B. E. HEMINWAY.

Sled.

No. 107,776. Patented Sept 27, 1870.

fig 1.

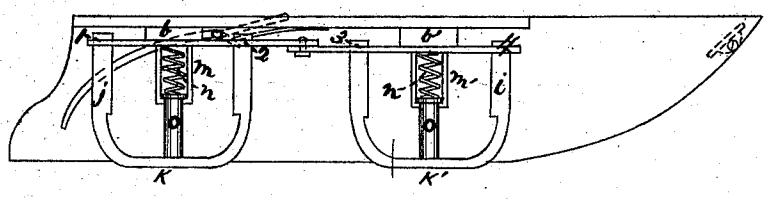
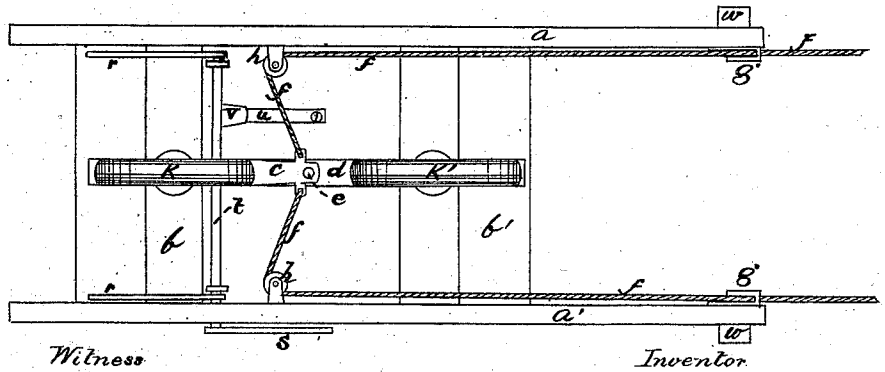


fig. 2.



Witness

Wm. Franklin Seavey

Geo. E. Bird

Inventor

B. E. Heminway

Per Wm Clifford Atty

United States Patent Office.

BENJAMIN E. HEMINWAY, OF PORTLAND, MAINE, ASSIGNOR TO HIMSELF AND WILLIAM L. PRINCE, OF SAME PLACE.

Letters Patent No. 107,776, dated September 27, 1870.

IMPROVEMENT IN SLEDS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, BENJAMIN E. HEMINWAY, of Portland, in the county of Cumberland and State of Maine, have invented a new and useful Improved Sled; and I hereby declare the following to be a full, clear, and exact description of the same, which will enable others to make and use my invention, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 shows a side sectional elevation.

Figure 2 shows a bottom plan.

My invention has in view to provide a sled which can be steered by the drag-rope. It has also in view providing a rest for the feet of the person sitting on the same, and a device by which the sled may be quickly and easily checked, if occasion requires.

In the drawing—

a a' shows the sled-runners.

b b', the cross-bars. To these bars are first attached and pivoted the horizontal arms *c d*. These arms are jointed together at *e*.

To the arm *c* is attached the sled-rope *f*, which passes along the inside of the runners and over pulleys at *g g*. When drawn evenly, the rope *f* serves the ordinary purpose of such a rope, but if one or the other side is pulled, the jointed and pivoted arms *c d* are turned or drawn from one to the other side.

The rope also passes over pulleys at *h*, as shown in fig. 2, so that it first passes out at right angles from the arm *c*, then along the inner side of the runners to *g*.

Attached to the arms *c* and *d* are guides, *i j*, formed as seen in the drawing, or in any shape that may be desired. Their lower edge, *k k'*, rests on the snow or ice equally with the runners *a a'*, being of the same length. These guides are attached to *c d* at 1 2 3 4, as shown in the drawing, and are consequently swung or turned with them.

From this, it will be understood that the direction of the sled can be varied according as the guides are turned; that is, when one side of the drag-rope is pulled, the sled is turned one way, and when the other, the other way. The guides are turned simultaneously. They may be in the form of a center or third runner, jointed in the center, or as may be desired.

m m' are hollow cylinders, attached to the cross-bars *b b'*, and each containing a spring, see *n*. Working in these cylinders are the pistons or plungers *o*, rigidly attached to the inside of the bottom of the guides *i j*.

I have specified that at 1 2 3 4, the guides were attached to the arms *c d*, but they are so attached that they can slip up and down through apertures in the said arms. Now as the sled passes over the snow, the guides, by this power of vertical motion, are enabled to accommodate themselves to the inequalities of the surface, the springs *n* allowing them to rise over obstacles, so that the sled is not tipped or turned, while at the same time said springs give them sufficient hold on the snow to steer the sled.

At *r* is shown a brake, operated by the arm *s*, on the outside of the sled. This brake is attached to the rod *t*, passing across the bottom of the sled, and when not in use is kept out of the way by the spring *u*, operating on the catch *v*, attached to the rod *t*.

When it is desired to stop the sled, the arm *s* is pulled up, forcing the claws of the brake into the snow, which checks the sled quickly, and with great ease to the operator. This is of great use in some cases, as when there is danger of running into a passing team.

w w show plates of metal attached to the side of the sled-frame near the forward end, and projecting therefrom. These are placed at a convenient angle with the plane of the runners, so as to serve as a comfortable foot-rest for the person sliding, and are attached by means of lips and screws, or other device, to the frame of the sled.

What I claim as my invention, and desire to secure by Letters Patent, is—

A sled combining the jointed arms *c d*, pivoted to the cross-bars *b b'*, with guides *i j*, cylinders *m m'*, plungers *o*, springs *n*, brake *r*, operated by the spring *u* and arm *s*, and foot-rests *w w*, all arranged and operating substantially as set forth.

B. E. HEMINWAY.

Witnesses:

WM. FRANKLIN SEAVEY,

W. H. CLIFFORD.