April 15, 1947. T. I. DUFFY 2,418,971

WAGON CONSTRUCTION

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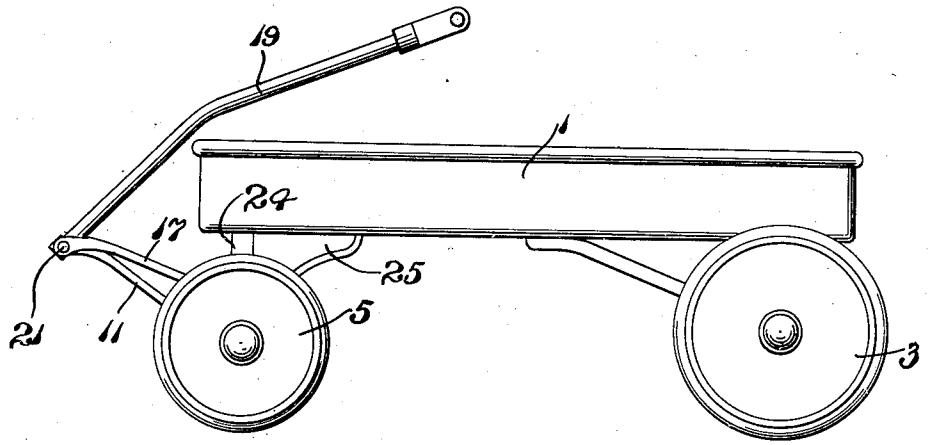


Fig. 1.

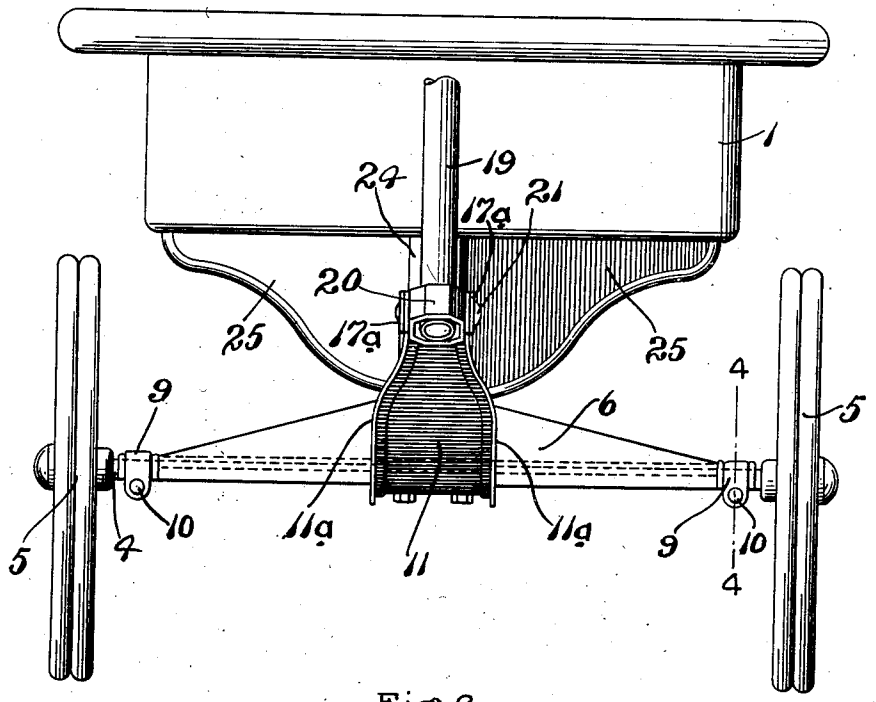


Fig. 2.

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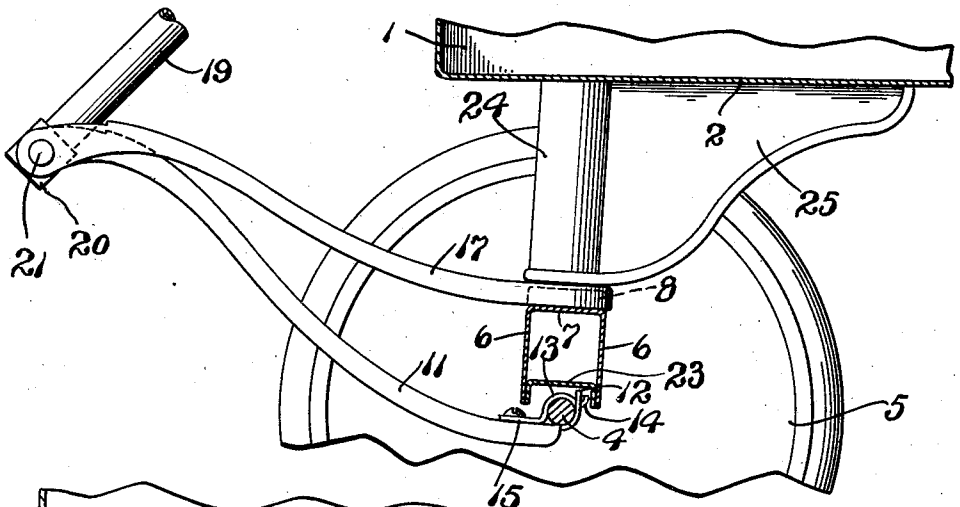


Fig.3.

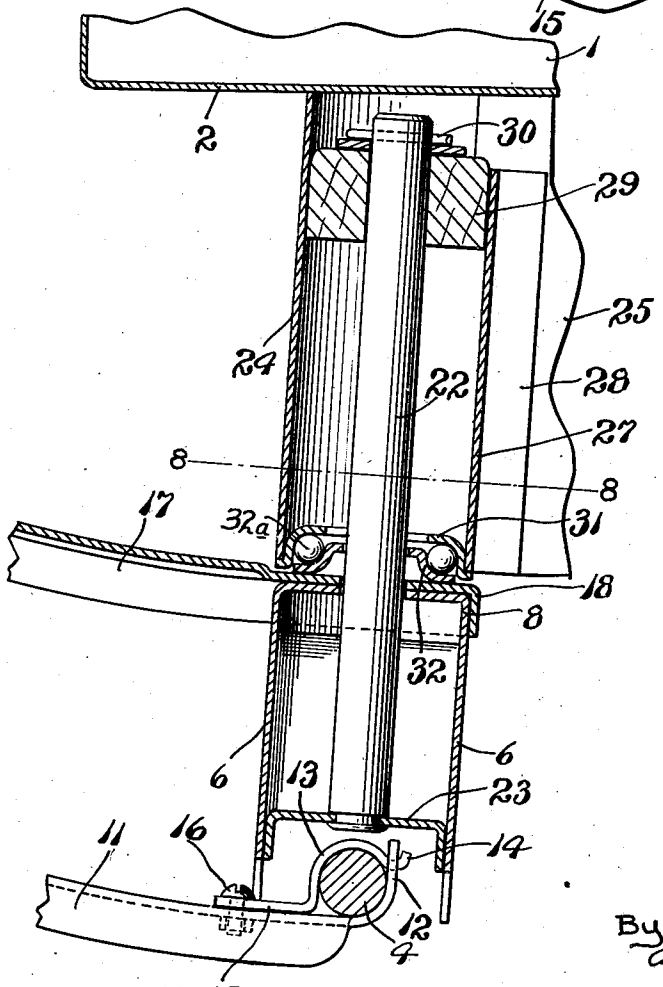


Fig.5.

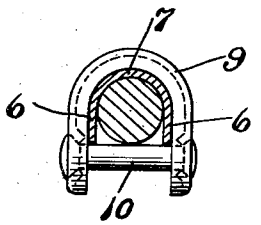


Fig.4.

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WAGON CONSTRUCTION

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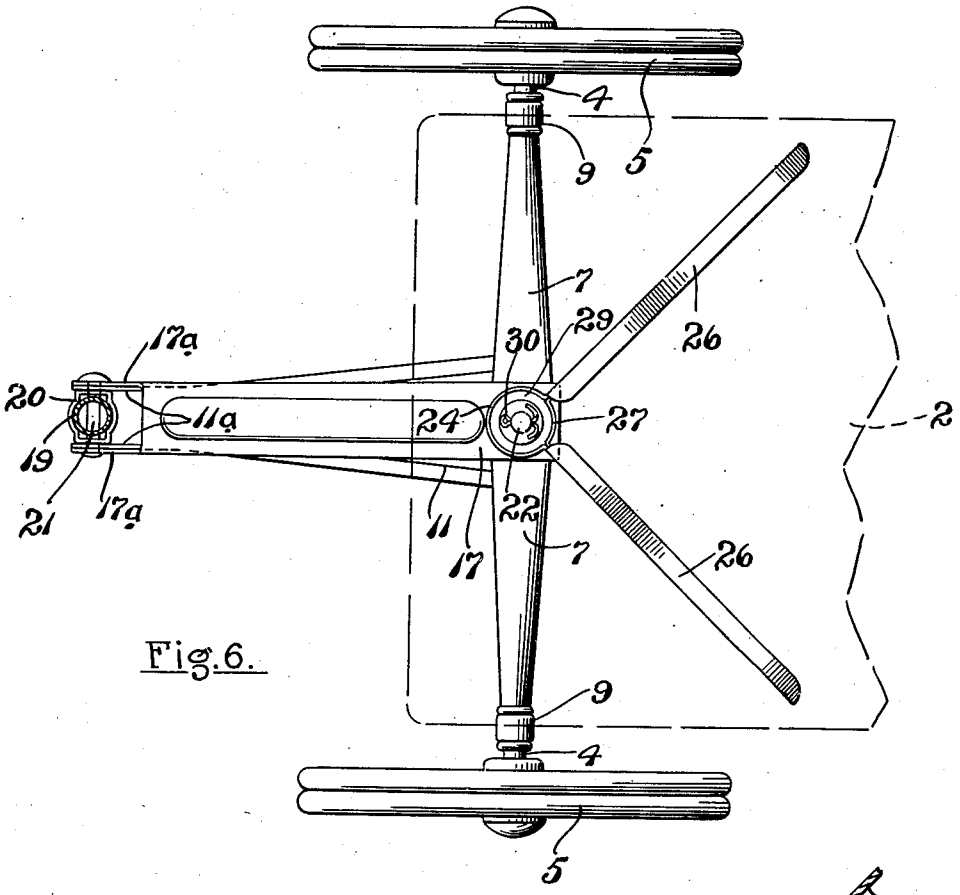


Fig.6.

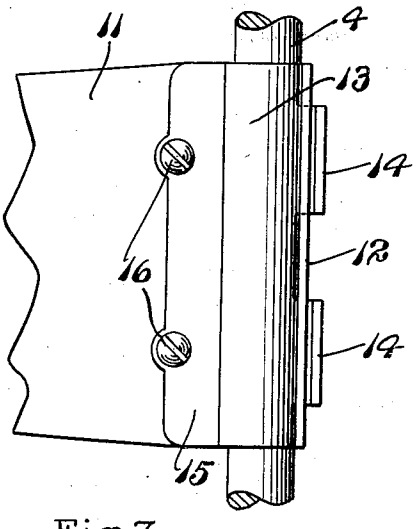


Fig.7.

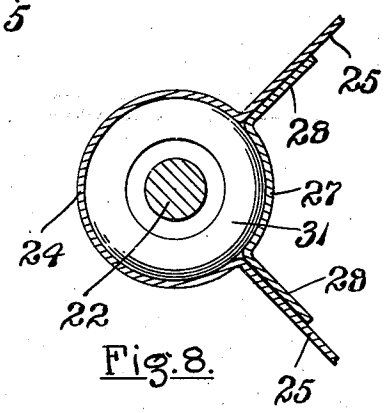


Fig.8.

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WAGON CONSTRUCTION

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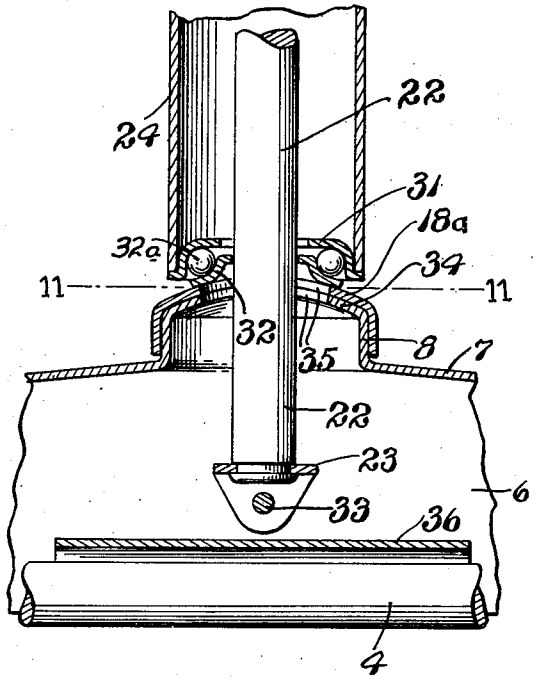


Fig. 9.

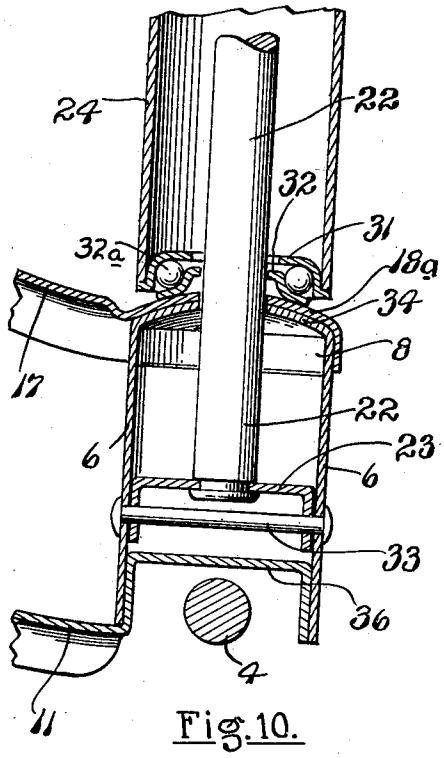


Fig. 10.

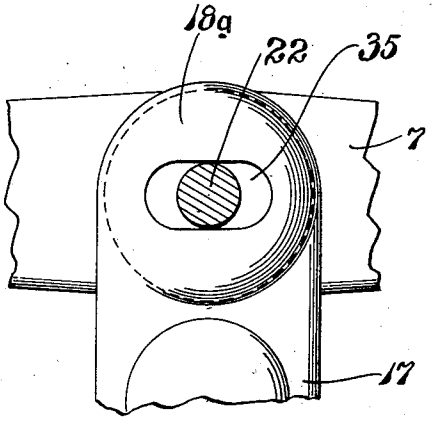


Fig. 11.

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Patented Apr. 15, 1947 2,418,971

UNITED STATES PATENT OFFICE

2,418,971

WAGON CONSTRUCTION

Thomas I. Duffy, Grand Haven, Mich., assignor to Anderson-Bolling Mfg. Co., Grand Haven, Mich., a corporation of Michigan

Application February 28, 1945, Serial No. 580,140

11 Claims. (Cl. 280—87.01)

1

The present invention is directed to a wagon construction, particularly in connection with the front of wagons of the so-called express type, small in size and in general largely used by children. It is a primary object of the present invention to provide a novel construction of the front running gear for a wagon of this type which is simple and economical to produce, readily assembled and installed, durable in operation and having ample strength for all service to which it may be normally subjected.

An understanding of the invention may be had from the following description taken in connection with the accompanying drawings, in which,

Fig. 1 is a side elevation of a wagon having my invention applied thereto.

Fig. 2 is an enlarged front elevation thereof.

Fig. 3 is a fragmentary enlarged longitudinal vertical section through the front portion of the wagon.

Fig. 4 is a vertical section substantially on the plane of line 4—4 of Fig. 2.

Fig. 5 is a fragmentary enlarged vertical section through the tongue and change direction structure at the front end of the wagon.

Fig. 6 is a plan view of the forward portion of the wagon with the body removed, its position being indicated in dash lines.

Fig. 7 is a fragmentary enlarged plan view of the attachment used for connecting the lower member of the tongue construction to the front axle.

Fig. 8 is a horizontal section substantially on the plane of line 8—8 of Fig. 5.

Fig. 9 is a fragmentary vertical section of a modified form of structure illustrating similar construction to that shown in Fig. 5 but with the section at right angles to the plane of the section shown in said Fig. 5.

Fig. 10 is a fragmentary vertical section of such modified structure similar to and in the same plane as in Fig. 5, and

Fig. 11 is a fragmentary horizontal section on the plane of line 11—11 of Fig. 9.

Like reference characters refer to like parts in the different figures of the drawings.

The body 1 of the wagon, preferably of steel has a horizontal bottom 2 and at the rear of the wagon rear wheels 3 are secured in any suitable manner for supporting the body above the ground.

At the front a front axle 4 extends below and transversely of the body, being provided with

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wheels 5 at its ends. Associated with the axle 4 is a bolster 6 made of sheet metal in substantially channel form having front and rear vertical flanges 6 connected at their upper edges by an integral web 7, the central portion of which is pressed upwardly into a boss 8 which has a central vertical opening therethrough. U-shaped clamps 9 embrace the bolster at its ends between suitable spaced ribs projecting therefrom and the depending legs of the clamps are secured together and clamped against the bolster by cross pins 10 headed or riveted at their ends as shown (Fig. 4).

A lower tongue member 11 of sheet metal, and in an inverted channel form, is connected at its rear end to the front axle 4 substantially midway between its ends. The upper web of the channel is extended at the rear and turned upwardly, as at 12 (Fig. 5), and a securing clip 13 is provided curved to engage the upper side of the axle 4 and with upwardly turned spaced apart terminal hooks 14 (Figs. 5 and 7) which pass through slots made in the section 12. At its front end the clip 13 is extended forwardly in a section 15 to lie against the upper side of the tongue member 11 and is secured in place by means of stove bolts 16.

The tongue construction also contains an upper member 17 also of sheet metal in an inverted channel form, the rear end of which is shaped at 18 to engage the boss 8 and lying over the upper side thereof. The two tongue members 17 and 11 converge toward each other in front of the wagon and each at its front end has a portion of its upper web cut away so that the projecting side flange portions 11*a* and 17*a*, respectively (Fig. 6), lie along side of each other with the flanges 11*a* preferably inside of the flanges 17*a*. The immediate tongue 19 at its rear or lower end is received within a box or frame 20 of sheet metal and a pin 21 is passed through the flanges 17*a* and 11*a*, the ends of the box and the tongue member 19, connecting the parts together and permitting the tongue 19 to be swung from its rear upper position as shown in Fig. 1 to a forward position in which it extends in front of the wagon.

A vertical kingpin 22 at its lower end is secured to an inverted channel base 23 located substantially horizontally between the lower edge portions of the sides 6 of the bolster and secured thereto. Such kingpin extends upwardly, and preferably at a slight inclination to the rear, through the opening in the boss 8 and a corre-