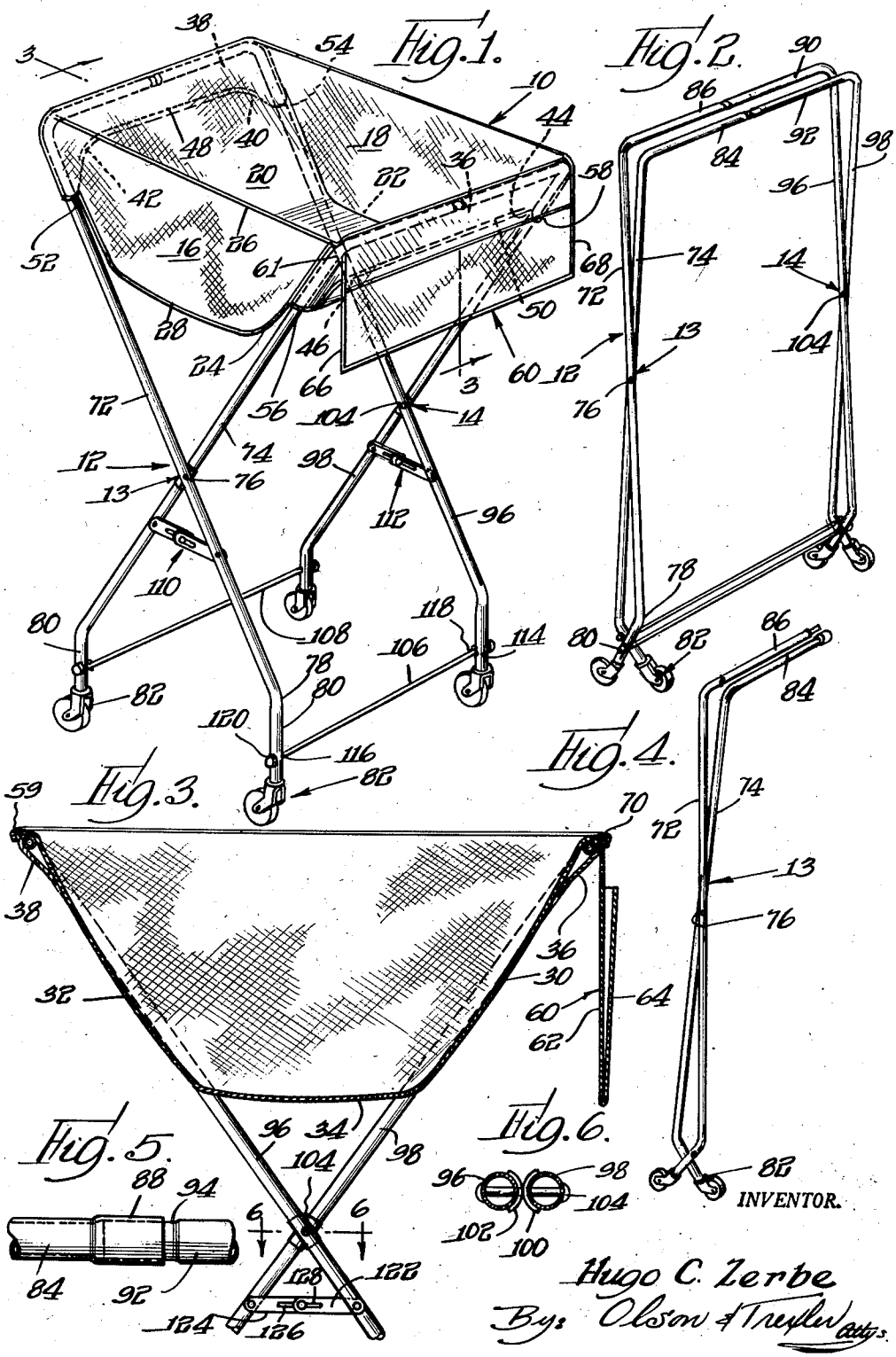
April 2, 1957 H. C. ZERBE 2,787,310

LAUNDRY CART

Filed July 30, 1954



United States Patent Office 2,787,310 Patented Apr. 2, 1957

2,787,310

LAUNDRY CART

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Application July 30, 1954, Serial No. 446,872

5 Claims. (Cl. 150—49)

This invention relates generally to an improved laundry cart, and more specifically to an improved laundry cart providing a means for locking the clothes supporting means or hamper in position.

I have found that laundry carts in the prior art have the disadvantage that the clothes supporting means or hamper is loosely placed over the supporting structure provided therefor, and frequently is blown off by strong or gusty winds when the device is used out of doors.

I have also found that in the laundry carts in use prior to my invention, the clothes hamper, loosely placed over the supporting structure or frame therefor, could be easily dislodged from its proper position when wet clothes were placed in a corner thereof, or thrown into the cart from an off-vertical angle. Needless to say, this situation is very undesirable as it results in the wet clothes falling to the ground and possibly requiring additional laundering. There is the added factor that it is difficult if not impossible for a person to lift the clothes hamper into position while the wet clothes are in the bottom thereof.

It is therefore an object of this invention to provide an improved structure to prevent displacement of the clothes hamper by strong winds.

It is another object of this invention to provide a means for holding the clothes hamper in position so that it will not slide off of the supporting frame therefor.

Laundry carts in the prior art also have the disadvantage that they cannot be disassembled into small pieces for shipment, and therefore, they have been shipped in clumsy wide boxes which can be mailed only to rural areas according to current postal regulations. For this reason, stores selling the older type laundry carts have high delivery costs.

It is an object of the present invention to provide a laundry cart that can be disassembled in such a manner as to permit packing the device for shipment in a smaller carton than has heretofore been used. The carton provided is small enough to meet mailing requirements in urban as well as rural areas, and therefore substantial savings in delivery costs are possible.

It is still another object of this invention to provide a laundry cart light in weight so as to be readily carried in one hand.

It is still another object to provide a supporting structure or frame which is secured in assembled relationship by the hamper of the laundry cart.

The foregoing and other objects and advantages will be more apparent from the following detailed description when considered in connection with the accompanying drawings wherein:

Fig. 1 is a perspective view of a laundry cart constructed in accordance with the principles of my invention;

Fig. 2 is a perspective view of the support member or frame in collapsed or folded position;

Fig. 3 is a vertical section taken along the line 3—3 of Fig. 1;

Fig. 4 is a fragmentary perspective view of a portion of the support members shown in Fig. 2;

Fig. 5 is an exploded fragmentary view of a portion of the supports shown in Fig. 2; and

Fig. 6 is a sectional view taken along the line 6—6 of Fig. 3, showing the hollow tubular support members and the plates affixed to the inner sides thereof.

The invention includes a clothes supporting means or hamper 10 and a frame or supporting means 12 to hold the hamper.

As shown in Fig. 1, the hamper 10 includes side portions or walls 16 and 18 and a central portion or floor 20, sewn or otherwise attached thereto as at 22 and 24. Sides 16 and 18 are identical, and therefore it will be sufficient to describe only one of them. Side 16 has substantially the shape of an inverted truncated triangle with top margin 26 and bottom margin 28 approximately parallel and legs approximately of equal length.

The central portion 20 of the hamper is made from a rectangular piece of cloth or other suitable sheet material and is sewn or otherwise attached at the margins thereof to the edges of the side portions or walls 16 and 18. When sewn in position the central portion 20 is approximately U-shaped in longitudinal section, as shown in Fig. 3, with the arms of the U bent outwardly from the vertical. The arms of the U therefore form the ends 30 and 32 of the hamper 10, and the base portion of the U forms the bottom 34 of the hamper.

Attached to the upper portions of ends 30 and 32 are hem pieces 36 and 38. The hem pieces are illustrated as separate pieces, but it is contemplated that they may be made integral with end members 30 and 32 if so desired. The hem pieces 36 and 38 are straight at the top and side margins thereof and are of a length to correspond approximately with the width of the end portions 30 and 32. The lower margins of the hem pieces are curved as at 40, 42, 44 and 46, the inside ends of the curves being joined by the straight edges 48 and 50, the hem pieces thus being wider at their ends than in their mid-sections. The hem pieces 36 and 38 are sewn along the margins thereof to the end portions 30 and 32, with the exception that apertures are provided at the extremities of the curved portions at 52, 54, 56 and 58 to allow for the entry of the support members or frame to be described hereinafter.

The hem pieces 36 and 38 are further provided with a fullness at each of the corners allowing for a tuck or pleat as at 61. The fullness is necessary in order that adequate room be provided for the support members, and also to facilitate threading the support members into the hem pieces.

It will be seen hereinafter that forming the hem pieces 36 and 38 in the manner described serves to lock the support members in position, and to prevent the hamper 10 from slipping off or being blown off the frame.

There is also attached to end portion 30 a clothes pin bag 60. This bag is formed from a rectangular piece of material looped back upon itself to provide an envelope for storing clothes pins or other laundry accessories. The back portion of the bag 62 and the front portion 64 are sewn together along their opposite edges as at 66 and 68, thus forming the encolsure for the storage of sundry items, the top remaining open for access to the enclosure. The upper margin of the back 62 of the clothes pin bag is sewn or otherwise attached to the hem piece 36 and end portion 30 at 70. It is to be understood that the clothes pin bag 60 may be made integral with the end portion 30 or separate as desired.

To enhance the appearance of the laundry cart, and to provide additional strength at the places where the material is joined together, all open edges of the hamper, hem pieces, and clothes pin bag are provided with a binding, such as, for example, that shown at 59 (Fig. 3).

Referring now to the support means or frame 12, it

will be seen that the frame is made in two complementary parts or sections 13 and 14, each including two leg members. The legs are preferably made of sheet metal formed into a hollow tube, but it is to be understood that any suitable material may be used. Legs 72 and 74 of section 13 are pivotally connected in the center thereof by a rivet or other fastening means 76. The legs, when the devices are assembled and in operative position, are disposed at an angle of approximately 75 degrees. The lower ends of the legs are bent downwardly as at 78 to form a substantially vertical portion 80, into the ends of which are inserted casters 82. The legs being hollow, a conventional type of caster 82 may be inserted into the ends thereof.

The upper ends of the legs 72 and 74 are bent at an angle of 90 degrees to form end pieces 84 and 86 as shown in Fig. 2. The plane formed by the end pieces 84 and 86 is perpendicular to the plane formed by the legs 72 and 74. The length of the end pieces 84 and 86 is slightly greater than one-half of the width of hem pieces 36 and 38.

Referring now to Fig. 5, the ends of the end pieces 84 and 90 of support members 13 and 14 are of enlarged diameter as at 88, and the corresponding ends of complementary end pieces 86 and 92 of support members 13 and 14 are of reduced diameter as at 94 to provide for the frictional fitting together of the end pieces of the two support members 13 and 14.

It is to be noted that the enlargement 88 is of predetermined length, thereby limiting the extent to which the end pieces may be telescoped together. In a reciprocal manner, reduced ends 94 are also of predetermined length.

In Fig. 6 it will be seen that at the intersection of the legs, for example the legs 96 and 98, there are placed on the confronting surfaces each of said leg wear plates 100 and 102. The plates 100 and 102 are arcuately shaped, the arc being of the same curvature as the outside surface of the hollow legs as 96 and 98. The plates have a width of approximately one-third of the circumference of the outside of the legs. The length of the plates, extending axially along the legs, is approximately one and one-half times their width, but exact measurements are not critical. The plates are attached to the legs by the single rivet or fastener 104 forming the pivotal connection of the legs.

The plates are made of a hard metal such as steel to separate the legs which preferably are made of aluminum so that when the cart is collapsed the legs will not rub together to wear or bind. The plates serve also to separte the legs sufficiently to provide clearance for the casters when the cart is collapsed.

To add stability to the laundry cart, braces 106 and 108, and collapsible or folding braces 110 and 112 are provided. Braces 106 and 108 are cylindrical metal bars slightly longer in length than the width of the central portion 20 of the hamper. The legs 72 and 96, and 74 and 98 are provided with aligned apertures as at 114 and 116, the apertures being of approximately the same diameter as the brace bars 106 and 108. To place the brace bars, the bar 106 being exemplary, in position, one end of the bar is inserted through aperture 114 and the other end through the aligned aperture 116. Movement of the brace axially of the apertures in the leg members is limited by projections such as 118 struck out of the surface of the metal bar. These projections hold the leg members apart, and thereby prevent the cart from collapsing by an inward movement of the legs axially of the brace 106. It is to be understood that brace 108 is formed and positioned similar to brace 106, and that projections 118 are provided on the brace bars cooperable with all four legs of the device.

Whereas projections 118 are provided on the inside of the legs to prevent movement of the legs inwardly, knobs or buttons 120 are provided to prevent outward movement of the legs. These knobs are cup shaped and are adapted to fit over the ends of the braces 106 and 108. They are of conventional design and structure, and are retained on the ends of the braces by projections formed on the inside thereof which are adapted resiliently and wedgingly to bite against the brace bars. It will be understood that cotter pins, nuts threaded over ends of the braces, or any other type of fastener would serve equally well to accomplish the purpose for which the knobs are used.

After the knobs 120 are affixed, it will be seen that the legs, at the lower ends thereof, are secured between the projections 118 and the knobs 120.

Now to be considered are the braces 110 and 112 as shown in Figs. 1 and 3. The braces are identical and therefore only one will be described. Brace 112 is formed of two rectangular strips of metal 122 and 124, with elongated apertures 126 and 128 near their confronting ends, with a rivet loosely placed through the elongated apertures, thereby pivotally and slidably connecting the same. The opposite ends of the metal pieces are also apertured, and these latter apertures are aligned with holes provided in the legs and through these latter two holes and aligned apertures are placed rivets or other fastening devices, thereby securing the ends of the braces to the legs.

The braces 110 and 112 are positioned slightly below the point at which the legs cross each other, and in such a manner that when fully extended the legs are at their maximum longitudinal extension. The braces 110 and 112, therefore, limit the outward movement of the legs.

It will be noted that hamper 10 is also a brace for the cart as the hem pieces 36 and 38 secure the integral end pieces 84, 86, 90 and 92 against axial separation, and sides 16 and 18 as well as central portion 20 limit the spreading of the legs in a direction perpendicular to the end pieces. The hamper 10, therefore, serves the same stabilizing function for the portion of the legs above the pivot points as the braces 110 and 112 serve for the portion of the legs below the pivot points.

Having described the parts of my invention there remains to be described the method of assembling the same. At the fractory the clothes supporting means or hamper 10 is assembled by sewing sides 16 and 18 to the central portion 20, and by sewing hem pieces 36 and 38 in position. The clothes pin bag 60 is also sewn or affixed at this time to the remainder of the hamper, and as will be apparent from the drawing a single seam may be used to attach a number of the parts, thereby keeping labor and material costs at a minimum.

The supporting members 13 and 14 are partially assembled at the factory, with the legs being appropriately bent to form the end pieces at the tops thereof and the vertical portions at the bottom. Plates 100 and 102 are properly positioned, and rivets 76 and 104 are inserted through the aligned apertures in the legs and plates, thereby securing the parts together. At this point braces 110 and 112 are affixed to the legs by riveting or otherwise attaching them to the lower portion of legs 72, 74, 96 and 98.

The foregoing completes the factory assembly, and the hamper 10, support members 13 and 14, as well as the braces, casters and knobs, are then packed for shipment to a customer. It is to be noted that because supports 13 and 14 are of approximately one-half the width of the laundry cart, as shown in Fig. 4, the package in which they are shipped will be correspondingly one-half the width of the usual or normal shipping box in which such items are shipped. This is a significant factor because as mentioned previously one of the difficulties encountered in the sale of laundry carts old in the art is that the boxes in which they are shipped are clumsy and are too large to be shipped by mail to urban areas. Applicant's smaller box meets postal requirements for ship-

ment to urban as well as rural areas and thereby reduced shipping costs are achieved.

On receipt of the partially assembled laundry cart by a customer, the completion of the assembly is accomplished as follows:

End portion 84 is thread through opening 46 in the hem piece 36, after which the end portion 92 is threaded through the opening 58 in hem piece 36. The end portions are then telescoped together, as shown in Fig. 5. With the end pieces together, the hem piece 36 is straightened and pulled down in such a manner that the tuck or pleat such as 61 overlies the point at which the bend occurs between legs 74 and 98 and end pieces 84 and 92. It will be noted that the tucks and longitudinal ends of the hem 36 serve to hold the end pieces in assembled relationship. Furthermore, they position the hamper properly on the frame. The method of assembling the end pieces and the hamper for legs 74 and 98 is then repeated for end pieces 86 and 90, and legs 72 and 96.

Braces 106 and 108 are then inserted into the apertures provided in the legs, after which knobs, such as 120, are placed over the ends of braces 106 and 108. These knobs, coupled with the struck-out portions 118 serve to retain the legs in proper position.

The casters, such as 82, are then inserted in the legs, and the assembly is completed.

Obivously, the invention is not limited to the specific structural features disclosed herein, but is capable of other embodiments and changes without departing from the spirit and scope of the appended claims.

I claim:

1. A laundry cart, including a frame having a pair of parallel spaced apart end pieces and supports extending downwardly substantially at the opposite extremities of both of said end pieces, and a hamper for supporting clothes and the like, said hamper having a sleeve-like portion encircling the frame end pieces to retain said hamper on said frame and engaging the depending frame supports outwardly thereof properly to position said hamper relative to said frame, said sleeve-like portion receiving said end pieces and the top portion of said depending frame supports and thereby properly retaining said hamper in position on said frame.

2. A laundry cart, including a frame having a pair of parallel spaced apart end pieces and supports extending downwardly substantially at the opposite extremities of both of said end pieces, and a hamper for supporting clothes and the like, said hamper having means associated therewith encircling the frame end pieces to retain said hamper on said frame and having means engaging the depending frame supports outwardly thereof properly to position said hamper relative to said frame, said last mentioned means comprising pockets engaging the outer surfaces of said depending frame supports.

3. A laundry cart as set forth in claim 2, wherein said means for engaging said depending supports and said means for engaging said end pieces comprises a hem on said hamper.

4. A laundry cart, including a frame having a pair of parallel spaced apart end pieces and supports extending downwardly substantially at the opposite extremities of both of said end pieces, and a hamper for supporting clothes and the like, said hamper including side walls, end walls, and a bottom, said hamper having a sleeve-like portion encircling the frame end pieces to retain said hamper on said frame and engaging the depending frame supports outwardly thereof to properly position said hamper relative to said frame, said frame end pieces each including two complementary tubular members telescopically associated, said sleeve-like portion engaging the depending frame supports outwardly thereof and holding the telescoped tubular members in assembled relationship.

5. A laundry cart as set forth in claim 4, wherein said frame comprises four L-shaped tubular members, the smaller leg of the L being approximately one-half of the width of said hamper.

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