April 13, 1926. 1,580,831

W. S. LEWIS

TOY MOTOR VEHICLE

Filed June 27, 1923 2 Sheets-Sheet 1

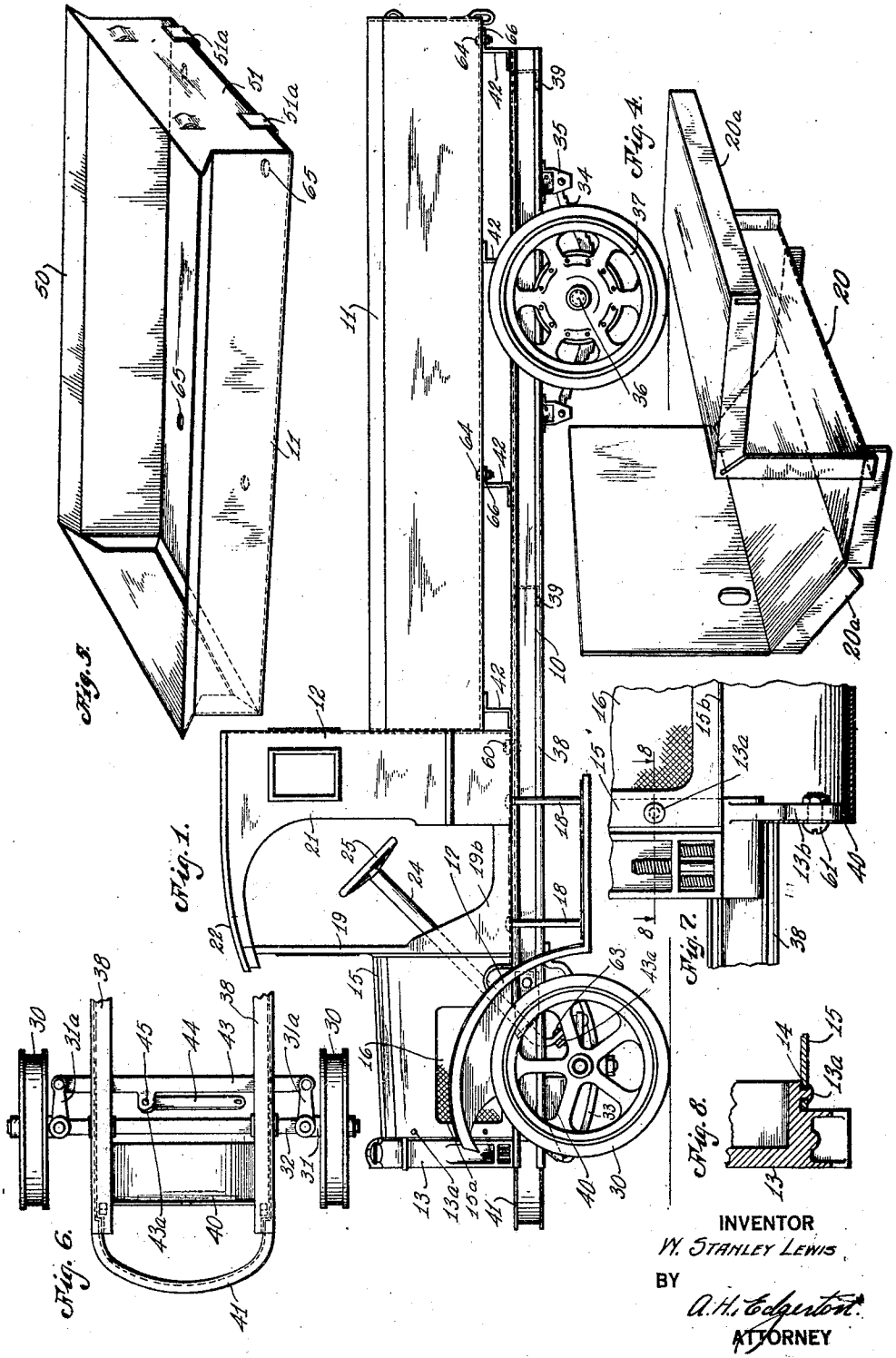


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

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Fig. 10.

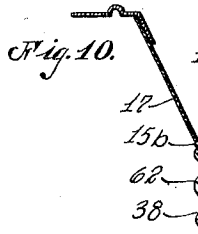



Fig. 2.




Fig. 9.

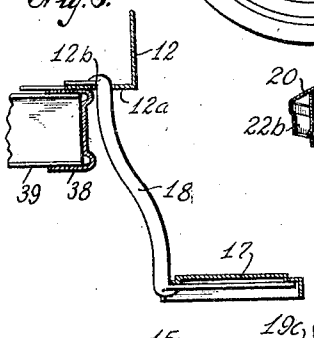



Fig. 3.




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# UNITED STATES PATENT OFFICE.

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## TOY MOTOR VEHICLE.

Application filed June 27, 1923. Serial No. 648,135.

*To all whom it may concern:*

Be it known that I, WILBUR STANLEY LEWIS, a citizen of the United States, residing at 8321 Detroit Avenue, in the city of Cleveland, county of Cuyahoga, and State of Ohio, have invented new and useful Improvements in Toy Motor Vehicles, of which the following is a specification, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon.

This invention relates to the toys of the type that are moved, or wheeled, by pushing or pulling them, and has reference more particularly to an imitation automobile truck which is designed to give a realistic appearance, withstand serious injury with rough usage and to be inexpensively constructed and assembled.

In metal toys of this character it is customary to stamp and form such parts, as are consistent with the design, from sheet metal, it is also customary to attach, by welding, juxtaposed parts, but the tendency to sacrifice the appearance is increased by both these methods, as the sharp detail and form required in some parts is lost in sheet metal stampings, and the finish, or painting is destroyed by welding, unless all painting is done after welding. This limits the color combinations that may be employed, unless the toy is hand painted or brushed, or unless the parts, attached by welding, are retouched or repainted. These disadvantages are obviated by my present invention; according to which I build complete sections of a toy motor truck, including such parts as are usually painted the same color in a motor truck, painting each section, by dipping, and in imitation of the color scheme of a motor truck, and thereafter, assemble the sections by means which do not require painting, and are so located in the toy, as to be obscured from ordinary view, or positioned so, as not to detract from the appearance of the toy.

With the above mentioned and other objects in view, the invention consists in a novel construction in toy vehicles and more particularly in the design and construction, attaining the close resemblance to a motor truck, an example of which, is the preservation of sharp detail and form in the imitation radiator, axles, springs, etc. attained by using die castings; and, the invention consists also further in the novel parts and combinations and arrangement of parts hereinafter particularly described and further defined in the accompanying claims.

In the accompanying drawings, in which I have embodied one form of my invention, Fig. 1, is a view in side elevation of a toy motor truck. Fig. 2 is a detail side view of the forward portion of the toy. Fig. 3, is a perspective view in section of the cab, hood and radiator. Fig. 4, is a perspective view of the seat and floor section. Fig. 5 is a perspective view of the truck body or bed. Fig. 6, is a detail plan view of a portion of the forward end of the toy showing the construction of the forward end of the frame and some of the steering connections. Fig. 7, is a detail view partially in section, illustrating the method of connecting the forward portion of the upper forward subassembly to the frame. Fig. 8, is a section taken on the line 8—8 of Fig. 7. Fig. 9 is a section on the line 9—9 of Fig. 2. Figure 10, is a section on the line 10—10 of Fig. 2.

As shown in the drawings, in which I have embodied one form of my invention, the toy comprises a chassis 10, body 11, and cab portion 12, each of these sections being so designed and constructed, as to admit into the subassembly all parts consistent with the painting, by dipping process. Referring to Fig. 1, the cab portion 12, embraces an imitation radiator 13, preferably made of a soft metal casting, and in the present case, provided with laterally depending lugs or bosses $13^a$, adapted to engage holes 14, in a sheet metal hood 15. The lugs $13^a$, protrude beyond the surface of the hood, and function as rivets, when the cab portion is assembled. In either side of the hood 15, slots $15^a$ are provided, and the metal lying between these slots is depressed, forming a pocket into which a sheet of wire gauze 16 is inserted, which represents the engine cooling medium, or ventilator, in a real motor truck, and contributes to the realistic appearance of the toy.

The hood 15, is built with flanges $15^b$, depending laterally and outwardly from the lower edge thereof, and to these flanges there is spot welded or otherwise firmly secured, flanged portions of the fenders, and steps 17. Additional support is provided for the fenders, by step irons 18, which are spot welded to the underside of the steps,

and to an inwardly depending ledge or flange 12[a] at the base of the cab 12. As illustrated in Fig. 9, holes 12[b] are provided in the ledge 12[a] through which the ends of the step irons 18, are inserted before welding. By this construction any unsightly appearance caused by welding is concealed, and it will also be noted that the fenders are entirely independent of the frame, being supported on the cab and hood, or the upper forward subassembly 12.

The cab is comprised of four sheet metal stampings; the wind shield 19, dash floor boards and seat 20, sides and rear wall 21, and the top 22. The wind shield 19, is spot welded along a flange 19[c], which conforms to the contour of the rear edge of the hood, and is rigidly attached thereto by welding. A single plate 20 forming a dash, toe board, floor board, seat riser and seat, Figs. 2, 3, 4, is welded to the rear face of the wind shield 19, and contiguous walls of the cab along the flanges 20[a], formed in the seat dash member. The sides and rear wall member 21, is formed with inwardly depending flanges 21[a], at the top and bottom edges of the stamping. These flanges assure rigidity, and at the base of the cab provide a concealed ledge, which supports the bolts that attach the cab to the frame. The top 22 is pressed from sheet metal and formed with a skirting 22[a] on the side rear edges, which telescopically engages the top of the cab walls 21. A deeper skirting or flange 22[b], is formed at the front edge and forward corners of the top, and, when the top is positioned, maintains the contour of the upper forward portion of the cab side walls 21. Upon the underside of the toe board 20, a bracket 23 is welded, which supports the steering column 24, upon the upper end of which a steering wheel 25 is welded, or otherwise rigidly secured. In the present case the sub-assembly of the cab, portion 12, preferably embraces the steering column, steering wheel and a bracket 26, which is designed to support the lower end of the steering column. At the instance of the assembly of this portion of the toy, the bracket 26, is mounted on the steering column by the insertion of the column through a clearance hole 26[a] in the bracket, then setting a cotter key 27, in the lower portion of the column 24 which, for the convenience of painting, loosely attaches the bracket to the column, and later, when the final assembly is made, retains the steering column from upward movement. Downward movement of the steering gear is prevented by the insertion of a cotter key 28, in the steering column 24, above and adjacent the bracket 23.

The chassis portion 10, or subassembly of the frame and parts comprising this section, embrace a pair of front wheels 30, mounted on spindles 31, which are pivotally retained in the yoked ends of the front axle 32. Imitation vehicle springs 33, are riveted to the axle and sustain the forward portion of the frame. The opposite end of the frame is supported on imitation springs 34, stamped from sheet metal and formed with brackets 35, which are spot welded, or riveted to the frame. The spring 34, supports a rear axle 36, upon which is journaled wheels 37. The frame is constructed of channel shaped side rails 38, with center and rear cross members 39, telescoped between the flanges of the side rails and welded thereto. The forward portion of the frame is built with an imitation oil pan 40, spot welded to the lower flanges of the side rails 38, and a semicircular channel iron bumper 41, welded to the end of the frame at points so formed as to permit the alignment of the flanges of the bumper with the flanges of the frame side rails. Z bars 42 are welded to the top of the frame parallel with the cross members, and are provided to support the body 11, and further, strengthen the frame. Steering arm 31[a], Fig. 6, integral with the spindles 31, are pivotally connected to a tie rod 43, which is formed with a boss or ear 43[a], to which a drag link 44, is loosely connected by means of a rivet 45.

Another subassembly of the toy vehicle is the body 11, which embraces the pan or container 50, and an end gate 51. The container is formed of a single plate of sheet metal, all overlapping edges being welded so as to form a strong rigid unit. The end gate conforms to the contour of the container and is hinged at the lower edge, the loops of the hinges 51[a] engaging with slots in the container 50.

The final assembly, after painting, is facilitated by the arrangement of the bolts used in joining the different sections. The cab portion 12, is attached to the chassis 10, by two bolts 60, which pass through aligned holes in the flanges 21[a], and the upper flange of the channel shaped frame 38. Additional support is provided by the bolt 61, Fig. 7, which unites the imitation oil pan 40, with a boss 13[b], integral with the radiator 13, depending from the base thereof. A rivet or bolt 62, Fig. 10, connects the bracket 26, to the frame 38, and a rivet 63, inserted and set in adjacent holes in the steering column end and drag link 44, completes the assembly of the forward section, or cab portion of the toy. The body is attached by four bolts 64, inserted through holes 65 in the container 50, which registers with holes 66 in the Z bars 42.

It will be obvious that various changes may be made in the details of construction of any of the various parts described herein, and in their manner of arrangement, without departing from the spirit of the invention, and it will be understood that the in-

vention is not limited to the precise construction and arrangement shown and described. It will be further understood, that whenever the word painting is employed herein, it will be understood as including also, enameling, japanning, or any other well known or equivalent process of coating the surface of the toy.

I claim as my invention the following novel features substantially as hereinbefore specified, namely—

1. A toy motor vehicle comprising a chassis, a body, and a cab section, said cab section being formed of sheet metal stampings including a section having a portion thereof bent forwardly and upwardly to form a footrest, and its other portion bent upwardly and rearwardly to form a seat, and a section including cab, hood and radiator sections, said cab being formed of a sheet of metal bent to form opposite side members, a back member and an apertured windshield member, said side and back members having flanges on their lower edges for securing said section to the chassis.

2. A toy motor vehicle comprising a chassis, a body, and a cab section, said cab section being formed of sheet metal stampings including a section, including a combined cab, hood and radiator sections, said cab being formed of a sheet of metal bent to form opposite side members, a back member, and an apertured windshield member, said side and back members having flanges on their lower edges for securing said section to the chassis.

In testimony whereof I hereunto affix my signature.

W. STANLEY LEWIS.