

# UNITED STATES PATENT OFFICE

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## TOY

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This invention relates to a structurally and functionally improved toy or similar article.

It is an object of the invention to furnish an article of this nature which may include any desirable number of parts and in which these parts may, for example, have different colors applied to their bodies so that this step of manufacture may be economically performed and without danger of the color to be applied to one part spreading over to the surface of another part, and by means of which, moreover, such parts may be subsequently assembled, furnishing an extremely attractive article.

A further object of the invention is that of providing a toy comprising a number of portions which are connected together in such manner that any danger of accidental separation thereof is substantially precluded.

Another object is that of furnishing an article which will include relatively few parts, each individually simple and rugged in construction, these parts being capable of assemblage by relatively unskilled labor to furnish unitary structures capable of withstanding rough usage.

A still further object of the invention is that of furnishing parts which may be produced largely by means of automatic machinery and which parts, if desired, may be packaged to be subsequently assembled by the purchaser.

With these and other objects in mind, reference is had to the attached sheet of drawing illustrating practical embodiments of the invention, and in which:

Fig. 1 is a side elevation of a toy embodying the teachings of the present invention;

Fig. 2 is a sectional side view showing one of the main units of the article with certain of the parts associated therewith;

Fig. 3 is a similar view of the second of the main units;

Figs. 4 and 5 are transverse sectional views taken respectively along the lines 4—4 and 5—5 and in the direction of the arrows as indicated in Fig. 1;

Fig. 6 is a plan view of one of the units as shown in association with the article of Figs. 1 and 2;

Fig. 7 is a view similar to Fig. 1, but showing a second form of the article; and

Fig. 8 is a bottom plan view of such article.

In these several views, toys have been shown, which toys are in the nature of automobiles. At this time it will be appreciated, first, that numerous other articles of similar nature might be provided within the teachings of the present in-

vention, and, additionally, that such teachings are not necessarily limited to toys, although the invention is primarily dedicated to the construction of an article of this nature.

Thus the article as illustrated in Fig. 1 may include two main sections, to wit, a body portion 10 and what might be termed a running gear portion as illustrated in Fig. 3. Both of these portions may be die cast or otherwise suitably and economically constructed. According to the present invention one of these portions is formed with axle-accommodating openings and the other of the same is formed with axle-accommodating recesses or their equivalents, the two being combined in such manner that an interlocking structure is presented. In the structure illustrated, the portion 10 is formed with the axle-accommodating openings 11, while the running gear portion is formed with recesses 12 which are adapted to be aligned with the openings 11 so that an axle may extend transversely through both portions. The body portion, as in Figs. 4 and 5, presents downwardly extending side walls 13 and the running gear portion is formed with slots which accommodate the lower edges of such side walls and has raised portions 14 above the recesses 12 which extend materially above the lower edges of the wide walls 13 when the two portions are in assembled relationship. Moreover, the running gear portion presents surfaces or rails 15 at points short of its mud guard portions 16, which rails underlie the lower edges of the side walls 13 (excepting only where they are extended to provide material for the formation of the openings 11.) In this manner an extremely rigid structure is provided and the running gear portion may have a forward extension 17 which simulates in appearance the apron of a motor passenger vehicle and which underlies the lower edges of the body portion adjacent the forward end of the same to further contribute rigidity. Substantially a duplication of this structure is afforded adjacent the rear end of the running gear portion where it is preferred that a cross-rail or frame member 18 be provided and which lies adjacent to the rear edge of the body portion 10.

Such body portion may also be conveniently formed with openings in its front and rear walls. The first of these openings receives a stud 19, which may form an integral part of an element 20 as shown in Fig. 6. This element is provided, if it is desired, to form, for example, the radiator, lamp and pump elements separately from the body portion. Such separate formation is

especially to be recommended where these elements are, for example, to be silvered, i. e., coated or finished in a different manner from the finish of the body portion. After the element 20 has its stud inserted through the opening in the forward wall of the body portion, this stud may be tapped to "head" the same—in effect, to rivet the parts together. If integrally formed, both the stud 19 and the element 20 are made of sufficiently soft metal so that no difficulties may be encountered in connection with this operation. A turning of the parts, one with respect to each other and around the stud 19 is precluded, first, due to the fact that the element 20 and the front end of the body portion are preferably bulged or angular in cross section, secondly, by forming (if desired) the front wall of the body portions with openings 21 to receive lug elements 22 extending rearwardly from the inner face of the element 20. In any event, a turning of the parts will also be prevented by virtue of the fact that the lamp portions 23 are preferably disposed so as to extend to each side and rearwardly adjacent the front of the body portion. The opening in the rear of the body portion 10 may conveniently accommodate a nail or tack 24 which is simply driven home, and serves as a mounting for a grooved element 25 mounting a ring 26 simulating in appearance a tire.

Thus the several portions of the article may be manufactured and finished separately, it being understood that each one of the wheels (hereinafter referred to) is constructed similarly to the structure embodied in 25—26. Accordingly any desired colors may be economically applied without there being any danger of these colors merging one into the other or otherwise detracting from the appearance of the finished article.

The "spare wheel" and "radiator grill" and associated parts may be applied to the body portion as an initial, intermediate or final step in the assembly. In any event, however, the body portion is positioned upon the running gear portion so that a firm interlocking of the parts occurs; it being obvious that the extended portions within which the axle openings 11 are formed will lie snugly within the slots which are in line with the raised portions 14, so that longitudinal as well as transverse shifting cannot occur. The axles 27, which may be in the form of nails, are now passed through the openings 11 and obviously have their bodies extending into the recesses 12. Before these axles are applied, one wheel element, such as 25—26, is associated with the nail or rod adjacent the head 28 thereof and a second wheel element may be held in position within the area overlying the fender portion 16, so that the free end of the axle may be threaded through this second opening whereupon, by utilizing a pair of pliers or a hammer, this axle may be enlarged as at 29 to prevent accidental detachment thereof.

In the form shown in Figs. 7 and 8, the same methods prevail with the exception of the rear spare tire which has been eliminated from this structure. However, in lieu thereof there is provided an axle or nail 30, in all respects similar to the element heretofore described in connection with the elements 27, 28 and 29, and which extend through the body portion to mount at its adjacent opposite ends "spare wheels". These are, of course, positioned beyond the side walls of the body portion, and the mud guard portions 16 are formed with openings so as to

snugly accommodate or provide "wells" for such "spare wheels".

Regardless of whether the entire unit is to be constructed and assembled in the factory, or whether portions of such assembly are to be practiced by the consumer who simply receives the parts, it will be appreciated that the methods of assembly are extremely simple, and if the heading of the stud 19 or axles 27 might prove to be an undesirable practice for amateurs, any other suitable expedient might be resorted to to secure this interlocking and fitting of the parts and prevent accidental detachment thereof. In any event, it will be understood that the tires or rings may be associated with the wheels or pulley elements at the time of manufacture of the parts, or subsequently, as might prove most desirable. Also by having the two axles or their equivalents interlock the parts at spaced points, it is obvious that, first, the interlocking operation is extremely simple, and, secondly, it is extremely effective, resulting in a securing of the portions against any substantial movement with respect to each other.

Thus, among others, the several objects of the invention as specifically afore noted are achieved. It will be appreciated that numerous changes in construction and rearrangement of the parts, might be resorted to without departing from the spirit of the invention as defined by the claims.

Having thus fully described the invention, what is claimed as new and desired to be protected by Letters Patent is:

1. A toy including running gear and body portions, extended and perforated parts disposed adjacent the ends of and forming a part of one of such portions, such parts projecting materially into the area of the other toy portion when such portions are applied to each other, such other toy portion presenting open bearing surfaces lying adjacent the perforations of such extended parts when such portions are so applied, and axle members disposed adjacent the ends of such portions, such members extending through the perforations of the extended parts and engaging said open bearing surfaces to prevent separation of such portions.

2. A wheeled toy including a running gear portion, a body portion, walls forming parts of such portions and lying adjacent each other when the body portion is disposed upon such running gear portion, certain of such walls being formed with axle openings adjacent opposite ends of such portions, certain of such walls presenting open bearing surfaces to lie adjacent such axle openings, and wheel-mounting axles lying in contact with such open bearing surfaces and extending through such openings to retain the body portion against removal from such running gear portion.

3. A wheeled toy including a running gear portion, a body portion, walls forming parts of such portions and lying adjacent each other when the body portion is disposed upon such running gear portion, certain of such walls being formed with axle openings adjacent opposite ends of such portions, certain of such walls presenting open bearing surfaces to lie adjacent such axle openings, wheel-mounting axles lying in contact with such open bearing surfaces and extending through such openings to retain the body portion against removal from such running gear portion, and a forwardly and downwardly projecting part lying between the walls of such

running gear portion and arranged adjacent the forward end of the same to underlie the lower adjacent edges of the body portion.

5 4. A wheeled toy including a body portion and a running gear portion, perforated extensions forming a part of such body portion and projecting from the lower edges thereof at points adjacent the opposite ends of such portions, certain of the lower edges of the running gear portion being formed with recesses to align with  
10 such perforations, and wheel-mounting axles extending through such recesses and perforations to maintain such toy portions against separation one from the other.

15 5. A wheeled toy including a running gear portion, a body portion, walls forming parts of such portions and lying adjacent each other when the body portion is disposed upon such running gear portion, extensions formed with openings and projecting from the lower edges of the walls  
20 of such body portion, certain of the lower edges of the running gear portions being recessed, and such running gear portion having slots in line with such recesses and of an area adequate to

accommodate such extensions, such extensions, slots, and recesses being provided at opposite ends of such toy portions, and wheel-mounting axles extending through the openings of such extensions and within such recesses to maintain  
5 the toy portions against separation.

6. A toy including a running gear and a body portion, side walls forming a part of such body portion, perforated extensions projecting from  
10 the lower edges of such side walls, raised portions forming a part of such running gear portion and defining in the lower edges of the same recesses, said running gear portion being formed with slots in line with such recesses and of an  
15 area adequate to accommodate such perforated extensions, such body portion being applied to such running gear portion with the extensions disposed adjacent opposite ends of such portion and projecting through such slots into line with  
20 such recesses, and wheel-mounting axles extending through such perforations and within the recesses defined by such raised portions to maintain such toy portions against separation.

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