

# UNITED STATES PATENT OFFICE

2,065,208

## TOY

Frank Bischof, Jr., Chicago, Ill., assignor to Dowst Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application February 26, 1935, Serial No. 8,269

4 Claims. (Cl. 46-223)

This invention relates to a structurally and functionally improved toy.

It is an object of the invention to provide an article of this nature which may represent in miniature an automobile or other wheeled vehicle and the several parts of which may be manufactured largely by automatic machinery and assembled with facility.

In this manner an apparatus is furnished which may be placed upon the market at nominal cost and which will embody relatively few parts, providing, when assembled, a rugged unitary article capable of being subjected to reasonable abuse without danger of breakage.

A further object of the invention is that of furnishing a toy constructed as afore outlined, but which may nevertheless faithfully simulate in appearance a large article or apparatus of which it is a miniature embodiment.

With these and other objects in mind, reference is had to the attached sheets of drawings illustrating practical embodiments of the invention, and in which—

Fig. 1 is a plan view with certain of the parts broken away to disclose underlying construction;

Fig. 2 is a side elevation of a toy as illustrated in Fig. 1, with certain of the parts again broken away;

Fig. 3 is a partly sectional side view of the unit as shown in Fig. 2;

Fig. 4 is a top plan view of the running gear portion of such unit;

Figs. 5 and 6 are transverse sectional views taken along the lines 5-5 and 6-6 and in the direction of the arrows as indicated in Fig. 3;

Fig. 7 is a perspective view of the front end of a toy as shown in the preceding views and with the parts thereof separated;

Fig. 8 is a plan view showing a toy embodying a slightly different form of structure than is included in the preceding views;

Fig. 9 is a side elevation of a toy as shown in Fig. 8, but with certain of the parts broken away to disclose the structure to the rear of the same;

Fig. 10 is a transversely sectional view taken along the lines 10-10 and in the direction of the arrows as indicated in Fig. 9;

Fig. 11 is a view similar to Fig. 9, but showing a further alternative form of construction which may be employed;

Fig. 12 is a fragmentary plan view of the unit as shown in Fig. 11; and

Fig. 13 is a transverse sectional view taken

along the lines 13-13 and in the direction of the arrows as indicated in Fig. 11.

Heretofore numerous types of wheeled toys have been produced. However, with a view to manufacturing, at minimum expense, units of this nature, it has been desirable, if not necessary, to resort to die casting and similar manufacturing methods. This in itself has been entirely satisfactory, but difficulty has been experienced incident to the expense involved in assembling the several parts to provide a completed unit. Also, it has been extremely difficult to reproduce and assemble them in such a manner that they would, in an acceptable fashion, simulate in appearance the corresponding parts of a large unit of apparatus.

According to the teachings of the present invention, it is proposed in the case of a wheeled toy to provide a running gear portion and a body portion and to assemble and interlock these portions in such manner that the difficulties heretofore encountered are avoided.

Thus, in the drawings the numeral 15 indicates a body portion, and 16 a running gear portion. The former may mount a radiator-lamp and bumper assembly as has been generally indicated at 17, and the latter portion may by means of axles 18—extending in contact with portions 19 bent to accommodate the axles—mount wheels 20.

As has been especially indicated in Fig. 4, the running gear portion 16 may include a plate 21 with which the portions 19 are integral, and this plate may have parts 22 simulating in appearance running boards and adjacent which integral portions 23 simulating in appearance mud-guards extend.

Now referring in detail to the forward assembly of the body portion, it will be seen as in Fig. 7 that the unit 17 includes, as afore indicated, parts simulating in appearance a bumper, a radiator shell or core, and lamps. These parts may be formed of a material different than the body portion and including for example a nickel or chromium finish. The body portion adjacent such parts is formed with notches 24 for the accommodation of the bar 25 or other element mounting the lamps and is also formed with a backing plate 26 lying slightly to the rear of the forward edges of the body portion. Additionally, an opening 27 may be formed in the upper surface of the body portion, and this opening is of an area adequate to accommodate a stem 28 extending from the upper surface of the bar 25. Consequently, this stem may be introduced through

the opening and the associated parts may be swung to a point at which the rear faces of the radiator shell or core lie in contact with the forward faces of the plate 25. With a view to properly centering these parts, these surfaces may include angularly extending portions, the surfaces being formed so that they match one with the other. The running gear portion 16 may have adjacent its forward end a projection 29 from which a flange 30 extends upwardly. Consequently, with the part 17 in position upon the body portion, it is obvious that the application of the running gear portion thereof will cause the flange 30 to extend in advance of and to engage the part 17 adjacent its lower edge. Thus detachment of the part 17 is precluded so long as the running gear portion remains in position.

Adjacent their rear ends and as shown in Figs. 1 to 6, the portions are formed with a suitable interlocking structure. To this end the body portion may have adjacent its rear edge a pair of forwardly projecting parts 31 which extend within the space defined by the rear of the body portion 15. With this in mind, and as has been especially shown in Figs. 1 and 2, the body portion is interrupted to accommodate these parts.

Adjacent this point a bumper structure may also be secured. This structure conveniently includes a bar 32 from which inwardly extending portions 33 project, the latter terminating in offset inner ends 34. The running gear portion is formed—as shown in Fig. 4—with channels 35 within which the portions 33 lie, the offset ends of the latter extending into openings 36 formed at points beyond the channels. It is accordingly obvious that prior to engaging the projections 31 within the notches 37 formed in the running gear portion, the bumper is positioned as shown in Figs. 1 and 4. Thereafter, by applying the toy portions one against the other the bumper is locked against displacement.

Now with a view to securing the forward end of the toy portions against displacement, it will be observed that the inner faces of the mud guard portions 23 adjacent the forward ends of the running gear portion are recessed or formed with openings as has been indicated at 38. Adjacent a corresponding part in the body portion there extends from the edges of the latter a pair of projections 39. These projections have upon their outer faces wedges or latch elements 40. Accordingly, when the portions are inter-engaged adjacent their rear ends and their forward ends are swung to their normal or assembled position, the projections 39 will lie within the recesses or openings 38, and the latch elements 40 will bear against the edges of these openings until the parts are fully seated, at which point the upper edges of the latch elements will ride beyond the edges of the openings 38 and the parts will be locked against displacement. Of course, as previously brought out, the radiator-lamp-bumper assembly will have been applied to the body portion prior to this operation, and accordingly this unit will also be locked. However, should it ever be necessary to disassemble the parts, this may be readily done by either pressing inwardly against the faces of the body portion and adjacent the projections 39 and/or forcing the mud guard portions 23 adjacent the forward end of the running gear portion outwardly, so that the latch elements 40 may clear the edges of the openings 38.

Numerous other methods of readily locking the

parts against displacement suggest themselves in accordance with the teachings of the present invention. For example, as shown in Figs. 8, 9 and 10, the body and running gear portions are locked against their forward ends in the manner heretofore taught. However, in this construction these portions are not formed with the projections and openings 31—37. In lieu thereof projections 41 may extend from one of the portions (for example, the body portion) and have latching elements or wedge members 42 which co-operate with the edge portions of openings or recesses formed in the body portion. Accordingly, and as shown especially in Fig. 10, the parts may be forced together and against any likelihood of accidental separation.

A further form of construction which permits of ready assemblage and locking of the parts is illustrated in Figs. 11 to 13. In these views it will be observed that the body and running gear portions are formed with a quick detachable but normally interlocking structure extending from the rear edges. This structure may involve a pair of hook shaped catches 43 integral with and extending from (for example) the running gear portion, while the rear edge of the body portion is extended as at 44 to be engaged by the portions 43. If this structure is provided adjacent the rear end of the unit, then a suitable form of locking structure must be provided adjacent the forward end of the unit. With this in mind, a latch structure or its equivalent may be utilized as afore brought out, or else, and as shown especially in Fig. 13, the body portion may have outwardly extending edges 45 which ride in contact with and into the area defined below latch elements 46 which are integral with the mud guard portions. In other words, after the rear end of the parts have been inter-engaged, the forward ends are swung downwardly, this resulting in a spreading or forcible movement of the ledges or ends of the surfaces 45 have cleared the projections or latch elements 46. At that time the parts will snap to the position as shown in Fig. 13, and accidental separation thereof will be precluded.

As a result of the foregoing or similar constructions, it is perfectly obvious that the various portions, and especially the two main portions of the vehicle, may be separately formed by means of ordinary die operations. Thereafter, they may be separately colored or finished in any desired manner, and while the wheels and axles are conveniently applied to the running gear portion prior to its assembly, they may, of course, be associated therewith after the body portion has been associated with the running gear portion. Likewise, while by the present invention it is feasible to provide contrasting and separately formed bumper-lamp-radiator units which are securely locked in place by the assemblage of the two portions, these parts may be dispensed with or else be otherwise provided. The fact remains that instead of having to depend upon cumbersome and in some respects inefficient methods and structure for retaining the portions in assembled condition, the present invention provides a structure and teaches a method of procedure such that unskilled labor may with facility assemble the portions of the unit.

Obviously numerous changes in construction and rearrangement of the parts might be resorted to without departing from the spirit of 75

the invention as defined in the following claims.

Having described the invention, I claim:

1. A toy including running gear and body portions, one of such portions being formed with channels extending to a point adjacent its outer surface, the other of such portions being adapted to lie adjacent such channels, a separate bumper element, and arms extending rearwardly from such bumper element and retained against removal from such channels by the other toy portion.

2. A toy including running gear and body portions, projections extending from one of such portions, the second of such portions being formed with spaces for the accommodation of such projections whereby such portions may be inter-connected adjacent such projections, and latch structures forming a part of such portions and at points spaced from such projections whereby at the latter points to additionally and automatically couple such portions as they are brought to a position adjacent each other.

3. A toy including running gear and body portions, projections extending downwardly from such body portions, latch elements upon the outer faces of such projections and adjacent the outer

ends thereof, such running gear portion presenting opposed inner edge portions spaced a distance less than the distance between such latch elements, and such body portion being formed of a material capable of being flexed whereby, as such portions are brought to assume proper positions with respect to each other, such latch elements will cam against the edges of the running gear portion and will thereupon snap outwardly below such edges to lock such running gear and body portions against separation.

4. A toy including running gear and body portions, a separate radiator element normally immovable with respect to such portions, a part extending upwardly from such element and rearwardly of the same, said body portion being formed with an opening in its upper edge for the accommodation of such extended part, such radiator element lying between the inner surfaces and adjacent the forward edges of such running gear and body portions, and means for preventing a separation of such running gear and body portions whereby to fixedly maintain said element against accidental displacement with respect thereto.

FRANK BISCHOF, JR.