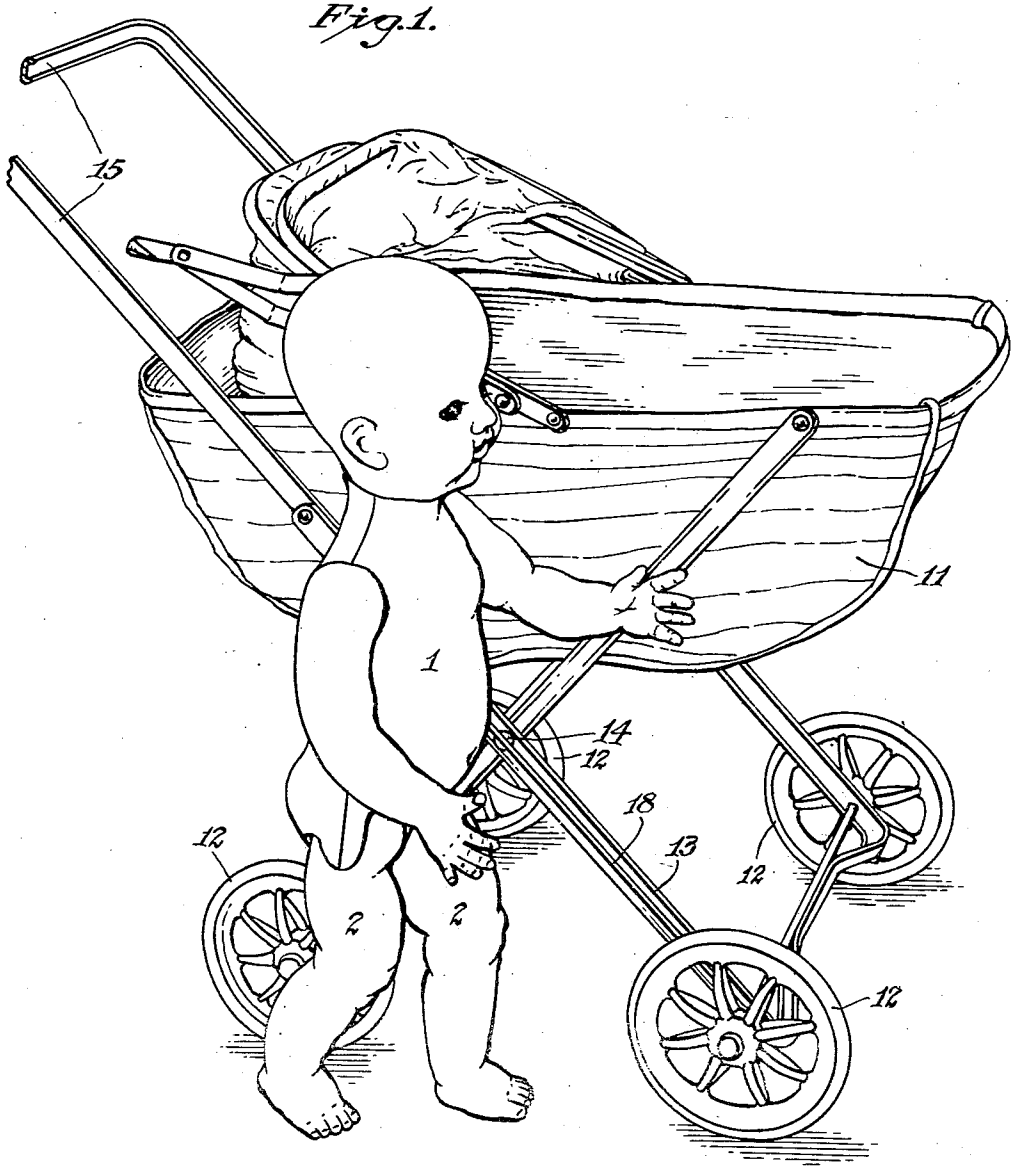
March 25, 1958 H. W. NOYES 2,827,733

WALKER DOLL AND CARRIAGE TOY

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Fig. 1.



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Fig.2.

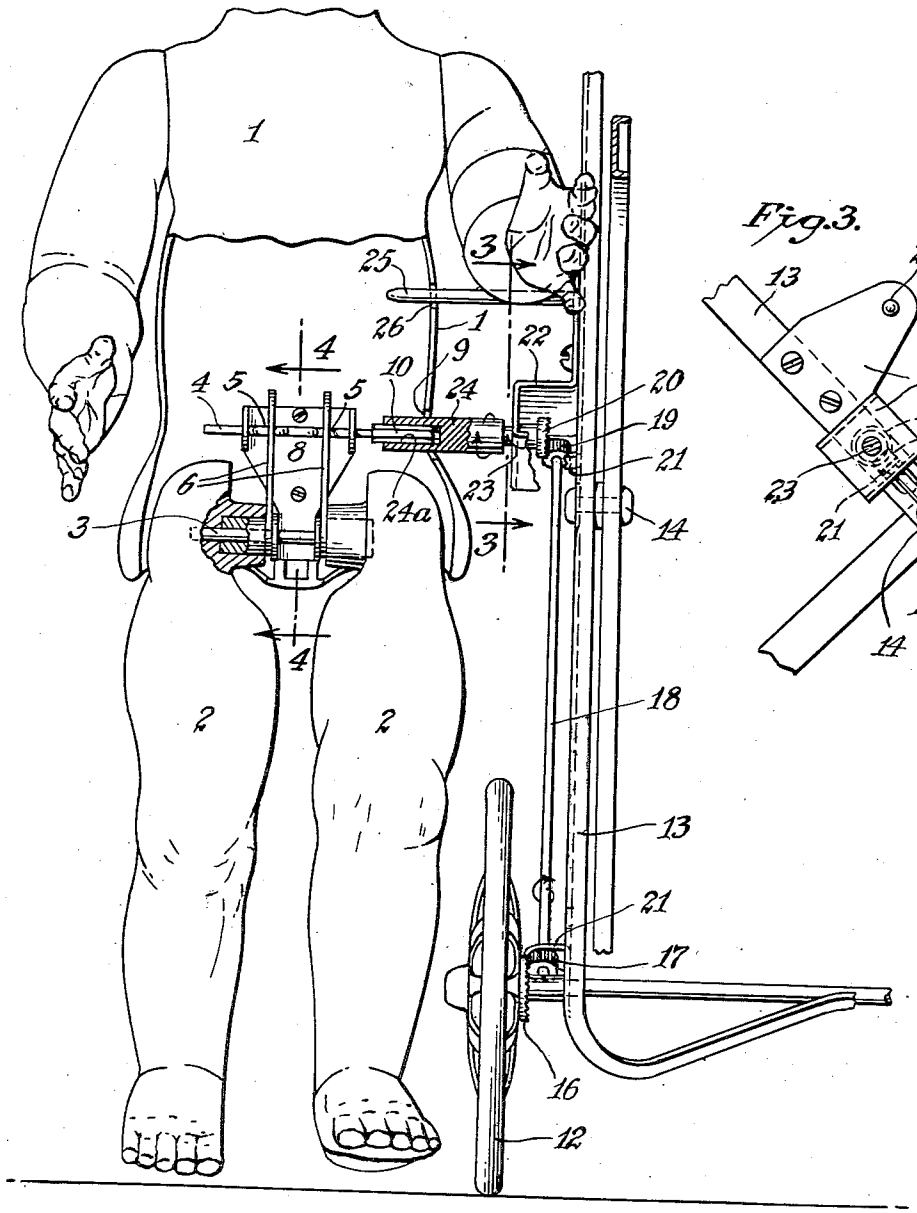


Fig.3.

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Fig. 5.

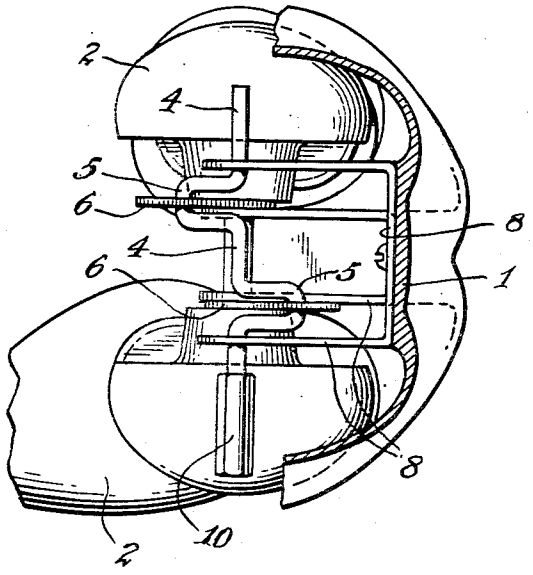
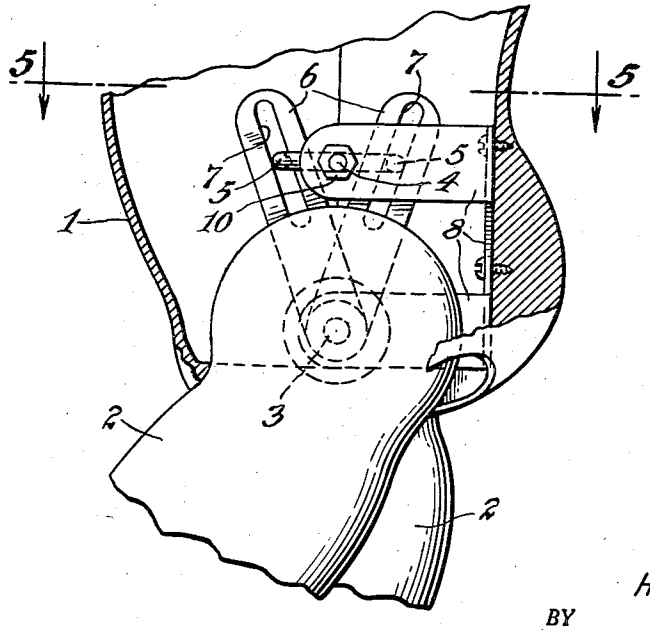


Fig. 4.



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2,827,733

WALKER DOLL AND CARRIAGE TOY

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Application May 17, 1955, Serial No. 508,917
6 Claims. (Cl. 46—116)

This invention relates to a walker doll and carriage toy.

A walker doll has legs which swing back and forth and which are provided with a simple interconnecting mechanism designed to force the legs to swing out of phase with each other so as to simulate a walking action. The doll is grasped by the child and propelled forwardly while being rocked slightly from side to side so as to bring each advanced leg in contact with the floor. With a little practice, the child learns to manipulate the doll skillfully.

A conventional baby carriage may be used to carry the walker doll, of course. Thus, the child may wheel the doll around, and the doll may be removed from the carriage so that the child may pretend to teach the doll to walk and, ultimately, to pretend that the doll has learned to walk successfully.

Any illusion of having successfully taught the doll to walk, is hampered by the fact that the child knows that the doll cannot, in fact, walk alone. The doll must always be supported and manipulated to provide the walking action. A true walking doll, which is mechanically powered and balanced to walk unaided, and which is quite expensive, represents the next step upward in a child's doll life. However, this type of doll is usually given a more mature appearance, and, therefore, does not span the breach, in the child's imagination, separating the teaching of the baby doll's walking training and its successful walking. The high cost of a true walking doll prevents many children from ever acquiring one of these interesting devices at all.

With the foregoing in mind, one of the objects of the present invention is to provide a walker doll and baby carriage combination toy which permits the child to wheel the baby doll, to teach the baby doll to walk, and to enjoy the triumph of having the baby doll walk apparently unaided beside the baby carriage. Another object is to provide a toy of this character at a cost comparable to that of an ordinary prior art baby carriage and walker doll. Other objects may be inferred from the following disclosure of a specific example of this invention, as it is illustrated by the accompanying drawings in which:

Fig. 1 is a perspective view showing the walker doll strolling beside the baby carriage in an apparently unaided manner;

Fig. 2 is a front view, showing only the pertinent parts of the invention, this view being partly in elevation and partly in vertical section;

Fig. 3 shows details and is taken on the line 3—3 in Fig. 2;

Fig. 4 is a vertical section, taken on the line 4—4 in Fig. 2 and showing details; and

Fig. 5 is a cross section taken on the line 5—5 in Fig. 4.

This illustrated toy includes a walker doll having a body 1 and legs 2, pivoted to the body 1 by pivot shafts 3. An unpowered leg walking motion mechanism interconnects the legs 2. This mechanism includes a rotary crank shaft 4 having two crank arms 5, respectively 180° out of phase, and levers 6 which respectively connect with the pivot shafts 3, of each leg 2, and have longitudinal slots 7, which are radial with respect to the pivot shafts 3, and in which the crank pin portions of the crank 5 operate. The crank shaft is journaled by a bracket 8 which is secured to the doll body 1.

This walker mechanism, just described above, is conventional as is the walker doll itself. It can be seen that the legs are forced to swing back and forth out of phase, so as to permit the walking action by the previously described manual manipulation. Such walker dolls are manufactured by mass-production methods and are relatively inexpensive. They cost very much less than a true walking doll.

According to the present invention an aperture or hole 9 is formed in the side of the doll's body 1. This hole is axially aligned with the crank shaft 4, and a coupling member 10 is fixed permanently to the end of the shaft 4 which projects towards the hole 9. This coupling member 10, which may comprise simply a flat sided piece press fitted on the shaft 4 tightly enough to be permanent, is preferably located so as to be completely confined within the doll's body 1. The outer end of the coupling member may project slightly from the outside of the body, through the hole 9, but the amount of this should be kept within such limits as to permit the coupling member to be concealed by the walker doll's usual clothing.

Note that the only modification, of the usual walker doll, is the provision of the hole 9 and the attachment of the coupling 10. This permits the toy manufacturer to purchase the inexpensive walker dolls, at wholesale price, and to make this simple and inexpensive conversion. The usual action of the walker doll is not interfered with, in any manner, nor is its appearance altered in any noticeable fashion.

As shown by Fig. 1, a conventional baby doll carriage may be used. The illustrated carriage has a body 11, in which the illustrated walker doll may be carried, and the usual wheels 12 which roll on the floor. This carriage is of the folding type having diagonal frame bars 13, interconnected by pivots 14, and extending upwardly to support the body 11. The usual handle 15 permits the carriage to be wheeled in the usual manner.

Note that this carriage, also, may be the commercial product produced by mass-production methods and which is, therefore, correspondingly inexpensive. As can be appreciated from the following, the ordinary function of this carriage is not altered, in any way, by the incorporation of the present invention, although a new and very advantageous function is added.

According to the invention, a side-faced gear 16 is firmly fixed to one of the wheels 12, and this gear 16 is provided with a meshing pinion 17 which is keyed to a shaft 18, extending inconspicuously up along the adjacent one of the diagonal bars 13 to a location slightly above the pivot 14 associated with that particular bar. The upper end of the shaft 18 has a pinion 19 meshed with a side-faced gear 20 generally corresponding with the gear 16 although not necessarily of the same diameter. Brackets 21 serve to journal the shaft 18 on the bar 13, and a bracket 22 journals a shaft 23, which extends horizontally and outwardly from the carriage body 11, which mounts the gear 20. When the carriage is wheeled the shaft 23 rotates.

The height at which the shaft 23 is located, relative to the floor on which the wheels 12 roll, should cause the coupling 24 to register or index with the coupling 10, on the crank shaft 4, when the walker doll is located at such a height as to cause the lower extremities of its legs to just slightly clear the floor. The coupling 24 is shown as comprising a socket member having a bore 24*a* which mates with the flat sided coupling 10 so as to

prevent relative rotation between the two couplings although they are quickly and easily separated from each other. The coupling members **10** and **24** merely slide to and from engagement relative to each other.

In this case, also, the general appearance of the baby carriage is not altered in any way. The carriage can still be folded, if desired, the shaft **18** is very inconspicuous, and the part **22** may be shaped to form a housing to protect the child's fingers from the gearing **19** and **20** while also serving to conceal this gearing. Only the coupling member **24** shows and this is relatively inconspicuous and, of course, entirely harmless because all it does is rotate when the carriage is pushed.

The usual walker doll leg control mechanism is sturdy enough so that by making the coupling members **10** and **24** relatively long, to give rigidity, the entire doll may be supported with its feet slightly off the floor. The balance of the doll may be such that, when attached to the carriage, the doll stands upright and does not rotate or oscillate with rotation of the coupling **24**. In other cases, such as when the doll is somewhat top heavy, the carriage may be provided with a projecting pin **25** fastened to the bar **13** along which the shaft **18** extends. In such an instance a second hole **26** is formed in the doll's body so that this pin **25** projects through this hole and locks the doll's body against any rotative movement while positively supporting the doll in an upright position.

Now it can be seen that the ordinarily commercially available walker doll and baby doll carriage, by inexpensive additions, has been made into a simulation of a true walking doll. Nothing is complicated and all that the child has to do is to thrust the walker doll against the side of the carriage so that the coupling **24** slips over the coupling **10** with the pin **25**, if used, slipping into the hole **26**. Appropriate holes are, of course, made in the walker doll's clothing. The action is simple and natural and does not give the child's imagination a jolt. Once the walker doll is attached to the carriage the child may wheel the carriage with the walker doll walking beside the carriage with its legs moving back and forth through the actuation of its usual walker mechanism, now powered by the drive taken from the carriage wheel.

It can be seen that this new toy provides the child with an inexpensive combination permitting the child to wheel the doll, to operate the walker doll in the usual manner, so as to pretend to teach the doll to walk, and upon successful conclusion of the walking lessons, in the child's imagination, it is possible to casually stand the walking doll, in effect, beside the carriage and to take it for a walk. The toy not only gives a greater play to imagination than does a carriage and the very expensive true walking doll, but it is a great boon to parents who cannot afford a true walking doll.

I claim:

1. A walker doll and carriage toy including a walker doll having a body and legs pivoted thereto and an unpowered leg walking motion mechanism interconnecting said legs and including a rotary element to make these legs move oppositely to each other when either leg is moved, said doll having a coupling member connected with said element and extending transversely with respect to said body; and a carriage having a body in which said doll may be carried and wheels which roll on the floor and a shaft projecting transversely from this carriage and connected to one of said wheels by means causing said shaft to be rotated by rotation of said wheel, said shaft having a coupling member cooperating with said doll element's coupling member to rotatively interconnect these parts in a separable manner and being poistioned at a height locating said doll upright beside said carriage with the lower ends of said legs spaced slightly above the floor on which said wheels roll, said carriage being of the type having a diagonal frame bar extending from one of its wheels to the central portion of said carriage and said means comprising a rotary shaft extending along said bar and gearing interconnecting said shaft with said wheel and said carriage's coupling member's shaft respectively.

2. A walker doll and carriage toy including a walker doll having a body and legs pivoted thereto and an unpowered leg walking motion mechanism interconnecting said legs and including a rotary element to make these legs move oppositely to each other when either leg is moved, said doll having a coupling member connected with said element and extending transversely with respect to said body; and a carriage having a body in which said doll may be carried and wheels which roll on the floor and a shaft projecting transversely from this carriage and connected to one of said wheels by means causing said shaft to be rotated by rotation of said wheel, said shaft having a coupling member cooperating with said doll element's coupling member to rotatively interconnect these parts in a separable manner and being positioned at a height locating said doll upright beside said carriage with the lower ends of said legs spaced slightly above the floor on which said wheels roll, said carriage being of the type having a diagonal frame bar extending from one of its wheels to the central portion of said carriage and said means comprising a rotary shaft extending along said bar and gearing interconnecting said shaft with said wheel and said carriage's coupling member's shaft respectively, said doll and carriage having separable means for holding said doll's body against rotation with said shaft when said coupling members are cooperating with said doll located beside said carriage.

3. A walker doll and carriage toy including a walker doll having a body and legs pivoted thereto and an unpowered leg walking motion mechanism interconnecting said legs and including a rotary element to make these legs move oppositely to each other when either leg is moved, said doll having a coupling member connected with said element and extending transversely with respect to said body; and a carriage having a body in which said doll may be carried and wheels which roll on the floor and a shaft projecting transversely from this carriage and connected to one of said wheels by means causing said shaft to be rotated by rotation of said wheel, said shaft having a coupling member cooperating with said doll element's coupling member to rotatively interconnect these parts in a separable manner and being positioned at a height locating said doll upright beside said carriage with the lower ends of said legs spaced slightly above the floor on which said wheels roll, said body being hollow and said mechanism being located within said body and the latter having an opening giving access to said doll's coupling member, the latter having an outer end terminating so as not to project substantially from said body and said carriage's coupling member cooperating with said doll's coupling member by projecting through said opening, said doll and carriage having separable means for holding said doll's body against rotation with said shaft when said coupling members are cooperating with said doll located beside said carriage, said carriage being of the type having a diagonal frame bar extending from one of its wheels to the central portion of said carriage and said means comprising a rotary shaft extending along said bar and gearing interconnecting said shaft with said wheel and said carriage's coupling member's shaft respectively.

4. A walker doll and carriage toy comprising a walker doll having a hollow body and legs pivoted thereto, said legs having levers projecting up into said body with longitudinal slots in their upper ends and said body having a transverse crank shaft pivoted therein with arms about 180° out of phase and crank arm pins riding in said slots, said body having a transverse opening exposing an end of said crank shaft and said crank shaft's end having a quick-releasable coupling member thereon; said

carriage having a body for carrying said doll and wheels and a diagonal frame bar extending from one of said wheels which roll on the floor to a central portion of one side of said carriage, the latter having a rotative quick-releasable coupling member projecting from said portion and constructed to couple with said crank shaft's coupling member and positioned so as to locate said doll upright with the lower ends of said legs clearing the lower level of said wheels at least slightly, and a rotary shaft extending along said frame bar from said carriage's said wheel to its said coupling member and gearing rotatively connecting the ends of said shaft with said carriage's said wheel and coupling member respectively.

5. A walker doll and carriage toy comprising a walker doll having a hollow body and legs pivoted thereto, said legs having levers projecting up into said body with longitudinal slots in their upper ends and said body having a transverse crank shaft pivoted therein with arms about 180° out of phase and crank arm pins riding in said slots, said body having a transverse opening exposing an end of said crank shaft and said crank shaft's end having a quick-releasable coupling member thereon; said carriage having a body for carrying said doll and wheels and a diagonal frame bar extending from one of said wheels which roll on the floor to a central portion of one side of said carriage, the latter having a rotative quick-releasable coupling member projecting from said portion and constructed to couple with said crank shaft's coupling member and positioned so as to locate said doll upright with the lower ends of said legs clearing the lower level of said wheels at least slightly, and a rotary shaft extending along said frame bar from said carriage's said wheel to its said coupling member and gearing rotatively connecting the ends of said shaft with said carriage's said wheel and coupling member respectively, said crank shaft's coupling member being located at least mainly within said doll's body.

6. A walker doll and carriage toy comprising a walker doll having a hollow body and legs pivoted thereto, said legs having levers projecting up into said body with longitudinal slots in their upper ends and said body having a transverse crank shaft pivoted therein with arms about 180° out of phase and crank arm pins riding in said slots, said body having a transverse opening exposing an end of said crank shaft and said crank shaft's end having a quick-releasable coupling member thereon; said carriage having a body for carrying said doll and wheels and a diagonal frame bar extending from one of said wheels which roll on the floor to a central portion of one side of said carriage, the latter having a rotative quick-releasable coupling member projecting from said portion and constructed to couple with said crank shaft's coupling member and positioned so as to locate said doll upright with the lower ends of said legs clearing the lower level of said wheels at least slightly, and a rotary shaft extending along said frame bar from said carriage's said wheel to its said coupling member and gearing rotatively connecting the ends of said shaft with said carriage's said wheel and coupling member respectively, said crank shaft's coupling member being located at least mainly within said doll's body and quick-releasable means for interconnecting said doll's body and said carriage non-rotatively.

References Cited in the file of this patent

UNITED STATES PATENTS

1,613,408 Perew ---------- Jan. 4, 1927