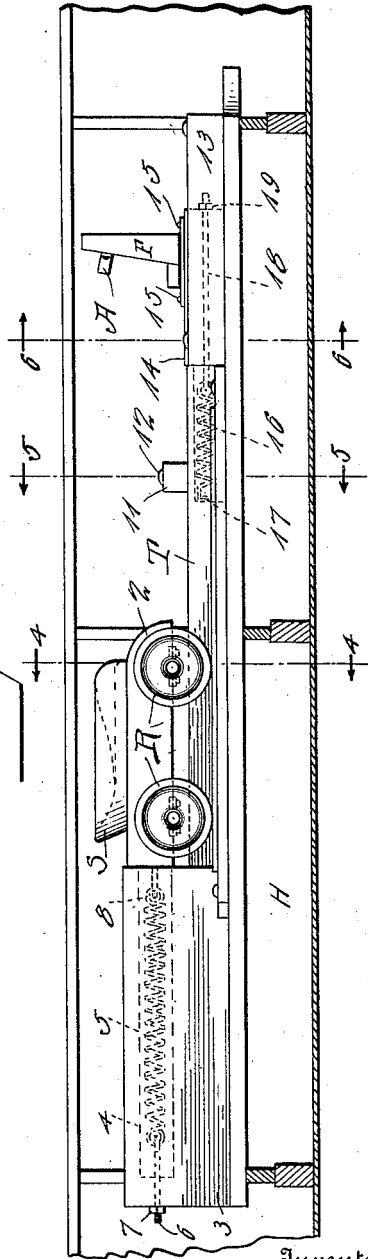
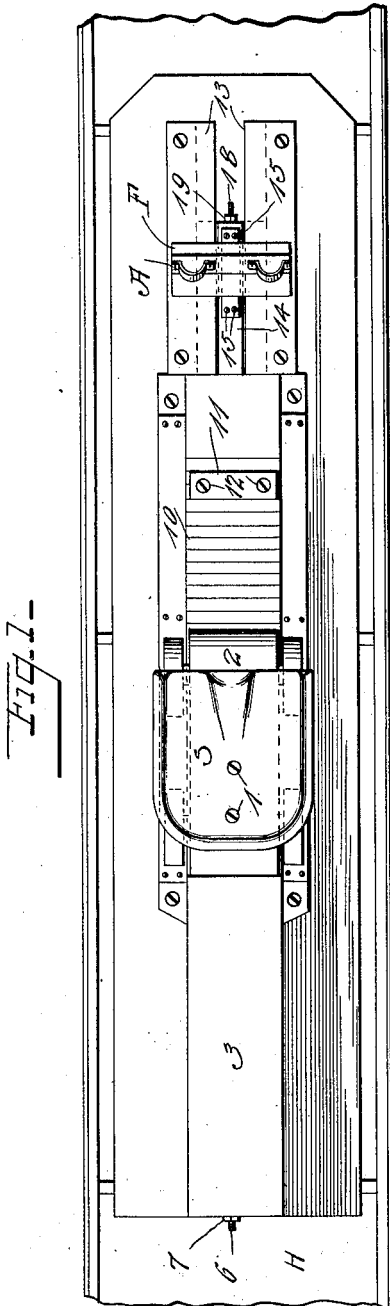


A. GERARDIN & C. SAUVÉ.
 SLIDING BOAT SEAT.
 APPLICATION FILED JUNE 24, 1912.

1,058,855.

Patented Apr. 15, 1913.

2 SHEETS—SHEET 1.



Witnesses
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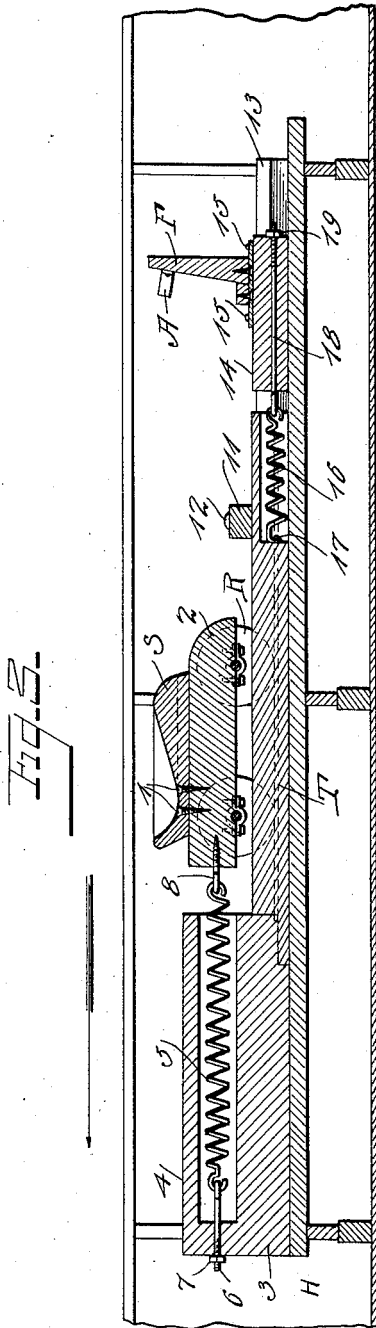


FIG. 4.

FIG. 6.

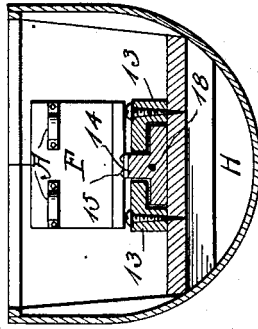


FIG. 5.

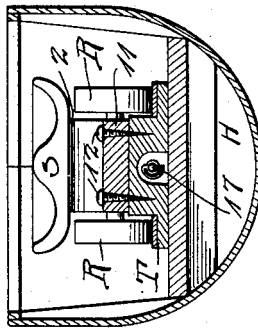
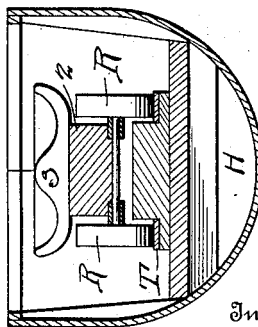


FIG. 3.



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UNITED STATES PATENT OFFICE.

ADRIAN GERARDIN AND CHARLES SAUVÉ, OF PEMBINA, NORTH DAKOTA.

SLIDING BOAT-SEAT.

1,058,855.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed June 24, 1912. Serial No. 705,574.

To all whom it may concern:

Be it known that we, ADRIAN GERARDIN and CHARLES SAUVÉ, citizens of the United States, residing at Pembina, in the county of Pembina and State of North Dakota, have invented certain new and useful Improvements in Sliding Boat-Seats; and we do 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.

This invention relates to boats, and more especially to the seats and foot supports thereof; and the object of the same is to improve the construction of a racing shell by making its seat and foot rests movable, drawing each forward within the hull by a spring, and mounting the seat on a carriage which makes pounding contact at each stroke with an anvil fixed within the hull of the shell. These objects are carried out by constructing the mechanism in the manner hereinafter more fully described and claimed, and as shown in the drawings, wherein—

Figure 1 is a plan view, and Fig. 2 a side elevation of this device, mounted within the hull of a racing shell. Fig. 3 is a central longitudinal sectional view through the entire device and the hull, showing the seat in a slightly different position from that illustrated in Figs. 1 and 2. Figs. 4, 5 and 6 are cross sections on the lines 4—4, 5—5 and 6—6 of Fig. 2 respectively.

In the drawings we have used the letter H to designate the hull of the boat, S the seat, and F the foot rest. In racing shells the hull construction is extremely light, as also are all parts thereof including the seat and foot rest, said seat is usually of the bucket type with or without means for holding the oarsman in place, and the foot rest may have straps or other attaching means A for holding the feet thereon. All these details are well known, and no novelty is claimed therefor; nor for the fact broadly speaking that the seat reciprocates on a track T, being shown in the drawings as guided thereon by rollers R.

Coming now more particularly to the gist of the present invention, the seat S is by

preference adjustably mounted as by screws 1 upon a rather heavy block constituting a carriage 2 which may slide on the track or, as in the present case carry rollers R movable on the track as shown. Within the hull forward of the track is securely fixed a bulkhead or other stout structure constituting an anvil 3 which is of some considerable size as shown and preferably rises above the top of the carriage 2, its body being cored out so as to produce a chamber in which is mounted a contractile spring 5 connected at one end to the anvil as by having its extremity 6 projected through the front end thereof and carrying a nut 7, and connected at its other end as at 8 to the front end of the carriage 2. The latter is thereby normally drawn into contact with the rear end of the anvil with a force dependent on the strength of the spring and the extent to which it is adjusted at the point 7.

Along the top of the track is marked a scale 10, and 11 is a stop adjustable over said scale and capable of being set at different points by means of any suitable device such as set screws 12; and the function of this stop is to limit the rearward movement of the carriage and seat. To the rear of the track T are parallel guides 13 having undercut adjacent edges between which moves a slide 14 whose projecting portion carries a foot piece F, and the latter may be adjustable thereon by any suitable means such as set screws 15. The lower end of this slide is drawn normally forward toward the seat by means of a contractile spring 16 attached at its front extremity at 17 to the rear end of the track; and, as in the case with the other spring, the rear extremity 18 of this spring may pass through the lower end of the slide 14 and receive a nut 19 so that the tension of this spring may be adjusted.

This attachment applied to a racing shell, a practice boat, or to a rowing machine, is used as follows: When the oarsman takes his seat and places his toes under the straps A, the parts stand at rest and he is supposed to be sitting upright with the blades of the oars resting on the surface of the water and his arms and hands in natural position, and

if such is not the case, the seat and the foot rest should be properly adjusted, one on the carriage 2 and the other on the slide 14; so that the device will fit the oarsman.

5 Straightening out his arms and knuckling up his knees, the oarsman now throws the blades of the oars forward by pushing their handles to the rear; and at this time, while he is really doing no work toward propelling the boat, this device compels him to do the work of expanding the main spring as he slides the seat and carriage to the rear. When it strikes the stop 11, he raises his hands and depresses the blades in the water, and the next movement is to straighten his legs and draw in his arms in the act of making a stroke. This movement, when it occurs while racing, is performed very quickly and of course requires great strength and skill, because it is due to its successful performance that the shell shall be projected through the water with the greatest speed. By the use of my improvement this action is assisted by the contraction of the main spring, and at the close of this stroke the rather heavy carriage 2 strikes the anvil 3 with an impact dependent upon the force expended by the oarsman, his weight, and the strength of the spring. This impact shoots the boat forward while the oarsman is "recovering," or preparing for the next stroke.

The purpose of the spring applied to the foot rest is to keep a constant tension on the main spring as the oarsman is straightening his legs, while yielding at the last moment so as to facilitate the completion of his stroke. It will be obvious that the contraction of the main spring assists in the forward movement of the seat and therefore quickens the stroke, in addition to the forward impulse given to the boat by the impact above described.

A further feature of this invention when applied to rowing machines for the instruction of beginners, lies in the fact that the main spring prevents the young oarsman from recovering too quickly, because as soon as he begins the recovery movement of his stroke he feels the retarding action of this spring and is reminded that he has been told not to recover so speedily.

It will be unnecessary for the purposes of this specification to amplify details further than as above, or to give the sizes, shapes, proportions and materials of parts.

We have found by experiments that, although the disposition of the main spring as above described would seem to throw additional labor on the oarsmen in the act of recovering, this is offset by the fact that it renders him assistance in the act of making his forward stroke, permits him to complete it more rapidly, and adds his momen-

tum to the forward progress of the boat by the impact of the carriage with the anvil.

What is claimed as new is:—

1. A sliding seat for racing shells, and a spring drawing it normally toward the bow of the boat.

2. A sliding seat for racing shells, yielding means drawing it normally forward, and an anvil with which it contacts at the completion of its forward movement.

3. In a racing shell, a seat mounted on a carriage which is of considerable size, means for supporting the carriage slidably on the hull, an anvil fixed within the hull forward of said carriage and seat, and a spring bearing the carriage normally forward and adapted to throw it into contact with the anvil at the completion of the power stroke.

4. In a racing shell, the combination with a tubular anvil fixed within the hull, a contractile spring disposed within the bore of the anvil, and adjustable connections between its forward end and the front end of said anvil; of the seat mounted on a sliding carriage of considerable weight, and connections between said carriage and the rear end of the spring, for the purpose set forth.

5. In a racing shell, a seat, a foot rest, and a spring connecting the latter with a fixed part of the shell structure and drawing the foot rest normally toward the seat.

6. In a racing shell, the combination of the seat, a spring moving it normally forward, the foot rest, and a spring moving it normally forward.

7. In a racing shell, the combination with the seat, a carriage on which it is mounted, an anvil fast within the hull forward of the carriage, and a spring moving the carriage normally forward and into contact with the anvil; of the foot rest, and spring pressing it normally toward said seat.

8. In a racing shell, the combination with the seat, a carriage on which it is mounted, an anvil fast within the hull forward of the carriage, and a spring moving the carriage normally forward and into contact with the anvil; of the foot rest, a slide to which it is adjustably secured, guides within which the slide moves, and a spring bearing the slide normally forward within said guides.

9. In a racing shell, the combination with the seat, a carriage on which it is adjustably mounted, an anvil fast within the hull forward of the carriage, and means moving the latter normally forward and into contact with the anvil; of a foot rest, a slide on which it is adjustably mounted, and means for moving the slide normally forward with yielding force.

10. In a racing shell, the combination with a track having a scale, a stop adjustable on the track over the scale, a carriage movable on the track, and a seat on the car-

riage; of an anvil fast within the hull at the front end of the track, and a foot rest.

11. In a racing shell, the combination with a track having a scale, a stop adjustable on the track over the scale, a carriage
5 movable on the track, and a seat on the carriage; of an anvil fast within the hull at the front end of the track and having a tubular body, and a contractile spring disposed
10 within said tubular body and attached at

its rear end to the carriage and at its front end to the anvil.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

ADRIAN GERARDIN.
CHARLES SAUVÉ.

Witnesses:

ARCHIE LIPINE,
J. BART CONMY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
