

UNITED STATES PATENT OFFICE.

FREDERICK GRETZLER, OF BENNINGTON, NEW YORK.

BRAKE FOR SLEDS.

SPECIFICATION forming part of Letters Patent No. 397,231, dated February 5, 1889.

Application filed April 24, 1888. Serial No. 271,660. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK GRETZLER, a citizen of the United States, residing at Bennington, in the county of Wyoming and State of New York, have invented certain new and useful Improvements in Brakes for Sleds; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a simple and effective stationary brake for bob-sleds when used in hauling heavy loads on hilly roads and to do away with chains, &c., now employed in going down steep places; and the invention will be understood by reference to the following specification and claim.

In the drawings, Figure 1 is a side elevation; Fig. 2, end view of the brake, the runner in cross-section through line *x*, Fig. 1.

A represents the rear runner of a bob-sled, and A' the top part.

B B are the brake-shoes, that cover both sides for a short distance of a single runner and partly inclose the bottom by curving under it, as in Fig. 2. It is pivoted by a bolt, *i*, at the rear ends to and through the runner, as shown in Fig. 1. The two upper ends are held together by a bolt, *d*, passing loosely through them and also through a connection, *e*, which is at the top jointed to a rod, *f*, which extends up to and under the top A', and is there bent at right angles (see Fig. 2) and moves in eye-bolts *g g*, fastened to the under side of the top A'. This rod projects a little beyond the top A' and is then jointed to a lever-handle, C, which is moved backward, as shown in both figures, to set the brake by lowering it, and

is engaged in the teeth of a rack, *h*, attached to the side of the top A' of the bob.

In Fig. 1, dotted lines, is shown the position of the lever-handle and brake when up.

The brake-shoes B are curved under the bottom of the runner, so as to partly, if not wholly, inclose it to make the action more effective; and to bring them together under the runner I form a piece, *b*, on each of the shoes and inclined from bottom to top, and attach one end of a flat spring, *a*, to the runner in front of the shoe, the free end of the spring resting on the incline. As the lever C forces the shoe B down, these springs *a a* compress the shoes closer and closer together, the construction of the other parts being loose enough to allow this.

c is a long bent single spring, the rear end fastened at *c'* to the runner and the loose end passing between the shoes B B and under the connecting-piece *e*. The lever C and bent piece *f* force the connecting-piece *e* against the spring, so that when the lever is relieved from the rack *h* this spring aids in throwing up the shoe.

By suitable connections the lever-handle can be brought to work from the driver's seat, to be operated from there, if desired.

I claim—

The combination of the runner A A', lever C, bent rod *f*, connecting-piece *e*, and shoes B B, the latter being curved at the bottom and having the inclines *b b* on their outsides, with the springs *a a* working in connection therewith, and also the central spring, *c*, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK GRETZLER.

Witnesses:

J. R. DRAKE,

GEO. A. BURNETT.