R. ARMSTRONG.

Sled.

No. 202,976. Patented April 30, 1878.

Fig: 1.

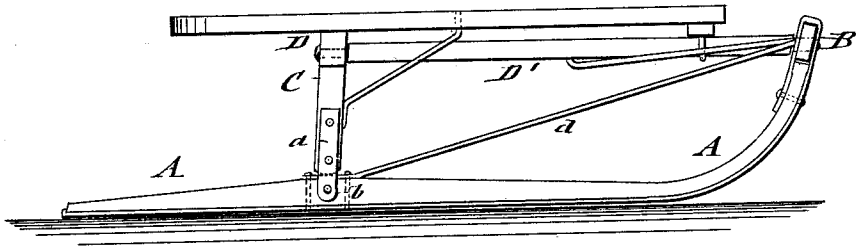


Fig: 2.

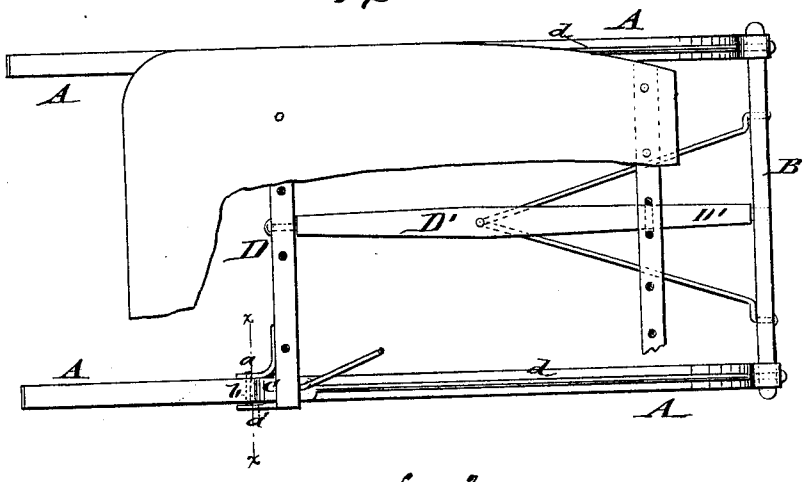
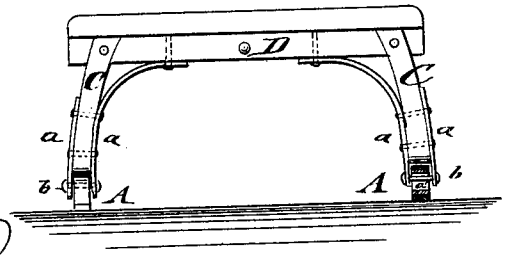


Fig: 3.



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ROBERT ARMSTRONG, OF PORTLAND, NEW BRUNSWICK, CANADA.

IMPROVEMENT IN SLEDS.

Specification forming part of Letters Patent No. **202,976**, dated April 30, 1878; application filed February 9, 1878.

To all whom it may concern:

Be it known that I, ROBERT ARMSTRONG, of Portland, in the Province of New Brunswick and Dominion of Canada, have invented a new and Improved Sled, of which the following is a specification:

The object of this invention is to construct a sled for light or heavy work, in such a manner that the runners have each sufficient mobility to pass over inequalities of road without disturbing the position of its fellow to any material extent.

In the accompanying drawings, Figure 1 represents a side elevation of my improved sled; Fig. 2, a top view, with part of body broken off; and Fig. 3, a rear elevation of the same.

Similar letters of reference indicate corresponding parts.

A A in the drawings are the runners, and B the front bar or roller, connecting the upwardly-curved front ends of runners of my improved sled. The knees or vertical supporters C are connected by side straps *a* to cross-bolts *b*, that work in vertical slots *a'* of the runners, and laterally connected by a bench, D, which is rigidly braced to the vertical supporters C.

The runners A A are connected to the front bar or roller B by brace-rods *d*, which extend from a point near the hinged supporters C to the roller, which is retained by metal bands to the ends of the runners. The lateral bench D is connected with front roller B by a pivoted perch or horizontal supporter, D', to which and the bench D any form of sleigh or sled body may be applied.

The advantage of the hinged knees or side supporters C is that the runners may be elevated or depressed at either end, or twisted laterally to a small extent beneath feet of supporters, so as to work with a certain degree of elasticity in passing over obstructions or inequalities of the road. The connection of roller and runners secures the parallel and upright position of the runners without materially interfering with their mobility, but should be such as to allow them some little play or twisting, or otherwise the runners will require to be made with very elastic bows, and may be so constructed, if desired. The pin or pivot of perch D' is fitted loosely to bench or to perch, as the case may be, so as to admit the play of roller thereon in following the motion of the runners. The mobility imparted to the runners enables them to pass easily over obstructions without straining or twisting the body.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, in a sled, of the runners A, connected with a front roller, B, by braces *d*, the knees C, having bolts that work in vertical slots of the runners, and the bench D, connected with the roller by the pivoted perch D', as shown and described.

ROBERT ARMSTRONG.

Witnesses:
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