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(54) **SYSTEM, METHOD AND APPARATUS FOR ASSEMBLING A PICKET FENCE**

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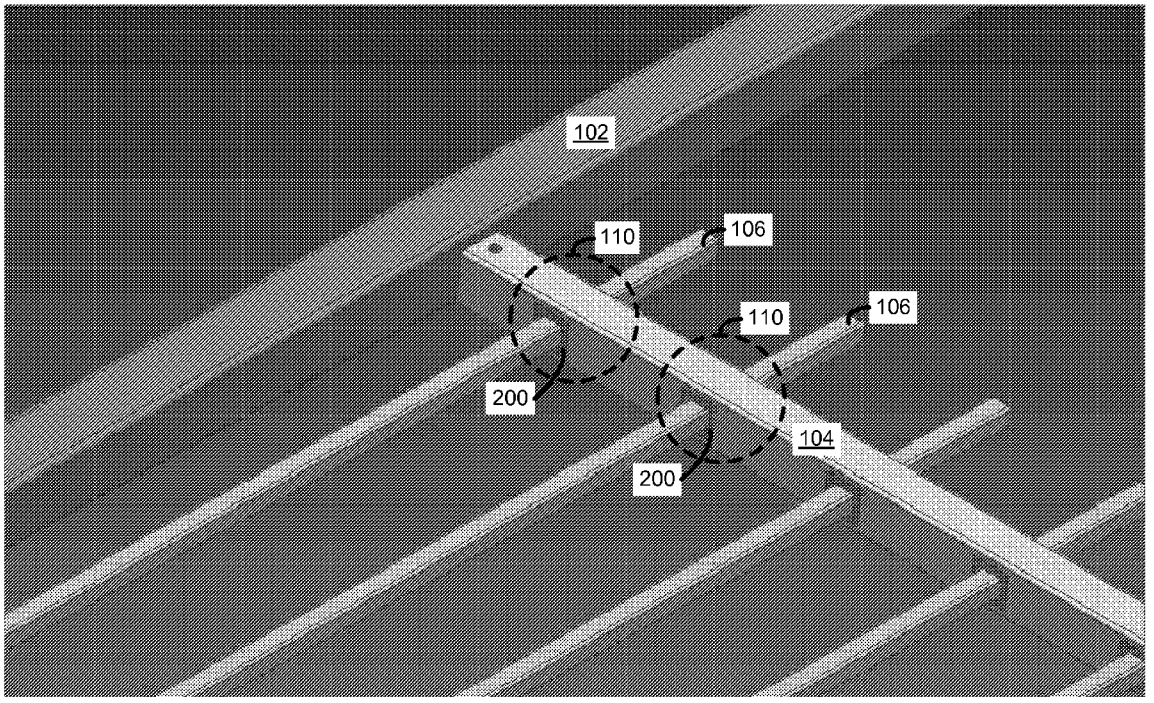
(57) **ABSTRACT**

The present invention provides a system, method and apparatus for assembling a picket fence. The picket fence includes two or more attachment surfaces, one or more rails, one or more single piece fasteners and one or more pickets. The one or more rails extend transversely to and are secured between two of the attachment surfaces. Each rail has one or more through apertures therein centered on a longitudinal axis of each rail. A single piece fastener is substantially disposed within each rail aperture and includes a housing having an aperture extending from a first end to a second end of the housing. The one or more pickets are vertically disposed between the rails and extend through the vertically aligned single piece fastener apertures. The single piece fastener locks into place within the rail aperture and locks the picket into place without any additional parts.



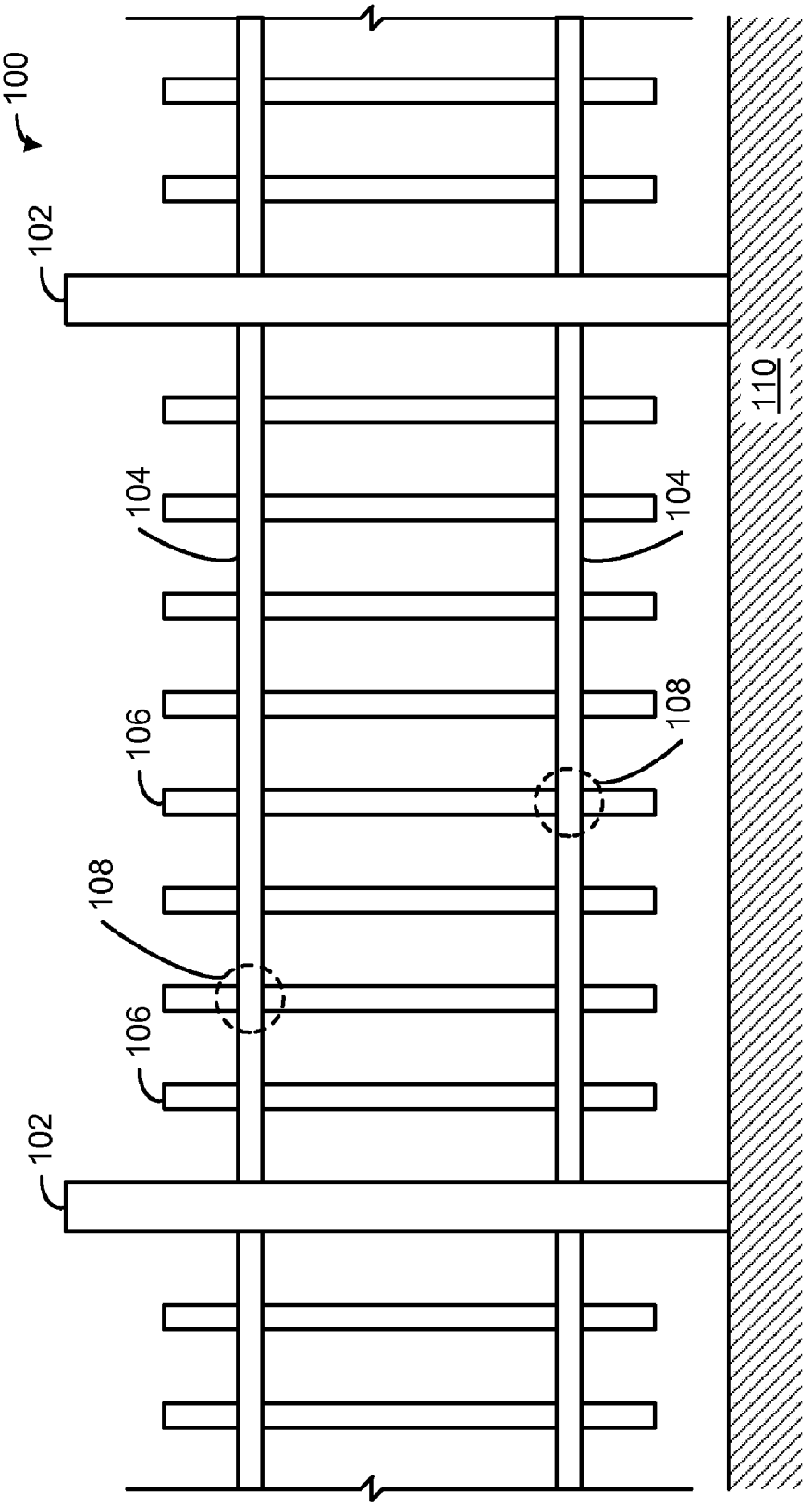


Fig. 1

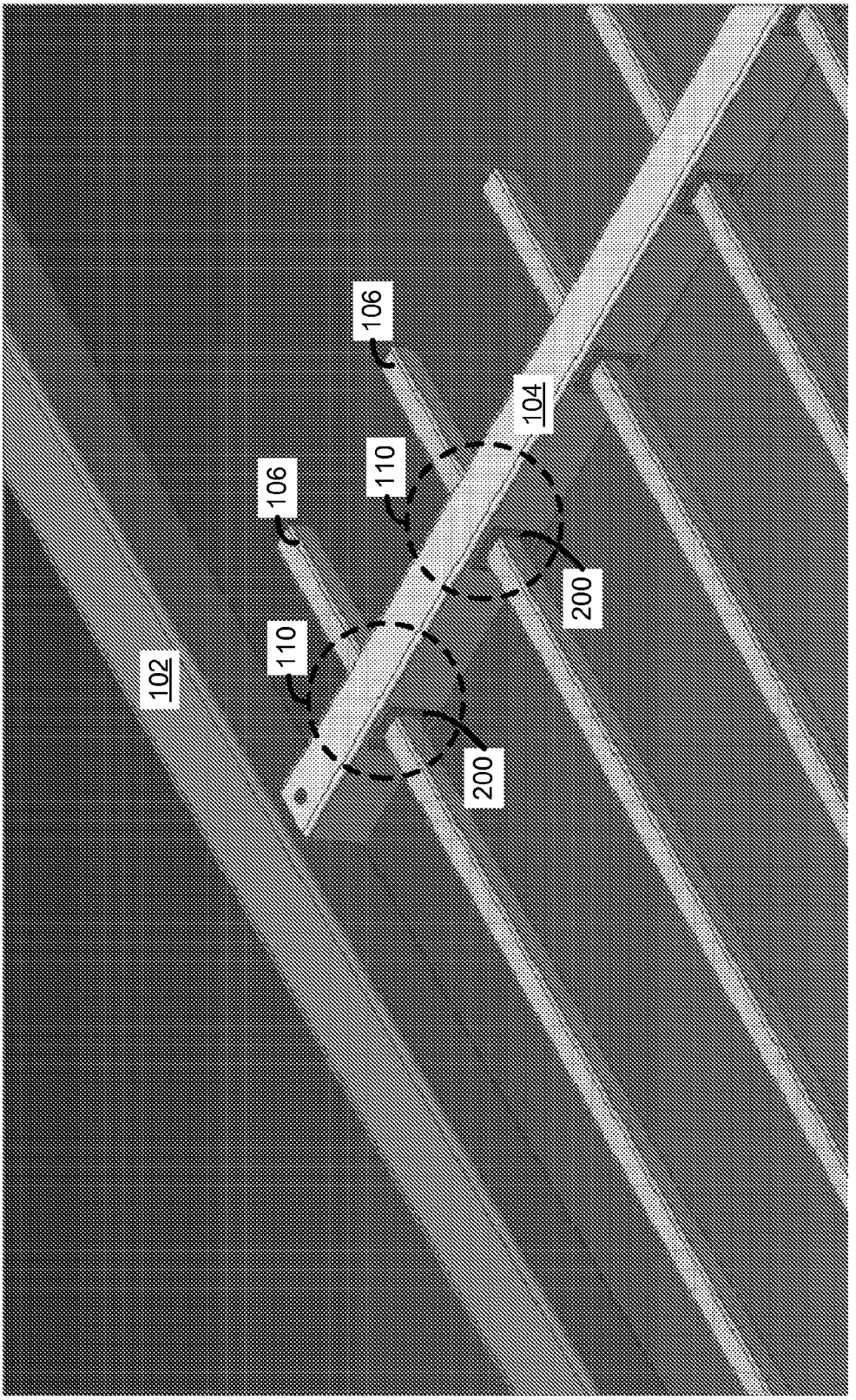


Fig. 2

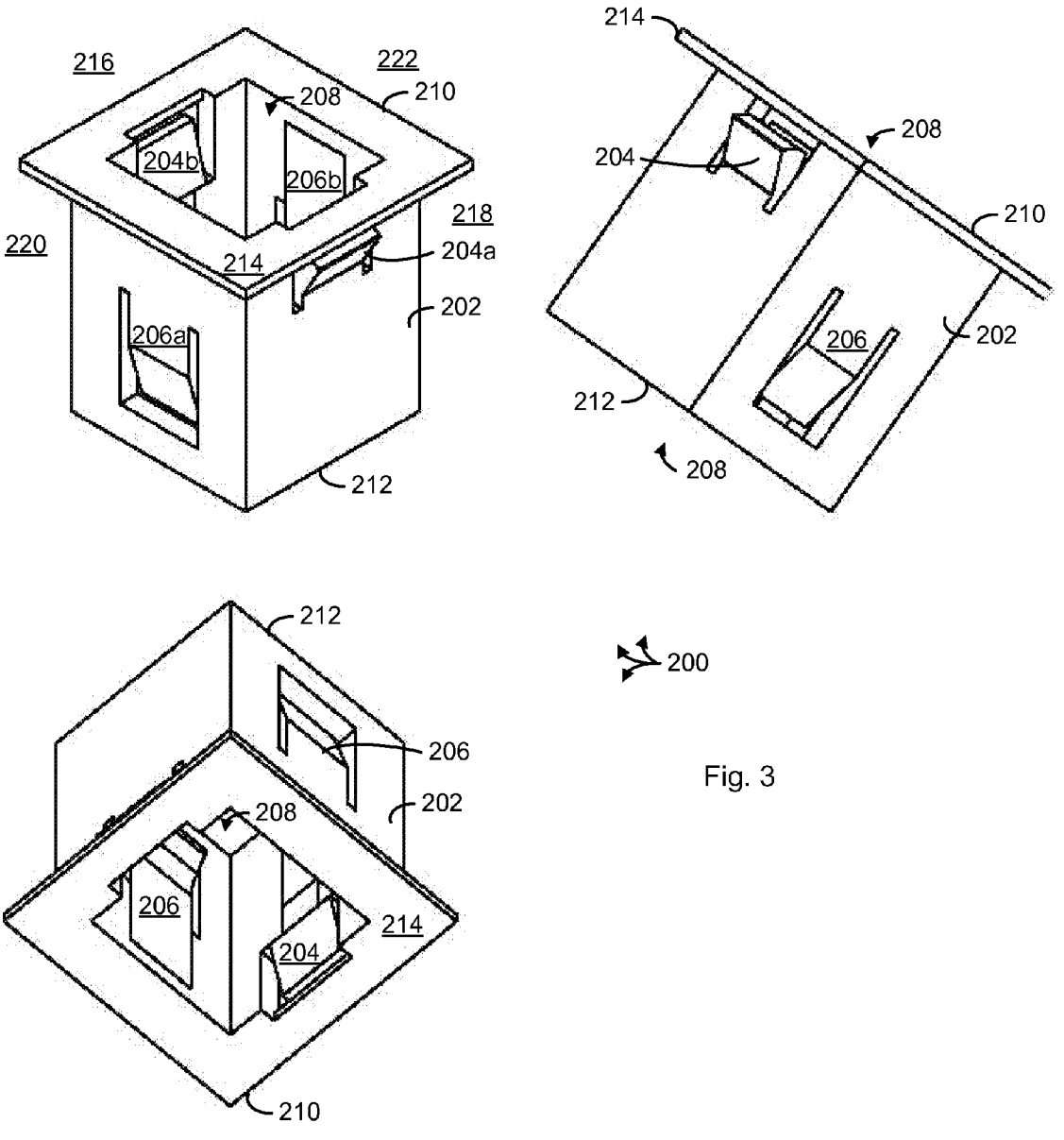

216
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Fig. 3

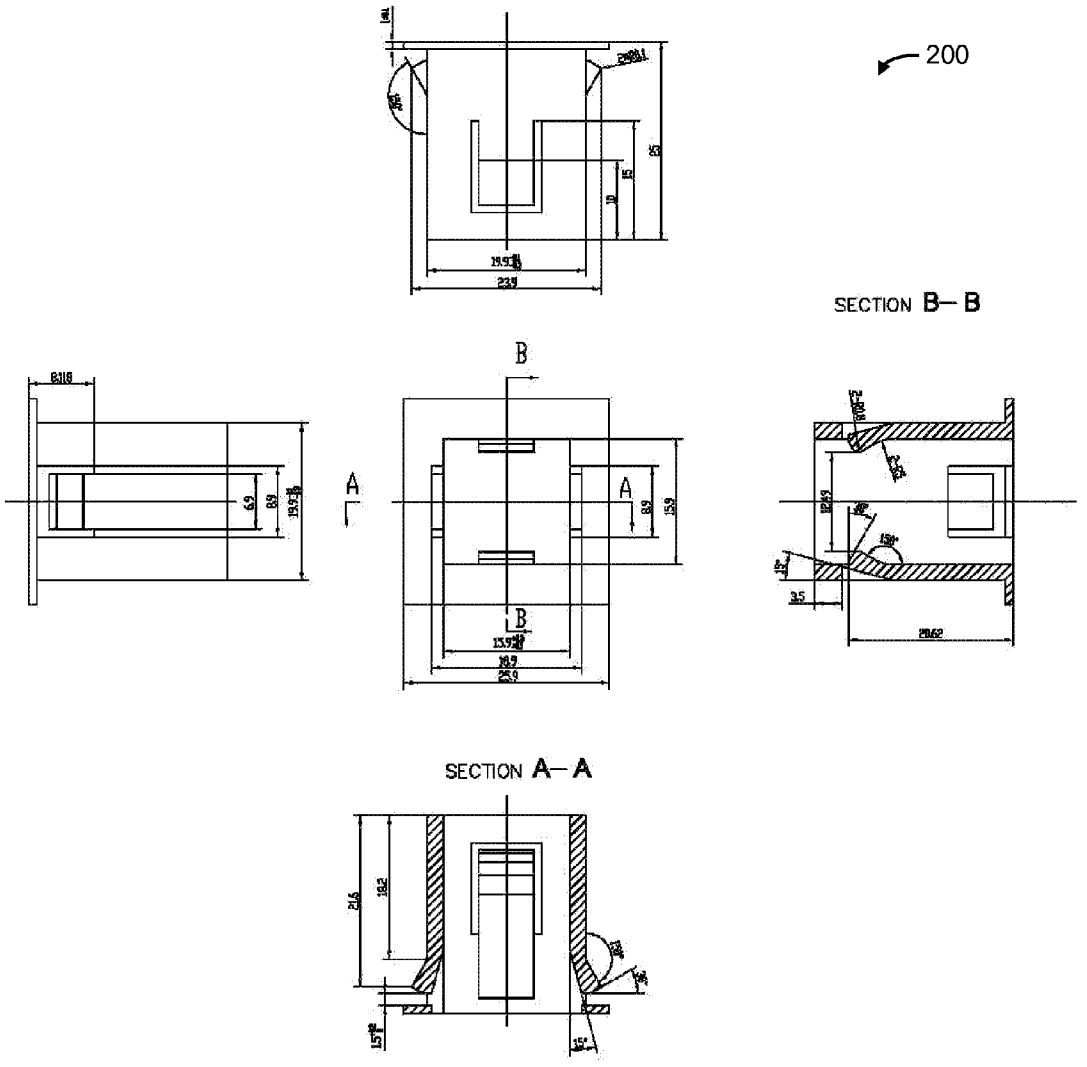


Fig. 4

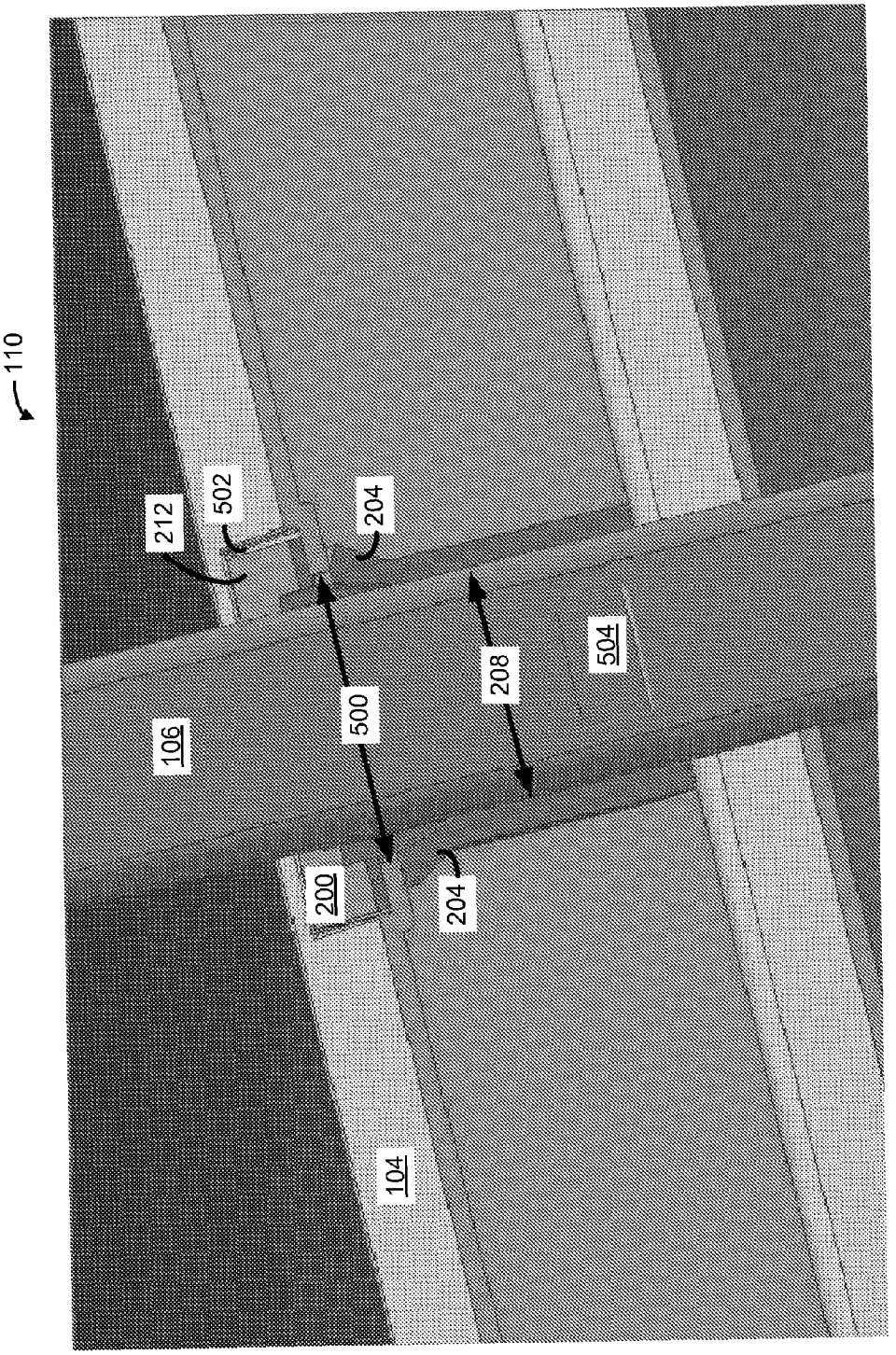


Fig. 5A

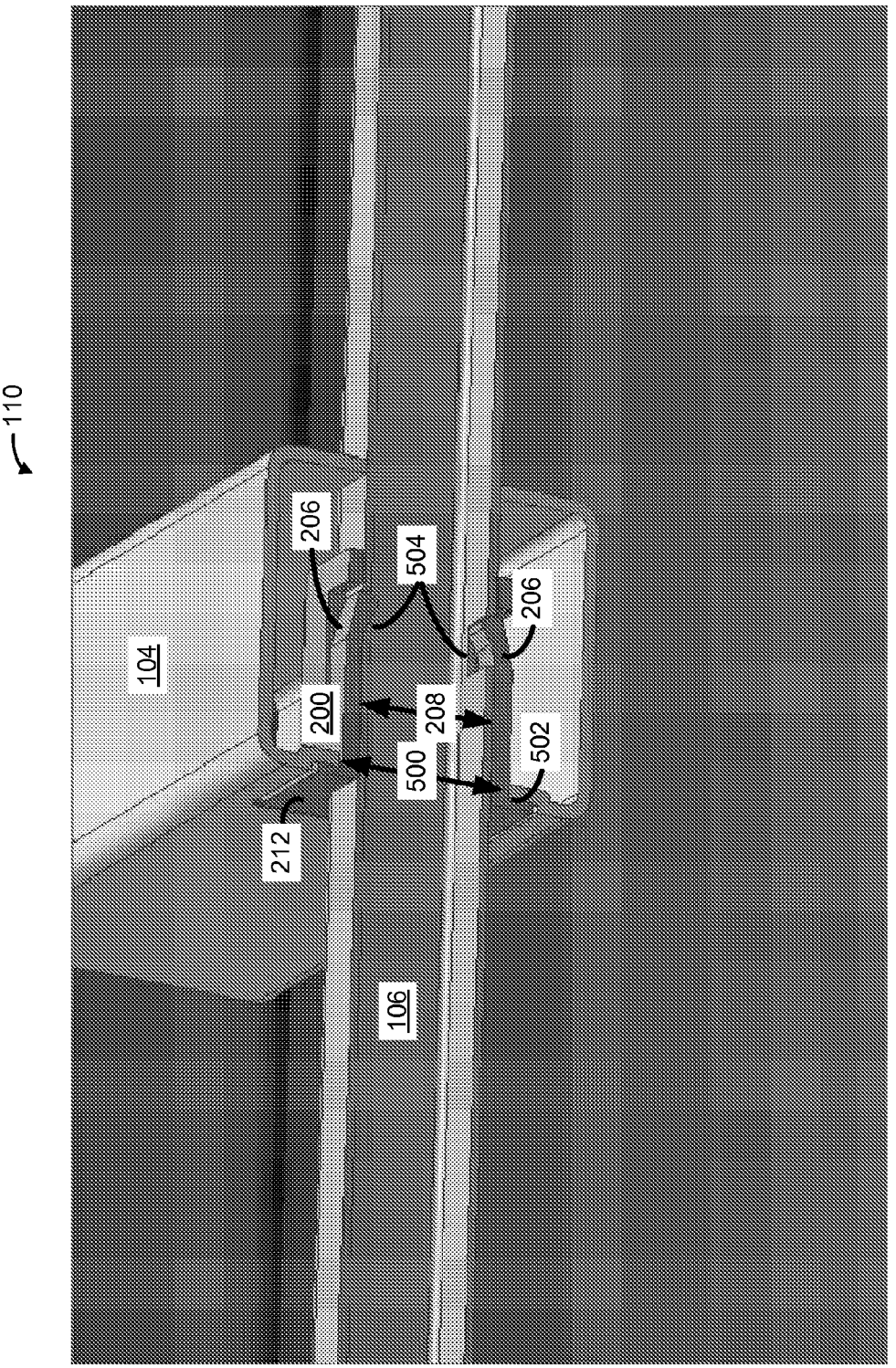
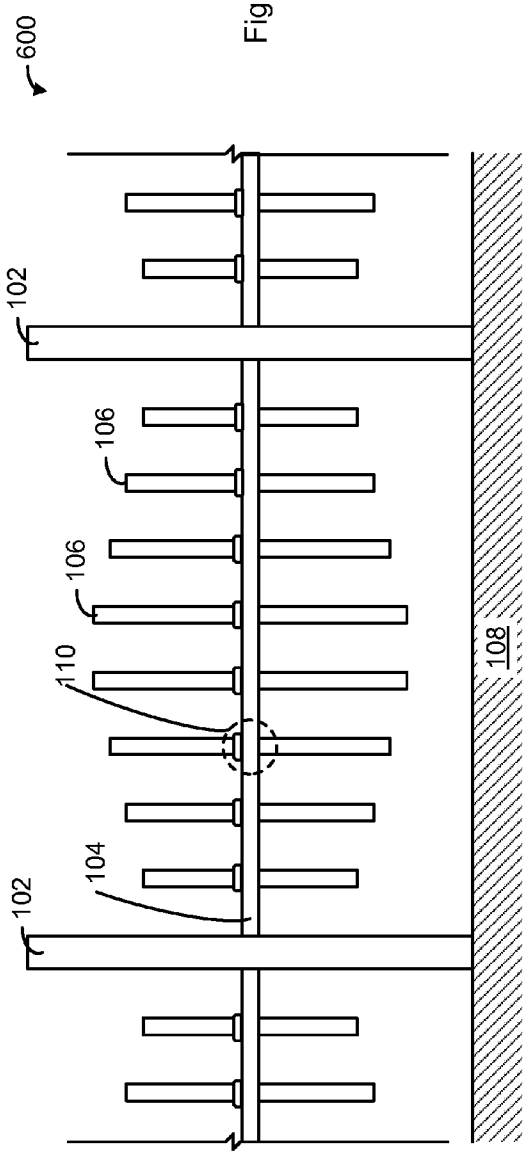


Fig. 5B

Fig. 6


600
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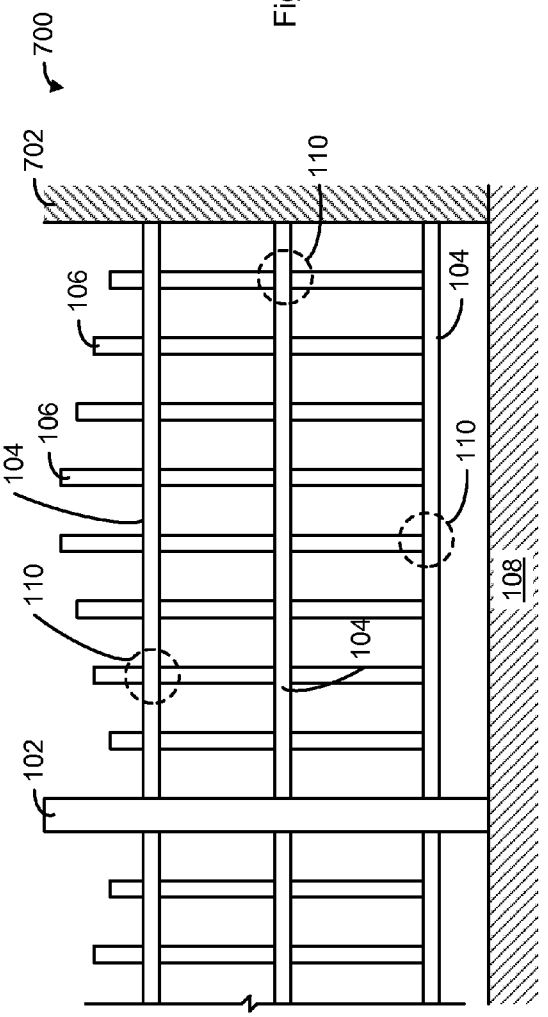
106
106
110
104
102
108

Fig. 7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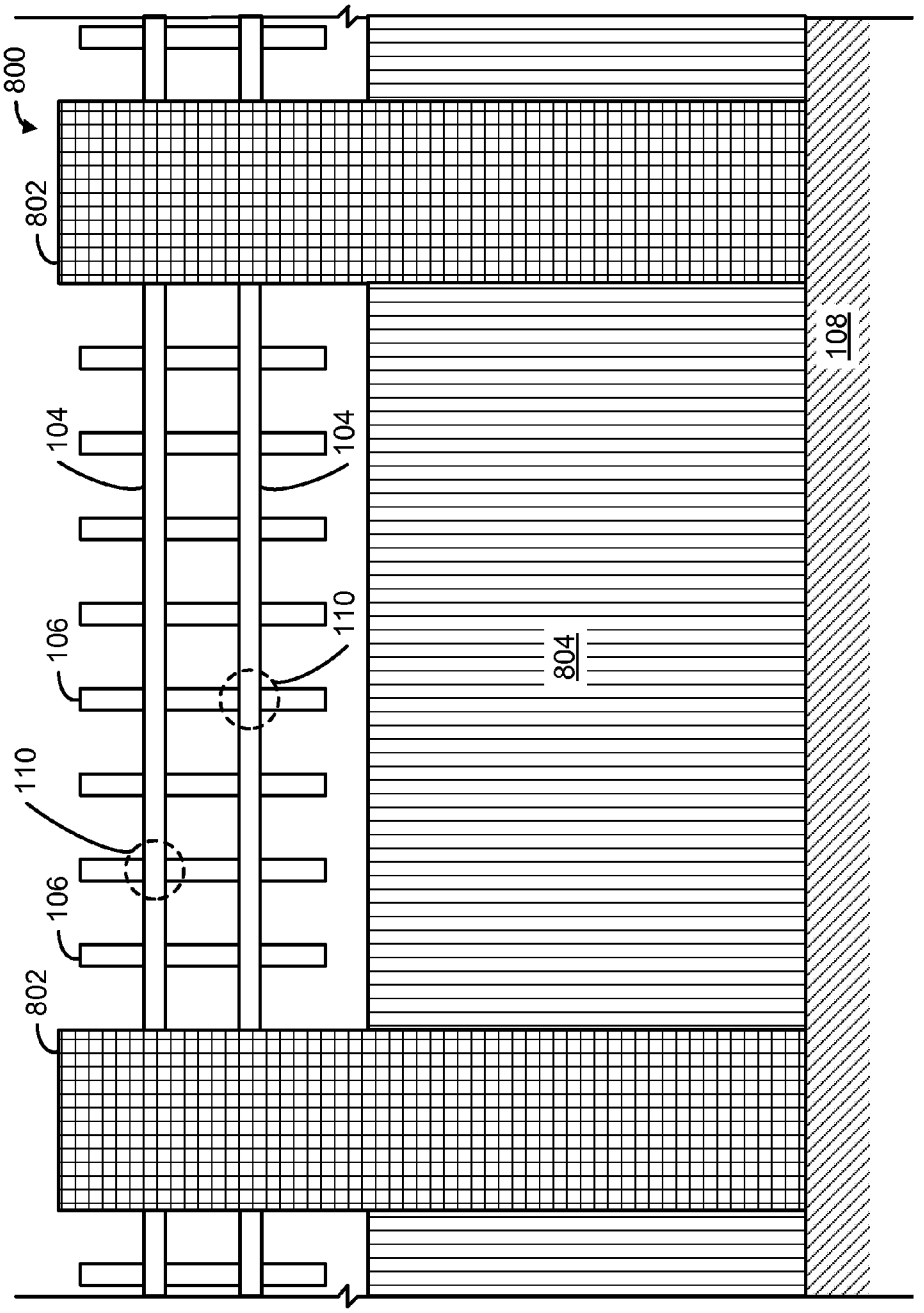

Fig. 8

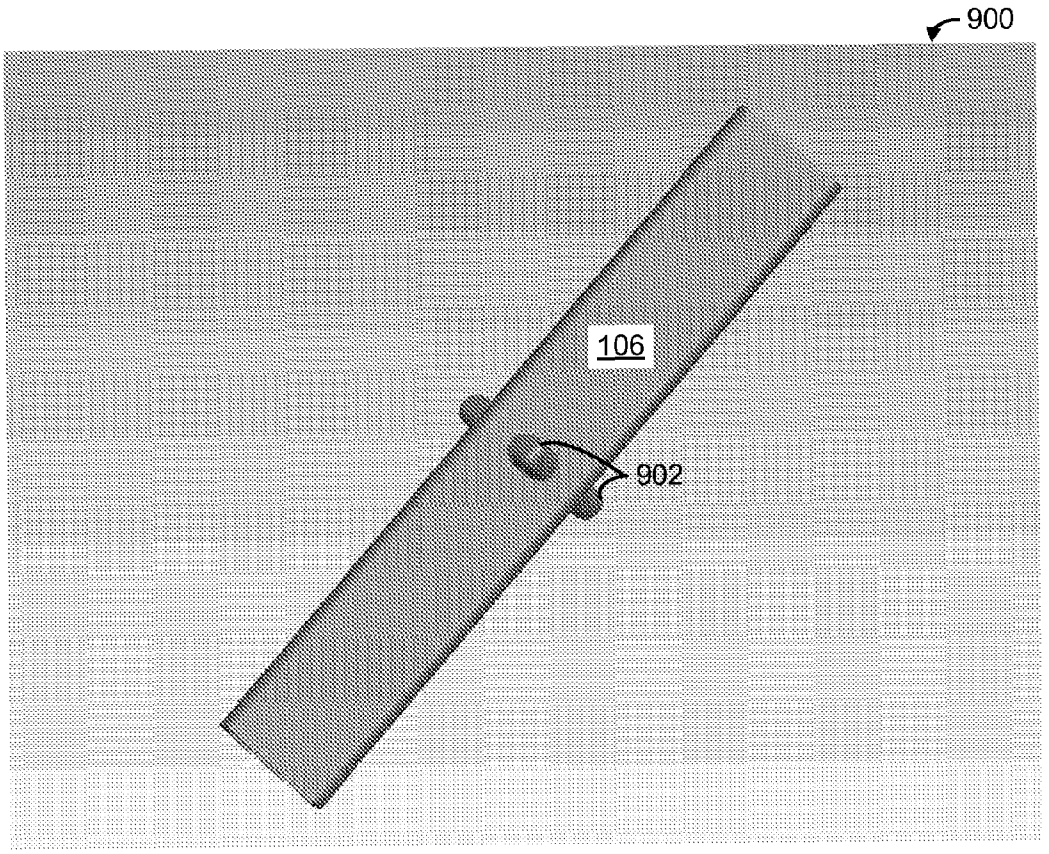

Fig. 9

SYSTEM, METHOD AND APPARATUS FOR ASSEMBLING A PICKET FENCE

FIELD OF THE INVENTION

[0001] The present invention relates generally to the field of fences and, more particularly, to a system, method and apparatus for assembling a picket fence.

PRIORITY CLAIM

[0002] This patent application is a non-provisional application of U.S. provisional patent application 60/762,466 filed on Jan. 25, 2006 and entitled "System, Method and Apparatus for Assembling a Picket Fence," which is hereby incorporated by reference in its entirety.

BACKGROUND OF THE INVENTION

[0003] Current picket fence systems, especially metal picket fences, are expensive (material and labor cost) and difficult to install. For example, most systems require one or more pieces of hardware to be added during assembly, such as screws, pins, spring clips, caps, grommets, rods, plates, etc. Other systems have fewer parts, but require special machining or tools (e.g., complex shaped, custom made punches and tooling to produce components). Moreover, many current systems can damage picket and/or rail during assembly by sliding metal to metal, and/or leave the junction of picket and rail open to the environment, and/or require an additional hardware component to seal and provide cosmetic cover.

[0004] As a result, there is a need for a system, method and apparatus for assembling a picket fence that is rapid, easy and less expensive than typical picket fences so that homeowners or contractors can assemble a picket fence without tools or additional hardware.

SUMMARY OF THE INVENTION

[0005] The present invention provides a system, method and apparatus for assembling a picket fence that is rapid, easy and less expensive than typical picket fences. Moreover, the present invention allows homeowners or contractors to assemble a picket fence without tools or additional hardware. The resulting fence provides increased durability and security while maintaining the clean aesthetic qualities of picket fence, which can be constructed of metal (e.g., steel, iron, aluminum, alloys, etc.) or plastic with a long life coating to prevent corrosion or UV degradation as the case may be.

[0006] As will be seen from the following description and FIGURES, the present invention provides at least the following advantages over current fence systems:

[0007] 1. The grip or single piece fastener can be preinstalled in the rail. As a result, there is no loose hardware to install during assembly.

[0008] 2. Pre-installing the grip or single piece fastener protects the finish on the pickets and rail during assembly, and acts as a sealing grommet in the finished configuration. This helps protect against environmental forces and improves cosmetic appearance of assembled fence.

[0009] 3. The grip or single piece fastener can be made of environmentally stable, UV resistant, high impact strength injection molded material thereby keeping cost lower compared to other fence system hardware.

[0010] 4. The metal component cost is also kept low by being using standard manufacturing equipment and processes. For example, openings in the pickets and rails are made using stock punches, thereby reducing cost and increasing availability.

[0011] 5. The system will allow for installation on level grade or incline by allowing the grip or single piece fastener to pivot around the openings in the picket.

[0012] 6. After assembly, the parts are permanently attached. One or more of the components must be destroyed to disassemble the fence, which makes for better security.

[0013] 7. Shipping and storage cost of system will be low since it can be shipped KD (knocked down).

[0014] 8. Rails can be attached to posts using "no tool/no hardware" features or can be attached by conventional hardware (screws).

[0015] 9. The grip or single piece fastener will also assist in orienting pickets all the same. Picket will not "snap" into place if oriented 90 degrees out of place. This is important for "spear-top" style pickets so they all face the same direction.

[0016] 10. Each picket can be secured in at least two rail locations (upper and lower), which provides more strength than a single attachment point.

[0017] More specifically, the present invention provides a picket fence that includes two or more attachment surfaces, one or more rails, one or more single piece fasteners and one or more pickets. The one or more rails extend transversely to and are secured between two of the attachment surfaces. Each rail has one or more through apertures therein centered on a longitudinal axis of each rail. A single piece fastener is substantially disposed within each rail aperture and includes a housing having an aperture extending from a first end to a second end of the housing. The one or more pickets are vertically disposed between the rails and extend through the vertically aligned single piece fastener apertures. The attachment surfaces can be a post, a wall, a building or a combination thereof. The single piece fastener locks into place within the rail aperture and locks the picket into place without any additional parts.

[0018] In addition, the present invention provides an apparatus to fasten a picket to a rail of a picket fence that includes a housing, a first fastener and a second fastener. The housing has an aperture extending from a first end to a second end of the housing and a flange extending transversely from the first end. The first fastener is disposed between the first end and the second end to engage the rail. The second fastener is disposed between the first end and the second end to engage the picket. The cross section of the aperture can be substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or shaped to receive a picket having a non-circular, non-oval, non-square, non-rectangular, non-triangular, non-hexagonal, non-polygonal cross section.

[0019] The present invention also provides a rail for a picket fence that includes a rail member having one or more through apertures therein centered on a longitudinal axis of the rail member and a single piece fastener substantially disposed within each rail aperture. The fastener includes a housing having an aperture extending from a first end to a second end of the housing to receive and secure a picket.

[0020] Moreover, the present invention provides a method of fastening a picket to a rail of a picket fence by providing the rail having one or more through apertures therein cen-

tered on a longitudinal axis of the rail and a single piece fastener substantially disposed within each rail aperture and inserting the picket into the single piece fastener aperture. The fastener includes a housing having an aperture extending from a first end to a second end of the housing.

[0021] The present invention is described in detail below with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] The above and further advantages of the invention may be better understood by referring to the following description in conjunction with the accompanying drawings, in which:

[0023] FIG. **1** is a front elevation view of a section of a picket fence in accordance with one embodiment of the present invention;

[0024] FIG. **2** is perspective view of a section of a picket-rail-post assembly in accordance with one embodiment of the present invention;

[0025] FIG. **3** is three isometric views of a single piece fastener in accordance with one embodiment of the present invention;

[0026] FIG. **4** is a top view, two side views and two cross sectional views of a single piece fastener in accordance with one embodiment of the present invention;

[0027] FIGS. **5**A and **5**B are perspective cross sectional views of a picket-rail assembly in accordance with one embodiment of the present invention;

[0028] FIGS. **6**, **7** and **8** are front elevation views of a section of a picket fence in accordance with various embodiments of the present invention; and

[0029] FIG. **9** is a side view of a picket having "stops" in accordance with another embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0030] While the making and using of various embodiments of the present invention are discussed in detail below, it should be appreciated that the present invention provides many applicable inventive concepts that can be embodied in a wide variety of specific contexts. The specific embodiments discussed herein are merely illustrative of specific ways to make and use the invention and do not delimit the scope of the invention. The discussion herein relates primarily to secure pickets within rails of a fence, but it will be understood that the concepts of the present invention are applicable to any situation where it is desirable to lock a generally vertical member within an aperture of a generally horizontal member with a single piece apparatus.

[0031] The present invention provides a system, method and apparatus for assembling a picket fence that is rapid, easy and less expensive than typical picket fences. Moreover, the present invention allows homeowners or contractors to assemble a picket fence without tools or additional hardware. The resulting fence provides increased durability and security while maintaining the clean aesthetic qualities of picket fence, which can be constructed of metal (e.g., steel, iron, aluminum, alloys, etc.) or plastic with a long life coating to prevent corrosion or UV degradation as the case may be.

[0032] As previously mentioned, the present invention provides at least the following advantages over current fence systems: (1) The grip or single piece fastener can be pre-installed in the rail. As a result, there is no loose hardware to install during assembly. (2) Pre-installing the grip or single piece fastener protects the finish on the pickets and rail during assembly, and acts as a sealing grommet in the finished configuration. This helps protect against environmental forces and improves cosmetic appearance of assembled fence. (3) The grip or single piece fastener can be made of environmentally stable, UV resistant, high impact strength injection molded material thereby keeping cost lower compared to other fence system hardware. (4) The metal component cost is also kept low by being using standard manufacturing equipment and processes. For example, openings in the pickets and rails are made using stock punches, thereby reducing cost and increasing availability. (5) The system will allow for installation on level grade or incline by allowing the grip or single piece fastener to pivot around the openings in the picket. (6) After assembly, the parts are permanently attached. One or more of the components must be destroyed to disassemble the fence, which makes for better security. (7) Shipping and storage cost of system will be low since it can be shipped KD (knocked down). (8) Rails can be attached to posts using "no tool/no hardware" features or can be attached by conventional hardware (screws). (9) The grip or single piece fastener will also assist in orienting pickets all the same. Picket will not "snap" into place if oriented 90 degrees out of place. This is important for "spear-top" style pickets so they all face the same direction. (10) Each picket can be secured in at least two rail locations (upper and lower), which provides more strength than a single attachment point.

[0033] Now referring to FIG. **1**, a front elevation view of a section of a picket fence **100** in accordance with one embodiment of the present invention is shown. The picket fence **100** includes two or more posts **102**, two or more rails **104**, one or more pickets **106** and a single piece fastener (not shown) at each rail-picket interface **110**. As illustrated in FIGS. **7** and **8**, the present invention is applicable to installations using any attachment surfaces (vertical or non-vertical) and is not limited to two posts **102** (e.g., one post and a wall, two walls, a post and a building, etc.) or two rails (e.g., one rail, three rails, etc.). The posts **102** are installed in the ground **108**, surface structure (e.g., asphalt, concrete, gravel, etc.) or on a structure (e.g., building, masonry wall, etc.) using well know installation techniques. As shown, the two or more rails **104** are spaced apart from one another and extend transversely to and secured between two of the posts **102**. Note that the two or more rails **104** do not have to be perpendicular to the posts **102** or the pickets **106** when the fence **100** is installed on uneven ground **108**. As illustrated in FIGS. **6** and **7**, the present invention is applicable to installations using one, two, three or more rails **104**. Each rail **104** is attached to the posts **102** using well known techniques (e.g., "no tool/no hardware" features or attached by conventional hardware (screws)). The posts **102**, rails **104** and pickets **106** may be of any desired length, height and shape. For example, the cross section of the picket **106** may be substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or other decorative shape. Moreover, posts **102**, rails **104** and pickets **106** may be formed of suitable plastic or metal material, and are typically hollow members.

[0034] Now also referring to FIG. **2**, a perspective view of a section of a picket-rail-post assembly in accordance with one embodiment of the present invention is shown. Each rail **104** has one or more through apertures (not shown) therein centered on a longitudinal axis of each rail **104** wherein the respective rail apertures are aligned. A single piece fastener **200** is substantially disposed within each rail aperture. The single piece fastener **200** is molded, machined, formed or extruded from a suitable metal or plastic material. The single piece fastener **200** includes a housing having an aperture extending from a first end to a second end of the housing. The one or more pickets **106** are vertically disposed between the rails **104** and extend through the vertically aligned single piece fastener **200** apertures.

[0035] Referring now to FIG. **3**, three isometric views of an apparatus or single piece fastener **200** in accordance with one embodiment of the present invention are shown. The single piece fastener **200** includes a housing **202**, a first fastener **204** and a second fastener **206**. The housing **202** has an aperture **208** extending from a first end **210** to a second end **212** of the housing **202** and a flange **214** extending transversely from the first end **210**. The first fastener **204** is disposed between the first end **210** and the second end **212** to engage the rail **104** (not shown). The second fastener **206** is disposed between the first end **210** and the second end **212** to engage the picket **106** (not shown). The cross section of the aperture **208** can be substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or shaped to receive a picket having a non-circular, non-oval, non-square, non-rectangular, non-triangular, non-hexagonal, non-polygonal cross section. The flange **214** can be of any desired shape and can extend from two or more sides of the housing **202** (e.g., tabs). In addition, the flange **214** can have a raised portion for additional structural strength or to provide an ornamental appearance. Although the flange **214** is shown to be at the first end **210**, the flange **214** can be disposed anywhere between the first end **210** and the first fastener **204**. The single piece fastener **200** is preferably made of environmentally stable, UV resistant, high impact strength injection molded material thereby keeping cost lower compared to other fence system hardware. Metal component cost can also be kept low by being using standard manufacturing equipment and processes. For example, the openings or apertures in the pickets and rails are made using stock punches, thereby reducing cost and increasing availability. Other fence systems use complex shaped, custom made punches and tooling to produce components.

[0036] As illustrated, the first fastener **204** may include a first self-locking tab **204***a* disposed in a first quadrant **216** of the housing **202** and a second self-locking tab **204***b* disposed in a third quadrant **218** of the housing **202**. Likewise, the second fastener **206** may include a third self-locking tab **206***a* disposed in a second quadrant **220** of the housing **202** and a fourth self-locking tab **206***b* disposed in a fourth quadrant **222** of the housing **202**. FIG. **4** provides a top view, two side views and two cross sectional views of a single piece fastener **200** in accordance with one embodiment of the present invention. Note that the present invention is not limited to the embodiment shown in FIGS. **3** and **4**. For example, the first fastener **206** may include one or more self-locking tabs and the second fastener **208** may include one or more self-locking tabs. Each self-locking tab can be integrated into the housing **202** and may include an angled portion to engage the rail **104** (not shown) or the picket **106** (not shown). Each self-locking tab may also include a set of ridges to engage the rail **104** (not shown) or the picket **106** (not shown).

[0037] Now referring to FIGS. **5**A and **5**B, perspective cross sectional views of a picket-rail assembly **110** in accordance with one embodiment of the present invention are shown. Note that FIG. **5**A corresponds to Section A-A in FIG. **4**, and FIG. **5**B corresponds to Section B-B in FIG. **4**. The rail **104** has one or more through apertures **500** therein centered on a longitudinal axis of the rail **104**. The single piece fastener **200** is substantially disposed within each rail aperture **500**. The single piece fastener **200** includes a housing having an aperture **208** extending from a first end to a second end of the housing to receive and secure the picket **106**. The single piece fastener **200** locks into place within the rail **104** aperture **500** via the first fastener **206** and locks the picket **106** into place via the second fastener **208** and picket aperture **504** without any additional parts. Picket aperture **504** can be created at the factory or on site as desired by the customer or contractor. As shown, the flange **212** of the single piece fastener **200** rests within cavity **502**, which is not required for the present invention, but adds to the aesthetic appearance of the fence. The cavity **502** and flange **212** interface can also help to seal the interface. Note that the picket **106** may also include a swaged (swelled) area above the upper single piece fastener **106** as a double redundant system to resist extraordinary force being applied in a downward direction (e.g., a person standing on top of one or more pickets).

[0038] As is apparent in these FIGURES, the single piece fastener **200** has numerous advantages, such as, low cost, easy installation without special tools, can be pre-installed in the rail aperture **500**, prevents movement of the picket **106** after installation, substantially seals the rail aperture **500**, the cross sectional shape of the rail aperture **500** does not have to be identical to a cross sectional shape of the single piece fastener aperture **208**, etc. Moreover, there is no loose hardware to install during assembly. Other fence systems require one or more pieces of hardware to be added during assembly, such as screws, pins, spring clips, caps, grommets, rods, plates, etc. Pre-installing the single piece fastener **200** in the rail **104** also protects the finish on the pickets **106** and rail **104** during assembly, and acts as a sealing grommet in the finished configuration. Shipping and storage cost of the system can also be low since it can be shipped KD (knocked down). The single piece fastener **200** also helps protect against environmental forces and improves cosmetic appearance of assembled fence. Other systems can damage picket and/or rail during assembly by sliding metal to metal, and/or leave the junction of picket and rail open to the environment, and/or require an additional hardware component to seal and provide cosmetic cover.

[0039] The present invention also provides a method of fastening a picket **106** to a rail **104** of a picket fence **100** by providing the rail **104** having one or more through apertures **500** therein centered on a longitudinal axis of the rail **104** and a single piece fastener **200** substantially disposed within each rail aperture **500**. The fastener **200** includes a housing having an aperture **208** extending from a first end to a second end of the housing. The picket **106** is inserted into the single piece fastener aperture **208**. The process may also include the step of inserting the single piece fastener **200** into each rail aperture **500**. The present invention allows for installation on level grade or incline by allowing the single piece

fastener **200** to pivot around the openings or apertures **504** in the picket **106**. After assembly, the parts are permanently attached. One or more components must be destroyed to disassemble the picket **106** from the rail **104**, which provides better security. The single piece fastener **200** can also assist in orienting pickets all the same. In such a case, the picket **106** will not "snap" into place if oriented 90 degrees out of place. This is important for "spear-top" style pickets **106** so they all face the same direction.

[0040] Referring now to FIG. **6**, a front elevation view of a section of a picket fence **600** in accordance with another embodiment of the present invention is shown. The picket fence **600** includes two or more posts **102**, a single rail **104**, one or more pickets **106**, a single piece fastener (not shown) with an ornamental top at each rail-picket interface **110**. The posts **102** are installed in the ground **108**, surface structure (e.g., asphalt, concrete, gravel, etc.) or on a structure (e.g., building, masonry wall, etc.) using well know installation techniques. As shown, the rail **104** extends transversely to and is secured between two of the posts **102**. Note that the rail **104** does not have to be perpendicular to the posts **102** or the pickets **106** when the fence **600** is installed on uneven ground **108**. The rail **104** is attached to the posts **102** using well known techniques (e.g., "no tool/no hardware" features or attached by conventional hardware (screws)). The posts **102**, rails **104** and pickets **106** may be of any desired length, height and shape. For example, the cross section of the picket **106** may be substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or other decorative shape. Moreover, posts **102**, rail **104** and pickets **106** may be formed of suitable plastic or metal material, and are typically hollow members.

[0041] Now referring to FIG. **7**, a front elevation view of a section of a picket fence **700** in accordance with another embodiment of the present invention is shown. The picket fence **700** includes at least one posts **102**, a structure **702** (e.g., a wall or building), three rails **104**, one or more pickets **106** and a single piece fastener (not shown) at each rail-picket interface **110**. The posts **102** are installed in the ground **108**, surface structure (e.g., asphalt, concrete, gravel, etc.) and on the structure **702** (e.g., building, masonry wall, etc.) using well know installation techniques. As shown, the rails **104** extend transversely to and are secured between the post **102** and structure **702**. Note that the rails **104** do not have to be perpendicular to the posts **102**, structure **702** or the pickets **106** when the fence **700** is installed on uneven ground **108**. The rails **104** are attached to the posts **102** and structure **702** using well known techniques (e.g., "no tool/no hardware" features or attached by conventional hardware (screws)). The posts **102**, rails **104** and pickets **106** may be of any desired length, height and shape. For example, the cross section of the picket **106** may be substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or other decorative shape. Moreover, posts **102**, rail **104** and pickets **106** may be formed of suitable plastic or metal material, and are typically hollow members.

[0042] Referring now to FIG. **8**, a front elevation view of a section of a picket fence **800** in accordance with another embodiment of the present invention is shown. The picket fence **800** includes two or more attachment surfaces **802** (e.g., a column of a masonry wall), two rails **104**, one or more pickets **106** and a single piece fastener (not shown) at each rail-picket interface **110**. The attachment surfaces **802** are installed in the ground **108** and have a connecting structure **804** (e.g., lower masonry wall) between them such that the rails **104** and pickets **106** are mounted above the connecting structure **804** using well know installation techniques. As shown, the rails **104** extend transversely to and are secured between the attachment surfaces **802**. Note that the rails **104** do not have to be perpendicular to the attachment surfaces **802** or the pickets **106** when the fence **800** is installed on uneven ground **108**. The rails **104** are attached to the posts **102** and attachment surfaces **802** using well known techniques (e.g., "no tool/no hardware" features or attached by conventional hardware (screws)). The attachment surfaces **802**, connecting structure **804**, rails **104** and pickets **106** may be of any desired length, height and shape. For example, the cross section of the picket **106** may be substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or other decorative shape. Moreover, rails **104** and pickets **106** may be formed of suitable plastic or metal material, and are typically hollow members.

[0043] Now referring to FIG. **9**, a side view **900** of a picket **106** having "stops" **902** in accordance with another embodiment of the present invention is shown. Stops **902** or bumps can be added to the pickets **106** to add strength to prevent the picket **106** being pushed down through the top rail **104** (e.g., if someone were to walk along or climb over the tops of the pickets). Stops **902** or bumps also prevent the picket **106** from falling through the rail **104***a* in the event the fastener **200** or part of the fastener **200** breaks or fails. In either case, the stops **902** or bumps will maintain the picket **106** at approximately the same height as the rest of the pickets and thus maintain the aesthetic appearance of the fence. Typically, the stops **902** or bumps are only added to the upper end of each picket **106**, just above where the picket **106** meets the horizontal top rail **104**. Note that picket apertures **504** are not shown in FIG. **9**. Although FIG. **9** show one stop **902** or bump on each side the picket **106**, the number the stops **902** may be decreased or increase. Moreover, the location of the stops **902** may be changed so the stops **902** are not centered or are placed on the corners of the picket **106**.

[0044] Although preferred embodiments of the present invention have been described in detail, it will be understood by those skilled in the art that various modifications can be made therein without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. A picket fence comprising:

two or more attachment surfaces;

one or more rails extending transversely to and secured between two of the attachment surfaces, each rail having one or more through apertures therein centered on a longitudinal axis of each rail;

a single piece fastener substantially disposed within each rail aperture, the fastener comprising a housing having an aperture extending from a first end to a second end of the housing; and

one or more pickets vertically disposed between the rails and extending through the vertically aligned single piece fastener apertures.

2. The picket fence as recited in claim **1**, wherein the attachment surfaces comprise a post, a wall, a building or a combination thereof.

3. The picket fence as recited in claim **1**, wherein the one or more rails comprise two or more rails spaced apart from one another and extending transversely to and secured

between two of the attachment surfaces, and wherein the respective rail apertures are aligned.

4. The picket fence as recited in claim **1**, wherein the two or more rails are not perpendicular to the attachment surfaces or the pickets.

5. The picket fence as recited in claim **1**, wherein the single piece fastener locks into place within the rail aperture and locks the picket into place without any additional parts.

6. The picket fence as recited in claim **1**, wherein the single piece fastener prevents movement of the picket after installation.

7. The picket fence as recited in claim **1**, wherein the single piece fastener substantially seals the rail aperture.

8. The picket fence as recited in claim **1**, wherein a cross sectional shape of the rail aperture is not substantially identical to a cross sectional shape of the single piece fastener aperture.

9. The picket fence as recited in claim **1**, wherein the single piece fastener is pre-installed in the rail aperture.

10. The picket fence as recited in claim **1**, wherein the single piece fastener further comprises:

a flange extending transversely from the first end;

a first fastener disposed between the first end and the second end to engage the rail; and

a second fastener disposed between the first end and the second end to engage the picket.

11. The picket fence as recited in claim **1**, further comprising one or more stops disposed on each picket to prevent the picket from falling through the single piece fastener.

12. An apparatus to fasten a picket to a rail of a picket fence comprising:

a housing having an aperture extending from a first end to a second end of the housing and a flange extending transversely from the first end;

a first fastener disposed between the first end and the second end to engage the rail; and

a second fastener disposed between the first end and the second end to engage the picket.

13. The apparatus as recited in claim **12**, wherein a cross section of the aperture is substantially circular, oval, square, rectangular, triangular, hexagonal, polygonal or shaped to receive a picket having a non-circular, non-oval, non-square, non-rectangular, non-triangular, non-hexagonal, non-polygonal cross section.

14. The apparatus as recited in claim **12**, wherein the flange comprises two or more tabs.

15. The apparatus as recited in claim **12**, wherein the flange has an ornamental appearance.

16. The apparatus as recited in claim **12**, wherein the flange is disposed between the first end and the first fastener.

17. The apparatus as recited in claim **12**, wherein the first fastener comprises one or more self-locking tabs and the second fastener comprises one or more self-locking tabs.

18. The apparatus as recited in claim **17**, wherein each self-locking tab is integrated into the housing and includes an angled portion to engage the rail or the picket.

19. The apparatus as recited in claim **17**, wherein each self-locking tab comprises a set of ridges to engage the rail or the picket.

20. The apparatus as recited in claim **17**, wherein the first fastener comprises a first self-locking tab disposed in a first quadrant of the housing and a second self-locking tab disposed in a third quadrant of the housing, and the second fastener comprises a third self-locking tab disposed in a second quadrant of the housing and a fourth self-locking tab disposed in a fourth quadrant of the housing.

21. The apparatus as recited in claim **12**, wherein the housing comprises a metal, a plastic or an alloy.

22. The apparatus as recited in claim **12**, further comprising a protective coating on the housing.

23. The apparatus as recited in claim **12**, wherein the fastener is a single piece.

24. A rail for a picket fence comprising:

a rail member having one or more through apertures therein centered on a longitudinal axis of the rail member; and

a single piece fastener substantially disposed within each rail aperture, the fastener comprising a housing having an aperture extending from a first end to a second end of the housing to receive and secure a picket.

25. A method of fastening a picket to a rail of a picket fence comprising the steps of:

providing the rail having one or more through apertures therein centered on a longitudinal axis of the rail and a single piece fastener substantially disposed within each rail aperture, the fastener comprising a housing having an aperture extending from a first end to a second end of the housing; and

inserting the picket into the single piece fastener aperture.

26. The method as recited in claim **25**, further comprising the step of inserting the single piece fastener into each rail aperture.

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