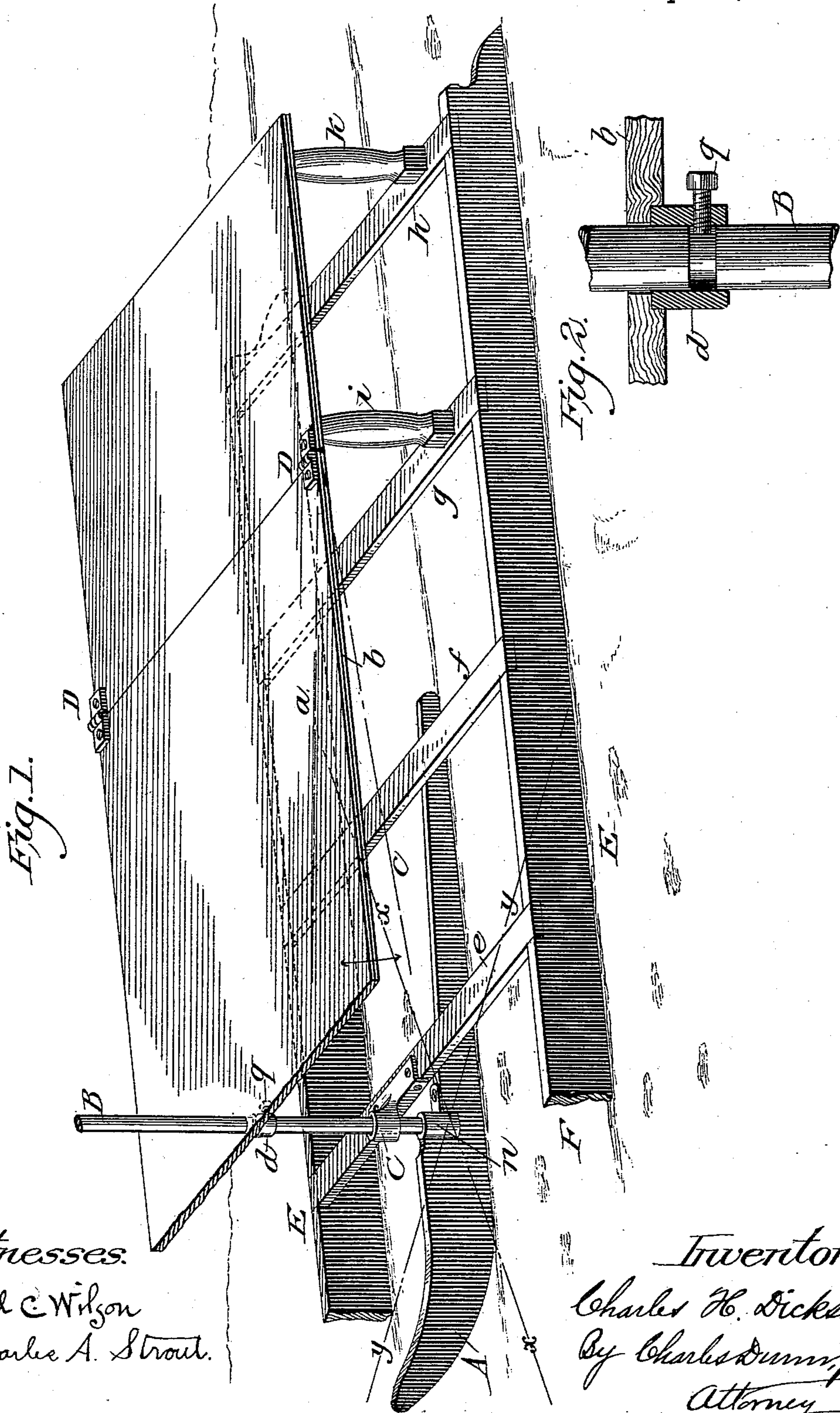


(No Model.)

C. H. DICKSON.
COASTING SLED.

No. 424,469.

Patented Apr. 1, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES H. DICKSON, OF PORTLAND, MAINE.

COASTING-SLED.

SPECIFICATION forming part of Letters Patent No. 424,469, dated April 1, 1890.

Application filed November 15, 1888. Serial No. 290,958. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. DICKSON, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented a certain new and useful Improvement in Coasting-Sleds, of which the following is a specification.

My improvement has for its object the furnishing an attachment to sleds used for coasting upon snow, ice, or other smooth surface, so that they can be guided with ease, certainty, and celerity, and if necessary can be stopped very quickly.

It will be seen that my device can be used either upon sleds called "double runners"—that is, having two pairs of runners—or upon sleds having but one pair of runners.

The usefulness of my invention is in the aid given by it for the avoidance of accidents, which frequently happen through the inability of a person riding upon a sled going at a high rate of speed to guide his sled quickly out of the way of an obstacle or to stop it quickly, if desirable or necessary.

My invention is illustrated in the accompanying drawings, which is hereby made a part of this specification, in which—

Figure 1 is a side view of a sled having my device, the curved front end of the runners being broken away to show the inner or guiding runner A. Fig. 2 is a detail view.

A is a runner shorter in its length than the runners of the sled, but projecting as to its point or forward end slightly in advance of the others. This guiding-runner A is rigidly and firmly attached to the standard B at *n*. At C is a collar, in which B rotates freely, and at *d* B is firmly fixed in the floor *b b* of the sled. The collar *d* is provided with the set-screw *q*, working into a groove in B, (not shown,) so that B can be rotated in *d*; but there can be no vertical motion of B in the collar *d*. The floor *b b* is hinged at D, so that the part of the floor *b* in which the collar *d* is fixed is free to move vertically through the arc shown by the dotted lines *a c o*.

E is one of the runners of the sled, broken off at F, to show the guiding-runner A.

e, f, g, and h are cross-bars of the sled extending from E to the other runner. (Not shown in the figure.)

i and *k* are two of the standards which

support *b b*, there being a sufficient number of these on the other runner to properly support that part of *b b* not supported by B. *w, x, y, and z* show the horizontal arc over which A is free to move upon its supporting-pivot B.

a, c, and o defines by dotted lines the vertical arc through which that part of *b* in front of D passes while in use. The collar C should be firmly bolted to *e*, and should permit the free rotatory movement of B and should also allow B to slide freely in a vertical direction.

The operation of my invention is as follows: The load placed upon the sled is borne upon *b b*, a large part of the weight of the load resting upon that part of *b b* which is between D and *d*, and as *d* is not movable upon B vertically, by reason of the groove into which the set-screw *q* works, it will be seen that a large part of the weight on the sled will be thrown upon the guiding-runner A, giving it at all times a good hold upon the surface over which the sled is passing. The hinge-joint at D, in *b b*, permits this pressure and continues it at all times, so that the lower edge of A is always pressed down upon the surface of the snow. The essential principle of my invention, therefore, consists in making the platform or seat in two sections, one of which is wholly supported by the main runners and the other section having one end pivoted or hinged to the main body of the sled and its other end, with any weight that may be thereon, adapted to be supported directly upon the steering-runner. One means of supporting the end of said hinged section has already been described; but any other equivalent means might be employed, so long as the principle remains the same. By the use of a tiller or steering-wheel upon the upper end of B the person guiding the sled is enabled to turn A in a lateral direction either way, pivoting upon B for a center, the only limit to this movement being the distance between the runners of the sled E and its corresponding runner on the other side. The readiness with which the supplementary steering-runner A may be turned, together with the hold it has upon the surface over which the sled is passing, affords in this way a ready and certain means of steering. If it is desired to stop the sled as soon as possible,

it can be effected by turning A so that it shall be either in the direction of the dotted line *x x* or the dotted line *y y*—that is, to its utmost limit to left or right—and the sled
5 will soon stop by the opposition of A to the onward course of the sled in the line which it has been pursuing. It will be seen that tiller-lines attached to A can be used instead of a wheel or tiller upon the upper end of B, if it
10 is desired.

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

1. In a sled having the usual supporting-
15 runners and a supplementary guiding-runner,

a platform composed of two sections, one adapted to bear wholly upon the main runners, and the section having one end hinged upon the main part and the other adapted to bear upon the supplementary guiding-runner, 20 as and for the purposes set forth.

2. In a coasting-sled, the combination of the supplementary guiding-runner A, with the rotating standard B, and the hinged platform *b b*, all in the manner and for the pur- 25 poses set forth.

CHARLES H. DICKSON.

Witnesses:

WILLIAM DAVIS,
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