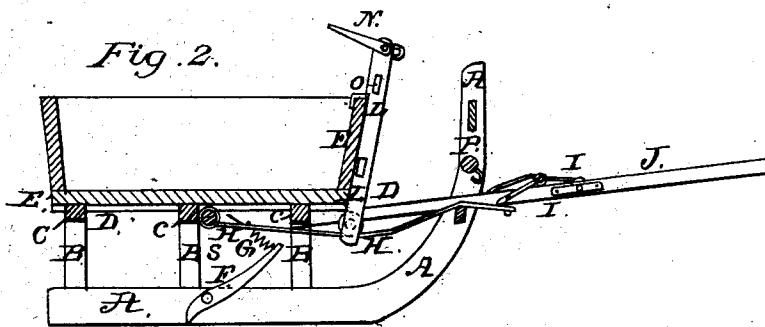
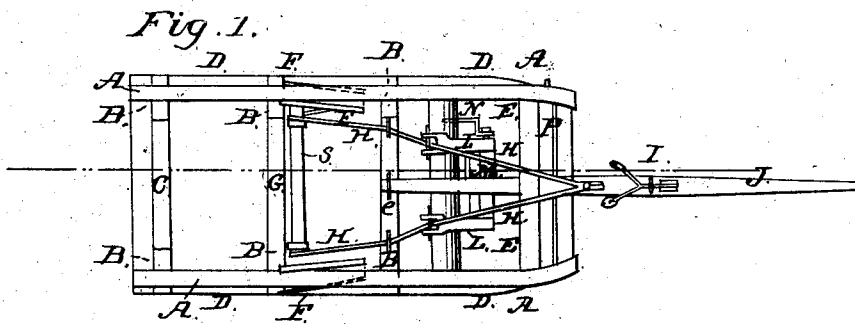


H. W. & B. C. SMITH.

Sled.

No. 69,717.

Patented Oct. 8. 1867



Inventors *H. W. Smith*
B. C. Smith
 Per *Munn & Co.*
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Theo. Dausche Witnesses:
W. Freewin

United States Patent Office.

H. W. SMITH, OF RAINSBURG, PENNSYLVANIA, AND B. C. SMITH, OF
TOLLESTON, INDIANA.

Letters Patent No. 69,717, dated October 8, 1867.

IMPROVEMENT IN SLEIGH-BRAKE.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, H. W. SMITH, of Rainsburg, in the county of Bedford, and State of Pennsylvania, and B. C. SMITH, of Tolleston, in the county of Lake, and State of Indiana, have invented a new and improved Sled-Brake; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a bottom view of a sled to which our improved brake has been attached.

Figure 2 is a vertical longitudinal section of the same, taken through the line *x x*, fig. 1.

Similar letters of reference indicate like parts.

Our invention has for its object to furnish an improved sled-brake, simple in construction, effective in operation, and which will give to allow it to pass over obstructions; and it consists in the combination of the brake-irons, operating-ropes, roller or pulleys, tongue-rope, and sliding-cord with each other; in the combination of the brake-irons, operating-ropes, roller or pulleys, and roller pivoted to the forward part of the sled-frame; in the combination of the brake-irons, operating-ropes, roller or pulleys, with the roller and frame attached to the forward end of the sled-box; and in the combination of coiled springs with the brake-irons and operating-ropes; the whole being constructed and arranged as hereinafter more fully described.

A are the runners, B are the knees, C are the beams, D are the rails, and E is the box of the sled, about the construction of which parts there is nothing new. F are the brake-irons, which are made U-shaped, and which are pivoted to the runners A, near their upper edges, in such positions that when turned down their points may project below the bearing surfaces of the runners, and so that when not in use they may lie along the upper edges of the runners out of the way. G are coiled wire springs, one end of which is secured to the upper ends of the brake-irons F, and to the other ends of which are attached the ends of the operating-ropes H. If desired, the ends of the ropes H may be attached directly to the ends of the brake-irons F, the object of the springs being to prevent breakage by allowing the brakes to give when the projecting ends of the brake-irons strike against a solid obstruction. The ropes H pass back and over a roller, S, or its equivalent, pivoted to the frame of the sled; they then pass forward and terminate in a loop or ring. When it is desired that the brake should be applied by the horses, the loop of the ropes H is hooked upon a hook attached to the lower end of the tongue-rope I, which passes around a pulley pivoted in a slot in the tongue J, and has a ring or loop attached to or formed upon its upper end, through which is passed the sliding-rope K, the ends of which are connected to the hold-back straps of the harness, so that as soon as the sled presses forward against the horses the brakes will be applied, and with a force proportioned to said pressure. The rope K and tongue-rope I, having a sliding connection, prevent the brake from being applied by the side pressure of the horses in turning. L is a frame which, when a box is used, and it is desired to apply the brakes by hand, is hooked upon or otherwise attached to the forward end of the box E. M is a roller pivoted to the side bars of the frame L, and having a hook attached to its middle part, upon which is hooked the loop of the ropes H, and the brakes are applied by revolving the roller M by means of the crank N attached to the projecting end of the axle of said roller. The roller may be held in place, applying the brakes with any desired force, by throwing the crank N over the catch or stop O attached to the side of the frame L. When the box is not used, and it is desired to apply the brakes by hand, the loop of the ropes H is hooked upon a hook attached to the middle of the roller P, which is pivoted to the forward part of the sled-frame. The roller P is operated to apply the brakes by attaching the crank N to the projecting end of the axle of said roller.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the brake-irons F, operating-ropes H, roller S, or its equivalent, tongue-rope I and sliding-rope K, with each other, and with the tongue and frame of the sled, substantially as herein shown and described, and for the purpose set forth.

2. The combination of the brake-irons F, operating-ropes H, roller S, or its equivalent, frame L and roller M, with each other, and with the box E and frame of the sled, substantially as herein shown and described, and for the purpose set forth.

3. The combination of the brake-irons F, operating-ropes II, roller S, or its equivalent, and roller P, with each other, and with the frame of the sled, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the coiled springs G with the brake-irons F and operating-ropes II, substantially as herein shown and described, and for the purpose set forth.

Witnesses:

N. C. EVANS, }
A. C. JAMES, } as to H. W. SMITH.
A. VANDER NAILLEN, }
ROBERT COLLINS, } as to B. C. SMITH.

H. W. SMITH,
B. C. SMITH.