April 12, 1932. E. S. PEAKE 1,853,833

WHEELED TOY

Filed June 1, 1931

Fig. 1.

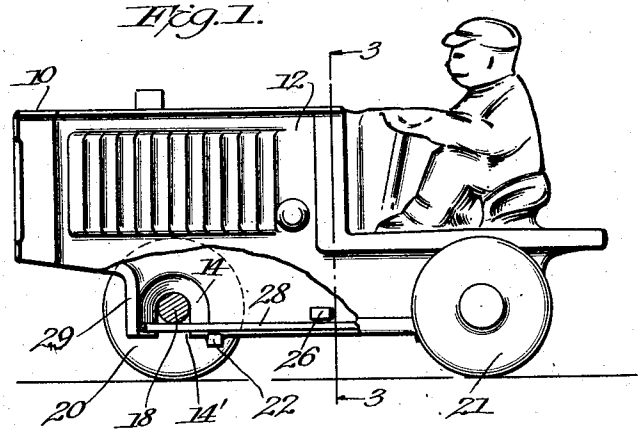


Fig. 2.

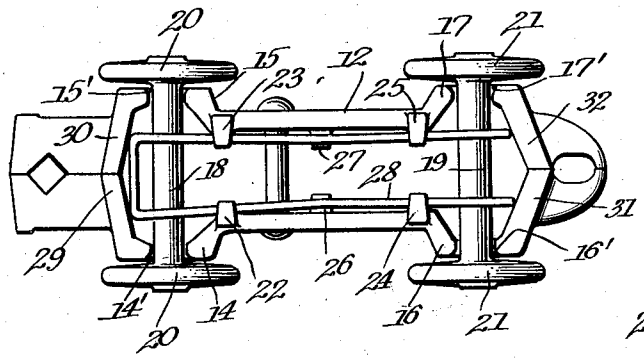


Fig. 3.

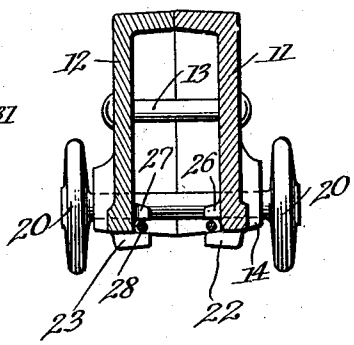


Fig. 4.

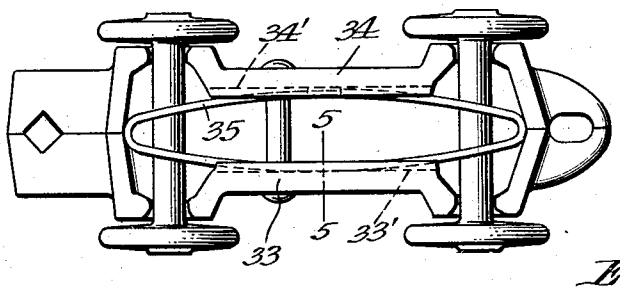
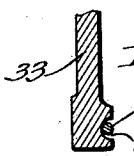


Fig. 5.



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UNITED STATES PATENT OFFICE

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WHEELED TOY

Application filed June 1, 1931. Serial No. 541,453.

The present invention relates to improvements in wheeled toys and in particular to the means for mounting the wheel and axle units in connection with the frames of such toys.

Heretofore, it has been the general practice either to construct the frame of such toys in two parts which are provided with axle openings, the frame portions being brought together with the axle ends in such openings and then riveted together; or to pass the axles through aligned openings provided in the frame, place wheels on the axle ends, and upset the axle extremities to hold the wheels in place. Both of these procedures require a disproportionate amount of time where the article must be cheaply produced and it is the principal purpose of the present invention to provide means whereby the time required for assembling may be reduced to a minimum.

According to the present invention, the toy frame is provided with aligned downwardly opened recesses adapted to receive the axle of a preferably integral wheel and axle unit and a spring member is provided which is adapted to be sprung into engagement with seating means with a portion underlying the axle to hold it in the recesses.

While the invention is susceptible of various embodiments, I have shown two practical and preferred embodiments in the accompanying drawings by way of illustration. In the drawings,

Figure 1 is a side elevation partly in section and with parts broken away of a toy embodying the invention in one form;

Figure 2 is a bottom plan view of the toy shown in Figure 1;

Figure 3 is a section on line 3—3 of Figure 1;

Figure 4 is a bottom plan view of a toy embodying the invention in slightly modified form; and

Figure 5 is a section on line 5—5 of Figure 4.

Referring to the drawings, a frame, generally indicated at 10, is provided and, as here shown, is in simulation of a tractor. As particularly indicated in Figure 3, the frame may be conveniently made of right and left hand complementary portions 11 and 12 secured together by means of a rivet 13. The lower side wall portions of the frame are provided with outwardly extended boss-like portions 14, 15, 16, and 17 provided with aligned downwardly opened recesses 14′, 15′, and 16′, 17′ in which are seated axles 18 and 19 which are provided respectively with wheels 20, 21 formed integral therewith. As shown in Figures 1, 2 and 3 the wall portions of the frame are provided at their lower edges with opposed inwardly extending lugs 22, 23, and 24, 25, and intermediate these two sets of lugs and somewhat thereabove with opposed lugs 26 and 27. An elongated laterally compressible bent spring member 28 shown in Figures 1, 2 and 3 as being substantially hairpin-shaped is adapted to be engaged with the side wall portions of the frame immediately above lugs 22 to 25 and below lugs 26 and 27 with its end portions underlying axles 18 and 19 to hold the latter in their seats. In assembling, member 28 is laterally compressed so as to be passed substantially broad side between the opposed lower lugs whereupon it is permitted to expand into contact with the lower wall portions, its downward displacement being prevented by the lower lugs and its upward displacement by the upper lugs 26 and 27 as well as by the axles 18 and 19.

Frame portions 11 and 12 are provided with complementary end wall portions 29, 30, and 31, 32 which project somewhat below member 28, as particularly shown in Figures 1 and 3, these end wall portions serving to limit longitudinal displacement of the spring member and also serving to conceal the ends of the spring member.

The described arrangement permits rapid assembly of the frame and axles and affords positive means for retaining the axles in the downwardly open frame recesses.

According to Figures 4 and 5, the lower wall portions 33 and 34 of the frame are provided with longitudinally extending grooves 33′, 34′ immediately below the axles in which a laterally compressible spring member 35 is adapted to be engaged with its ends under-

lying the axles to retain the latter in the frame recesses. The spring member 35, as here shown, is in the form of an elongated spring loop whose longitudinal displacement is prevented by end wall portions of the frame as described above in connection with Figures 1 to 3.

Preferably, as shown in both embodiments, means other than the axles are provided for preventing upward displacement of the spring member, the spring seating means being such as to retain the ends of the spring member slightly out of contact with the axles so as not to impede the rotation of the latter by frictional engagement therewith.

I have shown two forms of spring members and two forms of seating means therefor. Either form of spring member may, of course, be used with either form of seating means.

It will be obvious that the invention is susceptible of other embodiments than those shown and described, and consequently, I do not limit myself to structure except as in the following claims.

I claim:

1. In a wheeled toy, a frame having side wall portions provided with aligned downwardly open recesses, an axle seated in said recesses, and a bent spring member engaged in seating means presented by the side walls and having a portion underlying the axle to hold the latter in said recesses.

2. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in the aligned recesses, inwardly projecting lugs on said side walls adjacent said recesses, and an elongated laterally compressible spring member laterally engaged with said side walls above said lugs with its end portions underlying the axles to hold the latter in said recesses.

3. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in the aligned recesses, inwardly projecting lugs on said side walls adjacent said recesses, an elongated laterally compressible spring member laterally engaged with said side walls above said lugs with its end portions underlying the axles to hold the latter in said recesses, and inwardly projecting lugs on the side walls between the first mentioned lugs and engaged above said spring member.

4. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in the aligned recesses, the side walls being provided with inwardly faced longitudinally extending grooves, and an elongated laterally compressible spring member laterally engaged in said grooves with its end portions underlying the axles to hold the latter in said recesses.

5. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in the aligned recesses, and a hairpin shaped spring member engaged in seating means presented by the side walls with its end portions underlying the axle to hold the latter in said recesses.

6. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in the aligned recesses, and an elongated spring loop engaged in seating means presented by the side walls with its end portions underlying the axle to hold the latter in said recesses.

7. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in aligned recesses, and an elongated laterally compressible spring member laterally engaged in seating means presented by said side walls with its end portions underlying the axles to hold the latter in said recesses, said frame also including means at the ends of said spring member for limiting relative longitudinal movement of the latter.

8. In a wheeled toy, a frame having side wall portions provided with pairs of aligned downwardly open recesses, axles seated in aligned recesses, and an elongated laterally compressible spring member laterally engaged in seating means presented by said side walls with its end portions underlying the axles to hold the latter in said recesses, said frame also including end wall portions joining the side wall portions and extending below the ends of said spring member for limiting relative longitudinal movement of the latter.

9. In a wheeled toy, a frame including opposed wall portions and having downwardly open aligned recesses, an axle in said recesses, and means for retaining the axle in said recesses comprising a compressible member sprung into engagement with seating means presented by the opposed walls and having a portion underlying the axle.

10. In a wheeled toy, a frame presenting aligned downwardly open recesses, an axle seated in said recesses, and an elongated flat spring member engaged with seating means on the frame and extending beneath the axle to hold it in the recesses, the frame presenting means beyond the ends of said spring member to limit longitudinal movement of the latter in both directions.

In testimony whereof I have hereunto set my hand.

EDWARD S. PEAKE.