

(No Model.)

2 Sheets—Sheet 1.

M. F. DAVIS.

### ROW BOAT SEAT.

No. 282,855.

Patented Aug. 7, 1883.

Fig. 1

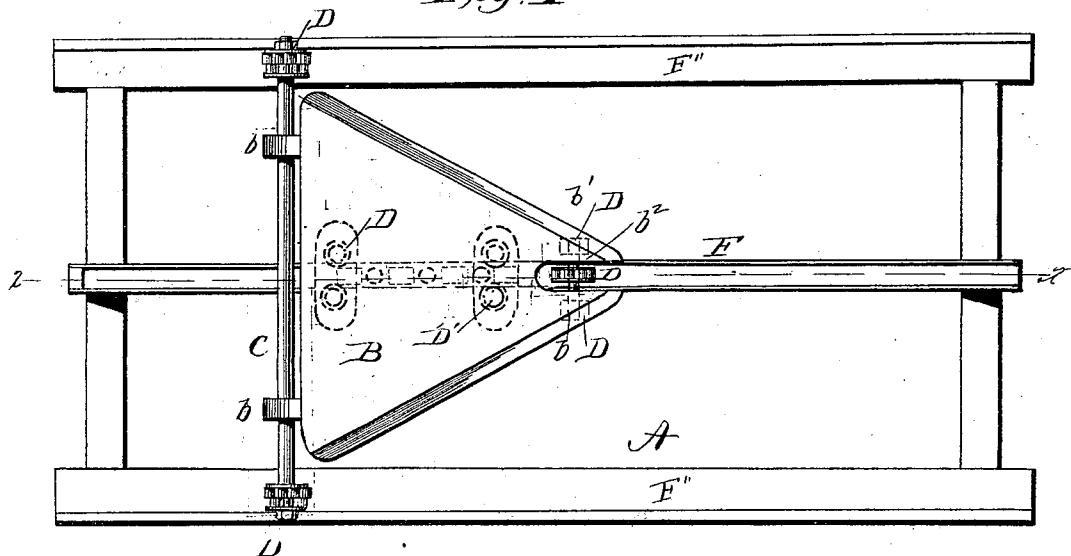


Fig. 2

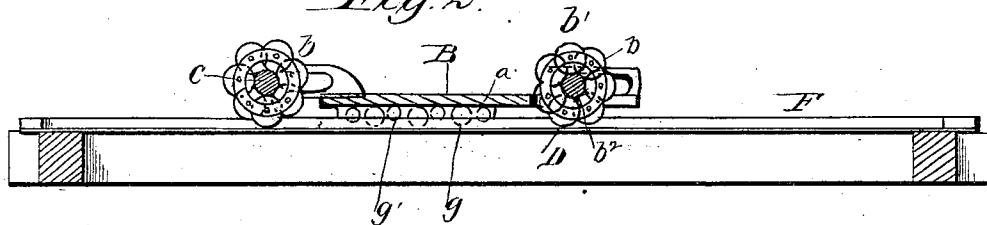
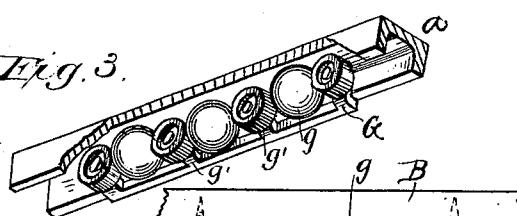
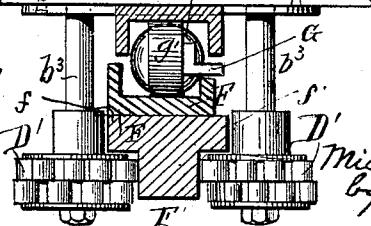


Fig. 3.



Eri



**WITNESSES**

Frank L. Oerard,  
George Cornell.

*INVENTOR*

Michael F. Davis  
by L. Deane  
his Attorney

(No Model.)

2 Sheets—Sheet 2

M. F. DAVIS.

ROW BOAT SEAT.

No. 282,855.

Patented Aug. 7, 1883.

Fig. 5.

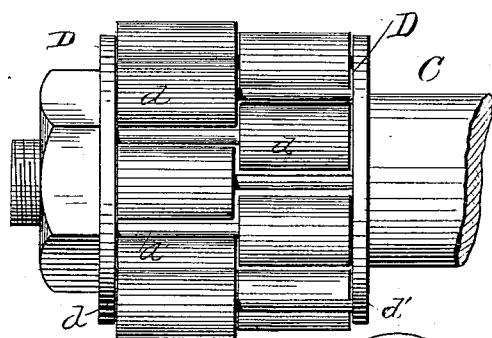
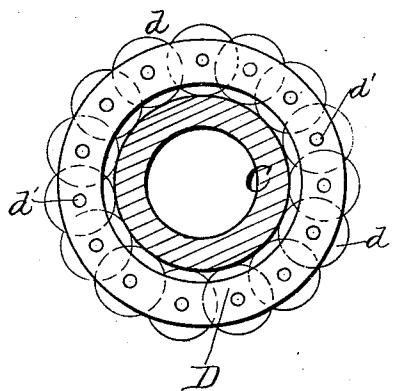


Fig. 6.

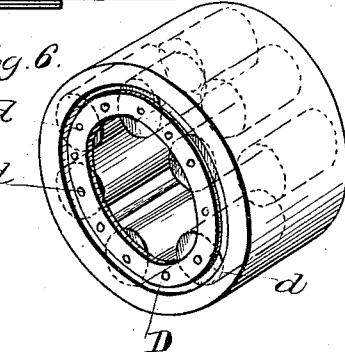


Fig. 7.

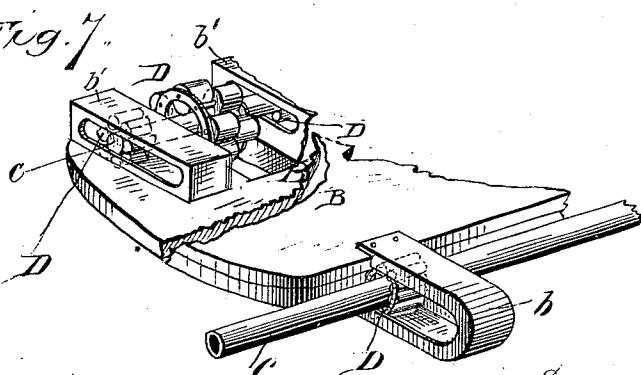
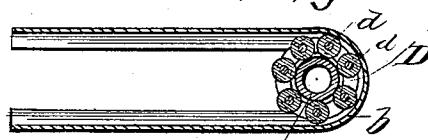


Fig. 8.



WITNESSES

Frank L. Ormond  
George Cornell

INVENTOR

Michael F. Davis  
by L. Deane  
his Attorney

# UNITED STATES PATENT OFFICE.

MICHAEL F. DAVIS, OF PORTLAND, MAINE.

## ROW-BOAT SEAT.

SPECIFICATION forming part of Letters Patent No. 282,855, dated August 7, 1883.

Application filed February 15, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL F. DAVIS, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Row-Boat Seats; 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 applies to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a plan view of a seat provided with my anti-friction rolls and in position in a row-boat. Fig. 2 is a section on line  $x x$ , Fig. 1. Fig. 3 is a detail in perspective of the rolls under the body of the seat. Fig. 4 is a front elevation, partly in section, to show the lateral rolls in position under the seat. Fig. 5 shows in two views, respectively in end and side elevation, a gang of anti-friction rolls. Fig. 6 is a perspective showing the rolls with a flanged tire; Fig. 7, a perspective view of these gang-rolls applied at front and rear of the seat. Fig. 8 is a detail in section, showing the gang-rolls applied to the rear supporting shaft of the seat.

This invention relates to improvements in racing-boats; and it consists chiefly in details concerning the mounting of the seat.

In the accompanying drawings, A denotes the boat, and B the sliding seat. This seat is mounted at the rear on shaft C by means of the boxes b, preferably two, one on each side of the seat. The bearings in these boxes are quite long, so as to allow considerable fore-and-aft movement of the shaft C. This shaft is usually made of metal pipe. Each box b has inside a gang of anti-friction rolls, D. (See Fig. 5.) This gang is made of a series of small rolls, d, mounted between rings d', so that a set of rolls come on one side and a set on the other, the axis of the rolls in the last being between the peripheries of the first in proper alternation, so that when the gang is used the friction comes on alternate sides from roll to roll. Each gang is thus free to have a rotary motion in the box b, which the shaft C is supported by, and revolves on their inner peripheries. The outer ends of the shaft C are also

supported on like rolls, D. The track of these rolls may be merely the upper face of the gunwales F' F" of the boat; or a steel or suitable track may be laid on the frame-work of the boat. The front or aft end of the seat is supported on the short shaft b<sup>2</sup>, which, at its ends, is journaled in the boxes b', and these boxes are, on their inside, of the same shape and carry gang-rolls as do boxes b, and in the middle this shaft b<sup>2</sup> revolves in and is supported by the larger gang-rolls D, which run on the track F, extending fore and aft of the boat, and supported by the keelson. The side boxes, b', will come a little above the seat, and the center gang, D, will play in a slot in the front end of the seat. On the under side of the seat is fixed the channel a, which comes over the center track, F, and is sustained by the balls g, each of which comes intermediately between a pair of the rolls g'. These rolls are attached to the independent piece or pieces G, so as to revolve, thus affording a very easy and movable support for the seat. The forward and rear movement of this central support under the seat may be controlled by suitable stops, so that it cannot pass from under the seat. The balls g are preferably used; but it is obvious that many of the advantages now described could be secured by the use of the rolls g' alone. I may also use balls alone on this track, keeping them in place by suitable stops.

At the extreme fore-and-aft part of the seat are fixed the vertical rolls D'. There are two forward and two aft. Each of said rolls revolves on the end of a vertical rod, b<sup>3</sup>, suspended from the seat. There is a pair of the rolls at front and a pair aft, each pair placed so as to have a roll on each side of the sill F' of the track F, so as to come under its edge f. The office of these rolls D' is to overcome lateral friction on the seat, always arising in using a sweep or in rough water, and by means of them the seat will always be held firm in position, and yet be wholly free to move fore and aft along the track. These rolls D' are exactly similar in construction to those above described in Fig. 5.

The bearing-boxes b and b' are each elliptically shaped, to allow necessary fore and aft movement of the shafts C and b<sup>2</sup>, so as to prevent as much as possible the friction of the

shafts and their rolls, and also to enable the movements of the seat to be more readily and suitably effected.

Having thus described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. In a row-boat, a seat supported by suitable anti-frictional bearings on shafts movable on anti-frictional bearings and by longitudinal anti-frictional bearings, whereby said seat has free fore-and-aft movement, substantially as described.

2. In a row-boat, a seat suspended from shafts which are movably supported, the one at the sides of the seat and the other beneath the seat, by anti-friction bearings, substantially as described.

3. In a row-boat, a seat movably supported by central anti-frictional bearings aft, and by side anti-frictional bearings forward and by longitudinal anti-frictional bearings beneath, substantially as described.

4. The seat B, supported at the rear by anti-frictional gang-roll bearings on a shaft having at its ends anti-frictional gang-rolls, and at the front centrally supported on anti-frictional gang-roll bearings, substantially as described.

5. In a row-boat, a seat supported on and movable by means of anti-frictional bearings acting vertically and laterally, said bearings not being attached to said seat, substantially as described.

6. A row-boat having a movable seat, and in combination therewith anti-frictional bear-

ing-shafts, said shafts being mounted in boxes 35 considerably longer than the diameters of the shafts, so as to permit a movement of the shafts lengthwise of the boxes, substantially as stated.

7. In a row-boat, a seat, B, combined with the independent piece or pieces G, provided 40 with anti-frictional rolls bearing on the tracks or guideways, substantially as described.

8. The combination, with the seat of a row-boat, of anti-friction rolls or balls operating against lateral supports, substantially as de- 45 scribed.

9. In a row-boat, a seat provided with anti-frictional supports, whereby it is sustained and is movable, combined with lateral anti-frictional rolls, substantially as described. 50

10. In a row-boat, the combination of the seat B, supported and movable, as described, with the gunwales F", substantially as set forth.

11. The seat B, mounted on shaft C, as de- 55 scribed, at its rear end, and on shaft b' at its front end, each of said shafts being provided with rolls D, substantially as set forth.

12. In combination with the seat B, having the channel a under it, the track F, piece G, 60 rolls g', and balls g, substantially as set forth.

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

MICHAEL F. DAVIS.

Witnesses:

JOHN B. MILLS,  
FRANCIS G. INGERSOLL.