

(No Model.)

J. H. ABEEL, Jr.

ANTI-FRICTION RUNNER FOR SLIDING SEATS.

No. 390,740.

Patented Oct. 9, 1888.

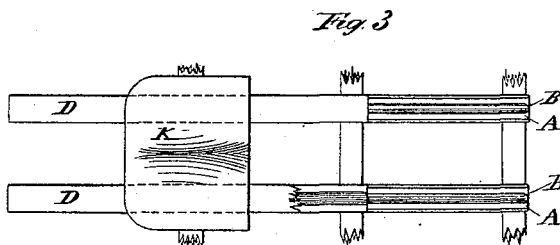
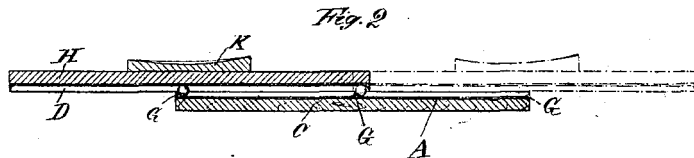
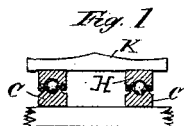


Fig. 4

Fig. 5

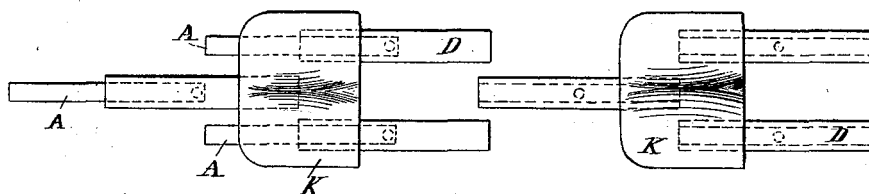
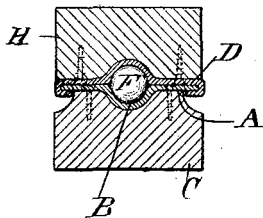


Fig. 6



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ANTI-FRICTION RUNNER FOR SLIDING SEATS.

SPECIFICATION forming part of Letters Patent No. 390,740, dated October 9, 1888.

Application filed May 17, 1888. Serial No. 274,130. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. ABEEL, JR., a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Anti-Friction Runners for the Sliding Seats of Row-Boats and other Purposes, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

This invention has primarily for its object the construction of what is known among oarsmen as the "sliding" seat. The results aimed at are to secure a substitute for the runners commonly employed which will not require cleaning and oiling, but which will permit the seat to be shifted to and fro with the minimum resistance.

Many modifications of the ordinary forms of slide have been made and used with varying success; but the high cost of all the proposed substitutes, together, in most cases, with the necessarily complicated or fragile character of the devices employed, has stood in the way of their general adoption and use. For example, it has been proposed to run the seat over rollers, to mount it on wheels, and in various similar ways to reduce the friction and to avoid the use of oil and grease. What are known as "ball-slides" have also been used—that is to say, two long boxes are attached to the seat and bear on anti-friction balls carried by boxes mounted on braces in the boat. In such case the balls are confined in compartments in the boxes.

My invention is an improvement on this last-described form of slide.

In carrying out my invention I form, usually by drawing, brass strips with a longitudinal bead. One of these strips is slightly wider than the other and its edges are bent over, so that when the other strip is slipped endwise into it said edges will overlap the narrow strip, preventing the two from being separated. Two of these strips are secured to the braces of the boat and the others to the seat, and small balls are placed in the channels formed by the opposing beads and retained by stops or partitions soldered in the beads.

The invention also includes a special com-

bination of these slides with a seat, as will be hereinafter set forth.

In the drawings, Figure 1 is a cross section of the runners. Fig. 2 is a longitudinal section of one of the runners. Fig. 3 is a plan view of the runners and seat. Figs. 4 and 5 are plan views of a modification, and Fig. 6 is a full-sized section of a runner with braces secured to the parts of the same.

A designates one of the metal strips. It may be of any suitable metal, and is provided with a central bead, B, which forms a groove along the center of the opposite side of the strip. In practice I make these strips comparatively thin and light and secure them to a wooden bar or base, C, which is to be suitably mounted in the boat. D is the other or upper strip. It is made in a similar manner with a longitudinal bead, that forms a groove, which, with the groove in strip A, when the two strips are associated, forms a tubular channel or chamber for the steel or other balls, F. Both the strips have stops or partitions G secured in the grooves—one in the center and one at or near each end. These form compartments to retain the balls in proper position to sustain the weight of the seat and its occupant.

In order to prevent the seats from jumping or falling out by the handling of the boat, the upper strips, D, are formed with downwardly and inwardly bent edges, which extend over the edges of the under strips, A.

The strips D, unless made of sufficient rigidity, are secured to light but strong wooden bars H, and on these the seat K is mounted.

The extreme positions of the seat and movable parts of the slide are shown, respectively, in Figs. 2 and 3.

In lieu of using two side runners of full length, I may use two short side runners and a central runner. This is shown in Fig. 4. The construction of the runners is the same as that described; but the seat is secured to the three upper strips, D D D, preferably to the after ends of the side strips and forward end of the center strip.

The length of the cockpit of some boats is so small as to require holes to be made in its forward end to permit the long strips D D to project when the seat is pushed to its fullest

extent forward; but by using two short side runners and the central runner this will be avoided, while the full length of the slide is obtained. This is made possible by the tapering or pointed shape of the cockpit forward.

The advantages of this device are its lightness, simplicity, strength, cheapness, and durability. The bearing-surfaces are brought in the closest possible proximity to each other, and are secured absolutely from separation, so that the attempts so persistently made by nearly every ordinary or unskilled oarsman to unship his seat by rolling or pulling in an arc of a circle rather than in a line with the keelson are entirely thwarted.

As the metallic strips of the slide are easily made by a single or continuous operation, the cost is very much reduced.

What I claim is—

1. The combination, with a boat-seat and the supports therefor, of metallic strips A, secured to the seat, and strips B, secured to the supports, both strips being formed with longitudi-

nal grooves and the edges of one strip of each pair overlapping those of the other, and anti-friction balls contained in compartments in the channels formed by the longitudinal grooves in the strips, as herein set forth.

2. The combination, with a sliding seat, of runners composed of metallic strips each having a central groove formed by a longitudinal bead, and fastened to wooden bars to secure the requisite rigidity, and balls contained within the chambers formed by the grooves, and stops or partitions in the grooves for dividing the same into compartments.

3. The combination of two side runners composed of grooved strips with intermediate anti-friction balls, and a central runner of like construction placed forward of the side runners, and a seat secured to each of the upper grooved strips of the runners, as set forth.

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Witnesses:

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