J. T. CLARKSON.

Sleigh.

No. 220,056. Patented Sept. 30, 1879.

Fig. 1.

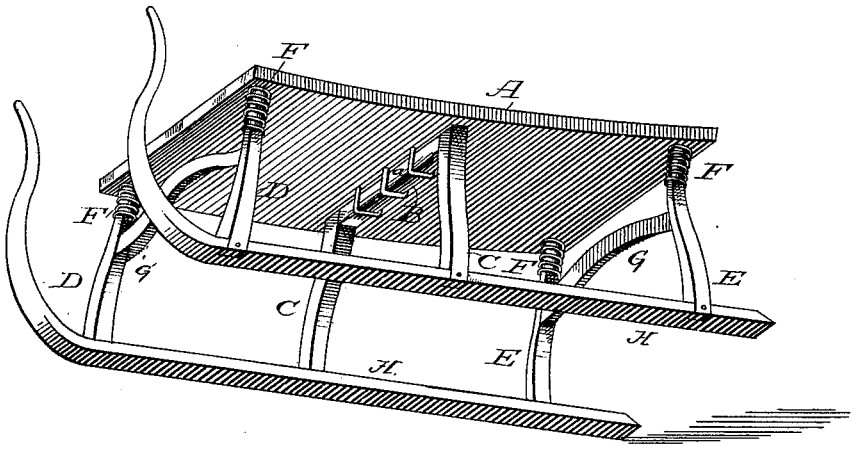
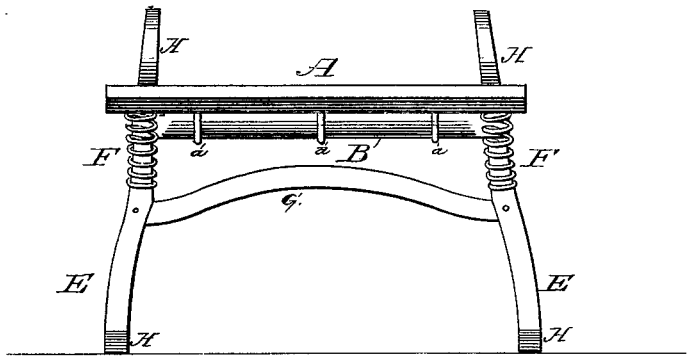


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH T. CLARKSON, OF AMESBURY, MASSACHUSETTS.

IMPROVEMENT IN SLEIGHS.

Specification forming part of Letters Patent No. **220,056**, dated September 30, 1879; application filed February 8, 1879.

To all whom it may concern:

Be it known that I, JOSEPH T. CLARKSON, of Amesbury, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Sleighs and Sleds, of which the following is a specification.

This invention relates to that class of vehicles for winter use which are designed to run upon aqueous but congealed surfaces or road-beds, and which are constructed with but a single pair of runners, and in which the body, when rigidly secured in relative position to the bearing or road-contact line of such runners, must conform to all the pitching movements thereof consequent upon the undulating conditions of such road-bed, such undulations resulting, in the first instance, from the drifted and unequal distribution of the snow-fall, and being then greatly increased by the pitching motion of such vehicles when passing over such uneven surface.

The object of my invention is to prevent the shocks and concussions attendant upon the violent pitching and diving of a vehicle having but one pair of runners when passing from the crest of a snow-hummock into a ravine existing between two such crests; and the invention consists in the peculiar construction of the sleigh bottom or underwork; in the manner of connecting the body with the frame; in the combination and arrangement of springs with such frame and body, to hold the body in proper relative position, and to relieve the shocks and concussions to which it may be subjected from the causes hereinbefore stated.

Figure 1 is a perspective view of a sleigh having my improvements applied, and showing the floor of the body pivoted to the middle bar, and with the springs in position—this view being taken from a stand-point below and in front of the sleigh. Fig. 2 is a rear view of Fig. 1.

In these views, H H represent the runners; E E, the rear standards; C C, the middle standards, and D D the front standards, all which are secured to runners H, in the usual manner. The middle standards, at their upper ends, are united with a bar, B, in the usual manner; but the front and rear standards are, respectively, united by a bar, G, at a point some distance below the tops of such standards, and below the level of bar B, as is plainly shown in the drawings.

The floor A of the body rests upon bar B, and is secured thereto by the staples *a*, which embrace the bar and are secured to the floor, which is so pivoted to the bar that its ends have a limited vertical or vibratory movement with such bar as a central pivot.

On each of the end standards E E and D D, and above bars G, is placed a spiral spring, F, the axial passage in which is of such size that the spring plays freely on the rounded standard, but is held in lateral adjustment thereby. The top of these corner standards may, as shown, be sufficiently below the top of bar B as to allow the requisite space between such standards and the floor A; or the latter may be constructed with passages through it, in which the standards may enter and move as the frame and body change their relative positions at the ends thereof.

It will be apparent that with such springs, of the requisite strength, and when the sleigh is either stationary or moving on a level road, the load will not materially change the relative positions of the ends of the body A and the frame; but when used upon uneven roads, such as have been described, as the sleigh pitches into depressions the front springs will yield and effectually cushion the body, thereby obviating the concussion and shock that would otherwise result, and when the sleigh rises and meets the opposite acclivity the rear springs perform the same office, though not to the same extent, as the pitching into is more violent than the rising out of such depressions.

It will also be seen that by arranging a spring at each corner of the vehicle, instead of having but one spring at each end, in the center, the strain upon both the body and frame is greatly decreased, especially when used—as is most usual—with two persons, as the balance is not disturbed, although the weight of such persons is unequal, and the load is borne direct upon the standards instead of upon the centers of the bars.

I claim as my invention—

1. In a sleigh having a tilting or pivoted body, the middle bar, B, arranged above or

higher than the end bars, G G, that the floor A of the body may rest upon such middle bar as a tilting fulcrum, and above or independent of such end bars, substantially as specified.

2. In a sleigh having a pivoted tilting body, and supported by springs at the ends thereof, the standards D D and E E, extending above the bars G G, substantially as specified.

3. In a sleigh having a pivoted tilting body, the combination, with such body, of the standards E E and D D and the spiral springs F, arranged upon such standards, substantially as specified.

4. In a sleigh having a pivoted tilting body, the combination and arrangement of the body A, pivoted to the elevated bar B, the corner standards, D E, extending above the bars G, and with the springs F arranged thereon, all substantially as specified.

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Witnesses:
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