(No Model.)

J. PUSEY.

TOBOGGAN.

No. 386,414. Patented July 17, 1888.

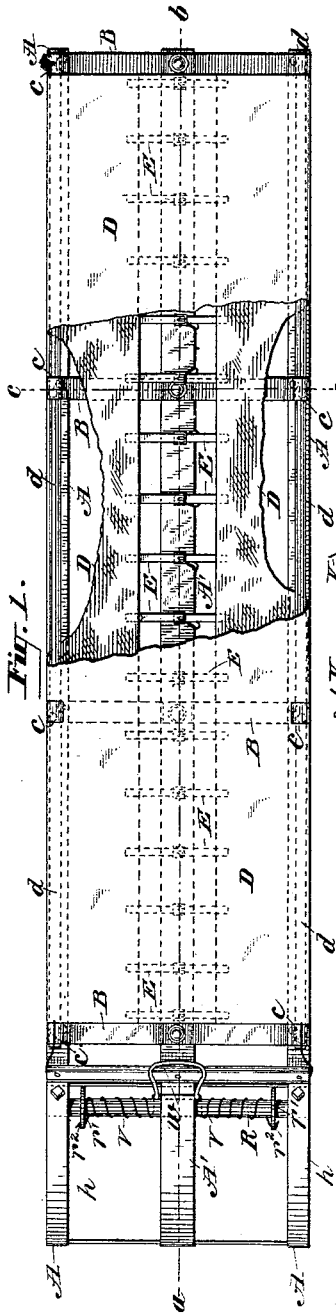

Fig. 1.

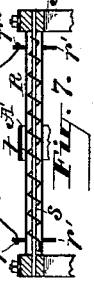

Fig. 7.

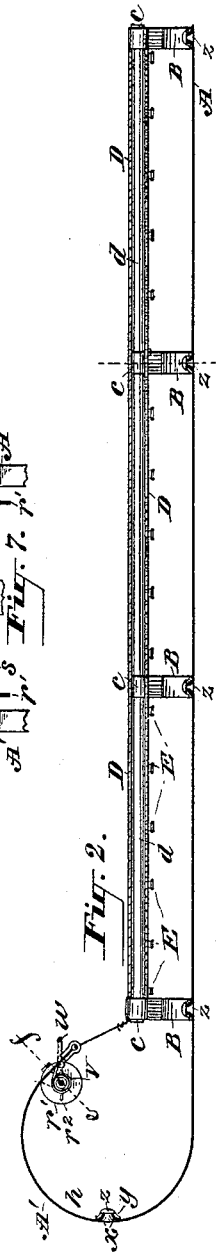

Fig. 2.

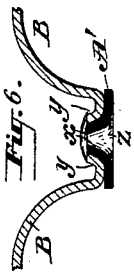

Fig. 6.

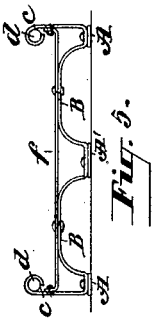

Fig. 5.

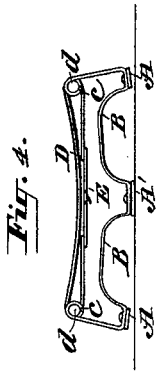

Fig. 4.

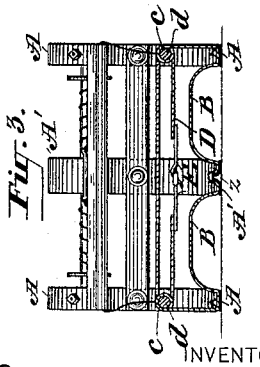

Fig. 3.

WITNESSES:

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TOBOGGAN.

SPECIFICATION forming part of Letters Patent No. 386,414, dated July 17, 1888.

Application filed October 4, 1887. Serial No. 251,397. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA PUSEY, a citizen of the United States, residing at the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Toboggans, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view, with part of seat broken away. Fig. 2 is a full longitudinal section, as on line *a b*, Fig. 1. Fig. 3 is a section as on line *c d*, Fig. 1. Fig. 4 is a view similar to Fig. 3, showing the position assumed by the runners, &c., with relation to the trackway when the toboggan is in use, exaggerated. Fig 5 is an end view illustrating a manner of bracing the side-rail supports. Fig. 6 is a detail view showing the manner of riveting the cross strips to the rails. Fig. 7 is a full section, as on line *e f*, Fig. 2.

This invention in certain features is an improvement upon a toboggan for which I filed an application for Letters Patent August 11, 1887, Serial No. 246,689, and also embodying certain other improvements which are applicable to toboggans generally, as will hereinafter appear.

The invention consists, first, in a toboggan constructed of runners of flexible elastic strips of steel or other suitable material, secured at the proper distance apart by means of arched flexible elastic cross-strips of steel, which are riveted or otherwise firmly secured to the runners, the ends of which strips are turned up, so as to project above the line of the runners, and are bent around at the top to form eyes for the reception of the side rails, to which side rails is secured a suitable seat, as hereinafter described. The result of this construction is that the tobaggan and seat, as a whole, are elastic, yet capable of resisting the strains, shocks, and bendings to which a toboggan is subjected when is use.

The invention relates, secondly, to the peculiar construction of a toboggan such as above described, and this feature consists in the use of a middle runner between the said two lateral runners and connected therewith, in combination with the aforesaid elastic cross-strips and rail-supports and a flexible seat supported by the hand-rails, whereby the weight of the tobogganer sitting upon said seat draws in toward each other the said rails, whereby the elastic cross-strips are caused to spring upward on each side of the lateral runners, as seen in Fig. 4, and thus cause the toboggan to tend to run upon the middle runner, (which, as shown in the drawings, is preferably made broader than the lateral ones,) and thereby reducing the extent of the frictional surface presented to the ice or snow.

The invention relates, thirdly, to the combination, with a toboggan and its side rails, of a seat composed of a flexible fabric—such as carpeting, duck, &c.—with means for stretching or taking up the slack of the fabric transversely, and which seat may be readily applied to the toboggan and readily replaced.

The invention consists, fourthly, in the combination, with a toboggan or other coasting-vehicle, of a spring-controlled roller and cord or rope device for drawing the toboggan, whereby the said cord, although normally wound tightly upon the roller, when the end is drawn upon it will unwind by the resistance of the toboggan; but when let go will wind up on said roller by the stress of the spring, and thus be out of the way when not needed.

The invention relates, fifthly, to details of the construction of said spring-roller and cord device, and also to certain other details of construction of the toboggan and seat, which will be fully described hereinafter, and pointed out by proper claims.

Like reference-letters indicate the same or corresponding parts where they are shown in the several figures.

Referring to the annexed drawings, A are two side runners, and A′ a middle runner, preferably but not necessarily broader than the others. These runners are made of strips of steel or other suitable elastic flexible metal—say one-eighth of an inch thick and from one to two inches wide. They are bent around to form the usual hood, *h*, at the front end, and are secured together by means of elastic flexible cross-strips B, also of steel, which are arched between the runners, as shown. The flat part of the strips is riveted to the latter, preferably by upsetting the metal around the

rivet-holes of both the runners and the strips, so as to secure greater strength, and so as to bring the lower ends of the rivets flush with the runners without the necessity of drilling countersinks. This is shown in Figs. 2, 3, and 6, (most clearly in Fig. 6,) in which *x* is the upset part of the runner, *y* that of the cross-strips, and *z* is the rivet.

I remark that the runners and cross-strips may be longitudinally corrugated, so as to increase their strength and to present a less frictional surface as to the former.

The free ends of the strips B are bent up at right angles, or thereabout, and their extremities are farther bent around, so as to form eyes *c* for the reception of the flexible side rails, *d*, of suitable wood or other material. These eyes extend to a height above the tops of the arches of the cross strips B sufficient for the ample clearance of the seat. The seat D consists of a strip of duck, carpeting, or other flexible fabric, which is passed over the side rails and secured in place by means, preferably, of buckle-straps E, (or it may be lacing,) whereby the fabric may be tightened and the slack taken up when necessary or desirable.

The result of the foregoing construction is a toboggan which is light, strong, yet resilient in every part, and swift-running. Again, the weight of the tobogganers sitting upon the flexible seat tends to draw in to a certain extent toward each other the side rails, which obviously causes the elastic cross-bars to bend upward from the middle outwardly, (see Fig. 4,) and thereby elevate the two lateral runners, (when the middle runner is used,) thus allowing the toboggan to run more or less upon the middle runner, and the greater the weight of the occupants of the seats the more are the side runners relieved from the surface of the trackway. It will also be seen that by this construction the seat is practically elastic or springy.

Each of the supports of the side rails may, if desired, be strengthened against the inward draft upon them by means of an angle-plate, *f*, Fig. 5, which is riveted to the supports of the side rails and to the cross-strips B, as shown in Fig. 5.

I do not wish to be understood as confining myself to the use of three runners.

I will now describe the spring-controlled roller and cord device hereinbefore referred to, having reference to Figs. 1, 2, 3, and 7. This consists of a roller, R, journaled on a fixed shaft, *s*, that is secured to and across the bent-up part or hood *h* of the toboggan. The roller is controlled by a spiral spring, *t*, within the same, one end of which spring is fixed to said shaft and the other end to the roller. The roller is in the present instance provided with flanges r', with holes r^2 therein for securing the ends of the cord or rope V. The construction is such that normally the ends of the rope are wound upon the roller by the stress of the spring; but when the rope is grasped or a ring, *w*, thereon for the purpose of drawing the toboggan it (the rope) will be unwound by the resistance or friction of the toboggan (the resistance of the spring being of course less than that of the toboggan.) When the cord is released, it will be at once wound upon the roller, and thus be out of the way, as shown in Figs. 1, 2, and 3. In Fig. 7 the cord is unwound.

I do not limit myself to the particular construction shown of this cord-take-up device; but the construction shown possesses certain advantages, as follows: The draft upon the toboggan is always practically central, and also a cord will wind upon the roller evenly and of sufficient length without overlapping, neither of which would be the case were but a single cord used, or, rather, but one end of the cord were secured to the roller.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a toboggan, the combination, with the elastic runners, of the arched elastic cross-strips having their ends upturned and bent around to form eyes for the reception of the side rails, together with the flexible seat suspended from said rails, substantially as and for the purpose set forth.

2. In a toboggan, the combination of the two lateral runners and the middle runner, the arched elastic cross strips secured to said runners, the side rails connected to said cross-strips, and the flexible seat secured to said side rails, substantially as and for the purpose set forth.

3. The combination, with a toboggan or coasting-vehicle, of the spring-controlled roller and cord attached thereto, substantially as and for the purpose set forth.

4. In combination with a toboggan, the wide spring-controlled roller and the cord having its ends secured to the said roller at or near the ends thereof respectively, substantially as and for the purpose set forth.

5. The combination, with a toboggan consisting of three or more runners connected by elastic cross-bars, of hand-rails rigidly connected to the cross-bars, and a seat composed of a fibrous flexible material extending over and around said rails, and having its free ends connected by a non-elastic connection, substantially as described.

In testimony whereof I have hereunto affixed my signature this 30th day of September, A. D. 1887.

JOSHUA PUSEY.

Witnesses:

FRANCIS S. BROWN,

JNO. NOLAN.