March 1, 1938. L. F. McCLEARY 2,109,826

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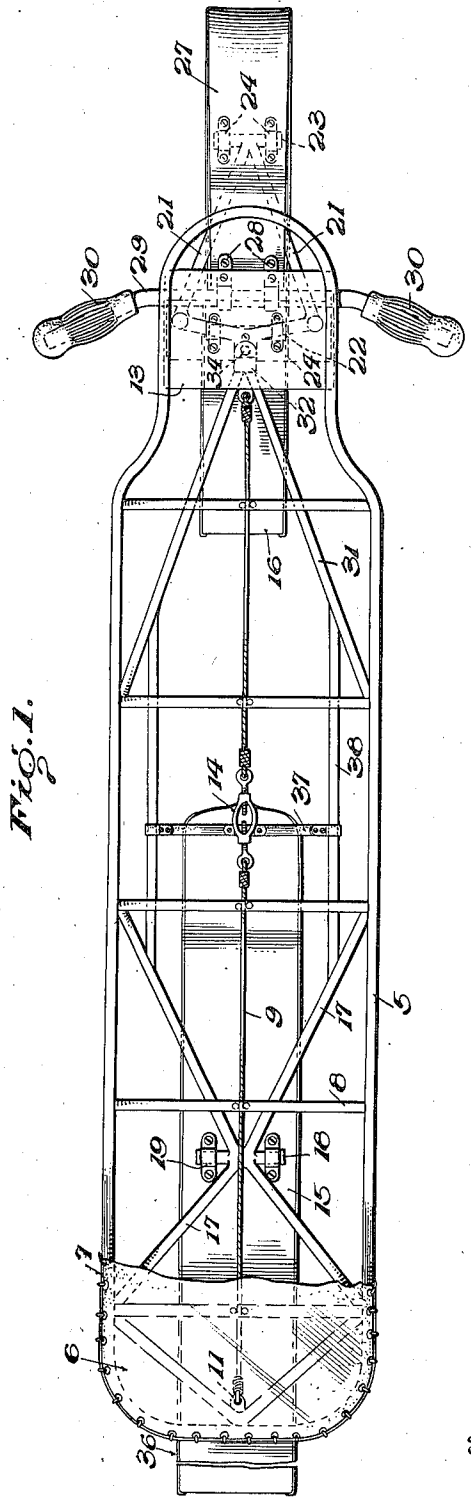


Fig. 1.

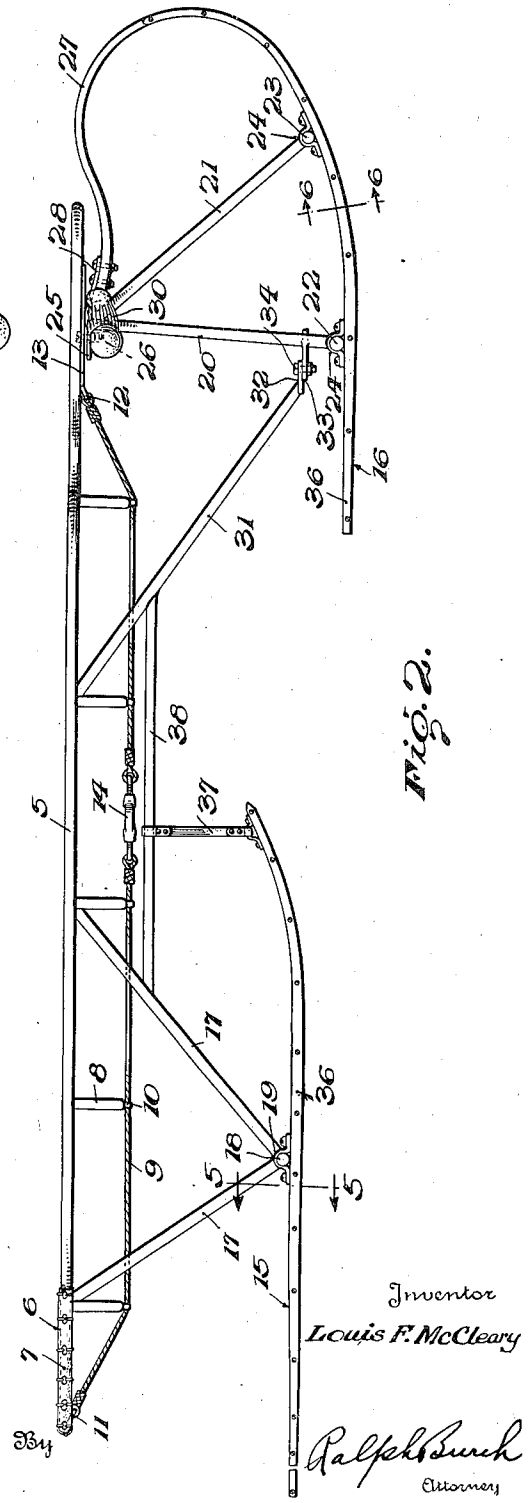


Fig. 2.

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Fig. 3.

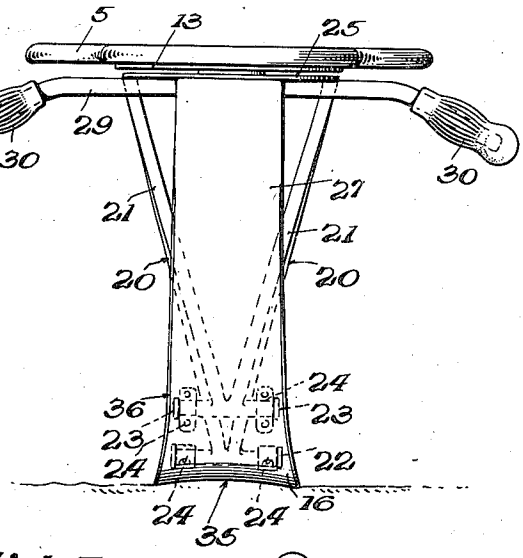


Fig. 4.

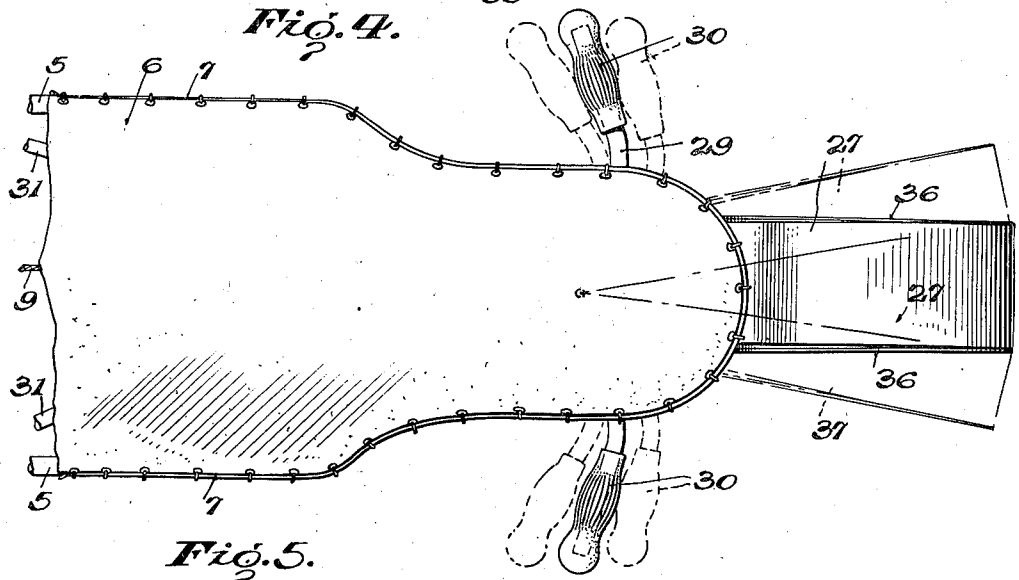


Fig. 5.

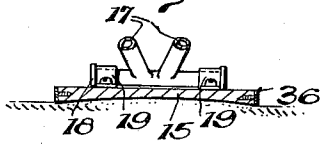
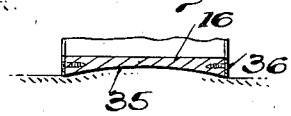


Fig. 6.



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Patented Mar. 1, 1938 2,109,826

UNITED STATES PATENT OFFICE

2,109,826

SLED

Louis Franklin McCleary, Twin Falls, Idaho

Application February 19, 1937, Serial No. 126,701

10 Claims. (Cl. 280—16)

This invention relates to improvements in sleds and particularly to the type adapted for coasting down hills covered with ice or snow.

It is an object of the invention to provide a sled having a single pair of runners arranged in tandem relation, whereby the rider is required to exercise a certain degree of skill to properly operate the sled, adding to the excitement and thrill of coasting.

A further object of the invention is to provide a sled of the above-mentioned character which is simple and durable in construction, fast and thrilling in use and inexpensive to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is a top plan view of the sled with only a portion of the cover applied thereto,

Fig. 2 is a side elevation of the same,

Fig. 3 is a front view of the same,

Fig. 4 is an enlarged fragmentary top plan view of the front end of the sled,

Fig. 5 is a cross section taken on line 5—5 of Fig. 2, and,

Fig. 6 is a cross section taken on line 6—6 of Fig. 2.

In the drawings, wherein for the purpose of illustration I have shown a preferred embodiment of my invention, the body of the sled is constructed of light structural metal tubing and consists of a rectangular frame 5 adapted to be covered by a sheet of canvas 6 secured to the frame by lacing 7, to provide a seat for the rider. The frame 5 is braced at spaced intervals, throughout its length, by transverse arcuate bars 8, having their ends welded to the side members of the frame and their intermediate portions disposed below the horizontal plane of the frame. A supporting cable 9 extends longitudinally of the frame beneath the brace bars 8 being held in the center of the brace bars by spaced guide pins 10 depending from the bars. One end of the cable is attached to the rear end of the frame by a bracket 11 and the opposite end is connected to the bracket 12 formed integral with the rear edge of the plate 13 extending transversely of the forward end of the frame 5 and fixedly secured thereto. A turnbuckle 14 is interposed in the cable, intermediate its length, for drawing the cable taut. The body is supported by two runners 15 and 16 arranged in tandem relation, each of the runners being constructed of relative broad flat strips of hard wood, such as maple or hickory. The runners are disposed centrally and longitudinally of the frame 5, the rear runner 15 being connected to the frame by a plurality of diverging tubular struts 17 having their lower ends converging together and connected to the center of a bearing rod 18 extending transversely of the runner to which it is pivotally connected, midway its length, by bearing clamps 19 permitting longitudinal rocking movement of the rear runner. The upper ends of the struts 17 are connected to the side members of the frame 5 by welding. The front runner 16 is connected to the frame by a double pair of struts 20 and 21, each of which includes diverging arms joined at their lower ends to bearing rods 22 and 23 extending transversely of the runner and secured thereto at spaced intervals by clamps 24. The arms of the strut 20 extend vertically from the runner while the arms of the strut 21 are inclined, so that the upper ends of the arms of both the struts meet and are jointly connected to a rotatable plate 25 pivotally connected to the underside of the plate 13 by a pivot bolt 26. The forward end 27 of the front runner 16 is curved upwardly and reversely, its free end being connected to the front edge of the rotatable plate 25 by a pair of clamps 28 which also connect the handle bar 29 to the plate 25. The handle bar 29 extends transversely of the frame 5 with both ends projecting beyond the sides. The ends of the handle bar are bent at a slight angle and equipped with hand grips 30 by means of which the rider turns the handle bar to steer the front runner. The strut 20 is braced near its lower end by brace members 31 provided at their lower end with a bearing plate 32 pivotally connected to a bearing plate 33 formed integral with the strut by a pivot bolt 34 and the upper ends of the members are connected to the side members of the frame 5. As shown in Figs. 5 and 6, the bottom of the runners are formed with a transversely curved groove 35 and secured to the side edges of the runners are wear resisting metal strips 36. The forward end of the rear runner is slightly turned upwardly and is connected by flexible straps 37 to horizontal brace bars 38 extending between the two forward struts of the rear runner and the brace members 31, to limit the rocking movement of the rear runner.

In operation, the rider lies down on the seat of the sled and grasps the hand grips 30 of the handle bar 29 with his hands. Owing to the tandem arrangement of the runners 15 and 16,

the rider must exercise a certain degree of skill in properly balancing the sled by shifting the weight of his body in order to prevent tipping or upsetting of the sled. This adds to the thrill and enjoyment of coasting and in a short time the rider becomes very skilled in the operation of the sled and is able to travel at a much faster speed than with the conventional type of sled. The handle bar **29** is directly connected with the front runner **16** which is pivotally mounted to permit the runner to be turned for steering the sled in the desired direction. The frame and supports of the runners being constructed of structural tubing provides a very durable structure which is light in weight and will withstand the shocks and jars to which it is subjected. While the sled is ordinarily used for coasting down hills it may also be towed by an automobile or other power driven vehicle.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that certain changes in the shape, size and arrangement of the parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. A sled comprising an elongated body having a series of spaced transverse brace members, a supporting cable extending longitudinally of the body beneath the brace members and connected at each end to said body, front and rear runners disposed centrally and longitudinally of said body in tandem relation, fixed supporting struts connecting the intermediate portion of said rear runner to said body, a pair of supporting struts connected at spaced intervals to said front runner and pivotally connected to said body, brace rods extending from said body and pivotally connected to one of the supporting struts of said front runner and means for turning said front runner.

2. A sled comprising a body consisting of a rectangular tubular frame, arcuate brace members extending transversely of the frame at spaced intervals, a supporting cable extending longitudinally of said frame beneath said brace members and connected at each end to said frame, front and rear runners disposed centrally and longitudinally of said body in tandem relation, supporting struts rockably connecting said rear runner to said frame, a revolvable plate connected beneath the forward end of said body, supporting struts extending downwardly from said plate and connected at their lower ends to said front runner, a handle bar extending transversely beneath said body and connected to said revolvable plate and inclined brace rods extending from said body and pivotally connected to the supporting struts of said front runner near the bottom thereof.

3. A sled comprising an elongated body, front and rear runners arranged in tandem relation, a revolvable supporting structure connecting one of said runners to said body including upright struts, diverging brace bars fixedly connected at one end to said body and means pivotally connecting the opposite ends of said brace bars to the upright struts of said revolvable supporting structure.

4. A sled comprising an elongated body, a pair of runners arranged in tandem relation, supporting struts connecting said runners to said body, said struts having a bearing rod at their point of connection with said runners formed integral with the struts and extending transversely and in contacting relation with the upper surface of said runners and bearing clamps securing the bearing rod to said runners.

5. A sled comprising an elongated body, front and rear runners arranged in tandem relation, supporting struts rockably connecting said rear runner to said body, a revolvable plate connected beneath the forward end of said body, supporting struts extending from said plate and connected to said front runner, the forward end of said front runner being reversely curved and connected to said plate and means for turning said plate.

6. A sled comprising an elongated body having a series of transverse brace members, a supporting cable extending longitudinally of said body beneath the brace members and connected at each end to said body, and front and rear runners connected to said body.

7. A sled comprising an elongated body having a series of transverse brace members, an adjustable supporting cable extending longitudinally of said body beneath said brace members and connected at each end to said body and front and rear runners connected to said body.

8. A sled comprising a body consisting of a rectangular open frame, a flexible cover for said frame, brace members extending transversely of said frame beneath said cover, a supporting cable extending longitudinally of said body beneath the brace members and connected at each end to said body and front and rear runners connected to said body.

9. A sled comprising a body consisting of a rectangular open frame, a flexible cover for said frame, arcuate brace members extending transversely of said frame in spaced relation, a supporting cable extending longitudinally of said body beneath the brace members and connected at each end to said body and front and rear runners connected to said body.

10. A sled comprising an elongated body, front and rear runners arranged in tandem relation, a revolvable supporting structure connecting one of said runners to said body, a brace bar extending between said body and revolvable supporting structure having one end fixedly connected to said body and pivot means connecting the opposite end of said bar to said revolvable supporting structure near the bottom thereof.

LOUIS FRANKLIN McCLEARY.