May 30, 1950 W. JAFFA 2,509,736

TOY WAGON

Filed Oct. 2, 1946

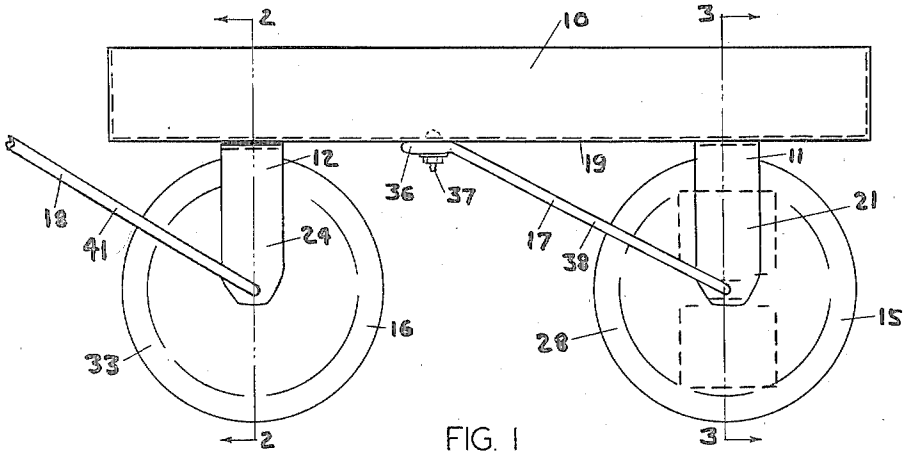


FIG. 1

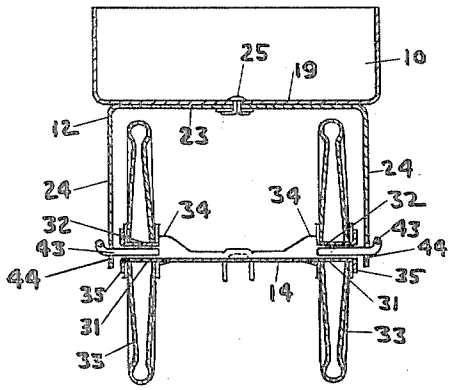


FIG. 2

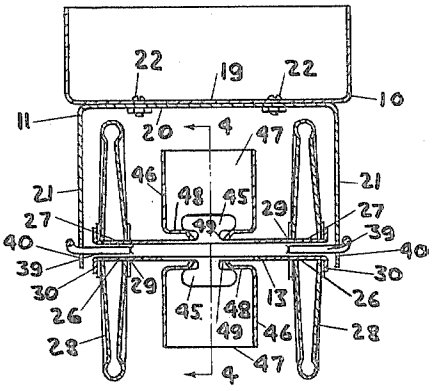


FIG. 3

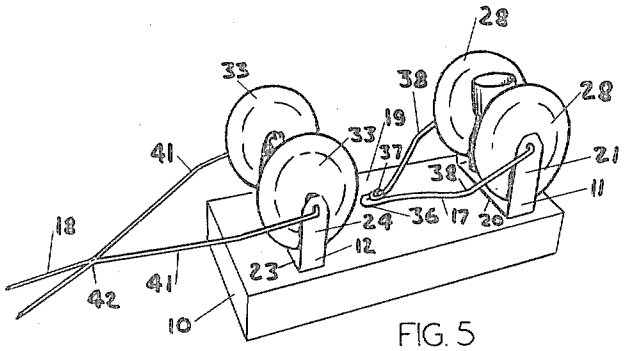


FIG. 5

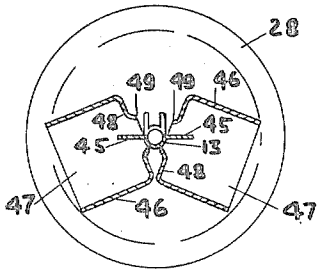


FIG. 4

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TOY WAGON

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14 Claims. (Cl. 280—87.01)

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This invention has relation to a toy wagon.

An object of the invention is to provide a toy wagon which will be of novel and improved construction.

A further object is to provide a toy wagon wherein will be incorporated desirable and improved features and characteristics of construction novel both as individual entities of the toy wagon and in combination with each other.

And a further object is to provide a toy wagon which will consist of elements as hereinafter set forth.

With the above objects in view, as well as others which will appear as the specification proceeds, the invention comprises the construction, arrangement and combination of parts as now to be fully described and as hereinafter to be specifically claimed, it being understood that the disclosure herein is merely illustrative and intended in no way in a limiting sense, changes in details of construction and arrangement of parts being permissible so long as within the spirit of the invention and the scope of the claims which follow.

In the accompanying drawing forming a part of this specification,

Fig. 1 is a side elevational view, partially broken away, of a toy wagon made according to the invention;

Fig. 2 is a vertical sectional view, taken substantially on line 2—2 in Fig. 1;

Fig. 3 is a vertical sectional view, taken substantially on line 3—3 in Fig. 1;

Fig. 4 is a detail sectional view, taken as on line 4—4 in Fig. 3; and

Fig. 5 is a perspective view, on a reduced scale, disclosing the toy wagon in upside down position.

With respect to the drawing and the numerals of reference thereon, the toy wagon of the present invention includes a body 10, rear and front supporting straps, denoted 11 and 12 respectively, for said body 10, rear and front axles, represented 13 and 14, respectively, rear and front sets, designated 15 and 16, respectively, of spaced apart wheels, a supporting and reinforcing piece 17, and a handle piece 18.

The wagon body 10, of rectilinear configuration as disclosed, includes a flat base or bottom wall 19 and spaced apart side and end walls extending upwardly from said base or bottom wall.

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The rear supporting strap 11 is constituted as an inverted U-shape member, of any rigid material suitable to its purpose, having a horizontal base portion 20 and downwardly extending arms 21, 21 integral with and at right angular relation to the base portion 20. Said base portion 20 of the rear supporting strap 11 is disposed transversely of the base or bottom wall 19 of the wagon body 10 and is secured to said base or bottom wall 19, against its lower surface, as by spaced apart rivets 22, 22. The downwardly extending arms 21, 21 of said rear supporting straps 11 are, respectively, adjacent the opposite sides of said wagon body, beneath the base or bottom wall 19 and spaced inwardly of its side edges in the disclosure as made.

The front supporting strap 12 also is constituted as an inverted U-shape member, of any rigid material suitable to its purpose, having a horizontal base portion 23 and downwardly extending arms 24, 24 integral with and at right angle relation to the base portion 23. Said base portion 23 of the front supporting strap 12 is adapted selectively to be disposed transversely of the base or bottom wall 19 of the wagon body 10 and at other angular relations to said base or bottom wall 19. To this end, the midlength of the base portion 23 is pivotally connected, as by a vertical pin 25, to the base or bottom wall 19 of the wagon body, so that the lower surface of said base or bottom wall rests upon said base portion 23, for rotative movement of the front supporting strap 12 in a horizontal plane, about the vertical pin 25 as an axis, relative to said wagon body. The downwardly extending arms 24, 24 of said front supporting strap 12 are, respectively, adapted to be adjacent the opposite sides of the wagon body, beneath said base or bottom wall 19 and spaced inwardly of its side edges, when the base portion 23 of the front supporting strap 12 is disposed transversely of said wagon body.

The rear axle 13 is constituted as an elongated member of suitable rigid material including cylindrical hollow end portions 26, 26 which are alined with each other in direction longitudinally of said rear axle and provide interior cylindrical surfaces, designated 27, 27, within said cylindrical hollow end portion 26, 26, respectively.

The set 15 of rear wheels consists of spaced apart wheels 28, 28 which are rigidly fixed upon exterior surfaces of the cylindrical hollow end portions 26, 26, respectively. As shown, said rear axle 13 includes integral stop pieces 29, 29 at the inner sides of and against the wheels 28, 28, and outer end parts 30, 30 of the cylindrical hollow end portions 26, 26 are upset in direction away from said cylindrical hollow end portions 26, 26 against outer surfaces of said wheels 28, 28, at the locations of the wheel centers, thus to cause the wheels 28, 28 to be rigidly fixed to the rear axle 13.

Likewise, the front axle 14 is constituted as an elongated member of suitable rigid material including cylindrical hollow end portions 31, 31 which are alined with each other in direction longitudinally of said front axle and provide interior cylindrical surfaces, represented 32, 32, within said cylindrical hollow end portions 31, 31, respectively.

The set 16 of front wheels consists of spaced apart wheels 33, 33 which are rigidly fixed upon exterior surfaces of the cylindrical hollow end portions 31, 31, respectively. The front axle 14 includes integral stop pieces 34, 34 at the inner sides of and against the wheels 33, 33, and outer end parts 35, 35 of the cylindrical hollow end portions 31, 31 are upset in direction away from said cylindrical hollow end portions 31, 31 against outer surfaces of said wheels 33, 33, at the locations of the wheel centers, thus to cause the wheels 33, 33 to be rigidly fixed to the front axle 14.

The supporting and reinforcing piece 17 is constituted as an elongated element, which may be a length of wire, including a loop portion 36 at the midlength of said elongated element detachably connected, as by a headed and nutted screw bolt 37, to the midwidth of an intermediate portion of the base or bottom wall 19 of the wagon body 10. As disclosed, the loop portion 36 and the screw bolt 37, which connects said loop portion 36 to said base or bottom wall 19, are situated between the rear and front supporting straps 11 and 12 at closer relation to the front supporting strap than to the rear supporting strap. Legs 38, 38 of said supporting and reinforcing piece 17 extend forwardly and downwardly from said loop portion 36 in diverging relation to each other and terminate in oppositely disposed, alined interiorly extending pintles or trunnions 39, 39 adapted to be employed to support the downwardly extending arms 21, 21 of the rear supporting strap 11 upon the rear axle 13 in such manner that the wheels 28, 28 of the set 15 of rear wheels will have capacity for rotation upon said pintles or trunnions 39, 39. More explicitly, outer parts of the pintles or trunnions 39, 39 adjacent the diverging legs 38, 38 are adapted to be removably situated in apertures 40, 40 in the downwardly extending arms 21, 21, and inner end portions of said pintles or trunnions 39, 39 are adapted to be removably situated within the cylindrical hollow end portions 26, 26 of the rear axle 13 thus to support the wagon body 10 upon the rear wheels 28, 28, through engagement of the pintles or trunnions 39, 39 with the defining surfaces of the apertures 40, 40 and with the interior cylindrical surfaces 27, 27 of said rear axle 13. Desirably, the supporting and reinforcing piece 17 will be composed of flexible and resilient material and the construction and arrangement will be such that the pintles or trunnions 39, 39 will be held within the cylindrical hollow end portions 26, 26 of the rear axle 13 by reason of resilient action of the diverging legs 38, 38 of said supporting and reinforcing piece 17 and can be removed from said rear axle, as well as from the apertures 40, 40 in the downwardly extending arms 21, 21, by manual flexing apart of said divergent legs 38, 38.

The handle piece 18 includes integral legs 41, 41, at the rear of said handle piece, which extend rearwardly from a location 42 of union between said legs 41, 41 in diverging relation to each other and terminate in oppositely disposed, alined, interiorly extending pintles or trunnions 43, 43 adapted to be employed to support the downwardly extending arms 24, 24 of the front supporting strap 12 upon the front axle 14 in such manner that the wheels 33, 33 of the set 16 of front wheels will have capacity for rotation upon said pintles or trunnions 43, 43. Outer parts of the pintles or trunnions 43, 43 adjacent the divergent legs 41, 41 are adapted to be removably situated in apertures 44, 44 in the downwardly extending arms 24, 24, and inner end portions of said pintles or trunnions 43, 43 are adapted to be removably situated within the cylindrical hollow end portions 31, 31 of the front axle 14 thus to support the wagon body 10 upon the front wheels 33, 33, through engagement of the pintles or trunnions 43, 43 with defining surfaces of the apertures 44, 44 and with the interior cylindrical surfaces 32, 32 of said front axle 14. Also desirably, the rearward portion of the handle piece 18 will be composed of flexible and resilient material and the construction and arrangement will be such that the pintles or trunnions 43, 43 will be held within the cylindrical hollow end portions 31, 31 of the front axle 14 by reason of resilient action of the diverging legs 41, 41 of said hand piece 18 and can be removed from said front axle, as well as from the apertures 44, 44 in the downwardly extending arms 24, 24, by manual flexing apart of said divergent legs 41, 41.

The rear axle 13 is a part of what may be termed a combination axle and bell support. An intermediate portion of said rear axle 13 includes integral or rigid wings 45, 45 which as shown extend radially from the longitudinal axis of the rear axle and are situated at diametrically opposite sides of said rear axle. Each wing 45 is constituted as a generally T-shaped piece including an elongated head in spaced relation to the rear axle 13 and extending transversely of the body of the corresponding wing, and each elongated head of each wing provides inwardly facing shoulders at the opposite sides of the body of the corresponding wing 45 and at the interior side of the elongated head and substantially parallel with and spaced from the rear axle 13. The wings or generally T-shape pieces 45, 45 are as shown of equal size and similar configuration.

Each of the wings 45 supports a hollow metal bell denoted 46, 46. As disclosed, each hollow metal bell 46 includes a wide open exterior portion 47, which may be cylindrical, or of other shape, and at its interior side each hollow metal bell includes an annular wall 48 in substantially perpendicular relation to the open portion of the hollow metal bell and provided with a reduced opening 49. Each opening 49 is situated axially of the corresponding hollow metal bell 46, and an annular surface of each annular wall 48 defining the corresponding opening 49 is of considerably less diameter than is the corresponding hollow metal bell. As shown, the hollow metal bells 46, 46 are duplicates.

The body of each wing 45 has width less than

the diameter of the opening 49 in each hollow metal bell 46, and the overall length of the elongated head of each wing 45 is somewhat greater than a measurement representing the diameter of each opening 49. The hollow metal bells 46, 46 are adapted to be assembled with the wings 45, 45, in the manner as clearly disclosed in Figs. 3 and 4, so that the elongated heads of said wings 45, 45 lie within the bodies of said hollow metal bells, and the annular walls 48, 48, or more accurately, the interior portions of said annular walls, lie between the rear axle 13 and said elongated heads. The construction and arrangement are such that the hollow metal bells 46, 46 are loosely assembled with the rear axle 13 for limited outward and inward and rocking movement relative to said rear axle. The inwardly facing shoulders provided by the elongated heads of the wings 45, 45 limit outward movement of the hollow metal bells and the rear axle 13 limits inward movement of said hollow metal bells.

Desirably, the front axle 14 also may be constituted as a combination axle and bell support. That is, an intermediate portion of said front axle 14 may include integral or rigid wings similar to and for the same purpose as are the wings 45, 45 upon the rear axle 13. Actually, the rear and front axles 13 and 14 may be of substantially duplicate construction. The front axle 14 is disclosed in Fig. 2 turned or situated so that its integral or rigid wings are horizontal. The construction and arrangement are such that the unit consisting of the rear axle 13, the rear wheels 26, 26 and the hollow metal bells 46, 46 and the unit consisting of the front axle 14 and the front wheels 33, 33 are interchangeable. Evidently, the toy wagon can include two sets of hollow metal bells such as 46, 46, one set upon each axle, or a single set of hollow metal bells, upon either the rear or front axle, or said toy wagon can be without hollow metal bells.

The wheels of the sets of rear and front wheels will be rotated when the handle piece 18 is pushed or pulled so that the toy wagon is made to roll or ride over a floor, or other supporting surface for said toy wagon. Each hollow metal bell, such as 46, 46, of each set of hollow metal bells employed will be suspended, by reason of gravity, when below the axle by which supported to be vertically situated. With rotation of an axle having a set of hollow metal bells, each bell obviously will be moved from position below the axle to position above said axle, and, by reason of the fact that the hollow metal bells are loosely assembled with the axle by which supported for limited rocking movement, each bell will drop, by gravity, a limited distance when caused by the axle to be moved beyond upper dead center position. The construction and arrangement will be such that as each bell drops, when just past dead center position, it will strike a bell then at lower elevation, or below the axle, thus to cause both bells to be concurrently sounded. Evidently, each of the rear and front axles 13 and 14 will be rotated once each time their supporting wheels are made to turn through a complete revolution, and the hollow metal bells, such as 46, 46, of each set of hollow metal bells employed will be caused to strike against each other twice during each revolution of the axle by which supported.

What is claimed is:

1. A toy wagon comprising a body, rear and front supporting straps secured to said body each including spaced apart, downwardly extending arms, rear and front axles, spaced apart wheels fixed to each of said rear and front axles, a supporting and reinforcing piece secured to said body and connecting the spaced apart, downwardly extending arms of the rear supporting strap with said rear axle, and a handle connecting the spaced apart, downwardly extending arms of the front supporting strap with said front axle.

2. A toy wagon comprising a body, rear and front supporting members secured to said body each including spaced apart, downwardly extending elements, rear and front axles each including hollow end portions, spaced apart wheels fixed upon the hollow end portions of each of said rear and front axles, a supporting and reinforcing piece secured to said body and including a first set of oppositely disposed, alined pintles mounted in the spaced apart, downwardly extending elements of the rear supporting member and in the hollow end portions of said rear axle, said first set of oppositely disposed, alined pintles connecting said spaced apart, downwardly extending elements of said rear supporting member and the rear axle to each other, and a handle including a second set of oppositely disposed, alined pintles mounted in the spaced apart, downwardly extending elements of the front supporting member and in the hollow end portions of said front axle, said second set of oppositely disposed, alined pintles connecting said spaced apart, downwardly extending elements of said front supporting member and the front axle with each other.

3. A toy wagon comprising a body, rear and front supporting straps secured to said body each including spaced apart, downwardly extending arms, rear and front axles, spaced apart wheels fixed upon end portions of each of said rear and front axles, a supporting and reinforcing piece secured to said body and including a first set of oppositely disposed, alined pintles mounted in the spaced apart, downwardly extending arms of the rear supporting strap and in the end portions of said rear axle, said spaced apart, downwardly extending arms of said rear supporting strap being situated outwardly of and adjacent the opposite ends of the rear axle and said first set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the rear supporting strap and said rear axle to each other, and a handle including a second set of oppositely disposed, alined pintles mounted in the spaced apart, downwardly extending arms of the front supporting strap and in the end portions of said front axle, said spaced apart, downwardly extending arms of said front supporting strap being situated outwardly of and adjacent the opposite ends of the front axle and said second set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the front supporting strap and said front axle to each other.

4. A toy wagon comprising a body, rear and front supporting straps secured to said body each including spaced apart, downwardly extending arms, rear and front axles, spaced apart wheels fixed upon end portions of each of said rear and front axles, a supporting and reinforcing piece secured to said body including a first set of spaced apart, resilient and flexible legs and a first set of oppositely disposed, alined pintles rigid with said first set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of the rear supporting strap and in the end portions of said rear axle, said spaced apart, downwardly extending arms

of said rear supporting strap being situated outwardly of and adjacent the opposite ends of the rear axle and said first set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the rear supporting strap and said rear axle to each other, and a handle including a second set of spaced apart, resilient and flexible legs and a second set of oppositely disposed, alined pintles rigid with said second set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of the front supporting strap and in the end portions of said front axle, said spaced apart, downwardly extending arms of said front supporting strap being situated outwardly of and adjacent the opposite ends of the front axle and said second set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the front supporting strap and said front axle to each other.

5. A toy wagon comprising a body, rear and front supporting straps secured to said body each including spaced apart, downwardly extending arms, rear and front axles each having cylindrical hollow end portions, spaced apart wheels fixed upon said cylindrical hollow end portions of each of said rear and front axles, a supporting and reinforcing piece secured to said body including a first set of spaced apart, resilient and flexible legs and a first set of oppositely disposed, alined pintles rigid with said first set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of the rear supporting strap and in the cylindrical hollow end portions of said rear axle, said spaced apart, downwardly extending arms of said rear supporting strap being situated outwardly of and adjacent the opposite ends of the rear axle and said first set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the rear supporting strap and said rear axle to each other, and a handle including a second set of spaced apart, resilient and flexible legs and a second set of oppositely disposed, alined pintles rigid with said second set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of the front supporting strap and in the cylindrical hollow end portions of said front axle, said spaced apart, downwardly extending arms of said front supporting strap being situated outwardly of and adjacent the opposite ends of the front axle and said second set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the front supporting strap and said front axle to each other.

6. The combination as specified in claim 1, means rigidly securing the rear supporting strap to and transversely of said body, and means pivotally supporting the front supporting strap to said body.

7. The combination as specified in claim 3, means rigidly securing the rear supporting strap to and transversely of said body, and means pivotally securing the front supporting strap to said body.

8. The combination as specified in claim 4, means rigidly securing the rear supporting strap to and transversely of said body, and means pivotally securing the front supporting strap to said body.

9. A toy wagon comprising a body, a supporting member secured to said body including spaced apart, downwardly extending elements, an axle including hollow end portions, spaced apart wheels fixed upon the hollow end portions of said axle, a supporting piece secured to said body and including oppositely disposed, alined pintles mounted in the spaced apart, downwardly extending elements of said supporting member and in the hollow end portions of said axle, said oppositely disposed, alined pintles connecting said spaced apart, downwardly extending elements of said supporting member and said axle to each other.

10. A toy wagon comprising a body, a supporting member secured to said body including spaced apart, downwardly extending elements, an axle including hollow end portions, spaced apart wheels fixed upon the hollow end portions of said axle, and a handle including oppositely disposed, alined pintles mounted in the spaced apart, downwardly extending elements of said supporting member and in the hollow end portions of said axle, said oppositely disposed, alined pintles connecting said spaced apart, downwardly extending elements of said supporting member and the front axle with each other.

11. In a toy wagon, a body, a supporting strap secured to said body including spaced apart, downwardly extending arms, an axle, spaced apart wheels fixed upon end portions of said axle, a supporting piece secured to said body including spaced apart, resilient and flexible legs and a set of oppositely disposed, alined pintles rigid with said spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of said supporting strap and in the end portions of said axle, said spaced apart, downwardly extending arms of said supporting strap being situated outwardly of and adjacent the opposite ends of said axle and said set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the supporting strap and said axle to each other.

12. In a toy wagon, a body, a supporting strap secured to said body including spaced apart, downwardly extending arms, an axle, spaced apart wheels fixed upon said axle at end portions thereof, and a handle including a set of spaced apart, resilient and flexible legs and a set of oppositely disposed, alined pintles rigid with said set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of said supporting strap and in the end portions of said axle, said spaced apart, downwardly extending arms of said supporting strap being situated outwardly of and adjacent the opposite ends of said axle and said set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of the supporting strap and said axle to each other.

13. In a toy wagon, a body, a supporting strap secured to said body including spaced apart, downwardly extending arms, an axle having cylindrical hollow end portions, spaced apart wheels fixed upon said cylindrical hollow end portions of said axle, a supporting and reinforcing piece secured to said body including a set of spaced apart, resilient and flexible legs and a set of oppositely disposed, alined pintles rigid with said set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of said supporting strap and in the cylindrical hollow end portions of said axle, said spaced apart, downwardly extending arms of said supporting strap being situated outwardly of and adjacent the opposite ends of the axle and said set of oppositely disposed, alined pintles

connecting the spaced apart, downwardly extending arms of said supporting strap and said axle to each other.

14. In a toy wagon, a body, a supporting strap secured to said body including spaced apart, downwardly extending arms, an axle having cylindrical hollow end portions, spaced apart wheels fixed upon said cylindrical hollow end portions of said axle, and a handle including a set of spaced apart, resilient and flexible legs and a set of oppositely disposed, alined pintles rigid with said set of spaced apart, resilient and flexible legs mounted in the spaced apart, downwardly extending arms of said supporting strap and in the cylindrical hollow end portions of said axle, said spaced apart, downwardly extending arms of said supporting strap being situated outwardly

of and adjacent the opposite ends of said axle and said set of oppositely disposed, alined pintles connecting the spaced apart, downwardly extending arms of said supporting strap and said axle to each other.

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