

DESCRIPTION

HAND PUSH CART

Field of the Invention

[0001]

The present invention relates to a hand push cart.

Background Art

[0002]

A hand push cart, such as a stroller, a pet cart, etc., is used for taking out an infant or a pet (for example, JP 2018-114796 A). In order to let a hand push cart smoothly pass over bumps on and in a traveling surface, it is effective to raise a front wheel located forward in a traveling direction. In order to raise the wheel, it is effective to pull a handle of the hand push cart rearward and downward, with putting a foot on a cross member provided near wheels located rearward in the traveling direction of the hand push cart. The cross member is a transversely extending member that couples a pair of rear legs, for example.

[0003]

However, many hand push carts have a basket member provided below. The basket member is attached to a hand push cart by wrapping a string-like attachment member around a cross member. It is difficult to put a foot on the cross member around which the attachment member is wrapped.

Summary of the Invention

[0004]

The present invention has been made in view of the above circumstances. The object of the present invention is to make it possible to put a foot stably on a cross member to which a basket member is attached.

[0005]

A hand push cart according to the present invention comprises:

a cart body having a pair of legs spaced apart from each other in a width direction, wheels respectively held on lower end portions of a pair of the legs, a cross member extending between a pair of the legs or a pair of the wheels, and a stepping member provided on the cross member; and

a basket member attached to the cart body;

wherein:

the basket member has a basket body forming a housing part, and an attachment member extending from the basket body to attach the basket body to the cart body; and

a passageway for the attachment member is formed between the cross member and the stepping member.

[0006]

The present invention makes it possible to put a foot stably on a cross member to which a basket member is attached.

Brief Description of the Drawings

[0007]

Fig. 1 is a view for describing an embodiment, which is a perspective view showing an example of a stroller.

Fig. 2 is a partial perspective view of the stroller of Fig. 1 seen from behind.

Fig. 3 is a side view showing the stroller of Fig. 1, with some constituent elements being removed.

Fig. 4A is a side view showing a stepping member and a cross member of the stroller of Fig. 1 seen from a width direction.

Fig. 4B is a sectional view of the cross member and the stepping member of Fig. 4A seen from the width

direction, in a section along a B-B line of Fig. 7.

Fig. 4C is a sectional view of the cross member and the stepping member of Fig. 4A seen from the width direction, in a section along a C-C line of Fig. 7.

Fig. 5 is a perspective view of the cross member and the stepping member of Fig. 4A.

Fig. 6 is a perspective view showing the stepping member of Fig. 5.

Fig. 7 is a plan view showing the stepping member of Fig. 6.

Fig. 8 is a sectional view of the stepping member in a section along XIII-XIII line of Fig. 7.

Fig. 9 is a side view showing a modification example of the stroller.

Detailed Description of the Invention

[0008]

A stroller used for taking out an infant is described hereunder as an example of a hand push cart. However, the present invention is not limited to a stroller, but can be used for a cart configured to be pushed forward by a user's hand, such as a hand push cart configured as a pet cart for moving a pet.

[0009]

Figs. 1 to 9 are views for describing an embodiment according to the present invention. Figs. 1 to 4 show an overall structure of the stroller as an example of a hand push cart, or an overall structure of a stroller body as an example of a cart body. Figs. 4A to 5 show a cross member (laterally cross member, transverse member) and a stepping member included in the stroller body (cart body). Figs. 6 to 8 show the stepping member. A configuration shown in some drawings may be omitted in other drawings.

[0010]

As shown in Figs. 1 and 2, a stroller (hand push

cart) 10 in this embodiment has a stroller body (cart body) 15, and a basket member 70 supported by the stroller body 15. As shown in Fig. 2 showing the stroller 10 seen from behind, the stroller body 15 has a transversely extending cross member 25, and a stepping member 40 provided on the cross member 25. The stroller 10 described below is devised to make it possible to put a foot stably on the cross member 25 to which the basket member 70 is attached.

[0011]

The respective constituent elements of the stroller 10 are described in sequence below. As shown in Fig. 1, each of the illustrated stroller 10 and the stroller body 15 generally has substantially a symmetric configuration with respect to a plane that is located in the center in a transverse direction and extends along a back and forth direction and an up and down direction.

[0012]

In this specification, the terms "front (forth)", "rear (back, behind)", "up (above)", "down (below)", "back and forth direction" and "up and down direction" used for the stroller (hand push cart) and its constituent elements mean, unless otherwise specified, "front (forth)", "rear (back, behind)", "up (above)", "down (below)", "back and forth direction" and "up and down direction" with respect to an infant riding on the unfolded stroller and its constituent elements. More specifically, the "back and forth direction" corresponds to a direction joining a lower left and an upper right in sheet planes of Figs. 1 and 2, and a right and left direction in a sheet plane of Fig. 3. Unless otherwise specified, "front" is a side to which an infant riding on the stroller faces. The "front" is a lower left side in the sheet plane of Fig. 1, an upper right side in the sheet plane of Fig. 2, and a left side in the sheet

plane of Fig. 3. On the other hand, the "up and down direction" is a direction orthogonal to a traveling surface of the stroller. Thus, when the traveling surface is a horizontal surface, the "up and down direction" is a vertical direction. A "transverse direction" is a width direction which is orthogonal both to the "back and forth direction" and the "up and down direction".

[0013]

In the example shown in Fig. 1, the stroller 10 further has, in addition to the stroller body 15 and the basket member 70, a seat 60 supported by the stroller body 15. The seat 60 is a part on which an infant sits or lies down.

[0014]

Next, the stroller body 15 is described with reference to Figs. 1 to 4. The stroller body 15 is configured to be foldable. The stroller body 15 has a pair of front legs 21 respectively located on the right side and the left side, and a pair of rear legs 23 respectively located on the right side and the left side. The stroller body 15 further has first links L1, second links L2, third links L3 and forth links L4, which are respectively located on the right side and the left side. The front legs 21, the rear legs 23, and the first to fourth links L1 to L4 function as links that constitute the stroller body 15 to be foldable and unfoldable.

[0015]

As shown in Figs. 1 and 2, the front leg 21 holds, at its lower end portion, a front wheel 22 such that the front wheel 22 can be rotated (rotatably). The front wheel 22 constitutes a caster, and can be rotated and turned. The rear leg 23 rotatably holds, at its lower end portion, a rear wheel 24. The front leg 21 and the rear leg 23 can be made of a metal pipe such as an aluminum alloy pipe, for example.

[0016]

As shown in Figs. 1 and 2, an upper end portion of the front leg 21 is connected to a front portion of the first link L1 located on the corresponding side (left side or right side) such that the the first link L1 can be pivoted (swung) (pivotably (swingably)). An upper end portion of the rear leg 23 is pivotably (swingably) connected to the front portion of the first link L1 located on the corresponding side (left side or right side). The first link L1 can be made of a resin molding, for example. In the illustrated example, the first link L1 can serve as an armrest.

[0017]

As can be understood from Fig. 3, the second link L2 is pivotably (swingably) connected to a rear end portion of the first link L1 located on the corresponding side (left side or right side). In the illustrated example, the second link L2 is constituted as a part of a handle 30. The handle 30 has a generally U-shape. The handle 30 has a pair of shaft parts 31, and a coupling part 32 that couples a pair of the shaft parts 31. Each shaft part 31 constitutes the second link L2. The coupling part 32 couples upper end portions of a pair of the shaft parts 31. The handle 30 can be made of a metal pipe such as an aluminum alloy pipe, for example.

[0018]

As well shown in Fig. 2, the third link L3 is pivotably connected to the rear leg 23 located on the corresponding side (left side or right side). The third link L3 can be made of a metal pipe such as an aluminum alloy pipe, or a resin molding, for example. In the illustrated example, the third link L3 is pivotably connected, at its lower end portion, to an intermediate portion of the rear leg 23.

[0019]

As shown in Figs. 2 and 3, the fourth link L4 is pivotably connected to the front leg 21 located on the corresponding side (left side or right side). In the illustrated example, the fourth link L4 is pivotably connected, at its front end portion, to an intermediate portion of the front leg 21. The fourth link L4 constitutes a part of a seat support unit that supports the seat 60.

[0020]

In the illustrated example, the second link L2, the third link L3 and the fourth link L4, which are located on the same side (left side or right side) in the width direction, are pivotably connected to each other by means of the same shaft member 35 (see Fig. 3). The shaft member 35 passes through the second link L2, the third link L3 and the fourth link L4. This structure allows the second link L2, the third link L3 and the fourth link L4 to be pivoted each other about an axis line corresponding to a center axis line of the shaft member 35.

[0021]

The stroller body 15 has the seat support unit 38 as a structure for supporting the seat 60. As shown in Fig. 3, the seat support unit 38 has a seat support 38A and a back support 38B. The back support 38B is swingable with respect to the seat support 38A. The seat support 38A includes a pair of side frame elements 39a, a front frame member 39b coupling a pair of the side frame elements 39a, and a rear frame member 39c coupling a pair of the side frame elements 39a (see Fig. 2). A pair of the side frame elements 39a are spaced apart from each other in the width direction. Each side frame element 39a extends in the back and forth direction and constitutes the aforementioned fourth link L4. The front frame member 39b extends in the width direction and couples front end portions of a pair of the side

frame elements 39a. The rear frame member 39c extends in the width direction and couples rear end portions of a pair of the side frame elements 39a.

[0022]

The stroller body 15 further has a cross member transversely extending between a pair of the legs or between a pair of the wheels. The illustrated stroller body 15 has a front coupling member 26 (see Fig. 1) coupling a pair of the front legs 21, and a rear coupling member 27 (see Fig. 2) coupling a pair of the rear legs 23. The front coupling member 26 functions as a footrest. The front coupling member 26 and the rear coupling member 27 can be made of a metal pipe such as an aluminum alloy pipe, or a resin molding, for example. A flexible guard member 28 is detachably provided between a pair of the first links L1.

[0023]

As well shown in Fig. 2, in the illustrated example, the stepping member 40 is provided on the cross member 25 formed of the rear coupling member 27. The stepping member 40 is described in detail below.

[0024]

The stroller body 15 as structured above can be folded by relatively pivoting the respective constituent members. Specifically, the handle 30 constituting the second link L2 is once raised rearward and upward and is then pushed downward, so as to pivot the third link L3 clockwise in Fig. 3 with respect to the rear leg 23. In accordance with this operation, the first link L1 and the fourth link L4 are pivoted clockwise in Fig. 3 with respect to the second link L2. These operations allow the handle 30 and the front leg 21 to come close to each other while maintaining a substantially parallel relationship therebetween in a side view. In addition, the handle 30 can be lowered. Thus, the stroller body 15 can be folded. In the folded state, the stroller

body 15 can have reduced dimensions along the back and forth direction and the up and down direction of the stroller 10. On the other hand, a procedure reverse to the aforementioned folding operation can unfold the stroller body 15 from its folded state.

[0025]

The seat 60 and the basket member 70 attached to the stroller body 15 are flexible. Thus, the seat 60 and the basket member 70 are deformed with the folding and unfolding operations of the stroller body 15 so as not to interfere with these operations.

[0026]

Next, the basket member 70 attached to the stroller body 15 is described.

[0027]

The basket member 70 provides an housing part serving as an housing space. An article to be housed in the housing part of the basket member 70 is not particularly limited as long as it is allowed by the structure of the basket member 70, and may be a rug and/or a toy, for example. The basket member 70 has a basket body 71 forming the housing part, and an attachment member 72 extending from the basket body 71. The basket body 71 may be formed as a sewn product. The attachment member 72 is a member for attaching the basket body 71 to the stroller body (cart body) 15.

[0028]

Various structures can be employed as the attachment member 72. For example, the attachment member 72 may be formed of an elongate string-like or belt-like member. The string-like or belt-like member may further has a fixing tool such as a hook and loop fastener, a button, a clip, etc. or may be formed only of a fixing tool.

[0029]

As shown in Fig. 2, the illustrated attachment

member 72A is formed by folding a belt member made of a sewn product at a distal end portion thereof away from the basket body 71. The attachment member 72A has a generally belt-like shape. The belt member as a material is sewn only to a distal end of the belt-like member, and the belt member as a material is maintained in the folded state. Thus, the distal end of the belt member is diverted to be somewhat spaced apart from the facing belt-like member. The distal end portion of the belt-like member has a tapered outer shape. Due to the attachment member 72A, when the folded portion of the belt member is inserted through a retaining hole 16 provided in the stroller body 15, the distal end of the belt member expands so as to be restricted from freely slipping out of the retaining hole 16. On the other hand, the attachment member 72A can be pulled out from the retaining hole 16 of the stroller body 15 by pressing the distal end of the belt member.

[0030]

By way of example, the basket member 70 shown in Fig. 2 has the four attachment members 72A extending upward from the basket body 71, and the three attachment members 72B and 72C extending downward and rearward from the basket body 71. The first attachment members 72A extending upward from the basket body 71 are passed through the retaining holes 16 provided in a pair of the third links L3 and the retaining holes 16 provided in a pair of the fourth links L4 so as to be held on the stroller body 15. By using the first attachment members 72A, the basket member 70 is held in such a manner that it is suspended from the stroller body 15.

[0031]

The three attachment members 72B and 72C extending downward and rearward from the basket body 71 are spaced apart from one another in the width direction. The second attachment members 72B located on both sides are

respectively passed through the retaining holes 16 provided in the rear coupling member 27 or the rear wheels 24 so as to be held on the stroller body 15. On the other hand, the third attachment member 72C located centrally in the width direction has a structure different from the other attachment members 72A. The third attachment member 72C is formed as a belt-like member having a fixing tool such as a hook and loop fastener. As shown in Figs. 4A to 4C, the third attachment member 72C goes around the cross member 25 to form an annular part through which the cross member 25 passes, by means of a fixing tool (not shown), so as to be attached to the cross member 25.

[0032]

The three downwardly extending attachment members 72B and 72C, in particular, the third attachment member 72C located centrally in the width direction, can stabilize the position of the basket member 70 suspended from the stroller body 15. This can suppress the basket body 71 housing therein an article from rolling, to thereby effectively avoid instable traveling of the stroller 10 caused by the rolling of the basket body 71.

[0033]

Further, the third attachment member 72C located centrally in the width direction can also effectively avoid the bottom surface of the basket body 71 deforming to come into contact with a traveling surface, because an article housed in the basket body 71 is heavy. Particularly in the basket member 70 shown in Fig. 3, the bottom surface of the basket body 71 is inclined downward toward the rear. When such a basket body 71 is attached to the stroller body 15, the aforementioned effect of the third attachment member 72C becomes more significant.

[0034]

Next, the stepping member 40 provided on the cross

member 25 is described in detail. The stepping member 40 is a part on which a foot of a user of the stroller (hand push cart) 10 is put. In a hand push cart constituted as the stroller 10, a user as a caregiver of an infant riding on the stroller 10 puts his/her foot on the stepping member 40, when he/she drives the stroller 10.

[0035]

A traveling surface TP (see Fig. 3) on which the hand push cart 10 travels may have a bump (convexity and/or concavity). In order that the hand push cart 10 passes over a convexity, it is effective that a wheel located forward in the traveling direction of the traveling hand push cart is raised. Otherwise, the wheel located forward in the traveling direction butts against the convexity so that the stroller cannot travel any more. In addition, the traveling surface TP may have a concavity such as a groove. For example, when crossing a railroad crossing, it is effective that a wheel located forward in the traveling direction of the traveling hand push cart is raised. Otherwise, the wheel located forward in the traveling direction gets stuck in the concavity so that the stroller cannot travel any more.

[0036]

As shown by a thick arrow in Fig. 3, a user pulls the handle 30 downward and rearward in order to raise the front wheels 22 located forward in the traveling direction. At this time, the user steps the stepping member 40 to prevent rearward movement of the hand push cart 10 itself. By stepping the stepping member 40, the general rotation of the hand push cart 10, which is clockwise in Fig. 3 about a rotation axis line of the wheel located rearward in the traveling direction, is promoted, so that the front wheels 22 located forward in the traveling direction can be raised.

[0037]

As shown in Fig. 2, the stepping member 40 is provided only on a part of the entire length of the cross member 25 which extends along the width direction and is formed of the rear coupling member 27 in the width direction. In addition, as shown in Fig. 4A, when seen from the width direction, the stepping member 40 is provided only on a part of the whole circumference of the cross member 25. Namely, the stepping member 40 does not go around the cross member 25. This specific example allows a user who sees the stepping member 40 to visually notice that the stepping member 40 is a part on which his/her foot is to be put. Thus, the user can effectively use the stepping member 40. Namely, when passing over a convexity and a concavity, the user can step the stepping member 40 so as to raise the front wheels 22 held on the front legs 21 located forward in the traveling direction. Thus, passing over of the convexity and the concavity can be stably performed.

[0038]

Particularly in the illustrated example, the stepping member 40 is located on a part of the crossing member 25, the part including a center of the cross member 25 in the width direction. Thus, the front wheels 22 can be raised by stepping the stepping member 40, while rolling of the stroller 10 in the right and left direction is restricted.

[0039]

As shown in Figs. 4A to 4C, the stepping member 40 is attached to the cross member 25 in such a manner that the stepping member 40 covers from above a part of the cross member 25, which is highest in the up and down direction when seen from the width direction. This specific example allows the cross member 25 to stably support the stepping member 40 from below. Thus, detachment of the stepping member 40 from the cross

member 25 when stepping the stepping member 40 can be effectively prevented.

[0040]

Figs. 4B and 4C show the cross member 25 and the stepping member 40 in a section along both the up and down direction and the back and forth direction, i.e., in a section orthogonal to the width direction. Figs. 4B and 4C show the sections at different positions in the width direction. More specifically, Fig. 4B shows the stepping member 40 together with the cross member 25 in a section along a B-B line of Fig. 7, and Fig. 4C shows the stepping member 40 together with the cross member 25 in a section along a C-C line of Fig. 7.

[0041]

A position at which such a stepping member 40 is installed on the cross member 25 overlaps a position at which the aforementioned third attachment member 72C, which is important for stably holding the basket body 71, is installed on the cross member 25. When the third attachment member 72C is wrapped around both the cross member 25 and the stepping member 40, it is impossible to stably step the stepping member 40. In the first place, a user may hesitate to step the stepping member 40 in order to avoid soiling the third attachment member 72C.

[0042]

On the other hand, according to this embodiment, as shown in Figs. 4B and 4C, a passageway PW for the third attachment member 72C is formed between the cross member 25 and the stepping member 40. Thus, the third attachment member 72C does not pass the outer surface of the stepping member 40, but can pass through the passageway PW between the inner surface of the stepping member 40 and the cross member 25. Thus, the third attachment member 72C can be avoided being between the stepping member 40 and a foot. In addition, since the

stepping member 40 is attached to the cross member 25 in such a manner that the stepping member 40 covers from above a part of the cross member 25, which is highest in the up and down direction when seen from the width direction, a force can be stably applied to the cross member 25 through the stepping member 40. This makes it possible to easily raise the front wheels 22 held on the legs 21 located forward in the traveling direction. As a result, passing over of a concavity and/or a convexity of the traveling surface (see Fig. 3) can be stably performed.

[0043]

Moreover, the third attachment member 72C can be effectively avoided being soiled by a shoe placed on the stepping member 40. Further, since the third attachment member 72C is arranged in the passageway PW formed between the stepping member 40 and the cross member 25, displacement of the position of the third attachment member 72C over the cross member 25, and even detachment of the third attachment member 72C from the cross member 25 can be suppressed. This can more stabilize the holding of the basket body 71 by means of the third attachment member 72C.

[0044]

The stepping member 40 is further described. As shown in Figs. 4A to 4C, when seen from the width direction, the stepping member 40 is configured to cover substantially a half of the entire circumference of the cross member 25. In the illustrated example, the rear coupling member 27 forming the cross member 25 has a flat part having a flat outer surface, and a curved part having a curved outer surface. In particular, in the illustrated cross member 25, the outer surface of one curved part 25b is semicircular. A pair of the flat parts 25a couple end portions of the two curved parts 25b. As a result, in a section orthogonal to the width

direction, the cross member 25 has a major axis line LA parallel to a direction in which a pair of the flat parts 25a extend, and a minor axis line SA parallel to a direction in which a pair of the flat parts 25a face each other. The major axis line LA and the minor axis line SA are orthogonal to each other. The major axis line LA extends along a central axis line of the rear leg 23 on which the cross member 25 (rear coupling member 27) is provided, and inclines with respect to the up and down direction so as to be located forward above.

[0045]

The stepping member 40 covers a half of the cross member 25, which is a rear and a somewhat upper part divided by the major axis line LA. In particular, the illustrated stepping member 40 covers an area over the half of the cross member 25, which is a rear and a somewhat upper part divided by the major axis line LA. Such a stepping member 40 is easy to be attached to and secured to the cross member 25, and can cover a necessary range of the cross member 25.

[0046]

As shown in Figs. 4B and 4C, when seen from the width direction, the passageway PW extends along the outer surface of the cross member 25, i.e., the passageway PW extends linearly on the flat part 25a and extends curvilinearly on the curved part 25b. As shown in Fig. 5, the passageway PW opens, at its both ends, forward and somewhat downward. Since the passageway PW has a pair of openings, the third attachment member 27C can be attached to and detached from the cross member 25, while the stepping member 40 is fixed on the cross member 25.

[0047]

In more detail, in order for the attachment, the third attachment member 72C is inserted into the passageway PW from any of the openings to pass through

the passageway PW. Then, the distal end portion of the third attachment member 72C having passed through the passageway PW and a portion of the third attachment member 72C, which is located between the passageway PW and the basket body 71, are fixed to each other using a fixing tool such as a hook and loop fastener, a button, a clip, etc. Thus, the third attachment member 72C extending from the basket member 71 can be attached to the cross member 25. In order for the detachment, a portion of the third attachment member 72C, which has passed through the passageway PW, is drawn into the passageway PW, and the third attachment member 72C is drawn out from the passageway PW. Since the basket member 70 is attachable to and detachable from the stroller body 15, the basket member 70 can be kept clean by washing it, for example.

[0048]

The stepping member 40 is further described in detail with reference further to Figs. 5 to 8. Fig. 5 is a view showing the stepping member 40 attached to the cross member 25 seen from forward. Fig. 6 is a perspective view showing only the stepping member 40 shown in Fig. 5, with the cross member 25 being removed. Fig. 7 is a plan view showing the stepping member 40 seen from a side facing the cross member 25. Fig. 8 is a sectional view along a XIII-XIII line of Fig. 7.

[0049]

As can be understood from Figs. 5 and 7, the stepping member 40 includes a pair of first portions (first areas) 41 located on both end portions and attached to the cross member 25, and a second portion (second area) 42 located between a pair of the first portions 41 in the width direction. The stepping member 40 forms the passageway PW between its second portion 42 and the cross member 25. The stepping member 40 is attached, at this first portion 41, to the cross member

25 using a fixing tool such as a screw, a rivet, etc. According to such a specific example, the first portions 41 attached to the cross member 25 restrict displacement of the position of the third attachment member 72C in the width direction. Thus, the third attachment member 72C can be prevented from being unintentionally detached from the cross member 25, and further the third attachment member 72C can be stably held on the cross member 25.

[0050]

As can be understood from Figs. 2 and 8, the stepping member 40 is bulged from the cross member 25 more in the second portion 42 than in the first portions 41. Namely, the stepping member is bulged in the second portion 42 which is located between a pair of the first portions 41. In other words, the thickness of the stepping member 40 is larger in the second portion 42 than in the first portions 41. Such an outer shape of the stepping member 40 makes it easier for a user to put his/her foot on the second portion 42. The user can apply a force more stably to the cross member 25 through the stepping member 40 by putting his/her foot in the area centering on the second portion 42, which area is an intermediate part of the stepping member 40 in the width direction.

[0051]

In particular, the second portion (second area) 42 of the stepping member 40 may be centrally located on the cross member 25 in the width direction. Such a structure allows a force to be more stably applied to the cross member 25 through the stepping member 40. In addition, since the third attachment member 72C is centrally located in the width direction, the basket member 71 can be more stably attached.

[0052]

In particular, as shown in Figs. 2 and 8, the

height of the stepping member 40 bulged from the cross member 25 increases from both ends in the width direction toward the center in the width direction. In other words, the thickness of the stepping member 40 increases from both ends in the width direction toward the center in the width direction. Such an outer shape of the stepping member 40 makes it further easier for a user to put his/her foot on the second portion 42, and also makes it possible to furthermore stably apply a force to the cross member 25 through the stepping member 40.

[0053]

As shown in Fig. 6, the stepping member 40 has a plate-like part 45 covering the cross member 25, and a first rib 51 located in the first portion 41 and projecting from the plate-like part 45 toward the cross member 25.

[0054]

The plate-like part 54 is a plate-shaped part having a planar extension. However, the plate-like part 45 may be provided with a hole or the like. The plate-like part 45 shown in Fig. 2 has a curved plate-like shape. As shown in Fig. 2, the plate-like part 45 has an outer rib 46 on an outer surface facing opposite to the cross member 25. The outer ribs 46 (three in the illustrated example) are provided to be spaced apart from one another in a direction orthogonal to the width direction. The outer ribs 46 function as slip resistance to a shoe (foot) put on the stepping member 40. The outer ribs 46 visually inform a user of a position on which a foot should be put.

[0055]

As shown in Figs. 4B and 5, the first rib 51 located in the first portion 41 and extending from the plate-like part 45 is in contact, at its distal end most away from the plate-like part 45, with the cross member 25. Such a first rib 51 allows the stepping member 40

with sufficient rigidity to be smaller and lighter. In addition, since the first rib 51 is maintained in contact with the cross member 25, the stepping member 40 can be stably located on the cross member 25. Moreover, the position of the third attachment member 72C can be effectively prevented from being displaced in the width direction.

[0056]

As shown in Figs. 6 and 8, the first rib 51 includes a first longitudinal rib 51a and a second transverse rib 51b. As shown in Figs. 4B and 4C, when seen from the width direction, the first longitudinal rib 51a extends along the outer surface of the cross member 25. The first transverse rib 51b extends in the width direction. Such a structure allows the stepping member 40 with sufficient rigidity to be sufficiently smaller and lighter.

[0057]

Particularly in the illustrated example, as shown in Figs. 4B and 4C, when seen from the width direction, the first longitudinal rib 51a curvilinearly extends along the outer surface of the cross member 25. As shown in Figs. 6 to 8, the first longitudinal ribs 51a are provided on the first portion 41 to be spaced apart from one another in the width direction. The first transverse rib 51b linearly extends in the width direction. The first transverse ribs 51b are provided on the first portion 41 to be spaced part from one another in a direction orthogonal to the width direction. As can be understood from Fig. 6, the first transverse ribs 51b are spaced part from one another along the outer surface of the cross member 25 when seen from the width direction. As shown in Figs. 4B, 4C and 7, the first longitudinal ribs 51a and the first transverse ribs 51b extend from the plate-like part 45 along a plane orthogonal to the width direction. A through hole

51c, through which a fixing tool, such as a screw, a rivet, etc., for attaching the stepping member 40 to the cross member 25 passes, is provided in the first portion 41.

[0058]

As shown in Fig. 6, the stepping member 40 has a second rib 52 located in the second portion 42 and projecting from the plate-like part 45 toward the cross member 25. As shown in Fig. 6, the height of the second rib 52 projecting from the plate-like part 45 is lower than the height of the first rib 51 projecting from the plate-like part 45. Thus, as shown in Figs. 4B, 4C and 5, the second rib 52 is spaced, at its distal end most away from the plate-like part 45, from the cross member 25. The passageway PW is formed between the distal end of the second rib 52 and the cross member 25. Thus, a difference between the the height of the first rib 51 projecting from the plate-like member 45 and the height of the second rib 52 projecting from the plate-like part 45 is almost the same as the thickness of the passageway PW, and is larger than the thickness of the third attachment member 72C passing through the passageway PW.

[0059]

In the illustrated example, the distance from the distal end of the second rib 52 to the cross member 25 is substantially constant. Thus, the thickness of the passageway PW at a position facing the second rib 52 is substantially constant. Such a structure can suppress the third attachment member 72C from getting stuck in the passageway PW, particularly when the distal end of the third attachment member 72C is inserted into the passageway PW in order to attach the third attachment member 72C.

[0060]

As shown in Figs. 6 and 8, the second rib 52 includes a second longitudinal rib 52a and a second

transverse rib 52b. As shown in Figs. 4B and 4C, when seen from the width direction, the second longitudinal rib 52a extends along the outer surface of the cross member 25. The second transverse rib 52b extends in the width direction. Such a structure allows the stepping member 40 with sufficient rigidity to be sufficiently smaller and lighter. As shown in Figs. 4B, 4C and 7, the first longitudinal rib 52a and the second transverse rib 52b extend from the plate-like part 45 along a plane orthogonal to the width direction.

[0061]

As shown in Figs. 4B and 4C, when seen from the width direction, the second longitudinal rib 52a curvilinearly extends along the outer surface of the cross member 52 while being spaced apart from the cross member 25. According to such a specific example, movement of the third attachment member 72C in the passageway PW between the cross member 25 and the stepping member 40 can be guided by the second longitudinal rib 52a, when the third attachment member 72C is attached to and detached from the cross member 25. Thus, it is easy to attach the basket member 70 to the stroller body 15 using the third attachment member 72C.

[0062]

In the illustrated example, when seen from the width direction, the distance from the distal end of the second longitudinal rib 52a to the cross member 25 is almost constant at each position along the outer surface of the cross member 25. Such a structure allows the third attachment member 72C to smoothly move in the passageway PW, when the third attachment member 72C is attached to and detached from the cross member 25.

[0063]

However, as shown in Figs. 4B and 4C, when seen from the width direction, the height of the second

longitudinal rib 52a projecting from the plate-like part 45 gradually lowers toward both ends 52ae at both end portions along the outer surface of the cross member 25. According to such a specific example, the insertion of the third attachment member 72C into the passageway PW between the cross member 25 and the stepping member 40 by the varying height of the second longitudinal rib 52a. Thus, it is easy to attach the basket member 70 to the stroller body 15 using the third attachment member 72C.

[0064]

As shown in Figs. 6 and 8, the second longitudinal ribs 52a are provided on the second portion 42 of the stepping member 40. The second longitudinal ribs 52a are provided to be spaced apart from one another in the width direction. As shown in Figs. 7 and 8, an arrangement pitch P2 of the second longitudinal ribs 52a is smaller than an arrangement pitch P1 of the first longitudinal ribs 51a. Such a structure allows the strength of the stepping member 40 to be sufficiently maintained at the second portion 42 away from the cross member 25. Thus, a force applied to the stepping member 40 can be efficiently transmitted to the cross member 25. In addition, it is easy for the third attachment member 72C to be supported by the two or more second longitudinal ribs 52a in the passageway PW between the cross member 25 and the stepping member 40. In this case, since the state of the third attachment member 72C in the passageway PW can be stabilized, an article or the like can be stably held by the basket member 70. In addition, movement of the third attachment member 72C in the passageway PW between the cross member 25 and the stepping member 40 can be stably guided by the two or more second longitudinal ribs 52a, when the third attachment member 72C is attached to and detached from the cross member 25.

[0065]

More preferably, the arrangement pitch P2 of the second longitudinal ribs 52a is smaller than a width W of the belt-like third attachment member 72C, which is shown by two-dot chain lines in respective Figs. 7 and 8. Such a specific example allows the third attachment member 72C to be supported by the two or more second longitudinal ribs 52a in the passageway PW between the cross member 25 and the stepping member 40. Thus, the support state of the basket member 70 can be stabilized, and the third attachment member 72C can be stably guided in the passageway PW.

[0066]

The second rib 52 also includes the second transverse rib 52b extending in the width direction. This second transverse rib 52b can also contribute to guidance of the belt-like extending in in the passageway PW. Namely, when the belt-like third attachment member 72C is moved in the passageway PW, the distal end of the third attachment member 72C comes into contact with the second transverse rib 52b extending in the width direction. Thus, the third attachment member 72C can be suppressed from moving diagonally to the passageway PW. Namely, the second transverse rib 52b contacts the distal end of the belt-like third attachment member 72C to adjust the orientation of the third attachment member 72C. More specifically, the orientation of the third attachment member 72C can be adjusted in such a manner that the distal end of the third attachment member 72C extends in a direction orthogonal to the longitudinal direction of the passageway PW. Thus, the third attachment member 72C can be stably guided by the second transverse rib 52b in the passageway PW, during attachment and detachment of the basket member 70 using the third attachment member 72C.

[0067]

Particularly in the illustrated example, as shown

in Fig. 4C, the cross member 25 includes, in the area covered with the stepping member 40, the flat part 25a having a flat outer surface and the curved part 25b having a curved outer surface. The distal end of the second transverse rib 52b faces a connection part 25c between the flat part 25a and the curved part 25b. As can be understood from Fig. 5, the connection part 25c extends like a line, particularly like a straight line along the width direction. In the illustrated example, the distal end of the second transverse rib 52b extends along the connection part 25c while facing the connection part 25c. According to such a specific example, the second transverse rib 52b is provided on an area where the orientation of the third attachment member 72C is changed in the passageway PW. Thus, when the orientation of the third attachment member 72C is changed in the passageway PW during attachment and detachment of the third attachment member 72C to and from the cross member 25, it is easy for the distal end of the third attachment member 72C to come into contact with the second transverse rib 52b. Namely, since the second transverse rib 52b is provided in the passageway PW at an area where the third attachment member 72C tends to get stuck, movement of the third attachment member 72C along the passageway PW can be effectively promoted.

[0068]

As shown in Fig. 4C, when seen from the width direction, the second transverse ribs 52b are provided along the outer surface of the cross member 25. In addition, two connection parts 25c are present in the passageway PW. One second transverse rib 52b is located to face each connection part 25c. Thus, the illustrated structure can make smoother the movement of the third attachment member 72C in the passageway PW.

[0069]

As shown in Fig. 7, the plate-like part 45 includes a pair of side edge parts 45c located on both ends in the width direction, a first edge part 45a extending in the width direction to couple a pair of the side edge parts 45c, and a second edge part 45b extending in the width direction to couple a pair of the side edge parts 45c. The side edge part 45c extends in a direction orthogonal to the width direction. As shown in Figs. 6 and 7, the aforementioned each first longitudinal rib 51a extends from the first edge part 45a to the second edge part 45b. As shown in Fig. 5, the first edge part 45a and the second edge part 45b are spaced apart, at the second portion 42 and an area of the first portion 41, which area at least includes a portion adjacent to the second portion 42, from the cross member 25. In the example shown in Fig. 5, the first edge part 45a and the second edge part 45b are each spaced apart from the cross member 25, along its length other than both ends in the width direction, or along its entire length. Since a gap is formed between the cross member 25 and the first edge part 45a or the second edge part 45b of the plate-like part 45, a user can easily notice the presence of the passageway PW, and further can perceive the entrance of the passageway PW. In addition, during the use of the stroller 10, a large force that will detach the stepping member 40 from the cross member 25 can be suppressed from being applied from the third attachment member 72C to the plate-like part 45. Further, since the stepping member 40 can be largely expanded from the cross member 25, it is easy to stably step the stepping member 40.

[0070]

Further, as shown in Figs. 5 and 7, recesses 47 are formed, at the second portion 42, in the first edge part 45a and the second edge part 45b. The recess 47 makes it easier for a user to notice the presence of the

passageway PW, and further to perceive the entrance of the passageway PW. In addition, the third attachment member 72C can be easily inserted into the passageway PW, and the third attachment member 72C can be easily drawn out from the passageway PW, during attachment and detachment of the basket member 70. Further, during the use of the stroller 10, a large force that will detach the stepping member 40 from the cross member 25 can be suppressed from being applied from the third attachment member 72C to the plate-like part 45.

[0071]

In the aforementioned embodiment, the hand push cart (stroller) 10 has the cart body (stroller body) 15, and the basket member 70 attached to the cart body 15. The cart body 15 has a pair of the legs 23 spaced apart from each other in the width direction, the wheels 24 respectively held on the lower end portions of a pair of the legs 23, the cross member 25 extending in the width direction between a pair of the legs 23 or a pair of the wheels 24, and the stepping member 40 provided on the cross member 25. The basket member 70 has the basket body 71 forming a housing part, and the third attachment member 72C extending from the basket body 71 to attach the basket member 70 to the cart body 15.

[0072]

According to such an embodiment, the passageway PW for the third attachment member 72C is formed between the cross member 25 and the stepping member 40 provided on the cross member 25. Thus, the third attachment member 72C can be effectively suppressed from being located on the stepping member 40, and it is possible to stably put a foot on the stepping member 40. Thus, a force can be stably applied to the cross member 25 through the stepping member 40 to raise the wheels 22 held on the legs 21 located forward in the traveling direction. As a result, passing over of a convexity and

a concavity can be stably performed. In addition, the third attachment member 72C can be effectively avoided being soiled by a shoe or the like placed on the stepping member 40.

[0073]

Although one embodiment has been described with reference to the specific example, the aforementioned specific example is not intended to limit the one embodiment. The above embodiment can be carried out in other various specific examples, and can be variously omitted, replaced, changed, added, without departing from the scope thereof.

[0074]

A modification example is described with reference to the drawings. In the following description and the drawings used in the following description, the same reference numerals as those used for the corresponding parts in the aforementioned specific example are used for the parts that can be configured in the same ways as in the aforementioned specific example, and duplicate descriptions are omitted.

[0075]

The stroller body 15, the stepping member 40 and the basket member 70 described above are mere examples, and can be variously modified. Further, although the aforementioned specific example, in which the stepping member 40 is provided on the cross member 25 located between a pair of the rear legs 23, is shown, the disclosure is not limited to this example. For example, the stepping member 40 may be provided on the cross member 25 provided between a pair of the rear wheels 24. Further, as shown in Fig. 9, in a stroller 10 having a swingable handle 30, the stepping member 40 may be attached to a cross member 25 (e.g., the aforementioned front coupling member 26) extending in the width direction between a pair of front legs 21, or a cross

member 25 extending in the width direction between a pair of front wheels 22.

[0076]

Further, as has been already described above, the cross member 25, the stepping member 40 and the basket member 70 described above are not limited to the application to the stroller 10, but can be used in a hand push cart as a pet cart for taking out a pet, or a hand push cart as a wagon for transporting an article.

[0077]

10	Stroller
15	Stroller body
21	Front leg
22	Front wheel
23	Rear leg
24	Rear wheel
25	Cross member
25a	Flat part
25b	Curved part
25c	Connection part
30	Handle
40	Stepping member
41	First portion
42	Second portion
45	Plate-like part
45a	First edge part
45b	Second edge part
45c	Side edge part
46	Outer rib
47	Recess
51	First rib
51a	First longitudinal rib
52	Second rib
52a	Second longitudinal rib
52ae	end
52b	Second transverse rib

70	Basket member
71	Basket body
72	Attachment member
72C	Third attachment member
PW	Passageway
L1	First link
L2	Second link
L3	Third link
L4	Fourth link

CLAIMS

1. A hand push cart comprising:

a cart body having a pair of legs spaced apart from each other in a width direction, wheels respectively held on lower end portions of a pair of the legs, a cross member extending between a pair of the legs or a pair of the wheels, and a stepping member provided on the cross member; and

a basket member attached to the cart body;

wherein:

the basket member has a basket body forming a housing part, and an attachment member extending from the basket body to attach the basket body to the cart body; and

a passageway for the attachment member is formed between the cross member and the stepping member.

2. The hand push cart according to claim 1, wherein

the stepping member extends along the width direction, and the stepping member is provided on a part of an entire length of the cross member in the width direction, and is provided on a part of an entire circumference of the cross member when seen from the width direction.

3. The hand push cart according to claim 1 or 2, wherein

the stepping member covers a highest position of the cross member from above when seen from the width direction.

4. The hand push cart according to any one of claims 1 to 3, wherein

the stepping member has a pair of first portions located on both end portions in the width direction and

attached to the cross member, and a second portion located between a pair of the first portions in the width direction to form the passageway between the second portion and the cross member.

5. The hand push cart according to claim 4, wherein the stepping member is bulged from the cross member more in the second portion than in the first portions.

6. The hand push cart according to claim 4 or 5, wherein:

the stepping member has a plate-like part covering the cross member, and a first rib located in the first portion and projecting from the plate-like part toward the cross member; and

the first rib is in contact, at its distal end, with the cross member.

7. The hand push cart according to claim 6, wherein:

the first rib has a first transverse rib extending in the width direction, and a first longitudinal rib projecting toward the cross member when seen from the width direction; and

the first rib is in contact, at its distal end, with the cross member.

8. The hand push cart according to any one of claims 4 to 7, wherein:

the stepping member has a plate-like part covering the cross member, and a second rib located in the second portion and projecting from the plate-like part toward the cross member; and

the second rib includes a second longitudinal rib extending along an outer surface of the cross member while being spaced apart from the cross member when seen from width direction.

9. The hand push cart according to claim 8, wherein
a height of the second longitudinal rib projecting
from the plate-like part gradually lowers toward both
ends at both its end portions along the outer surface
of the cross member.

10. The hand push cart according to claim 8 or 9,
wherein:

the second longitudinal ribs are provided to be
spaced apart from each other in the width direction; and
an arrangement pitch of a plurality of the second
longitudinal rib is smaller than a width of the
attachment member.

11. The hand push cart according to any one of claims
8 to 10, wherein:

the stepping member further has a first rib located
in the first portion and projecting from the plate-like
part toward the cross member;

the first rib includes first longitudinal ribs
extending along an outer surface of the cross member
when seen from the width direction;

the first longitudinal ribs are provided to be
spaced apart from each other in the width direction;

the second longitudinal ribs are provided to be
spaced apart from each other in the width direction; and
an arrangement pitch of the second longitudinal
ribs is smaller than an arrangement pitch of the first
longitudinal ribs.

12. The hand push cart according to any one of claims
8 to 11, wherein

the second rib further includes a second
transverse rib extending in the width direction.

13. The hand push cart according to claim 12, wherein:
the cross member includes, in an area on which the plate-like part is provided, a flat part having a flat outer surface, and a curved part having a curved outer surface; and

a distal end of the second transverse rib extends along a linear connection part between the flat part and the curved part.

14. The hand push cart according to any one of claims 6 to 13, wherein:

the plate-like part includes a pair of side edge parts located on both ends in the width direction, a first edge part coupling a pair of the side edge parts, and a second edge part coupling a pair of the side edge parts; and

at least one of the first edge part and the second edge part is provided, in the second portion, with a recess.

15. The hand push cart according to any one of claims 6 to 14, wherein:

the plate-like part includes a pair of side edge parts located on both ends in the width direction, a first edge part coupling a pair of the side edge parts, and a second edge part coupling a pair of the side edge parts; and

the first edge part and the second edge part are spaced apart, at the second portion and an area of the first portion, which area at least includes a portion adjacent to the second portion, from the cross member.