

(No Model.)

E. S. MURRAY & H. R. COLE.
CLUTCH FOR TOBOGGAN CARS.

No. 561,169.

Patented June 2, 1896.

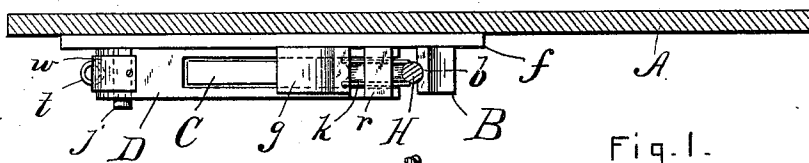


Fig. 1.

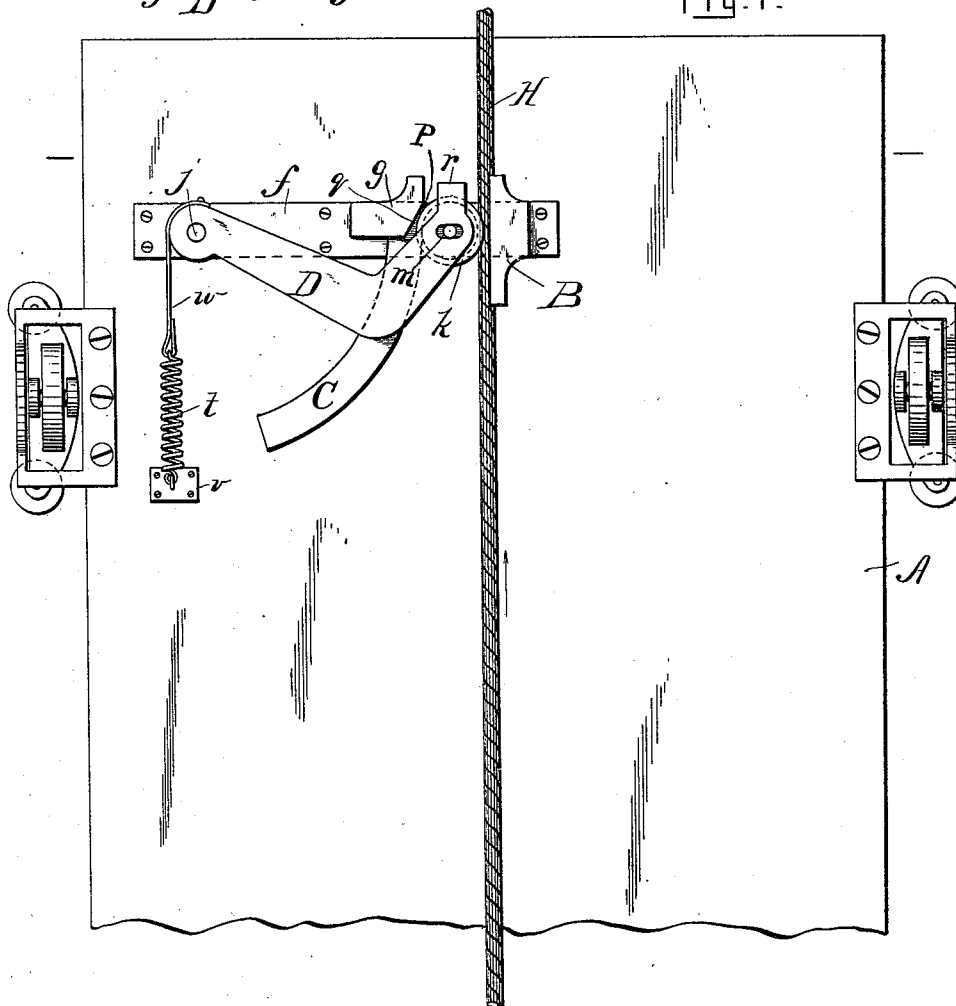


Fig. 2.

WITNESSES.

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UNITED STATES PATENT OFFICE.

EDWIN S. MURRAY AND HARTLEY R. COLE, OF HAVERHILL, MASSACHUSETTS, ASSIGNORS TO ORLANDO BROWN AND CHAS. N. GRANT, OF SAME PLACE.

CLUTCH FOR TOBOGGAN-CARS.

SPECIFICATION forming part of Letters Patent No. 561,169, dated June 2, 1896.

Application filed January 11, 1894. Serial No. 496,479. (No model.)

To all whom it may concern:

Be it known that we, EDWIN S. MURRAY and HARTLEY R. COLE, of Haverhill, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Clutches for Toboggan-Cars, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an end elevation of a portion of a toboggan-car provided with our improved clutch, and Fig. 2 a bottom plan view of the same.

Like letters of reference indicate corresponding parts in both figures of the drawings.

Our invention relates especially to an improvement in the cable grips or clutches for cars employed on toboggan-slides, it being especially designed for use with a slide shown and described in the application of Chas. N. Grant for improvement in roller-toboggans, filed October 10, 1892, Serial No. 448,382, the object being to provide a clutch by which the hold upon the actuating-cable of the slide is rendered positive.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body of the car, which may be of any suitable form and construction. At the forward end of the car a rigid head-block B is secured, said block being pendent vertically from the car-body and provided on its inner face with a groove *b*, which runs longitudinally of the car. In the same plane as the head-block, and secured to the bottom of the car by a plate *f*, there is a block *g*, from which a horizontally-arranged arc or segment C projects toward the rear of the car. A bell-crank lever D is pivoted by its long arm *j* to the plate *f*, and is slotted to work on the segment C, which serves as a guide therefor to prevent the vertical movement of the lever and relieving the

strain on its pivot. In the free end of the short arm of the bell-crank lever a grooved pulley *k* is pivoted, its groove registering with the groove *b* in the head-block B. The pivot-opening *m* in the lever is elongated to permit the pulley to play laterally, this last motion being deemed essential to afford the proper grip.

The segment C has a peripheral boss P, as shown in the detail in Fig. 2, said boss being arranged to fit the groove of the pulley. The block *g* is beveled at *q* to engage the inner edge of the short arm of the lever and act as a stop. At the outer end of said arm there is a bunter *r*, and a coiled spring *t* has one end secured at *v* to the body of the car, its opposite end being provided with a strap *w*, which passes around the pivot end of the long arm of the bell-crank lever, said spring acting contractively to throw the free end of the lever inward against the stop-block *g*.

The cable H in the use of our improvement is disposed between the blocks B and *g* and travels in the direction indicated by the arrow in Fig. 2.

The tension of the spring *t* throws the grip-pulley *k* inward, so that the space between said pulley and the head-block B is less than the diameter of the cable. Said pulley rolling on the boss of the segment is forced against the cable, tightly locking the car to it. The car being mounted on tracks in the ordinary manner of rolling toboggans is carried along by the cable, and at the end of its route a projection on the track is arranged in position to engage the block *r* of the lever D, throwing said lever outwardly and releasing the cable, when the car may be readily stopped.

Much difficulty has heretofore been experienced in gripping the cable by the clamps ordinarily employed from the fact that said cable, which runs at a high rate of speed, will, when wet or greasy, slip readily through the clutch and retard or slow the progress of the car. By the means herein employed the cable is so jammed between the pulley *k* and head-block B that it is practically impossible for it to slip.

Having thus explained our invention, what we claim is—

1. In a roller-toboggan car the combination with the block grooved to receive a cable of the angle-lever pivoted on said car, a guide and stop for said lever, and a pulley mounted
5 on a movable pivot in the free end of said lever in position to crowd the cable against said block.

2. In a roller-toboggan car the combination of the head-block, B; the spring-tensioned
10 pivoted lever, D; and the pulley, k, mounted on a movable pivot in the free end of said lever, all being arranged to operate substantially as specified.

3. In a roller-toboggan car the combination
15 of the grooved head-block, B; the segment and stop-block, g, the spring-tension lever working on said segment and a grooved pulley in the free end of said lever registering with the

groove of the head - block substantially as specified. 20

4. In a roller-toboggan car the combination of the lever pivotally mounted on the car and the grooved pulley pivoted in the free end of said lever, said pulley being movable laterally and disposed to crowd the toboggan - cable
25 against a projection on the car; the segmental guide limiting the vertical movement of said lever, a stop for the lever and a spring for forcing the lever toward said stop, all being
30 arranged to operate substantially as specified.

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Witnesses:

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