(No Model.)

S. SANDERS.

SLED.

No. 418,072. Patented Dec. 24, 1889.

Fig. 1.

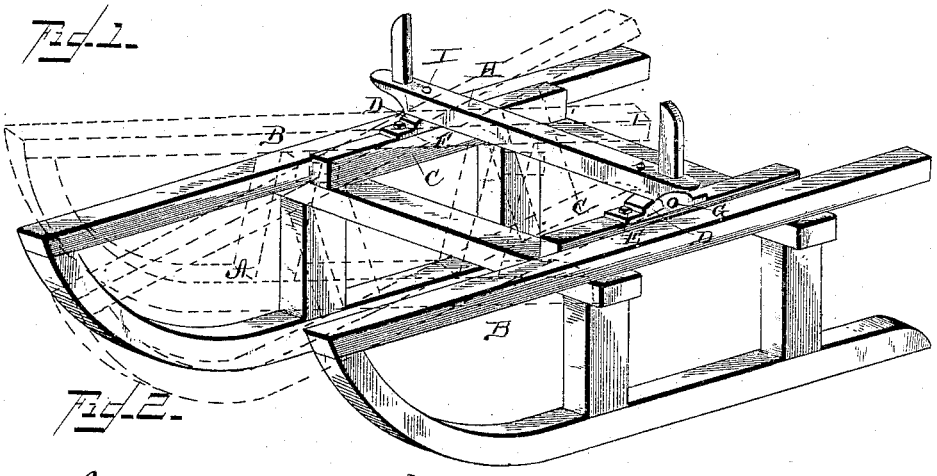


Fig. 2.

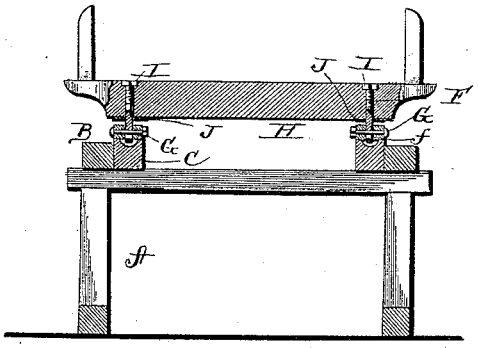


Fig. 3.

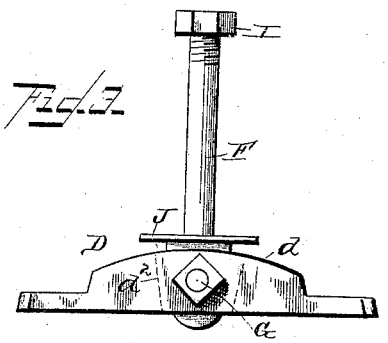


Fig. 4.

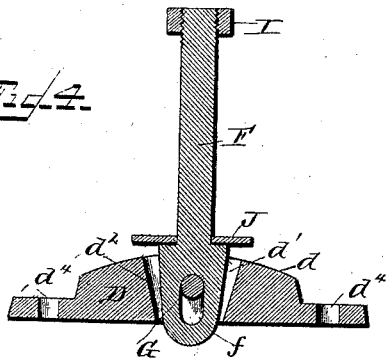


Fig. 5.

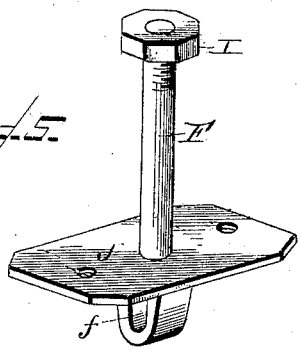
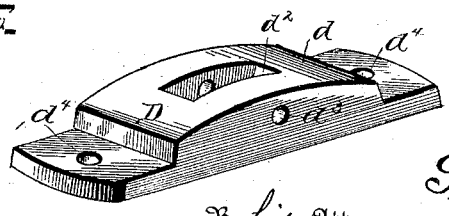


Fig. 6.



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UNITED STATES PATENT OFFICE.

SAMUEL SANDERS, OF MONTEZUMA, IOWA.

SLED.

SPECIFICATION forming part of Letters Patent No. 418,072, dated December 24, 1889.

Application filed August 15, 1889. Serial No. 320,898. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SANDERS, a citizen of the United States, residing at Montezuma, in the county of Poweshiek and State of Iowa, have invented certain new and useful Improvements in Attachments to Sleds and other Vehicles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has relation to attachments to sleds and other vehicles, and it consists in providing a construction whereby the unpleasant jolting incident to travel over rough roads is compensated for and the body of the sled or vehicle always kept upon an even plane, notwithstanding the obstruction it may encounter or the uneven character of the ground traversed; and with this primary object in view it consists in the improved construction and combination of parts, as hereinafter more fully pointed out and described.

Referring to the drawings, Figure 1 represents a perspective view of a sled embodying my invention, the dotted lines indicating the several positions which the runners may be placed in under the above-described conditions. Fig. 2 is a cross-sectional view through the bolster. Fig. 3 is a detail view of the casting with the rocking bolt and anti-frictional plate in position. Fig. 4 is a longitudinal sectional view of the same. Fig. 5 is a detail view of the bolt and anti-frictional plate, and Fig. 6 is a detail view of the casting.

Like letters of reference refer to like parts throughout the several views.

In the accompanying drawings, the letter A represents an ordinary sled, and B B the raves thereof. Secured at opposite points of the raves and extending longitudinally are bars C C.

The letter D represents the casting, said casting being provided upon its upper surface with a raised or bulged portion d, and provided centrally with an elongated slot d', said slot having its end walls inclined or beveled, as at d^2, and its side walls provided with transverse bolt-holes d^3 d^3. The extended ends of the castings are also provided with bolt-holes d^4 d^4 for the reception of bolts E, which serve to secure the castings to the bars C C.

The letters F F represent vertical bolts, said bolts having their lower ends enlarged and provided with elongated slots f f. These enlarged ends are adapted to pass into the elongated slots of the castings and are secured in place therein by transverse bolts G G, which pass through the bolt-holes of the side walls of said slots, and also through the elongated slots of the enlarged ends. By thus providing these elongated slots in the vertical bolts it will be seen that the latter have a limited vertical play within the slots of the castings, so that when the vehicle meets an elevation or depression in the roadway the bolts may be raised or lowered, so as to afford the requisite degree of oscillatory movement to the vehicle-body, this latter movement being facilitated by the inclined ends of the slots.

The vertical bolts are designed to pass through the bolster H of the sled, and their ends are screw-threaded to receive locking-nuts I I. Immediately above the lower enlarged ends of the bolts I provide transverse anti-frictional plates J J, to which the bolster is also secured. These act as washers or wearing-surfaces and serve to prevent the bolster from coming in direct contact with the tops of the castings.

By reference to Fig. 1 of the drawings the operation of my improvement will be readily understood. For instance, if in passing over a roadway an incline or obstruction is met, the forward part of the sled will be elevated, and, ordinarily, the sled-body would be correspondingly elevated. In my device, however, when the fore part of the sled is thus raised, the body will be thrown forward, and as the vertical bolts which pass into the bolster have an oscillatory movement the body will assume a level position, this being facilitated by reason of the limited vertical play of the bolts, which permits of the self-adjustment of the body to a level, notwithstanding greater or less elevations or depressions. When the sled is passing down an incline or meets de-

pressions in the roadway, the operation of the oscillating bolts is of course the reverse of that just described.

It will be seen that my invention is simple in construction, inexpensive of production, and may be equally applicable to almost any form of vehicle.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination, with the frame and bolster of a sled or other vehicle, of castings disposed therebetween, arranged upon opposite sides of the frame, and provided with elongated longitudinal slots, vertical oscillating bolts having their lower ends flattened and enlarged, and transverse pivot-bolts passing through transverse apertures in the side walls of the elongated longitudinal slot and through the enlarged heads of the oscillating bolts, substantially as set forth.

2. The combination, with the frame and bolster of a sled or other vehicle, of castings disposed therebetween and located upon opposite sides of the frame and provided with elongated longitudinal slots, oscillating vertical bolts having their lower ends flattened and enlarged, said flattened and enlarged ends being provided with vertical elongated slots, and transverse pivot-bolts, substantially as set forth.

3. The combination, with the frame and bolster of a sled or other vehicle, of castings disposed therebetween and located upon opposite sides of the frame and provided with elongated longitudinal slots, the side walls of said slots being provided with transverse bolt-holes and the end walls being inclined or beveled, oscillating vertical bolts having their lower ends flattened and enlarged, said flattened and enlarged ends being provided with elongated vertical slots, and transverse pivot-bolts, substantially as set forth.

4. The combination, with the frame and bolster of a sled or other vehicle, of castings provided with elongated longitudinal slots, said castings being located upon opposite sides of the frame, oscillating vertical bolts having their lower ends flattened and enlarged and formed or provided above said enlarged lower ends with anti-frictional plates, and transverse pivot-bolts, said bolts passing through transverse apertures in the walls of the elongated slots of the castings and through the lower enlarged head of the vertical bolt, substantially as set forth.

5. The combination, with the frame and bolster of a sled or other vehicle, of longitudinal plates secured to opposite points of the raves of the frame, castings secured to said plates and provided upon their upper surfaces with curved re-enforcements or enlarged portions and central elongated longitudinal slots, and also having apertured end flanges for the reception of bolts, oscillating vertical bolts having their upper ends passing through the bolster and screw-threaded to receive locking-nuts and their lower ends enlarged and flattened, said flattened and enlarged portions being provided with elongated vertical slots, transverse anti-frictional plates, and transverse pivot-bolts passing through transverse apertures in the side walls of the slots in the castings and through the lower enlarged heads of the vertical bolts, substantially as set forth.

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

SAMUEL SANDERS.

Witnesses:
A. G. UNDERWOOD,
A. F. RAYBURN.