

UNITED STATES PATENT OFFICE

THEODORE S. DOWST, OF CHICAGO, ILLINOIS

WHEELED TOY

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This invention relates to children's toys, and with particular reference, to toy automobiles.

It is an object of this invention to construct a toy which may be cheaply manufactured and at the same time will withstand rugged service, when played with by a child.

It is a further object to provide a child's toy made of separable parts in a novel manner to facilitate manufacture in quantity, but such that it may be assembled with substantially as great simplicity and when so assembled will be as rugged as though it were integrally formed.

The construction of small rigid toys of component parts of stamped sheet metal is not a satisfactory process from many points of view, partly because the toys, being made of a comparatively thin metal, are easily bent out of shape, and partly because of the cost of construction. The construction of such parts by ordinary casting has been unsatisfactory because the irregularity of size and shape of the parts precludes accurate ready fitting.

It is an object of this invention therefore, to construct a toy, having the advantages of the foregoing processes but free from their limitations.

In the manufacture of small rigid toys, one of the most efficient and accurate methods of forming the toys is by a simple die casting operation. There are, however, many limitations on the character of toys that can be so manufactured, because of inherent limitations in the process.

It is a further object of this invention, therefore, to provide a toy in which the cheapness and efficiency of die casting may be employed while overcoming the foregoing limitations, in a new manner. In the manufacture of toys having a plurality of parts, moreover, the labor cost in assembling and coloring is in itself a very appreciable item, particularly when it is realized that the type of toy to which this invention is especially adapted is intended to retail at a low figure, many of them being designed for distribution through the ten cent stores. Under the circumstances, therefore, the cost of produc-

tion becomes an item of serious moment, as a slight increase in cost can not be made up by an increase in selling price.

It is one of the objects of this invention to reduce the labor costs on both assembling and coloring in a new and novel manner.

The invention accordingly comprises a device possessing the elements, features, and the relation of parts which will be exemplified in the article hereinafter described and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

Fig. 1 is a side elevation of a roadster made in accordance with this invention.

Fig. 2 is a cross section substantially on the line 2—2 of Fig. 1.

Fig. 3 is an exploded view of the same car.

Fig. 4 is a coupé body adapted to be interchanged with the roadster body of Fig. 1.

Fig. 5 is a bus body adapted to be mounted on the same chassis.

In accordance with this invention, the automobile is made, in general, in two parts, which are herein designated for convenience, as a body and a chassis, although it be understood that the division plane separating the two will be determined by the convenience of manufacture and coloring. For example, although in the form illustrated in Figure 3, the hood portion is included with the chassis, it may, if desired, be separate from the chassis and included upon the body. Furthermore, where the words "engaging surface" is used herein to designate the compound surface of joining of the two portions of the body, it is to be understood that this may, in general, not be a geometrical surface, but may be portions of several connection geometrical surfaces to conform to the convenience of manufacture.

In general, in accordance with this invention, the two portions are arranged to fit accurately together so that, when assembled it creates the effect of a rigid, integrally formed toy. In order, that the parts may be con-

constructed inexpensively and yet fit accurately, it is desirable that the parts shall be individually made by a die-casting process in which the metal is forced into metallic die under pressure as such a process insures not only a desirable shape and finish, but also insure such accuracy of construction that the component parts may fit accurately together.

Referring now more particularly to Figure 1, the numeral 1 designates the chassis herein including the running board 2, hood 3 and wheels 4. The body 5 rests upon the chassis and engages it upon the surface 6—7. The separate parts are provided, at spaced points upon the engaging surface with attaching means of a character to permit ready, but firm assembly. To accomplish this, there is provided upon the front end of one of the parts a tongue in position to underlie a lip upon the other. Upon the forward end of the body is thus provided a lip 8 extending under and engaging a lug 9 upon the chassis. This lip 8 may be conveniently formed as shown, in a shape to correspond upon its exterior to the interior of the hood portion 3 of the chassis, so that the rear end of the top surfaces of the hood may itself be utilized as the lug 9.

The parts are also provided with another set of attaching means, to hold the lug and lip in engagement. Thus the chassis 1 is provided with downwardly extending lugs 10 having journals 11 for carrying the shaft 13 of the driving wheels. One of these lugs is provided upon each side of the car in position properly to space the driving wheels. Lugs 14 extend downwardly from the under side of the body portion and also carry journals 15 for the axle 13, these lugs 14 being so spaced as to fit between the lugs 10 upon the chassis and preferably are arranged to be held against lateral displacement by them. The journals 11 and 15 are so arranged that when the parts are in place, they are in alignment with each other, so that the shaft 13 may be inserted through said journals to retain all the parts in place. The cooperation between the lip 8 and the lug 9 is such that in and of itself the lip could be inserted beneath the lug by horizontal movement. Such movement is prohibited in the instant case, however, by the fact that the body portion is cut out as at 20 to accommodate the mud-guard 21. Under such circumstances, it is preferred to construct the lip 8 and lug 9 so that the body may be lifted from the chassis by a pivotal movement about the lip, a result which may readily be accomplished if the lip 8 be not too long and too close a fit. With the above construction, it will be clear that the body may readily be inserted upon the chassis either in an original assembling or in changing from one type of body to another by slipping the lip 8 under the lug 9

and pushing them into place and then moving the body pivotally until it engages the chassis at all points, whereupon the shaft journals will be brought into line and, when the wheel shaft is thrust in place, the parts will be firmly held together.

As illustrated in Fig. 3 the dash board itself may be constructed as a separate unit 22 comprising a flat plate adapted to slide down in a groove in the body portion. Notches 23 may be provided in the side in such position that the metal of the body portion may be bent inwardly to retain the dash board in place. This dash board may itself carry a steering wheel 24.

By the above construction it will be clear that a toy design may be so divided along lines of color differentiation that the individual parts may be separately colored by quantity production methods and subsequently easily and effectively assembled, whereby there is formed a toy having the desired color arrangements without the necessity of hand coloring.

Since certain changes may be made in the above article and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A toy of the character described comprising, in combination, a die cast chassis portion and a die cast body portion adapted to fit together substantially along a plane, said portions having cooperative attaching devices adapted to come into engagement at one edge of said plane by pivotal movement of said portions relative to each other, an attaching means at the opposite edge of said plane comprising journals adapted to be brought into alignment by said pivotal movement and a shaft extending through said journals.

2. A toy of the character described comprising, in combination, a chassis portion and a body portion adapted to fit together, one of said portions having a lug and the other a mating socket adapted to permit a pivotal connection of said portions about said lug and socket, and means for preventing said pivotal movement and adapted to prevent movement of a character to withdraw the lug from the socket, said means including mating journals on said body and chassis adapted

to be brought into alignment as said portions engage, and a wheel supporting axle extending through said journals to retain the portions in place.

- 5 3. A toy automobile comprising, in combination, a body portion having a slot therein, a windshield portion slidable in said slot and having indentations therein whereby, when
10 said windshield is in place, it may be fastened by crimping the metal of said body into said indentation.

In testimony whereof I affix my signature.
THEODORE S. DOWST.

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