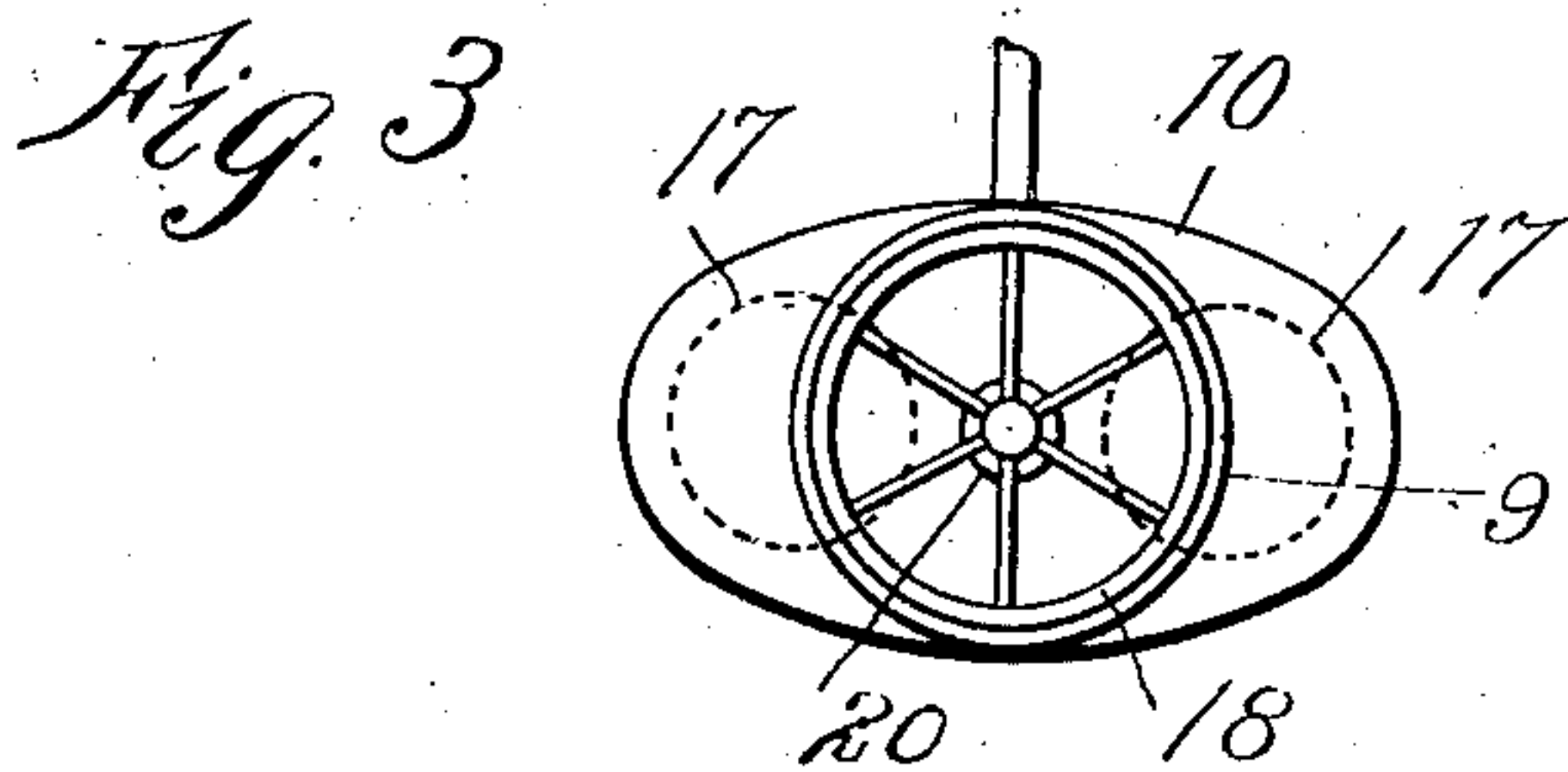
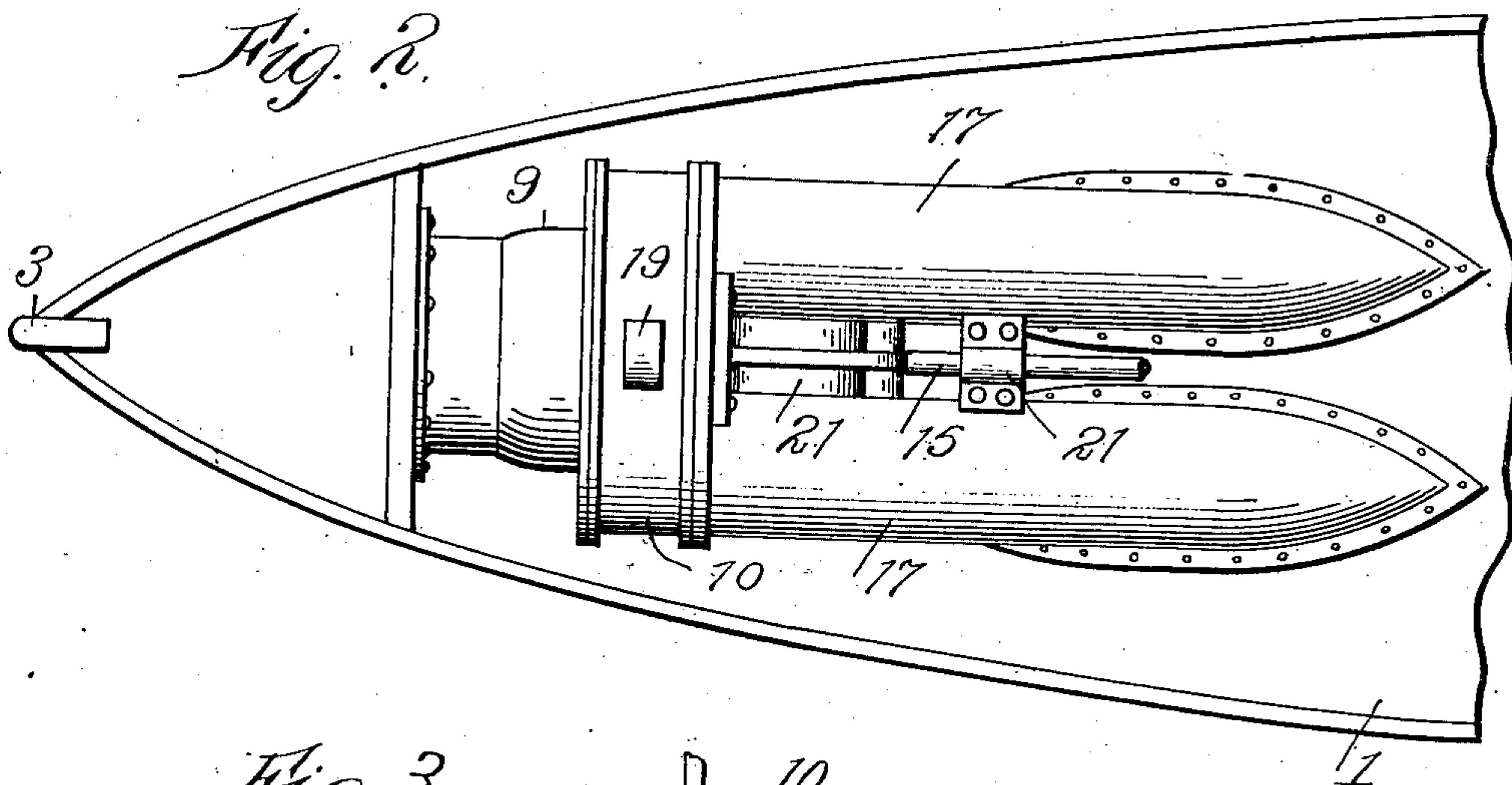
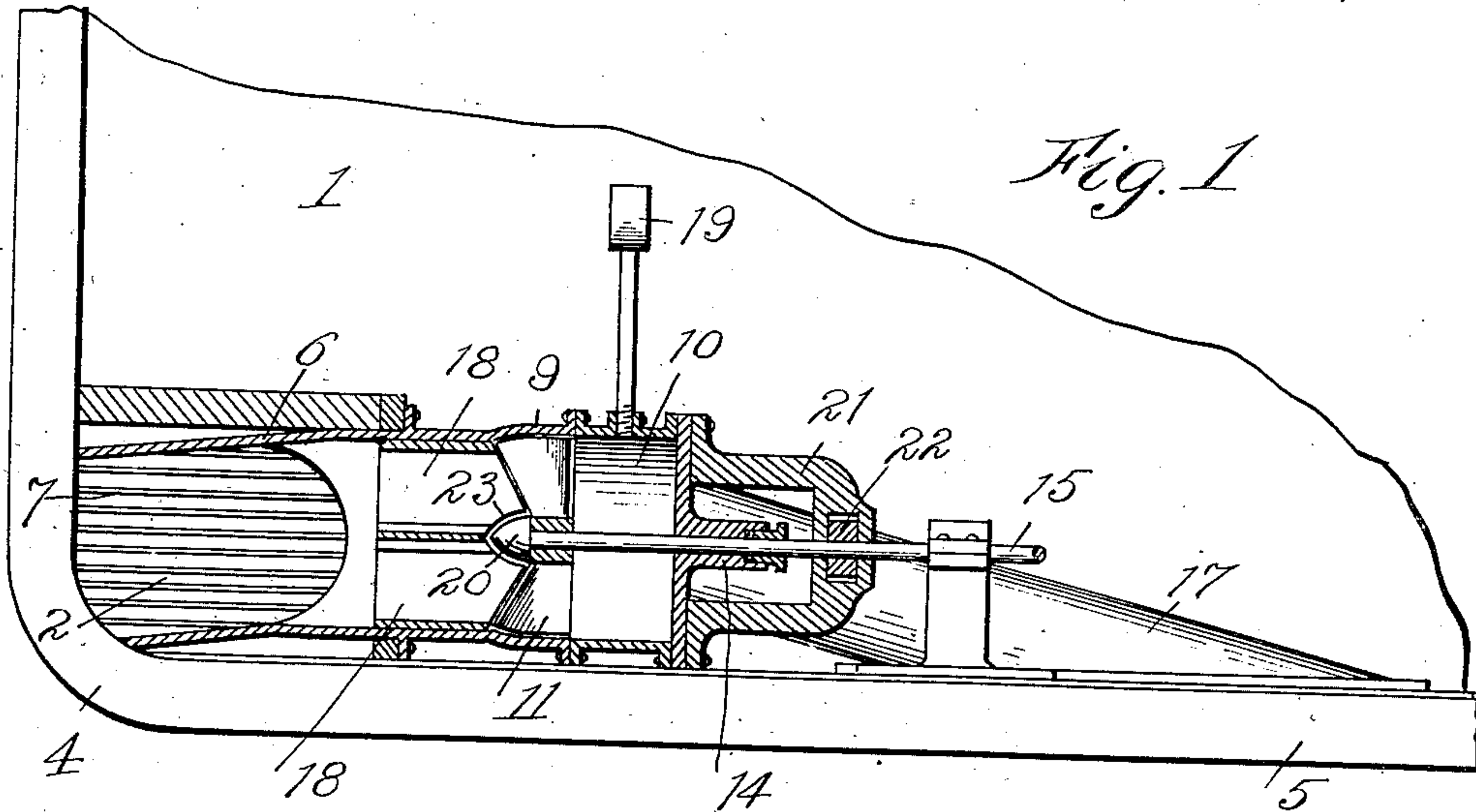


A. R. WEISZ.
SCREW PROPELLER.
APPLICATION FILED DEC. 28, 1907.

915,255.

Patented Mar. 16, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

ALBERT RICHARD WEISZ, OF BROOKLYN, NEW YORK, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO WEISZ ROTARY PISTON AND ATMOSPHERIC MOTOR COMPANY, A CORPORATION OF NEW YORK.

SCREW-PROPELLER.

No. 915,255.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed December 28, 1907. Serial No. 408,395.

To all whom it may concern:

Be it known that I, ALBERT RICHARD WEISZ, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented new and useful Improvements in Screw-Propellers, on which Letters Patent were granted to me on September 19, 1899, under No. 633,171.

The object of my improvement is to avoid the whirling motion of the water when entering the tube before it reaches the propeller.

I have found that in disposing the propeller described in the patent above referred to rather far away from the mouth of the inlet tube, which for structural reasons is of a certain advantage, the water drawn by the propeller into the tube is inclined to assume a whirling motion, tending to follow the motion of the propeller before it reaches the same, so that the action of the propeller blades may be rendered under certain circumstances ineffective. This whirling motion of the water in front of the propeller will increase with the number of blades on the propeller and will also increase, the farther the propeller is disposed back in the tube.

In order to compel the water to run through the tube to the propeller in a straight path substantially in parallel to the longitudinal axis of the tube, I have provided means which will lead the water in the manner described to the edge of the propeller, so that the latter can operate to its full efficiency.

My improvement is described in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of the fore portion of a boat, showing my improved propelling device in longitudinal section, Fig. 2 is a plan view thereof, and Fig. 3 is a transverse section through the intake tube on the line *a b*.

The boat is shown exactly in the manner described in the Letters Patent above referred to.

In Figs. 1 and 2, 1 represents the hull of the boat, 3, 4 and 5 the keel, of usual construction, 6 is the inlet tube with the inlets 7 on either side of the bow. In a suitably widened portion 9 of the tube 6 is disposed the propeller 11, suitably operated by shaft 15. A thrust bearing 22 is provided in yoke 21, suitably fastened to the portion 10 of the tube, which forms the pressure chamber of the system, as described in the patent above

referred to. The water is discharged from chamber 10 preferably in the same manner as described in said patent by means of the two discharge tubes 17, terminating at the bottom of the boat, one on either side of the keel and preferably not farther back than amidships. In intake tube 6 are radially disposed and fixed a suitable number of plates or partitions 18, extending from the suction side of the propeller (Fig. 1) a suitable distance toward the mouth of tube 6 substantially in parallel to the longitudinal axis of the tube. The plates 18 are brought as close to propeller 11 as mechanical reasons will allow, and are suitably shaped near the hub of the propeller at 23 to conform with the conical shaped end 20, of the propeller hub, which is provided on this hub for the purpose of deflecting water in the central portion of the tube toward the propeller blades. The mouth 7 of the tube may be covered by a screen or grid 2 of suitable size so as to keep foreign matter, floating on the water, out of the tube without obstructing the free flow of the water into the tube. The water, which has in entering tube 6 when the boat is in operation, the natural tendency to flow through said tube in a straight path, will be prevented by plates or walls 18 extending close to the propeller 9, from assuming a rotating or whirling motion, caused by the rotation of the propeller, and be guided in the same straight path to the propeller in which it enters the tube. Thus the propeller can act with its full efficiency upon the body of water which it is to force through the system. The preferred form in which the plates or walls 18 are arranged in tube 6 is shown in the cross-section in Fig. 3.

While I have shown in the drawings the preferred form of walls 18, I do not wish to limit myself to this form, as any other manner of disposing the walls or means for guiding the water in the manner described above are within the scope of my invention.

What I claim is:

1. In a device of the character described, the combination with a tube adapted to conduct fluid, a propeller in said tube adapted to draw the fluid into said tube at one end and discharge same at the other end; of means disposed in the suction side of said tube conforming snugly to the shape of said propeller for preventing a whirling motion of the fluid before it reaches said propeller.

2. In a device of the character described,
the combination with a tube adapted to con-
duct fluid, a propeller in said tube adapted to
draw the fluid into said tube at one end and
5 discharge same at the other end; of a suitable
number of fixed walls disposed radially in the
suction side of said tube snugly to said pro-
peller and conforming with the shape of said

propeller, and extending a suitable distance
from said propeller, substantially longitudi- 10
nally of said tube, to prevent a whirling mo-
tion of the fluid before it reaches the propeller.

ALBERT RICHARD WEISZ.

Witnesses:

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