June 27, 1950 J. BERGER 2,512,995

STROLLER HAVING REMOVABLE CHAIR

Filed Jan. 19, 1949 2 Sheets-Sheet 1

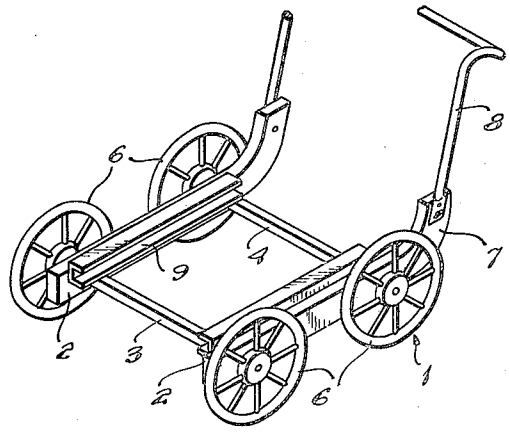


Fig. 1.

Fig. 2.

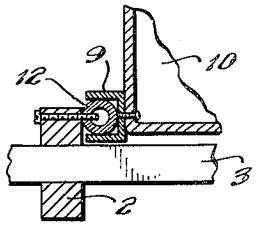


Fig. 5.

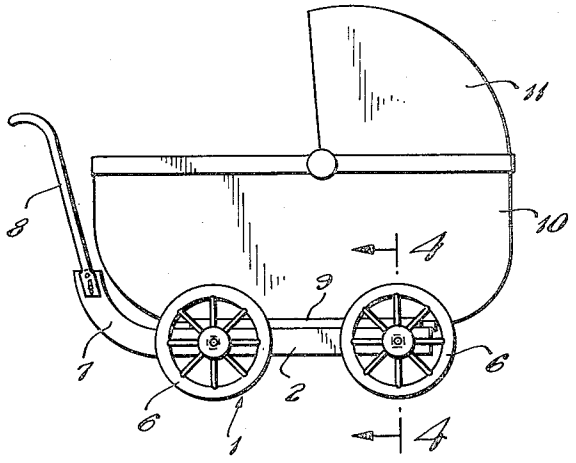


Fig. 3.

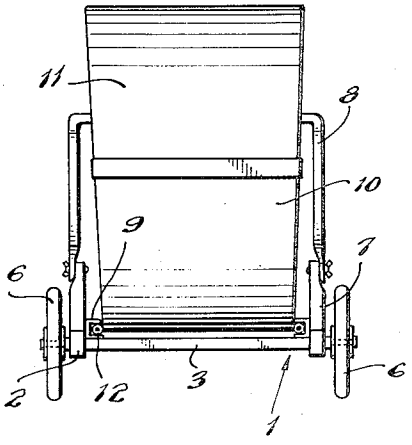
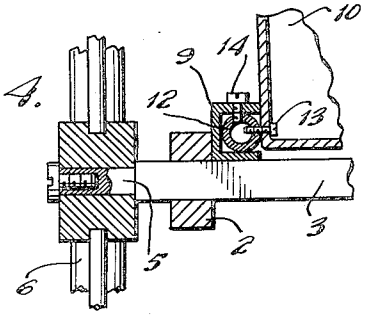


Fig. 4.



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June 27, 1950 J. BERGER 2,512,995

STROLLER HAVING REMOVABLE CHAIR

Filed Jan. 19, 1949 2 Sheets-Sheet 2

Fig. 6.

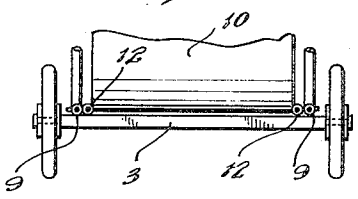
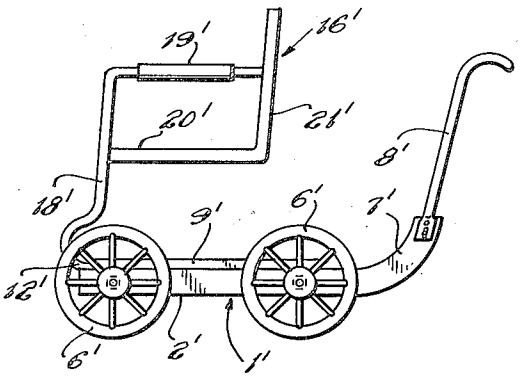


Fig. 8.



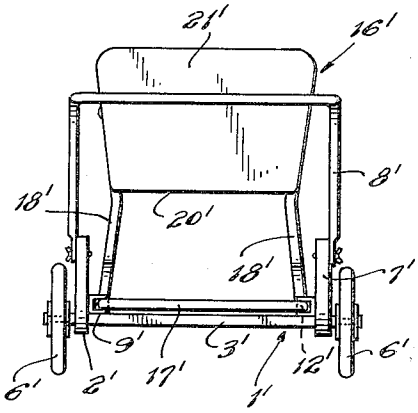


Fig. 9.

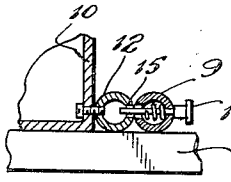


Fig. 7.

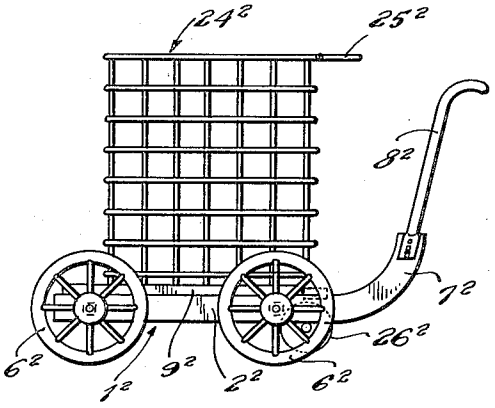


Fig. 10.

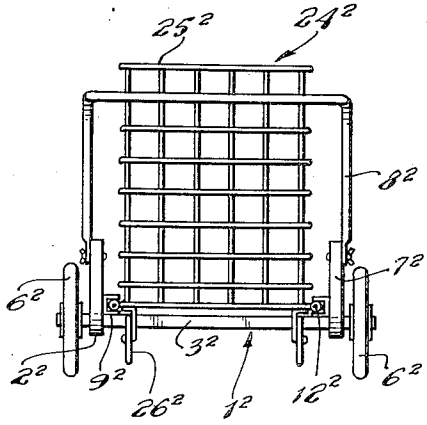


Fig. 11.

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STROLLER HAVING REMOVABLE CHAIR

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Application January 19, 1949, Serial No. 71,729

9 Claims. (Cl. 280—47)

1

The present invention relates to running gear units used for baby carriages, strollers, or the like.

It is well known that in prior art devices the body of a baby carriage, stroller or the like is permanently secured to its running gear and thus each vehicle is equipped with its own running gear despite the fact that the running gears used for the different vehicles are about identical.

It is, therefore, one of the objects of the present invention to provide a common running gear on which different units may be easily and exchangeably mounted.

It is another object of the present invention to provide a running gear with means which easily, through a sliding movement, receive a complementary portion of a unit to be exchangeably mounted on the running gear.

It is a further object of the present invention to provide a running gear supporting a unit which may be easily lifted from the gear.

It is still another object of the present invention to provide a running gear equipped with channel members which receive complementary portions secured to different units to be mounted on the running gear.

It is yet another object of the present invention to provide a running gear having a pusher handle and means for exchangeably mounting of different units on said running gear.

It is a further object of the present invention to provide a running gear equipped with channel members receiving complementary portions secured to different units to be mounted on said running gear and to provide releasable means on the channel members for locking said complimentary portions on the latter.

With these and other objects in view which will become apparent in the following detailed description, the present invention will be clearly understood in connection with the accompanying drawings, in which:

Figure 1 is a perspective top view of the running gear;

Fig. 2 is an elevational view of the running gear with a baby carriage body;

Fig. 3 is an end view of the arrangement shown in Fig. 2;

Fig. 4 is a fragmentary section along the lines 4—4 of Fig. 2;

Fig. 5 is a fragmentary section of a variation similar to that of Fig. 4;

Fig. 6 is an end view of another embodiment of a running gear with a carriage body, the latter partly broken away;

Fig. 7 is a fragmentary section on enlarged scale of the embodiment shown in Fig. 6;

Fig. 8 is an elevational view of the running gear with a chair;

Fig. 9 is an end view of the arrangement shown in Fig. 8;

2

Fig. 10 is an elevational view of a running gear with a cart; and

Fig. 11 is an end view of the arrangement shown in Fig. 10.

Referring now to the drawings and particularly to Fig. 1, the running gear 1 comprises two bars 2 which extend in longitudinal or angular direction which maintain the front axle 3 as well as the rear axle 4 in parallel position and which are, preferably, of rectangular cross-section.

Each of the axles 3 and 4 are equipped with extensions 5 which carry the wheels 6. Each bar 2 is bent upwards at its rear end to form a curved portion 7, on the end of which a collapsible pusher handle 8 may be mounted.

Two channel members 9 are secured to the axles 3 and 4, preferably adjacent the bars 2, which members 9 are welded or secured by other suitable means to the axles. These members 9 may be used for maintaining the axles 3 and 4 in parallel position and the bars 2 may be dispensed with. Furthermore, if required, the channel members 9 may be disposed at any predetermined distance above the axles 3 and 4 by providing suitable supporting and distancing means. In the embodiment shown in Fig. 1 the channel members 9 are of C cross-section, it is to be understood, however, that the channel members 9 may have any convenient cross-section and may for instance form tubes of any shape, since they are adapted to receive portions of a unit to be carried by the running gear, which portions are of a complementary cross-section to the channel members 9, as will be pointed out later. Thus the channel members 9 may be secured to the unit and the complementary portions on the running gear as indicated in the fragmentary section shown in Fig. 5.

Figs. 2 to 4 show the use of the running gear 1 for a baby carriage. Such carriage comprises a running gear 1, as described above, which is equipped with the channel members 9. A conventional carriage body 10 having a hood 11 is equipped with tubular members 12 (Fig. 4) which fit exactly into the channel members 9 and slide easily in and out of the latter. The tubular members 12 are shown of circular cross-section, though it is to be understood that they may be of rectangular or other convenient section, as long as they are properly received by the channel members 9, or as long as the latter are received by the tubular members 12. The tubular members 12 are secured to the carriage body 10 by screws 13 or any other suitable means. In order to prevent the removal of the carriage body 10 from the running gear 1 unvoluntarily spring bolts 14 may be provided in the channel members 9 which are received by corresponding bores 15 in the tubular members 12. It is to be under-

stood, that the bars 2 may be entirely omitted and merely channel members 9 provided, in which case the latter perform the double function of maintaining the axles 3 and 4 in parallel position as well as of forming one element of the sliding connection between the running gear and the unit to be mounted in the gear.

The arrangement, as disclosed in Figs. 2 to 4, operates in a simple manner. In order to mount the carriage body in the running gear 1, it is merely necessary to slide the tubes 12 into complementary channels 9 and move the body 10 until the spring bolts 14 snap into corresponding bores 15. In order to remove the carriage body it is merely necessary to lift the spring bolts 14 and slide the body 10 out.

While the construction in which the unit to be supported by the running gear slides out of the latter, the embodiment shown in Figs. 6 and 7, which is disclosed in connection with a carriage body, though any other unit may be provided, does not provide sliding means for connection between the running gear and the supporting unit, but is merely set on the running gear which is secured by its own weight. It is preferable, however, to provide locking means between the unit and the gear, which locking means may easily be opened.

Thus, the arrangement shown in Figs. 6 and 7 comprises a running gear 1' which is equipped with a pair of members 9, extending in longitudinal direction and secured to the axles 3 and 4. The supported unit, which is in the present example a carriage body 10, has tubular members 12 secured thereto on the side walls thereof, which members 12 may rest on the axles 3 and 4. In order to prevent unvoluntary removal of the unit 10 from the running gear one or more spring bolts 14 are provided in either one of the members 9 and 12 which project into a bore 15 of the other member and thereby lock the unit 10 to the running gear 1, though any other convenient locking means may be provided. By merely withdrawing the spring bolts 14, the unit may be lifted from the gear.

The embodiment shown in Figs. 8 and 9 discloses a combination of the running gear 1' with a chair 16' thus forming a stroller. The chair 16' is preferably made of tubular material, though any other chair may serve the same purpose, as long as it is equipped with tubes 12' which are received by channel members 9' of the running gear 1'. The chair 16', as shown in the drawings, comprises two longitudinal tubes 12', which may be connected by a cross tube 17' at their rear ends whereas their front ends are bent upwards to vertical tubes 18' the upper end of which is bent rearward to form arm supports 19'. The seat 20' and the back 21' are secured in conventional manner to the tubes 18' and the supports 19', respectively.

The operation of the stroller is similar to that of the carriage. The bottom tubes 12' of the chair 16' slide into the complementary channel members 9' of the running gear 1' until locked by a spring bolt (not shown), when the chair is to be mounted on the running gear. In order to remove the chair, it is merely necessary to withdraw the spring bolt and then slide easily the tubes 12' of the chair bottom out of the channel members 9', whereupon the chair may be used separately for the child either in connection with a table, a high chair, or as auto child seat. It is clear, however, that the channel members 9' may be provided on the chair and the tubular members 12' on the running gear 1' without changing the operation of the stroller.

A third embodiment of the present invention is shown in Figs. 10 and 11 where a running gear 1^2 is combined with a shopping cart 24^2. As shown in the drawing the running gear 1^2 is equipped with channel members 9^2 and the shopping cart 24^2 is in conventional manner made of wire which forms at its upper end a handle 25^2. The bottom of the cart 24^2 may carry small wheels 26^2 in order to move the cart around when removed from the running gear 1^2. It is essential, however, to secure tubular members 12^2, preferably, adjacent the bottom of the cart 24^2 to the latter, which are received by the complementary channel members 9^2 of the running gear 1^2, though it is possible to reverse this arrangement and to secure the channel members to the cart and the tubular members to the running gear.

The operation of this embodiment is similar to that of the two other embodiments. In order to mount the shopping cart on the running gear, it is merely necessary to slide the tubular members of the cart into the channels of the running gear until a spring bolt (not shown), which may be provided on each of the channels, snaps into a corresponding bore (not shown) of the tubular members. In order to remove the cart, it is again just necessary to withdraw the spring bolts, if any, and slide the tubular members of the cart out of the channel members of the running gear.

It should be emphasized that the arrangement shown in Figs. 6 and 7 in connection with a carriage body may be used in the same manner for a chair, a cart or any other unit, since the three units, namely carriage body, chair and cart are given as examples only and any other unit may be mounted on the running gear by suitable means which permit of easy removal of the unit from the running gear, without requiring tools, but by a simple hand operation. Furthermore the longitudinal members, as for instance the channel members or any other guide members, may extend throughout the entire length of the horizontal leg portions of the chair, or may be of shorter length, as long as they are or have components which operate as barrier means which prevent lateral movement of the leg portions. In this manner the longitudinal members guide the horizontal leg portions into supported position.

While I have disclosed several embodiments of the present invention and particularly three specific units with the running gear, it is to be understood that these embodiments are given by example only without limiting the scope of the present invention, the scope of which is to be determined by the objects and the claims.

I claim:

1. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed portions spaced apart a predetermined distance, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal members, means rigidly connecting said longitudinal members to said axles, said horizontally disposed leg portions of said chair being disposed in the substantially horizontal plane of and closely adjacent to the said longitudinal members, the latter including barrier means for preventing lateral movement of said leg portions

and thus forming means to guide said leg portions into supported position.

2. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed portions spaced apart a predetermined distance, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal members, means rigidly connecting said longitudinal members to said axles, said horizontally disposed portions of said chair being disposed in the substantially horizontal plane of and closely adjacent to the said longitudinal members, said members including at least one channel member of predetermined length, and said channel member receiving one of said horizontally disposed portions.

3. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed portions spaced apart a predetermined distance, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal members, means rigidly connecting said longitudinal members to said axles, said members including two parallel channel members of predetermined length, said channel members receiving said horizontally disposed leg portions of said chair.

4. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed portions spaced apart a predetermined distance and a third horizontally disposed leg portion connecting said two parallel leg portions, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal members, means rigidly connecting said longitudinal members to said axles, said parallel horizontally disposed portions of said chair being disposed in the substantially horizontal plane of and closely adjacent to the said longitudinal members, the latter including barrier means for preventing lateral movement of said horizontally disposed portions and thus forming means to guide said horizontally disposed portions into supported position.

5. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed portions spaced apart a predetermined distance and a third horizontally disposed leg portion connecting said two parallel leg portions, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal members, means rigidly connecting said longitudinal members to said axles, said horizontally disposed portions of said chair being disposed in the substantially horizontal plane of and closely adjacent to the said longitudinal members, said members including at least one channel member of predetermined length, said channel member receiving one of said horizontally disposed leg portions, the longitudinal members including barrier means for preventing lateral movement of said horizontally disposed portions of the chair and thus forming means to guide said leg portions into supported position.

6. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed portions spaced apart a predetermined distance, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, two parallel longitudinally disposed channel members, means rigidly connecting said longitudinal members to said axles, said channel members receiving said horizontally disposed leg portions of said chair.

7. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed rod portions spaced apart a predetermined distance, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal rods means rigidly connecting said longitudinal rods to said axles, said horizontally disposed leg rod portions of said chair being disposed in the substantially horizontal plane of and closely adjacent to the said longitudinal rods, the latter including barrier means for preventing lateral movement of said horizontally disposed leg rod portions and thus forming means to guide said horizontally disposed leg rod portions into supported position.

8. A vehicle having a seat and a back, two arm supports disposed from the said back in forward direction above said seat, two leg members extending from said seat downwardly, said leg members being bent into two parallel and substantially horizontally disposed tubular portions spaced apart a predetermined distance, adapted to rest on the ground when used as a chair, and two parallel axles, each having two wheels, longitudinal tubular members, means rigidly connecting said longitudinal members to said axles, said horizontally disposed tubular leg portions of said chair being suspended on said axles and disposed in the substantially horizontal plane of and closely adjacent to the said longitudinal tubular members, the latter including barrier means for preventing lateral movement of said horizontally disposed tubular leg portions of said chair and thus forming means to guide said leg portions into supported position.

9. The vehicle, as set forth in claim 1, which includes means for releasably retaining said horizontally disposed leg portions in said supported position.

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