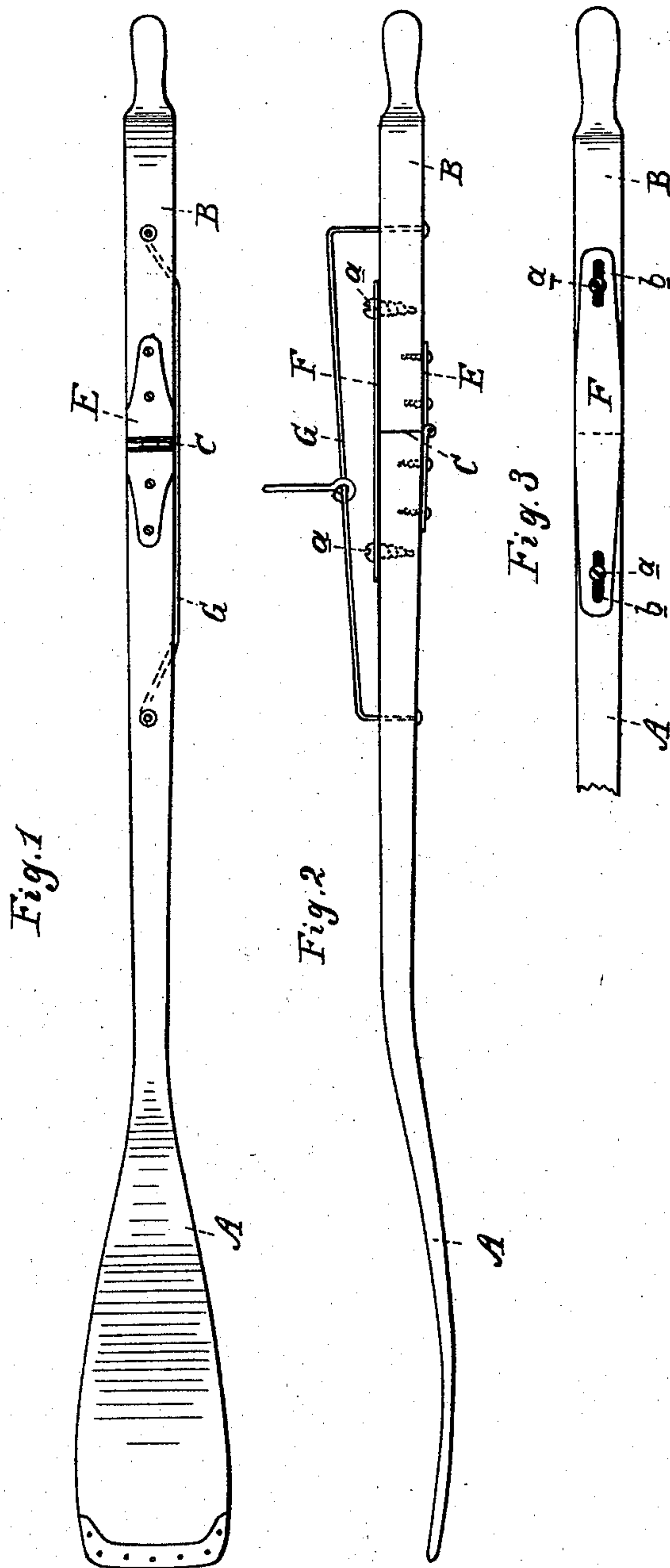


(No Model.)

C. G. VAN FLEET.
SPRING JOINTED BOAT OAR.

No. 388,467.

Patented Aug. 28, 1888.



Attest:
John Schuman.
R. M. Hulbert.

Inventor:
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Atty.

UNITED STATES PATENT OFFICE.

CHARLES G. VAN FLEET, OF TROY, PENNSYLVANIA.

SPRING-JOINTED BOAT-OAR.

SPECIFICATION forming part of Letters Patent No. 388,467, dated August 28, 1888.

Application filed April 13, 1888. Serial No. 270,518. (No model.)

To all whom it may concern:

Be it known that I, CHARES G. VAN FLEET, a citizen of the United States, residing at Troy, in the county of Bradford and State of Pennsylvania, have invented certain new and useful Improvements in Spring-Jointed Boat Oars, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in spring-jointed boat-oars; and the invention consists in providing the oar with a spring-joint whereby the power can be applied to greater advantage toward the
15 end of the stroke than with the use of the ordinary oars; and, further, it consists in the peculiar arrangement of different parts whereby the oar is adapted to be used in the ordinary manner.

20 In the drawings which accompany this specification, Figure 1 is a side elevation of my improved oar. Fig. 2 is a plan, and Fig. 3 is an elevation of the side opposite to Fig. 1.

25 A is the blade-section, and B is the handle-section, of the oar divided by the joint C, and these parts are connected together by means of a suitable hinge, E.

30 F is a spring, preferably a leaf-spring, applied to the side of the oar opposite to the hinge, and this spring is of such tension as to keep the oar normally straight, and when in operation give a limited spring to the oar. Suitable means, such as the screws *a*, engaging into the slots *b* of the spring, may be employed
35 to hold the spring in its proper relation to the oar and permit its free action in operation.

For the purpose of providing a fulcrum for the oar upon the boat, I secure to the front side of the oar the rail G, and with this rail I en-

gage the oar-lock, which may be of any suitable description, such as the ordinary form of thole-pins, or a staple through the eye of which the rail G engages, or otherwise. This rail G should be of suitable length to admit of sufficient lateral play to the oar to draw it in
45 the boat, or, as in sporting-boats is often done, to allow it to drag in the water without necessarily taking it out of the oar-lock.

By having the spring of a suitable degree of tension, proportioned to the power of the oarsman and the length of oar, great benefit will result from my construction, as the power of the oarsman is applied to the best advantage.

What I claim as my invention is--

1. A boat-oar consisting of two hinged sections having a spring uniting the said sections and serving to overcome the yield due to the hinge when the oar is in use, substantially as
55 and for the purpose specified.

2. In a boat-oar, the combination of the blade-section, the handle-section, the hinge connecting the same together, and a leaf-spring, F, applied to the side opposite the hinge and connected at or near its end to both sections,
60 substantially as described.

3. The combination, in a spring jointed boat-oar, of the sections A B, the hinge E, connecting said sections, the spring F, applied to the side opposite the hinge, and the rail G on said
65 oar and adapted to receive the oar-lock, all arranged to operate substantially as described.

70 In testimony whereof I affix my signature, in presence of two witnesses, this 9th day of April, 1888.

CHARLES G. VAN FLEET.

Witnesses:

JOHN SCHUMAN,
P. M. HULBERT.