

No. 812,604.

PATENTED FEB. 13, 1906.

J. J. SITZLER.
MARINE VESSEL.
APPLICATION FILED APR. 14, 1905.

Fig. 1.

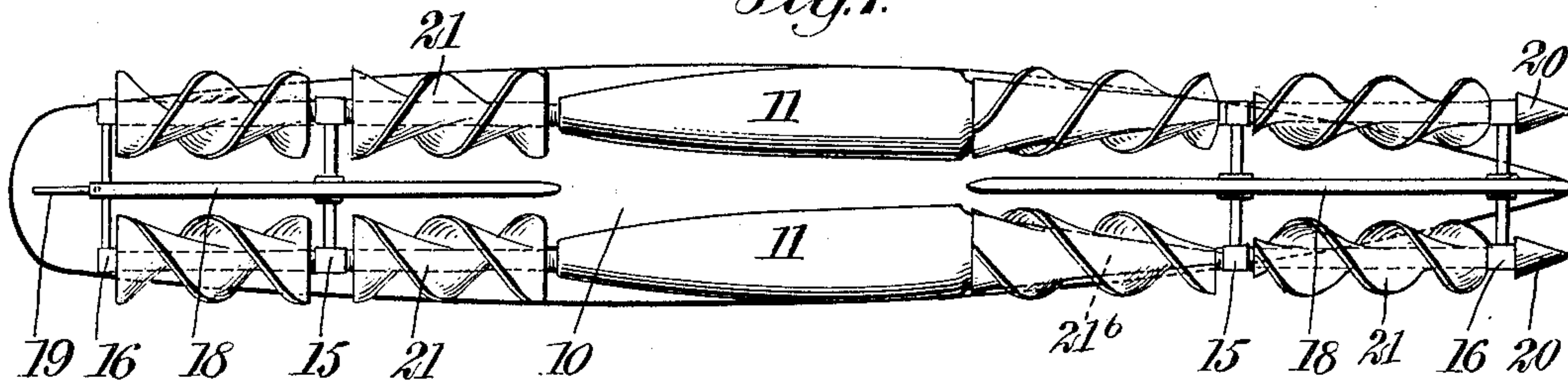


Fig. 2.

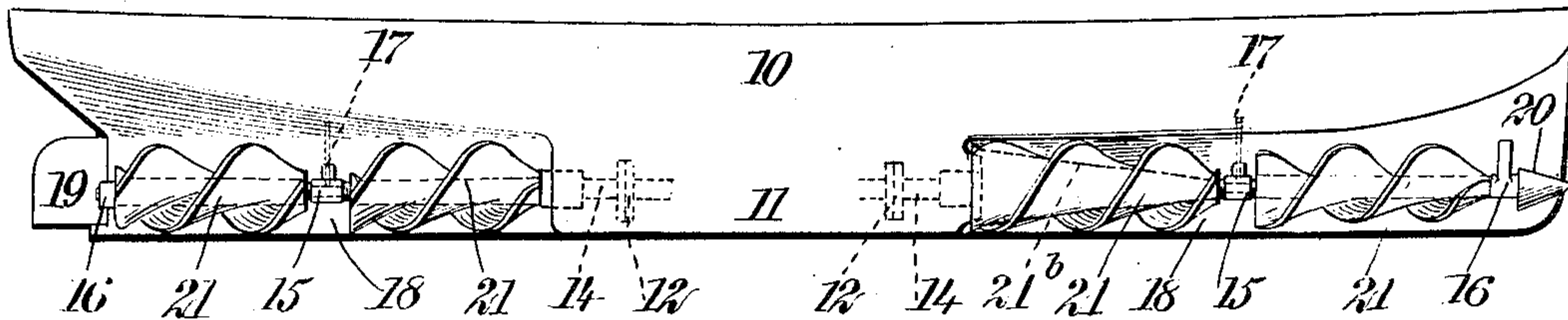


Fig. 3.

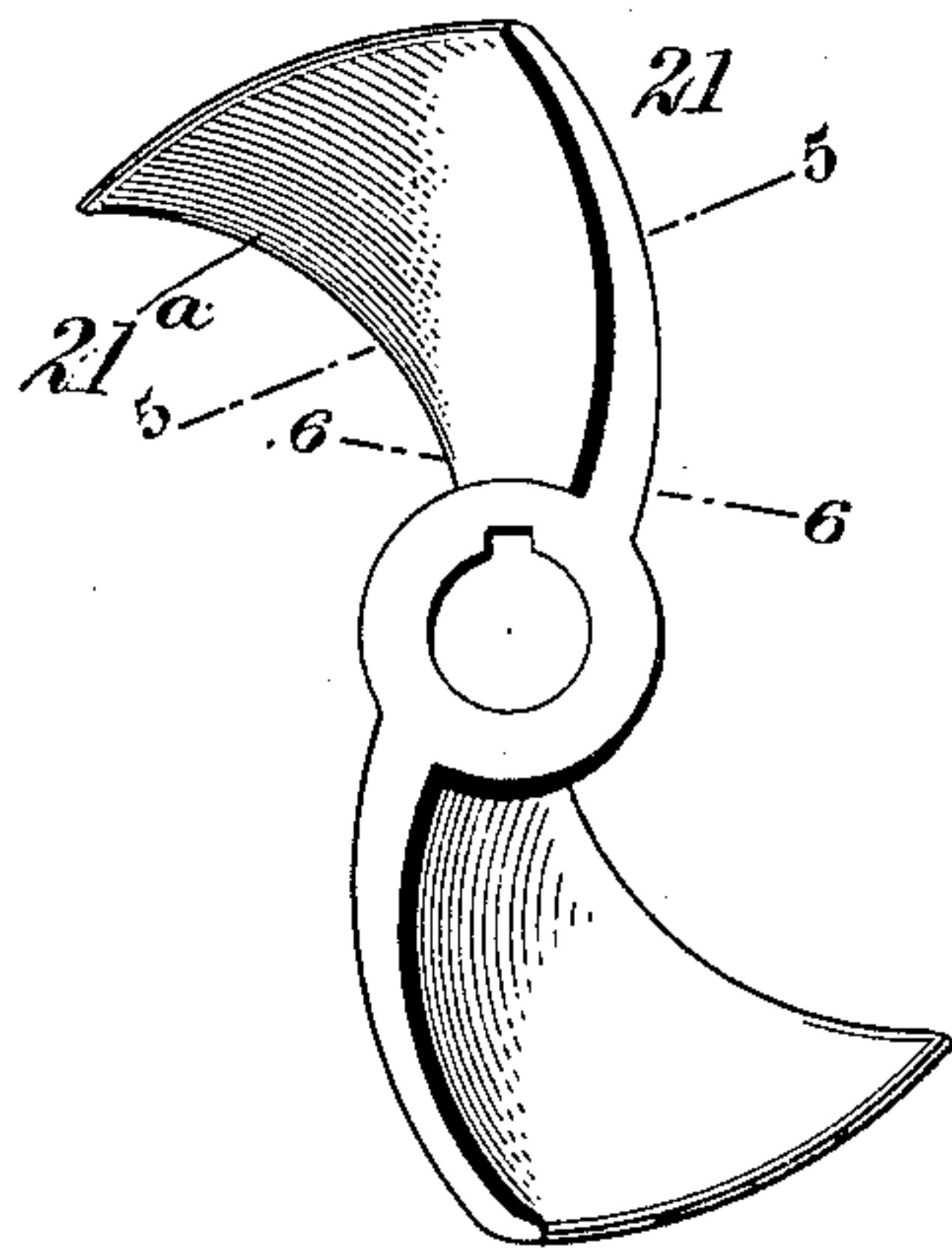


Fig. 4.

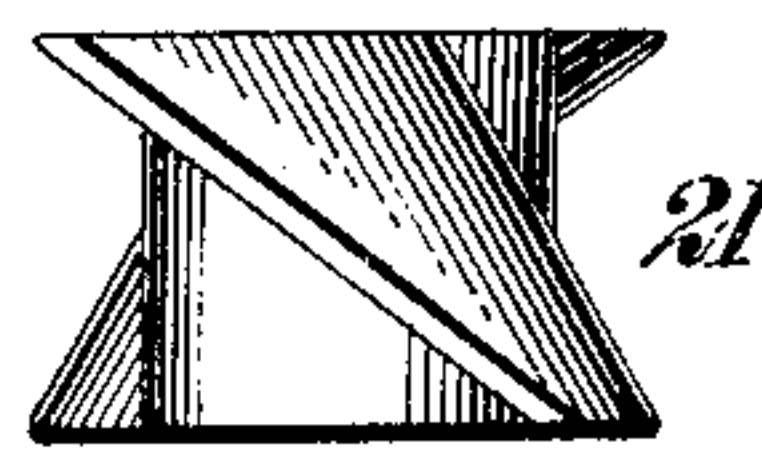


Fig. 5.

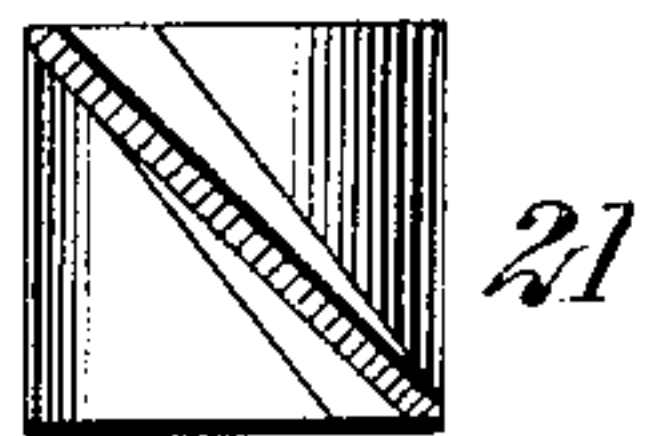


Fig. 6.



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MARINE VESSEL.

No. 812,604.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed April 14, 1905. Serial No. 255,493.

To all whom it may concern:

Be it known that I, JOHN J. SITZLER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Marine Vessel, of which the following is a full, clear, and exact description.

The invention relates especially to propulsion of marine vessels, the object being to reduce the displacement of the vessel to a minimum, so as to reduce the resistance to propulsion, and to produce a more efficient propeller than that commonly employed. I attain these ends by certain peculiar features of construction and arrangement of parts, all of which will be fully brought out hereinafter and pointed out in the claims.

Reference is to be had to the accompanying drawings, which illustrate as an example the preferred manner of embodying my invention, in which drawings like characters of reference indicate like parts in the several views, and in which—

Figure 1 is a bottom plan view of a marine vessel having two sets of propelling devices. Fig. 2 is a side elevation of the same. Fig. 3 is a detail view showing the form of the screw-propeller employed. Fig. 4 is an end view of the parts shown in Fig. 3, and Figs. 5 and 6 are respectively sections on the lines 5 5 and 6 6 of Fig. 3.

The hull 10 of the vessel is formed on its bottom with two pockets 11, which are intended to be submerged and which contain the crank-shafts of the two engines which drive the vessel. The crank-shafts of the engine are connected by couplings (indicated by broken lines 12 in Fig. 2) to the shafts 14 of the forward and after propellers. The shafts 14 project from the forward ends of the pockets 11 to the bow of the boat and from the after ends of the pockets to the stern, and said shafts are carried in suitable bearings 15 and 16, as shown. As indicated by the broken lines in Fig. 2, the bearings 15 have oil-ducts 17 therein, which permit lubricating the shafts from within the hull of the boat. Between each set of propellers a divisional wall or keel 18 is located, the keels running fore and aft and the aft keel carrying a rudder 19, as shown. At their front extremities the shafts 14 have conical heads 20, which serve to break the water from the bearings 16 adjacent thereto.

The propellers are in the form of continuous screws 21, each screw having two blades and said blades leaping or overhanging the shaft, as illustrated in Figs. 1 and 2. This overhanging of the blades is also illustrated at the point 21^a in Fig. 3. Such form gives the propeller the greatest efficiency. The forward propellers are provided with cones 21^b near the pockets 11, forming the shafts of the propellers. Said cones serve to open the water ahead of the pocket 11 and to reduce resistance against the pocket. The propellers 21 may be formed with their blades in integral lengths, as indicated in Figs. 1 and 2, or they may be formed of a number of sections, as indicated in Figs. 3 to 6, these sections being strung on the shaft and fastened together with their side edges in contact, so as to form the continuous screw shown in Figs. 1 and 2.

While I have shown the vessel provided with two pockets 11 and two sets of propelling-screws, I desire it understood that the vessel could be constructed with but one pocket and a single set of fore and aft propellers. In this case the divisional keels 18 would also be dispensed with and the single pocket would be located in the transverse center of the hull.

Having thus described the preferred form of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A marine vessel having a hull with a pocket projecting downward from its bottom below the floor-line of the hull, said pocket being adapted to carry the engine crank-shaft, two propelling-screws projecting fore and aft and extending respectively from the ends of the pocket to the bow and stern, said screws having shafts projecting into the pocket and the shaft of the forward propeller being tapered from the pocket forward, for the purpose specified, means in the pocket for connecting the shafts with the crank-shaft, a conical head at the forward end of the forward screw and means for revolvably mounting the screws, said means for mounting the screws comprising bearings at the bow and stern and an additional bearing for each shaft located intermediate the pocket and the bow and stern bearings respectively.

2. A marine vessel having a hull with two pockets intermediate the length of the hull said pockets being spaced from each other and projecting below the floor-line of the hull

and each being adapted to carry the engine
crank-shafts, propelling-screws projecting
fore and aft from each pocket, the screws
having shafts extending into the pockets and
5 the shafts of the forward screws tapering
from the pockets forward, for the purpose
specified, means in the pockets connecting
the propeller-shafts with the crank-shafts,
means for revolubly mounting the screws and

keels located between the members of the 10
forward and after pairs of screws.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

JOHN J. SITZLER.

Witnesses:

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CARL H. LISBERY.