(No Model.)

W. M. SPANN.

PROPELLER FOR BOATS.

No. 568,499. Patented Sept. 29, 1896.

Fig. 1.

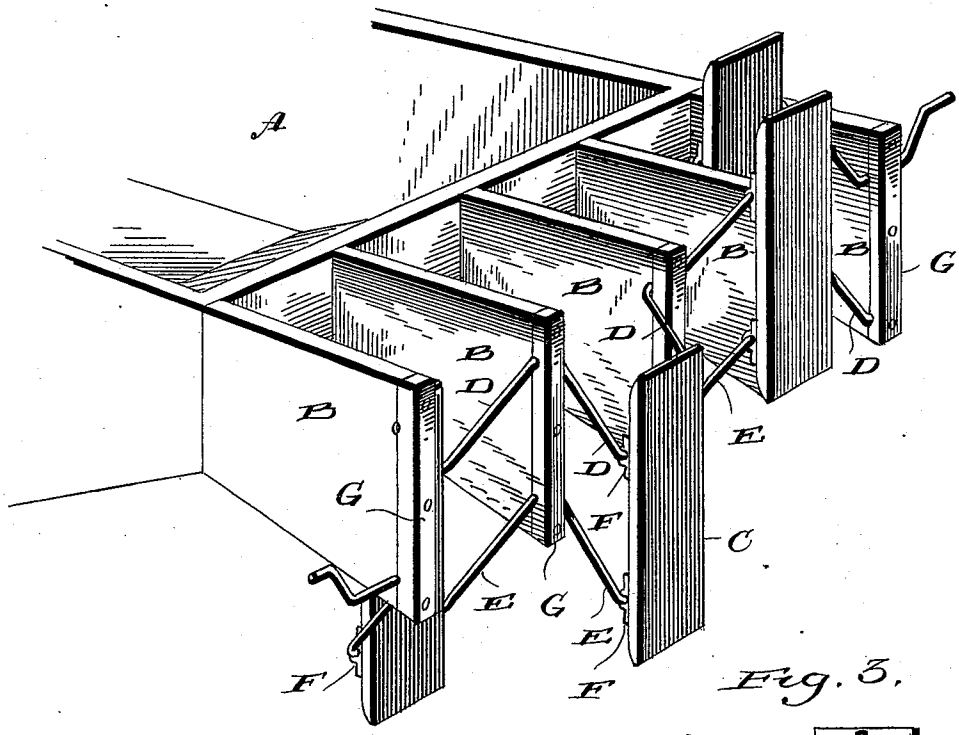


Fig. 3.

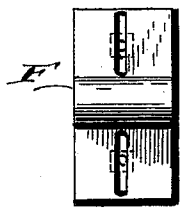
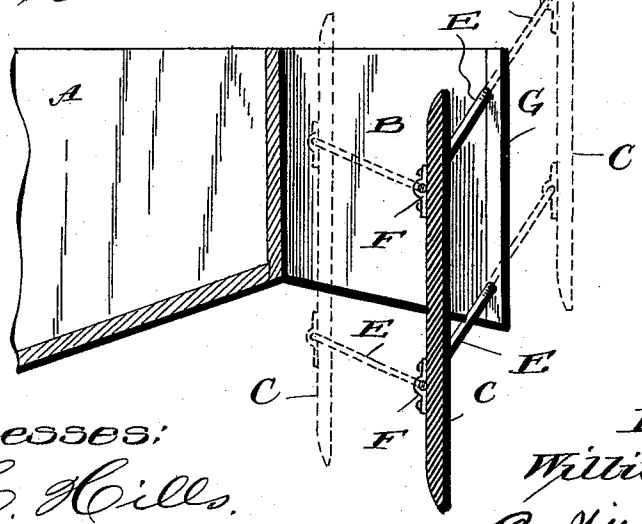


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM M. SPANN, OF DONIPHAN, MISSOURI.

PROPELLER FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 568,499, dated September 29, 1896.

Application filed May 21, 1896. Serial No. 592,494. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. SPANN, a citizen of the United States, residing at Doniphan, in the county of Ripley and State of Missouri, have invented certain new and useful Improvements in Propellers for Boats; and I 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in propellers for boats of that class in which the paddle-bar is mounted to move vertically through the water, so that the lifting of the water is avoided. The paddle is mounted so that it enters the water endwise and comes out the same way. Lifting of the dead-water is avoided and hence increased power is attained by less exertion of the person in the boat. Any desired number of paddles may be employed.

The invention has for its object to provide an improved construction of this kind which shall be simple, cheap, durable, and efficient and so constructed that the paddles may be easily adjusted to any depth of water.

Other objects and advantages of the invention will hereinafter appear and the novel features thereof will be specifically defined by the appended claim.

The invention in this instance resides in the peculiar combinations and the construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view showing the application of my invention. Fig. 2 is a vertical longitudinal section through the same through one of the paddles. Fig. 3 is a detail showing the manner of adjusting the stirrups.

Like letters of reference indicate like parts in the different views.

Referring now to the details of the drawings by letter, A designates a portion of a boat of any sort to which the paddles may be applied either at the stern or side. In this instance they are shown as applied at the stern. In this arrangement the rearwardly-projecting supports B are disposed substantially parallel with each other, and in the spaces between these supports the paddles are mounted to work.

C are the paddles, of any desired material and size and shape. There may be more or less of them, and they are mounted upon the crank-shafts D and E, which are disposed in parallel relation with each other, as seen in both of the views. The crank-shafts are mounted in the outer ends of the vertical supports B, and the paddles are secured to the cranks by means of the stirrups or the like F, which are adjustable thereon, as seen in Fig. 3, so that the paddles may be raised or lowered according to the depth of the water.

The bearings of the crank-shafts in the vertical supports are preferably partially in the ends of the supports and partially in the plates G, secured to the ends of the said supports, as seen best in Fig. 1. The crank-shafts are placed in position and then the plates are applied and screws or screw-threaded rods or other means employed for holding them in place. The paddles have their upper and lower ends beveled, as seen in Fig. 2, to facilitate their entering the water and moving out of the same.

The employment of the double crank-shafts is deemed important, as it insures movement of the paddles in a predetermined path and dispenses with the necessity of guides for the upper ends of the paddles and also avoids the necessity of the extension of the paddles to pass through and be guided by such guides.

Motion may be imparted to the crank-shaft, either the upper or lower one, in any desired manner, either by hand or through the medium of an endless chain or a pitman and connections, but as the means for operating the paddles forms no part of the present invention the same have not been shown.

What is claimed as new is—

The combination with a boat and the vertically-disposed supports at the rear thereof, of the removable plates on the rear ends of

said supports said supports and plates having oppositely-disposed recesses to form bearings for the crank-shafts, the crank-shafts mounted in said bearings in the same vertical plane but in different horizontal planes, the stirrups mounted on the paddles for vertical adjustment, and the paddles secured to the crank-shafts and having bearings in the stirrups, each paddle being connected with the cranks of both shafts, and having their ends beveled and adapted to enter and leave the water substantially vertically, substantially as herein shown and described.

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

WILLIAM M. SPANN.

Witnesses:
BENNETT PAUL,
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