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Inventor(s)

GALE; Steven

ANCHOR FOR AN ANGLE RAIL UTILITY TRAILER

Abstract

An anchor is configured to be slidably received within an elongated channel defined between a base rail and an upright angle rail of an angle rail utility trailer. The anchor includes an elongated body having first and second side walls configured complementary to the channel so as to be slidably receivable within the channel, an anchor head extending from a top end of the first and/or second side wall, at least one support surface configured to engage the bottom rail of the trailer to support the body of the anchor received within the channel on the bottom rail with the anchor head extending above the bottom rail, and means for engaging the first and/or second side wall and/or bottom rail following insertion of the elongated body into the channel to prevent or restrict upward movement of the anchor within the channel.

Inventors: GALE; Steven (Colfax, IN)

Applicant: Indiana Mills & Manufacturing, Inc. (Westfield, IN)

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Background/Summary

FIELD OF THE INVENTION

[0001] The present disclosure relates generally to anchors and anchor systems for utility trailers, and more specifically to anchors and anchor systems for angle rail utility trailers.

BACKGROUND

[0002] Utility trailers are typically constructed with framing components making up at least a front wall and two side walls. Generally, three different shapes of steel, other metal, and/or metal composite, are used to construct a trailer frame; box tubing, so-called channel iron, and so-called angle iron. A box tubing frame component is generally a closed, hollow structure, e.g., in the form of a square or rectangle, a channel iron frame component is similar to box tubing but contains a channel extending along one of the sides, and an angle iron frame component is an elongated piece worked or otherwise provided in the shape of a two-sided, open-ended triangle. This disclosure is directed to anchors and anchor systems for so-called angle iron utility trailers.

SUMMARY

[0003] The present invention may comprise one or more of the features recited in the attached claims, and/or one or more of the following features and combinations thereof. In a first aspect, an anchor is configured to be slidably received within an elongated channel defined between and bounded by a base rail and an upright angle rail of an angle rail utility trailer. The anchor may comprise an elongated body including an elongated first side wall and an elongated second side wall extending laterally away at an angle from the elongated first side wall, each of the first and second side walls defining a respective top end and a bottom end opposite the top end, the elongated body sized and configured complementary to the elongated channel so as to be slidably receivable within the elongated channel, an anchor head extending from the top end of at least one of the first and second side walls, the anchor head configured to secure at least one structure thereto, wherein at least one of the anchor head, the first side wall and the second side wall defines at least one support surface configured to engage the bottom rail of the angle rail utility trailer to support the body of the anchor received within the channel on the bottom rail with the anchor head extending above the bottom rail, and means for engaging at least one of the first and second side walls at or near a respective bottom end thereof and at least one of the bottom rail and a lower terminal end of the upright angle rail following insertion of the elongated body into the channel to prevent or restrict upward movement of the anchor within the channel.

[0004] In a second aspect, an anchor is configured to be slidably received within an elongated channel defined between and bounded by a base rail and an upright angle rail of an angle rail utility trailer. The anchor may comprise an elongated body including an elongated first side wall and an elongated second side wall extending laterally away at an angle from the elongated first side wall, each of the first and second side walls defining a respective top end and a bottom end opposite the top end, the elongated body sized and configured complementary to the elongated channel so as to be slidably receivable within the elongated channel, an anchor head extending from the top end of at least one of the first and second side walls, the anchor head configured to secure at least one engagement structure thereto, wherein at least one of the anchor head, the first side wall and the second side wall defines at least one support surface configured to engage the bottom rail of the angle rail utility trailer to support the body of the anchor received within the channel on the bottom rail with the anchor head extending above the bottom rail, and an anchor coupling structure configured to detachably engage at least one of the first and second side walls at or near a respective bottom end thereof, the anchor coupling structure sized and configured such that, with the elongated body received within the channel and the engagement member engaged with the at least one of the first and second side walls at or near a respective bottom end thereof, the anchor coupling structure prevents or restricts upward movement of the elongated body within the channel by contact with at least one of the bottom rail and a lower terminal end of the upright angle rail.

Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] FIG. 1 is a front perspective view of an angle rail utility trailer including an embodiment of a number of anchors each mounted in one of a number of different channels each defined between the bottom rail of the trailer and a different one of the upright angle rails attached to and between the bottom rail and a top rail of the trailer.

[0006] FIG. 2A is a magnified view of the outwardly-facing portion P of the trailer of FIG. 1, i.e., the portion P facing outwardly away from the trailer.

[0007] FIG. 2B is a magnified view of the inwardly-facing portion P of the trailer of FIG. 1, i.e., the portion P facing inwardly toward an interior of the trailer.

[0008] FIG. 3 is a cross-sectional view of the channel defined between the upright angle rail and the bottom rail of FIGS. 2A and 2B as viewed along the section line 3-3 of FIG. 2B.

[0009] FIG. 4A is a front perspective view of an embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0010] FIG. 4B is a front perspective view of the anchor of FIG. 4A shown with an anchor element mounted to the anchor head of the illustrated anchor.

[0011] FIG. 5 is a front perspective view similar to FIG. 2B illustrating insertion of the anchor of FIG. 4B into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0012] FIG. 6 is a bottom, exterior perspective view of the portion P of FIG. 1 illustrating an embodiment of an anchor coupling structure for preventing upward movement of the anchor of FIGS. 4B and 5 within the channel defined between the bottom rail and an upright angle rail.

[0013] FIG. 7A is a front perspective view of another embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0014] FIG. 7B is a front perspective view similar to FIG. 2B showing the anchor of FIG. 7A inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0015] FIG. 8A is a front perspective view of yet another embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0016] FIG. 8B is a front perspective view similar to FIG. 2B showing the anchor of FIG. 8A inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0017] FIG. 9A is a front perspective view of still another embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0018] FIG. 9B is a front perspective view similar to FIG. 2B showing the anchor of FIG. 9A inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0019] FIG. 10A is a front perspective view of a further embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0020] FIG. 10B is a front elevational view of an inwardly-facing portion of the trailer of FIG. 1 showing an embodiment of an anchor system including two of the anchors of FIG. 10A each inserted into adjacent channels defined between the bottom rail and respective adjacent upright angle rails of the trailer of FIG. 1.

[0021] FIG. 11A is a front perspective view of yet a further embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0022] FIG. 11B is a front perspective view similar to FIG. 2B showing the anchor of FIG. 11A inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0023] FIG. 12A a rear perspective view of still a further embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0024] FIG. 12B is a front perspective view similar to FIG. 2B showing the anchor of FIG. 12A inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0025] FIG. 12C is a rear perspective view similar to FIG. 2A showing the anchor of FIG. 12A inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0026] FIG. 13 is a front perspective view similar to FIG. 2B showing another embodiment of an anchor inserted into the channel defined between the bottom rail and an upright angle rail of the trailer of FIG. 1.

[0027] FIG. 14 is a front perspective view of the anchor of FIGS. 8A-8B illustrating another embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail.

[0028] FIG. 15A is a front perspective view of the anchor of FIG. 13 illustrating a modified bottom end of the body of the anchor and another embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail.

[0029] FIG. 15B is a front perspective view of the anchor of FIG. 15A illustrating another embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail.

[0030] FIG. 16 is a front perspective view of the anchor of FIG. 13 illustrating another modified bottom end of the body of the anchor and yet another embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail.

[0031] FIG. 17 is a front perspective view of the anchor of FIG. 13 illustrating yet another modified bottom end of the body of the anchor and still another embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail.

[0032] FIG. 18A is a front perspective view of the anchor of FIG. 13 illustrating still another modified bottom end of the body of the anchor and a further embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail, wherein the anchor coupling structure is shown in a deployed state.

[0033] FIG. 18B is a front perspective view similar to FIG. 18A and showing the anchor coupling structure in an undeployed state.

[0034] FIG. 19A is a front perspective view of the anchor of FIG. 13 illustrating another modified bottom end of the body of the anchor and another embodiment of an anchor coupling structure for preventing upward movement of the anchor within the channel defined between the bottom rail and an upright angle rail, wherein the anchor coupling structure is shown in an undeployed state.

[0035] FIG. 19B is a front perspective view similar to FIG. 19A and showing the anchor coupling structure in a deployed state.

[0036] FIG. 20A is a front perspective view of another embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0037] FIG. 20B is a rear perspective view of the anchor of FIG. 20A.

[0038] FIG. 21A is a front perspective view of yet another embodiment of an anchor mountable to and within a channel defined between a bottom rail and an upright angle rail of the trailer of FIG. 1.

[0039] FIG. 21B is a rear perspective view of the anchor of FIG. 21A.

DETAILED DESCRIPTION OF THE DRAWINGS

[0040] While the concepts of the present disclosure are susceptible to various modifications and

alternative forms, specific exemplary embodiments thereof have been shown by way of example in the drawings and will herein be described in detail. It should be understood, however, that there is no intent to limit the concepts of the present disclosure to the particular forms disclosed, but on the contrary, the intention is to cover all modifications, equivalents, and alternatives consistent with the present disclosure and the appended claims.

[0041] References in the specification to “one embodiment”, “an embodiment”, “an example embodiment”, etc., indicate that the embodiment described may include a particular feature, structure, or characteristic, but every embodiment may not necessarily include the particular feature, structure, or characteristic. Moreover, such phrases may or may not necessarily refer to the same embodiment. Further, when a particular feature, structure or characteristic is described in connection with an embodiment, it is submitted that it is within the knowledge of one skilled in the art to effect such feature, structure or characteristic in connection with other embodiments whether or not explicitly described. Further still, it is contemplated that any single feature, structure or characteristic disclosed herein may be combined with any one or more other disclosed feature, structure or characteristic, whether or not explicitly described, and that no limitations on the types and/or number of such combinations should therefore be inferred.

[0042] Referring now to FIGS. 1-6, an embodiment is shown of a tie down anchor **30** configured to be removably coupled to and between an upright angle rail **20** and a bottom or base rail **14** of a conventional angle iron utility trailer. It will be understood that the term “iron” used in the phrase “angle iron utility trailer” is a term of art in the utility trailer industry, and should not be interpreted to mean that one or more frame components of such a trailer is/are made of iron. To avoid confusion, the remainder of this disclosure will refer to a conventional “angle iron utility trailer” as an “angle rail utility trailer,” wherein the rails of such a utility trailer may be made of steel, other metal, including but not limited to iron, other metal composite, other suitable material(s), and/or a combination of any such material(s). In any case, the term “angle rail utility trailer,” as used herein, will be understood to mean a utility trailer in which at least a number of spaced-apart upright “angle rails” **20** are coupled to and between a base platform including a number of bottom or base rails **14** coupled together to form a perimeter configured to support a conventional floor or bed of the utility trailer, and a top rail assembly including a number of top rails coupled together to form at least a portion of a perimeter configured to be vertically spaced apart from the base platform, wherein the top rail assembly is suspended above the base platform by the number of spaced-apart upright angle rails **20**.

[0043] The term “angle rail,” as used herein, will be understood to mean an elongated structure having two substantially planar sides, wherein the two substantially planar sides are of unitary construction or are coupled to one another along their lengths, and wherein an angle is defined between the two substantially planar sides along the length of the angle rail such that the angle rail defines an open-ended triangle in lateral cross-section. In the various embodiments illustrated by example in the attached drawings, the two substantially planar sides of the upright angle rail define about a 90-degree angle therebetween such that the two planar sides together form at least approximately a right angle, although it will be understood that in alternate embodiments the angle defined between the two substantially planar sides of the upright angle rail may be greater or less than 90 degrees. Also in the various embodiments illustrated by example in the attached drawings, the bottom or base rails **14** used to construct the base platform and the top rails used to construct the top rail assembly are also “angle rails” as just defined, although it will be understood that in alternate embodiments one or more of the bottom or base rails may be provided in the form of conventional box tubing, channel iron or rail(s) of other conventional shapes/configurations, and/or one or more of the top rails may be provided in the form of conventional box tubing, channel iron or rail(s) of other conventional shapes/configurations.

[0044] Before describing the various embodiments of the tie down anchors and and/or systems illustrated by example in the attached drawings, construction of a conventional angle rail utility

trailer **10**, illustrated by example in FIGS. **1-3** and **5-6**, will be described to make clear how and where, relative to the frame components of the angle iron utility trailer **10**, such anchors and anchor systems will engage and be coupled to the trailer **10**. In the typical constructions of an angle rail utility trailer **10** depicted by example in FIG. **1**, a number of bottom or base rails **14** are secured together, e.g., by welding, to form a closed-perimeter base platform **11** configured to support a floor or bed **12** of the trailer **10**. The base platform **11** formed by the bottom or base rails **14** is secured to at least one conventional axle assembly **13** and to a conventional tongue assembly **17** in a conventional manner. A number of top rails **18** are likewise secured together to form a top rail assembly **16**, typically in the same general shape as the base platform **11** formed by the bottom or base rails **14**, and a number of spaced apart upright angle rails **20** are secured to and between the bottom or base rails **14** and the top rails **18** to support the top rail assembly **16** and form opposed side walls, a front and, in some cases, at least a portion of a rear of the utility trailer **10**. In the illustrated embodiment, the rear of the utility trailer **10** is fitted with a conventional loading ramp **R**, e.g., for loading and unloading of wheeled vehicles onto and from the utility trailer **10**. In some alternate embodiments, the rear of the utility trailer may be fitted with a conventional tailgate configured to be pivotable or otherwise movable relative to the base platform **11**, and in such embodiments the tailgate may or may not be constructed of upright angle rails and/or one or more top rails. In any case, in the example depicted in FIG. **1**, which should not be considered to be limiting in any way, one side wall **S** of the angle rail utility trailer **10** is formed by at least three spaced-apart upright angle rails **20** secured to and between one bottom or base rail **14** and one top rail **18**. It will be understood that the bottom or base rail **14**, the top rail **18**, and/or one or more of the upright angle rails **20** may each be a single piece or may be formed by two or more pieces secured to one another.

[0045] Referring now to FIGS. **2A** and **2B**, the portion **P** of the side wall **S** of the angle rail utility trailer **10** illustrated in FIG. **1** is shown, wherein FIG. **2A** shows the portion **P** of the exterior side of the side wall **S**, i.e., the side of the angle rail utility trailer **10** that faces outwardly away from the trailer **10**, and FIG. **2B** shows the portion **P** of the interior side of the side wall **S**, i.e., the side of the angle rail utility trailer **10** that faces inwardly toward the interior of the trailer **10**. In the illustrated embodiment, the bottom or base rail **14** is an elongated structure illustratively provided in the form of an angle rail, as this term is defined above, including planar side walls **14A** and **14B** each extending away from an apex **14C** of the bottom or base rail **14** to a terminal end **15A**, **15B** of the respective side wall **14A**, **14B**. As described above in the definition of an angle rail, the side walls **14A**, **14B** form an angle therebetween such that the base or bottom rail **14** defines an open-ended triangle in lateral cross-section, with the apex **14C** forming an apex of the open-ended triangle. In the illustrated embodiment, the angle between the side walls **14A**, **14B** of the base or bottom rail **14** is approximately 90 degrees such that the side walls **14A**, **14B** form substantially a right angle therebetween, and the base or bottom rail **14** is oriented such that an interior and upwardly-facing surface of the side wall **14A** is positioned horizontally (relative to a flat and level surface upon which the trailer **10** is positioned) with the terminal end **15A** of the side wall **14A** facing the interior of the trailer **10** so as to support the floor or bed **12** of the utility trailer **10** (as illustrated by example in FIG. **1**), and such that the side wall **14B** extends upwardly away from, at a substantially right angle relative to, the side wall **14A**, such that the terminal end **15B** of the side wall **14B** extends above the apex **14C** of the base or bottom rail **14**.

[0046] The top rail **18** is likewise an elongated structure illustratively provided in the form of an angle rail, as this term is defined above, including planar side walls **18A** and **18B** each extending away from an apex **18C** of the top rail **18** to a terminal end **19A**, **19B** of the respective side wall **18A**, **18B**. The side walls **18A**, **18B** form an angle therebetween such that the top rail **18** defines an open-ended triangle in lateral cross-section, with the apex **18C** forming an apex of the open-ended triangle. In the illustrated embodiment, the angle between the side walls **18A**, **18B** of the top rail **18** is approximately 90 degrees such that the side walls **18A**, **18B** form substantially a right angle

therebetween, and the top rail **18** is oriented such that an interior and downwardly-facing surface of the side wall **18B** is positioned horizontally (relative to a flat and level surface upon which the trailer **10** is positioned) with the terminal end **19A** of the side wall **18A** facing outwardly away from the trailer **10**, and such that the side wall **18B** extends downwardly away from, at a substantially right angle relative to, the side wall **18A**, such that the terminal end **19B** of the side wall **18B** extends below the apex **18C** of the top rail **18** and the exterior surface of the side wall **18B** faces the interior of the utility trailer **10**.

[0047] The upright angle rail **20**, illustrated by example in FIGS. **2A** and **2B**, is an elongated structure illustratively provided in the form of an angle rail, as this term is defined above, including planar side walls **20A** and **20B** each extending away from an apex **20C** of the upright angle rail **20** to a terminal end **21A**, **21B** of the respective side wall **20A**, **20B**. The side walls **20A**, **20B** form an angle therebetween such that the upright angle rail **20** defines an open-ended triangle in lateral cross-section, with the apex **20C** forming an apex of the open-ended triangle. The upright angle rail **20** has a length defined between a top end **20D** of the side walls **20A**, **20B** and a bottom end **20E** of the side walls **20A**, **20B**. In the illustrated embodiment, the length of the side wall **20A** is the same as the length of the side wall **20B**, and the top ends of the side walls **20A**, **20B** are coterminous as are the bottom ends **21A.sub.1**, **21A.sub.2** of the side walls **20A**, **20B** such that the top end **20D** and the bottom end **20E** of the upright angle rail **20** are both planar in the transverse direction. In the illustrated embodiment, the angle between the side walls **20A**, **20B** of the upright angle rail **20** is approximately 90 degrees such that the side walls **20A**, **20B** form substantially a right angle therebetween, although in alternate embodiments the angle between the side walls **20A**, **20B** may be greater or less than 90 degrees.

[0048] The top end **20D** of the upright angle rail **20** is illustratively received into contact with the downwardly-facing surface of the side wall **18A** of the top rail **18**, and with the terminal ends **21A**, **21B** of the respective side walls **20A**, **20B** in contact with the outwardly-facing surface (i.e., facing away from the utility trailer **10**) of the side wall **18B** of the top rail **18**. With the upright angle rail **20** and the top rail **18** so positioned, the upright angle rail **20** and the top rail **18** are secured to one another, such as by welding or by one or more other conventional securement device(s), medium(s) and/or technique(s). In some embodiments, at least one of the terminal ends **21A**, **21B** of the respective side walls **20A**, **20B** is secured to the outwardly-facing surface of the side wall **18B**. Alternatively or additionally, at least one of the top ends of the respective side walls **20A**, **20B** may be secured to the downwardly-facing surface of the side wall **18A**. In some embodiments, such as illustrated by example in FIG. **2A**, the upright angle rail **20** and the top rail **18** are sized such that, when secured to one another as just described, the apex **20C** of the upright angle rail **20** is coterminous with the terminal end **19A** of the side wall **18A** of the top rail **18**. In alternative embodiments, the upright angle rail **20** and/or the top rail **18** may be sized such that, when secured to one another as just described, the terminal end **19A** of the side wall **18A** extends laterally (i.e., horizontally) beyond the apex **20C** of the upright angle rail **20**, or such that, when secured to one another as just described, the apex **20C** of the upright angle rail **20** extends laterally (i.e., horizontally) beyond the terminal end **19A** of the side wall **18A** of the top rail **18**. In some alternative embodiments, the top end **20D** of the upright angle rail **20** may be spaced apart from the downwardly-facing surface of the side wall **18A** of the top rail **18**.

[0049] The terminal ends **21A**, **21B** of the respective side walls **20A**, **20B** of the upright angle rail **20** adjacent to and near the bottom end **20E** of the upright angle rail **20** are positioned in contact with the outwardly-facing surface **14E** (i.e., facing away from the utility trailer **10**) of the side wall **14B** of the bottom rail **14**. In the embodiment illustrated by example in FIG. **2A**, the bottom end **20E** of the upright angle rail **20** is positioned flush with the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail **14** such that each of the bottom ends **20A.sub.1**, **20A.sub.2** of the respective side walls **20A**, **20B** of the upright angle rail **20** are flush with the surface **14D**, although in alternate embodiments the bottom end **20E** of the upright angle rail **20** may terminate at a

position along the side wall **14B** above the apex **14C** of the bottom rail **14** or may extend below the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail **14**. In any case, with the upright angle rail **20** and the bottom rail **14** so positioned relative to one another, the upright angle rail **20** and the bottom rail **14** are secured to one another, such as by welding or by one or more other conventional securement device(s), medium(s) and/or technique(s). In some embodiments, both of the terminal ends **21A**, **21B** of the respective side walls **20A**, **20B** of the upright are secured to the outwardly-facing surface **14E** of the side wall **14B** of the bottom rail **14**, and in some alternative embodiments only one of the terminal ends **21A**, **21B** of the respective side walls **20A**, **20B** of the upright angle rail **20** is secured to the outwardly-facing surface **14E** of the side wall **14B** of the bottom rail **14**.

[0050] The height of the top rail **18** relative to the bottom rail **14** depends on the position at which the upright angle rail **20** is secured to the top rail **18** relative to the top end **20D** of the upright angle rail **20** and the downwardly-facing surface of the side wall **18A** of the top rail, and the position at which the upright angle rail **20** is secured to the bottom rail **14** relative to the bottom end **20E** of the upright angle rail **20** and the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail **14**. If, for example as described above and illustrated by example in FIGS. **2A** and **2B**, the upright angle rail **20** is secured to the top rail **18** with the top end **20D** of the upright angle rail **20** in contact with the downwardly-facing surface of the side wall **18A** of the top rail **18**, and the upright angle rail **20** is secured to the bottom rail **14** with the bottom end **20E** of the upright angle rail **20** flush with the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail **14**, the height of the top rail **18** relative to the bottom rail **14** will be equal to the sum of the length of the upright angle rail **20** (i.e., between the top and bottom ends **20D**, **20E**) and the thickness of the side wall **18A** of the top rail **18**. The height of the top of the side wall **S** of the utility trailer **10** above the bed or floor **16** in such embodiments will be the height just described less the sum of the thickness of the side wall **14A** of the bottom rail **14** and the thickness of the floor or bed **16** supported on the upwardly-facing surface of the side wall **14A** of the bottom rail **14**. These heights will, of course, be different if the upright angle rail **20** is positioned differently with respect to the top rail **18** and/or with respect to the bottom rail **14**, as described above.

[0051] With the upright angle rail **20** secured to the bottom rail **14** as just described, a channel **25** is defined between the inwardly-facing surfaces of the side walls **20A**, **20B** of the upright angle rail **20** and the outwardly-facing surface **14E** of the side wall **14B** of the bottom rail **14**, as illustrated in the cross-sectional diagram of FIG. **3**. The channel **25** is triangular in lateral cross-section, which triangular cross-section is bounded by the inwardly-facing surfaces of the side walls **20A**, **20B** of the upright angle rail **20** and the portion of the outwardly-facing surface **14E** of the side wall **14B** of the bottom rail **14** that extends between the junction of the terminal end **21A** of the side wall **20A** and the outwardly-facing surface **14E** of the side wall **14B**, and the junction of the terminal end **21B** of the side wall **20B** and the outwardly-facing surface **14E** of the side wall **14B**. The channel **25** has a length extending between a top end **251** of the channel **25** defined by the terminal end **15B** of the side wall **14B** of the bottom rail **14**, and a bottom end **252** of the channel **25**. As will be described in detail below, various embodiments of an anchor or anchor system are configured to be removably inserted in the channel **25** and to be secured to and between the bottom rail **14** at the top end **251** of the channel **25** and one or any combination of the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**, the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20**, and the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail **14**, at or near the bottom end **252** of the channel **25**. Depending upon the mounting of the upright angle rail **20** relative to the side wall **14B** of the bottom rail **14** as described above, the bottom end **252** of the channel **25** may be defined by a combination of the bottom ends **20A.sub.1**, **20A.sub.2** of the respective side walls **20A**, **20B** of the upright angle rail **20** and the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail in embodiments in which the bottom ends **20A.sub.1**, **20A.sub.2** are flush with the surface **14D** as depicted by example in FIGS. **2A** and **2B**, or may be

defined only by the combination of the bottom ends **20A.sub.1**, **20A.sub.2** of the respective side walls **20A**, **20B** or only be the downwardly-facing surface **14D** of the side wall **14A** of the bottom rail **14**.

[0052] As depicted by example in FIGS. **1-6**, an embodiment is shown of an anchor **30** configured to be slidably received within the channel **25** defined between the upright angle rail **20** and the bottom rail **14**, and to be secured to and between the bottom rail **14** at the top end **251** of the channel **25** and to the upright angle rail **20** and/or to the bottom rail **14** at the bottom end **252** of the channel **25** (or near the bottom end **252** of the channel **25** depending upon the position of the end **20E** of the upright angle rail **20** relative to the downwardly-facing surface **14D** of the bottom rail **14** as described above). In this regard, it bears pointing out that the channel **25** defined between the upright angle rail **20** and the bottom rail **14** is distinguishable from a conventional “stake pocket,” in that the channel **25** (in fact, several channels **25**) is/are pre-existing channels defined between the conventional frame components of a conventional angle rail utility trailer as just described, whereas a “stake pocket” is a component that may be added to, i.e., secured to, an otherwise conventional and pre-existing frame component of a utility trailer. In some cases, one or more such stake pockets may be secured to a pre-existing frame structure of a conventional utility trailer and extend outwardly away from such a frame structure, and in other cases one or more such stake pockets may be secured to and between an existing frame structure of the utility trailer and a fascia strip such that the fascia strip extends along, and opposite to, the frame component with the stake pocket(s) positioned therebetween. In any case, such stake pockets, if included on a utility trailer, are not part of, or defined by, conventional frame components of a conventional utility trailer as are the channels **25** illustrated in the attached figures and just described, but are rather additional components that are added to, i.e., secured to, one or more conventional frame components

[0053] As best shown in FIGS. **4A** and **4B**, the anchor **30** is an elongated structure having a body **31** illustratively shaped similarly to the upright angle rail **20** and including planar side walls **32** and **34** each extending away from an apex **33** of the body **31** to a respective terminal end. The side wall **32** extends between a top end **32A** and a bottom end **32B** of the side wall **32**, and extends away from the apex **33** of the body **31** to a lateral terminal end **32C**. The side wall **34** extends between a top end **34A** and a bottom end **34B** of the side wall **34**. A portion of the side wall **34** extending upwardly from the bottom end **34B** extends away from the apex **33** of the body **31** to a lateral terminal end **34C**, and another portion of the side wall **34** extending downwardly from the top end **34A** extends away from the apex **33** of the body **31** to another lateral terminal end **34D**, wherein the lateral terminal end **34D** extends further laterally than does the lateral terminal end **34C** such that a step **34E** is formed at the intersection of the lateral terminal ends **34C**, **34D**. The dimensions of the side walls **32**, **34** of the body **31** of the anchor **30** are sized complementarily to the dimensions of the channel **25** defined between the upright angle rail **20** and the bottom rail **14** of the frame of the utility trailer **10** such that the body **31** of the anchor can be slidably received within the channel **25**. As best shown in FIG. **3**, the side walls **32**, **34** of the body **31** are illustratively sized such that the dimensions of the portion of the body **31** defined between the lateral terminal ends **32C** and **34C** of the respective side walls **32**, **34** are slightly smaller than the respective dimensions of the channel **25** such that this portion of the body **31** fits snugly within, but is freely slidably relative to, the respective inwardly-facing side walls of the channel **25**. As best shown in FIG. **5**, the anchor **30** is slidably received within the channel **25** by inserting the bottom end **30B** of the body **31** of the anchor **30** into the top end **251** of the channel **25**, and then passing the body **31** of the anchor **30** downwardly, indicated by the dashed-line arrow “**D**” in FIG. **5**, into the channel **25** (see, e.g., FIG. **3**) until the step **34E** defined between the lateral terminal ends **34C** and **34D** of the side wall **34** comes to rest upon the terminal end **15B** of the side wall **14B** of the bottom rail **14**. The anchor **30** is prevented by the step **34E** from passing further into the channel **25**, and the anchor **30** is thus supported one the bottom rail **14** by the step **34E**. As illustrated by example in FIGS. **2B** and **5**, the portion of the side wall **34** defined between the step **34E** and the top end **34A** of the side wall **34**,

along with a corresponding portion of the side wall **32**, extend above the channel **25**, i.e., above the terminal end **15B** of the side wall **14B** of the bottom rail **14**, due to the step **34E** supporting the anchor **30** on the terminal end **15B** of the bottom rail **14**.

[0054] An anchor head **36** is illustratively integral with, and extends outwardly away from the top end **34A** of the side wall **34** of the anchor body **31**. In the embodiment illustrated in FIGS. **1-6**, the anchor head is provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls **32**, **34** of the body **31** of the anchor **30**, which illustratively extends perpendicularly away from the inwardly-facing surface of the side wall **34** of the body **31** of the anchor **30**, i.e., at an angle of approximately 90 degrees relative to the inwardly-facing planar surface of the side wall **34**. The anchor head **36** illustratively defines an anchor opening **38** which extends through the anchor head **36**. In some embodiments, the anchor opening **38** is sized for connection thereto of a conventional hook or other engagement structure attached to or integral with a conventional tie-down or anchoring strap. In some embodiments, an eye-bolt **42** is provided and secured to the anchor head **36** via the anchor opening **38**, wherein the eyebolt **42** has an opening **44** defined therethrough. The eyebolt **42** and the opening **44** are sized and configured for connection thereto of a conventional hook or other engagement structure attached to or integral with a conventional tie-down or anchoring strap. In this regard, the terms “anchor” and “tie down anchor,” as used herein, will be understood to be synonymous with one another. In any case, the anchor head **36** is positioned above the step **34E** defined between the lateral terminal ends **34C** and **34D** of the side wall **34** of the anchor body **31**, such that as the anchor **30** is prevented by the step **34E** from passing further downwardly into the channel **25**, the anchor head **36** is maintained by the step **34E** in a fixed position above the terminal end **15B** of the side wall **14B** of the bottom rail **14** at all times.

[0055] The bottom end **30B** of the body **31** of the anchor **30** is illustratively configured to accommodate a coupling structure **46** configured to prevent upward movement of the anchor body **31** into the channel **25** after the anchor **30** is inserted into the channel **25** as illustrated in FIG. **5**. In the embodiment illustrated in FIGS. **1-6**, for example, the side wall **32** of the anchor body **31** defines an opening **40A** therethrough adjacent to the bottom end **32B** of the side wall **32**, and the side wall **32** of the anchor body **31** likewise defines another opening **40B** therethrough adjacent to the bottom end **34B** of the side wall **34** of the anchor body. Illustratively, the length of the side wall **34**, between bottom end **34B** and the step **34E**, and the length of the corresponding portion of the side wall **32**, are sized such that the openings **40A**, **40B** clear the bottom ends **20A.sub.1**, **20A.sub.2** of the respective side walls **20A**, **20B** of the upright angle rail **20** as the body **31** of the anchor **30** is fully inserted into the channel **25** with the step **34E** resting on the terminal end **15B** of the side wall **14B** of the bottom rail **14**, as illustrated by example in FIGS. **5** and **6**. The coupling structure **46** in this embodiment is illustratively provided in the form of a locking pin **48**, e.g., a headed locking pin **48**, and a complementarily configured locking clip or bracket **49** coupled to the head end of the pin **48** and configured to releasably couple to the opposite end of the pin **48**. After the body **31** of the anchor **30** is fully inserted into the channel **25**, with the step **34E** resting on the terminal end **15B** of the side wall **14B** of the bottom rail **14**, the coupling structure **46** is engaged with the bottom end **30B** of the anchor **30** by extending the pin **48** through both of the openings **40A**, **40B**, and then securing the coupling bracket **49** to the pin **48** to prevent the pin **48** from passing back through either of the openings **40A**, **40B**. In the illustrated embodiment, the pin **48** of the coupling structure **46** is sized to extend laterally beyond the side walls **20A**, **20B** of the upright angle rail **20** to prevent, or at least restrict, upward movement of the anchor **30** within the channel **25** by contact between the pin **48** and the respective bottom ends **20A.sub.1**, **20A.sub.2** of the respective side walls **20A**, **20B** of the upright angle rail **20** as depicted by example in FIG. **6**. In alternate embodiments, only one of the openings **40A**, **40B** may be provided or used, such that a pin or other coupling structure may be inserted therein and secured to as to prevent, or at least restrict, upward movement of the anchor **30** within the channel **25** by contact between such a pin or

other coupling structure with only one of the bottom ends **20A.sub.1**, **20A.sub.2** of a respective one of the side walls **20A**, **20B** of the upright angle rail **20**.

[0056] It will be understood that the anchor head **36** of the anchor **30** illustrated and described with respect to FIGS. **1-6** represents only one non-limiting example of an anchor head configuration, and that other anchor head configurations are contemplated by this disclosure. Some non-limiting examples other anchor head embodiments are illustrated in FIGS. **7A-14B**, and will be described below. In some such embodiments, the body **31** of the anchor **30** may be unchanged from that illustrated in FIGS. **1-6**, and in other such embodiments one or more modifications may be made to the anchor body, as will also be described below. In all cases, however, it should be understood that in the various anchor embodiments illustrated by example in FIGS. **7A-14B**, use and operation of such alternate anchor embodiments is the same as that described above with respect to FIGS. **1-6** in that the respective anchor body is configured to be slidably received within the channel **25** defined between the upright angle rail **20** and the bottom or base rail **14**, to be configured to engage the terminal end **15B** of the side wall **14B** of the bottom rail **14** so as to maintain the anchor head in a fixed position above the terminal end **15B** of the side wall **14B** of the bottom rail **14**, and to be configured to engage with a suitable coupling structure to prevent, or at least restrict, upward movement of the anchor received within the channel **25** by contact between such a coupling structure with one or both of the bottom ends **20A.sub.1**, **20A.sub.2** of a respective one of the side walls **20A**, **20B** of the upright angle rail **20** and/or with the downwardly-facing surface **14D** of the bottom rail **14**.

[0057] Referring now to FIGS. **7A** and **7B**, an alternate embodiment is shown of an anchor **30'**, wherein the body **31** of the anchor **30'** is illustratively identical to the body **31** of the anchor **30** illustrated in FIGS. **1-6** and described above. The anchor **30'** illustratively differs from the anchor **30** in the configuration of the anchor head **36'**. In the embodiment illustrated in FIGS. **7A** and **7B**, the anchor head **36'** is illustratively integral with, and extends upwardly and outwardly away from the top end **34A** of the side wall **34** of the anchor body **31**. Like the anchor head **36**, the anchor head **36'** is provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls **32**, **34** of the body **31** of the anchor **30'**, which illustratively has an inwardly-facing surface which extends at an obtuse angle, e.g., in a range of 60-75 degrees, away from the inwardly-facing surface of the side wall **34** of the body **31** of the anchor **30'**. The anchor head **36'** illustratively defines an anchor opening **38'** which extends through the anchor head **36'**. In some embodiments, the anchor opening **38'** is sized for connection thereto of a conventional hook or other engagement structure attached to or integral with a conventional tie-down or anchoring strap, although in other embodiments the opening **38'** may be sized to receive and engage an eyebolt or other securement structure configured for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap. In any case, the anchor head **36'** is positioned above the step **34E** defined between the lateral terminal ends **34C** and **34D** of the side wall **34** of the anchor body **31**, such that as the anchor **30'** is prevented by the step **34E** from passing further downwardly into the channel **25**, the anchor head **36'** is maintained by the step **34E** in a fixed position above the terminal end **15B** of the side wall **14B** of the bottom rail **14** at all times as illustrated by example in FIG. **7B**.

[0058] Referring now to FIGS. **8A** and **8B**, another alternate embodiment is shown of an anchor **30''**, wherein the body **31'** of the anchor **30''** illustratively differs from the body **31** of the anchor **30** illustrated in FIGS. **1-6** in that the side wall **34'** does not include the step **34E**, and in that the side walls **32'**, **34'** of the anchor **30''** extend upwardly to, and are integral with, a two-sided anchor head **36''**. In the embodiment illustrated in FIGS. **8A** and **8B**, the anchor head **36''** illustratively includes a lobe **50A** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **32'**, and which extends beyond the lateral terminal end **32C** of the side wall **32'** so as to define a downwardly-facing anchor support surface **52A**. The lobe **50A** is illustratively provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side

walls **32'**, **34'** of the body **31'** of the anchor **30''**, which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **32'** of the body **31'** of the anchor **30''**. An opening **54A** is defined through the lobe **50A** generally above the anchor support surface **52A**, and is sized for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap. The anchor head **36''** further illustratively includes another lobe **50B** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **34'**, and which extends beyond the lateral terminal end **34C** of the side wall **34'** so as to define a downwardly-facing anchor support surface **52B**. The lobe **50B** is illustratively provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30''**, which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **34'** of the body **31'** of the anchor **30''**. An opening **54B** is defined through the lobe **50B** generally above the anchor support surface **52B**, and is sized for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap. In the embodiment illustrated in FIGS. **8A** and **8B**, the support surfaces **52A**, **52B** prevent the anchor **30''** from passing further downwardly into the channel **25**, and the anchor head **36''** is thus maintained by the support surfaces **52A**, **52B** in a fixed position above the terminal end **15B** of the side wall **14B** of the bottom rail **14** at all times as illustrated by example in FIG. **8B**.

[0059] Referring now to FIGS. **9A** and **9B**, another alternate embodiment is shown of an anchor **30''**, wherein the body **31'** of the anchor **30''** is illustratively identical to the body **31'** of the anchor **30''** illustrated in FIGS. **8A** and **8B**, and wherein the anchor **30''** is further similar to the anchor **30''** in that the anchor **30'''** includes a two-sided anchor head **36'''**. The anchor head **36'''** illustratively differs from the anchor head **36''** in the shape and configuration of the two opposing lobes. In the embodiment illustrated in FIGS. **9A** and **9B**, the anchor head **36'''** illustratively includes a first region **60A** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **32'**. The first region **60A** is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30'''**, and which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **32'** of the body **31'** of the anchor **30'''**. A first lobe **62A** of the anchor head **36'''** is integral with the first region **60A**, and extends outwardly away from the first region **60A** and beyond the lateral terminal end **32C** of the side wall **32'** so as to define a downwardly-facing anchor support surface **64A**. The first lobe **62A** is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30'''**. A bend **61A** is defined between the first region and the first lobe **60A**, **62A** respectively, such that the inwardly-facing surface of the first region **60A** forms a reflex angle with the inwardly-facing surface of the first lobe **62A** (both surfaces shown in FIG. **9A**). The reflex angle is illustratively selected such that, when the anchor **30''** is inserted into the channel **25** of the trailer **10**, the inwardly-facing surface of the first lobe **62A** is coplanar with the inwardly facing surface of the side wall **14B** of the bottom rail **14**, and the downwardly-facing anchor support surface **64A** contacts, and is supported on, the terminal end **15B** of the side wall **14B** of the bottom rail **14** as illustrated by example in FIG. **9B**.

[0060] The anchor head **36'''** further illustratively includes a second region **60B** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **34'**. The second region **60B** is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30'''**, and which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **34'** of the body **31'** of the anchor **30'''**. A second lobe **62B** of the anchor head **36'''** is integral with the second region **60B**, and extends outwardly away from the second region **60B** and beyond the lateral terminal end **32C** of the side wall **34'** so as to define a downwardly-facing anchor support surface **64B**. The second lobe **62B** is illustratively provided in

the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30'''**. A bend **61A** is defined between the second region and the second lobe **60B**, **62B** respectively, such that the inwardly-facing surface of the second region **60B** forms a reflex angle with the inwardly-facing surface of the second lobe **62B** (both surfaces shown in FIG. 9A). The reflex angle is illustratively selected such that, when the anchor **30'''** is inserted into the channel **25** of the trailer **10**, the inwardly-facing surface of the second lobe **62B** is coplanar with the inwardly facing surface of the side wall **14B** of the bottom rail **14**, and the downwardly-facing anchor support surface **64B** contacts, and is supported on, the terminal end **15B** of the side wall **14B** of the bottom rail **14** as illustrated by example in FIG. 9B. Both of the lobes **62A**, **62B** illustratively define a number of openings therethrough, e.g., two such openings **63A**, **63B** shown, although more or fewer such openings may be defined through either or both of the lobes **62A**, **62B**. In any case, with the inwardly-facing surfaces of the first lobe **62A** and the second lobe **62B** both coplanar with one another and with the inwardly facing surface of the side wall **14B** of the bottom rail **14** on either side of the upright angle rail **20**, as shown in FIG. 9B, the anchor **30''** provides a suitable attachment structure for securing installable trailer side walls, e.g., plywood side walls or side walls of one or more other suitable material, thereto, e.g., at least partially along and about the inner periphery of the utility trailer **10**.

[0061] Referring now to FIGS. 10A and 10B, yet another alternate embodiment is shown of an anchor **30.sup.IV**, wherein the body **31''** of the anchor **30.sup.IV** is illustratively similar to the body **31'** of the anchors **30'** and anchor **30'''** illustrated in FIGS. 8A-9B, and wherein the anchor head **361** differs from the anchor head **36'''** only in the number of openings defined through the first and second lobes **62A**, **62B**, e.g., each of the lobes **62A**, **62B** illustratively define three openings **63A-63C** therethrough, although in alternate embodiments more or fewer openings may be defined through the first lobe **62A** and/or the second lobe **62B**. In any case, the anchor body **31''** illustratively differs from the anchor body **30'** in the support structures for supporting the anchor **30.sup.IV** on the terminal end **15B** of the side wall **14B** of the bottom rail **14** when the anchor **30.sup.IV** is received within the pocket **25** of the utility trailer **10**, and in the position of anchor head **36.sup.IV** above such supports. As depicted by example in FIG. 10A, the side wall **32''** extends outwardly from the apex **33** to a lateral terminal end **32C** which extends upwardly from the bottom end of the side wall **32''** as described previously. Above the portion of the side wall **32''** having the lateral terminal end **32C** is a projection **35A** which defines a step **37A** between the projection **35A** and the lateral terminal end **32C** of the side wall **32''**. Above the projection **35A**, the side wall **32''** extends outwardly from the apex **33** to another lateral terminal end **32D**, which illustratively extends beyond the terminal end **32C**, and which extends upwardly to an intersection with the anchor head **36.sup.IV**. The side wall **34''** likewise extends outwardly from the apex **33** to a lateral terminal end **34C** which extends upwardly from the bottom end of the side wall **34''** as described previously. Above the portion of the side wall **34''** having the lateral terminal end **34C** is another projection **35B** which defines a step **37B** between the projection **35B** and the lateral terminal end **34C** of the side wall **34''**. Above the projection **35B**, the side wall **34''** extends outwardly from the apex **33** to another lateral terminal end **34D**, which illustratively extends beyond the lateral terminal end **34C**, and which extends upwardly to an intersection with the anchor head **36.sup.IV**. Upon insertion of the anchor **30.sup.IV** into the channel **25** defined between the upright angle rail **20** and the bottom rail **14** as described above, the downwardly-facing surfaces of the steps **37A**, **37B** contact, and are supported on, the terminal end **15B** of the side wall **14B** of the bottom rail **14** as illustrated by example in FIG. 10B. This spaces the anchor head **36.sup.IV** upwardly above the bottom rail **14**, and thus upwardly above the floor or bed **12** of the utility trailer **10**, as also depicted by example in FIG. 10B.

[0062] As further depicted by example in FIG. 10B, two or more of the anchors **30.sup.IV** may form part of an anchor system **75** in which an accessory support panel **70** is secured to and between the anchor heads **36.sup.IV**, e.g., via conventional fixation members **72A**, **72B**, of two or more

anchors **30.sup.IV** each inserted into a different channel **25** defined by and between different respective upright angle rails **20** and the bottom rail **14**. The accessory support panel **70** may illustratively define any number of openings or slots **74** therethrough along the length of the panel **70**, and one or more of the openings may be configured to mount a peg, hook, shelf or other such structure to the panel **70**. In any case, the anchor body **31** may be sized to suspend the panel **70** at any desired distance above the floor or bed **12** of the utility trailer **10**, and the anchor head **36.sup.IV** may be configured to accommodate mounting thereto of any number of vertically spaced apart panels **70** (only one such panel **70** illustrated by example in FIG. **10B**). The number and configuration of such panels **70** and the number and configuration of openings **74** in any such panel(s) may be chosen to support any number and/or types of accessories on the panel(s) **70**. Examples of some such accessories may include, but are not limited to, any lawn care or landscaping tools and/or equipment and/or supplies, construction tools and/or construction equipment, camping gear, sports equipment, cycling equipment, one or more barbeque grills, one or more food and/or beverage coolers, and the like. In any case, it will be understood that whereas the anchor system illustrated by example in FIG. **10B** includes a single accessory support panel **70** mounted to and between two anchors **30.sup.IV**, more or fewer panels **70** may alternatively be mounted to and between the two anchors **30.sup.IV**, and/or any number of accessory support panels **70** may be mounted to more or fewer of the anchors **30.sup.IV**, i.e., to as few as one anchor **30.sup.IV** or to three or more anchors **30.sup.IV**. It will be further understood that in implementations in which at least one accessory support panel **70** is mounted to and between two or more anchors **30.sup.IV**, the two or more anchors may, but need not, be inserted into channels **25** of adjacent or contiguous, i.e., sequential, upright angle rails **20**, but may rather skip one or more adjacent or contiguous upright angle rails **20**.

[0063] Referring now to FIGS. **11A** and **11B**, yet a further alternate embodiment is shown of an anchor **30.sup.V**, wherein the body **31'** of the anchor **30'''** is illustratively identical to the body **31'** of the anchors **30''** and **30'''** illustrated in FIGS. **8A-8B** and **9A-9B** respectively, and wherein the anchor **30.sup.V** is further similar to the anchor **30''** of FIGS. **8A** and **8B** in that the anchor **30.sup.V** includes a two-sided anchor head **36.sup.V**. The anchor head **36.sup.V** illustratively differs from the anchor head **36''** of FIGS. **8A** and **8B** in the shape and configuration of the two opposing lobes. In the embodiment illustrated in FIGS. **11A** and **11B**, the anchor head **36.sup.V** illustratively includes a first region **80A** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **32'**, and which is integral with the side wall **32'** of the body **31'** of the anchor **30.sup.V**. The first region **80A** is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30.sup.V**, and which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **32'** of the body **31'** of the anchor **30.sup.V**. A first lobe **82A** of the anchor head **36.sup.V** is integral with the first region **80A**, and extends outwardly away from the first region and beyond the lateral terminal end **32C** of the side wall **32'** so as to define a downwardly-facing anchor support surface **86A**. The first lobe **82A** is illustratively provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30.sup.V**, and in any case the first lobe **82A** defines an opening **84A** therethrough. A bend **81A** is defined between the first region and the first lobe **80A**, **82A** respectively, such that the inwardly-facing surface of the first region **80A** forms an obtuse angle with the inwardly-facing surface of the first lobe **82A**. In the illustrated embodiment, the obtuse angle is illustratively selected such that, when the anchor **30.sup.V** is inserted into the channel **25** of the trailer **10**, the inwardly-facing planar surface of the first lobe **82A** is approximately perpendicular to the inwardly-facing planar surface of the side wall **14B** of the bottom rail **14**, as illustrated by example in FIG. **11B**, although in alternate embodiments the obtuse angle formed between the inwardly-facing surface of the first region **80A** and the inwardly-facing surface of the first lobe **82A** may be greater or lesser than the angle

illustrated in FIGS. 11A and 11B. In any case, with the anchor 30.sup.V inserted in to the channel 25 defined between the upright angle rail 20 and the bottom rail 14, as illustrated by example in FIG. 11B, the downwardly-facing anchor support surface 86A of the first lobe 82A contacts, and is supported on, the terminal end 15B of the side wall 14B of the bottom rail 14.

[0064] The anchor head 36" further illustratively includes a second region 80B which extends outwardly away from the apex 33 of the anchor body 31' adjacent to the top of the side wall 34', and which is integral with the side wall 34' of the body 31' of the anchor 30.sup.V. The second region 80B is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls 32', 34' of the body 31' of the anchor 30.sup.V, and which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall 34' of the body 31' of the anchor 30.sup.V. A second lobe 82B of the anchor head 36.sup.V is integral with the second region 80B, and extends outwardly away from the second region 80B and beyond the lateral terminal end 34C of the side wall 34' so as to define a downwardly-facing anchor support surface 64B. The second lobe 82B is illustratively provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls 32', 34' of the body 31' of the anchor 30.sup.V, and in any case the second lobe 82B defines an opening 84B therethrough. A bend 81B is defined between the second region and the second lobe 80B, 82B respectively, such that the inwardly-facing surface of the second region 80B forms an obtuse angle with the inwardly-facing surface of the second lobe 82B. In the illustrated embodiment, the obtuse angle is illustratively selected such that, when the anchor 30.sup.V is inserted into the channel 25 of the trailer 10, the inwardly-facing planar surface of the second lobe 82B is approximately perpendicular to the inwardly-facing planar surface of the side wall 14B of the bottom rail 14, and such that the inwardly-facing planar surfaces of the first and second lobes 82A, 82B face one another and are approximately parallel with one another as illustrated by example in FIG. 11B such that the openings 84A, 84B defined through the lobes 82A, 82B are axially aligned, although in alternate embodiments the obtuse angle formed between the inwardly-facing surface of the second region 80B and the inwardly-facing surface of the second lobe 82B may be greater or lesser than the angle illustrated in FIGS. 11A and 11B and/or the openings 84A, 84B may not be axially aligned. In any case, with the anchor 30.sup.V inserted in to the channel 25 defined between the upright angle rail 20 and the bottom rail 14, as illustrated by example in FIG. 11B, the downwardly-facing anchor support surface 86B of the first lobe 82B contacts, and is supported on, the terminal end 15B of the side wall 14B of the bottom rail 14.

[0065] In embodiments of the anchor 30.sup.V in which the openings 84A, 84B defined through the first and second lobes 82A, 82B of the anchor head 36" are axially aligned, the openings 84A, 84B may illustratively be sized to receive a rod, pin, or bolt 88 therein such that the rod, pin or bolt 88 is mounted to each lobe 82A, 82B and extends across the space defined between the lobes 82A, 82B, i.e., such that a gap or space is defined between the rod, pin, or bolt 88 and the inwardly-facing surfaces of the upper portions of the side walls 32', 34' of the body 31' of the anchor 30.sup.V. Illustratively, the lateral distance between the inwardly-facing surfaces of the lobes 82A, 82B is sized to accommodate the width of a conventional tie-down web or strap, such that the conventional tie-down web or strap may be passed downwardly or upwardly into and through the gap or space defined between the lobes 82A, 82B, around the rod, pin, or bolt 88, and then outwardly away from the gap or space, such that the rod, pin, or bolt 88 acts as an anchor point for the tie-down web or strap. In alternate embodiments, the vertical distance between the rod, pin, or bolt 88 and the terminal end 15B of the side wall 14B of the bottom rail 14 (or from the floor or bed 12 supported on the side wall 14A of the bottom rail 14 as shown by example in FIG. 1), may be greater than that shown in FIG. 11B via suitable modification of the lobes 82A, 82B and/or by increasing the distance between the lobes 82A, 82B and the terminal end 15B of the side wall 14B of the bottom rail 14 by suitably modifying the body 31' of the anchor 30\ such as illustrated with the anchor body 31" illustrated by example in FIGS. 10A and 10B and described above. In alternate

embodiments, and/or in embodiments in which the openings **84A**, **84B** defined through the first and second lobes **82A**, **82B** of the anchor head **36.sup.V** are not axially aligned, the openings **84A**, **84B** may be sized and configured for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap.

[0066] Referring now to FIGS. **12A-12C**, yet a further alternate embodiment is shown of an anchor **30.sup.VI**, wherein the body **31'** of the anchor **30'''** is illustratively identical to the body **31'** of the anchors **30''**, **30'''**, and **30.sup.V** illustrated in FIGS. **8A-8B**, **9A-9B**, and **11A-11B** respectively, and wherein the anchor **30.sup.VI** is further similar to the anchor **30.sup.V** of FIGS. **11A** and **11B** in that the anchor **30.sup.VI** includes a similar, two-sided anchor head **36.sup.VI**. The anchor head **36.sup.VI** illustratively differs from the anchor head **36''** of FIGS. **8A** and **8B** in the positioning of the two lobes. In the embodiment illustrated in FIGS. **12A-12C**, the anchor head **36.sup.VI** illustratively includes a first region **90A** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **32'**, and which is integral with the side wall **32'** of the body **31'** of the anchor **30.sup.VI**. The first region **90A** is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30.sup.VI**, and which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **32'** of the body **31'** of the anchor **30.sup.VI**. A first lobe **92A** of the anchor head **36.sup.VI** is integral with the first region **90A**, and extends outwardly away from the first region **90A** and beyond the lateral terminal end **32C** of the side wall **32'**. The first lobe **92A** is illustratively provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30.sup.VI**, and in any case the first lobe **92A** defines an opening **94A** therethrough. A bend **96A** is defined between the first region and the first lobe **90A**, **92A** respectively, such that the inwardly-facing surface of the first region **90A** forms a reflex angle with the inwardly-facing surface of the first lobe **92A**, and such that the bend **96A** defines a downwardly-facing anchor support surface **98A**. In the illustrated embodiment, the reflex angle is illustratively selected such that, with the anchor **30.sup.VI** inserted into the channel **25** of the trailer **10**, the first lobe **92A** extends rearwardly of the terminal end **15B** of the side wall **14B** of the bottom rail **14** and rearwardly of the terminal end **21B** of the side wall **20B** of the upright angle rail **20**, i.e., such that the first lobe **92A** faces generally away from the exterior of the utility trailer **10**, as illustrated by example in FIGS. **12B** and **12C**, although in alternate embodiments the obtuse angle formed between the inwardly-facing surface of the first region **90A** and the inwardly-facing surface of the first lobe **92A** may be greater or lesser than the angle illustrated in FIGS. **12A-12C**. In any case, with the anchor **30.sup.VI** inserted in to the channel **25** defined between the upright angle rail **20** and the bottom rail **14**, as illustrated by example in FIG. **12B**, the downwardly-facing anchor support surface **98A** of the bend **96A** defined between the first region **90A** and the first lobe **92A** contacts, and is supported on, the terminal end **15B** of the side wall **14B** of the bottom rail **14**.

[0067] The anchor head **36.sup.VI** further illustratively includes a second region **90B** which extends outwardly away from the apex **33** of the anchor body **31'** adjacent to the top of the side wall **34'**, and which is integral with the side wall **34'** of the body **31'** of the anchor **30.sup.VI**. The second region **90B** is illustratively provided in the form of a planar, square or rectangular-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30.sup.VI**, and which illustratively has an inwardly-facing surface which is co-planar with the inwardly-facing surface of the side wall **34'** of the body **31'** of the anchor **30.sup.VI**. A second lobe **92B** of the anchor head **36.sup.VI** is integral with the second region **90B**, and extends outwardly away from the second region **90B** and beyond the lateral terminal end **34C** of the side wall **34'**. The second lobe **92B** is illustratively provided in the form of a planar, D-shaped plate, e.g., with the same or similar thickness as the side walls **32'**, **34'** of the body **31'** of the anchor **30.sup.VI**, and in any case the second lobe **92B** defines an opening **94B** therethrough. A bend **96B** is defined between the second region and the second lobe **90B**, **92B** respectively, such that the inwardly-facing surface

of the second region **90B** forms a reflex angle with the inwardly-facing surface of the second lobe **92B**, and such that the bend **96B** defines a downwardly-facing anchor support surface **98B**. In the illustrated embodiment, the reflex angle is illustratively selected such that, with the anchor **30.sup.VI** inserted into the channel **25** of the trailer **10**, the second lobe **92B** extends rearwardly of the terminal end **15B** of the side wall **14B** of the bottom rail **14** and rearwardly of the terminal end **21A** of the side wall **20A** of the upright angle rail **20**, i.e., such that the second lobe **92B** faces generally away from the exterior of the utility trailer **10**, as illustrated by example in FIGS. **12B** and **12C**, although in alternate embodiments the obtuse angle formed between the inwardly-facing surface of the second region **90B** and the inwardly-facing surface of the second lobe **92B** may be greater or lesser than the angle illustrated in FIGS. **12A-12C**. In any case, with the anchor **30.sup.VI** inserted in to the channel **25** defined between the upright angle rail **20** and the bottom rail **14**, as illustrated by example in FIG. **12B**, the downwardly-facing anchor support surface **98B** of the bend **96B** defined between the second region **90B** and the second lobe **92B** contacts, and is supported on, the terminal end **15B** of the side wall **14B** of the bottom rail **14**. As depicted by example in FIGS. **12B** and **12C**, e.g., in cases or situations in which not side wall is mounted to the utility trailer **10**, the openings **94A**, **94B** of the lobes **90A**, **90B** are generally accessible from the interior side of the utility trailer **10** (FIG. **12B**) as well as from the exterior side of the utility trailer **10** (FIG. **12C**). However, in cases or situations in which a side wall is mounted to the utility trailer **10**, e.g., as described above with respect to FIGS. **10A** and **10B**, the openings **94A**, **94B** of the lobes **90A**, **90B** will be accessible only from the exterior side of the utility trailer **10** (FIG. **12C**).

[0068] Referring now to FIG. **13**, still a further alternate embodiment is shown of an anchor **30.sup.VII**, which is illustratively identical to the anchor **30.sup.VI** illustrated in FIGS. **12A-12C** except that the anchor head **36.sup.VII** differs from the anchor head **36.sup.VI** illustrated in FIGS. **12A-12C** in that the first and second lobes **92A'**, **92B'** of the anchor head **36.sup.VII** each form an obtuse angle relative to the first and second regions **90A**, **90B** respectively of the anchor head **36.sup.VII** so that the downwardly-facing surfaces **99A**, **99B** of the lobes **92A'**, **92B'** respectively, together with the downwardly-facing surfaces **98A**, **98B** of the bend portions **96A**, **96B**, form anchor support surfaces which, with the anchor **30.sup.VII** inserted into the channel **25** as shown, support the anchor **30.sup.VII** on the terminal end **15B** of the side wall **14B** of the bottom rail **14**.

[0069] It should be pointed out that whereas some of the embodiments of the anchors illustrated in FIGS. **1-13** are depicted as having various anchor heads with an associated anchor body **31** or an anchor body **31'**, any of the anchors illustrated in FIGS. **1-13** may alternatively have as an anchor body the anchor body **31''** illustrated by example in FIGS. **10A-10B** so as to space the respective anchor head a desired distance or length upwardly away from the bottom rail **14** or from the floor or bed **12** of the utility trailer **10**.

[0070] The configuration of the bottom end **30B** of the body **31** of the anchor **30** and of the coupling structure **46** illustrated and described above with respect to FIGS. **1-6** represents only one non-limiting example of a bottom end of an anchor body and of a corresponding anchor coupling structure, i.e., for coupling the anchor to one or both of the bottom ends **20A1**, **20A2** of a respective one of the side walls **20A**, **20B** of the upright angle rail **20** and/or to the downwardly-facing surface **14D** of the bottom rail **14**, and it will be understood that other configurations of the bottom end of the body of an anchor and/or other anchor coupling configurations are contemplated by this disclosure. Some non-limiting examples of other configurations of the bottom end of the body of an anchor and/or of other anchor coupling embodiments are illustrated in FIGS. **14-19B**, and will be described below. In some such embodiments, the bottom end of the body of the anchor may be unchanged from that illustrated by example in FIGS. **1-13** and only the anchor coupling structure may change, and in other embodiments one or more modifications may be made to the anchor body and to the anchor coupling structure, as will also be described below. In all cases, however, it should be understood that in the various embodiments illustrated by example in FIGS. **14-19B**, use and operation of the anchor itself is the same as that described above with respect to FIGS. **1-13** in

that the respective anchor body is configured to be slidably received within the channel 25 defined between the upright angle rail 20 and the bottom or base rail 14, and is configured to engage the terminal end 15B of the side wall 14B of the bottom rail 14 so as to maintain the anchor head in a fixed position above the terminal end 15B of the side wall 14B of the bottom rail 14, and may have any of the anchor head configurations illustrated and described above with respect to FIGS. 1-13. [0071] Referring now to FIG. 14, an alternate embodiment is shown of an anchor coupling structure 46' for coupling to the body 31-31'' of any of the anchors 30-30.sup.VII illustrated in FIGS. 1-13 to prevent, or at least restrict, upward movement of the anchor 30-30.sup.VII received within the channel 25 defined between the upright angle rail 20 and the bottom rail 14 via contact between the coupling structure 46' and the bottom ends 20A1, 20A2 of the side walls 20A, 20B respectively of the upright angle rail 20. In the embodiment illustrated by example in FIG. 14, the anchor 30'' of FIGS. 8A-8B is shown, although the anchor 30'' may alternatively be any of the anchors 30-30.sup.VII, and the coupling structure 46' in this embodiment is illustratively provided in the form of a conventional padlock having a conventional padlock body 120 operatively coupled to a conventional padlock shackle 122. The shackle 122 illustratively has sufficient length to pass through both of the openings 40A, 40B defined through the side walls 32', 34' respectively of the body 31' of the anchor 30', and to then couple and lock to the padlock body 120. In this embodiment, the coupling structure 46' is operable identically as described with respect to the coupling structure 46 of FIGS. 1-6 in that after the body 31' of the anchor 30'' is fully inserted into the channel 25 with the bottom end 30B of the body 31' extending out of the bottom 20E of the upright angle rail 20 (see, e.g., FIG. 2A), the coupling structure 46' is engaged with the bottom end 30B of the anchor 30'' by extending the unlocked shackle 122 through both of the openings 40A, 40B, and then securing, i.e., locking, the shackle 122 to the padlock body 120 in a conventional manner. With the shackle 122 extending through the openings 40A, 40B and locked to the padlock body 120, the shackle 122 is prevented from passing back through either of the openings 40A, 40B, and upward movement of the anchor 30'' within the channel 25 is thereby prevented, or at least restricted, by contact between the shackle 122 and the respective bottom ends 20A.sub.1, 20A.sub.2 of the respective side walls 20A, 20B of the upright angle rail 20. In alternate embodiments, only one of the openings 40A, 40B may be used, such that the shackle 122 extends only through one of the openings 40A, 40B.

[0072] Referring now to FIG. 15A, the anchor coupling structure 46' of FIG. 14 is shown which includes a shorter shackle 122'. In the embodiment illustrated in FIG. 15A, the anchor 30.sup.VII of FIG. 13 is shown, although the anchor of FIG. 15A may alternatively be any of the anchors 30-30.sup.VII. In any case, the body 31''' of the anchor 30.sup.VII is illustratively modified such that the bottom 32B' of the side wall 32''' is truncated such that the bottom 32B' terminates above the bottom 34B of the side wall 34, and the side wall 34' is unchanged from that shown in FIGS. 8A-8B and 14. In the embodiment illustrated in FIG. 14, the bottom 32B' of the side wall 32''' need not be sized to extend downwardly and outwardly from the end 20E of the upright angle rail 20, and instead only the bottom 34B of the side wall 34' is sized to extend downwardly and outwardly from the end 20E of the upright angle rail 20. The shackle 122' illustratively has sufficient length to pass through the opening 40B defined through the side wall 34' respectively of the body 31''' of the anchor 30.sup.VII, and to then couple and lock to the padlock body 120. In this embodiment, the coupling structure 46' is configured such that after the body 31''' of the anchor 30.sup.VI is fully inserted into the channel 25 with the bottom end 34B of the side wall 34' of the body 31''' extending out of the bottom 20E of the upright angle rail 20 (see, e.g., FIG. 2A), the coupling structure 46' is engaged with the bottom end 30B of the anchor 30'' by extending the unlocked shackle 122' through the opening 40B, and then securing, i.e., locking, the shackle 122' to the padlock body 120 in a conventional manner. With the shackle 122' extending through the opening 40B and locked to the padlock body 120, the shackle 122' is prevented from passing back through the opening 40B, and upward movement of the anchor 30.sup.VII within the channel 25 is

prevented, or at least restricted, by contact between the shackle **122'** and the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20** (see also FIG. 6).

[0073] Referring now to FIG. 15B, an alternate embodiment is shown of another anchor coupling structure **46''** for coupling to the side wall **34'** of the body **31'''** of the anchor **30.sup.VII** illustrated in FIG. 15A. In the illustrated embodiment, the coupling structure **46''** is provided in the form of a bolt **130** and nut **132** combination, wherein the bolt **130** is sized to extend through the opening **40B** defined through the side wall **34'** adjacent to the end **34B** of the side wall **34'** (opening **40B** shown in FIG. 15A but obscured from view in FIG. 15B by the nut **132**), and the nut **132** is sized to threadingly engage the nut **132** to secure the bolt **130** and nut **132** to the side wall **34'**. In this embodiment, the coupling structure **46''** is configured such that after the body **31'''** of the anchor **30.sup.VII** is fully inserted into the channel **25** with the bottom end **34B** of the side wall **34'** of the body **31'''** extending out of the bottom **20E** of the upright angle rail **20** (see, e.g., FIG. 2A), the coupling structure **46''** is engaged with the bottom end **30B** of the anchor **30''** by extending the bolt **130** through the opening **40B**, and then threading the nut **132** onto the bolt **130** to secure the bolt **130** and nut **132** to the side wall **34'**. With the bolt **130** and nut **132** secured to the side wall **34'** through the opening **40B**, upward movement of the anchor **30.sup.VII** within the channel **25** is prevented, or at least restricted, by contact between the bolt **130** and/or nut **132** and the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20** (see also FIG. 6).

[0074] Referring now to FIG. 16, an alternate embodiment of a body **31.sup.IV** of an anchor, and of a corresponding anchor coupling structure **46'''**, is shown in which the anchor head portion is the anchor head associated with the anchor **30.sup.VII** of FIG. 13, although it will be understood that any of the anchors **30-30.sup.VII**, or at least the anchor heads of any of the anchors **30-30.sup.VII**, may alternatively be used with the body **31.sup.IV** and anchor coupling structure **46'''** of FIG. 16. In any case, the body **31.sup.IV** includes a modified side wall **32.sup.IV** in which the bottom end **32B''** of the side wall **32.sup.IV** includes a bend **32G** and an ear or tab **32F** extending from the bend **32H** away from the side wall **32.sup.IV**, wherein the ear or tab **32F** is a planar structure, illustratively integral with the side wall **32.sup.IV**, and illustratively having the shape of a right-triangle oriented and sized to as to be received within the channel **25** as the anchor **30.sup.VII** is passed into and through the channel **25**. The inwardly-facing surfaces of the side wall **32.sup.IV** and the ear or tab **32F** form an angle therebetween, and an opening **32H** is defined through the ear or tab **32F**. In the illustrated embodiment, the inwardly-facing surfaces of the side wall **32.sup.IV** and the ear or tab **32F** form substantially a right angle therebetween, although in alternate embodiments the angle may be greater or less than 90 degrees. The lateral terminal end of the other side wall **34'''** of the body **31.sup.IV** illustratively terminates flush with the downwardly-facing surface of the ear or tab **32F**, and an anchor coupling structure **46'''** in the form of an anchor plate **140** is provided with a bolt **142** extending therethrough, wherein the bolt **142** is threaded and configured to threadingly engage the opening **32H** formed through the ear or tab **32F**. The anchor plate **140** illustratively has a length which, when the anchor plate **140** is attached by the bolt **142** to the ear or tab **32F**, extends beyond the edge of the diagonal portion of the ear or tab **32F** and beyond the outer surface of the side wall **34'''** as illustrated by example in FIG. 16. The lengths of the side walls **32.sup.IV**, **34'''** are illustratively sized such that, with the body **31.sup.IV** of the anchor **30.sup.VII** fully inserted into the channel **25**, the co-planar terminal end of the side wall **34'''** and downwardly-facing surface of the ear or tab **32F** terminate at or just above the respective terminal ends **20A.sub.1**, **20A.sub.2** of the side walls **20A**, **20B** of the upright angle rail **20**.

[0075] In the embodiment illustrated in FIG. 16, the coupling structure **46'''** is configured such that after the body **31.sup.IV** of the anchor **30.sup.VII** is fully inserted into the channel **25** with the bottom end **34B'** of the side wall **34'''** and the downwardly-facing surface of the ear or tab **32F** flush with, or slightly retracted from, the terminal ends **20A.sub.1**, **20A.sub.2** of the side walls **20A**, **20B** of the upright angle rail **20**, the coupling structure **46'''** is engaged with the ear or tab **32F** of the side wall **32.sup.IV** of the body **31.sup.IV** by threading the bolt **142** into the opening **32H**, to

secure the anchor plate **140** to the side walls **32.sup.IV** and **34'''**. With the bolt **142** secured to the side walls **32.sup.IV** and **34'''**, upward movement of the anchor **30.sup.VII** within the channel **25** is prevented, or at least restricted, by contact between the upwardly-facing surface **140A** of the anchor plate **140** and at least one of the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**, the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20**, and the downwardly-facing surface **14D** of the bottom rail **14** (see also FIG. 6). Prior to fully securing the anchor plate **140** to the body **31.sup.IV** of the anchor **30.sup.VII**, the anchor plate **140** is laterally rotatable relative to the body **31.sup.IV**, and in the illustrated embodiment the anchor plate **140** is sized such that the anchor plate **140** may be positioned so as to secure the upwardly-facing surface **140A** against the downwardly-facing surface **14D** of the bottom rail **14** and one of the bottom ends **20A.sub.1**, **20A.sub.2** of a respective one of the side walls **20A**, **20B** of the upright angle rail **20**, although in alternate embodiments the anchor plate **140** may be sized and/or configured in shape such that the upwardly-facing surface **140A** of the anchor plate **140** contacts any one or more of the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**, the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20**, and the downwardly-facing surface **14D** of the bottom rail **14**.

[0076] Referring now to FIG. 17, another alternate embodiment of a body **31.sup.V** of an anchor, and of a corresponding anchor coupling structure **46.sup.IV**, is shown in which the anchor head portion is the anchor head associated with the anchor **30.sup.VII** of FIG. 13, although it will be understood that any of the anchors **30-30.sup.VII**, or at least the anchor heads of any of the anchors **30-30.sup.VII**, may alternatively be used with the body **31.sup.V** and anchor coupling structure **46.sup.IV** of FIG. 17. In any case, the body **31.sup.V** includes a modified side wall **32.sup.V** in which the bottom end **32B'''** of the side wall **32.sup.V** is truncated so that it does not pass through (i.e., outwardly of) the end **20E** of the upright angle rail **20** when the anchor **30.sup.VII** is fully inserted in to the channel **25**. The body **31.sup.V** further includes a modified side wall **34.sup.IV** in which a lateral tab or ear **34F** extends away from the inwardly-facing surface of the side wall **34.sup.IV**. Illustratively, the ear or tab **34F** is oriented and sized such that it extends away from the inwardly-facing surface of the side wall **34.sup.IV** at an angle which allows it to be received within the channel **25** as the anchor **30.sup.VII** is passed into and through the channel **25**. The ear or tab **34F** defines an opening **34G** therethrough sized to receive and engage an anchor coupling structure **46.sup.IV**, illustratively provided in the form of a threaded bolt **150**. The side wall **34.sup.IV** and the ear or tab **34F** extending therefrom are illustratively sized so that the resulting length of the combination of the side wall **34.sup.IV** and the ear or tab **34F** is such that, with the body **31.sup.V** of the anchor **30.sup.VII** fully inserted into the channel **25**, the opening **34G** clears, i.e., extend downwardly out of, the bottom end **20E** of the upright angle rail **20**. The ear or tab **34F** is illustratively configured and oriented such that the bolt **150** enters the opening **34G** defined through the ear or tab **34F** along an axis that is approximately perpendicular to the longitudinal axis of the channel **25**. As a result, with the body **31.sup.V** of the anchor **30.sup.VII** fully inserted into the channel **25**, the bolt **150** is secured to the ear or tab **34F** by threading the bolt **150** into the opening **34G**, and upward movement of the anchor **30.sup.VII** within the channel **25** is thus prevented, or at least restricted, by contact between the anchor coupling structure **46.sup.IV**, i.e., the head of the bolt **150**, and the downwardly-facing surface **14D** of the bottom rail **14** (see also FIG. 6). In alternate embodiments the ear or tab **34F** may be oriented such that upward movement of the anchor **30.sup.VII** within the channel **25** may be prevented, or at least restricted, by contact between the anchor coupling structure **46.sup.IV**, i.e., the head of the bolt **150**, and the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**, or the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20**.

[0077] Referring now to FIGS. 18A and 18B, yet another alternate embodiment of a body **31.sup.VI** of an anchor, and of a corresponding anchor coupling structure **46.sup.V**, is shown in which the anchor head portion is the anchor head associated with the anchor **30.sup.VII** of FIG. 13,

although it will be understood that any of the anchors **30-30.sup.VII**, or at least the anchor heads of any of the anchors **30-30.sup.VII**, may alternatively be used with the body **31.sup.VI** and anchor coupling structure **46.sup.V** of FIGS. **18A-18B**. In any case, the body **31.sup.VI** includes a modified side wall **32.sup.VI** in which the bottom end **32B.sup.IV** of the side wall **32.sup.VI** is truncated so as to clear (i.e., terminate at or pass outwardly of) the end **20E** of the upright angle rail **20** when the anchor **30.sup.VII** is fully inserted in to the channel **25**, and a modified side wall **34.sup.V** in which the bottom end **34B'''** of the side wall **34.sup.V** is truncated so as to clear (i.e., terminate at or pass outwardly of) the end **20E** of the upright angle rail **20** when the anchor **30.sup.VII** is fully inserted in to the channel **25**. In the illustrated embodiment, the bottom ends **32B.sup.IV** and **34B'''** of the respective side walls **32.sup.VI** and **34.sup.V** are co-planar with one another, although in alternate embodiments the bottom end **34B'''** of the side wall **34.sup.V** may terminate higher or lower than the bottom wall **32B.sup.IV** of the side wall **32.sup.VI**.

[0078] The anchor coupling structure **46** is illustratively provided in the form of a biased latch **160** pivotably coupled to the inwardly-facing surface of the side wall **34.sup.V** and configured to automatically deploy upon full insertion of the anchor **30.sup.VII** into the channel **25** defined between the upright angle rail **20** and the bottom rail **14** so as to prevent, or at least restrict, upward movement of the anchor **30.sup.VII** within the channel **25** via contact between the latch **160** and the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**. In alternative embodiments, the biased latch **160** may be coupled to the inwardly-facing surface of the side wall **32.sup.VI** and configured to automatically deploy so as to prevent, or at least restrict, upward movement of the anchor **30.sup.VII** within the channel **25** via contact between the latch **160** and the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20**. In the illustrated embodiment, the latch **160** is provided in the form of an elongated lever **160** having an upper end **160A** and a lower end **160B**, wherein the lever **160** is pivotably coupled to the side wall **34.sup.V** of the body **31.sup.VI** via a pivot point in the form of conventional fixation member **162**, e.g., a bolt or other conventional mechanical element, positioned between the upper end **160A** and the lower end **160B** such that the ends **160A**, **160B** of the lever **160** are together pivotable about the fixation member **162**.

[0079] A biasing member **164**, e.g., a coil spring, is positioned between, and coupled to each of, the lever **160** at or adjacent to the upper end **160A** thereof and to an oppositely facing portion of the inwardly-facing surface of the side wall **32.sup.VI**. The biasing member **164** is normally biased to an expanded state to maintain the upper end **160A** of the lever spaced away from the inwardly-facing surface of the side wall **32.sup.VI** as illustrated by example in FIG. **18B**, and is compressible, under force, to pivot the upper end **160A** of the lever **160** toward and against the inwardly-facing surface of the side wall **32.sup.VI** as illustrated by example in FIG. **18A**. A projection **166** extends away from the lower end **160B** of the lever **160** in the direction of the side wall **32.sup.VI**, and the projection **166** is sized and oriented so as to extend under the bottom end **32B.sup.IV** of the side wall **32.sup.VI** and outwardly away from the outwardly-facing surface of the side wall **32.sup.VI** under the normally biased (extended) state of the biasing member **164**, as illustrated by example in FIG. **18B**, and such that the terminal end of the projection **166** clears the outwardly-facing surface of the side wall **32.sup.VI** under the bottom end **32B.sup.IV** of the side wall **32.sup.VI** as the biasing member **164** is compressed so as to pivot bottom end **160B** of the lever **160** away from the inwardly-facing surface of the side wall **32.sup.VI**, as illustrated by example in FIG. **18A**. With the lever **160** in the position illustrated in FIG. **18A**, the projection **166** of the lever **160** thus does not extend beyond the outwardly-facing surface of the side wall **32.sup.VI** such that the body **31.sup.VI** of the anchor **30.sup.VII** will be freely moved axially along the channel **25** defined between the upright angle rail **20** and the bottom rail **14**.

[0080] In the embodiment illustrated in FIGS. **18A** and **18B**, the anchor coupling structure **46.sup.V** is configured such that sufficient force must be applied to the upper end **160A** of the lever **160** to cause the biasing member **164** to compress so as to pivot the bottom end **160B** of the lever **160** away from the side wall **32.sup.VI** to the position illustrated in FIG. **18A** in which the terminal

end of the projection **166** is inward of the outwardly-facing wall of the side wall **32.sup.VI**. In this position, the body **31.sup.VI** of the anchor **30.sup.VII** can be inserted into the channel **25**, and when the bottom ends **32B.sup.IV** and **34B'''** of the respective side walls **32.sup.VI**, **34.sup.V** are captured within the channel **25**, the force applied to the upper end **160A** of the lever **160** can be released, and the biasing force of the biasing member **164**, in turn, forces the terminal end of the projection **166** into contact with the inwardly-facing surface of the side wall **20A** of the upright angle rail **20**. The body **31.sup.VI** of the anchor **30.sup.VII** is then moved downwardly into the channel **25**, and when the terminal end of the projection **166** clears the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20** (see FIG. **6**), the biasing force of the biasing member **164** further pivots the bottom end **160B** of the lever **160** such that the projection extends outwardly away from the outwardly-facing surface of the side wall **32.sup.VI**, as illustrated in FIG. **18B**, and across or over the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**. With the lever **160** and the projection **166** in this position, upward movement of the anchor **30.sup.VII** within the channel **25** is prevented, or at least restricted, by contact between the upwardly-facing surface **166A** of the projection **166** of the lever **160** and the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**.

[0081] Referring now to FIGS. **19A** and **19B**, still another alternate embodiment of a body **31.sup.VII** of an anchor, and of a corresponding anchor coupling structure **46.sup.VI**, is shown in which the anchor head portion is the anchor head associated with the anchor **30.sup.VII** of FIG. **13**, although it will be understood that any of the anchors **30-30.sup.VII**, or at least the anchor heads of any of the anchors **30-30.sup.VII**, may alternatively be used with the body **31.sup.VII** and anchor coupling structure **46.sup.VI** of FIGS. **19A-19B**. In any case, the body **31.sup.VII** includes a modified side wall **32.sup.VII** in which the bottom end **32B.sup.V** of the side wall **32.sup.VII** is truncated so as to clear (i.e., terminate at or pass outwardly of) the end **20E** of the upright angle rail **20** when the anchor **30.sup.VII** is fully inserted in to the channel **25**, and wherein the side wall **32.sup.VII** includes a slot **32J** formed therethrough which is open to the bottom end **32B.sup.V**. The body **31.sup.VII** further includes a modified side wall **34.sup.VI**, wherein the bottom end **34B.sup.IV** of the side wall **34.sup.VI** is likewise truncated so as to be co-planar with the bottom end **32B.sup.V** of the side wall **32.sup.VII**, although in alternate embodiments the bottom end **34B.sup.V** of the side wall **34.sup.VI** may terminate higher or lower than the bottom wall **32B.sup.V** of the side wall **32.sup.VII**.

[0082] The anchor coupling structure **46.sup.VI** is illustratively provided in the form of a weighted cam **170** pivotably coupled to the inwardly-facing surface of the side wall **34.sup.VI** and configured to automatically deploy upon full insertion of the anchor **30.sup.VII** into the channel **25** defined between the upright angle rail **20** and the bottom rail **14** so as to prevent, or at least restrict, upward movement of the anchor **30.sup.VII** within the channel **25** via contact between the cam **170** and the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**. In alternative embodiments, the biased cam **170** may be coupled to the inwardly-facing surface of the side wall **32.sup.VII** and configured to automatically deploy so as to prevent, or at least restrict, upward movement of the anchor **30.sup.VII** within the channel **25** via contact between the cam **170** and the bottom end **20A.sub.2** of the side wall **20B** of the upright angle rail **20**. In the illustrated embodiment, the weighted cam **170** is provided in the form of a flat, disk-shaped body **170** having a projection **174** extending away from an engagement portion **176**, wherein the engagement portion **176** of the body **170** is pivotably coupled to the side wall **34.sup.VI** of the body **31.sup.VII** via a pivot point in the form of conventional fixation member **172**, e.g., a bolt or other conventional mechanical element, positioned between the engagement portion **176** and the projection **174** such that an engagement surface **176A** of the engagement portion **176** and the projection **174** are together pivotable about the fixation member **162**.

[0083] The engagement portion **176** of the cam body **170** is sized and configured so as to form a weighted body which normally rotates the cam body **170**, under the force of gravity, to cause the

engagement portion **176** to extend into and through the slot **32J** formed through the side wall **32.sup.VII** as illustrated by example in FIG. **19B**. The cam body **170** rotates relative to the side wall **34.sup.VI** as just described until the projection **174** comes into contact with the side wall **32.sup.VII** above the slot **32J**, which fixes the position of the cam body **170** such that engagement surface **176A** of at least part of the engagement portion **176** extends outwardly away from the outwardly-facing wall of the side wall **32.sup.VII**. The cam body **170** may be pivoted in the opposite direction by application of a suitable force to the projection **174** to cause the cam body **170** to rotate such as that the projection **174** moves away from the side wall **32.sup.VII**, the engagement portion **176** rotates back through the slot **32J** until the engagement surface **176A** of the engagement portion **176** clears the outwardly-facing surface of the side wall **32.sup.VI** of the side wall **32.sup.VI**, as illustrated by example in FIG. **19A**. With the cam body **170** in the position illustrated in FIG. **19A**, the engagement portion **176** of cam body **170** thus does not extend beyond the outwardly-facing surface of the side wall **32.sup.VII** such that the body **31.sup.VII** of the anchor **30.sup.VII** will be freely moved axially along the channel **25** defined between the upright angle rail **20** and the bottom rail **14**.

[0084] In the embodiment illustrated in FIGS. **19A** and **19B**, the anchor coupling structure **46.sup.VI** is configured such that sufficient force must be applied to the projection **174** of the cam body **170** to cause the cam body **170** to rotate the engagement portion **176** of the cam body **170** through the slot **32J** in the direction inwardly away from the inwardly-facing surface of the side wall **32.sup.VII** to the position illustrated in FIG. **19A** in which the engagement surface **176A** of the engagement portion **176** of the cam body **170** is completely inward of the outwardly-facing wall of the side wall **32.sup.VII**. In this position, the body **31.sup.VII** of the anchor **30.sup.VII** can be inserted into the channel **25**, and when the bottom ends **32B.sup.V** and **34B.sup.IV** of the respective side walls **32.sup.VII**, **34.sup.VII** are captured within the channel **25**, the force applied to the projection **174** can be released, and the weighted engagement portion **176** of the cam body **170**, in turn, rotates the cam body **170** in the opposite direction to cause the engagement portion **176** to pass into and through the slot **32J** until the engagement surface **176A** of the engagement portion **176** of the cam body **170** comes into contact with the inwardly-facing surface of the side wall **20A** of the upright angle rail **20**. The body **31.sup.VII** of the anchor **30.sup.VII** is then moved downwardly into the channel **25**, and when the engagement surface **176A** of the engagement portion **176** of the cam body **170** clears the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20** (see FIG. **6**), the weighted engagement portion **176** of the cam body **170** further rotates the cam body **170** until the projection **174** contacts the inwardly-facing surface of the side wall **32.sup.VII** above the lot **32J**, which causes the engagement portion **176** to extend outwardly away from the outwardly-facing surface of the side wall **32.sup.VII**, as illustrated in FIG. **19B**, and across or over the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**. With the cam body **170** in this position, upward movement of the anchor **30.sup.VII** within the channel **25** is prevented, or at least restricted, by contact between the upwardly-facing engagement surface **176A** of the engagement portion **176** of the cam body **170** and the bottom end **20A.sub.1** of the side wall **20A** of the upright angle rail **20**.

[0085] In the embodiments illustrated in FIGS. **1-19B** and described above, the various anchors **30-30.sup.VII** are illustratively constructed in the form of an elongated V-shaped body **31-31.sup.VII** with an integral anchor head, e.g., such that the anchor body and the anchor head are illustratively of uniform construction, and with various lower body configurations for accommodating and/or coupling to various anchor coupling structures **46-46.sup.VI**. In some alternate embodiments, the anchor body may be provided in the form of a closed structure, i.e., a three-sided triangle in transverse cross-section, with a top end configured to mount an anchor head of any desired design thereto, and with a bottom end configured to mount an anchor coupling structure of any desired design thereto. In some such embodiments, the anchor body, anchor head, and the anchor coupling structure may each be formed as a solid structure, and in other embodiments the anchor body may

be formed as a hollow or semi-hollow, yet three-sided structure, and in still other embodiments the anchor body. In some embodiments, the anchor body, the anchor head and/or the anchor coupling structure may be formed by any conventional technique such as casting or other conventional technique.

[0086] Referring now to FIGS. 20A and 20B, an anchor **300** of the type just described is shown. In the illustrated embodiment, the anchor **300** includes a three-sided body **310** generally having the shape of a triangle in lateral cross-section as described above with respect to the various anchors **30-30.sup.VII** of FIGS. 1-13, wherein the body **310** is configured to detachably mount an anchor head and an anchor coupling structure thereto, as the terms “anchor head” and “anchor coupling structure” are used hereinabove. The body **310** illustratively includes two sides **312**, **314**, which meet at an apex **310C** that extends from a top end **310A** of the body **310** to a bottom end **310B** of the body **310**. Between the top end **310A** and the bottom end **310B** of the body **310**, the side wall **312** extends away from the apex **310C** to a lateral terminal end **312A** which forms another apex with a lateral terminal end of a front wall **320**, and the side wall **314** similarly extends away from the apex **310C** to a lateral terminal end **314A** which forms yet another apex with the opposite lateral terminal end of the front wall **320**. Adjacent to the bottom end **310B** of the body **310**, the side wall **312** extends away from the apex **310C** to another lateral terminal end **312B**, wherein the lateral terminal end **312A** extends further away from the apex **310C** than the lateral terminal end **312B** so as to form a step **316** at the junction of the lateral terminal ends **312A**, **312B** of the side wall **312**. The step **316** extends across the front wall **320** and is also defined between the lateral terminal end **314A** of the side wall **314** and another lateral terminal side wall **314B** of the side wall extending between the bottom end **310B** of the body **310** and the step **316**. Adjacent to the top end **310A** of the body **310**, the side wall **312** likewise extends away from the apex **310C** to another lateral terminal end **312C**, wherein the lateral terminal end **312A** extends further away from the apex **310C** than the lateral terminal end **312C** so as to form another step **318** at the junction of the lateral terminal ends **312A**, **312C** of the side wall **312**. The step **318** extends across the front wall **320** and is also defined between the lateral terminal end **314A** of the side wall **314** and another terminal side wall **314C** of the side wall extending between the top end **310A** of the body **310** and the step **318**. The walls **312**, **314**, **320** are all illustratively planar, and a lower recessed planar wall **322** is illustratively defined between bottom end **310B** of the body **310** and the step **316**, and an upper recessed planar wall **324** is illustratively defined between the top end **310A** of the body **310** and the step **318**, wherein the planes formed by the planar walls **320**, **322**, and **324** are illustratively parallel with one another.

[0087] The recessed wall **324** and the step **318** defined between the front wall **320** and the recessed wall **324** illustratively together form a mounting platform and surface upon which to mount an anchor head. In the embodiment illustrated in FIGS. 20A, 20B, an anchor head **330** is illustratively provided in the form of an elongated plate having rounded lateral terminal ends **336A**, **336B**, and defining a mounting opening **332** therethrough approximately centrally between the lateral terminal ends **336A**, **336B**. A complementary opening is formed into the recessed wall **324**, e.g., centrally between the terminal lateral ends **3120**, **314C**, and a conventional fixation element **334**, e.g., a threaded bolt or other conventional fixation element, extends through and/or engages the opening **332** and the opening defined in the recessed wall **324**, and fixes the anchor head **330** to the anchor body **310**. In the illustrated embodiment, the anchor head **336** defines two anchor openings **338A**, **338B** therethrough adjacent to the respective ends **336A**, **336B**, each of which extends through the anchor head **330**. In some embodiments, the anchor openings **338A**, **338B** are sized for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap. In any case, the downwardly-facing bottom edge **340** of the anchor head **330** is oriented to rest upon the terminal end **15B** of the side wall **14B** of the bottom rail **14** upon full insertion of the anchor **300** into the channel **25** defined between the upright angle rail **20** and the bottom rail **14** as described above with respect to FIGS. 1-13, such that the bottom edge **340**

defines an anchor support surface of the anchor **300** relative to the utility trailer **10**.

[0088] In other embodiments, the anchor opening **338A** and/or the anchor opening **338B** may be sized and/or configured to mount an anchoring structure to the anchor head **330**, e.g., such as an eye-bolt **42**, and in such embodiments the anchoring structure will illustratively be sized and configured for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap. In any case, although two openings **338A**, **338B** are defined through the anchor head **330** in FIGS. **20A**, **20B**, it will be understood that the anchor head **330** may be defined more or fewer openings therethrough, at least one of which is configured for connection thereto of a conventional hook or other engagement structure to or integral with a conventional tie-down or anchoring strap or for attachment thereto of an anchoring structure as just described. It will be further understood that the anchor head **330** illustrated in FIGS. **20A**, **20B** and described above represents only one example shape and configuration of an anchor head that may be mounted to the anchor body **310**, and that other shapes and/or configurations of the anchor head **330** may be mounted to the anchor body **310**, some non-exhaustive examples of which are illustrated in FIGS. **4A-13** and described above.

[0089] The recessed wall **322** and the step **316** defined between the front wall **320** and the recessed wall **322** illustratively together form a mounting surface upon which to mount an anchor coupling structure. In the embodiment illustrated in FIGS. **20A**, **20B**, an anchor coupling structure **350** is illustratively provided in the form of an elongated plate having rounded lateral terminal ends **350A**, **350B**, and defining a mounting opening **352** therethrough approximately centrally between the lateral terminal ends **350A**, **350B**. A complementary opening is formed into the recessed wall **322**, e.g., centrally between the lateral terminal ends **312B**, **314B**, and a conventional fixation element **354**, e.g., a threaded bolt or other conventional fixation element, extends through and/or engages the opening **352** and the opening defined in the recessed wall **322**, and fixes the anchor coupling structure **350** to the anchor body **310**. In the illustrated embodiment, the length of the anchor body **310** is such that, with the anchor body **310** fully inserted into a channel **25** defined between an upright angle rail **20** and the bottom rail **14**, the recessed wall **322** clears the terminal ends **20A.sub.1**, **20A.sub.2** of the respective side walls **20A**, **20B** of the upright angle rail **20** sufficiently to allow for mounting of the anchor coupling structure **350** to the recessed wall **322** as depicted by example in FIGS. **20A**, **20B**. The length of the anchor coupling structure **350** between the lateral terminal ends **350A**, **350B** is such that, with the anchor body **310** fully inserted into a channel **25** as just described, the upwardly-facing top edge **350C** of the anchor coupling structure **350** extends laterally beyond the recessed wall **322** so as to prevent, or at least restrict, upward movement of the anchor body **310** within the channel **25**.

[0090] The anchor **300** is operatively mounted to a utility trailer **10** by first mounting an anchor head, such as the anchor head **330** depicted by example in FIGS. **20A**, **20B**, to the recessed wall **324** of the anchor body **310**. The bottom end **310B** of the anchor body **310** is then inserted into a channel **25** defined between an upright angle rail **20** and the bottom rail **14**, and the anchor body **310** is passed fully into the channel **25** until the downwardly-facing anchor support surface **340** of the anchor head **330** contacts the upwardly-facing terminal end **15B** of the side wall **14B** of the bottom rail **14** such that the anchor **300** is supported in the channel **25** by the bottom edge **340** of the anchor head **330** resting upon the terminal end **15B** of the bottom rail **14**. The anchor coupling structure **350** is then mounted to the recessed wall **322** of the anchor body **310** as described above. The upwardly-facing edge **350C** of the anchor coupling structure **350** prevents, or at least restricts, upward movement of the anchor **300** within the channel **25** by contact between the upwardly-facing edge **350C** of the coupling structure **350** with the bottom ends **20A.sub.1**, **20A.sub.2** of the side walls **20A**, **20B** of the upright angle rail **20**. In alternate embodiments, the anchor coupling structure **350** may be shaped and/or configured such that the upwardly-facing edge **350C** of the anchor coupling structure **350** prevents, or at least restricts, upward movement of the anchor **300**

within the channel 25 by contact between the upwardly-facing edge 350C of the coupling structure 350 with only one of the bottom ends 20A.sub.1, 20A.sub.2 of the respective side wall 20A, 20B of the upright angle rail 20.

[0091] Referring now to FIGS. 21A-22B, an example variant 400 is shown of the anchor 300 of the type just described is shown. In the illustrated embodiment, the anchor 400 includes a three-sided body 410 generally having the shape of a triangle in lateral cross-section as described above with respect to FIGS. 20A, 20B, and the body 410 is configured to detachably mount an anchor head and an anchor coupling structure thereto, as the terms “anchor head” and “anchor coupling structure” are used hereinabove. The body 410 illustratively includes two sides 412, 414, which meet at an apex 410C that extends from a top end 410A of the body 410 to a bottom end 410B of the body 410. In the illustrated embodiments, the top end 410A and the top and bottom ends 410A, 410B are both planar surfaces and parallel to one another, although in alternate embodiments the top end 410A and/or the bottom end 410B may be a non-planar surface. In any case, between the top end 410A and the bottom end 410B of the body 410, the side wall 412 extends away from the apex 410A to a lateral terminal end 412A which forms another apex with a lateral terminal end of a front wall 416 of the body 410, and the side wall 414 similarly extends away from the apex 410C to a lateral terminal end 414A which forms yet another apex with the opposite lateral terminal end of the front wall 416.

[0092] A generally L-shaped bracket 420 includes a lower bracket leg 422 configured to mount directly to the top end 410A of the body 410 of the anchor 400, e.g., via a conventional fixation element 424 passed through aligned openings in each of the bracket leg 422 and the top end 410A of the body 410 such that the fixation element 424 engages the opening in the top end 410A of the body 410. An upper bracket leg 426 is configured to mount directly to an anchor head 430, e.g., via a conventional fixation element 428 passed through aligned openings in each of the bracket leg 426 and the body of the anchor head 430 such that the fixation element 428 engages the opening in the anchor head 430 or engages a nut or other such fixation element to fix the anchor head 430 therebetween. In any case, the anchor head 430 is illustratively identical to the anchor head 330 illustrated in FIGS. 20A, 20B and described above, including respective lateral terminal ends 432A, 432B, openings 434A, 434B and anchor support surface 436, although it will be understood that the anchor head 430 may have any desired configuration with any number of openings as described above with respect to the anchor head 330.

[0093] The bottom end 410B of the body 410 of the anchor 400 illustratively forms a mounting surface to mount to an anchor coupling structure. In the embodiment illustrated in FIGS. 21A, 21B, an anchor coupling structure 450 is illustratively provided in the form of an elongated plate having rounded lateral terminal ends 450A, 450B, and defining a mounting opening therethrough approximately centrally between the terminal ends 450A, 450B. A complementary opening is formed into the bottom end 410B of the body 410 of the anchor, and a conventional fixation element 452, e.g., a threaded bolt or other conventional fixation element, extends through and/or engages the openings to fix the anchor coupling structure 450 to the anchor body 410 such that one face 450C of the anchor coupling plate 450 faces upwardly toward the anchor head 430. In the illustrated embodiment, the length of the anchor body 410 is such that, with the anchor body 410 fully inserted into a channel 25 defined between an upright angle rail 20 and the bottom rail 14, the bottom end 410B of the body 410 clears, terminates at, or is recessed slightly above, the terminal ends 20A.sub.1, 20A.sub.2 of the respective side walls 20A, 20B of the upright angle rail 20 so as to allow for mounting of the anchor coupling structure 450 to the bottom end 410B of the body 410 of the anchor 400 as depicted by example in FIGS. 21A, 21B. The length of the anchor coupling structure 450 between the terminal ends 450A, 450B is such that, with the anchor body 410 fully inserted into a channel 25 as just described, the upwardly-facing top surface 450C of the anchor coupling structure 450 extends laterally beyond the clears the terminal ends 20A.sub.1, 20A.sub.2 of the respective side walls 20A, 20B of the upright angle rail 20 so as to prevent, or at least

restrict, upward movement of the anchor body **410** within the channel **25**.

[0094] The anchor **400** is operatively mounted to a utility trailer **10** by first mounting an anchor head, such as the anchor head **400** depicted by example in FIGS. **21A**, **21B**, to the top end **410A** of the anchor body **410**. The bottom end **410B** of the anchor body **410** is then inserted into a channel **25** defined between an upright angle rail **20** and the bottom rail **14**, and the anchor body **410** is passed fully into the channel **25** until the downwardly-facing anchor support surface **436** of the anchor head **430** contacts the upwardly-facing terminal end **15B** of the side wall **14B** of the bottom rail **14** such that the anchor **400** is supported in the channel **25** by the bottom edge **436** of the anchor head **430** resting upon the terminal end **15B** of the bottom rail **14**. The anchor coupling structure **450** is then mounted to the bottom end **410B** of the anchor body **410** as described above. The upwardly-facing surface **450C** of the anchor coupling structure **450** prevents, or at least restricts, upward movement of the anchor **400** within the channel **25** by contact between the upwardly-facing surface **450C** of the coupling structure **450** with the bottom ends **20A.sub.1**, **20A.sub.2** of the side walls **20A**, **20B** of the upright angle rail **20**. In alternate embodiments, the anchor coupling structure **450** may be shaped and/or configured such that the upwardly-facing surface **450C** of the anchor coupling structure **450** prevents, or at least restricts, upward movement of the anchor **400** within the channel **25** by contact between the upwardly-facing surface **450C** of the coupling structure **450** with only one of the bottom ends **20A.sub.1**, **20A.sub.2** of the respective side wall **20A**, **20B** of the upright angle rail **20**.

[0095] While the disclosure has been illustrated and described in detail in the drawings and foregoing description, such an illustration and description is to be considered as exemplary and not restrictive in character, it being understood that only illustrative embodiments have been shown and described and that all changes and modifications consistent with the disclosure and recited claims are desired to be protected.

Claims

1. An anchor configured to be slidably received within an elongated channel defined between and bounded by a base rail and an upright angle rail of an angle rail utility trailer, the anchor comprising: an elongated body including an elongated first side wall and an elongated second side wall extending laterally away at an angle from the elongated first side wall, each of the first and second side walls defining a respective top end and a bottom end opposite the top end, the elongated body sized and configured complementary to the elongated channel so as to be slidably receivable within the elongated channel, an anchor head extending from the top end of at least one of the first and second side walls, the anchor head configured to secure at least one structure thereto, wherein at least one of the anchor head, the first side wall and the second side wall defines at least one support surface configured to engage the bottom rail of the angle rail utility trailer to support the body of the anchor received within the channel on the bottom rail with the anchor head extending above the bottom rail, and means for engaging at least one of the first and second side walls at or near a respective bottom end thereof and at least one of the bottom rail and a lower terminal end of the upright angle rail following insertion of the elongated body into the channel to prevent or restrict upward movement of the anchor within the channel.
2. The anchor of claim 1, wherein the elongated channel is defined between inwardly-facing surfaces of two side walls of the upright angle rail and an outwardly-facing surface of a side wall of the bottom rail such that the channel defines a triangular transverse cross section, and wherein the first and second side walls of the elongated body laterally intersect at an apex which extends along a length of the first and second side walls, each of the first and second side walls having a respective lateral terminal end extending laterally away from the apex between the respective top and bottom end, the angle and lengths of the first and second side walls between the apex and the respective lateral terminal ends together defining an open-ended triangular transverse cross section.

3. The anchor of claim 1, wherein at least one of the first and second side walls of the elongated body defines a step between the bottom and top ends thereof, and wherein the step defines the at least one support surface.
4. The anchor of claim 3, wherein the step is located adjacent to the anchor head such that, with the body of the anchor received within the channel, the anchor head is adjacent to the bottom rail.
5. The anchor of claim 1, wherein the step is spaced apart from the anchor head such that, with the body of the anchor received within the channel, the anchor head is spaced apart from the bottom rail.
6. The anchor of claim 1, wherein the anchor head defines at least one downwardly-facing surface, and wherein the at least one downwardly-facing surface of the anchor head defines the at least one support surface.
7. The anchor of claim 1, wherein the anchor head is configured to secure at least one engagement structure thereto.
8. The anchor of claim 7, wherein the anchor head includes a first portion extending from the top end of the first side wall and a second portion extending from the top end of the second side wall, and wherein the first portion of the anchor head is configured to secure at least one engagement structure thereto and the second portion of the anchor head is configured to secure at least another engagement structure thereto.
9. The anchor of claim 1, wherein the anchor head includes a first portion extending from the top end of the first side wall and a second portion extending from the top end of the second side wall, and wherein the first and second portions of the anchor head are both configured to secure an installable trailer side wall thereto.
10. The anchor of claim 7, wherein the anchor head includes a first portion extending from the top end of the first side wall and a second portion extending from the top end of the second side wall, and wherein the first portion of the anchor head is configured to secure at least one engagement structure thereto and the second portion of the anchor head is configured to secure at least another engagement structure thereto, and wherein the first and second portions are each configured to extend partially about the upright angle rail of the angle rail utility trailer so as to be accessible from outside of the trailer.
11. The anchor of claim 7, wherein the anchor head includes a first portion extending from the top end of the first side wall and a second portion extending from the top end of the second side wall, and wherein the first and second portions of the anchor head are together configured to receive therein and support a rod or pin, and wherein the rod or pin is configured to define an anchor point to which to secure a web or strap.
12. An anchoring system for an angle rail utility trailer including a plurality of upright angle rails secured to an along the base rail, a different one of a corresponding plurality of elongated channels is defined between each of the plurality of upright angle rails and the base rail, the anchoring system comprising: a plurality of the anchors each according to claim 1, each of the plurality of anchors configured to be slidably received within a different one of the plurality of elongated channels, and an accessory support panel configured to be attached to the anchor heads of two or more of the plurality of anchors, the accessory support panel configured to support or to secure thereto at least one accessory.
13. The anchor of claim 1, wherein the elongated body includes an elongated third side wall extending between lateral sides of the first and second elongated side walls to form a closed elongated body, and wherein the anchor head and the means for engaging are both detachably mountable to the elongated body.
14. An anchor configured to be slidably received within an elongated channel defined between and bounded by a base rail and an upright angle rail of an angle rail utility trailer, the anchor comprising: an elongated body including an elongated first side wall and an elongated second side wall extending laterally away at an angle from the elongated first side wall, each of the first and

second side walls defining a respective top end and a bottom end opposite the top end, the elongated body sized and configured complementary to the elongated channel so as to be slidably receivable within the elongated channel, an anchor head extending from the top end of at least one of the first and second side walls, the anchor head configured to secure at least one engagement structure thereto, wherein at least one of the anchor head, the first side wall and the second side wall defines at least one support surface configured to engage the bottom rail of the angle rail utility trailer to support the body of the anchor received within the channel on the bottom rail with the anchor head extending above the bottom rail, and an anchor coupling structure configured to detachably engage at least one of the first and second side walls at or near a respective bottom end thereof, the anchor coupling structure sized and configured such that, with the elongated body received within the channel and the engagement member engaged with the at least one of the first and second side walls at or near a respective bottom end thereof, the anchor coupling structure prevents or restricts upward movement of the elongated body within the channel by contact with at least one of the bottom rail and a lower terminal end of the upright angle rail.

15. The anchor of claim 14, wherein the first side wall of the elongated body defines a first opening at or near the bottom end thereof, and wherein the anchor coupling structure is configured to be received within the first opening and to be detachably engaged to the elongated body.

16. The anchor of claim 15, wherein the second side wall of the elongated body defines a second opening at or near the bottom end thereof, and wherein the anchor coupling structure is further configured to be received within the second opening.

17. The anchor of claim 16, wherein the anchor coupling structure comprises: a pin configured to extend through both of the first and second openings, and a clip or bracket configured to detachably mount to the pin and to prevent the pin from passing out of either of the first and second openings.

18. The anchor of claim 14, wherein an ear or tab extends away from the bottom end of the first side wall of the elongated body, the ear or tab defining a first opening therein, and wherein the anchor coupling structure comprises an anchor plate defining a second opening therein, and a fixation member configured to be received within the first and second openings to detachably secure the anchor plate to the ear or tab, the anchor plate configured, upon securement to the ear or tab, to prevent or restrict upward movement of the elongated body within the channel by contact with at least one of the bottom rail and the lower terminal end of the upright angle rail.

19. The anchor of claim 14, wherein the anchor coupling structure is movably coupled to the first wall of the elongated body, and wherein the anchor coupling structure is configured, upon receipt of the elongated body within the elongated channel, to move under bias to a position in which the anchor coupling structure prevents or restricts upward movement of the elongated body within the channel by contact with at least one of the bottom rail and the lower terminal end of the upright angle rail.

20. The anchor of claim 14, wherein the elongated body includes an elongated third side wall extending between lateral sides of the first and second elongated side walls to form a closed elongated body, and wherein the anchor head and the anchor coupling structure are both detachably mountable to the elongated body.
