

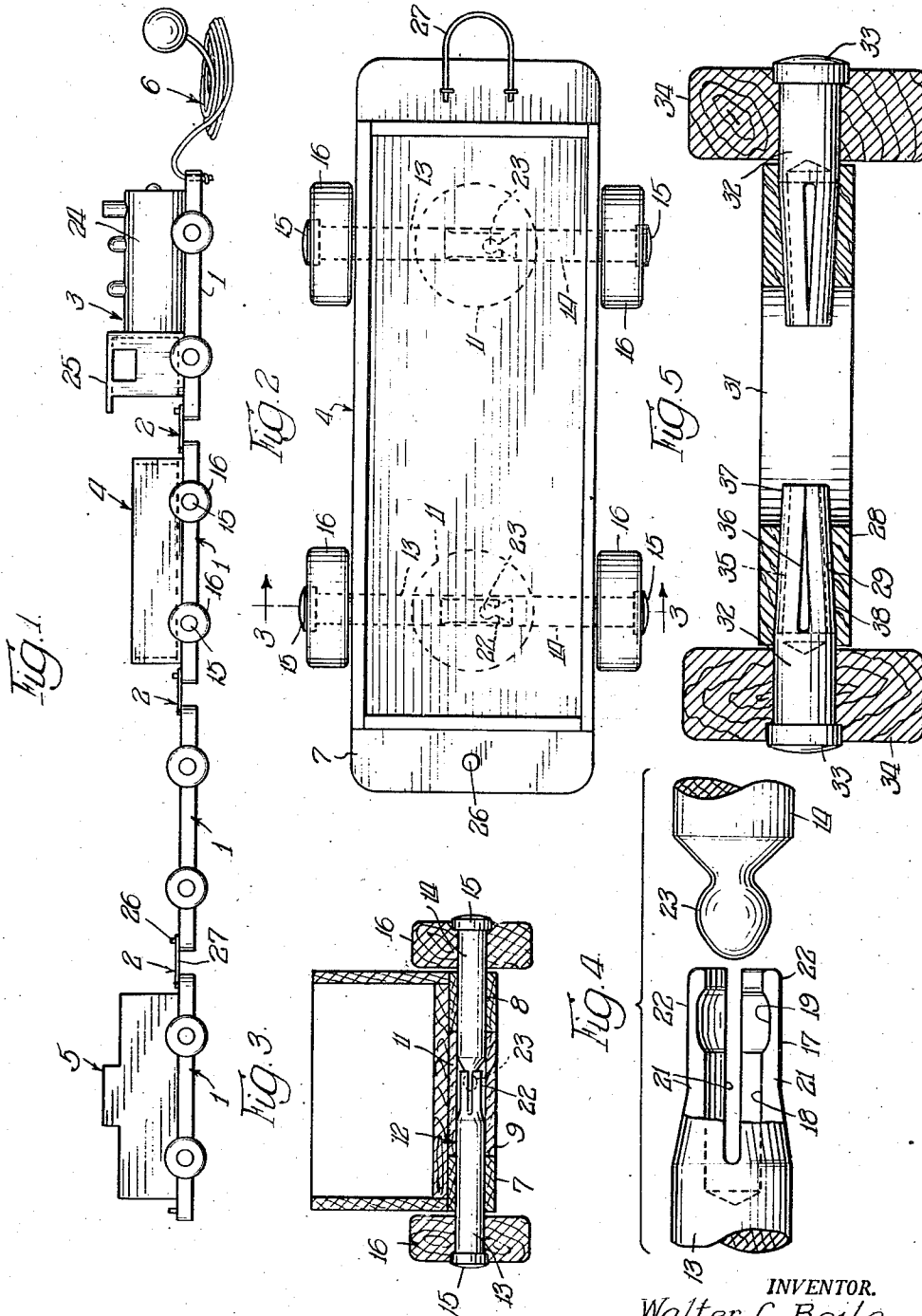
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CONSTRUCTIONAL TOY

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CONSTRUCTIONAL TOY

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4 Claims. (Cl. 46—223)

My invention relates particularly to a constructional toy of the vehicular type which simulates a normal sized vehicle such as a railroad car or locomotive.

Objects of the invention reside in the provision of a novel and interesting constructional toy, particularly of the vehicular type, which may be assembled and taken apart by a child, which is quite simple and rugged in construction, which is adapted to be constructed mainly of wood or other non-metallic material, which is economical as to manufacture, which involves only relatively large parts so that a child cannot injure itself as by swallowing the same, and which involves a standard wheeled chassis upon which body parts may be interchangeably mounted.

The invention will be better understood by reference to the accompanying drawing forming a part hereof and in which—

Figure 1 is a side elevation of a toy railroad train, the locomotive and cars of which each embody my invention;

Figure 2 is a top plan view of one of the cars;

Figure 3 is a sectional view substantially on the line 3—3 of Figure 2;

Figure 4 is an enlarged exploded view of the inner end portions of the axle parts as shown in Figures 2 and 3 with one of the parts partially broken away; and

Figure 5 is a sectional view similar to Figure 3 and showing a modified form of my invention.

Referring to the drawing, Figure 1 represents a toy railroad train comprising a locomotive, a gondola car, a flat car and a caboose, all of which embody identical wheeled chassis generally designated at 1, and these chassis are adapted to be coupled together in sequence, as generally designated at 2, to form the train. One end chassis has a body 3 in the form of a locomotive detachably mounted thereon, another chassis has a body 4 in the form of a gondola car detachably mounted thereon, the other end chassis has a body 5 in the form of a caboose detachably mounted thereon, and the remaining chassis has no body mounted thereon so that it forms a flat car. The uncoupled end of the chassis carrying the locomotive body 3 is preferably provided with a draw cord 6 by means of which the train may be drawn about.

Figures 2 and 3 illustrate a chassis having the gondola body 4 detachably mounted thereon as an example of the chassis structure and the detachable mounting of a body thereon.

Referring to Figures 2 and 3, an elongated flat base 7 is provided with two bores 8 spaced longi-

tudinally and extending therethrough transversely thereof in correspondence with the plane of the same, and the base is also provided with two bores 9 therethrough of relatively large diameter and spaced longitudinally of and disposed normal to the plane of the base and respectively diametrically intersecting the bores 8.

Two body mounting bosses 11 are secured on and project downwardly from the bottom of the gondola body 4 and are spaced longitudinally thereof and have the same spacing as the bores 9 of the base 7. These bosses are of relatively large diameter and are respectively insertable into the bores 9 when the body is detachably mounted on the base. The bosses 11 are provided with diametrical or transverse bores 12 which aline respectively with the bores 8 when the body is mounted on the chassis. The other bodies 3 and 5 embody the same mounting structure as does the body 4 and are interchangeable therewith on a chassis, so that a detailed description of each body is unnecessary.

Axles are engaged respectively in the bores 8 of the base 7, and each of these axles comprises two axle parts 13 and 14, each of which is provided with a head 15 at its outer end. Bored wheels 16 are engageable over the axle parts and are axially engageable with the heads 15, and the axle parts 13 and 14 are insertable into a bore 8 respectively from opposite ends of this bore with their inner ends foremost and into the transverse bore 12 of the boss 11, which is disposed in the bore 9 of the base which intersects this bore 8, to releasably secure the body on the base, the wheels 16 on the axle parts being confined between the sides of the base and the heads 15. A second pair of axle parts 13 and 14 having wheels 16 mounted thereon is similarly engaged in the other bore 8 of the base and in the bore 12 of the other boss 11 of the body, this forming a four-wheeled chassis having the body releasably secured thereon.

The inner end portion of the axle part 13 is slightly reduced in diameter, as designated at 17, and is provided with an axial bore 18 having an enlargement 19 adjacent the inner end of this axle part to form a socket, see particularly Figure 4, and the inner end portion of this axle part is provided with angularly spaced axially extending radial slots 21 forming resilient segment portions 22. The inner end portion of the axle part 14 is provided with a ball formation 23 of a reduced diameter approximating that of the enlargement 19 which is adapted to be forced into the bore 18 and engaged in the enlargement

19 to releasably secure the axle parts together and thus maintain the assembly above described, the resilient segment portions 22 yielding as the ball formation 23 is engaged with and disengaged from the enlargement 19. This arrangement is such that the ball formation 23 may be disengaged from the enlargement 19 by moving one axle part out of alinement with the other axle part without breakage.

From the above, it will be observed that the toy may be easily taken apart and reassembled, it being merely necessary to pull the pairs of axle parts apart to take the assembly apart and to push the axial parts together to secure the parts in assembled relation. Where no body is mounted on a base 7 to form a flat car, the axles merely extend across the bores 9 of the base 7. The locomotive body 3 is preferably formed of separate boiler and cab parts 24 and 25, each being provided at its bottom with a diametrically bored mounting boss which functions in the same manner as the bored bosses 11 above described.

Each base 7 has an upright stud 26 mounted at one end thereof and each base, with the exception of the locomotive base, has a loop of cord 27 secured at the other end thereof, these studs and loops forming the couplings 2 of Figure 1 by reason of the loops being engageable over the studs.

Referring to Figure 5, showing a modification of my invention, a flat base 28 is provided with a bore 29 extending therethrough transversely thereof in correspondence with the plane of the same, and this base is also provided with a bore 31 therethrough of relatively large diameter disposed normal to the plane of the base and diametrically intersecting the bore 29, this base corresponding with the base 7 in that the bore 29 is adapted to receive axle parts as is a bore 8 of the base 7, and the bore 31 is adapted to receive a transversely bored body mounting boss as is a bore 12 of the base 7.

Still referring to Figure 5, an axle comprises two identical axle parts 32, each of which is provided with a head 33. Bored wheels 34 are engageable over the axle parts 32 and are axially engageable with the heads 33, and these axle parts are insertable into the bore 29 respectively from opposite ends of this bore with their inner ends foremost, the wheels 34 on these axle parts being confined between the sides of the base 28 and the heads 33.

The inner end portion of each axle part 32 is provided with an axial bore 35 and with angularly spaced axially extending radial slots 36 forming resilient segment portions 37. The bore 29 is tapered and decreases in diameter inwardly from the opposite ends thereof, as designated at 38, so that the resilient segment portions 37 are compressed radially inward by the tapered bore portions 38 and thus cooperate with the bore for releasably securing the axle parts 32 engaged in the bore 29 with the wheels 34 confined between the heads 33 and opposite sides of the base, the inner end portions of these axle parts projecting into the bore 31 to engage in the transverse bore of a body mounting boss to releasably secure a body on the base 28 in the same manner as previously described with reference to Figures 2 and 3. With reference to Figure 5, it is merely necessary to pull the pairs of axle parts 32 out of the bore 29 to take the assembly apart and to push these axle parts into the bore 29 to secure the parts in assembled relation.

While I have thus described my invention, I do not wish to be limited to the precise details described, as changes may be readily made without departing from the spirit of my invention, but having thus described my invention, I claim as new and desire to secure by Letters Patent the following:

1. In a toy of the character described, the combination of a flat base provided with a first bore extending in correspondence with the plane of the same and with a second bore of relatively large diameter disposed normal to the plane of said base and intersecting said first bore, a body provided with a boss projecting downwardly from the bottom thereof and of a relatively large diameter and insertable in said second bore and said boss being provided with a transverse bore alineable with said first bore when said body is mounted on said base, an axle part provided with a head at its outer end and insertable into said first bore with its inner end foremost and into said transverse bore of said boss, a bored wheel engageable over said axle part and axially engageable with said head, and means operative to releasably secure said axle part engaged in said first bore and in said transverse bore of said boss with said wheel confined between said head and base.

2. In a toy of the character described, the combination of a flat base provided with a first bore extending therethrough in correspondence with the plane of the same and with a second bore of relatively large diameter disposed normal to the plane of said base and intersecting said first bore, a body provided with a boss projecting downwardly from the bottom thereof and of a relatively large diameter and insertable in said second bore, two axle parts respectively provided with heads at their outer ends and insertable into said first bore respectively from opposite ends of this bore with their inner ends foremost, two bored wheels engageable respectively over said axle parts and axially engageable with said heads, and means operative to releasably secure said axle parts engaged in said first bore with said wheels confined between said heads and base.

3. In a toy of the character described, the combination of a flat base provided with a first bore extending therethrough in correspondence with the plane of the same and with a second bore of relatively large diameter disposed normal to the plane of said base and intersecting said first bore, a body provided with a boss projecting downwardly from the bottom thereof and of a relatively large diameter and insertable in said second bore and said boss being provided with a transverse bore alineable with said first bore when said body is mounted on said base, two axle parts respectively provided with heads at their outer ends and insertable into said first bore respectively from opposite ends of this bore with their inner ends foremost, and at least one of said axle parts being also insertable into said transverse bore of said boss, two bored wheels engageable respectively over said axle parts and axially engageable with said heads, and means operative to releasably secure said axle parts engaged in said first bore and said one axle part engaged in said transverse bore of said boss with said wheels confined between said head and base.

4. In a toy of the character described, the combination of a flat base provided with a first bore extending therethrough in correspondence with

the plane of the same and with a second bore of relatively large diameter disposed normal to the plane of said base and intersecting said first bore, a body provided with a boss projecting downwardly from the bottom thereof and of a relatively large diameter and insertable in said second bore and said boss being provided with a transverse bore therethrough alineable with said first bore when said body is mounted on said base, two axle parts respectively provided with heads at their outer ends and insertable into said first bore respectively from opposite ends of this bore with their inner ends foremost and into said transverse bore of said boss, two bored wheels

engageable respectively over said axle parts and axially engageable with said heads, a first of said axle parts having its inner end portion provided with an axial bore and with angularly spaced axially extending radial slots forming radially resilient segment portions, and a second of said axle parts having its inner end portion of a diameter engageable with the axial bore of said first axle part in releasable securing engagement with said segment portions for securing said axle parts engaged in said first and transverse bores with said wheels confined therebetween said heads and base.

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