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Luoni

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[54] **TROLLEY ADAPTED TO HOLD OR TO EXHIBIT THINGS OR ARTICLES OF DIFFERENT KINDS**

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[52] **U.S. Cl.** **280/79.2,** 312/125, 312/305

[51] **Int. Cl.** **B62d 53/06**

[58] **Field of Search** 280/79.2, 79.1, 62; 312/125, 305, 202; 108/103, 139; 211/131, 163, 144

[56] **References Cited**

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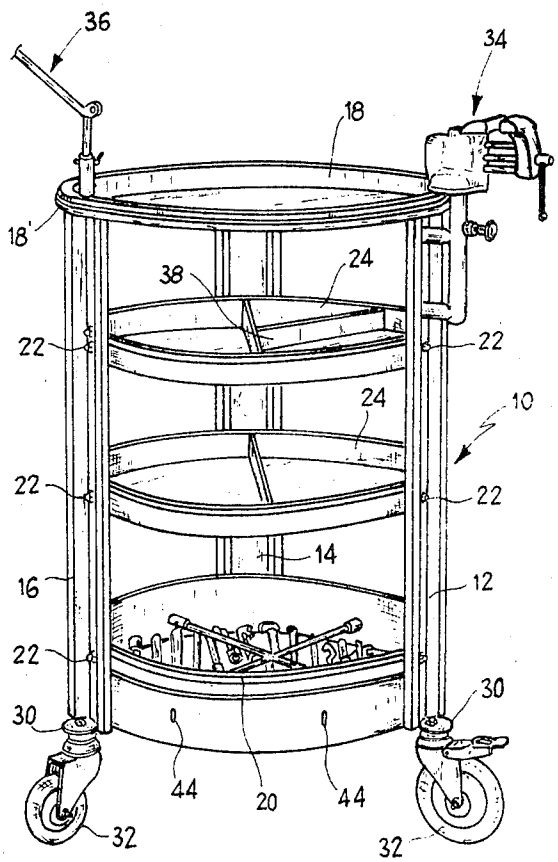
[57] **ABSTRACT**

A tool-holder trolley including several vertically stacked tray-like horizontal containers held by three uprights, the upper and lower containers being fixed to the uprights and the intermediate containers being revolvable on bearings carried by the uprights. The uprights have roller wheels at their lower extremities.

9 Claims, 3 Drawing Figures



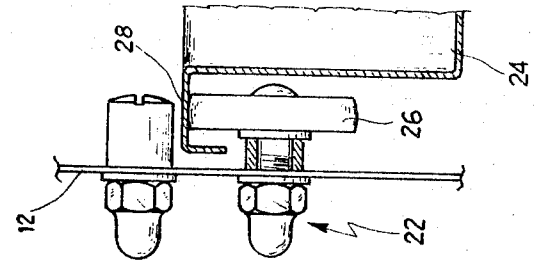


FIG.3

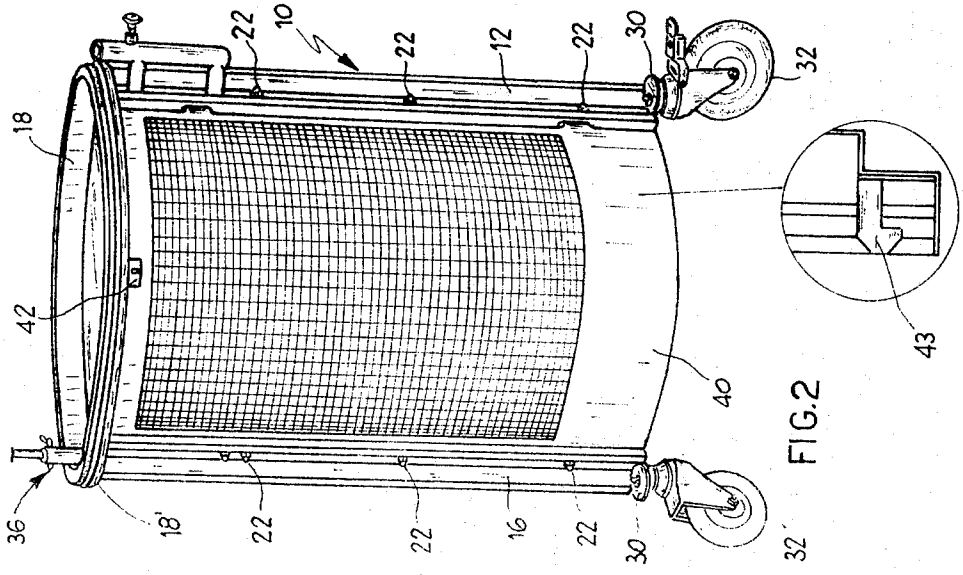


FIG.2

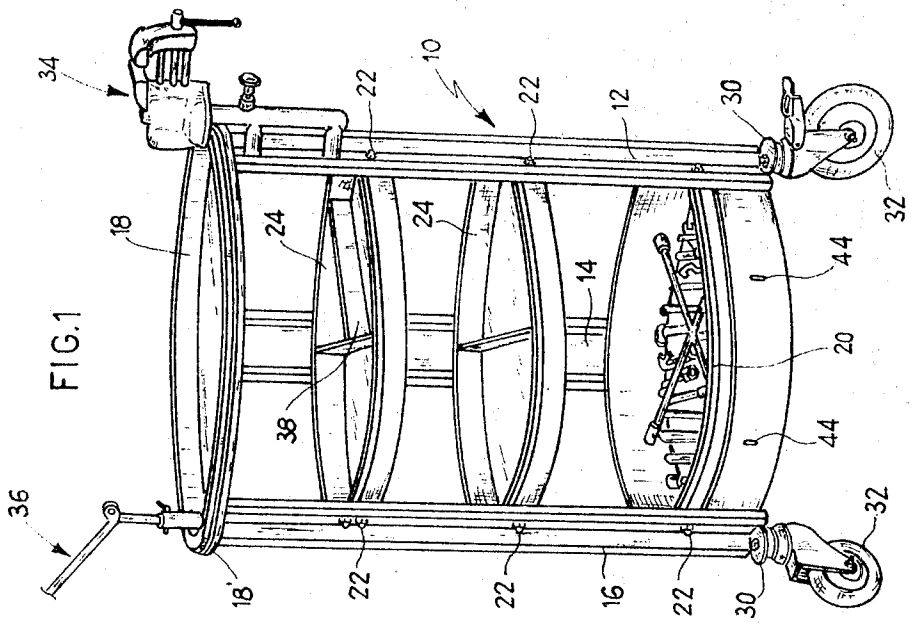


FIG.1

TROLLEY ADAPTED TO HOLD OR TO EXHIBIT THINGS OR ARTICLES OF DIFFERENT KINDS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention concerns a trolley, adapted to hold or to exhibit things or articles of different kinds, or to similar purposes, of the type comprising a plurality of uprights, by which one or more vertically spaced tray-like containers are supported, being such trolley designed preferably, though not exclusively, to hold tools or the like, and thus utilized as an aid to workers, as e.g. mechanics, machinists, coachbuilders, garage-men and others.

2. Description of the Prior Art

Are just known trolleys adapted to hold tools or the like in a plurality of containers. Since these containers of early trolleys are rigidly mounted on uprights, said containers, together with the tools cannot be moved in a useful position without moving the whole trolley.

BRIEF SUMMARY OF THE INVENTION

The present invention is directed to a trolley of the type as defined above, showing a novel and improved conformation and mutual arrangement of parts, thereby enhancing the convenience and usefulness thereof, and in particular making readily accessible the things laid into the tray-like containers, whatever the position thereof in respect of the operator may be.

For the attainment of the above and further purpose which will become apparent in the course of following description, the trolley according to the invention and of the type as previously defined, is essentially characterized in that their uprights are arranged radially and equidistant from a common vertical axis, and parallel thereto, while one or more circular shaped containers are revolvingly supported by bearings, engaged within circumferential seats with which same containers are formed, and fastened to said uprights in planes tangent to said seats.

In a preferred embodiment form of the invention, the preferably three uprights are kept mutually spaced and retained in the stated positions by stationary tray-like containers fastened to both ends thereof, while the bearings by which the revolving containers are supported, can be removably fastened to the uprights in the needed positions. Therefore, all things held in said revolving containers are readily accessible to operator, which can manually turn them, while by the use of said rotary supports, the capacity of containers can be integrally utilized, without the hindrance and the difficulties caused by the presence of a central upright.

The trolley is preferably fitted with casters, which supports are welded or otherwise fastened to lower ends of uprights, being one of said casters fitted with means by which the swivelling motion can be prevented, while means are provided on another of said casters for simultaneously preventing the swivelling motion and braking the wheel, whereby to define a direction of motion of trolley, and to prevent the motion thereof, respectively.

In particular, in the case of foreseen utilization of trolley according to the invention, i.e., as an aid to workers, same carriage can be equipped with one or more accessories, by which in particular the stationary tray-like top container can be utilized as work bench.

Such accessories may be e.g. a vice, a lamp or the like. Moreover, according to intended utilizations, recourse may be made to trays for small wares, to be placed within the stationary or rotary containers, as well as to trolley closing walls fitted between the uprights one of which fitted as a door that can be locked.

The invention will be now in the following description of an embodiment form thereof, as shown in the accompanying drawing, being both description and drawing given as a non restrictive example. In said drawing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a trolley according to the invention.

FIG. **2** shows the same trolley, when closed by side walls, and:

FIG. **3** is a enlarged part sectional side elevation of a detail of same trolley, concerning the support of revolving containers.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to accompanying drawing, the trolley **10** as shown therein, consists of three vertical uprights **12, 14** and **16,** substantially channel-shaped and maintained radially equidistant from a common vertical axis by two circular tray-like containers **18** and **20,** that are fastened, e.g. by welding, to both ends of said uprights, being the top container fitted with a shock-absorbing rubber ring **18'**.

Vertically spaced holes are formed in said uprights **12, 14, 16** in common horizontal planes thereof to accomodate screws and bolts **22,** by which support means for one or more further tray-like container **24** can be retained at the required levels between the stationary containers **18–20.** As shown in more detail in the FIG. **3,** a ball bearing **26** is retained by each screw **22,** being such bearing fitted with its axis horizontal and extending itself in a vertical plane tangent to a circumferential guide with which said containers are formed. Again as shown in the FIG. **3,** said bearings **26** are engaged in seats **28,** which are formed by having the top edges of tray-like containers **24** U-bent outwardly.

Thus, thanks to above stated mode of fitting, said traylike containers **24** can be easily turned about said common vertical axis, to make directly accessible all parts thereof, without the encumbering presence of a central upright.

Fastened — e.g. by welding — at the lower ends of uprights **12, 14, 16** are supports **30,** wherein casters **32** are fitted, being one of said casters provided with a positioning device by which the swivel can be locked, while leaving the wheel free, whereby to define a given direction of trolley motion, and being another caster fitted with a device by which both the swivel and the related wheel can be locked, whereby to keep the trolley stopped in a required position.

According to intended utilizations, the trolley as shown could be equipped with one or more accessories. Thus e.g., when the trolley is intended to serve as an aid for a mechanician, means are provided for fitting a vice **34** and a lamp **36,** that cooperate to the utilization of stationary top container **18** as work bench, while small trays **38** can be placed into the revolving containers to accomodate e.g. small metal wares.

As shown in the FIG. **2,** bent closing walls can be added to trolley whereby to prevent the access to ob-

jects placed in the containers **20** and **24.** Two of such walls can be inserted from below between two uprights, and are secured in position by screws engaged into threaded holes with which the container **20** is formed. The third wall is removably fitted; it can be fitted in the related position and serves as closing door, which is provided with fastening hooks **43,** that can be engaged into holes **44,** with which the container **20** is expressly formed, and with a locking device comprising a lock **42.** Moreover, latter wall can be fitted in the position already taken by anyone of other walls, resting thereagainst, without any material increase in the overall sizes of trolley, whereby to allow a free access to containers **20** and **24.**

It is to be understood that many changes and modifications in the previously disclosed trolley, according to intended uses which, in addition to those as specifically defined, may include: the exhibition of different articles, the custody thereof on the case of a movable bar or the like, and further similar applications.

What we claim is:

1. A tool-holder trolley comprising:

A a tray-like circular top stationary container having a squat upstanding circular side wall,

B a tray-like circular base stationary container having a squat upstanding circular side wall,

C said top and base containers being of the same diameters,

D plural tray-like circular intermediate revolvable containers each having a squat upstanding side wall,

E each intermediate container having an annular horizontal rim extending radially outwardly from the top edge of its side wall,

F said containers being arranged in parallelism and in spaced vertically stacked relationship about a common vertical axis,

G at least three vertical uprights, said uprights being equiangularly circumferentially spaced from one another,

H means securing said uprights to the side walls of said base and top containers to maintain the same in said stacked relationship,

I different sets of rolling supports, one for each of said intermediate containers, each set including a different rolling support for each upright, and means securing said rolling supports to said uprights for rotation about horizontal axes extending radially from said vertical axis, all of the horizontal axes for each set of rolling supports being in a common horizontal plane for that set,

J the rims of each intermediate revolvable container resting on a different set of rolling supports whereby the intermediate containers can revolve about said vertical axis independently of each other and in the absence of a central shaft, and

K roller wheels beneath said base container to permit the tool-holder to be rolled about on a horizontal surface.

2. A trolley according to claim **1,** wherein the uprights are kept mutually positioned and spaced by the stationary tray-like container, fastened thereto.

3. A trolley according to claim **2,** wherein said stationary containers are fastened to top ends and to bottom ends, respectively, of said uprights.

4. A trolley according to claim **1,** wherein a plurality of means is provided on said uprights to allow for the removable securing of revolving container supporting rolling supports thereto.

5. A trolley according to claim **1,** wherein the rim of each revolving container has a downwardly depending circular skirt to form with the rim an annular track which can ride about the associated set of rolling supports.

6. A trolley according to claim **1,** wherein three uprights are utilized.

7. A trolley according to claim **1,** wherein the roller wheels are casters and wherein means is provided to lock the swivelling motion of at least one of said casters, and to simultaneously lock both the swivelling motion and rotary motion of at least another of said casters.

8. A trolley according to claim **1,** wherein walls are fitted to close the spaces between said uprights, at least one of said walls acting as a lockable door that can be removed and inserted into the space already taken by anyother of closing walls, whereby the overall sizes of open trolley are not materially increased over those of closed trolley.

9. A trolley according to claim **1,** wherein at least one accessory is provided, in particular for the utilization of the stationary top container as a work bench.

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