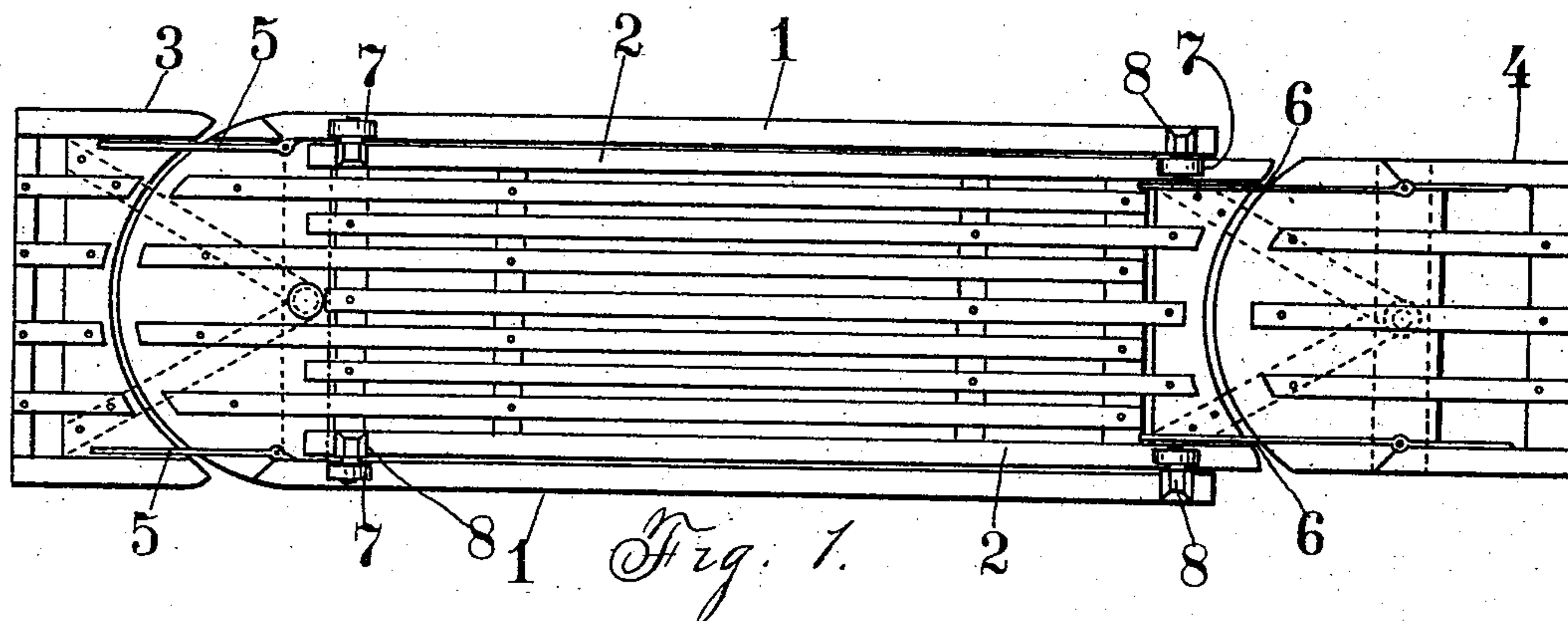


(No Model.)

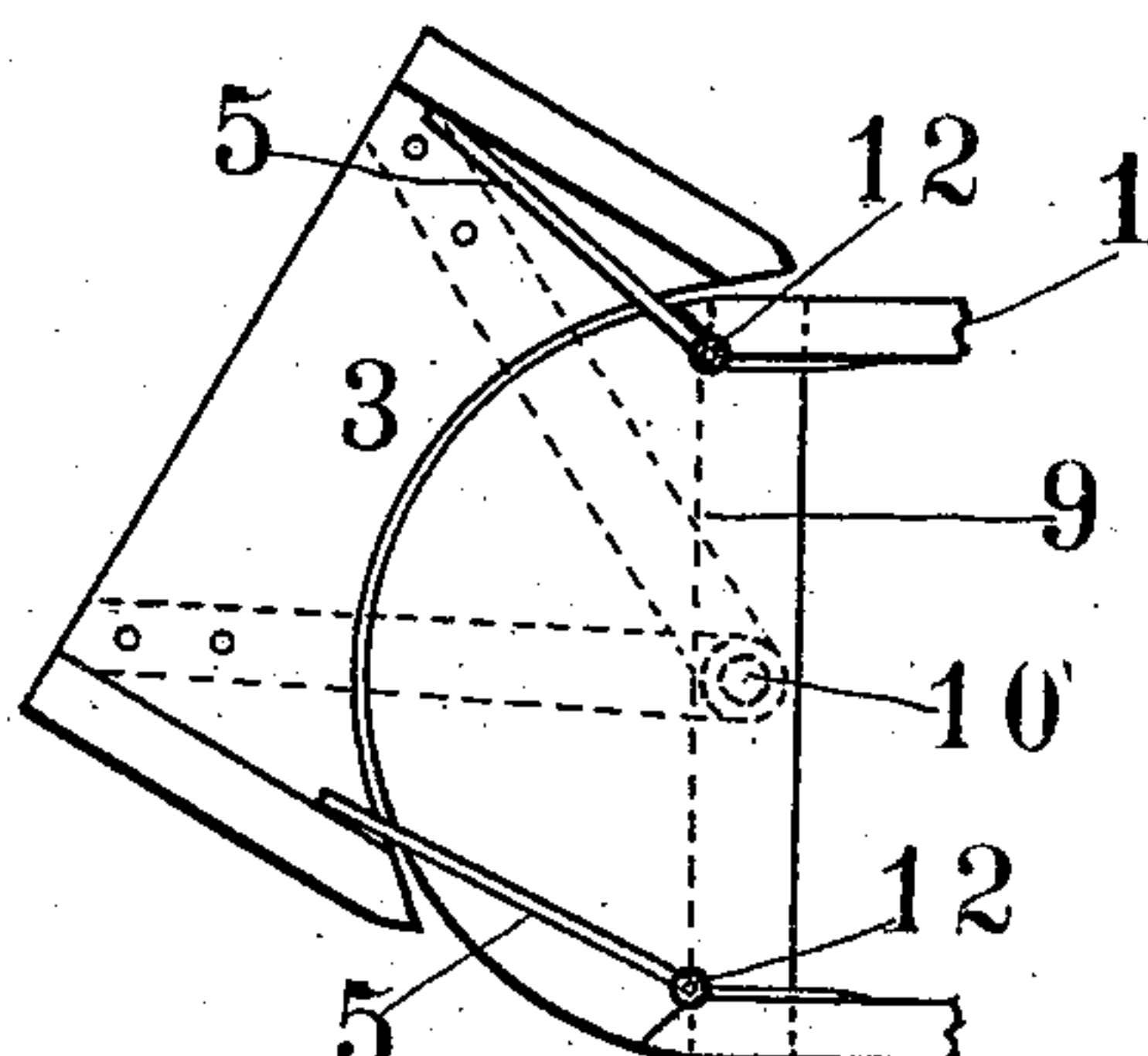
J. PATTERSON, Jr.  
ICE RUNWAY.

No. 501,659.

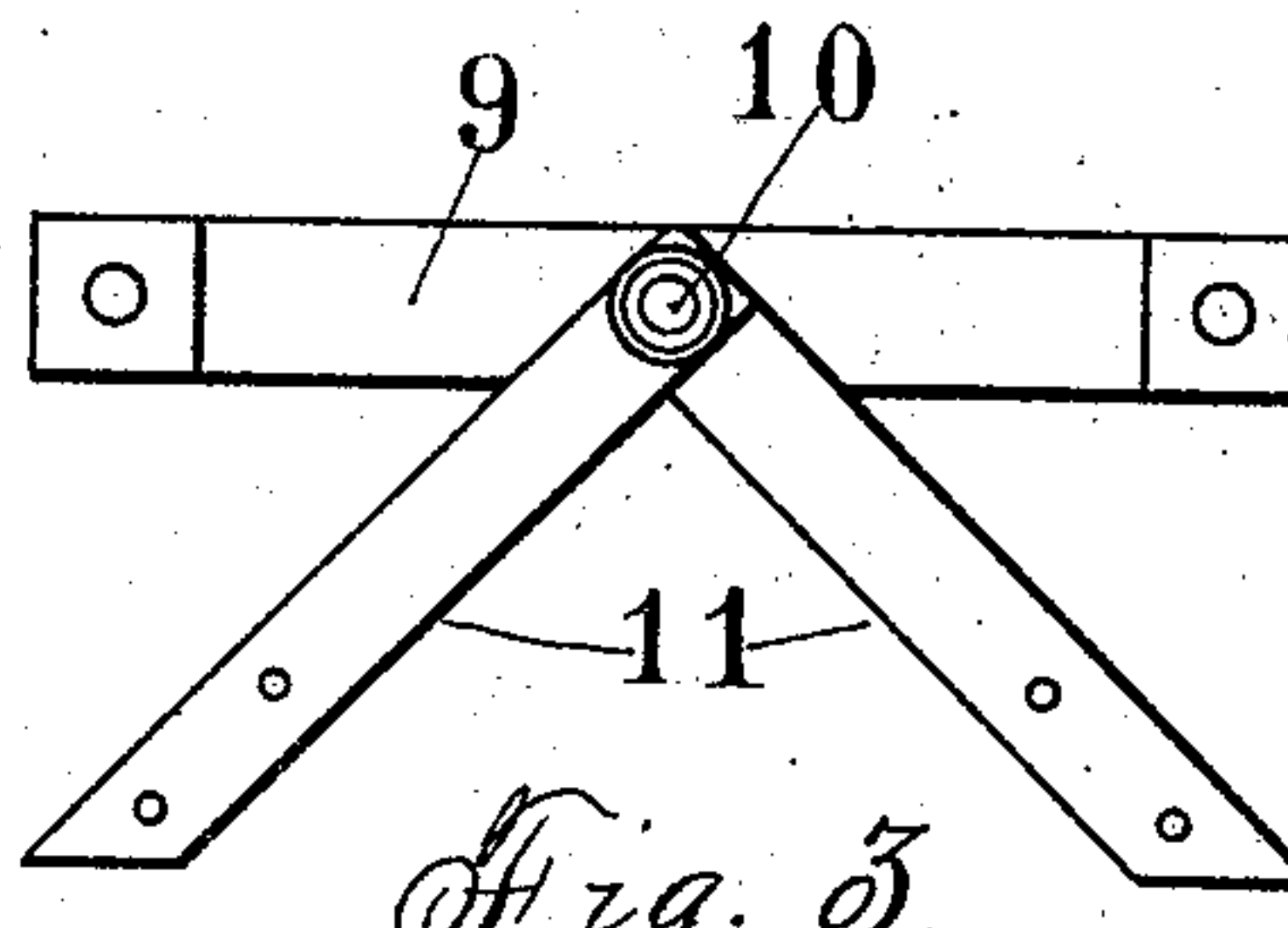
Patented July 18, 1893.



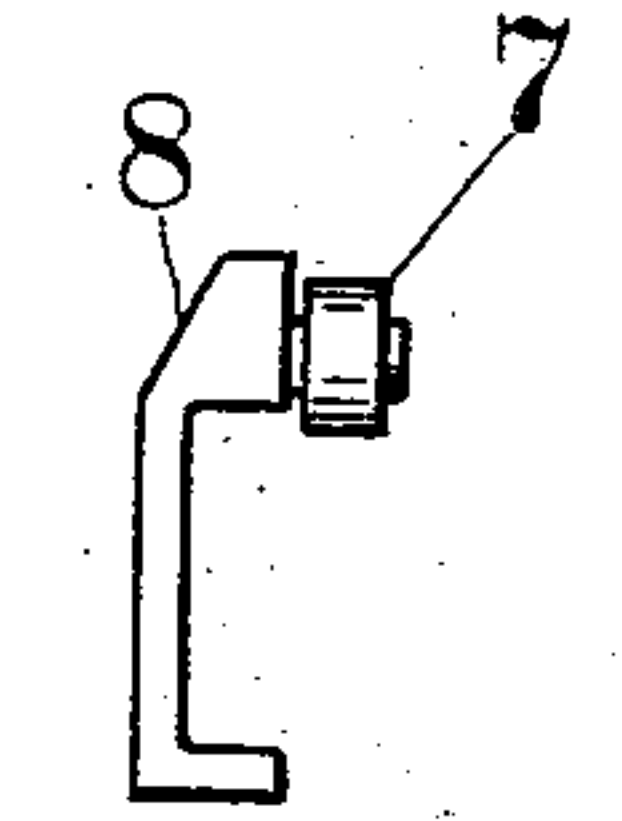
*Fig. 1.*



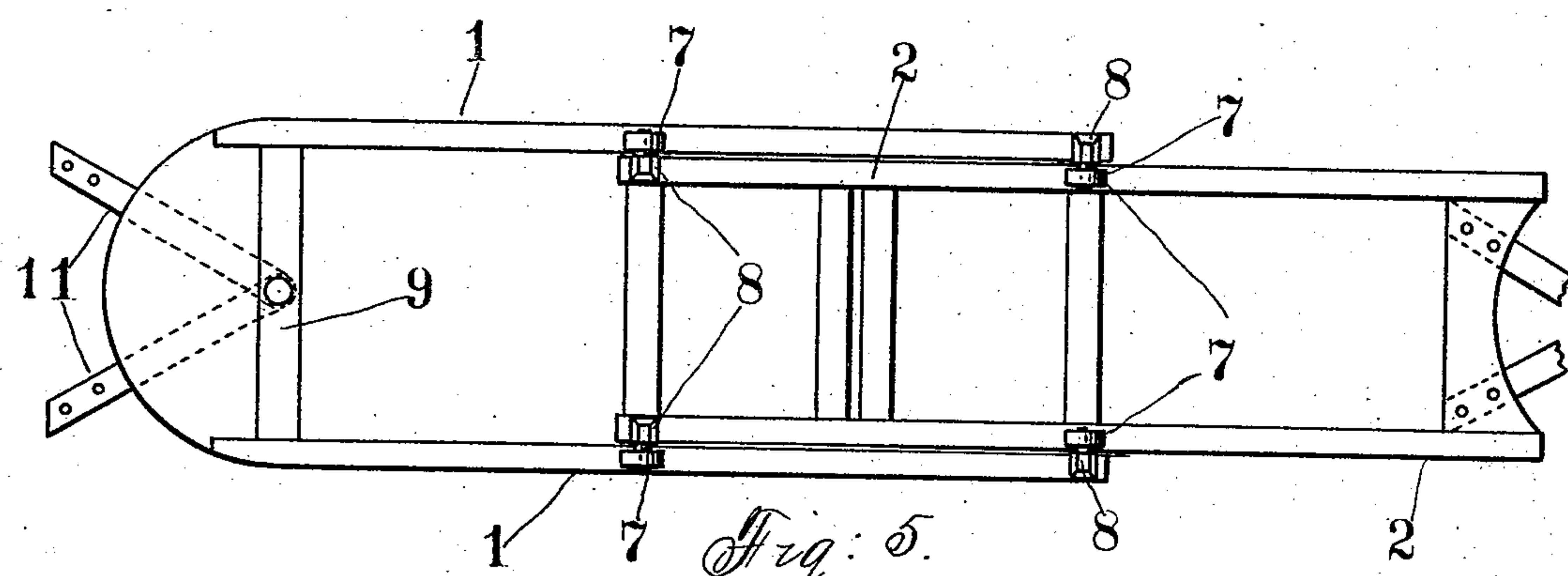
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Fig. 5.*

Witnesses:  
J. E. Harris.  
A. M. Turner.

Inventor:  
James Patterson Jr.  
By N. M. Brown  
his atty.



# UNITED STATES PATENT OFFICE.

JAMES PATTERSON, JR., OF ALBANY, NEW YORK.

## ICE-RUNWAY.

SPECIFICATION forming part of Letters Patent No. 501,659, dated July 18, 1893.

Application filed March 21, 1893. Serial No. 467,006. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES PATTERSON, Jr., a citizen of the United States, residing at Albany, Albany county, New York, have invented certain new and useful Improvements in Runways; and I do hereby 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 figures of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a new and improved runway for ice, merchandise, &c.

In the drawings Figure 1, shows a plan view of my invention in operative position; Fig. 2, a plan view of one of the ends, showing its position when swung out of line with the main framework; Fig. 3, a plan view of the yoke, bifurcated arms and bolt whereby the ends are pivoted to the main frame work; Fig. 4, a side elevation of one of the devices I use in reducing friction as the two portions of the main frame are made to close or extend, and Fig. 5 a plan view of the main frame work only, shown extended.

The main frames 1 and 2 are preferably lattice work structures, and slide lengthwise, the one against the other, that they may automatically extend or shut together as the requirements of their use may require. To reduce the friction as they thus slide, I use the movable supporting brackets 8, having the rollers 7 revolvably attached thereto, preferably as shown in Fig. 4. The brackets 8 are attached to the frames alternately, in pairs, and preferably at the ends of the frames, said attachment being accomplished by any well known fastening devices desired, but preferably by screws, the rollers 7 preferably rolling over the top surfaces of the outer rails of the main frame, and when so arranged the rollers 7, 7, allow of lengthwise movement of the frames 1 and 2 with the least amount of friction practicable.

At each end of the main frames 1 and 2 is a swinging attachment which acts as an extension of the main frame work and also allows of a large amount of lateral movement to the runway. These swinging ends lie, prefer-

ably, in the same plane as the main framework, and are connected thereto as follows: A yoke 9 is fastened, preferably, under the runway and preferably, to the under side of the outer rails thereof by means of the ends of the yoke 9 which have openings therein to receive bolts or other fastening devices as shown in Fig. 3. Bifurcated arms 11 are movably attached to the yoke 9 and the runway, by passing a bolt 10 through the floor of the runway, the ends of the arms 11 and the yoke 9 as seen in Fig. 3, and as indicated by the dotted lines in Figs. 1 and 2. The yoke is preferably a piece of flat strap iron punctured at or near its center to receive the bolt 10 and having its ends turned first upward and then in the direction of the length of the yoke making an eared offset, as shown in Fig. 3, with holes in the ears for fastening devices such as screws, &c., and the arms 11 are of similar pieces of strap iron preferably with holes through them to also receive fastening devices as shown in Fig. 3. The yoke, arms, and bolt form a contrivance well and long known for use in attaching swinging ends to trays, &c.

At 5, 5, and at 6, 6, in Fig. 1 will be seen hinged strips, preferably of metal, and they are also shown at 5 in Fig. 2. These strips 6, 6, are preferably attached to the end piece 4 by any sort of fastening device desired, like screws, nails, &c., and extend from end 4 over to and upon the main frame, the ends resting on the main frame being, preferably, unfastened and free to move lengthwise on the main frame as the end 4 is swung round. These strips may be either thin flexible pieces of metal or they may be thicker pieces with little or no flexibility, and having a hinge, as shown at 12 in Fig. 2 and said hinge is in the form, preferably, of the common butt used with doors in carpentry.

The strips 5, 5, instead of being fastened to the swinging end 3, are preferably fastened to the main framework or the rails thereof; and the reason therefore and for the fastening of the ends of strips 6 to the swinging end 4 is as follows: When ice or other objects are entered on the runway to be slid over it, they are entered on end 4, that being the receiving end. As they slide over the end 4 they cannot catch on the fastened ends of strips 6



because they are held close to the sides of the endpiece 4, and when the load or sliding object is nearing the other end of the main frame it cannot catch on the strips 5, 5, because they are held fast to and close against the rails of the main frame. If the device was turned end for end, and anything entered on end 3 the liability would be to catch the loose or free ends of the strips 5, 5, and 6, 6, upon the moving load and either, break, bend or tear them loose. These strips 5, 5, and 6, 6, also act as guards or stops to close the opening that must be left when the end pieces swing round, as shown at Fig. 2, and they thus keep the load from entering those openings and from getting clear from the runway before the end is reached.

In Fig. 5 I show the main frames without flooring and without ends 3 or 4 to avoid confusion in the drawings and to clearly show the main frames in extension.

The runway is especially designed for use with boats employed in the ice trade, and its operation is as follows: The end 4 is elevated and attached to the end of the usual stationary runway used with nearly all ice houses, or in some cases it is attached to the sill of the door of the ice house, and being so attached, its end 3 is laid upon the deck of the boat. Ice is slid down it, as with all runways used in the ice business. The boat receiving her cargo, however, does not always lie quiescent, but as a steamer passes or other boat agitates the water, she moves ahead or astern, as the case may be, and also sidewise, leaving her dock as far as her lines will allow, and in some cases where the passing steamer is large and makes a great agitation of the water, the ice boat will be so greatly tossed

about that her lines will not hold her and she breaks them. It is on such occasions that the runway is of great use, for as the ice boat moves forward or astern, the swinging ends allow of great lateral movement to the runway, and the longitudinal movement of the main frames allows of a lengthwise movement, and in all ordinary cases my device will operate throughout any such disturbance without being taken from the boat, while with the ordinary runway they have to be taken from the boat until the disturbance of the water has passed away.

Having fully described my invention so that those skilled in the art can make and use the same, what I claim is—

1. A runway having a main framework consisting of sections arranged to automatically draw out and close in the direction of their length when in use in connection with a moving boat or similar object, and a swinging nonextensible end piece attached to one of the main sections of the framework, and automatically adjustable guide plates connected with the frame and swinging end substantially as described.

2. A runway having a framework comprising two laterally movable end pieces, movable supporting brackets arranged lengthwise of the sections, and friction-reducing devices connecting the main portions of the framework substantially as described.

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

JAMES PATTERSON, JR.

Witnesses:

J. F. HARRIS,

W. M. BROWN.