

No. 745,621.

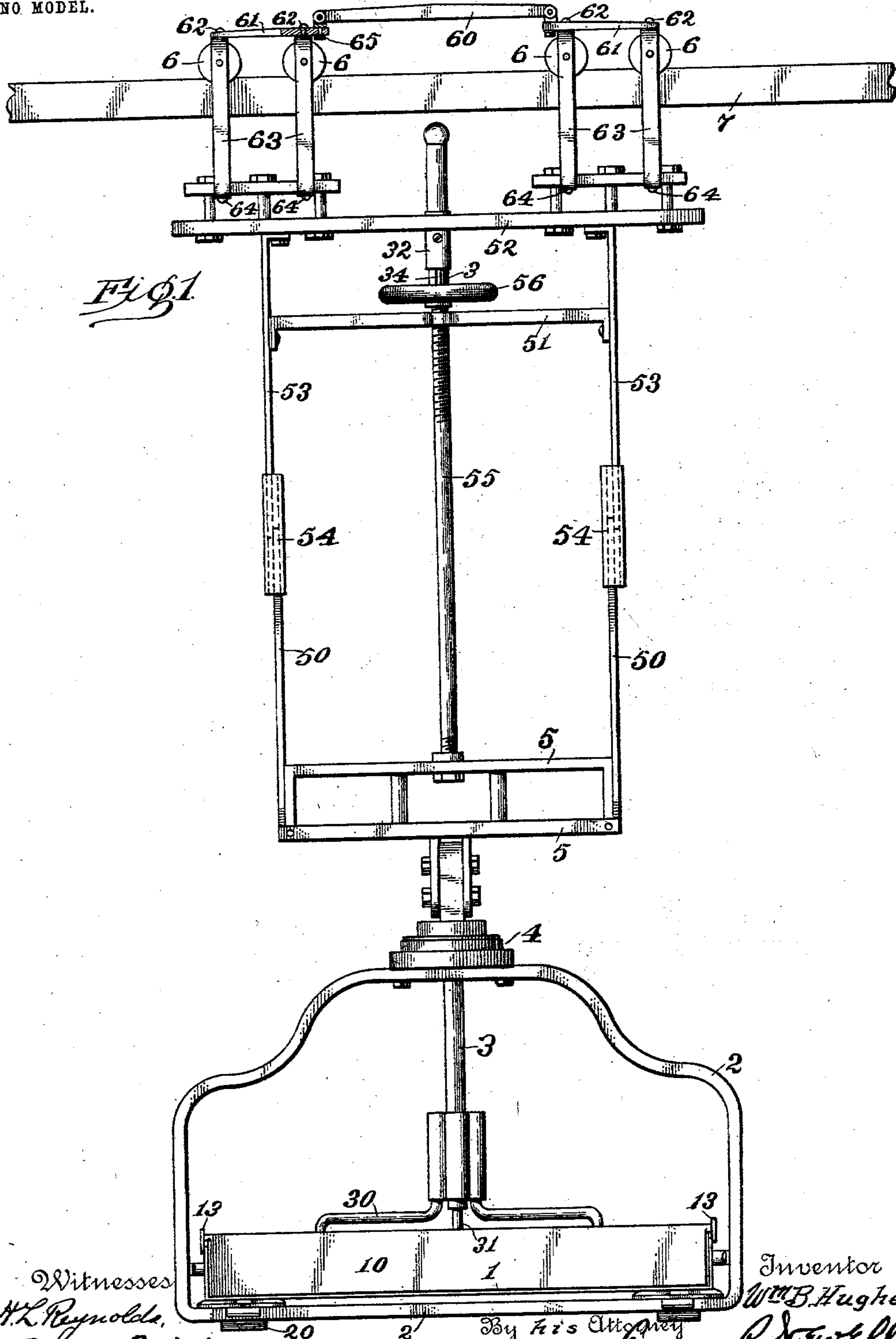
PATENTED DEC. 1, 1903.

W. B. HUGHES.
CARRIER FOR GLASSWARE OR LIKE ARTICLES.

APPLICATION FILED APR. 28, 1903.

2 SHEETS—SHEET 1.

NO MODEL.



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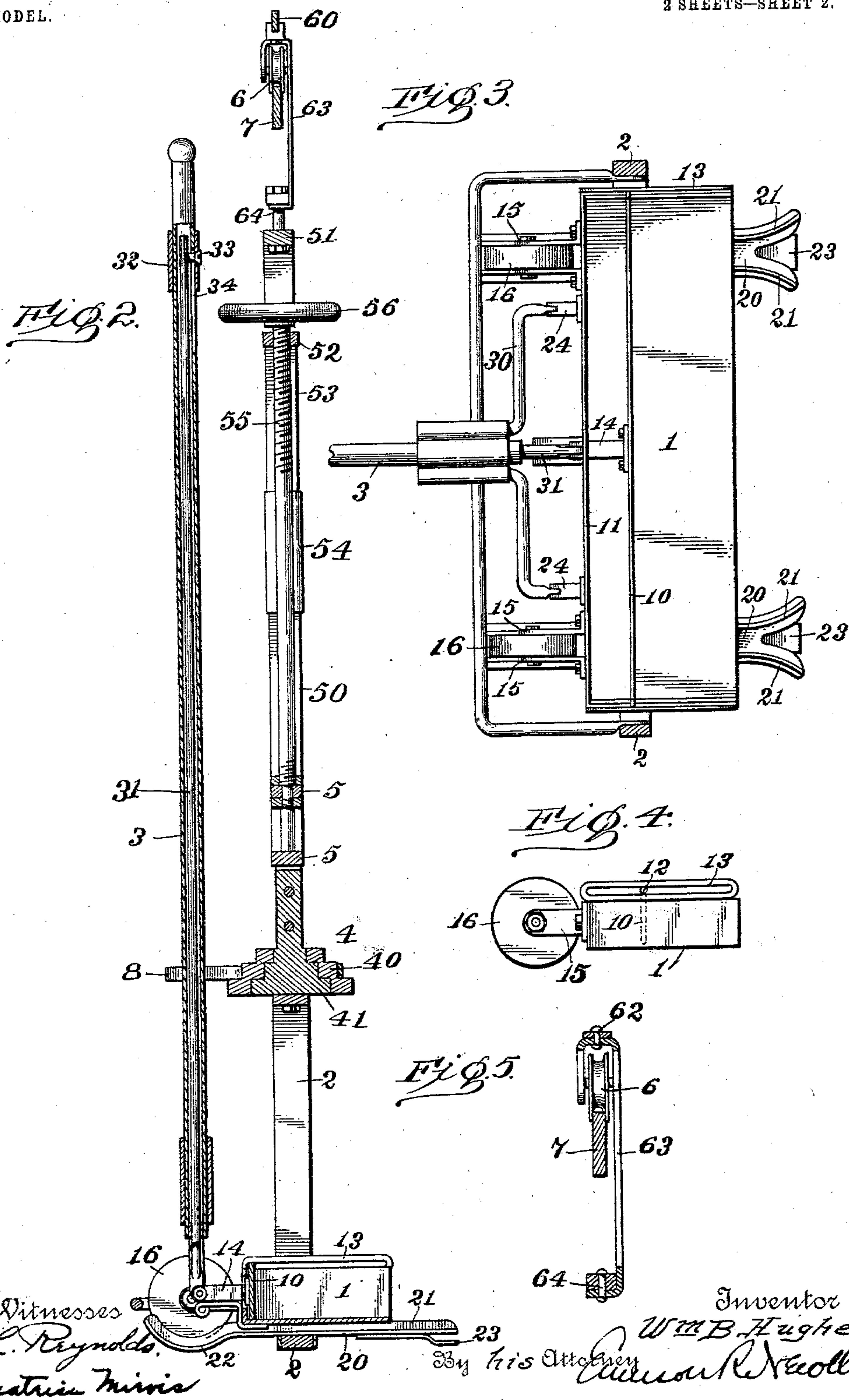
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

WILLIAM B. HUGHES, OF BROOKLYN, NEW YORK.

CARRIER FOR GLASSWARE OR LIKE ARTICLES.

SPECIFICATION forming part of Letters Patent No. 745,621, dated December 1, 1903.

Application filed April 28, 1903. Serial No. 154,698. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. HUGHES, a citizen of the United States, residing at Brooklyn, New York, (post-office address No. 836 Grand street, Brooklyn, New York,) have invented certain new and useful Improvements in Carriers for Glassware and Like Articles, of which the following is a clear, full, and exact description.

My invention relates to an improvement in devices for transporting and handling glassware or other like articles.

The object of my invention is to improve and simplify devices of this character.

My invention will be defined by the claims hereunto annexed.

In the manufacture of glassware—such, for instance, as bottles—it is necessary to shift them from place to place and to do this while they are hot and cannot be manually handled. My device is particularly designed for use under these conditions, although its effectiveness is not limited thereto or to handling such articles as are above mentioned. In my device I employ a tray which is provided with means whereby its contents may be removed without manually touching them and a carrier or support for said tray adapted to facilitate placing the tray upon or removing it from said support, together with a trolley or equivalent device by which the whole may be supported and moved from place to place.

In the drawings accompanying herewith I have shown my invention embodied in a form which is now preferred by me.

In the drawings, Figure 1 shows an elevation of my device. Fig. 2 is a sectional elevation taken at right angles to Fig. 1. Fig. 3 shows the tray in plan, the yoke supporting same being in section. Fig. 4 is an end elevation of the tray, and Fig. 5 is a sectional elevation taken through the trolley.

The tray 1 is in the form of a shallow box, having one of its long sides omitted. It is also provided with means whereby the contents thereof may be removed without necessitating manual contact therewith. Such means, as herein shown, consists of a pusher-bar 10, which extends the length of the tray and is adapted to be drawn back so as to contact with the inner surface of the remaining longitudinal side 11 of the tray. This

pusher is preferably guided upon the end walls of the tray, so as to maintain it securely in proper position. This result is herein shown as being secured by means of pins or projections 12 placed upon the ends of the pusher-bar and entering guide-slots 13, provided at the ends of the tray. The pusher-bar is reciprocated by means of a handle, which is hinged to an arm 14, projecting from the rear of said bar and extending through an opening in the rear side of the tray.

The tray is provided with rearwardly-extending arms 15, upon which are journaled wheels 16, one adjacent to each end of the tray. The lower edges of these wheels project somewhat below the lower surface of the tray. When the tray is removed to a table or similar surface, the open or front edge of the tray will rest upon the table; but the rear edge will be slightly raised and will be carried by the wheels 16. This facilitates sliding the tray upon the table, and the wheels also facilitate properly placing the tray upon its carrier or support. This carrier, as herein shown, comprises a yoke 2 of such size as to admit the tray between its sides and two trackways or channeled guides 20, carried by said yoke. These trackways have upwardly-projecting flanges 21, located one upon each side thereof and separated from each other a distance to freely receive the wheels 16 between them. The outer ends of these trackways have said flanges 21 flaring or curved outwardly, so as to make an entrance for the wheels of greater width than the body of the trackway. At their rearward ends the trackways are provided with depressions 22, adapted to receive the wheels 16, and thus hold the tray against removal without some little force is applied thereto. The forward ends of these trackways are designed to rest upon a table or other similar surface when the tray is to be removed from the carrier or to be replaced thereon. They are provided with means whereby they may be held in proper position against the edge of the table. Such means, as herein shown, consist of lips or stops 23, secured to the underside of the trackways and adapted to engage the edge and under surface of the table.

Extending rearwardly from the tray are ears or lugs 24, to which are pivoted lateral

extensions 30 from a handle 3. This handle is herein shown as consisting of a tube, and within this tube is placed a rod 31, which projects from the end thereof adjacent the tray and is pivotally connected with the rearwardly-extending arm 14 of the pusher. A sleeve 32 is mounted upon the tube 3 so as to slide freely thereon and is connected with the rod 31 within said tube by means of a pin 33, which passes through a slot 34 in the tube. By means of the particular form of handle described the tray and pusher may be moved as a whole off of or upon its carrier, and when desired the pusher may be operated so as to remove the contents of the carrier by sliding them out of the open side of the tray. The rear side of the tray is provided with a hole of sufficient size to accommodate the arm 14 and the end of the connected rod 31.

The yoke 2 is supported from an overhead trolley and in such manner that it may be swiveled or turned upon a vertical axis so as to face in any desired direction. Such a swivel connection is shown at 4. In this case the yoke is secured to the outer member 40 of the swivel, while the inner member 41 is connected with the overhead trolley.

The means for suspending the yoke from the trolley should be adjustable in length, so that the carrier may be made to exactly conform in height to the level of the tables or of the surfaces to and from which the bottles or other articles are to be moved. This result is herein attained by using a second yoke-like construction consisting of horizontal bars or a frame 5, to which vertical bars 50 are secured, and with this a similar frame consisting of the horizontal bars 51 52 and the vertical bars 53, corresponding in character to the bars 50. The ends of the bars 50 and 53 lie alongside of each other within a clip or guide 54, to one of which bars said clips are secured. The other of the vertical bars are free to move in said clip. The weight of the lower bars 5 and the yoke carried thereby is taken by a rod 55, which is secured to the bars 5 and passes through the bar 51. This rod 55 is threaded and has a hand-wheel 56 secured thereon and acting as a nut whereby the distance separating the bars 5 and 51 may be varied.

The trolley used in connection with this device should be of such a flexible character as will permit it to travel upon a trackway having short curves. I have shown a trolley which is provided with four wheels 6 and a frame provided with pivots, so that each wheel may turn upon an independent vertical axis. Each wheel 6 is journaled upon a vertical bar 63, which is preferably curved after the manner clearly shown in Fig. 5. This bar is connected at its lower end by means of a pivot 64 to the framework of the device. At its upper end each of the bars 63 is pivoted, by means of a pivot 62, to a horizontal bar 61, and these two bars are likewise connected, by means of a pivot 65 at the

inner ends thereof, to a bar 60. By these means the trolley-frame is made flexible, so that it may be bent to accommodate itself to a curve of any radius. This trolley is designed to run upon an overhead trackway, herein represented by the bar 7.

The operation of my device is as follows: While the tray is in place upon its carrier, the whole is moved along the front of the tables upon which the glassware is placed when made. As each table is reached the bottles or other glassware thereon are swept off upon the tray, and when the tray is filled it is taken to the annealing-furnace or wherever it is desired to deposit the bottles. When this point is reached, the tray-carrier is made to register with the edge of the table or other surface to which the articles are to be removed, whereupon the tray is removed from its carrier to said surface by means of its handle, which for this purpose is brought to a horizontal position, and when the tray has been placed at the point where it is desired these are removed by pushing on the rod 31, which operates the pusher. The tray after having been unloaded is returned to its carrier and the handle thrown upward into engagement with the catch 8. This catch consists of two somewhat separated spring bars or arms which when the handle is in place partially embrace it and may be separated to insert or remove the handle by reason of their spring character. In returning the tray to its carrier the flaring outer end of the channel facilitates the proper registry of the wheels 16 and the tray.

Hinging the handles to the tray enables long handles to be used, so that the tray may be inserted within a furnace, if desired, and at the same time enables these handles to be swung upward where they will not take up any extra room when not in use.

It is evident that many of the parts herein described might be replaced by other constructions which would serve the purpose as well, but which would yet be substantially the same as those herein shown and would fall within the scope of the invention as defined in the claims. I do not wish to be limited to the exact structure herein shown and described, as the same is given merely as an illustration of a preferred form of construction.

What I claim is—

1. A carrier for glassware and like articles, comprising a tray, a tray-carrier permitting removal of the tray and a pusher permanently carried by the tray and adapted to remove the articles therefrom.

2. A carrier for glassware and like articles, comprising a movable tray-carrier, a tray separable therefrom and a pusher mounted upon said tray and adapted to remove the contents therefrom.

3. A carrier for glassware and like articles, comprising a movable tray-carrier, a tray having guiding engagement with the tray-carrier,

a pusher permanently carried by the tray and adapted to remove the contents therefrom and means for registering the said tray-carrier with a table, whereby the tray may be removed to the table and then the pusher be used to remove the articles from the tray.

4. A carrier for glassware and like articles, comprising a movable tray-carrier, a tray adapted to be carried thereon and to be removed therefrom, a pusher mounted upon said tray having a guiding engagement therewith and a handle attached to the tray and provided with means whereby the pusher may also be operated.

5. A carrier for glassware and like articles, comprising a trolley adapted to run upon an overhead track, a tray-carrier suspended from said trolley, a tray thereon for the reception of the glassware or other articles and open at one side, a pusher mounted upon the tray and adapted to remove the contents therefrom and a handle for said tray having an attachment whereby the pusher may be operated.

6. A carrier for glassware and like articles, comprising an overhead trolley, a tray, a tray-carrier suspended from the trolley and adapted to permit horizontal removal of the tray therefrom, and a pusher carried by the tray and adapted to remove the articles therefrom.

7. A carrier for glassware and like articles, comprising a tray, a pusher adapted to remove the contents therefrom, a tray-carrier and a lip carried by said tray-carrier and adapted to pass beneath the edge of a table-top or like support.

8. A carrier for glassware and like articles, comprising a tray, a tray-carrier, guiding members upon carrier and tray permitting sliding the tray upon and off of its carrier, and means for registering one side of said tray-support with a table to permit the removal of the tray to the table and back.

9. A carrier for glassware and like articles, comprising a tray, a tray-carrier, and a trackway therefor, said tray-carrier and tray having a guiding engagement permitting horizontal removal of the tray therefrom and a handle hinged to the tray and adapted to be swung into a vertical position.

10. A carrier for glassware and like articles, comprising an overhead trolley, a tray, a tray-carrier having a guiding engagement with said tray and connections from said carrier to the trolley containing a swivel.

11. A carrier for glassware and like articles, comprising a tray, a tray-carrier permitting horizontal removal of the tray, an overhead trolley and a connection of adjustable length between said trolley and tray-carrier having therein a swivel.

12. A carrier for glassware and like articles, comprising a trolley, a tray-carrier having a trackway thereon, a tray adapted to rest on said trackway, wheels carried by the tray and running in said trackway, and stops carried by the trackway and adapted to engage the

edge of a table or other surface to which the tray is to be transferred.

13. A carrier for glassware and like articles, comprising a trolley, a tray-carrier having a trackway thereon, a tray adapted to rest on said trackway, wheels carried by the tray and running in said trackway, said trackway having depressions for the reception of the wheels, and stops carried by the tray-support and adapted to engage the edge of a table or other surface to which the tray is to be transferred.

14. A carrier for glassware and like articles, comprising a tray-carrier, a tray open at one side, a pusher carried by said tray, means for moving the carrier from place to place, and a handle containing two parts longitudinally movable one upon the other and hinged, respectively, one to the tray and the other to the pusher.

15. A carrier for glassware and like articles, comprising a trolley, a tray-carrier having a trackway thereon, a tray adapted to rest on said trackway, wheels carried by the tray and running in said trackway, stops carried by the tray-carrier adapted to engage the edge of a table or other surface to which the tray is to be transferred, and a handle hinged to said tray and adapted to swing into a substantially vertical position.

16. A carrier for glassware and like articles, comprising a tray, a tray-carrier, a movable support therefor, a pusher carried by the tray and adapted to remove the articles therefrom, and a handle for said tray adapted to be swung into horizontal or vertical positions.

17. A carrier for glassware and like articles, comprising a trolley, a tray-carrier suspended therefrom, a tray carried by the said support, a pusher carried by the tray and adapted to remove the articles therefrom, and handles for said tray and the pusher adapted to be swung into either horizontal or vertical positions.

18. A carrier for glassware and like articles, comprising a trolley, a tray-carrier suspended therefrom, a tray carried by the said carrier, a pusher carried by the tray and adapted to remove the articles therefrom, handles for said tray and the pusher adapted to be swung into either horizontal or vertical positions, and a catch adapted to hold said handles in vertical position.

19. A carrier for glassware and like articles, comprising a trolley, a yoke suspended therefrom, said suspending means containing a swivel, tracks carried by said yoke, and a tray having wheels on one side thereof adapted to engage said tracks.

20. A carrier for glassware and like articles, comprising a trolley, a yoke suspended therefrom, said suspending means containing a swivel, tracks carried by said yoke and having outwardly-flaring guides at their outer ends, and a tray having wheels on one side thereof adapted to engage said tracks.

21. A carrier for glassware and like articles, comprising a trolley, a yoke suspended there-

from by mechanism containing a swivel, tracks carried by said yoke and having outwardly-flaring guides at their outer ends, and a tray having wheels on one side thereof adapted to engage said tracks, said tracks having depressions adapted to receive the wheels when the tray is in place thereon.

22. A carrier for glassware and like articles, comprising a trolley, a tray-carrier suspended therefrom and having channeled trackways flaring at their outer ends, and a tray having wheels adapted to enter said trackway.

23. A carrier for glassware and like articles, comprising a trolley, a tray-carrier suspended therefrom and provided with trackways, a tray having guiding engagement with said trackways, a pusher adapted to remove the articles from the tray, and two handles hinged one to the tray and the other to the pusher.

24. A carrier for glassware and like articles, comprising a trolley, a tray-carrier suspended therefrom and provided with trackways, a tray adapted to have guiding engagement

with said trackways, a pusher adapted to remove the articles from the tray and a handle comprising a tube and a rod slidable therein and having hinged connection one with the tray and the other with the pusher.

25. A carrier for glassware and like articles, comprising a tray, a tray-carrier, a pusher adapted to remove the articles from the tray, a handle comprising a tube and a rod slidable therein, one hinged to the tray and the other to the pusher.

26. A carrier for glassware and like articles, comprising a tray open at one side, a tray-carrier, a pusher-plate extending across the tray, and a handle comprising a tube and a rod slidable therein, one hinged to the tray and the other to the pusher-plate.

Signed at New York city this 25th day of April, 1903.

WM. B. HUGHES.

Witnesses:

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