K. A. JOHNSON.

AMUSEMENT DEVICE.

APPLICATION FILED FEB. 9, 1920.

1,354,909. **Patented Oct. 5, 1920.**

Fig. 1

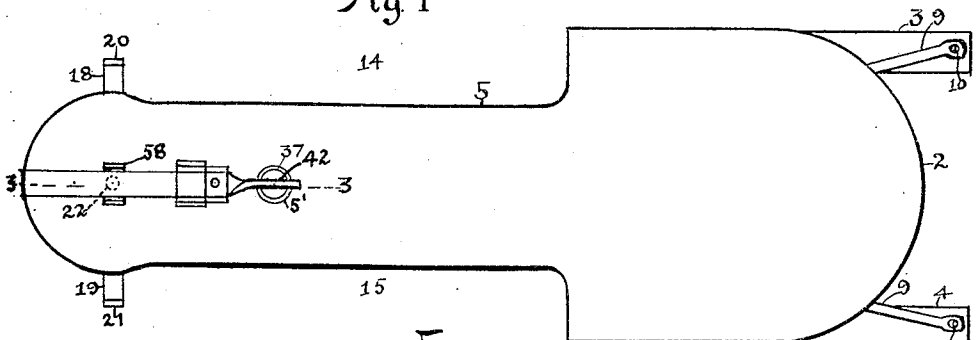


Fig. 2

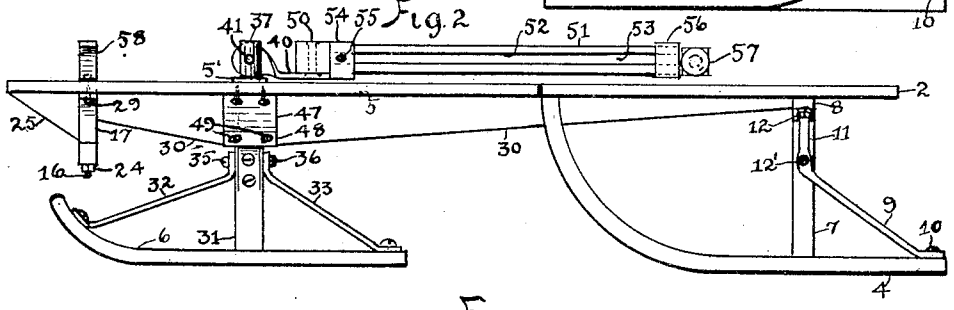


Fig. 3

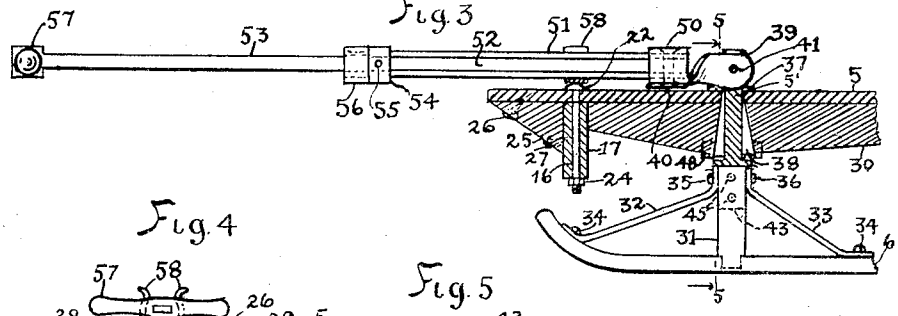


Fig. 4

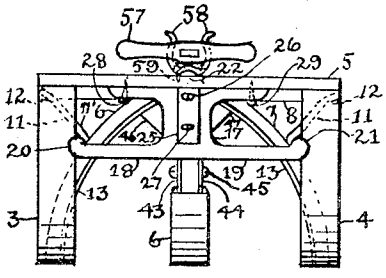
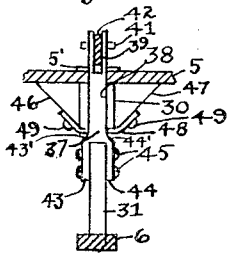


Fig. 5



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KARL ALGOT JOHNSON, OF PULLMAN, ILLINOIS.

AMUSEMENT DEVICE.

1,354,909. Specification of Letters Patent. Patented Oct. 5, 1920.

Application filed February 9, 1920. Serial No. 357,290.

To all whom it may concern:

Be it known that I, KARL A. JOHNSON, a citizen of the United States, residing at Pullman, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Amusemenet Devices, of which the following is a specification.

My invention relates to amusement devices and has particular reference to coasting sleds. The object of the invention is to provide a steerable sled of neat and pleasing design and of simple and strong construction that may be manufactured at a reasonable cost. Another object of the invention is to provide convenient seating arrangements and a combination steering and pulling gear that may be quickly set against movement so that the sled may be used as the ordinary sled with fixed runners.

With the above named objects in view my invention consists in the novel construction, combination and arrangement of parts, all as hereinafter described in detail, illustrated in the accompanying drawing and more particularly pointed out in the appended claims.

In the drawing—

Figure 1 is a top plan view of a sled embodying my invention with the steering handle projected forward and held inoperative, said handle being partly broken away.

Fig. 2 is a side elevation with the handle thrown back in position to be used as a steering handle by the passenger.

Fig. 3 is a section taken substantially on the line 3—3 of Fig. 1.

Fig. 4 is a front end elevation of the sled.

Fig. 5 is a section taken substantially on the line 5—5 of Fig. 3.

In the several views the top of the sled consists of a board with a comparatively wide seat portion 2 mounted on rear runners 3 and 4 and a forwardly projecting narrowed portion 5 mounted on a steerable runner 6. The runners 3 and 4 are secured to the seat 2 through a wooden arch composed of a pair of braces 6′ and 7 the upper ends of which are secured in any of the usual and approved ways to a cross-piece 8 to which the seat 2 is secured by screws or otherwise. The braces 6 and 7 are braced longitudinally of the runners by means of a pair of bent steel or iron braces, each of which has a leg 9 that is secured by a bolt or screw 10 to its runner, and a leg 11 secured at 12 to an end of the cross-piece 8. At the bend between the legs 9 and 11 the latter are secured at 12′ to the respective arch braces 6 and 7. These braces are shod and bound together by a continuous metal strap 13 secured in the usual way, as by screws or rivets engaged with said arch and the cross piece 8.

The narrowed portion 5 provides cut aways or leg spaces 14 and 15 when the sled is used by a rider in a sitting position and steered by means of the steering runner 6. When the sled is mounted in this position a forward support for the feet is provided by a bracket 17 secured by a vertical bolt 16 and provided with laterally projecting arms 18 and 19 with slightly upturned ends 20 and 21 which prevent the feet from slipping off of said arms or supports for the feet. The bolt 16 passes through the top portion 5 and the bracket 17 as shown in Fig. 3, a head 22 engaging the top portion 5 and a nut 24 on said bolt engaging the bottom of the bracket. The latter is braced forwardly by means of a triangular piece 25 that is secured to said top portion 5 and to the bracket in any suitable or preferred manner, as, for instance, (Fig. 4) by a screw 26 which enters the top portion 5 and a screw 27 engaged with the foot rest piece 17. The latter is in Figs. 2 and 4 shown further secured to the top portion 5 by means of screws 28 and 29 and against its rear side abuts the forward end of a rib board 30 which is arranged at right angles to the top 2 and 5 and has its rear end bearing against the cross-piece 8 as shown in Fig. 2. This rib board may be glued or screwed to the top 2, 5, or secured thereto in any other suitable manner.

The steering runner 6 is mounted for axial movement and for movement angularly in the plane of the rib board 30 to adapt it for steering and to enable it to adjust itself to inequalities of road surface, without the use of the usual more or less complicated rotary bearings and articulate joints. To this end the runner 6 is secured by a mortise and tenon joint, or otherwise in a rigid manner, to a post 31 from the front and rear sides of which to the runner 6 extend metal braces 32 and 33, one end of each of which is secured by a single bolt or by a pair of screws 35 and 36 as in Figs. 2 and 3. The post 31 which is preferably made of wood or light material is extended upwardly in the form of a bolt 37 which passes through

a slot 38 in the rib board 30 and top portion 5. The top of the slot terminates in a bore in a friction plate 5′ which substantially fits the bolt 37 and permits only rotary movement of said bolt. Downwardly, as shown in Figs. 3 and 5, the opening 38 for said bolt is gradually widened in the plane of the rib board 30 to permit the bolt to swing in the plane of the long axis of the sled and therewith the post 31 and the runner 6. Transversely, as shown in Fig. 5, the opening 38 is confined to the thickness of the bolt 37. The runner support composed of members 31 and 37 is supported against displacement in a downward direction by an on edge standing metal strap portion 39, or leaf, of a strip of metal having an intermediate twist to provide a horizontal fastening portion 40 to which the steering handle is secured. The leaf 39 is pivoted at 41 in a slot 42 formed in the top of the bolt 37 as shown most plainly in Fig. 5. The lower end of this bolt is split into two strap portions 43 and 44 which are engaged with opposite sides of the post 31 and secured thereto by means of screws 45, or by similarly placed bolts passing entirely through the straps 43 and 44 and the post 31. As shown in Fig. 5 these fastening strap portions 43 and 44 of the bolt 37 are bent outwardly to provide shoulders 43′ and 44′ upon which the superstructure rests. Between said shoulders and the top portion 5 are interposed a pair of triangular brace and bearing blocks 46 and 47 which are secured to the opposite sides of the rib board 30 and the top portion 5 and said blocks are coupled together at their lower apexes by means of a metal bearing plate 48 that is secured by screws 49 and through which the opening 38 is continued. The runner 6 and its vertical support members 31 and 37 thus form a staunch and rigid single member without breakable joints or pivot supports, the entire strain of the load upon the sled being imposed upon the shoulders 43′ and 44′ and the sides of the bolt opening beginning in a simple bore in the plate 5′ and ending in the elongation of said bore into a slot in the bearing plate 48. This opening 38, extending through the entire width of the rib board and this board being thickened to the extent of the side blocks 46 and 47, this part of the sled structure, which ordinarily would be the weakest, is made as strong and safe against accidental breakage as the strongest part of the structure, there being no strain on the pivot 41 other than that required to hold the leaf 39 in place and the hereinafter referred to pulling strain when the sled is drawn by the steering handle when the element of danger from accident is not present. To the portion 40 of the twisted coupling strap 39 and 40 is secured by means of a bolt or rivet 50 a handle section 51 in which is a slot 52 in which is slidably mounted an extension handle, or telescoping section of the handle, 53. To the inner end of the latter is secured a collar 54 which is slidably engaged by the handle section 51. The numeral 55 indicates a rivet as a means to fixedly secure said collar to the handle section 53. On the outer end of the handle section 51 is secured a similar collar 56 which forms a stop on the handle section 51 limiting the extension or outward movement of the handle section 53 and also forming a slide-bearing for said slidable section 53. On the free end of the latter is a handle bar 57 which is grasped by the rider for the purpose of steering the sled when in the position shown in Fig. 2, or may be used as handhold for two persons pulling the sled when the handle is extended as in Fig. 3 and released from the means provided to hold the runner 6 against steering movement. The latter means consists of a spring clip 58 between the leaves of which the handle portion 51 is held as in Figs. 1, 3 and 4 when the handle portion 53 is pushed into the handle portion 51 to bring the handle bar 57 to the collar 56. When the rider wishes to ride sidewise or steer with the feet in the more common way the telescope handle will be thus held, and to pull the sled forward the extended handle is simply lifted out of the clip 51 and operates like an ordinary wagon tongue.

I claim as my invention—

1. The combination with a top, having a seat portion, of a pair of runners on which said seat portion is mounted, said top having a comparatively narrow portion projecting forwardly from the intermediate part of said top, a runner on which said top is mounted, a post rising from said runner, a bearing in which said post is revolubly and angularly movable, and a steering bar pivoted to said part above said seat portion.

2. In a sled, the combination with a top having a seat portion and cut away side portions in front of said seat portion, a rib-board secured to the under-side of said top and at right angles thereto, lateral bracing means for said rib-board, said rib-board having a triangular opening therethrough in the forward part, a runner, a post rising from said runner, said post supporting said rib board at one end, a bolt portion rising from said post and engaging said opening, a steering handle pivoted to said bolt and holding said bolt and post against longitudinal movement downwardly, and a pair of runners upon which said seat portion is mounted.

3. In a sled, a top comprising a seat portion and a cut-away portion providing spaces in front of said seat for the legs of the rider and a narrow top portion projecting from said seat, a pair of runners on which said seat portion is mounted, a for-

ward runner upon which said narrow portion is mounted, said narrow portion having a bolt bore therethrough, a bearing block on the under-side of said narrow portion having a triangular opening therethrough and a longitudinally extending rib portion, a steerable forward runner, a post on said runner upon which said bearing block and rib portion is supported, a bolt on said post which engages said triangular portion and bolt bore and extends above said narrow top portion, a steering handle pivoted to said post and serving to hold said bolt against downward longitudinal movement, an extension handle slidably mounted on said steering handle, and means for holding same against movement.

4. In a sled, the combination with a top which includes a comparatively wide seat portion and a narrow forwardly projecting portion providing spaces at its side for the legs of the rider, a pair of runners on which said seat portion is mounted, a foot rest on said narrow portion, a runner, a post having shoulders thereon secured to said runner, a bearing block and rib board supported on said shoulders and secured to the under-side of said top, said bearing block and rib-board having an opening therethrough which is gradually enlarged downwardly and longitudinally of said rib-board and which terminates in a simple bore in said forwardly projecting portion, a bolt rising from said post between said shoulders and engaging said opening and bore, and steering means secured to said post and serving to hold said bolt in its place, said steering means including a steering handle in two sections which slidably engage each other.

In testimony whereof I have hereunto signed my name.

KARL ALGOT JOHNSON.