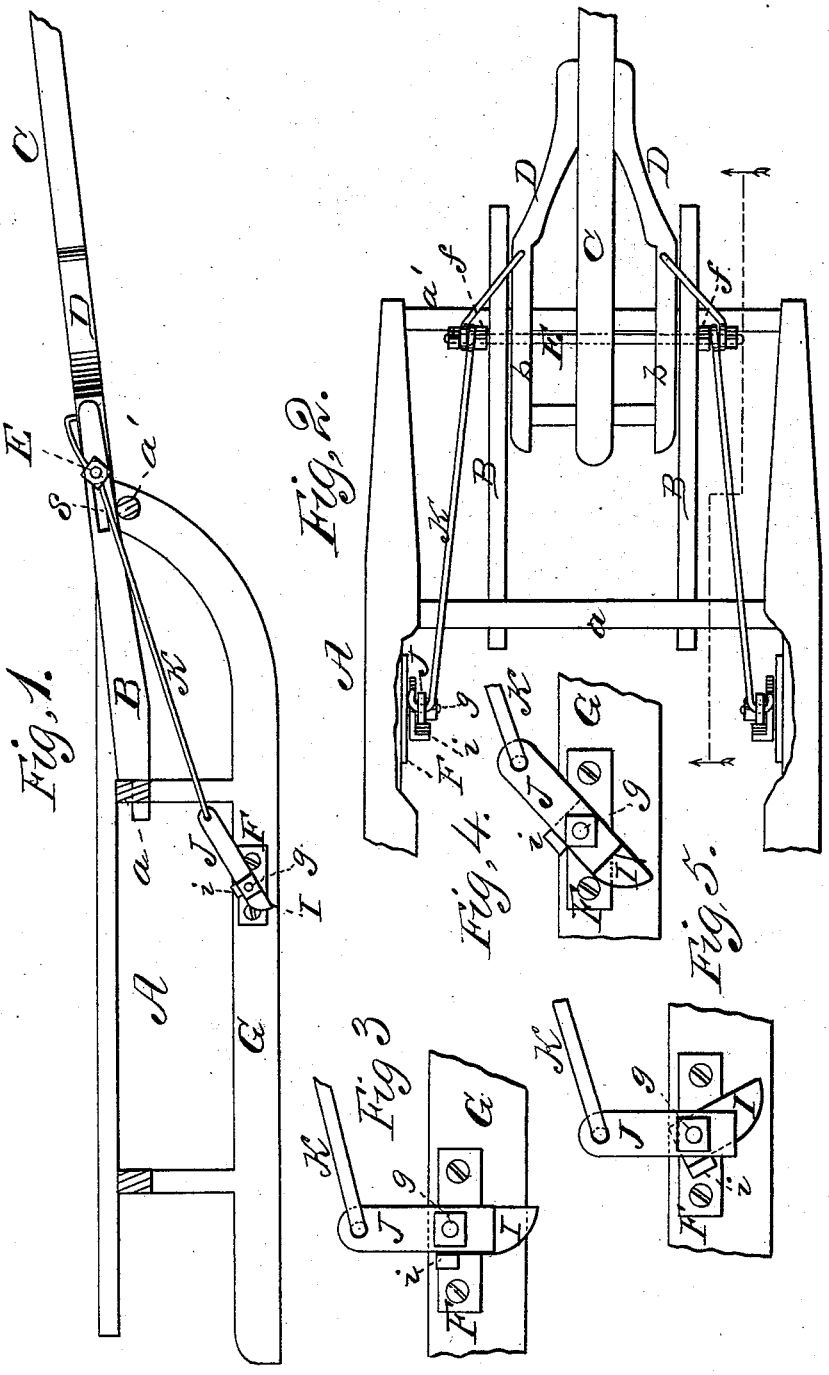
H. HUNT.

Automatic Sleigh-Brake.

No. 210,039. Patented Nov. 19, 1878.



WITNESSES

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HOWARD HUNT, OF TWIN GROVE, WISCONSIN.

IMPROVEMENT IN AUTOMATIC SLEIGH-BRAKES.

Specification forming part of Letters Patent No. **210,039**, dated November 19, 1878; application filed September 23, 1878.

To all whom it may concern:

Be it known that I, HOWARD HUNT, of Twin Grove, in the county of Green and State of Wisconsin, have invented a new and valuable Improvement in Automatic Sleigh-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal section of a sleigh with my brake attached. Fig. 2 is a top view of the same. Fig. 3 is a view of the brake device applied. Fig. 4 is a view of the same taken off, and Fig. 5 is a view showing the position of the brake during the backing of the sleigh.

This invention has relation to improvements in automatic brake mechanisms for bob and other sleighs.

The object of the invention is mainly to devise a brake mechanism automatically actuated by a backward movement of the draft-tongue in descending an incline, by reason of the holding back of the team, that in backing the sleigh into position will not bite upon the surface of the snow and oppose resistance to said backward motion.

The nature of the invention consists in the construction and novel arrangement of a brake for sleighs, having the vertical levers pivoted to the side of the runners and connected to the draft by rods; each brake-lever having pivoted to its lower end, and in the same line, the inside tooth, having an outward flange-stop on its upper rear corner, in rear of the pivot which connects the tooth together and to the runner, as hereinafter shown and described.

In the annexed drawings, the letter A designates a sleigh of ordinary construction, in connection with which I shall illustrate my invention. At the fore part of the sleigh, and rigidly secured to its cross-bars *a a'*, are the fore hounds B B, arranged parallel to each other, and having each an oblong horizontal slot, *s*, cut near its front ends.

C represents a pole, having the futchels D, provided with parallel rear extensions *b*, suitably braced to the tongue and fitting snugly between the fore hounds B aforesaid. The tongue is secured to the sleigh by means of a metallic bolt, E, extending transversely through said tongue and hounds, and having its ends engaged in the slots *a* of the hounds B. The tongue is thus allowed free vertical motion and endwise play. The bolt E is held against endwise movement by means of nuts *f* applied upon its screw-threaded ends, projecting beyond the hounds B. F represents a journal-plate rigidly secured to the side of the sleigh-runners G, and provided with a projecting journal or pivot, *g*, of adequate strength. Upon this spindle is applied an angular metallic braking-plate, I, provided upon its rear upper edge with a lug, *i*, projecting at right angles therefrom, which plate vibrates freely on the pivot, and when in a vertical position has its point projecting considerably beyond the bottom of the runner.

J indicates the brake-lever, that is passed upon the pivot *g* over the brake tooth or plate I, with its rear edge in contact with the lug or stop *i*, and is held thereon by means of a suitable nut. The power ends of the levers J are connected with the ends of the bolt E by means of the rigid rods K, having at their front ends each an eye, through which the said bolt extends, and maintained in position by means of suitable nuts.

The operation of my improved automatic brake is as follows: In descending an incline the team will naturally hold back and cause the tongue to move rearwardly endwise. This movement, by reason of the connecting-rods, vibrates the brake-levers into a vertical position. The point of the brake-tooth bites into the snow, causing the said tooth to swing to the rear until its lug *i* abuts against the rear edge of the brake-lever, when, to all intents and purposes, it becomes rigid and bites with its full force upon the surface of the snow, arresting the downward impulse of the sleigh and preventing it from crowding upon the team.

In backing upon level ground or hill-sides, the brake-tooth swings to the front until its point clears the snow as soon as the backward movement commences, thus doing away with

its braking action, although the pole had moved endwise and the brake-levers assumed a vertical position.

It will be seen from the foregoing description that I have invented an automatic brake that in descending a hill is rendered effective by a backward movement of the tongue caused by the holding back of the team, but which in backing opposes no obstacle to such movement, being swung up out of the way at its commencement.

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

An automatic sleigh-brake consisting of the vertical levers J, pivoted to the side of the runner, and connected to the draft-rod by the rods K, each brake-lever having pivoted to its lower end and in the same line the inside tooth, I, having an outward flange-stop, *i*, on its upper rear corner in rear of the pivot *g*, which connects the tooth and lever together and to the runner, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HOWARD HUNT.

Witnesses:
H. L. GOULD,
J. H. SCHINDLER.