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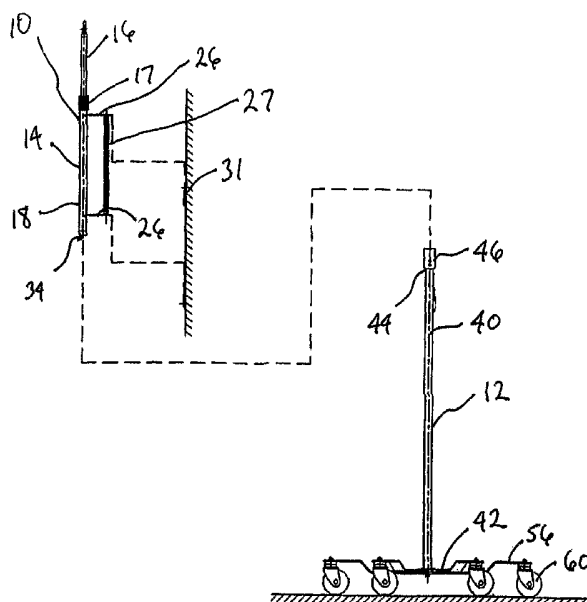
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60/474,695 30 May 2003 (30.05.2003) US</p> <p>(71) Applicant (for all designated States except US): HEALTH SCIENCE TECHNOLOGIES, LLC [US/US]; 6563 Old Hunters Run, Rockford, Illinois 61114 (US).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (for US only): BREDA, Wayne, J. [US/US]; 5 Tuttle Avenue, Clarendon Hills, Illinois 60514 (US). PIPER, Bradley [US/US]; 5202 S. Red Yucca Lane, Gold Canyon, Arizona 85218 (US).</p> <p>(74) Agent: BUROW, Scott, A.; BANNER & WITCOFF, LTD., 10 S. Wacker Drive, Suite 300, Chicago, Illinois 60606-7407 (US).</p> | <p>(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.</p> <p>(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published:
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- (54) Title:** INTRAVENOUS EQUIPMENT SUPPORT ON MOBILE POLE ASSEMBLY



- (57) Abstract:** An intravenous equipment support (10) on a mobile pole assembly (12) includes a telescoping hanger assembly (14) for mounting intravenous solution bags near a patient. The telescoping hanger assembly (14) is mounted to a mobile pole assembly (14). The pole assembly (12) generally includes a pole (40) defining an end for receiving the hanger assembly (14) and an opposite end that mounts to a wheeled base assembly (42). The wheeled base assembly (42) includes hazard markings (66) on the surface of the wheeled base assembly (42) visible from above. The hazard markings (66) preferably include alternating black and bright yellow stripes.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTRAVENOUS EQUIPMENT SUPPORT ON MOBILE POLE ASSEMBLY

CROSS REFERENCE TO RELATED APPLICATION

- [001] This Non-Provisional Application claims benefit to United States Provisional Application Serial No. 60/474,695 filed May 30, 2003.

FIELD OF THE INVENTION

- [002] The present invention relates generally to intravenous equipment supports and more specifically to mobile intravenous equipment supports.

BACKGROUND OF THE INVENTION

- [003] It is known that in hospitals, health care facilities, nursing homes, and the like, intravenous solution bags containing various intravenous solutions or fluids, blood, and medicants, to name a few, are used to treat patients. It is also known that intravenous equipment hangers are used to support and hang the intravenous solution bags near the patient. Known hangers are disclosed in U.S. D437,639 S and U.S. D437,640 S, both issued to Wayne J. Breda and Bradley Piper, and both incorporated herein by reference. These known intravenous equipment hangers include mounting supports for mounting the hangers to a wall or other structure. They also include extendable hanger bars that may be selectively moved and positioned relative to the mounting supports and thus relative to the wall, thereby providing a height adjustment mechanism for the hanger. Mounted to one end of the hanger bar is one or more hooks on which are mounted the intravenous solution bags. The known hangers may also be used without the mounting supports.
- [004] The present invention is directed at improving upon existing intravenous equipment hangers.

SUMMARY OF THE INVENTION

- [005] The present invention is generally directed to mounting intravenous equipment hangers, like the hangers of U.S. D437,639 S and U.S. D437,640 S, to a mobile pole assembly. The pole assembly generally includes a pole and a wheeled base. The base

includes hazard markings on the surfaces of the base visible from above. The hazard markings preferably include alternating black and bright yellow stripes.

- [006] More specifically, in one embodiment, the present invention includes a device for supporting and transporting intravenous equipment. The device further includes a telescoping support assembly having an inner bar and an outer bar sleeve. A hanger is mounted to the inner bar. The hanger defines support arms and at least one hook for mounting of the intravenous solution bags. The telescoping support assembly is mounted to a mobile pole assembly. The mobile pole assembly includes a pole for receiving and mounting the outer bar sleeve of the telescoping support assembly and a wheeled base assembly for supporting the pole. The wheeled base assembly further includes a plurality of support legs and wheels mounted to the support legs. Hazard indicators are located on the wheeled base assembly that are visible from above.
- [007] Other features and advantages of the invention will become apparent to those skilled in the art upon review of the following detailed description, claims and drawings in which like numerals are used to designate like features.

BRIEF DESCRIPTION OF THE DRAWINGS

- [008] Figure 1 is a side elevation view of an exemplary embodiment of an intravenous equipment support on a mobile pole assembly of the present invention.
- [009] Figure 2 is a side elevation view of an exemplary mounting of the intravenous equipment support on the mobile pole assembly.
- [0010] Figure 3 is a side elevation view of the intravenous equipment support.
- [0011] Figure 4 is an isometric view of an exemplary embodiment of the intravenous equipment support.
- [0012] Figure 5 is a partial side elevation view of the wheeled base assembly.
- [0013] Figure 6 is a top plan view of the wheeled base assembly of Figure 5.
- [0014] Before the embodiments of the invention are explained in detail, it is to be understood that the invention is not limited in its application to the details of construction and the

arrangement of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced or being carried out in various ways. Also, it is to be understood that the phraseology and terminology used herein are for the purpose of description and should not be regarded as limiting. The use of “including” and “comprising” and variations thereof is meant to encompass the items listed thereafter and equivalents thereof as well as additional items and equivalents thereof.

DETAILED DESCRIPTION OF THE EMBODIMENTS

- [0015] Referring to Figures 1-4, an exemplary embodiment of the invention generally includes an intravenous equipment support 10 mounted to a mobile pole assembly 12. The intravenous equipment support 10 includes a telescoping support assembly 14 defining an inner bar 16 that is selectively movable within an outer bar sleeve 18. In other words, the inner bar 16 slidably fits within the outer bar sleeve 18 and can be selectively adjusted depending on the desired height of the intravenous equipment support 10. The inner bar 16 may be held in position at the desired height using any known technique including the depicted clamping collar 17, pins, set screws, fasteners, and the like.
- [0016] Referring to Figure 4, the outer bar sleeve 18 defines an upper end 32 from which extends the inner bar 16 and a lower end 34 that, as described below, mounts to the mobile pole assembly 12. The inner bar 16 and outer bar sleeve 18 define a generally tubular shape and cooperatively engage with each other. The inner bar 16 and outer bar sleeve 18 may be made of any suitable lightweight material, such as aluminum or stainless steel. Other shapes and configurations of the inner bar 18 and outer bar sleeve 18 may be used to provide the desired telescoping feature.
- [0017] A hanger 20 is mounted to end 36 of the inner bar 16. The hanger 20 may be rotated or turned by selectively rotating or turning the inner bar 16. The hanger 20 defines outwardly extending arms 22 and one or more hooks 24 connected to, or formed integral with, the arms 22. The hooks 24 serve to hang the intravenous solution bags, not shown, near the patient. The hooks 24 may define any known shape and configuration that will serve to hang the intravenous solution bags.

- [0018] In an exemplary embodiment, a pair of support brackets 26 extends outwardly from the outer bar sleeve 18. The support brackets 26 at end 28 are mounted or attached to the outer bar sleeve 18. At the opposite end 30, the support brackets 26 define an L-shape that serve to hang the outer bar sleeve 18 to a wall mount plate 31. The present invention is thus adaptable from a wall mount configuration to a mobile configuration and described herein. Referring to Figures 2-3, in an exemplary embodiment, a support arm or brace 27 extends between the support brackets 26 to provide additional structural integrity to the support brackets 26.
- [0019] As depicted in Figures 1-2, the lower end 34 of the outer bar sleeve 18 mounts to the mobile pole assembly 12. The mobile pole assembly includes a vertically extending pole 40 that is mounted to a wheel assembly 42. The pole 40 at end 44 defines a mounting sleeve or collar 46 which receives and mounts the lower end 34 of the outer bar sleeve 18. Once the lower end 34 of the outer bar sleeve 18 is positioned on the pole 40, a detent pin 48 is inserted through the collar 46 and pole 40 and into the outer bar sleeve 18 to secure the outer bar sleeve 18 to the pole 40. One skilled in the art will understand that other techniques for securing the outer bar sleeve 18 to the pole 40 are possible with the invention.
- [0020] As illustrated by Figure 5, the pole 40 at end 50 is fastened to the wheel assembly 42 through the use of a fastener 52. The wheel assembly 42 includes a base 54 that further includes a plurality of support legs 56 that are centrally joined together at the location where the pole 40 mounts to the wheel assembly 42. The support legs 56 are held in position through the use of a fastener 57. As depicted by Figures 5-6, the support legs 56 extend radially outwardly and in a spaced-apart relation, and each leg defines a leg end 58 on which is mounted a conventional wheel or caster 60. Each wheel 60 is secured to each leg end 58 through the use of a fastener 62. Each wheel will rotate and turn relative to the leg end 58 and relative to each other to provide a wheel assembly 42 with easy movability. However, it should be understood that with the invention one or more of the wheels 60 may be fixed or non-rotatable relative to the other wheels. One skilled in the art will realize that other wheels and wheel assemblies may be used with the invention to provide a movable wheel assembly.

- [0021] Referring to Figure 6, each support leg 56 defines a top surface 64 on which are located hazard markings 66 that are visible from above. The hazard markings 66 preferably include alternating black and bright yellow stripes; however, other hazard markings or indicators may be used with the invention. The hazard markings 66 draw one's attention to the wheel assembly 42 and to therefore warn the person of the wheel assembly 42 so that the person does not trip over, or become entangled with, the wheel assembly 42.
- [0022] Variations and modifications of the foregoing are within the scope of the present invention. It should be understood that the invention disclosed and defined herein extends to all alternative combinations of two or more of the individual features mentioned or evident from the text and/or drawings. All of these different combinations constitute various alternative aspects of the present invention. The embodiments described herein explain the best modes known for practicing the invention and will enable others skilled in the art to utilize the invention. The claims are to be construed to include alternative embodiments to the extent permitted by the prior art.
- [0023] Various features of the invention are set forth in the following claims.

CLAIMS

WHAT IS CLAIMED IS:

1. A device for supporting and transporting intravenous equipment comprising:

a telescoping support assembly further comprising an inner bar and an outer bar sleeve,

a hanger mounted to the inner bar, the hanger defining at least one hook,

a mobile pole assembly mounted to the telescoping support assembly, the mobile pole assembly further comprising a pole for receiving and mounting the outer bar sleeve and a wheel assembly for supporting the pole, the wheel assembly further comprising a plurality of support legs and wheels, and

hazard indicators located on the wheel assembly.
2. The device of Claim 1, wherein the outer bar sleeve further includes support brackets for selective mounting of the support assembly to a wall mount plate.
3. The device of Claim 1, further comprising a clamping collar positioned between the inner bar and outer bar sleeve.
4. The device of Claim 3, wherein the hazard markings include black and yellow stripes.
5. The device of Claim 4, wherein the wheel assembly includes six wheels.
6. The device of Claim 1, wherein the hanger defines outwardly extending support arms and hooks mounted to the support arms.
7. The device of Claim 1, wherein the inner bar and the outer bar sleeve are tubular to provide cooperative engagement therebetween.
8. The device of Claim 1, further comprising a collar positioned on the pole and adapted to secure the outer sleeve to the pole.
9. The device of Claim 8, further comprising a detent pin for securing the outer sleeve to the pole.

10. A device for supporting and transporting intravenous equipment comprising:

a telescoping support assembly further comprising an inner bar and an outer bar sleeve,

a hanger mounted to the inner bar, the hanger defining at least one hook,

a mobile pole assembly mounted to the telescoping support assembly, the mobile pole assembly further comprising a pole for receiving and mounting the outer bar sleeve and a wheel assembly for supporting the pole, the wheel assembly further comprising a plurality of support legs and wheels,

a collar positioned on the pole and adapted to secure the outer sleeve to the pole, and

hazard indicators located on the wheel assembly.
11. The device of Claim 10, wherein the outer bar sleeve further includes support brackets for selective mounting of the support assembly to a wall mount plate.
12. The device of Claim 11, further comprising a clamping collar positioned between the inner bar and outer bar sleeve.
13. The device of Claim 12, wherein the hazard markings include black and yellow stripes.
14. The device of Claim 13, wherein the wheel assembly includes six wheels.
15. The device of Claim 14, wherein the hanger defines outwardly extending support arms and hooks mounted to the support arms.
16. The device of Claim 15, wherein the inner bar and the outer bar sleeve are tubular to provide cooperative engagement therebetween.
17. The device of Claim 16, further comprising a detent pin for securing the outer sleeve to the pole.
18. A device for supporting and transporting intravenous equipment comprising:

a telescoping support assembly further comprising an inner bar and an outer bar sleeve,

a hanger mounted to the inner bar, the hanger defining outwardly extending support arms and at least one hook,

a mobile pole assembly mounted to the telescoping support assembly, the mobile pole assembly further comprising a pole for receiving and mounting the outer bar sleeve and a wheel assembly for supporting the pole, the wheel assembly further comprising a plurality of support legs and wheels,

a collar positioned on the pole and adapted to secure the outer sleeve to the pole, and

a pin positioned on the collar for securing the outer sleeve to the pole.

19. The device of Claim 18, further comprising hazard indicators located on the wheel assembly, and wherein the wheel assembly includes six wheels and corresponding support legs for each wheel.

20. The device of Claim 19, further comprising a clamping collar positioned between the inner bar and outer bar sleeve.

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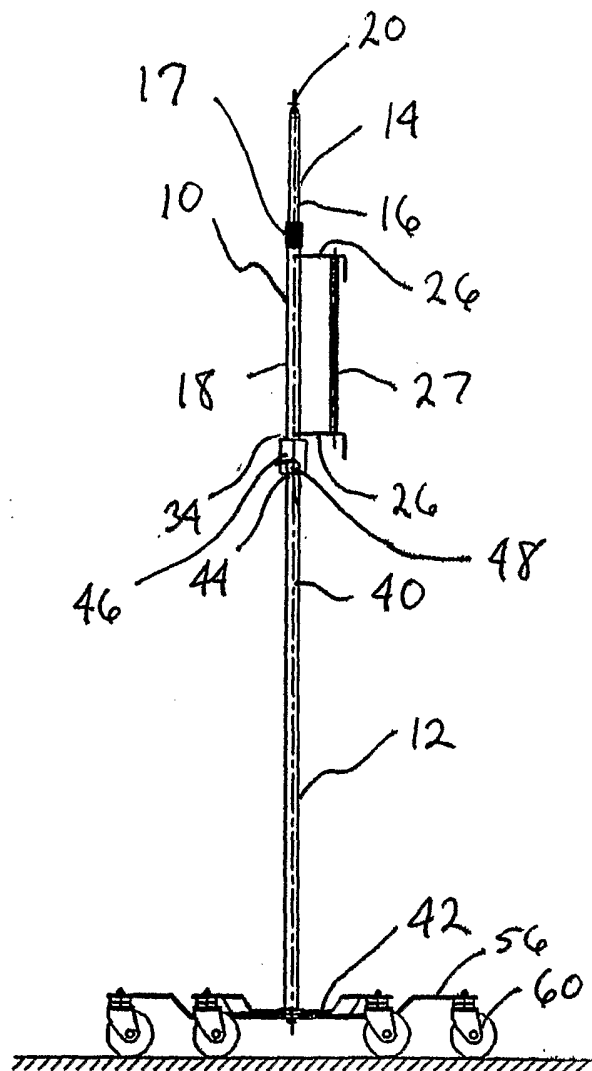
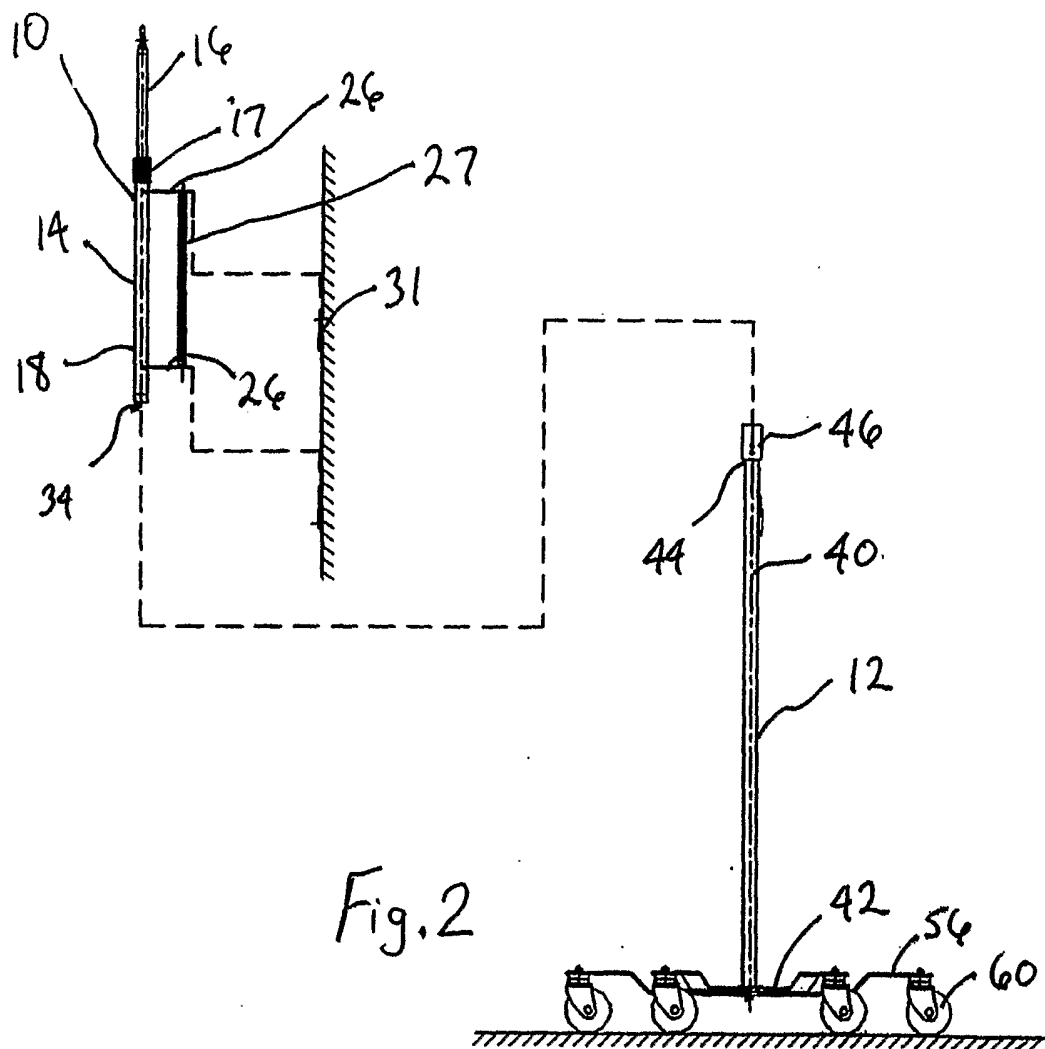


Fig. 1

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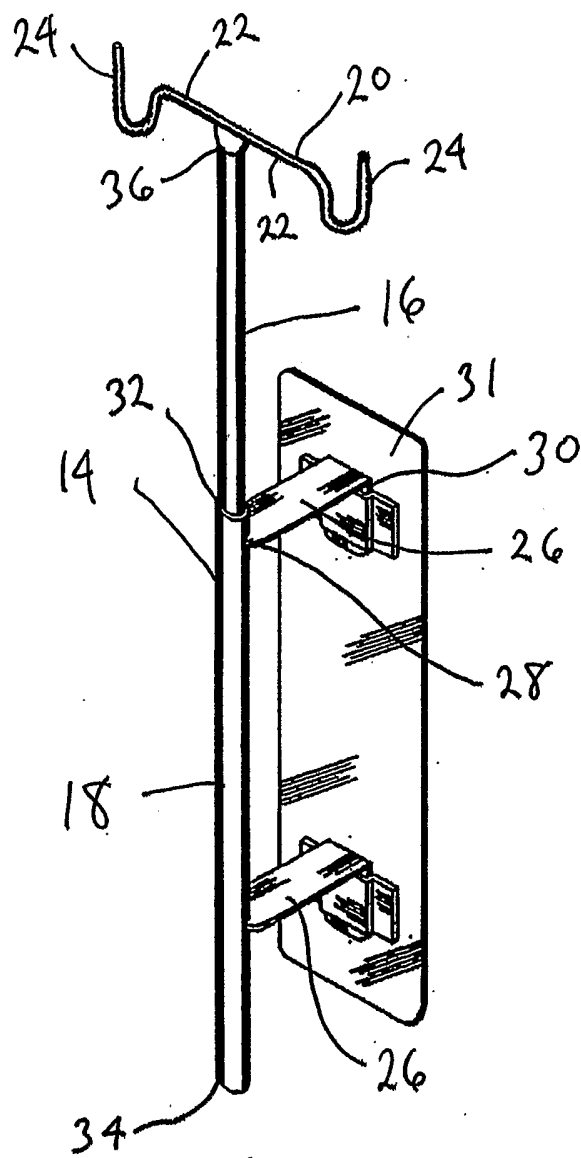


Fig. 4

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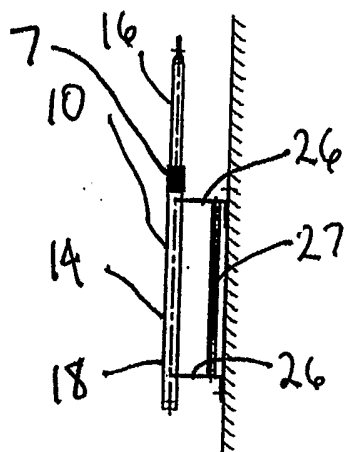


Fig. 3

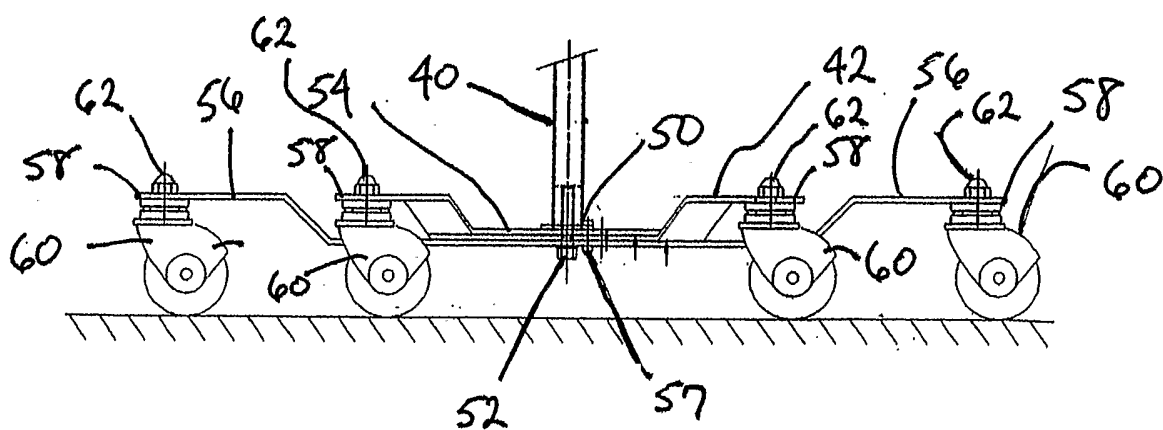


Fig. 5

