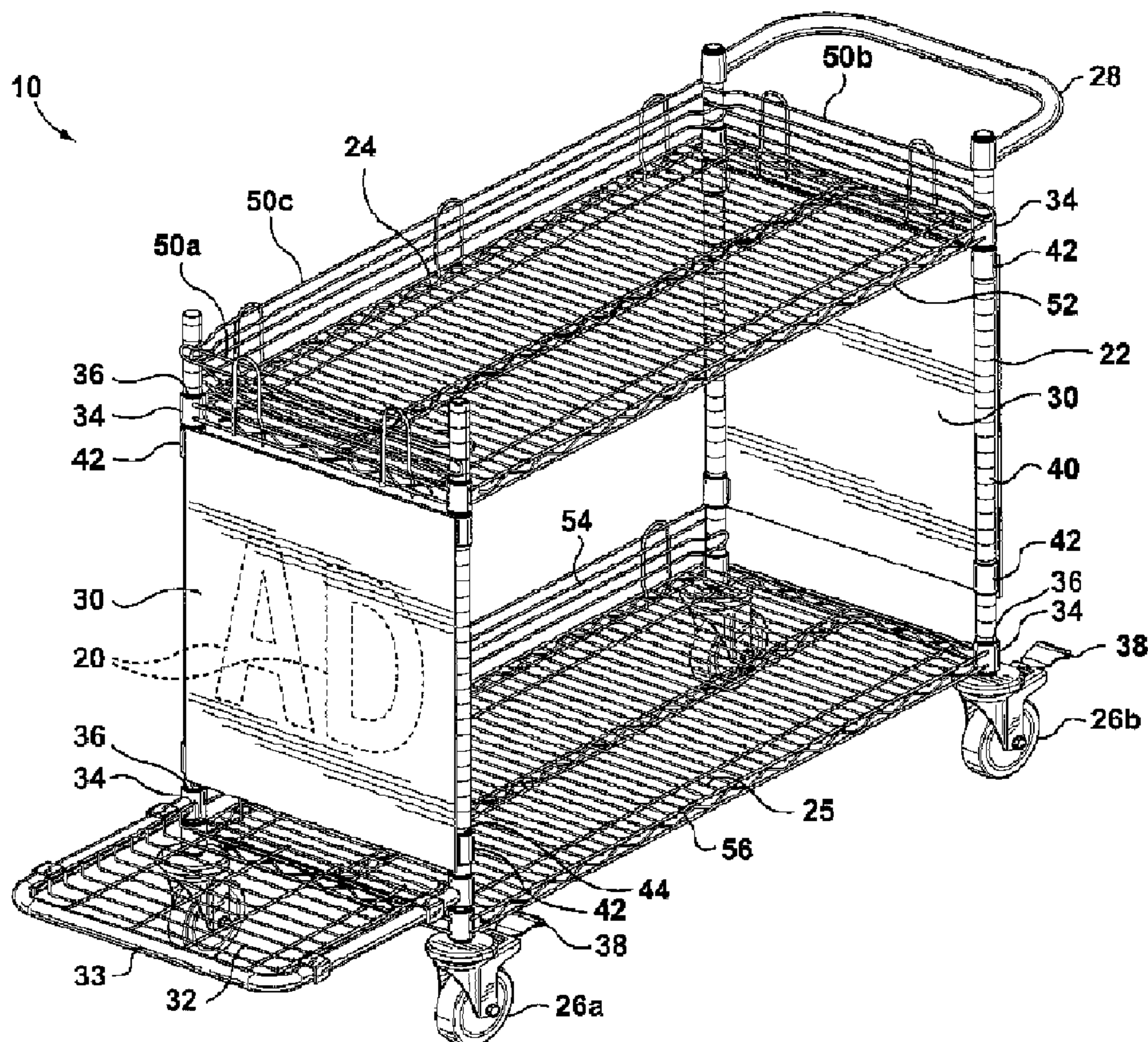




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(54) **Titre : CHARIOT DE GESTION DES DECHETS AVEC PANNEAUX PUBLICITAIRES**
 (54) **Title: WASTE MANAGEMENT CART WITH ADVERTISING PANELS**



(57) **Abrégé/Abstract:**

Provided is a cart having a frame, a set of wheels attached to the frame for transporting the cart, an upper shelf and a lower shelf for supporting waste management items, and at least one advertising panel attached to the frame for displaying advertising. Provided is a method for assembling a cart including attaching a frame to a lower shelf, attaching the frame to the upper shelf, and attaching at least one advertising panel to the frame.

Abstract

Provided is a cart having a frame, a set of wheels attached to the frame for transporting the cart, an upper shelf and a lower shelf for supporting waste management items, and
5 at least one advertising panel attached to the frame for displaying advertising. Provided is a method for assembling a cart including attaching a frame to a lower shelf, attaching the frame to the upper shelf, and attaching at least one advertising panel to the frame.

Title: WASTE MANAGEMENT CART WITH ADVERTISING PANELS**Technical Field**

5 [0001] The disclosure herein relates to waste management carts, and in particular to carts for transporting waste management containers including containers for garbage, recyclable materials, and compost.

Background

10 [0002] Waste management is the generation, prevention, characterization, monitoring, treatment, handling, reuse and residual disposition of solid wastes. There are various types of solid waste including municipal (residential, institutional, commercial), agricultural, and special (health care, household hazardous wastes, sewage sludge). Waste management includes materials produced by human activity, and the process is generally undertaken to reduce their effect on health, the environment or aesthetics.

15 [0003] More or less consistent with the rise of consumables and disposable products governments began to pass anti-dumping ordinances and introduce weekly curbside collection. Residents use a variety of refuse containers to facilitate curbside collection. As waste management practices are introduced with the aim of reducing landfill impacts, a range of container types, mostly made of durable plastic, came to be
20 introduced to facilitate the proper diversion of the waste stream. Such containers include blue boxes, green bins, and garbage bins.

[0004] For example, recycling bins or blue boxes are for storing recyclable materials such as cardboard, boxboard, cans, glass bottles, jars, paper, plastic containers, and plastic bags.

25 [0005] For example, compost, organic, or green bins are for storing biodegradable wastes such as food waste, paper and other products, houseplant waste, paper bags, pet waste, sawdust, shredded paper, and wood ashes.

[0006] For example, garbage bins are for storing garbage materials which include most other types of non-recyclable and non-compostable materials.

[0007] With the increase diversity in materials and waste streams, there is a need for waste management cart to transport and store the various waste management
5 containers.

Summary

[0008] According to one aspect, there is provided a cart including frame, a set of wheels attached to the frame for transporting the cart, an upper shelf and a lower shelf for supporting waste management items, and at least one advertising panel attached to
10 the frame for displaying advertising.

[0009] The cart further includes where the advertising panel has corners and wherein the advertising panel is attached to the frame at the corners with panel attachment collars.

[0010] The cart further includes where the panel attachment collars include a
15 bushing to provide a friction fit to the frame.

[0011] The cart further includes where the advertising panel includes a decal for displaying an advertisement.

[0012] The cart further includes first and second advertising panels, the first advertising panel at a left side of the frame and a second advertising panel at a right
20 side of the frame.

[0013] The cart further includes a handle at an upper end of the frame.

[0014] The cart further includes where the frame has four vertical supports.

[0015] The cart further includes where the waste management items are any one or more of garbage bins, green bins, and recycling bins.

[0016] The cart further includes where the set of wheels includes two front
25 wheels and two rear wheels, wherein the front two wheels include locking mechanisms for preventing rotation of the wheels.

- [0017]** The cart further includes where the set of wheels are swivel wheels.
- [0018]** The cart further includes where the upper shelf includes left, right, and rear rails to inhibit the waste management items from falling off of the upper shelf.
- [0019]** The cart further includes where the upper shelf includes an open front side
5 for allowing access to the upper shelf.
- [0020]** The cart further includes where the cart further comprises a side shelf at a lower end of a left end of the cart.
- [0021]** The cart further includes where the upper shelf is configured to support bins of recycling materials, the lower shelf is configured to support bins for organic
10 material, and the front shelf is configured to support bins for garbage material..
- [0022]** The cart further includes an expanded section of the lower shelf, and a tie-down extending from the upper shelf or frame to secure the expanded section of the lower shelf.
- [0023]** The cart further includes where the upper and lower shelf each include a
15 plurality of ribs for reinforcing the shelf, wherein the shelf includes three ribs running in a first direction and two ribs running in a direction perpendicular to the three ribs.
- [0024]** The cart further includes where the advertising panel comprises a metal sheet of 0.5mm to 4mm.
- [0025]** The cart further includes where the upper and lower shelves are attached
20 to the frame via shelf collars and shelf collar bushings using a friction fit.
- [0026]** According to a further aspect, there is provided a method for assembling the cart including attaching a frame to a lower shelf, attaching the frame to the upper shelf, and attaching at least one advertising panel to the frame.
- [0027]** Other aspects and features will become apparent, to those ordinarily
25 skilled in the art, upon review of the following description of some exemplary embodiments.

Brief Description of the Drawings

[0028] Some embodiments of the present specification will now be described, by way of example only, with reference to the following drawings, in which:

5 [0029] Figure 1 is a front perspective view of a cart, according to one embodiment;

[0030] Figure 2 is a left side view of the cart of Figure 1;

[0031] Figure 3 is a front view of the cart of Figure 1;

[0032] Figure 4 is a right side view of the cart of Figure 1;

[0033] Figure 5 is a rear view of the cart of Figure 1;

10 [0034] Figure 6 is a top view of the cart of Figure 1;

[0035] Figure 7 is a bottom view of the cart of Figure 1;

[0036] Figure 8 is a front perspective view of the cart of Figure 1 carrying containers;

[0037] Figure 9 is a front view of the cart of Figure 1 carrying containers;

15 [0038] Figures 10A-10D is a flow chart of a method for assembling a cart, in accordance with an embodiment; and

[0039] Figure 11 is a perspective view of a shelf for the cart of Figure 1.

Detailed Description

[0040] Referring to Figures 1-9, illustrated therein is a cart 10 for carrying and
 20 storing items, such as garbage bins 14, green bins 16, and recycling bins 18 (shown in Figures 8 and 9), while displaying advertising 20. The cart 10 can be used to store the items 14, 16, 18 and transport the items 14, 16, 18 to a pick-up location, for example a street curb for curb-side pick-up. The cart 10 can also be used in other situations, such as street sales, garage sales, and bake sales. The cart 10 provides advertising 20 in
 25 visible locations, such as on the curb-side of a residential or commercial area, such as on a weekly waste-collection day. The cart 10 can be used in service industries such as

in hotels, hospitals, and offices. The cart 10 can provide multiple container configurations to suit individual waste requirements.

[0041] The cart 10 can also be used to store the items 14, 16, 18 and organize and save space in storage areas such as in a garage or shed and the cart 10 can keep
5 the pick-up location organized on waste-collection day. The cart 10 can make it easier for waste collectors to pick up and empty containers from the cart 10 as there is may be less bending by the waste collector.

[0042] The cart 10 includes a frame 22, two or more shelves 24, 25 for carrying the items 14, 16, 18, a plurality of wheels 26, and a handle 28. The cart 10 also includes
10 at least one advertising panel 30 attached to the cart 10 for displaying advertising 20. As shown the cart 10, includes first advertising panel 30 attached to the left side of the cart 10 and a second advertising panel attached to the right side of the cart 10.

[0043] The cart 10 can have an upper shelf 24 and a lower shelf 25. At least one of the shelves 24, 25 can be height adjustable such that the cart 10 can be used for
15 items of different sizes. The cart 10 can have an additional side shelf 32 to expand the carrying capacity of the cart 10 for example, to carry the garbage bin 14. The side shelf 32 is attached to the frame 22 by a shelf bracket 33.

[0044] The shelves 24, 25, 32 are attached to the frame 22 via shelf collars 34 and shelf bushings 36. The cart 10 including the frame 22 and the shelves 24, 25, 32
20 can be constructed from metal wire such as all-season weather protected durable chromed steel.

[0045] In some embodiments, the cart 10 includes wheels 26 having locking mechanisms 38 to prevent wheel rotation so that the cart 10 can be left in a stationary position, such as at the pick-up location or in the storage area. In some embodiments,
25 the front wheels 26a, 26b have the locking mechanism 38 such that when the cart 10 is curbside, the wheels 26a, 26b are facing the street and can be locked. The wheels 26 may be attached to the frame 22 by sliding and screwing (e.g. via threading) into ends of vertical supports 40. Any or all of the wheels 26 (e.g. the front wheels 26a, 26b) may be swivel wheels. The cart 10 may also include a plurality of bumpers 27 between the

wheels 26 and the lower shelf 25 to protect the wheels 26 and the cart 10 when coming into contact with, for example, a wall or a curb.

[0046] The advertising panels 30 are attached to vertical supports 40 of the frame 22 by panel attachment collars 42 located at top and bottom corners of the advertising panels 30. The location of the panel attachment collars 42 at the corners of the advertising panel 30 may prevent vibration of the advertising panel 30 relative to the vertical supports 40 when in transport. The panel attachment collars 42 may have bushings 44 (e.g. made of plastic) to provide a snug friction fit to the vertical support 40. The advertising panels 30 may substantially cover the left and right sides of the cart 10 to provide an increased surface for providing advertising 20. The advertising 20 may be placed on the advertising panel 30 by adhesive decals.

[0047] In some embodiments, the cart 10 has a total weight capacity of 400lb, with 175lb per shelf, and 20 to 50lb for the side shelf 32. The cart 10 may be sized to carry standard sized items 14, 16, 18 and be 36 inches in length by 18 inches in width and 42 inches in height.

[0048] The upper shelf 24 has three rails: a left rail 50a, a right rail 50b, and a rear rail 50c. The rails 50a, 50b, 50c, inhibit the containers 18 from falling or blowing off of the upper shelf 24 when in storage, loading, during transport, and when at the pick-up location. The absence of one rail leaves a front side 52 of the upper shelf 24 open for sliding the containers 18 on and off of the upper shelf 24. The containers 18 on the upper shelf 24 may be recycling bins 18, being on the upper shelf 24, the recycling bins 18 may be advantageously positioned with an open top to provide easy access to put recycling items into and out of the recycling bins 18 while in transit or during storage.

[0049] The lower shelf 25 has a rear rail 54 to inhibit the containers 16 from falling off of the lower shelf 25 when loading and during transport. A front side 56 of the lower shelf 25 is open for sliding in and out of the containers 16. The lower shelf 25 may not have left or right side rails as the advertising panels 30 may inhibit the container from falling off of the lower shelf 25 when loading and during transport.

[0050] The rails 50a, 50b, 50c, may be wired frames that slide onto and are snug fit to the shelves 24, 25 and the frame 22.

[0051] In use, the cart 10 deployed at the curb may be advantageously positioned with the advertising panels 30 visible to passersby such as those walking or in a vehicle for a high visibility advertising location. In an embodiment, the advertising 20 includes advertisements for local or national goods and services.

5 **[0052]** Figures 10A-10D illustrate a method for assembling a cart (for example, the cart 10), in accordance with an embodiment. In some embodiments, the method may be done by hand.

[0053] At 102, the wheels 26 are connected to the vertical supports 40 via a threaded shaft 58 on the wheel 26 and a corresponding threaded cavity 60 on the
10 vertical supports 40. 102 is repeated for all four vertical supports 40.

[0054] At 104, bumpers 27 are slid over the vertical supports 40 to be adjacent to the wheels 26. At 106, the bushings 36 clipped together around the vertical support 40 at a slot above the bumper 27.

[0055] At 108, the bottom shelf 25 is slid over the four vertical supports 40 such
15 that the shelf collars 34 fit with the bushings 36 and such that wheels having the locking means are located on a front side of the cart 10. At 110, bushings 36 are clipped together around the vertical supports 40 at the left side of the cart 10. The side shelf bracket 33 is slid onto the vertical support 40 at the left side of the cart 10 onto the bushings 36. The front shelf 32 is pressed onto the front shelf bracket 33 for a friction
20 fit.

[0056] At 112, eight sets of bushings 44 are clipped together over the four vertical supports 40 and the advertising panels 30 are slid over the four vertical supports 40 such that the panel attachment collars 42 fit with the bushings 44 and the advertising panels 30 are at the same vertical level.

25 **[0057]** At 114, the rear rail 54 is pressed onto the bottom shelf 25.

[0058] At 116, four sets of bushings 36 are clipped together over the four vertical supports 40 at a slot above the panel attachment collars 42. The top shelf 24 is slid over the four vertical supports 40 such that the shelf collars 34 fit with the bushings 36. Where desired, the shelves 24, 25 may be tapped into place with a rubber hammer or

mallet, and may use a protective means such as a towel to protect the cart 10 from cosmetic damage by the rubber hammer.

[0059] At 118, the left, right, and rear rails 50a, 50b, 50c, are pressed onto the vertical supports 40 and upper shelf 24.

5 **[0060]** At 120, two sets of bushings 36 are placed onto the two vertical supports 40 at the right side of the cart 10. The handle 28 is slid over the bushings 36 such that handle collars fit with the bushings 36.

[0061] Figure 11 shows the upper and lower shelves 24, 25 in isolation. The bases of the upper and lower shelves 24, 25 may be similarly constructed. The shelves
10 24, 25 have three left-to-right ribs 46a, 46b, 46c and two front-to-back ribs 48a, 48b for supporting the shelf. The shelf 24, 25 also has four support bushings 34 for attaching to the vertical supports 40 of the frame 22.

[0062] In a further embodiment, the cart has an expanded section of a lower shelf. The expanded section may be suspended or secured with a tie-down extending
15 from an upper shelf or frame of the cart.

[0063] While the above description provides examples of one or more apparatus, methods, or systems, it will be appreciated that other apparatus, methods, or systems may be within the scope of the claims as interpreted by one of skill in the art.

CLAIMS:

1. A cart for transporting waste management containers including containers for garbage, recyclable materials, and compost, the cart comprising:
 - 5 a frame having vertical supports;
 - a set of wheels attached to the frame for transporting the cart;
 - an upper shelf and a lower shelf for supporting the waste management containers, the upper shelf and the lower shelf having at least one substantially open side to allow for insertion and removal of the waste management
10 containers;
 - at least one advertising panel removably attachable to the vertical supports for the primary purpose of displaying advertising, the advertising panel being sized to substantially cover a side of the cart to provide an increased surface for displaying advertising;
 - 15 a plurality of panel attachment collars for attaching the advertising panel to the vertical supports of the frame, each of the panel attachment collars being located at a corner of the advertising panel; and
 - a plurality of bushings for providing a friction fit between the panel attachment collars and the vertical supports.
- 20 2. The cart of claim 1, wherein the plurality of bushings are clipped together over the vertical supports and the advertising panels are slid over the bushings and the vertical supports such that the panel attachment collars fit with the bushings.
3. The cart of claim 1, wherein the advertising panel includes a decal for displaying
25 an advertisement.

4. The cart of claim 1, wherein the at least one advertising panel comprises two advertising panels.
5. The cart of claim 4, wherein the two advertising panels comprise a first advertising panel at a first side of the frame and a second advertising panel at a second side of the frame, the second side being opposed to the first side.
6. The cart of claim 1, further comprising:
a handle located at an upper end of the frame.
7. The cart of claim 1, wherein the waste management containers are any one or more of garbage bins, green bins, and recycling bins,
8. The cart of claim 7, wherein the lower shelf is sized to hold two green bins, and the upper shelf is sized to hold two recycling containers.
9. The cart of claim 1, wherein the set of wheels includes two front wheels and two rear wheels, wherein the front two wheels include locking mechanisms for preventing rotation of the wheels.
10. The cart of claim 2, wherein the set of wheels are swivel wheels.
11. The cart of claim 1, wherein the upper shelf includes left, right, and rear rails to inhibit the waste management containers from falling off of the upper shelf.
12. The cart of claim 11, wherein the upper shelf includes an open front side for allowing access to the upper shelf.
13. The cart of claim 1, wherein the cart further comprises a side shelf at a lower end of a left end of the cart.

14. The cart of claim 13, wherein the upper shelf is configured to support bins of recycling materials, the lower shelf is configured to support bins for organic material, and the side shelf is configured to support bins for garbage material.
- 5 15. The cart of claim 1 further comprising:
an expanded section of the lower shelf; and
a tie-down extending from the upper shelf or frame to secure the expanded section of the lower shelf.
- 10 16. The cart of claim 1 wherein the upper and lower shelf each include a plurality of ribs for reinforcing the shelf, wherein the shelf includes three ribs running in a first direction and two ribs running in a direction perpendicular to the three ribs.
- 15 17. The cart of claim 1 wherein the advertising panel comprises a metal sheet of 0.5mm to 4mm.
18. A method for assembling the cart of claim 1, the method comprising:
attaching a frame to a lower shelf;
attaching the frame to the upper shelf; and
20 attaching at least one advertising panel to the frame.

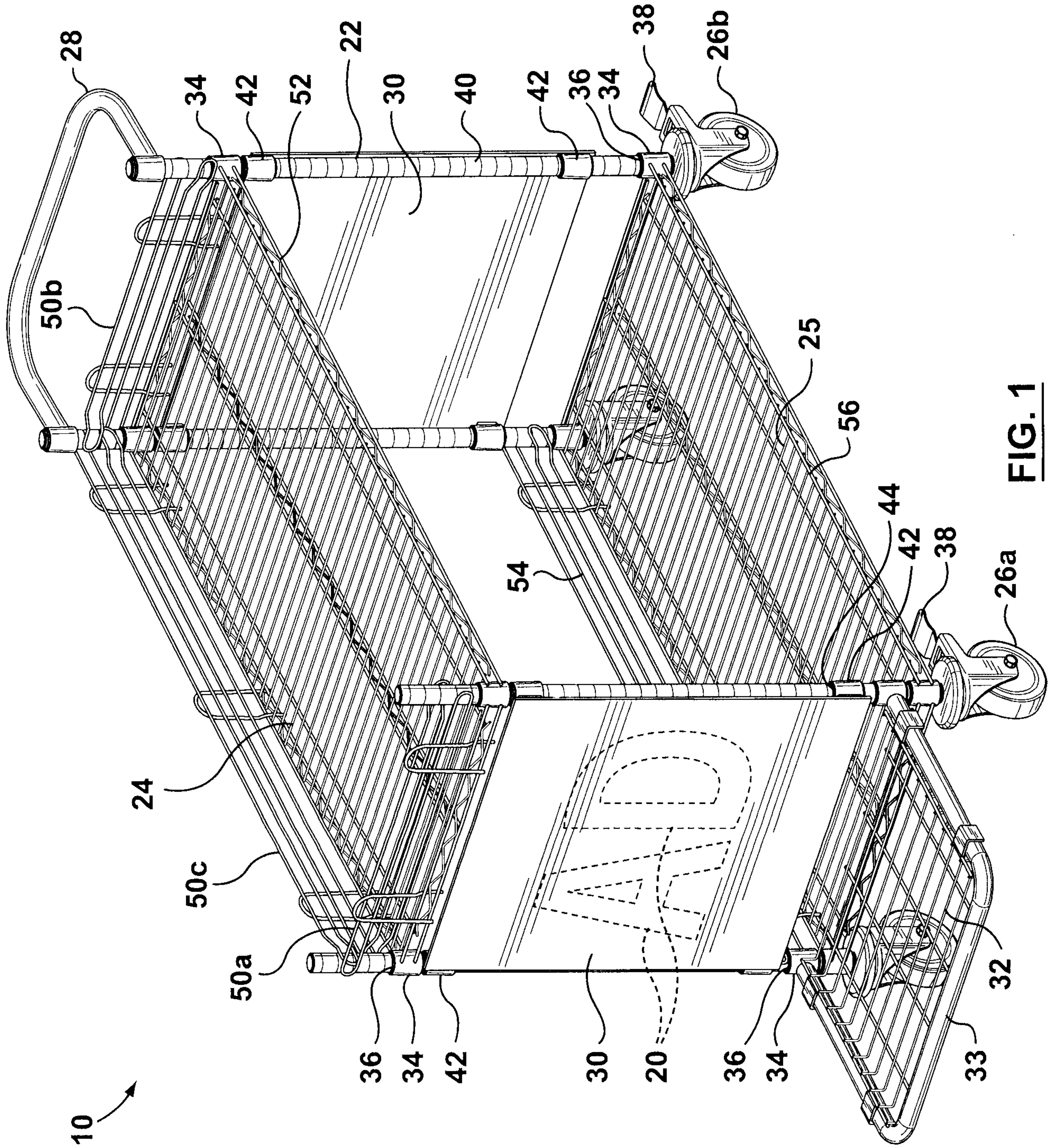


FIG. 1

10

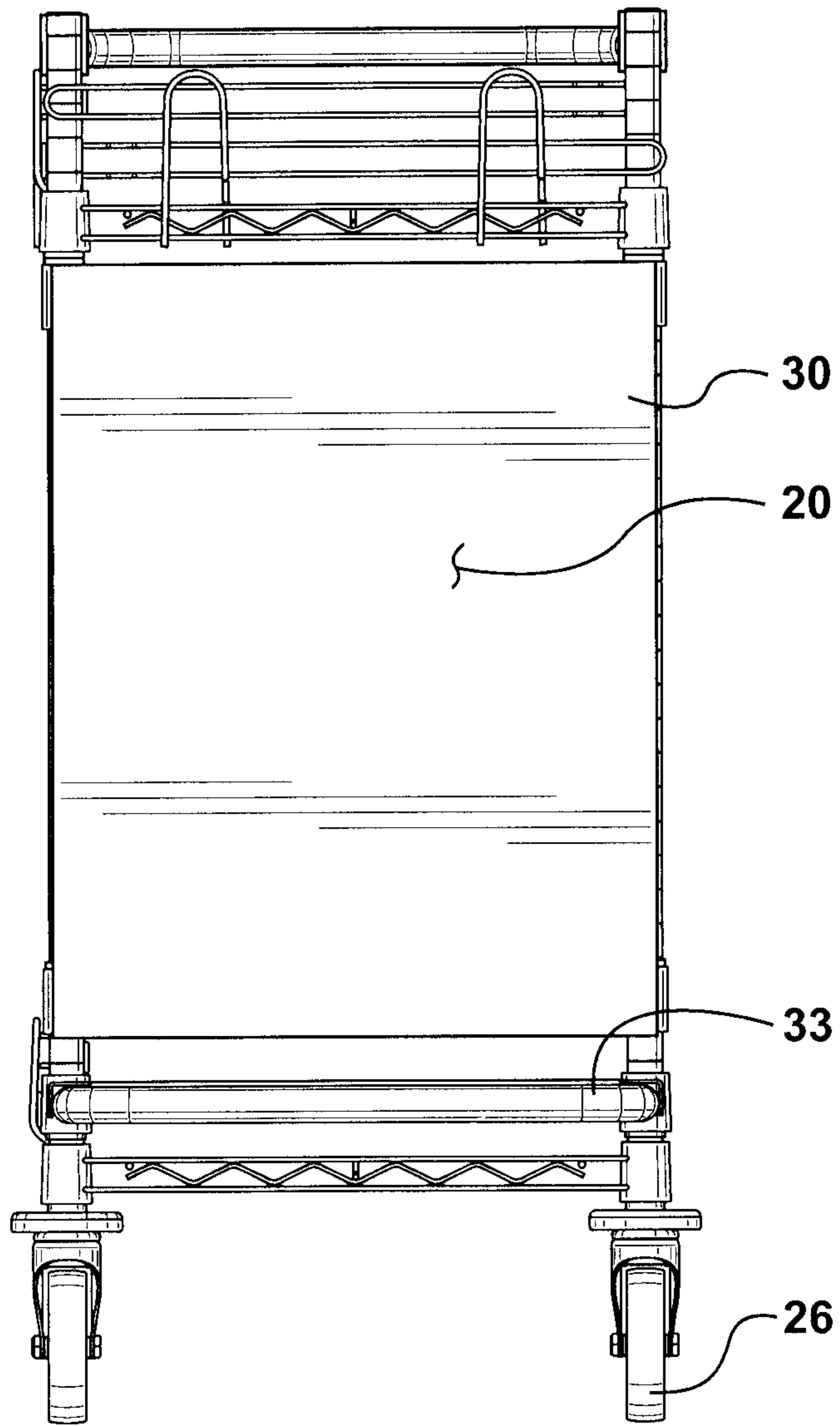


FIG. 2

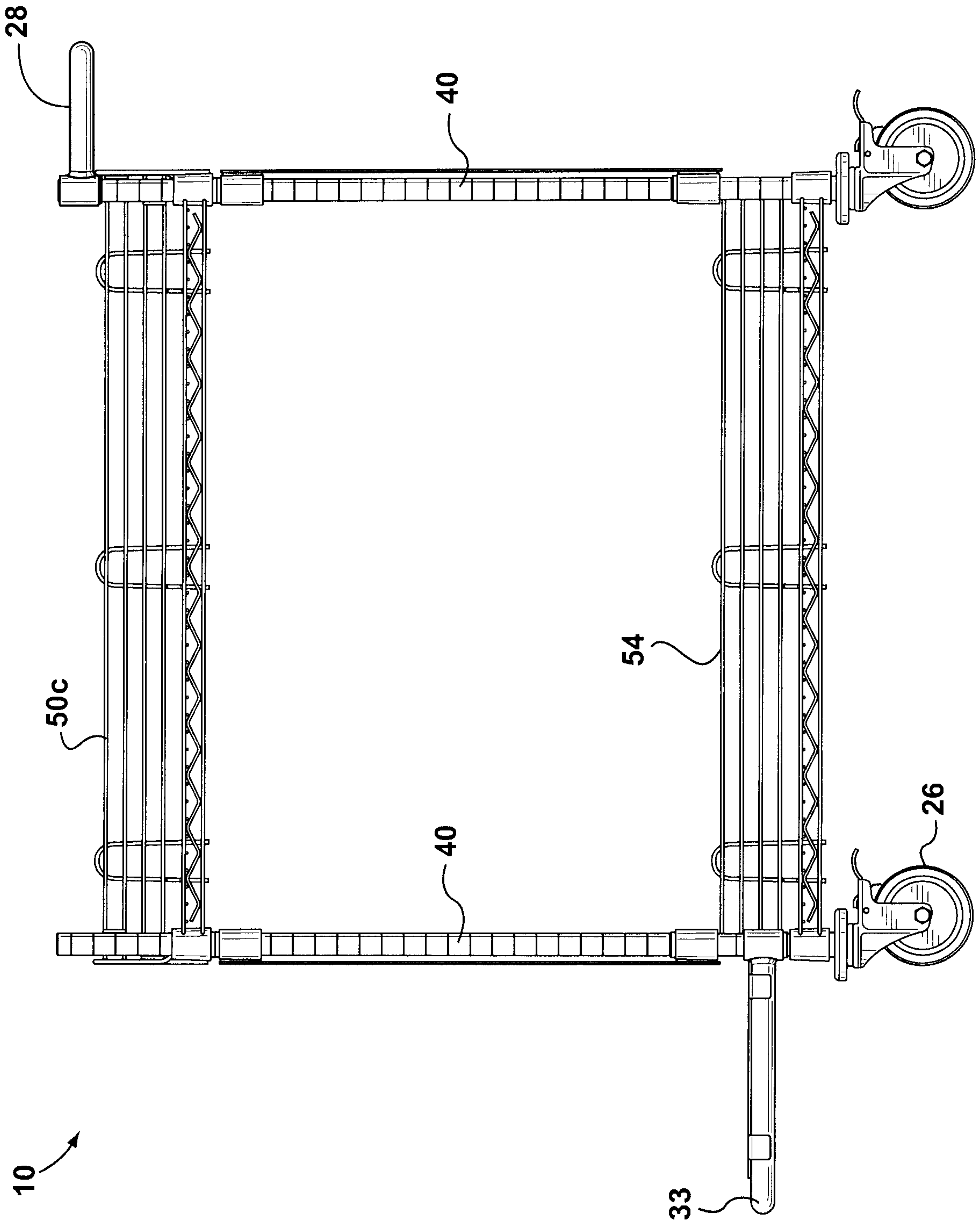


FIG. 3

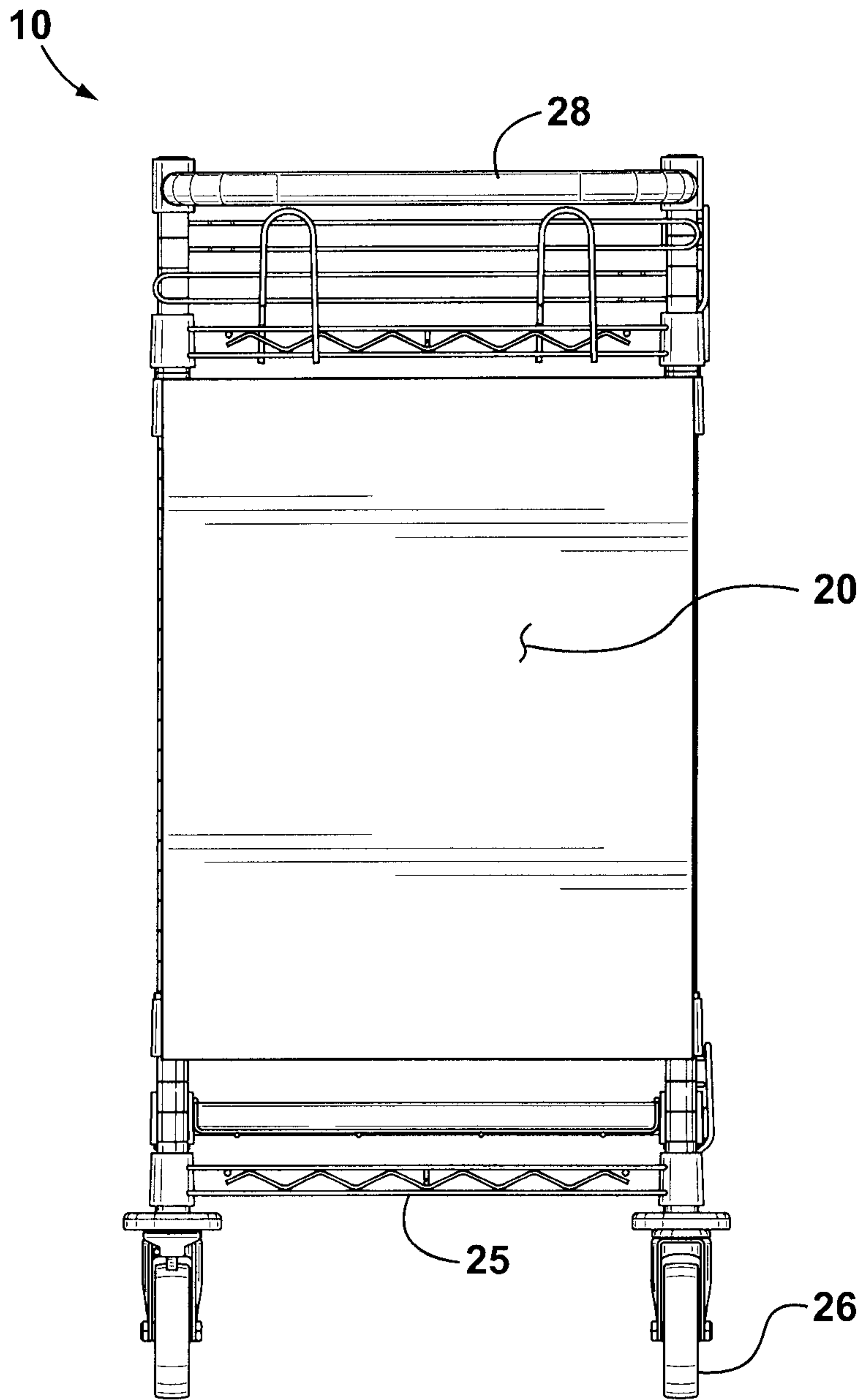


FIG. 4

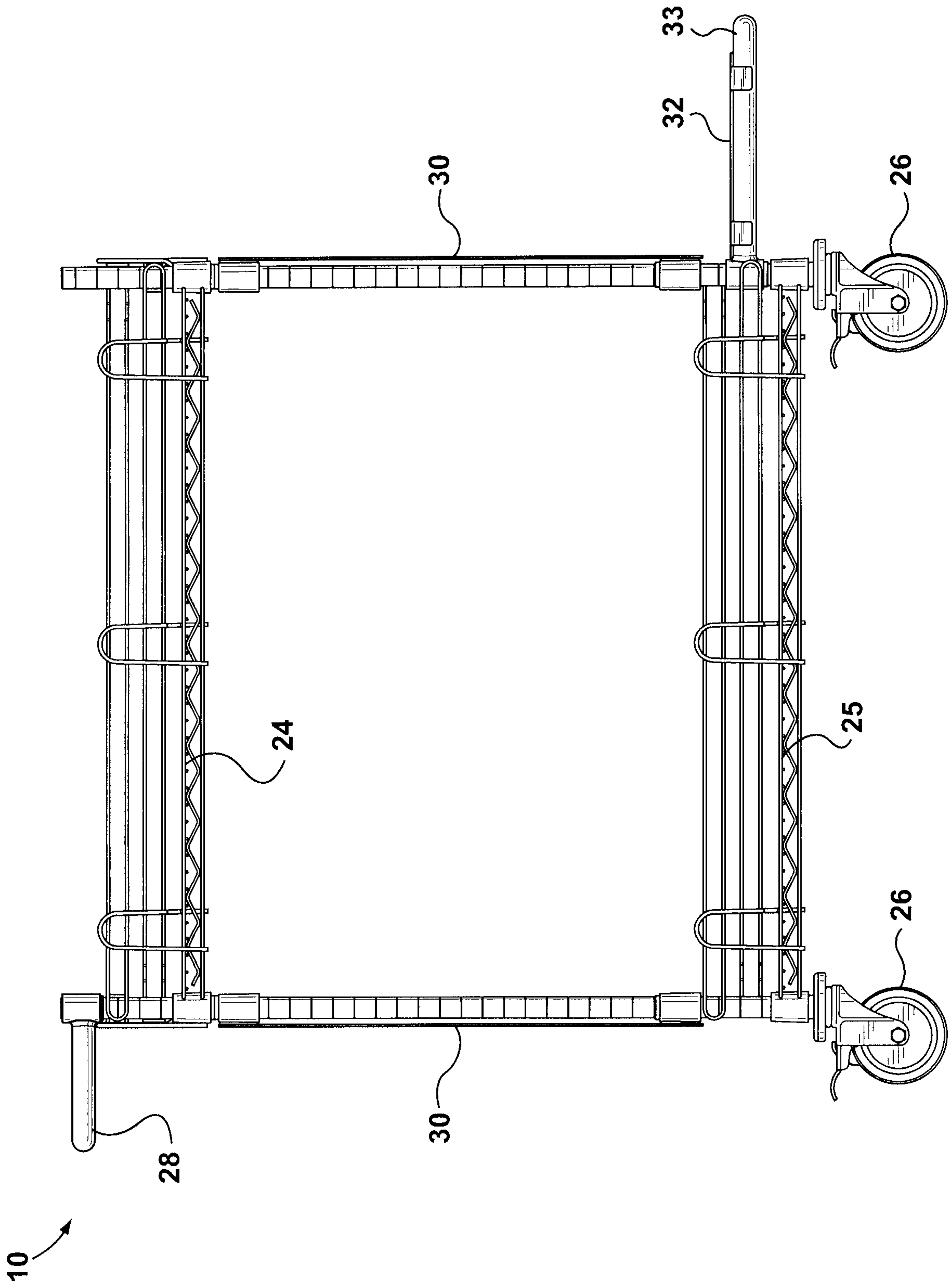


FIG. 5

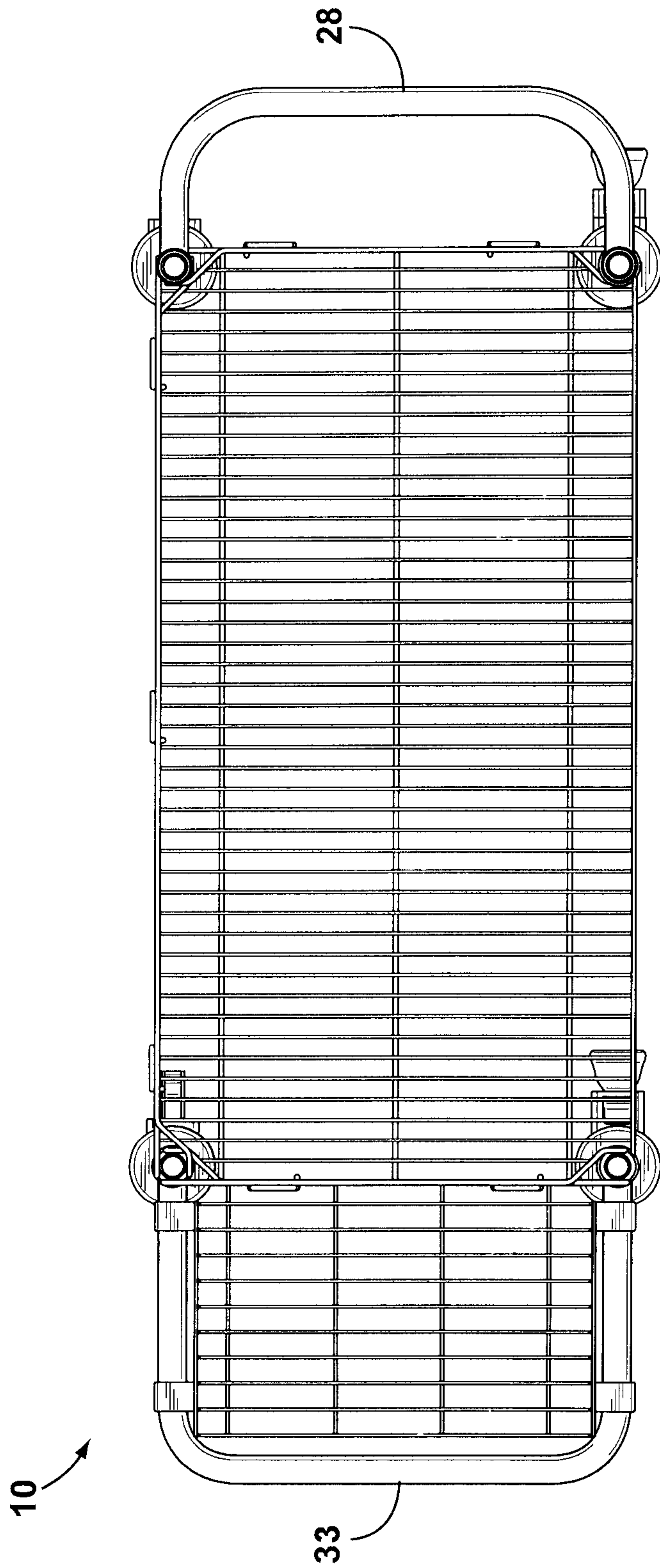


FIG. 6

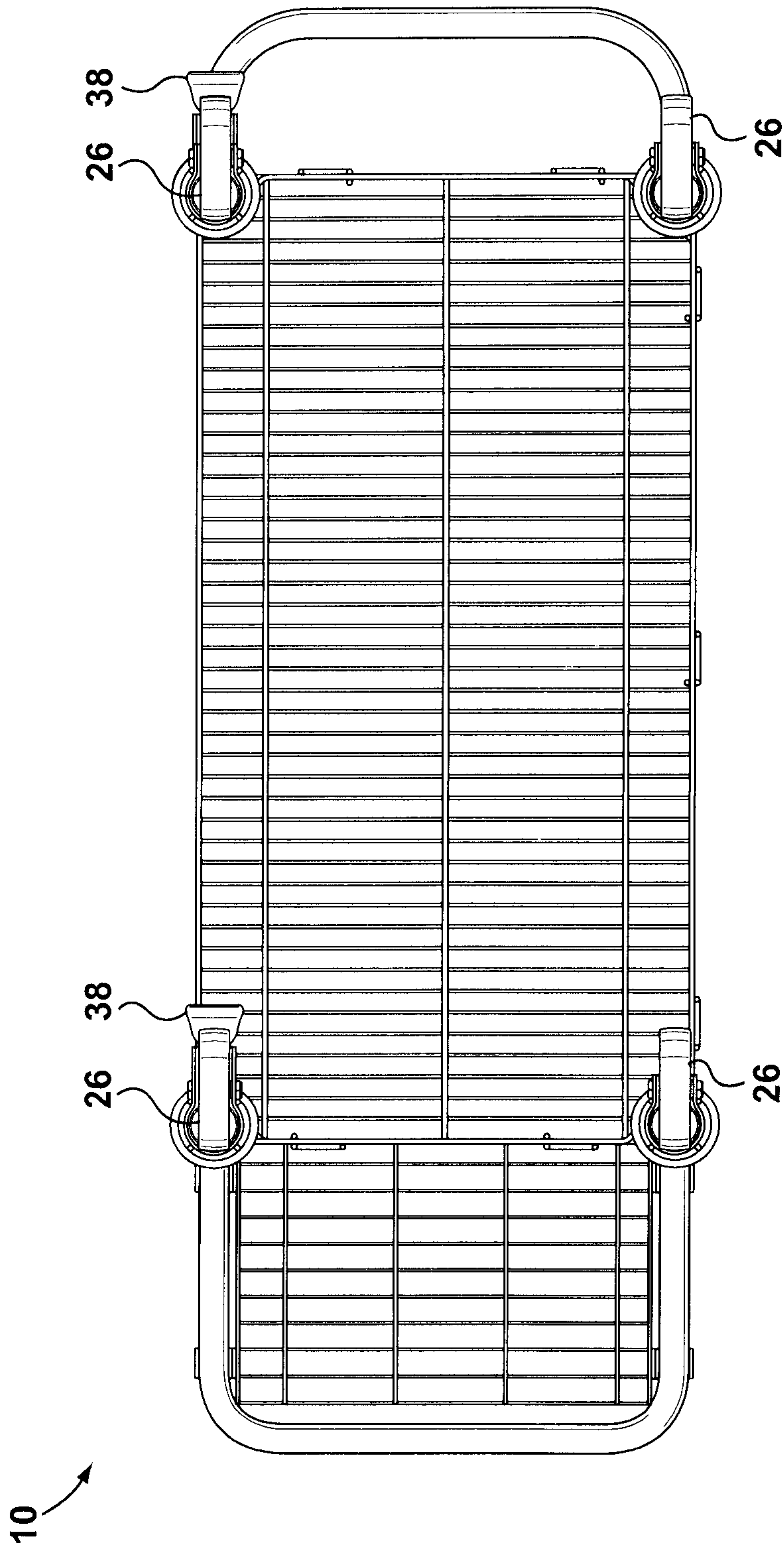


FIG. 7

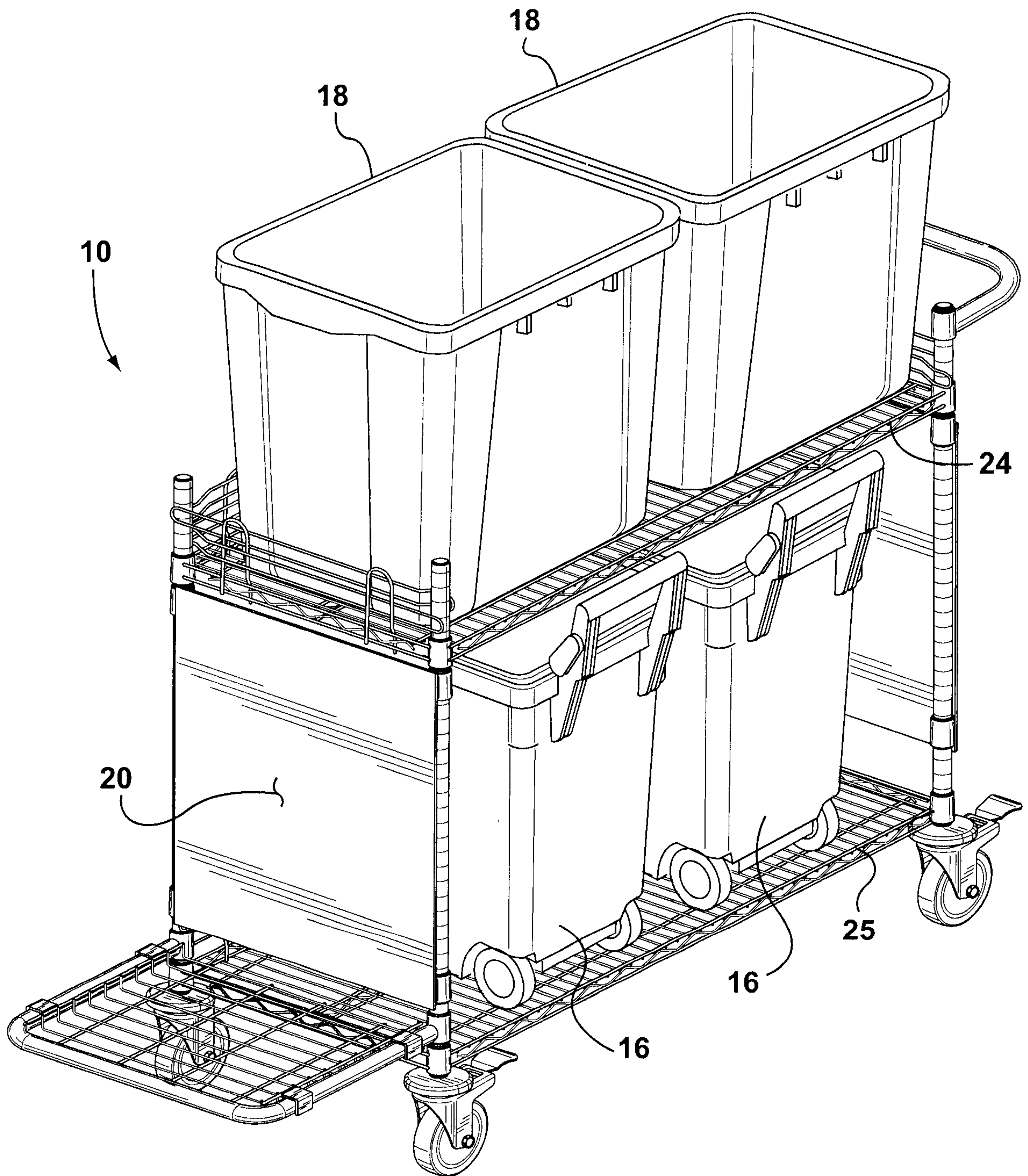


FIG. 8

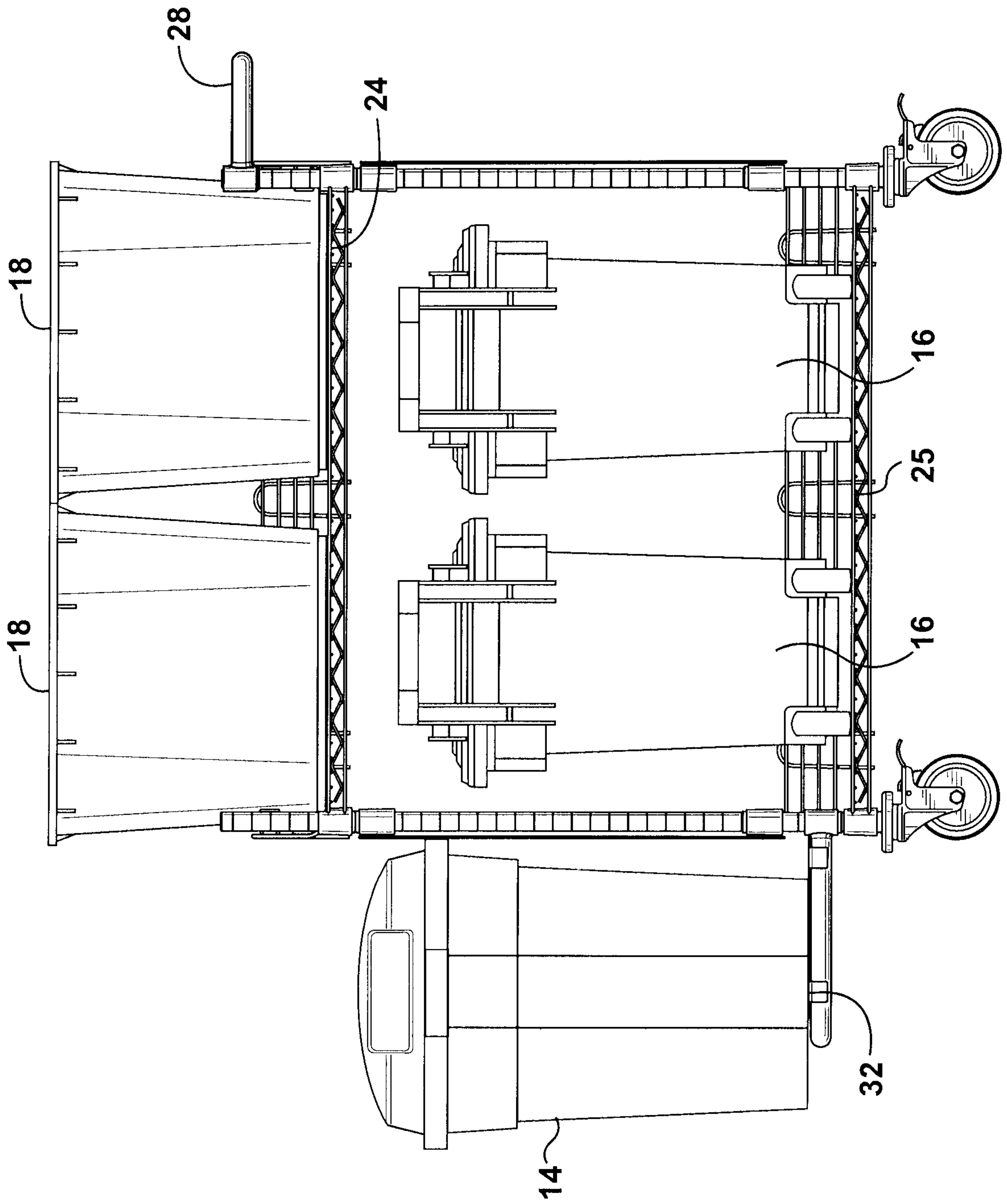


FIG. 9

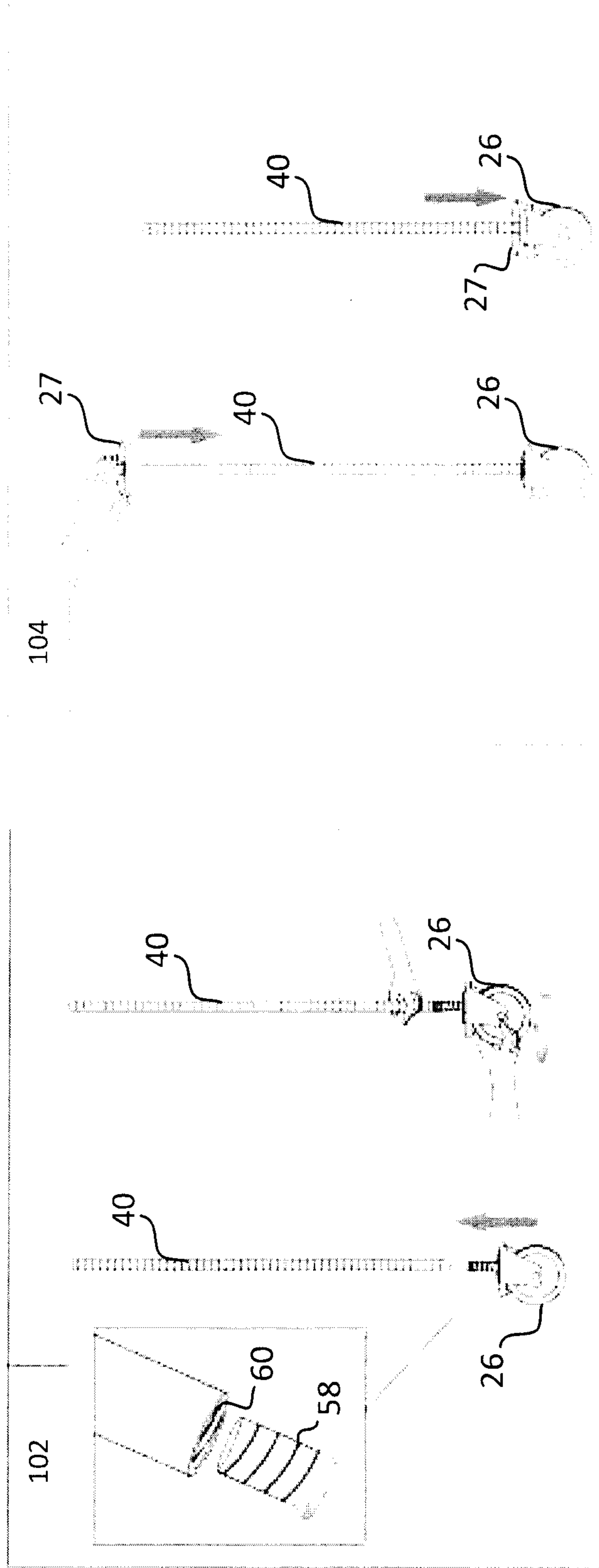


FIG 10A

FIG 10B

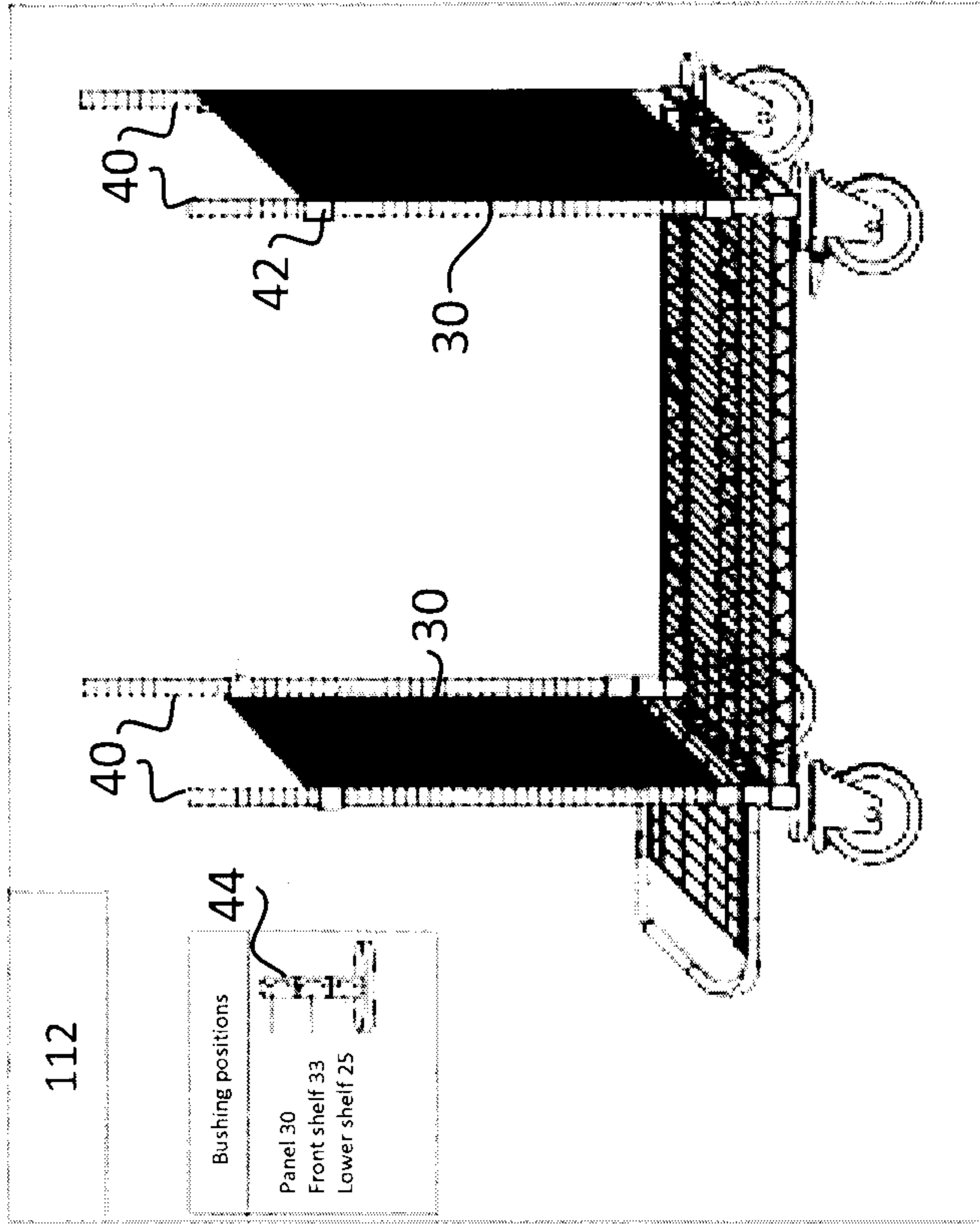


FIG 10F

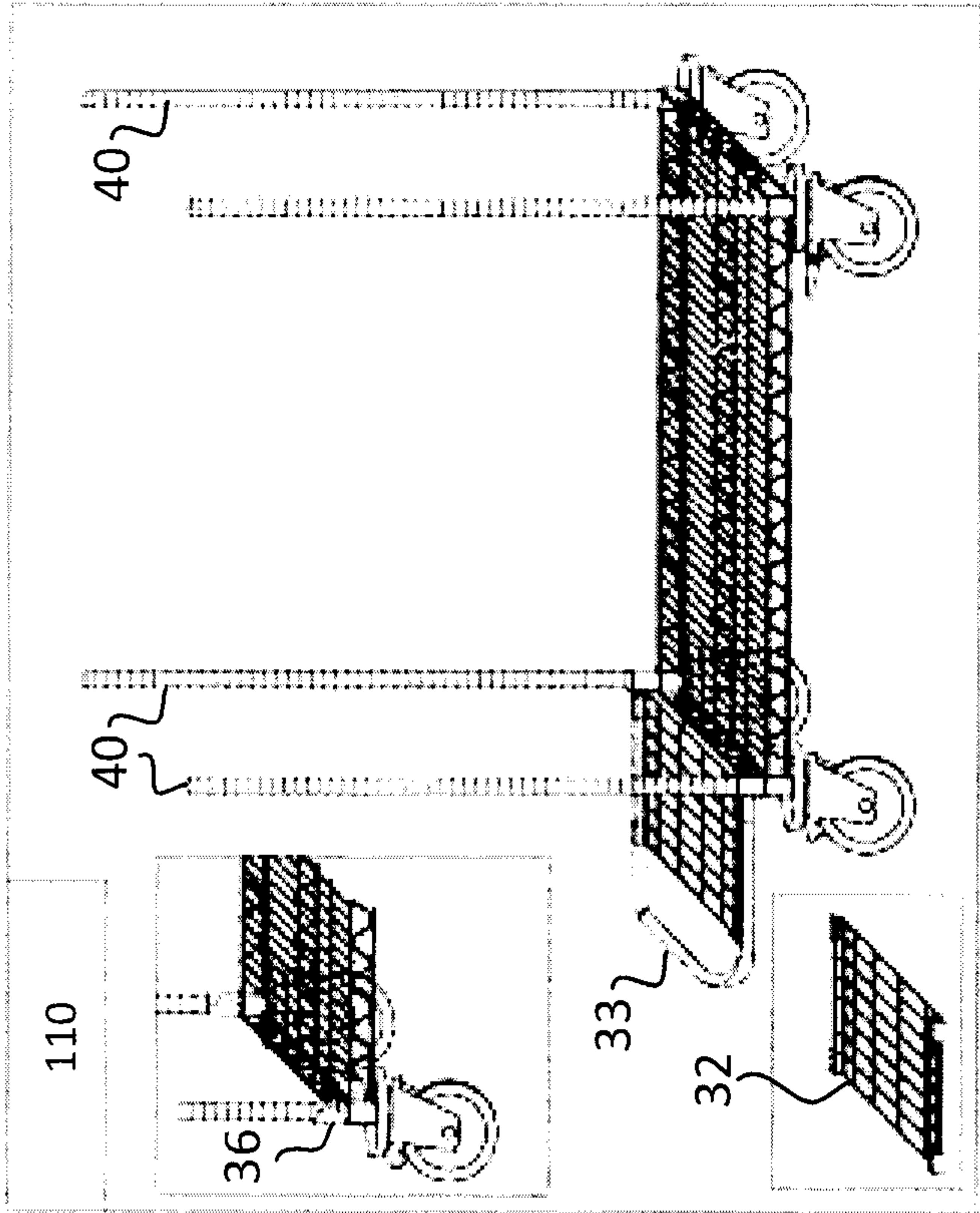


FIG 10E

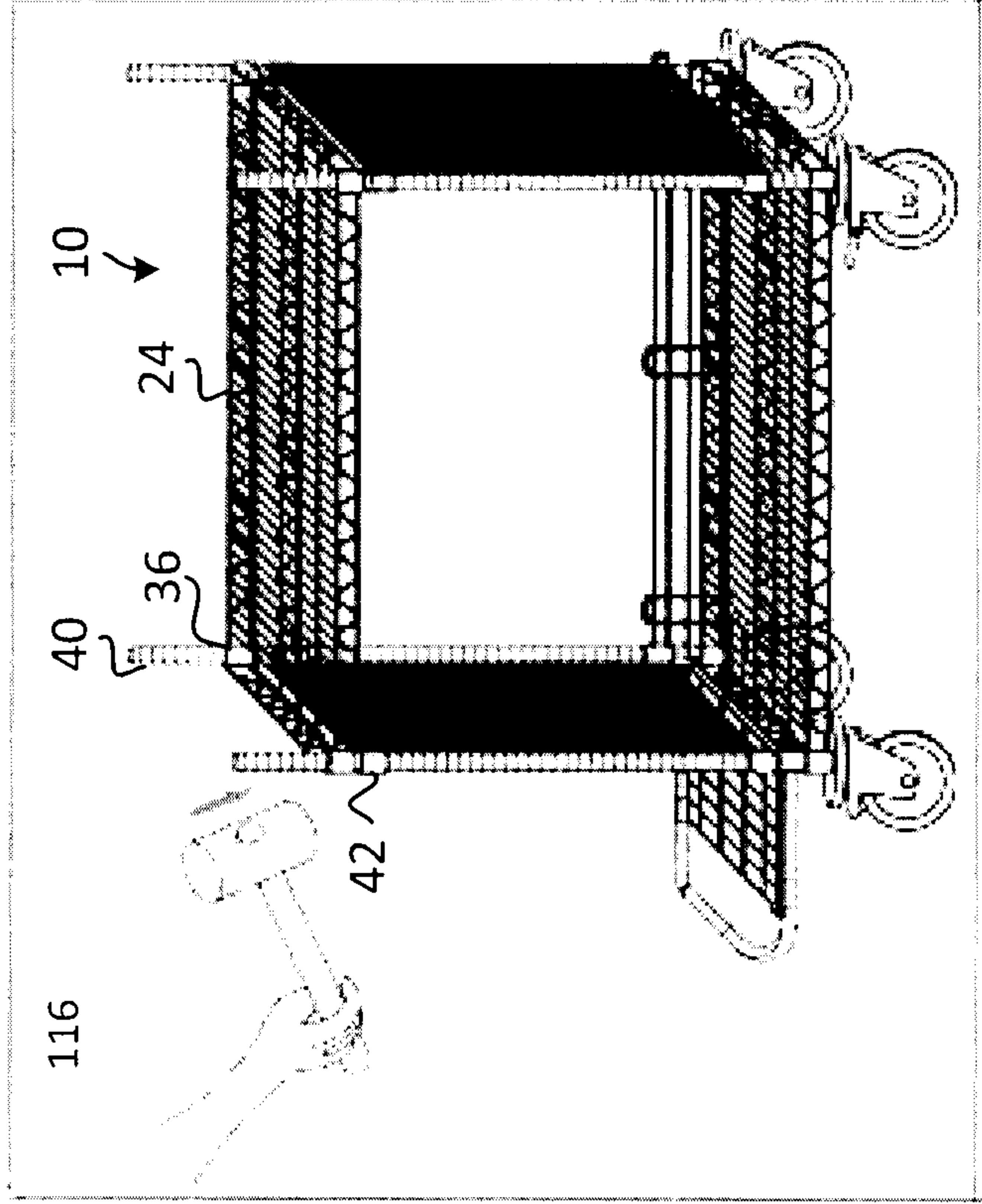


FIG 10H

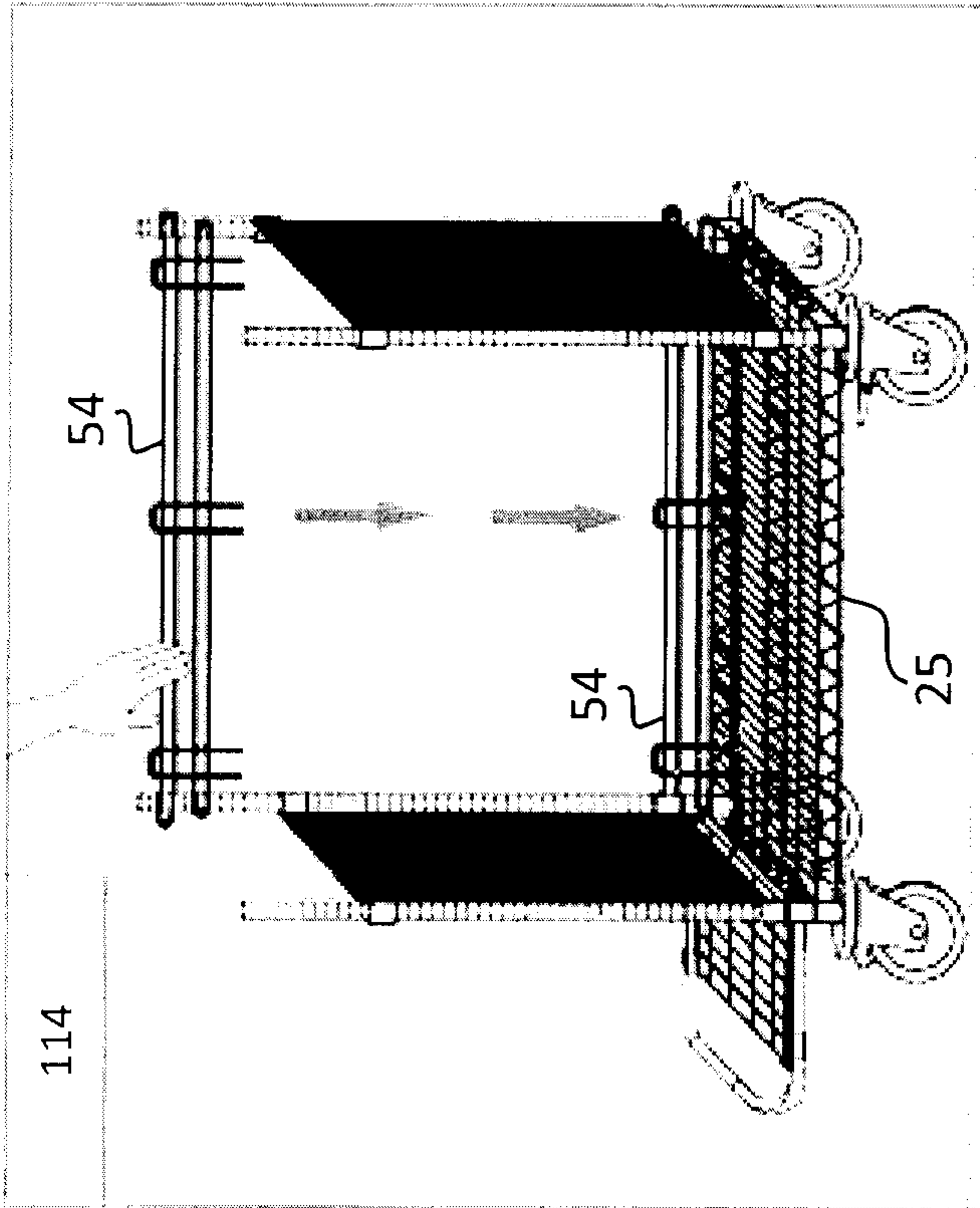


FIG 10G

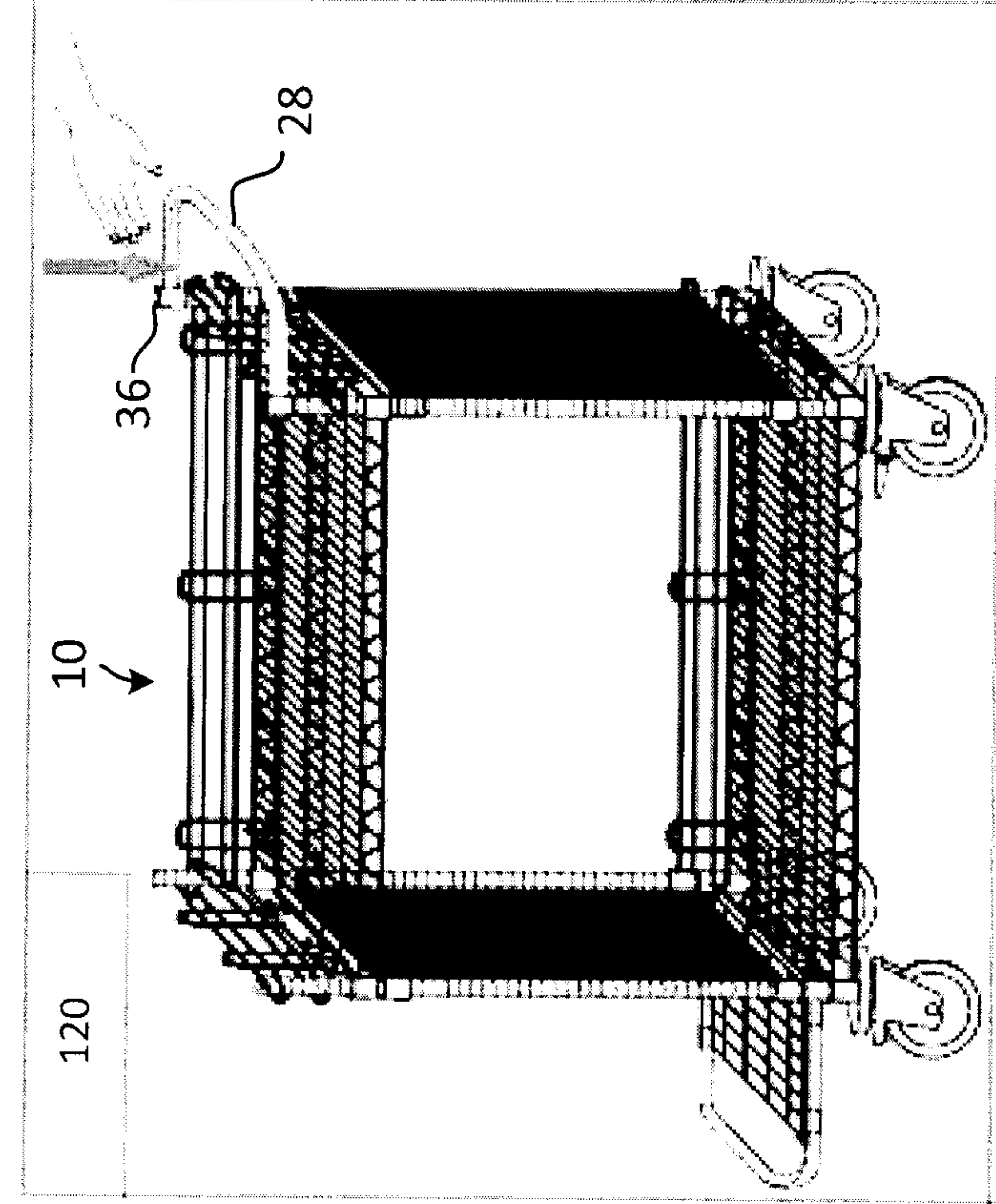


FIG 10J

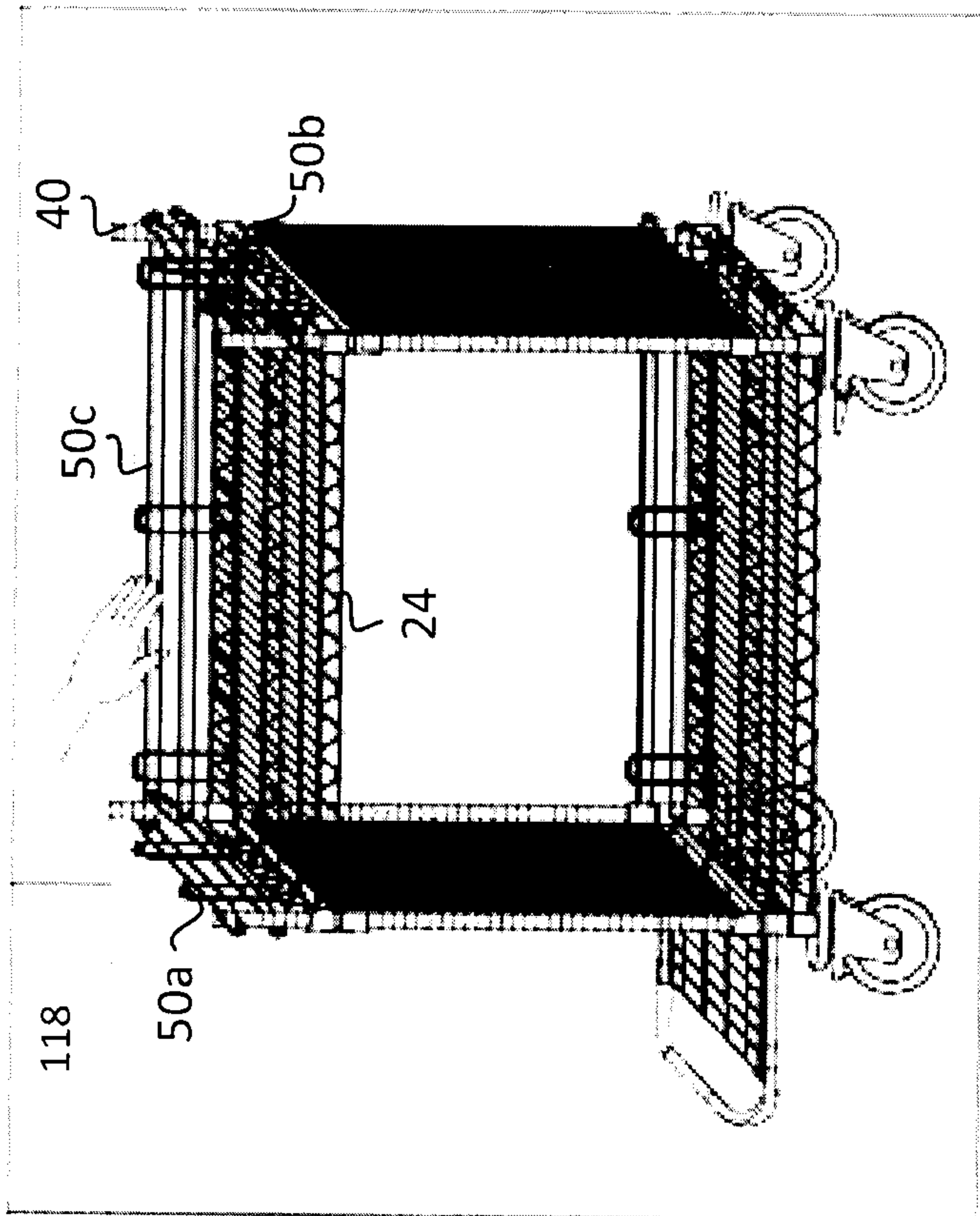


FIG 10I

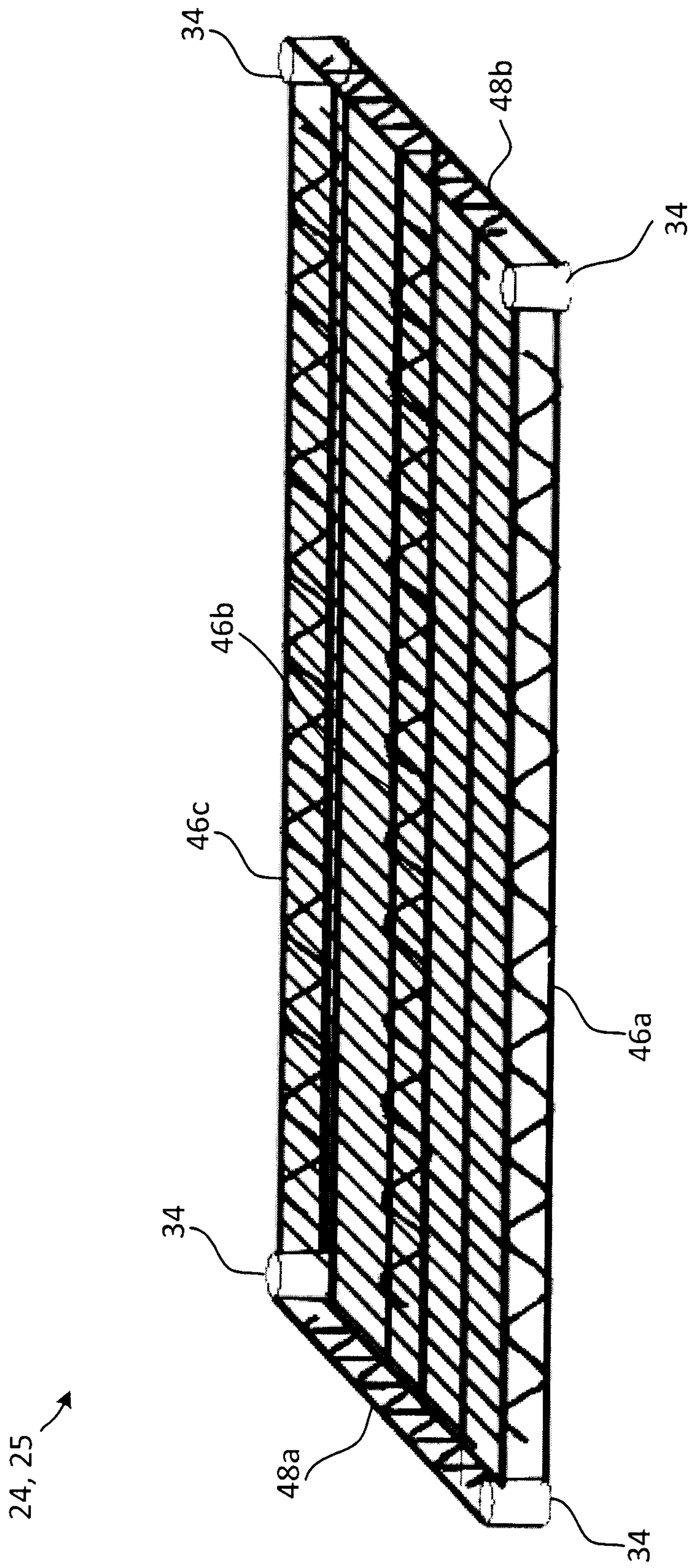


FIG. 11

