J. N. WHEELER.

CHILD'S SULKY.

APPLICATION FILED OCT. 28, 1909.

977,495. Patented Dec. 6, 1910.

Fig. 1.

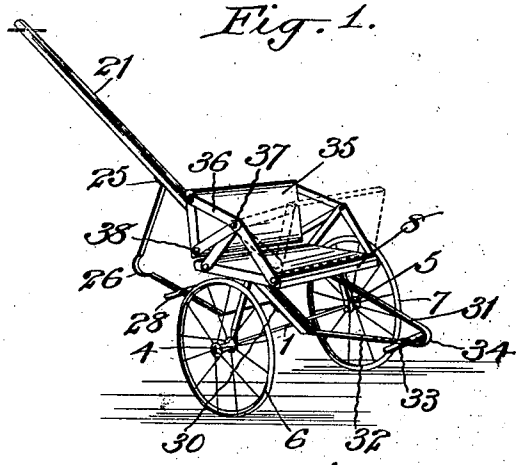


Fig. 2.

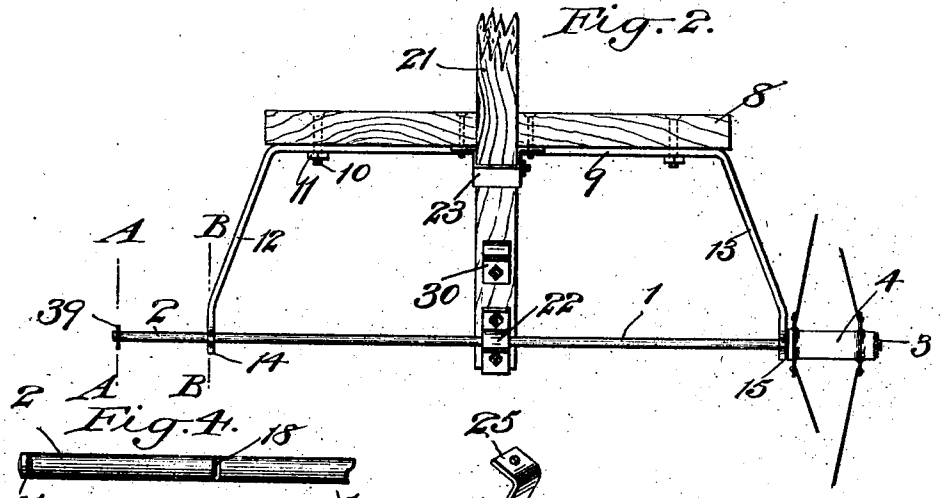


Fig. 4.

Fig. 5.

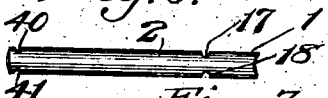


Fig. 6.

Fig. 7.

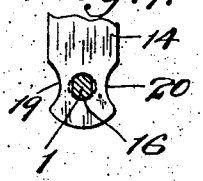
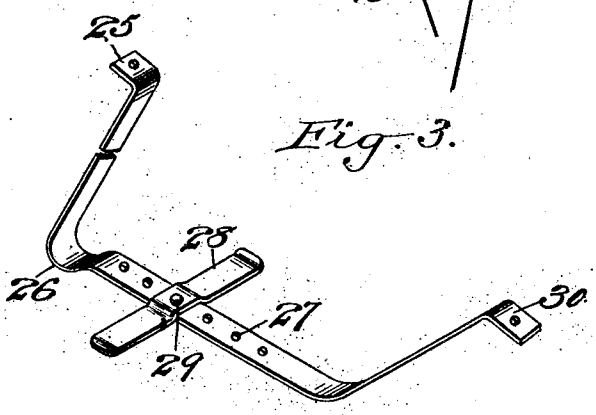


Fig. 3.



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CHILD'S SULKY.

977,495. Specification of Letters Patent. Patented Dec. 6, 1910.

Application filed October 28, 1909. Serial No. 525,144.

To all whom it may concern:

Be it known that I, JOEL N. WHEELER, a citizen of the United States, and resident of Geneva, in the county of Kane and State of Illinois, have invented a new and useful Child's Sulky, of which the following is a specification.

My invention relates to a child's sulky and more particularly to what I am pleased to term a reversible sulky, in which the child may be conveniently pushed face foremost or drawn face foremost at pleasure, the object being to provide a strong, convenient and cheap vehicle of light weight, from which the child will not be liable to be thrown by tipping either front, back or sidewise, and which may be knocked down and set up by unskilled parties.

A practical embodiment of my invention is represented in the accompanying drawings, in which,

Figure 1 is a view of the sulky in perspective as it appears in use, showing in full lines the position of the back when the occupant of the sulky is to be pushed and in dotted lines the position of the back when the occupant of the sulky is to be drawn. Fig. 2 is an enlarged vertical transverse section through the tongue and brace, showing the seat support and axle in front elevation, Fig. 3 is a view in detail of the brace which is connected with the tongue, showing the foot-rest adjustable thereon. Fig. 4 is a view in detail of one end of the axle, showing the same in side elevation. Fig. 5 is a view of the same in top plan, Fig. 6 is an enlarged section in the plane of the line A—A of Fig. 2, showing a form of lock in position for locking the wheel on the spindle, and Fig. 7 is an enlarged section in the plane of the line B—B of Fig. 2, showing one end of the seat support locked to the axle.

The axle is denoted by 1. It may conveniently consist of a slender bar of suitable metal, for example, iron, preferably circular in cross-section, its end portions serving as spindles 2 and 3 for the reception of the hubs 4 and 5 of the wheels 6 and 7.

The seat is denoted by 8. It may conveniently consist of a thin rectangular piece of wood of such width and length as may be desired and it is supported from the axle 1 by means of a flat metal strip, the middle portion 9 of which extends along beneath the central portion of the seat and is made fast to the seat 8 by means of several bolts 10, the said bolts having their heads countersunk in the upper face of the seat 8 and projecting downwardly through the supporting strip where their threaded portions are provided with nuts 11 for drawing the supporting strip into snug contact with the under face of the seat. The opposite ends of the flat metallic supporting strip are bent outwardly and downwardly, as shown at 12 and 13, their lower ends 14, 15, being bent at right angles to the axle 1 and provided with openings 16, see Fig. 7, normally of circular form and of sufficient size to slide over the opposite ends of the axle 1.

To secure the ends 14 and 15 to the axle, the axle is provided at the inner ends of its spindle portions with grooves 17, 18, see Fig. 5, made respectively in the opposite sides of the axle and opposite each other, so that when the ends 14 and 15 reach these grooved portions, the opposite walls of the opening 16 may be swaged into the grooves 17, 18, as clearly shown at 19, 20, Fig. 7. This swaging may be conveniently accomplished by a sharp tap with a hammer or the said walls may be simultaneously compressed between two pressure jaws in any well known or approved manner. This means of fastening not only does away with the use of bolts and nuts and rivets and the expense of making and furnishing them, but the opposite walls of the openings in the ends of the seat support serve as a reinforcement on the opposite sides of the axle and both prevent the ends of the support from shifting their positions longitudinally of the axle and circumferentially around the axle. Furthermore, the axle is only slightly weakened by the indents or grooves formed in its opposite sides.

The tongue for manipulating the sulky is denoted by 21. It is here shown as made fast to the axle 1 by means of a clip 22 and to the front of the seat 8, by means of a clip 23, bolted to the underside of the seat 8 near the front edge of the seat.

For the purpose of preventing the sulky from tipping either forward or backward to an extent which would endanger the security of the child sitting in the sulky, front and rear braces are provided which at the same time form supports for foot-rests. The brace which I term the front brace is attached to the tongue 21. It consists of a flat metallic strip the forward end of which is secured to the underside of the tongue con-

veniently by means of a screw, as at 25, and it extends thence downwardly to a point 26 sufficiently low so that when the tongue is dropped, the sulky seat will not be sufficiently tilted to pitch the child out, and at this point 26, it is conveniently given a short curve, as clearly shown, and thence it extends along toward the axle of the vehicle and is provided with a series of holes 27, see Fig. 3, for adjusting a foot-rest 28 in different positions toward and away from the edge of the seat 8, the foot-rest being adapted at its central portion to receive a bolt 29 which may pass through any one of the holes 27 to lock the foot-rest in the desired position. The front brace extends thence upwardly and rearwardly toward the tongue to which its rear end 30 is secured conveniently by a screw.

The rear brace consists of a flat strip of metal quite like that of the front brace, and is formed in the shape of a V, the upper branch 31 having its end secured to the edge of the seat 8 opposite that where the tongue is secured and its lower branch 32 being secured at its end to the lower end of the tongue 21 near the axle 1. The lower branch 32 of the rear brace is provided with a series of holes for adjusting a foot brace 33 in a manner quite similar to that shown in Fig. 3, in connection with the front brace. It is intended that the curved end 34 of the rear brace where the two branches 31, 32, are united, shall be sufficiently projected away from the body of the vehicle and toward the ground, so that the sulky will be prevented from tilting into a position to endanger the security of the occupant when the tongue is thrown upwardly.

The seat back is denoted by 35 and may consist of a thin board of rectangular form. It is secured to the seat 8 by means of swinging brackets which will permit it to be swung from the full line position shown in Fig. 1, to the dotted line position shown in Fig. 1. For convenience and economy in manufacture I prefer to form the connection between the back 35 and seat 8 of the sulky in eight parts, exact duplicates of one another, four of these parts to be employed at each end of the sulky. Each of these parts consists of a short flat strip of metal denoted by 36, having holes through its opposite ends. Two of these parts 36 are made fast to one end of the seat 8 near its opposite edges, the opposite ends of the parts being directed toward one another into position to overlap. In a similar manner two other of the parts are made fast to one end of the back 35 with their opposite ends arranged to overlap, the overlapping ends of the parts which lead from an end of the back having their openings made to register with the overlapping ends of a pair of parts which lead from the end of the seat so that a single pivotal bolt 37 will fasten the ends of the four parts together while screws 38 may be employed to fasten the opposite ends of the said parts to the end of the back and seat respectively. Thus the back will be securely held in place and at the same time may be, when it is desired to do so, swung from the position shown in full lines in Fig. 1 with the child seated therein, in position to be pushed by the attendant, into the position shown in dotted lines Fig. 1, where the child may be seated therein in position to be drawn by the attendant. The opposite ends of the seat support secured as hereinabove described to the axle in proximity to the inner ends of the spindle portions of the axle serve as abutments for the inner ends of the hubs of the wheels and the wheels themselves may be locked in position on the spindles 2 and 3 by means of thin ring washers or locking pieces denoted by 39, see Fig. 6, the opposite walls of which may be swaged into indents 40, 41, see Fig. 5, in the opposite walls of the spindles near their outer ends, thereby locking the pieces 39 to the spindles in a manner quite similar to that in which the opposite ends of the seat support are locked to the axle.

The structure hereinabove described is such that the weight of the occupant of the sulky is transferred to the axle 1, as closely as may be to the points where the axle is supported by the wheels, thereby advantageously economizing metal in the construction of the axle for supporting a given weight and the attachment of the seat snugly to the supporting strip throughout a considerable portion of its length distributes the weight along the strip to the point where its opposite ends turn toward the axle so that the strip is not liable to buckle or twist, the attachment of the tongue to the axle and the seat co-acting with the opposite ends of the seat support to form in effect a rigidly connected triangular structure of great strength and durability.

The sulky may be conveniently shipped in a knock-down state, the front and rear braces, the seat support, the links for connecting the back with the seat and the lock washers and connecting bolts and clips with the tongue, seat, back and wheels conveniently packed where there is no liability of breakage and the assembling of the parts is so simple that it may be accomplished by any unskilled person with a picture showing the parts assembled as a guide.

What I claim is:

1. In a child's sulky, the combination with the axle, of a seat support consisting of a strip of metal having its opposite ends provided with openings to receive the spindle ends of the axle, the said axle being pro-

vided with indents into which the walls of said openings may be pressed to lock the support to the axle, the middle portion of said seat support extending parallel with the axle, a seat made fast to said extended middle portion and a tongue connecting the seat and axle.

2. In a child's sulky, the combination with the axle and a seat support in the longitudinal plane of the axle, of a seat secured to the middle portion of the support, a tongue connecting the axle and seat, a forwardly extending and downwardly projecting brace for preventing the sulky from tipping too far forward, a rearwardly and downwardly projecting brace for preventing the sulky from tipping too far rearward and foot rests adjustably connected to said braces.

3. In a child's sulky provided with means for preventing it from tilting too far forward when the tongue is released, a rearwardly and downwardly projecting brace for preventing the sulky from tilting too far rearwardly when the tongue is released, the said rearwardly projecting brace being provided with a series of holes, a foot rest and fastening means arranged to coact with the foot rest and holes in the brace to lock the foot rest in different positions.

4. In a child's sulky in which the seat is supported on an axle and provided with a reversible back, forwardly and rearwardly projecting braces for preventing the seat from tilting too far forwardly and backwardly when released by the operator, a foot-rest and means for adjusting it on a brace to suit different lengths of legs whichever way the child sitting on the seat faces.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 25th day of October, 1909.

JOEL N. WHEELER.

Witnesses:
WM. GAYLORD,
MABEL A. ANDERSON.