

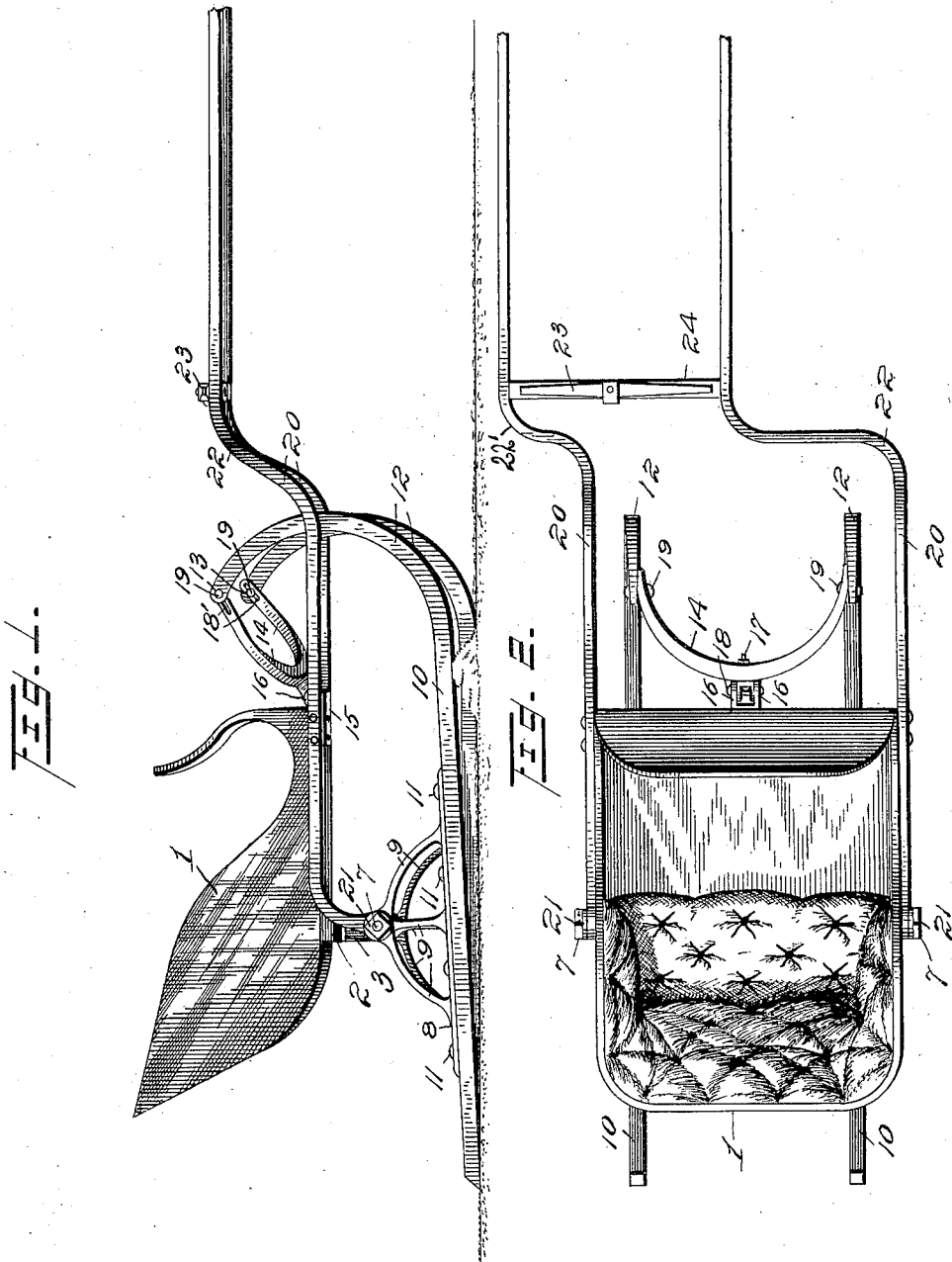
F. RUEBENHAGEN.  
SLEIGH.

APPLICATION FILED MAY 29, 1911.

1,032,299.

Patented July 9, 1912.

2 SHEETS-SHEET 1.



WITNESSES

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FIG. 3.

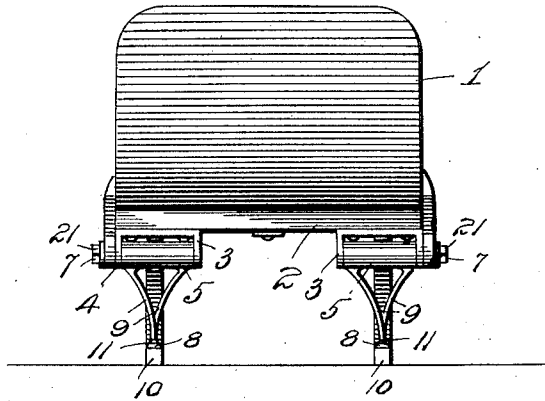


FIG. 4.

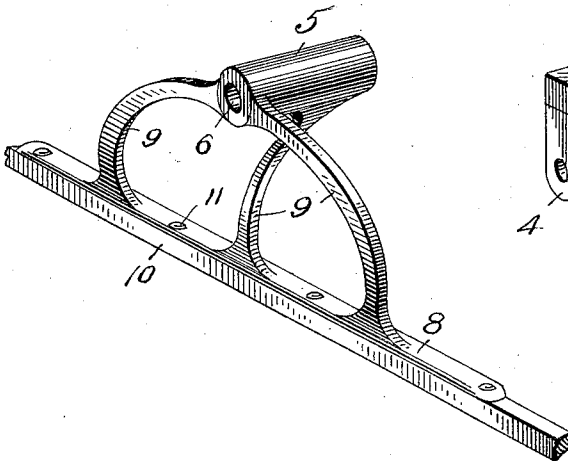


FIG. 5.

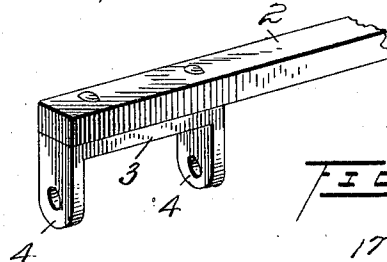


FIG. 6.

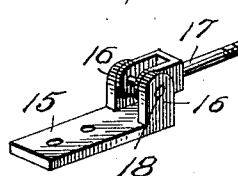
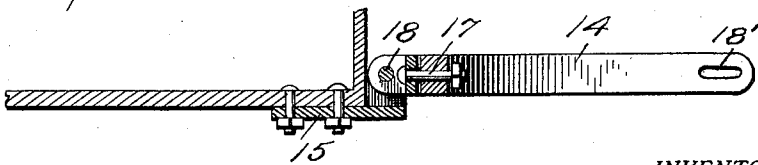


FIG. 7.



WITNESSES

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# UNITED STATES PATENT OFFICE.

FREDERICK RUEBENHAGEN, OF GAYLORD, MINNESOTA.

## SLEIGH.

1,032,299.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed May 29, 1911. Serial No. 630,038.

*To all whom it may concern:*

Be it known that I, FREDERICK RUEBENHAGEN, a citizen of the United States, residing at Gaylord, in the county of Sibley and State of Minnesota, have invented certain new and useful Improvements in Sleighs, of which the following is a specification.

This invention has relation to new and useful improvements in sleighs and especially sleigh runners and the main object thereof is to provide a runner that will pass over any rise or obstruction upon the ground without materially disturbing the equilibrium of the body of the sleigh.

Another object of my invention is to provide shafts that are so arranged as to protect the runners of the sleigh from any obstacle that might come in contact therewith.

A further object of my invention is to provide means at the forward end of the sleigh and attached to the body thereof to prevent sidewise movement of said runners when turning a curve and to brace the runners against such movement to relieve the strain on the axle or spindle upon which said runners are mounted.

With the foregoing and other objects in view my invention consists of the novel construction, combination and arrangement of parts as are described in this specification, illustrated in the accompanying drawings forming a part thereof and particularly pointed out in the appended claims.

Reference being had to the drawings: Figure 1 is a side elevational view of a sleigh embodying my improvements, one of the runners being illustrated as about to pass over an obstruction. It will be noted that the box or body of the sleigh is nearly level. Fig. 2 is a top plan view of a sleigh embodying my improvements. Fig. 3 is a rear end elevational view of a sleigh to which my improved runners have been attached. Fig. 4 is a perspective view of one of the runners, the ends thereof being broken away. Fig. 5 is a perspective view of one end of the wooden beam which extends under the body of the sleigh to the ends of which are secured bearing boxes as means whereby the runners of the sleigh are pivotally held in position. Fig. 6 is a detail of the manner in which the semi-circular member 14 is held pivotally to the body of the sleigh and Fig. 7 is a longitudinal, vertical, fragmentary sectional view through

the semi-circular member and the means for securing it pivotally and rotatably to the forward end of said sleigh.

Referring more particularly to the drawings, in which like numerals designate like parts throughout, my invention is described as follows: The body 1 has secured to the under side thereof a transverse beam 2 to each end of which is secured a bearing box 3. Each of said boxes 3 is provided with downwardly projecting centrally perforated lugs 4 spaced apart so that the hub 5 may be readily interposed between said lugs, the longitudinal opening 6 therein registering with perforations in the lugs 4. A bolt or spindle 7 is passed through the registering perforations thereby securing the inner hub in pivotal position to the bearing boxes.

The hubs 5 are secured to a metallic strip 8 by means of a plurality of braces 9 formed integral with each. Each of the strips 8 are secured to their respective runners 10 by means of screws 11 or any other well known means adapted for the purpose. The forward end of each runner is curved upwardly as at 12, being provided in their upper ends with perforations 13. A semi-circular member 14 is pivotally held to the forward end of the body 1 by means of a plate 15 provided with a pair of upwardly extending perforated lugs 16 at its forward end. Said plate is secured to the under face of the body of the sleigh by screws or any other common means adapted for the purpose. Pivotaly held between the lugs 16 is the rear bifurcated end of the rod 17 by means of a pin or bolt 18 extending through the perforations in the prongs of the bifurcated portions and said perforations in the lugs 16. It will be seen that the rod 17 is adapted for movement in a vertical plane. The rod 17 extends through the semi-circular member 14 centrally allowing rotary movement of said member. (See Fig. 7.) In each end of the semi-circular member 14 is a slot 18 which registers with the perforation in the end of its respective runner, a nut and bolt connection 19 being passed through said registering perforations and corresponding slots in such manner as to allow a slight movement of the ends of the runners in relation to the respective ends of the semi-circular member 14. The function of the semi-circular member 14 is to support the forward ends of the runners and to prevent sidewise movement of said run-

ners when they come in contact with an obstruction upon the ground or when the vehicle is turning a curve, thereby relieving the strain upon the hub 5, and spindle 7 of each runner. The semi-circular member 14 does not prevent the pivotal movement of the runners upon their spindles as the said member is, as above described, pivotally and rotatably held to the forward end of the body of the sleigh. In Fig. 1 will be seen the position of the semi-circular member at the time that one of the runners is passing over an obstruction.

The rear end of each shaft 20 is provided with a perforation therein which receives the end of the spindle 7 upon its respective side of the sleigh, when the nuts 21 are placed upon their respective spindles securing the shafts in position as well as the hubs of the runners. One of the shafts is curved inward at 22 and the other is curved outward at 22'. They are together provided with a swingle tree 23, which swingle tree is secured to a transverse beam 24. Thus it will be seen that the shafts 20 are so arranged that the horse will travel in front of the left hand runner of the sleigh. By such an arrangement, it will be seen, that the horse will travel in the trodden track of the road, instead of in the center of the road, as is usually the case. The shafts, it will be seen, protect the runners from interference with any object that they might come in contact with which is elevated from the ground, such as, for instance, a fence post or another vehicle, etc. It will also be noted that the strain when making a turn is almost entirely transmitted to the sleigh by the shafts through the body thereof, thereby tending to relieve the tension upon the runners as much as possible.

Although I have specifically described the novel features of construction, combination and arrangement of the parts of my inven-

tion, yet I do not confine myself to such specific construction, combination, and arrangement but reserve and may exercise the right to make such changes therein as do not depart from the spirit of the invention or the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:

1. In a device of the kind described the combination of a sleigh body with a pair of runners, means whereby the runners are pivotally held to said body, said means comprising a hub provided upon each runner and bearing boxes provided under the body of the sleigh, each bearing box for the reception of a respective hub, means to secure each hub rotatably within its bearing box, and means secured to the forward end of the sleigh body to prevent the runners from swerving in either direction, substantially as shown.

2. In a device of the class described the combination of a sleigh body with a pair of runners, means whereby the runners are pivotally held to said body, said means comprising a hub provided upon each runner and bearing boxes provided under the body of the sleigh, each bearing box for the reception of a respective hub, thereby securing the hubs rotatably in position, and means at the forward end of the sleigh body to prevent sidewise movement of the runners, said means comprising a semi-circular member pivotally and rotatably held to the forward end of the sleigh body, each of the ends of the member being connected to the forward end of a respective runner.

In testimony whereof I affix my signature in presence of two witnesses.

FRED. RUEBENHAGEN.

Witnesses:

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GEO. N. MCKENZIE.