J. C. TURNER.

WHEELED TOY.

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1,225,894.

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Fig. 1

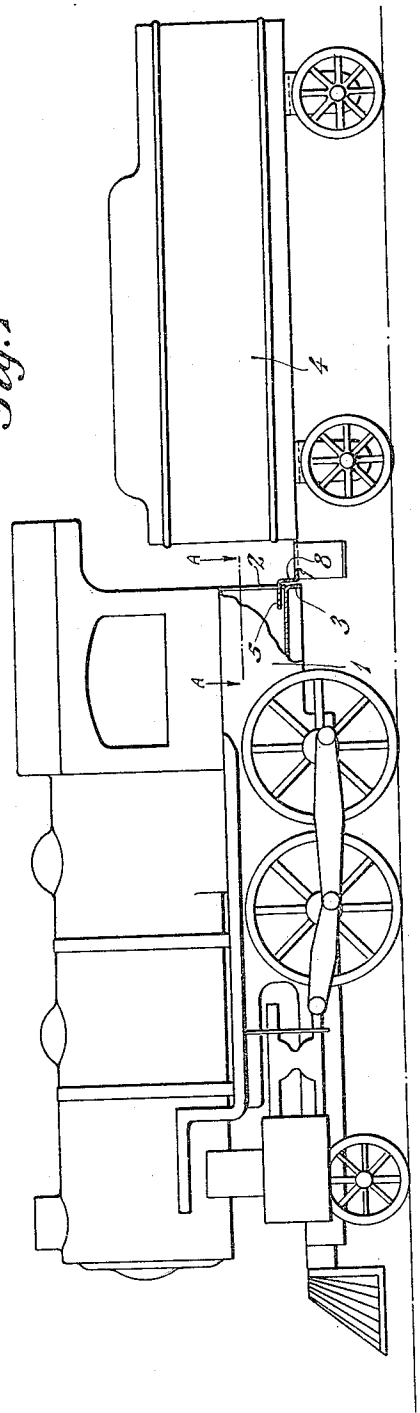
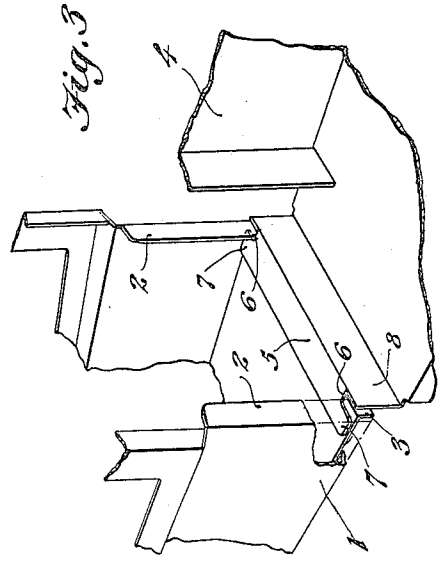


Fig. 3



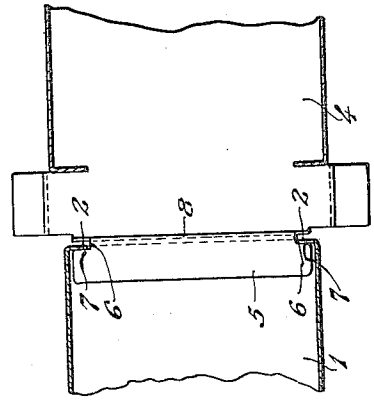


Fig. 2

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WHEELED TOY.

1,225,894. Specification of Letters Patent. Patented May 15, 1917.

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To all whom it may concern:

Be it known that I, JOHN C. TURNER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Wheeled Toys, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to toys, and more particularly to a device for connecting together two or more sections of a wheeled toy.

The object of the invention is to provide a connecting device of this kind which can be easily manipulated to connect together the two parts, or sections, of the toy, and which, when the connection has been accomplished, will form a strong, durable connection which will not be liable to be separated or broken by the child in playing with the toy. A further object of the invention is to provide such a connecting device which will permit both parts, or sections, of the toy to be lifted by grasping one of them, and will maintain the two parts in approximately their normal positions when they are so lifted. A further object of the invention is to provide a connecting device of a very simple, inexpensive character which can be applied to cheap toys as well as to the higher priced toys; and further to provide such a connection which can be constructed integrally with the respective parts of the toy, and can be formed from sheet metal simultaneously with the forming of the body portions of the parts of the toy.

In the accompanying drawings Figure 1 is a side elevation of a locomotive toy, partially broken away to show my connecting device interposed between the engine and the tender; Fig. 2 is a sectional view taken on the line *a*—*a* of Fig. 1, showing the connecting device in plan; and Fig. 3 is a perspective view of the end portions of the engine and tender, partly broken away, to show the connecting device applied thereto.

In these drawings I have illustrated the invention as applied to a locomotive toy, comprising an engine and a tender, the latter being connected with the engine by means of my invention. It will be understood, however, that the connecting device is not limited to use with any particular type of toy, but that it may be utilized wherever it is desired to separably connect together two parts or sections of a toy.

In carrying out my invention I have provided one part of the toy, preferably the forward part, with upright members which are rigidly secured thereto and are spaced apart. Coöperating with these upright members is a member, or plate, secured to and projecting from the adjacent end of the other part of the toy, this member being of a width greater than the distance between the two upright members and having openings to receive these members, thereby enabling the connection to be established by lifting the last mentioned part of the toy and placing the connecting members in interlocking engagement. When the last mentioned part of the toy has been lowered to its normal position a very firm, strong connection has been established, which can only be separated by imparting a movement to one part of the toy relatively to the other much greater than is liable to be imparted thereto in the ordinary use of the toy, but at the same time permitting the two parts to be quickly and easily separated when this is desired. The relative sizes of the openings and upright members are such that the two parts of the toy may have a relatively large amount of pivotal movement about both a vertical axis and a horizontal axis. Further, I have provided the two parts of the toys, below the horizontal axis about which the two parts of the connecting device pivot, with contact surfaces which limit the pivotal movement of the connecting devices, and consequently the two parts of the toy, and cause the one part of the toy to be held in approximately its normal position with relation to the other part of the toy when said other part is lifted.

The invention may be embodied in various forms, but that illustrated in the accompanying drawings is highly efficient and very inexpensive. As there shown I have provided the lower portions of the walls of the cab of the engine 1, at their rear edges, with inwardly extending flanges 2, preferably formed by bending inwardly the rear edges of the plates from which the walls are formed, these flanges constituting the upright members of the connecting device. It will be noted that the inner and upper edges of the flanges are unobstructed, to permit the coöperating member to be placed in engagement therewith. These flanges extend upwardly from the bottom plate, or floor, of the cab which has a down-turned flange 3

which stiffens the same, and may be said to constitute the frame of the toy structure. The second part of the toy, the tender 4 in the present instance, is provided at that end adjacent to the engine with a forwardly projecting plate 5, which is of a width greater than the distance between the inner edges of the flanges 2 and which is provided in its lateral edges with openings, or notches, 6, adapted to receive the flanges and establish the connection between the two parts of the toy. These notches are spaced from the front edge of the plate 5 a distance sufficient to provide shoulders 7, of ample strength to withstand any strain which may be imposed thereon. The notches, or openings, 6 are of a width greater than the thickness of the flanges 2, thereby not only permitting of a free swinging movement of the two parts of the toy about both a vertical axis and a horizontal axis, but also enabling the two parts of the connecting device to be very quickly and easily brought into interlocking relation, to thereby establish the connection. The plate 5 may be of any suitable character and may be connected with its part of the toy in any suitable manner, but in the present instance I have shown the plate as comprising an extension to the bottom of the tender, with which it is integrally formed.

It will be noted that the connection is such that it will not be separated by the lifting of the engine, but the tender will be lifted with the engine. To maintain the tender in approximately its normal position when it is lifted with the engine I have provided means for limiting the downward movement of the tender about the horizontal axis of the connecting device. This is accomplished in the present instance by providing the two parts of the toy below the horizontal axis of the connecting device with opposed surfaces which will be brought into engagement by the downward movement of the tender. In the present construction one of these surfaces comprises the down-turned flange 3 of the bottom of the cab. The other surface comprises a flange 8 depending from the notched portion of the plate 5. As shown in the drawings, the floor of the tender is somewhat lower than the floor of the cab, and the forwardly extending part of the floor of the tender is first bent upwardly, to form the flange 8, and is then bent forwardly, the notches being formed in the forwardly bent portion close to the flange 8. In this manner I not only provide the abutting flange 8 to form a stop to limit the movement of the tender about the horizontal axis of the connecting device, but I also bring the connecting plate 5 up to the level of the floor of the cab.

The particular shape and arrangement of the parts here shown are not essential to the successful operation of the device, nor is it necessary that the members of the connecting device should be formed integrally with the respective parts of the toy. However, the construction here shown enables the flanges and the connecting plate to be formed from the same sheets of metal from which the respective parts of the toy are made and is of a material advantage from a manufacturing standpoint as it greatly cheapens the production of the device. It will be apparent that the construction is very strong and will withstand any strain to which it is liable to be subjected; and inasmuch as it is necessary to move the tender upwardly a very considerable distance or tilt the same sidewise far enough to disengage the notched plate from the flanges of the engine before the two parts of the connection can be separated there is very little liability of the connection being separated under ordinary conditions of use. Hence, the connecting device is not only very inexpensive to manufacture, but is of a strong, durable character, and is very efficient as a connecting device.

I wish it to be understood that I do not desire to be limited to the details of construction shown and described as various modifications will occur to a person skilled in the art. For example, in that embodiment of the invention here illustrated it is preferable that two upright members, or flanges, be employed, but it will be apparent that the number of upright members may be varied as desired without departing from the invention.

Having now fully described my invention, what I claim as new, and wish to secure by Letters Patent, is:—

1. In a toy having two parts adapted to be connected one to the other, a connecting device comprising upright flanges extending inwardly from the opposed edges of one part of said toy near one end thereof and having their inner edges spaced apart, a plate secured to and projecting beyond the adjacent end of the other part of said toy, said plate being of a width greater than the distance between said flanges and having notches in the lateral edges thereof to receive the respective flanges.

2. A toy comprising two parts adapted to be connected one to the other and having overlapping portions, one of said portions having openings near the respective lateral edges thereof, and the other portion having upright members rigidly secured thereto and spaced apart to enter the respective openings in the first mentioned portion, said upright members extending some distance above said overlapping portions when the two parts of said toy are in their connected positions.

3. A wheeled toy comprising two parts, one of said parts comprising a body portion

formed of sheet metal and having integral inturned flanges at one end thereof, said flanges being spaced apart, the other part of said toy having a bottom plate of sheet metal, said plate extending beyond that end of the last mentioned part of said toy adjacent to the flanged end of the first mentioned part thereof, a projecting part of said plate being of a width greater than the distance between the inner edges of said flanges and having notches in the lateral edges thereof to receive the edges of said flanges and establish a separable connection between the two parts of said toy, said flanges being unobstructed at their inner and upper edges to permit said notched plate to be placed in interlocking engagement therewith.

4. In a toy having two parts adapted to be connected one to the other, a connecting device comprising members carried by the respective parts of said toy and adapted to be placed in interlocking relation to connect together the two parts of said toy, said interlocking parts having relative movement to permit one part of said toy to move about a horizontal axis relatively to the other part thereof, and the two parts of said toy having opposed surfaces arranged below said interlocking members to limit the movement of said part of said toy about said horizontal axis.

5. In a toy having two parts adapted to be connected one to the other, a connecting device comprising upright members carried by one part of said toy near one end thereof and spaced apart and a coöperating member carried by the adjacent end of the other part of said toy, projecting beyond said end thereof and having openings to receive the respective upright members, said openings being of a width greater than the thickness of said upright members to permit the free movement of the latter therein, the two parts of said toy also having coöperating means to limit their relative movement about the horizontal axis of said connecting device.

6. In a toy having two parts adapted to be connected one to the other, a connecting device comprising upright members carried by one part of said toy near one end thereof and spaced apart, and a coöperating member carried by the adjacent end of the other part of said toy, projecting beyond said end thereof and having openings to receive the respective upright members, the two parts of said toy also having opposed surfaces arranged immediately below said cooperating member and adapted to limit the movement of one part of said toy relatively to the other part thereof about the horizontal axis of said connecting device.

7. In a toy having two parts adapted to be connected one to the other, a connecting device comprising upright flanges extending inwardly from the opposite sides of one part of said toy near the end thereof and having their inner edges spaced apart, a plate secured to and projecting beyond the adjacent end of the other part of said toy, said plate being of a width greater than the distance between said flanges, and having notches in the lateral edges thereof to receive the respective flanges, said plate having a flange depending from the notched portion thereof and arranged to engage the end of the first mentioned part of said toy to limit the movement of said plate about the horizontal axis of said connecting device.

8. In a locomotive toy, an engine comprising a bottom plate having a depending flange at one end thereof, side walls extending upwardly from the sides of said bottom plate and having inturned flanges, said flanges being spaced apart and having their inner and upper edges unobstructed, a tender comprising a bottom plate of sheet metal extending beyond that end of said tender adjacent to the engine, said bottom plate being arranged on a lower level than the bottom plate of said engine and being bent upwardly to form a flange opposed to the flange of the bottom plate of said engine, and then bent forwardly, said forwardly bent portion being provided with notches in its lateral edges adjacent to the flange thereof, said notches being adapted to receive the flanges carried by said walls of said engine, and said notches being of such a size relative to said flanges that said tender may be moved about both a horizontal and vertical axis relatively to said engine.

In testimony whereof, I affix my signature hereto.

JOHN C. TURNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."