
52A
52B
50
56
T

Fig. 3

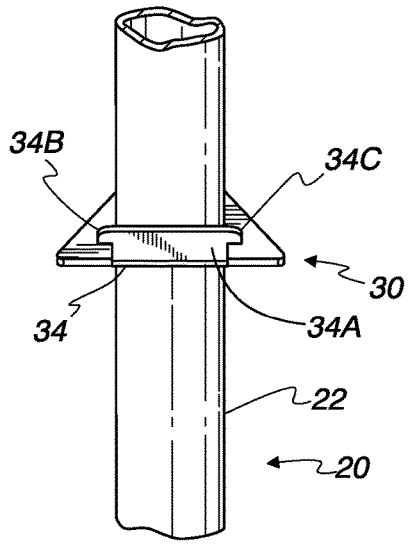
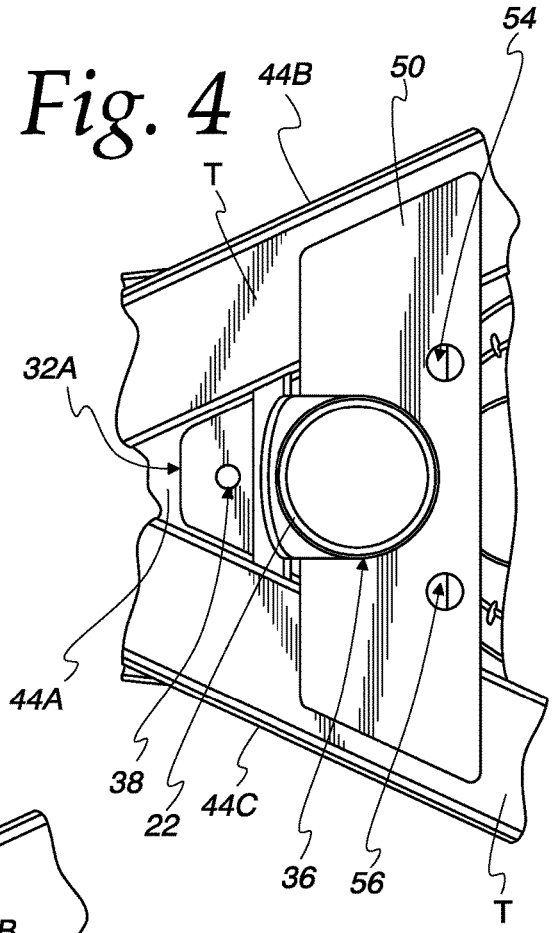


Fig. 4



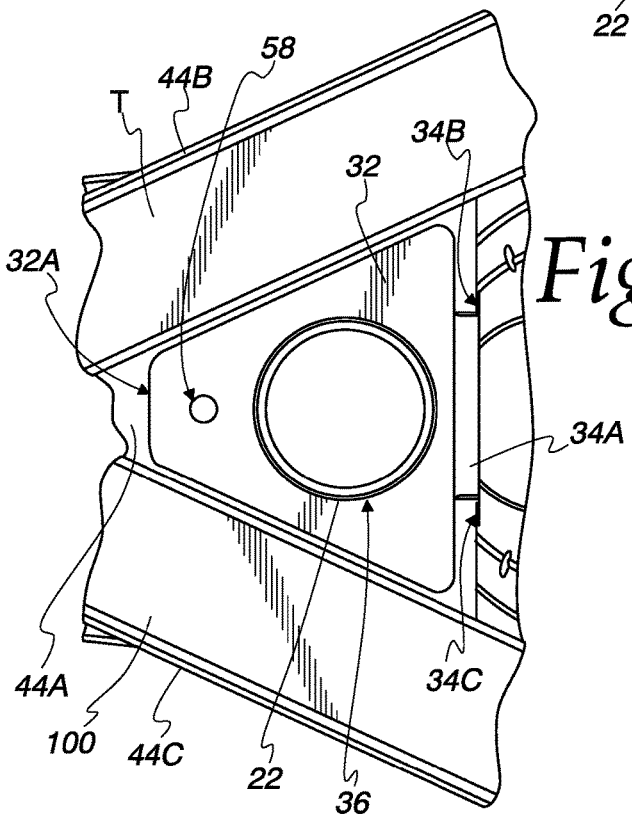


Fig. 5

Fig. 6

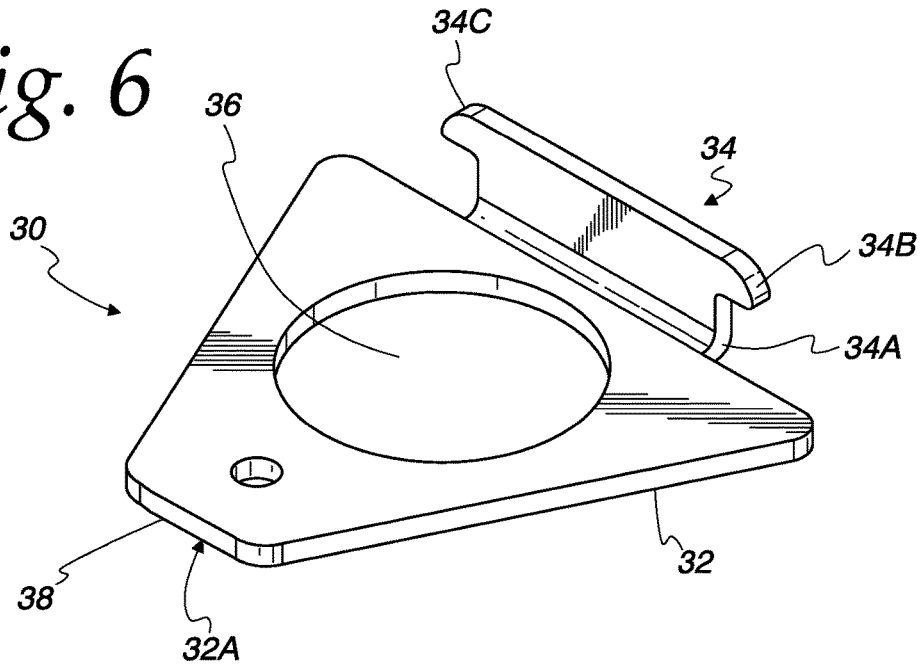


Fig. 7

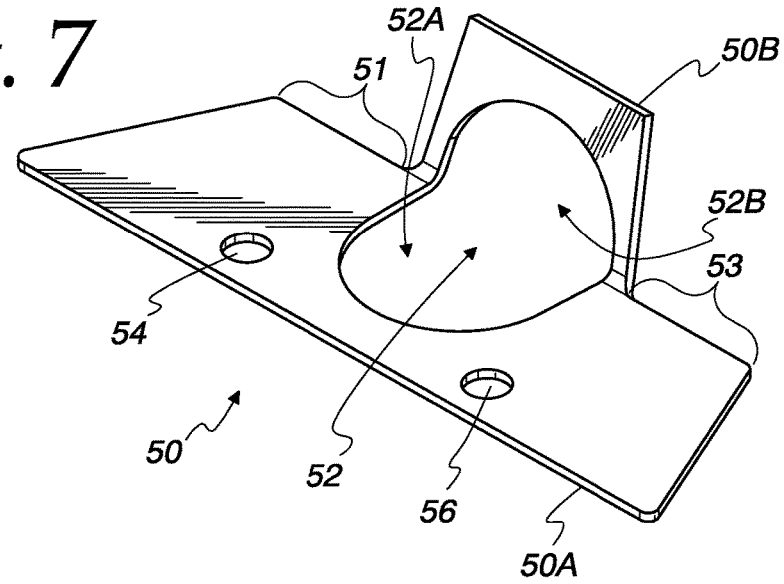


Fig. 8

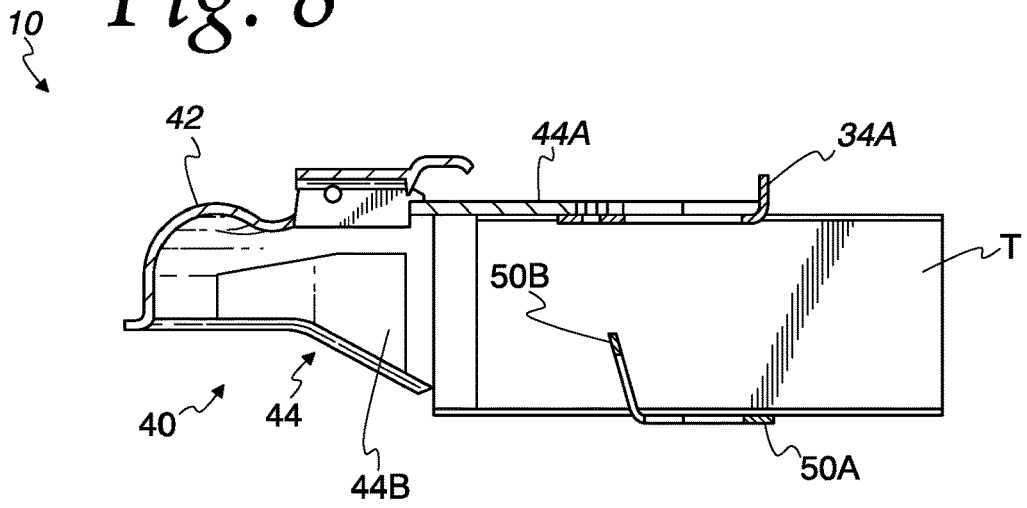

10
42
44A
34A
T
50B
40
44
44B
50A

Fig. 9

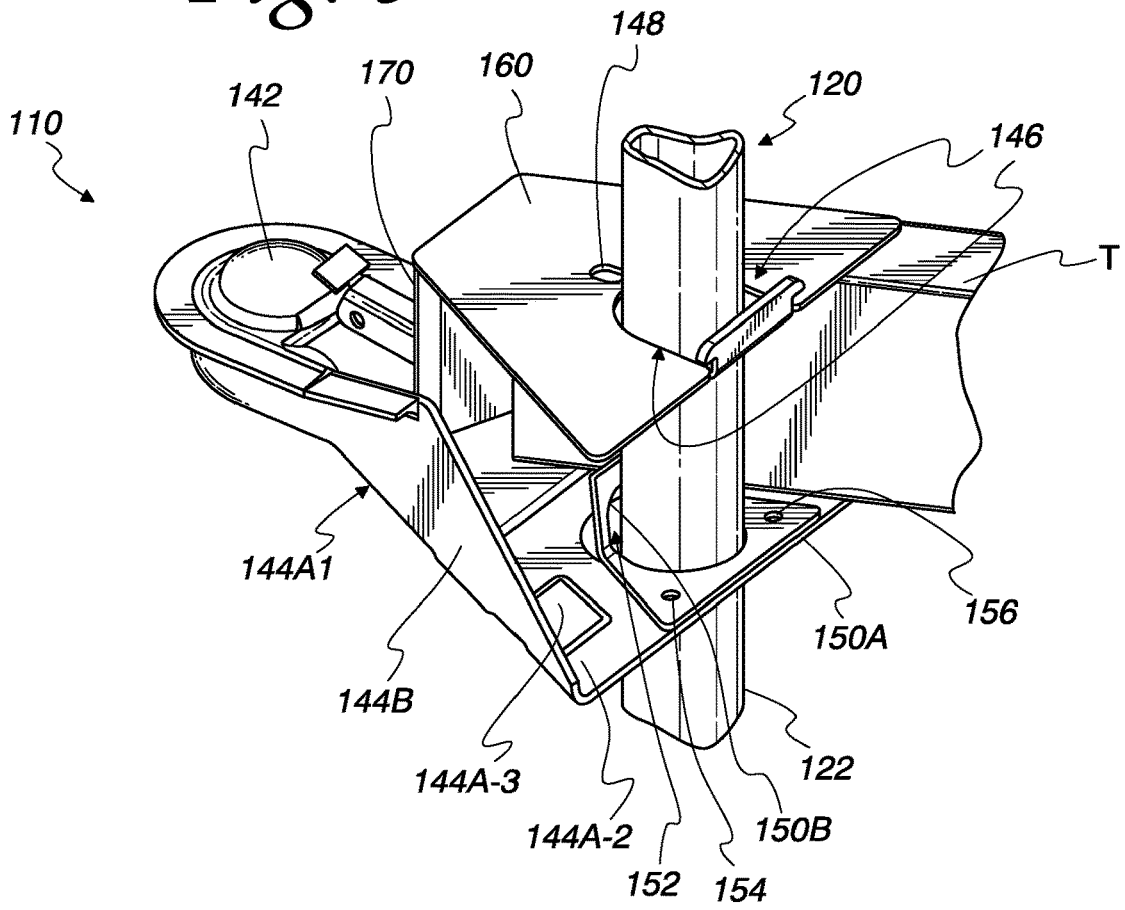

110
142
170
160
148
120
146
T
144A1
144B
144A-3
144A-2
152
154
150B
150A
156
122

Fig. 10

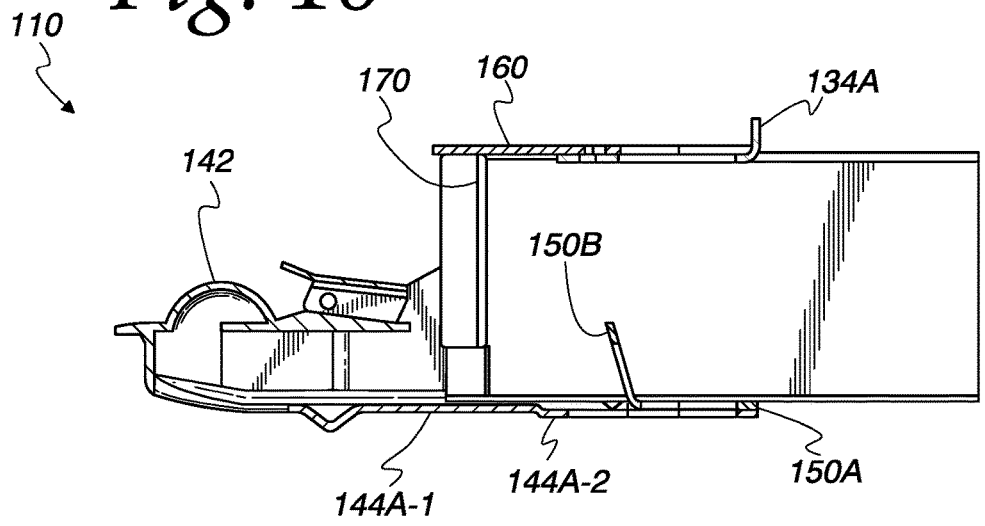

110
170
160
134A
142
150B
144A-1
144A-2
150A

Fig. 11

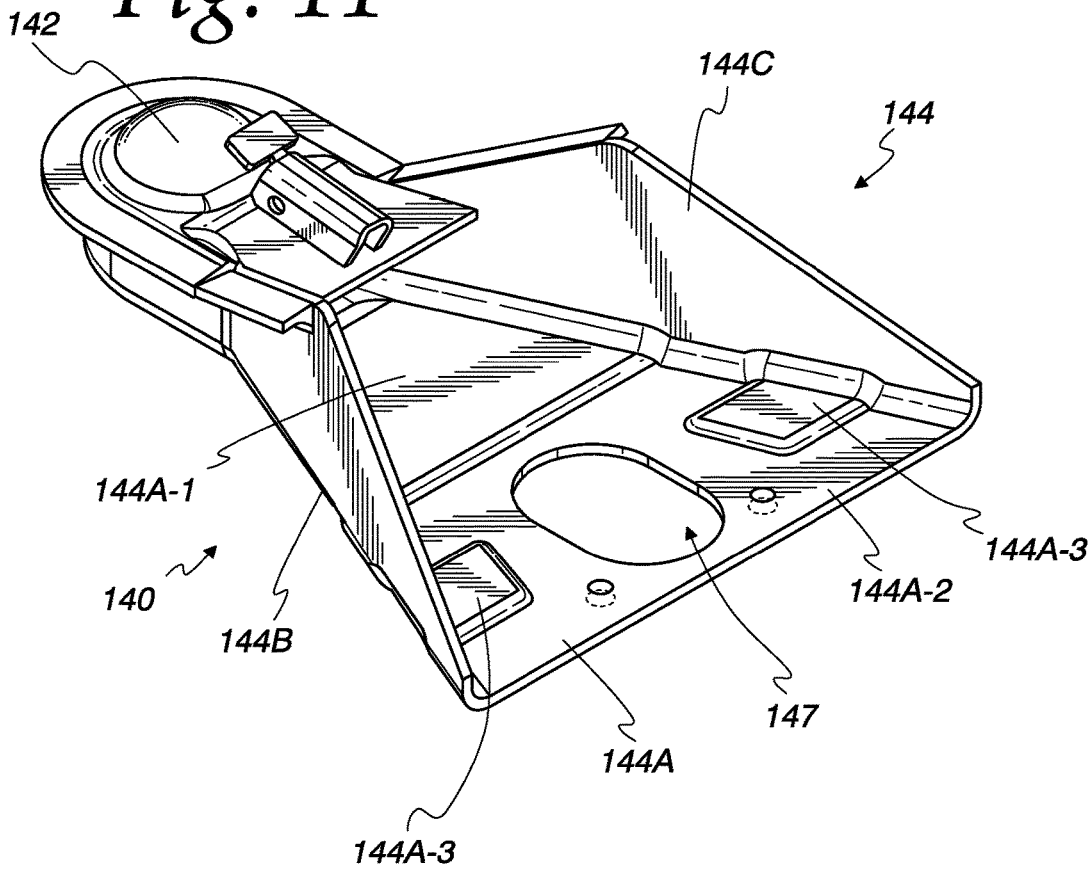

142
144C
144
144A-1
140
144B
144A-3
144A-2
147
144A
144A-3

Fig. 12

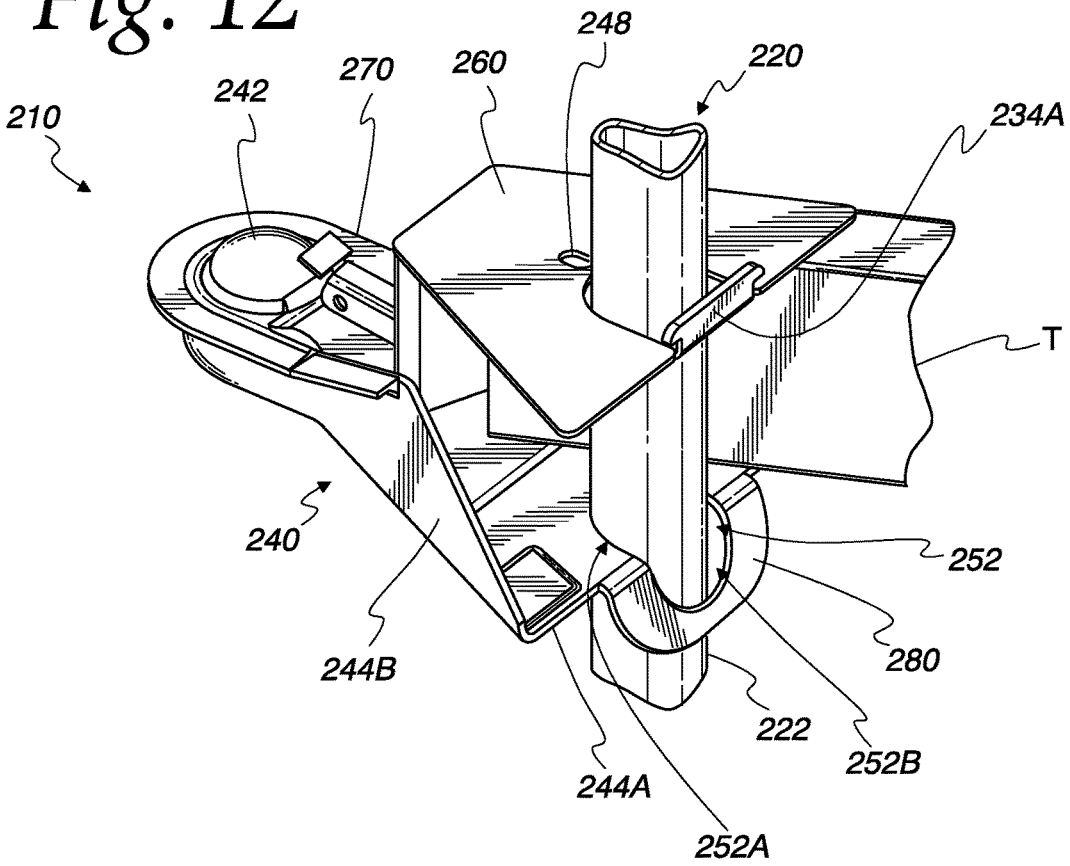

210
242
270
260
248
220
234A
T
240
252
280
244B
222
252B
244A
252A

Fig. 13

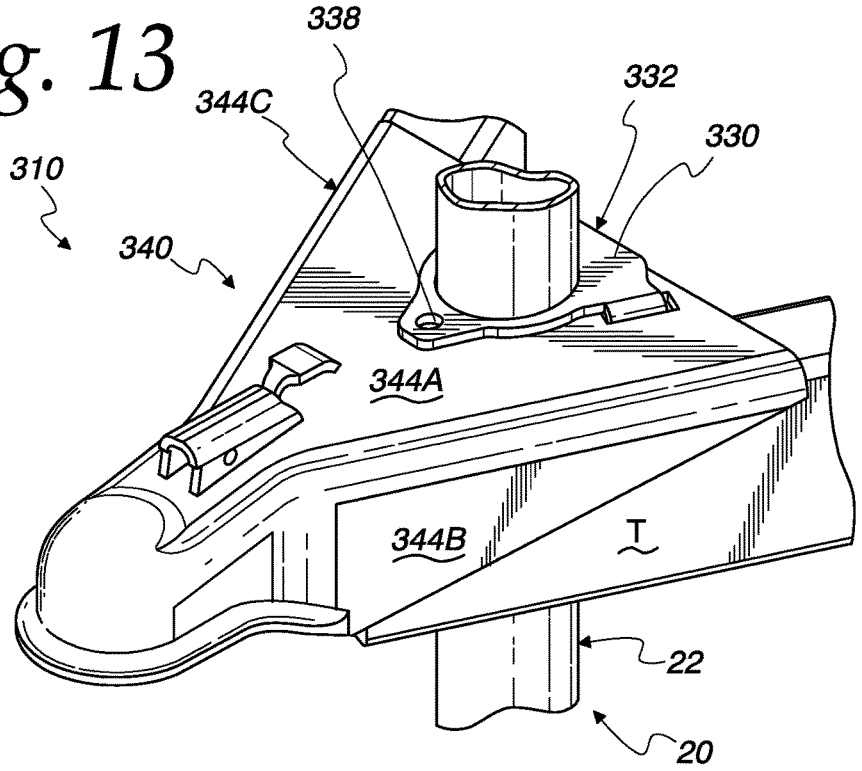

338
344C
332
330
310
340
344A
344B
T
22
20

Fig. 14

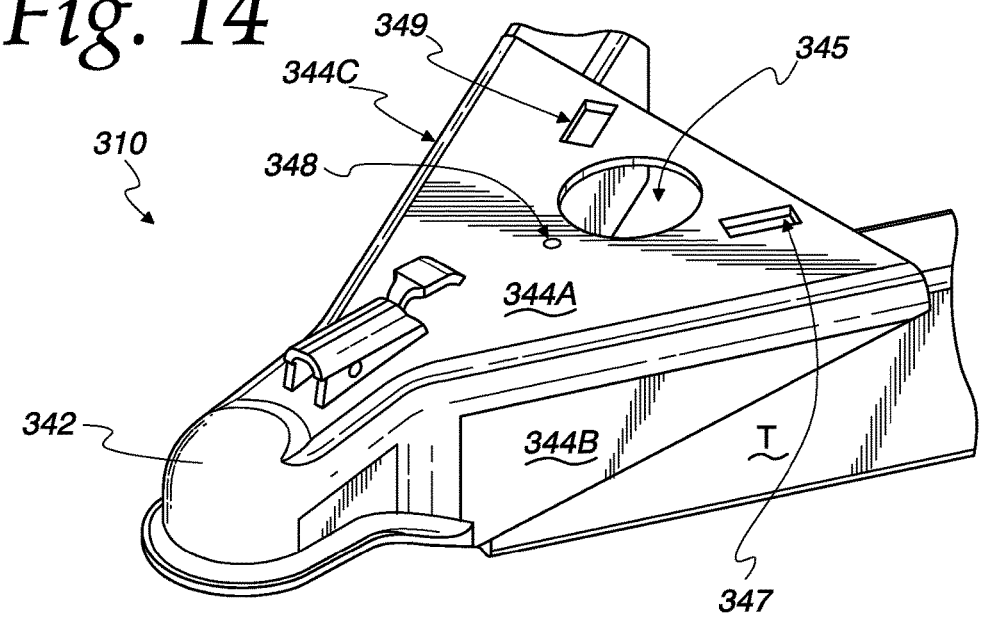

349
345
344C
310
348
344A
342
344B
T
347

Fig. 15

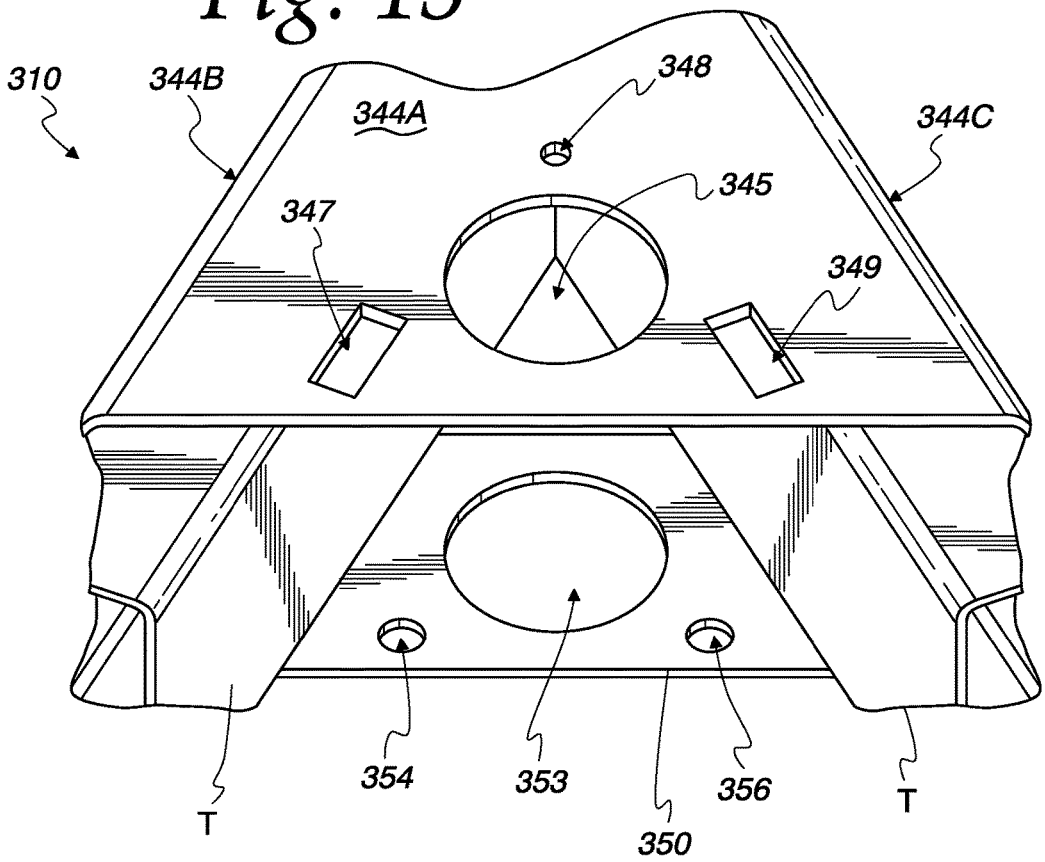

310
344B
348
344A
344C
345
347
349
T
354
353
356
T
350

Fig. 16

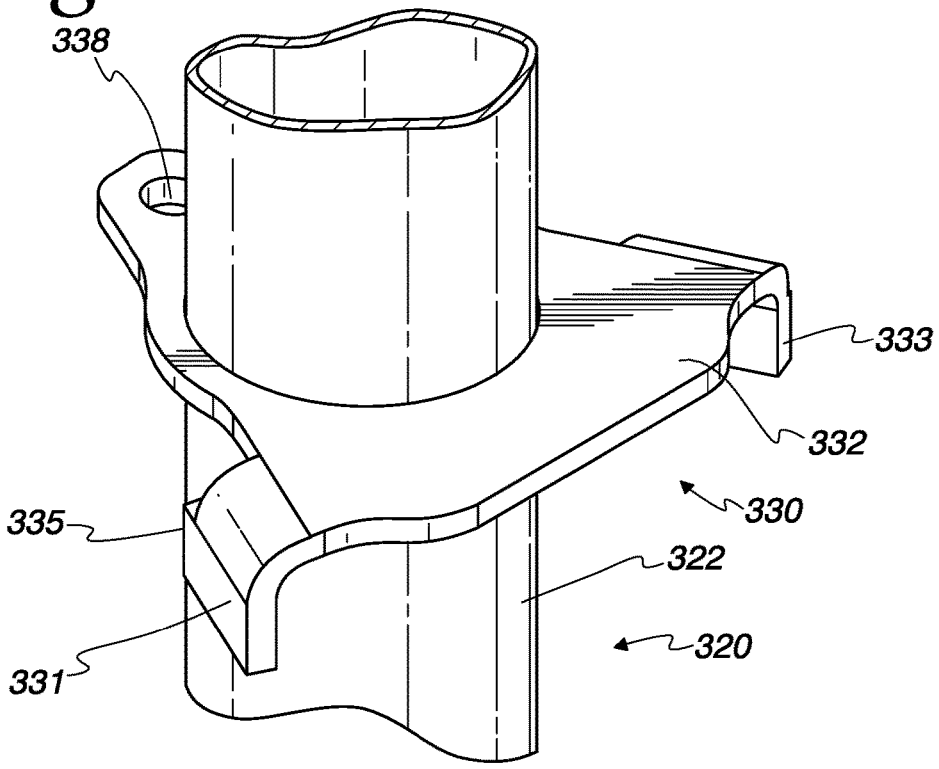
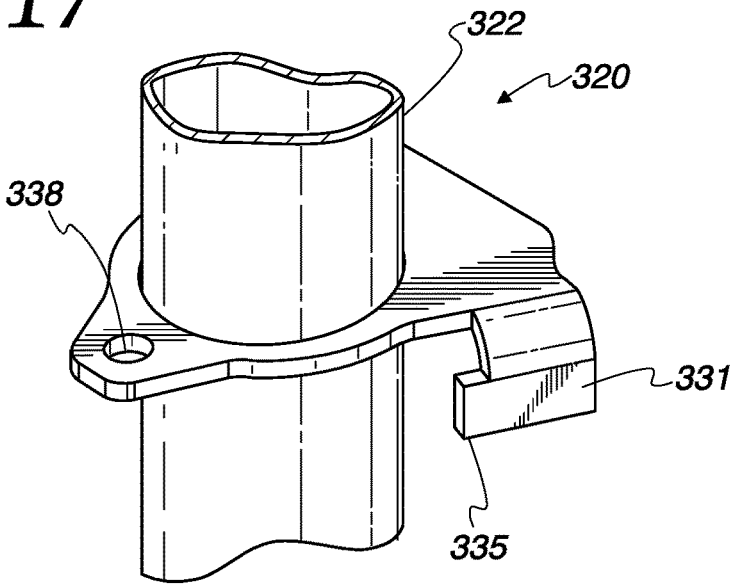


Fig. 17



TONGUE JACK AND COUPLER ASSEMBLY

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims benefit under 35 U.S.C. § 119 of U.S. Provisional Patent Application Nos. 62/518,308, filed on Jun. 12, 2017, and 62/530,995, filed on Jul. 11, 2017, and incorporates by reference the disclosures thereof in their entireties.

BACKGROUND AND SUMMARY OF THE DISCLOSURE

[0002] A tongue jack for supporting the tongue of a trailer typically includes a telescoping assembly having an inner tube received within an outer tube and an operating mechanism for extending and retracting the inner tube from and to the outer tube. A jack plate typically is attached to the outer tube, for example, by welding. The jack plate typically defines three mounting holes configured for receiving mechanical fasteners that may be used to connect the tongue jack to a trailer coupler.

[0003] A trailer coupler typically includes a hitch ball-receiving portion and a frame-receiving portion configured for connection to a trailer frame. The frame-receiving portion typically includes a top plate defining a tube-receiving hole configured to receive the outer tube of the jack and three mounting holes configured to receive the foregoing mechanical fasteners.

[0004] Typically, the outer tube is inserted into the tube-receiving hole from above, and the jack plate is disposed atop the coupler top plate with the mounting holes of the jack plate aligned with the mounting holes of the coupler top plate. Mechanical fasteners may be inserted through the respective mounting holes to secure the jack plate to the coupler top plate.

[0005] With the jack plate atop the coupler top plate, the entirety of the tongue weight of the trailer coupler is in essence supported by the mechanical fasteners. As such, if the fasteners were to fail, the jack would no longer be capable of supporting the tongue of the trailer.

[0006] The present disclosure is directed to a jack plate and coupler for use with a tongue jack and trailer wherein the jack plate is disposed underneath the coupler top plate.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. **1** is a perspective view of an illustrative tongue jack and trailer coupler assembly according to the present disclosure;

[0008] FIG. **2** is a perspective view of the trailer coupler of FIG. **1**;

[0009] FIG. **3** is a perspective view of the tongue jack of FIG. **1**;

[0010] FIG. **4** is a bottom plan view of the assembly of FIG. **1**;

[0011] FIG. **5** is a bottom plan view of a portion of the assembly of FIG. **1**;

[0012] FIG. **6** is a perspective view of a jack plate of the assembly of FIG. **1**;

[0013] FIG. **7** is a perspective view of a lower plate of the assembly of FIG. **1**;

[0014] FIG. **8** is a cross-sectional side view of the assembly of FIG. **1** without the tongue jack;

[0015] FIG. **9** is a perspective view of another illustrative tongue jack and trailer coupler assembly according to the present disclosure;

[0016] FIG. **10** is a cross-sectional side view of the assembly of FIG. **9**;

[0017] FIG. **11** is a perspective view of the trailer coupler of FIG. **9**;

[0018] FIG. **12** is a perspective view of a further tongue jack and trailer coupler assembly according to the present disclosure;

[0019] FIG. **13** is a perspective view of yet another illustrative tongue jack and trailer coupler assembly according to the present disclosure;

[0020] FIG. **14** is a perspective view of the trailer coupler of FIG. **13**;

[0021] FIG. **15** is another perspective view of the trailer coupler of FIG. **13**;

[0022] FIG. **16** is a perspective view of the tongue jack of FIG. **13** and a jack plate attached thereto; and

[0023] FIG. **17** is another perspective view of the tongue jack and jack plate of FIG. **13**.

DETAILED DESCRIPTION OF THE DRAWINGS

[0024] References to orientation herein, for example, upper, lower, top, bottom, front, rear, forward, rearward, left, right, vertical, horizontal, and the like, should be construed in the context of a trailer oriented normally on level ground in the direction the trailer would be pulled by a tow vehicle.

[0025] FIGS. **1-8** show an illustrative system **10** configured for attachment to a tongue (or drawbar) T of a trailer. The system **10** includes a tongue jack **20** attachable to a trailer coupler **40** via an intervening jack plate **30** connected to the tongue jack, typically by welding. The system **10** also includes a lower plate **50** (sometimes referred to herein as a jack lateral restraint plate) configured to constrain lateral motion of the tongue jack **20** when the system **10** is attached to the tongue T of the trailer. FIGS. **2**, **4**, and **5** further show the coupler **40** attached to the tongue T of a trailer frame.

[0026] The tongue jack **20** includes an elongated outer tube **22** having a generally cylindrical outer profile. The tongue jack **20** may also include an inner tube (not shown) telescopingly received with the outer tube and means (not shown) for telescopically extending the inner tube from, and retracting the inner tube into, the outer tube **22**.

[0027] The jack plate **30** includes a base **32** (sometimes referred to herein as a jack-to-coupler transfer plate) and a hanger **34** extending generally perpendicularly upwardly from an edge of the base. The base **32** is configured as a truncated triangular plate defining a first aperture **36** configured to receive the outer tube **22** of the tongue jack **20** for welded attachment thereto. The base **32** also defines a second aperture **38** configured to receive a mechanical fastener (not shown), as will be discussed further below. The second aperture **38** may be located between the first aperture **36** and the truncated "corner" **32**A of the base **32**. The hanger **34** includes a stem **34**A and first and second tabs **34**B, **34**C extending outwardly from opposite sides of the stem opposite the connection of the stem to the base. As such, the hanger **34** has a T-shaped profile.

[0028] The coupler **40** includes a ball-receiving portion **42** and a frame-receiving portion **44**. The ball-receiving portion **42** may be conventional. The frame-receiving portion **44** includes a top plate **44**A (sometimes referred to herein as a coupler-to-jack load transfer plate), a first (or left) side plate

44B depending from a first (or left) side of the top plate, and a second (or right) side plate 44C depending from a second (or right) side of the top plate. In a typical installation of the assembly 10 to the tongue T of the trailer frame, the top plate 44A may be generally horizontal, and the first and second side plates 44B, 44C may be generally vertical.

[0029] The top plate 44A, the first side plate 44B, and the second side plate 44C are configured for connection to an upper portion of the tongue T of the trailer frame. Such connection may be, for example, a bolted or welded connection.

[0030] The top plate 44A defines a rearward-facing, generally U-shaped slot 46 extending forwardly from a rear end of the top plate toward the ball-receiving portion 42. The slot 46 includes first (or left) and second (or right) generally linear side portions and a radiused portion connecting the first and second side portions. The slot 46 is configured to receive the outer tube 22 of the tongue jack 20, as will be discussed further below. The top plate 44A also defines an aperture 48 between the ball-receiving portion 42 and the slot 46. The aperture 48 is configured to receive a mechanical fastener (not shown), as will be discussed further below.

[0031] The lower plate 50 underlies and is connected to the bottom (or another lower portion) of the tongue T of the trailer frame. The lower plate 50 includes a generally planar and horizontal base 50A and a generally planar extension 50B extending at an angle upwardly from the base 50A. The base 50A defines a generally U-shaped slot 52A extending inwardly from a forward end thereof, and the extension 50B defines a generally U-shaped slot 52B extending upwardly from a lower end thereof. The slot 52A includes a radiused portion and may include first (or left) and second (or right) side portions connected by the radiused portion. Similarly, the second slot 52B includes a radiused portion and may include first (or left) and second (or right) side portions connected by the radiused portion. The open ends of the first and second slots 52A, 52B are coextensive so that the first and second slots 52A, 52B cooperate to define an eccentric aperture 52 through the bottom plate 50. The first and second slots 52A, 52B and the aperture 52 are configured to receive the outer tube 22 of the tongue jack 20, as will be discussed further below. The base 50A of the lower plate 50 may further define first and second apertures 54, 56, which may be sued to connect safety chains to the coupler 40. The base 50A of the lower plate 50 may include a first ear 51 extending outwardly from the first aperture 54 and a second ear 53 extending outwardly from the second aperture 56.

[0032] In use, the coupler 40 may be attached to the top or another upper portion of the tongue T of a trailer, for example, by welding one or more of the top plate 44A, the first side plate 44B, and the second side plate 44C to corresponding surfaces of the tongue T. Alternatively, the coupler 40 may be connected to the tongue T using mechanical fasteners (not shown). In such an embodiment, one or more of the top plate 44A, the first side plate 44B, and the second side plate 44C may be provided with apertures (not shown), and the tongue T may be provided with corresponding apertures (not shown) configured to receive such mechanical fasteners. The lower plate 50 may be similarly attached to the bottom or another lower portion of the tongue T.

[0033] The coupler 40 and the lower plate 50 may be attached to the tongue T so that the projection of the radiused portion of the slot 46 of the coupler and the projection of the radiused portion of the slot 52A of the base 50A of the lower plate 50, when viewed from above or below the coupler and the bottom plate, cooperate to generally define a circle having a generally vertical axis.

[0034] With the jack plate 30 connected, for example, welded, to the outer tube 22 of the jack 20, the lower end of the outer tube 22 of the tongue jack 20 may be inserted into the aperture 52 of the lower plate 50, for example, with the longitudinal axis of the outer tube at an angle to the generally vertical axis of the circle discussed above. The tongue jack 20 may then be pivoted, if necessary, to a vertical position in which the outer tube 22 and the stem 34A of the hanger 34 of the jack plate 30 are received within the slot 46 defined by the top plate 44A of the coupler 40, the base 32 of the jack plate 30 underlies the top plate 44A of the coupler 40, the hanger tabs 34B, 34C of the jack plate 30 overlie the top plate 44A of the coupler, and the aperture 48 of the top plate is axially aligned with the second aperture 38 of the jack plate. In an embodiment, the jack plate 30 may be configured so that the top plate 44A of the coupler 40 is received between the base 32 of the jack plate and the first and second ears 34B, 34C of the jack plate with little or no play in a direction perpendicular to the base 32.

[0035] A mechanical fastener (not shown) may be inserted through the aperture 48 of the top plate 44A and the aperture 38 of the jack plate 30 to secure the jack plate to the coupler 40. So assembled, the outer tube 22 of the tongue jack 20 may engage compressively with the inwardly-facing edges of the slot 46 of the coupler 40 and the slot 52A of the base 50A of the lower plate 50, thereby substantially precluding lateral motion of the tongue jack with respect to the coupler, the bottom plate, and the tongue T of the trailer. Also, with the tongue jack 20 deployed and bearing the weight of the tongue T of the trailer, the vertical component of the weight of the tongue is transferred from the tongue to the ground substantially via the jack plate 30 and the tongue jack, and substantially none of the vertical load is carried by the mechanical fastener connecting the jack plate to the coupler. With the tongue T of the trailer supported, for example, by a vehicle-mounted hitch, and the tongue jack 20 retracted, the weight of the tongue jack is transferred to the top plate 44A of the coupler 40 through the mechanical fastener and the ears 34B, 34C, stem 34, and base 32 of the jack plate 30.

[0036] FIGS. 9-11 show another illustrative system 110 configured for attachment to a tongue T of a trailer. The system 110 is substantially similar to the system 10. As such the system 110 will be discussed herein primarily in terms of differences between it and the system 10. Features of the system 110 having counterparts in the system 10 may be referred to analogously herein and identified with like reference characters, incremented by 100.

[0037] The coupler 40 of the system 10 may be referred to as a top mount coupler because it is configured for mounting to the top (or another upper portion) of the tongue T of the trailer. The coupler 140 of the system 110 is instead configured for mounting to the bottom (or another lower portion) of the tongue T of the trailer. The coupler 140 includes a ball-receiving portion 142 and a frame-receiving portion 144. The frame-receiving portion 144 includes a bottom plate 144A, a first (or left) side plate 144B extending upwardly from a first (or left side) of the bottom plate, and a second (or right) side plate extending upwardly from a second (or right) side of the bottom plate. The bottom plate 144A includes a first (or forward) portion 144A-1 and a

second (or rearward) portion **144**A-**2**. The second portion **144**A-**2** is generally parallel to and downwardly offset from the first portion **144**A-**1**. One or more pads **144**A-**3** may extend upwardly from the second portion **144**A-**2**. An upper surface of the first portion **144**A-**1** may be generally coplanar with an upper surface of the pad(s) **144**A-**3**. In an embodiment, the first and second portions **144**A-**1** and **144**A-**2** of the bottom plate **144**A may be combined into a single, generally planar portion.

[0038] As best shown in FIG. **11**, the bottom plate **144**A defines an aperture **147**. The aperture **147** is shown as an oval aperture including first (or left) and second (or right) side portions, and first (or forward) and second (or rearward) radiused portion connecting the first and second side portions. The aperture **147** is configured to receive the outer tube **122** of the tongue jack **120**, as will be discussed further below. Alternatively, the aperture **147** is embodied as a rearward-facing slot (similar to the slot **46**) extending inwardly from a rear portion of the bottom plate **144**A toward the ball-receiving portion **142**. In any event, the aperture **147** may be configured to restrain lateral side-to-side motion of the outer tube **122** of the jack **120** with respect to the bottom plate **144**A of the coupler **140**.

[0039] As shown, a lower plate **150** is connected to the bottom plate **144**A of the coupler **140**. The lower plate **150** is similar to the lower plate **50**, except that the lower plate **150** may lack features analogous to the first and second ears **51**, **53** of the lower plate **50**.

[0040] The lower plate **150** may be welded to the bottom plate **144**A of the coupler **140**, for example, to the second portion **144**A-**2** of the bottom plate **144**A of the coupler **140**. Alternatively, the lower plate may define one or more apertures **154**, **156**, the bottom plate **144**A of the coupler **140** may define one or more corresponding apertures, and mechanical fasteners may be used in connection with the apertures to connect the lower plate **150** to the bottom plate **144**A. Such mechanical fasteners may also be used to connect safety chains to the coupler **140**. If the bottom plate **144**A includes one or more pads **144**A-**3** extending from the second portion **144**A-**2** thereof, the lower plate **150** may be disposed adjacent one or more such pads and/or between two or more such pads.

[0041] An upper plate **160** having a form similar to that of the top plate **44**A of the coupler **40** is connected, for example, by welding, to the top (or another upper portion) of the tongue T of the trailer. The upper plate **160** defines a rearward-facing, generally U-shaped slot **146** extending inwardly from a rear end thereof toward a leading end thereof and configured in a manner similar to that of the slot **46** of the top plate **44**A of the coupler **40**. The upper plate **160** also defines an aperture **148** similar to the aperture **48** of the top plate **44**A of the coupler **40**.

[0042] The upper plate **160** and the coupler **140** (in combination with the lower plate **150**) may be attached to the tongue T so that the projection of the radiused portion of the slot **146** of the upper plate **160** and the projection of the radiused portion of the slot **152**A of the base **150**A of the lower plate **150**, when viewed from above or below the upper plate and the lower plate, cooperate to generally define a circle having a generally vertical axis.

[0043] A forward plate **170** may be connected between one or more of the tongue T, the upper plate **160**, and the coupler **140**.

[0044] The jack **20** with integral hanger **34** may be installed to the coupler **140**, lower plate **150**, and upper plate **160** of the system **110** in a manner similar to that describe above in connection with the system **10**.

[0045] FIG. **12** shows a further illustrative system **210** configured for attachment to a tongue T of a trailer. The system **210** is substantially similar to the system **110**. As such the system **210** will be discussed herein primarily in terms of differences between it and the system **110**. Features of the system **210** having counterparts in the system **110** may be referred to analogously herein and identified with like reference characters, incremented by 100.

[0046] The bottom plate **244**A of the coupler **240** is similar to the bottom plate **144**A of the coupler **140** except that the bottom plate **244**A may include a tab **280** extending downwardly from a rear end thereof. The tab **280** and the bottom plate **244**A cooperate to define a slot **252**, with a first portion **252**A of the slot defined by the bottom plate and second portion **252**B of the slot defined by the tab. The tab **280** is shown as integrally formed with the bottom plate **244**A. This embodiment could, but need, not include a lower plate analogous to the lower plate **150**. As shown, this embodiment does not include a lower plate analogous to the lower plate **150**.

[0047] In an embodiment, the tab **280** could be embodied as a separate structure from the coupler **240** and attached thereto by welding, mechanical fasteners, or other suitable means. For example, the tab **280** could be embodied as a portion of a structure (not shown) similar to the lower plate **150**, and the structure embodying the tab **280** could be connected to the bottom plate **244**A of the coupler **240** in a manner similar to that in which the lower plate **150** is connected to the bottom plate **144**A of the coupler **140**.

[0048] The jack **220** with hanger **234** attached thereto may be installed to the coupler **240** and upper plate **260** of the system **210** in a manner similar to that described above in connection with the system **110**.

[0049] FIGS. **13-17** show another illustrative system **310** configured for attachment to a tongue T of a trailer. The system **310** is in many respects similar to the system **10**. As such, the system **310** will be discussed herein primarily in terms of differences between it and the system **10**. Features of the system **310** having counterparts in the system **10** may be referred to analogously herein and identified with like reference characters, incremented by 300.

[0050] Whereas the jack plate **30** of the system **10** includes a hanger **34** extending upwardly from the base **32** thereof, the jack plate **330** of the system **310** includes instead a first flange **331** extending downwardly from a first side or corner of a base **332** thereof and a second flange **333** extending downwardly from a second, opposing side or corner of the base thereof. Both the first flange **331** and the second flange **333** are opposite a first, jack receiving aperture **336** from a second, fastener-receiving aperture **338**. A first tab **335** extends a first distance from an edge of the first flange **331**, and a second tab **337** extends a second distance from a corresponding edge of the second flange **333**. The first and second distances may, but need not be, the same. As shown, the first tab **335** and the second tab **337** are coplanar with the respective flanges **331**, **333**, and the first tab and the second tab extend generally forward from corresponding forward edges of the respective flanges. As such, the first tab **335** and the second tab **337** extend generally in the general direction of the portion of the jack plate **330** defining the second

aperture **338**. In another embodiment, the first tab **335** and the second tab **337** could extend generally rearward from corresponding rearward edges of the respective flanges **331**, **333**. In a further embodiment, the first tab **335** and the second tab **337** could extend generally laterally outwardly from corresponding lower edges of the respective flanges **331**, **333**.

[0051] Whereas the top plate **44**A of the coupler **40** of the system **10** defines a slot **46** for receiving the outer tube **22** of the tongue jack **20**, the top plate **344**A (sometimes referred to herein as a jack load transfer plate) of the coupler **340** of the system **310** defines a jack-receiving aperture **345** for receiving the outer tube **322** of the tongue jack **320**. The aperture **345** is configured to allow limited lateral fore and aft play of the outer tube **322** with respect to the top plate **344**A, and to substantially preclude lateral side-to-side play of the outer tube with respect to the top plate, as will be discussed further below. The top plate **344**A further defines a first slot **347** corresponding to the first flange **331** of the jack plate **330** and a second slot **349** corresponding to the second flange **333** of the jack plate. Each of the first and second slots **347**, **349** is sufficiently long and wide to enable the corresponding first and second flange **331**, **333**, including the corresponding first and second tab, **335**, **337**, to be slidingly received therethrough and to enable sufficient displacement of the first and second tabs with respect to the top plate so that the first and second tabs may selectively engage with a lower surface of the top plate, as will be discussed further below.

[0052] The lower plate **350** (sometimes referred to herein as a jack lateral restraint plate) of the system **310** is a generally planar member defining a jack-receiving aperture **353**. The aperture **353** is configured to receive the outer tube **322** of the jack **320** in sliding engagement therethrough with little or no lateral play in any direction. The lower plate **350** may also define first and second apertures **354**, **356** that may be used to connect safety chains to the coupler **340**.

[0053] In use, the coupler **340** and the lower plate **350** may be connected to the trailer tongue T, for example, as discussed above. With the jack plate **330** connected to the jack **320**, the outer tube **322** of the jack may be slidingly received within the aperture **345** of the top plate **344**A and the aperture **353** of the lower plate **350**. With the jack **320** oriented so that the first and second flanges **331**, **333** are aligned with the first and second slots **347**, **349**, respectively, the first and second flanges (including the first and second tabs **335**, **337**), may be received within the first and second slots. With the first and second flanges **331**, **333** received within the first and second slots **347**, **349**, respectively, the jack **320** may be pitched forward with respect to the top plate **344**A so that upper surfaces of the tabs **335**, **337** become engaged with the lower surface of the top plate **344**A adjacent to the first and second slots, and so that the second aperture **338** of the jack plate is coaxial with the **348** aperture of the top plate. A mechanical fastener (not shown) may be inserted through the apertures **338**, **348** to fasten the jack plate **330** to the top plate **344**A. The top plate **344**A and the first and second tabs **335**, **337** may be configured so that the top plate is received between upper surfaces of the tabs and the lower surface of the base **332** of the jack plate **330** with little or no (that is, insubstantial) play.

[0054] As shown, the outer tube **322** of the jack **320** may be proximate or in abutment with a rear portion of the jack-receiving aperture **345** when the first and second flanges **331**, **333** and first and second tabs **335**, **337** are oriented for passage through the first and second slots **347**, **349**, respectively, and the jack may be pitched forward so that the outer tube is proximate or abuts a forward portion of the aperture **345** in order to engage the tabs with the lower surface of the top plate **344**A, as discussed above. The jack **320** may be pitched in the opposite direction to disengage the first and second tabs **335**, **337** from the top plate **334**A.

[0055] In an embodiment wherein the first and second tabs **335**, **337** extend laterally outwardly from the first and second flanges **331**, **333**, respectively, the jack **320** may be manipulated as described above in connection with the embodiment shown to engage and disengage the first and second tabs with and from the top plate **344**A.

[0056] In an embodiment wherein the first and second tabs **335**, **337** extend rearwardly from the first and second flanges **331**, **333**, respectively, the jack **320** may be manipulated in a manner opposite to that described above in connection with the embodiment to engage and disengage the first and second tabs with and from the top plate **344**A.

[0057] Various embodiments having various features have been described herein in detail. Features of a given embodiment may be incorporated into other embodiments to the greatest extent possible. The embodiments shown and described herein are illustrative and are not intended to limit the scope of the invention as defined by the appended claims.

1. A system for use in connecting a tongue jack comprising an outer tube to a tongue of a trailer, the system comprising:

a coupler configured for connection to an upper portion of the tongue of the trailer, the coupler having a coupler plate defining a coupler aperture configured to receive the outer tube, the coupler aperture configured to allow substantial lateral fore-and-aft motion of the outer tube with respect to the coupler and to substantially preclude lateral side-to-side motion of the outer tube with respect to the coupler, the coupler plate further defining a first slot and a second slot;

a lower plate configured for connection to a lower portion of the tongue of the trailer, the lower plate defining a lower plate aperture configured to receive and substantially preclude lateral motion of the outer tube of the tongue jack; and

a jack plate defining an aperture configured to receive the outer tube of the tongue jack, the jack plate comprising a base, a first flange extending from the base, a first tab extending from the first flange, a second flange extending from the base, and a second tab extending from the first flange;

wherein the first slot is configured to selectively receive the first flange and the first tab therein, wherein the second slot is configured to selectively receive the second flange and the second tab therein, and wherein the coupler is configured to selectively retain the jack plate in engagement therewith.

2. The system of claim **1**, wherein the first slot is configured to receive the first flange and the first tab when the outer tube is in a first fore-and-aft position with respect to the coupler, and wherein the second slot is configured to receive the second flange and the second tab when the outer tube is in the first fore-and-aft position with respect to the coupler.

3. The system of claim **2** where the first slot is configured to receive the first flange but not the first tab when the outer

tube is in a second fore-and-aft position with respect to the coupler, and wherein the second slot is configured to receive the second flange but not the second tab when the outer tube is in the second fore-and-aft position with respect to the coupler.

4. The system of claim **3** wherein the jack plate is configured to receive the coupler plate between the base and the first tab and between the base and the second tab when the outer tube is in the second fore-and-aft position with respect to the coupler.

5. The system of claim **4** wherein the first tab extends forwardly from the first flange and the second tab extends forwardly from the second flange.

6. The system of claim **4** wherein the first tab extends rearwardly from the first flange and the second tab extends rearwardly from the second flange.

7. The system of claim **4** wherein the first tab extends outwardly from the first flange and the second tab extends outwardly from the second flange.

8. A trailer frame comprising:

a tongue jack comprising an outer tube and a jack plate having a base, a first flange extending from the base, a first tab extending from the first flange, a second flange extend form the base, and a second tab extending from the second flange;

a coupler connected to an upper portion of a tongue of the trailer frame, the coupler having a coupler plate defining a coupler aperture configured to receive the outer tube, the coupler aperture configured to allow substantial lateral fore-and-aft motion of the outer tube with respect to the coupler and to substantially preclude lateral side-to-side motion of the outer tube with respect to the coupler, the coupler plate further defining a first slot and a second slot; and

a lower plate connected to a lower portion of the tongue of the trailer, the lower plate defining a lower plate aperture configured to receive and substantially preclude lateral motion of the outer tube;

wherein the coupler and the jack plate are configured so that:

the first flange and the first tab may be received within the first slot and the second flange and the second tab may be received within the second slot when the jack is in a first fore-and-aft position with respect to the coupler aperture,

the first flange but not the first tab may be received within the first slot and the second flange but not the second tab may be received within the second slot when the jack is in a second fore-and-aft position with respect to the coupler aperture; and

the first tab and the second tab selectively are in bearing engagement with the coupler when the jack is in the second fore-and-aft position with respect to the coupler aperture.

9. The trailer frame of claim **8** wherein the outer tube is received within the lower plate aperture and within the coupler aperture.

10. The trailer frame of claim **9** wherein the outer tube is received within the coupler aperture in the second fore-and-aft position and the first tab and the second tab are in bearing engagement with the coupler.

11. The trailer frame of claim **10** further comprising a fastener securing the jack plate to the coupler plate.

12. The trailer frame of claim **8** wherein the first tab extends forwardly from the first flange and the second tab extends forwardly from the second flange.

13. The system of claim **8** wherein the first tab extends rearwardly from the first flange and the second tab extends rearwardly from the second flange.

14. The system of claim **8** wherein the first tab extends outwardly from the first flange and the second tab extends outwardly from the second flange.

15. A method of connecting a tongue jack to a trailer frame comprising the steps of:

providing a trailer frame;

providing a tongue jack comprising an outer tube and a jack plate having a base, a first flange extending from the base, a first tab extending from the first flange, a second flange extending from the base, and a second tab extending from the second flange;

providing a coupler having a coupler plate defining a coupler aperture configured to receive the outer tube, the coupler aperture configured to allow substantial lateral fore-and-aft motion of the outer tube with respect to the coupler and to substantially preclude lateral side-to-side motion of the outer tube with respect to the coupler, the coupler plate further defining a first slot and a second slot;

providing a lower plate defining a lower plate aperture configured to receive and substantially preclude lateral motion of the outer tube;

connecting the coupler to an upper portion of a tongue of the trailer frame;

connecting the lower plate to a lower portion of the tongue of the trailer;

inserting the outer tube through the coupler aperture;

inserting the outer tube through the lower plate aperture;

with the outer tube in a first fore-and-aft position with respect to the coupler aperture, inserting the first flange and the first tab through the first slot;

with the outer tube in the first fore-and-aft position with respect to the coupler aperture, inserting the second flange and the second tab through the second slot; and

manipulating the outer tube to a second fore-and-aft position with respect to the coupler aperture, wherein the coupler plate is engaged between the base of the jack plate and the first and second tabs of the jack plate.

16. The method of claim **15** further comprising the step of securing the jack plate to the coupler plate.

17. The method of claim **16** further comprising the step of securing the jack plate to the coupler plate using a mechanical fastener engaged with corresponding apertures defined by the jack plate and the coupler plate.

18. A trailer frame comprising:

a tongue jack having an outer tube and a jack plate having a hanger including a stem and at least one tab extending from the stem;

a coupler connected to one of an upper portion and a lower portion of a tongue of the trailer frame;

a plate connected to the other of an upper portion and a lower portion of the tongue of the trailer frame;

one of the coupler and the plate defining a slot extending inwardly from an edge thereof; and

the other of the coupler and the plate defining an aperture;

wherein the outer tube and the stem are received within the slot defined by the one of the coupler and the plate, the stem is supported by the one of the coupler and the

plate, and the jack plate is in bearing engagement with the one of the coupler and the plate; and

wherein the outer tube is received within the aperture defined by the other of the coupler and the plate and is laterally restrained by the other of the coupler and the plate.

19. The trailer frame of claim **18** wherein the coupler defines the slot and is attached to the upper portion of the trailer frame; and

wherein the plate defines the aperture and is attached to the lower portion of the trailer frame.

20. The trailer frame of claim **18** wherein the plate defines the slot and is attached to the upper portion of the trailer frame; and

wherein the coupler defines the aperture and is attached to the lower portion of the trailer frame.

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