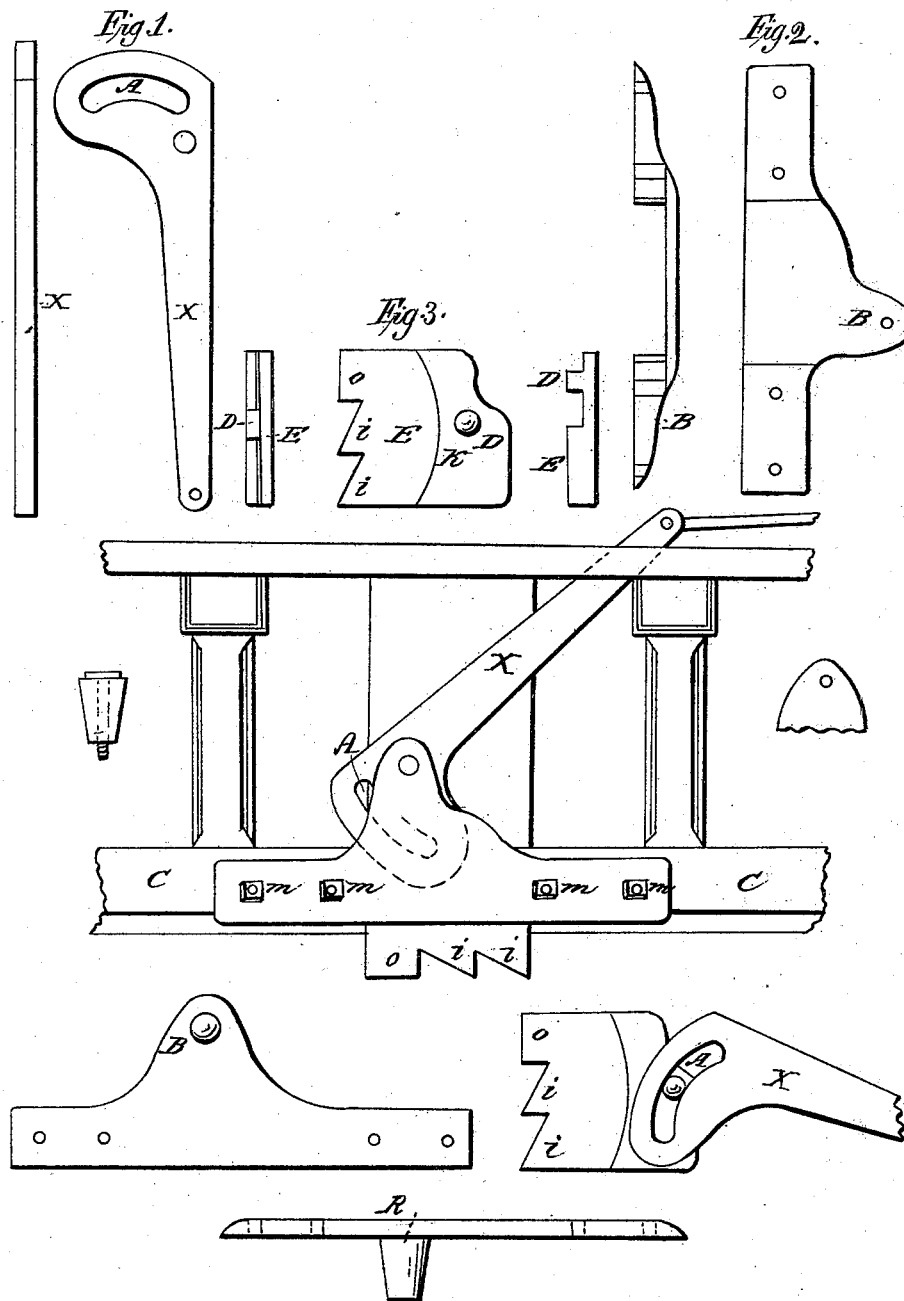


E. J. COOPER.

Sled Brake.

No. 111,109.

Patented Jan. 24, 1871.



Witnesses:

W. H. Bennett

John B. Fessenden.

Inventor:

Eustace J. Cooper.

# United States Patent Office.

EUSTACE J. COOPER, OF MINERAL POINT, WISCONSIN.

Letters Patent No. 111,109, dated January 24, 1871.

## IMPROVEMENT IN SLEIGH-BRAKES.

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, EUSTACE J. COOPER, of Mineral Point, in the county of Iowa, in the State of Wisconsin, have invented a new and improved Sled-Brake; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in an attachment to the runners of sleighs or sleds for the purpose of checking their motion or completely stopping the vehicles either on descending or ascending roads or ways.

### *Description of the Accompanying Drawing.*

Figure 1 is the lever used in operating the brake.

Figure 2 is a jaw bolted upon the side of the runner C C, supporting the lever X and protecting the brake-block E.

Figure 3 is a front view of the brake-block E.

Figure 4 is a vertical section of the sled or sleigh, with the improvement attached.

### *General Description.*

The brake consists of a lever X, fig. 1, with eccentric A moving upon a bolt traversing the jaw, fig. 2, at B. This jaw is secured to the runner C C by means of bolts M M M M, fig. 4.

The eccentric A of the lever, fig. 1, plays around the cam D, fig. 3, of the brake-block E, lowering or elevating the brake-block by the movements of the lever X forward or backward.

The brake-block E is so prepared with ratchets O I I, fig. 3, or other frictional matter, as to check or completely stop the vehicle when they are pressed upon the ground, snow, or ice over which the vehicle may be passing. The square ratchet O is designed as a complete hold for the vehicle, when stopped on ascending roads or ways, to prevent it running backward.

The manner of operating the within-described brake is as follows:

When the lever X is placed in a vertical position the brake-block E is drawn upward so that the ratchets O I I appear above the bottoms of the runners C C; but when bringing the lever forward in the direction indicated by the arrow, the eccentric A, playing around the cam D and the shoulder K of the brake-block E, presses the brake-block E downward, giving it a curvilinear motion downward, throwing the ratchet O slightly in advance of the other ratchets, or throwing the rear of the brake-block in advance of the front part of the same, in a downward direction.

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

The lever X with eccentric A, and the brake-block E, with cam D, shoulder K, and ratchets O I I, combined and operating substantially as set forth in the foregoing specification.

E. J. COOPER.

Witnesses:

W. H. BENNETT,  
J. B. TEASDALE.