

1,014,512.

Patented Jan. 9, 1912.

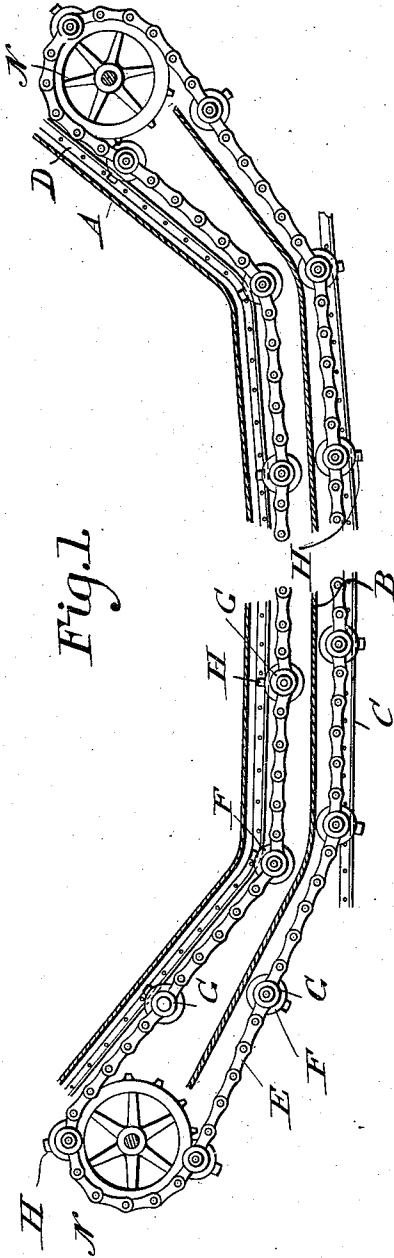


Fig. 1.

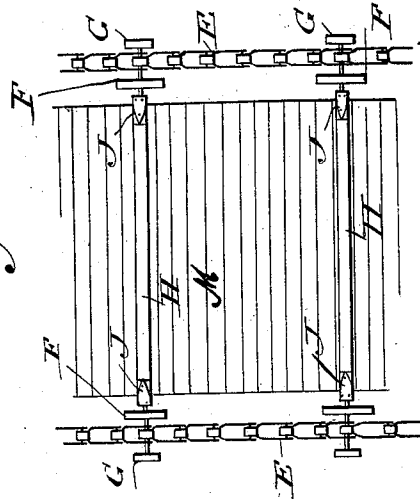


Fig. 3.

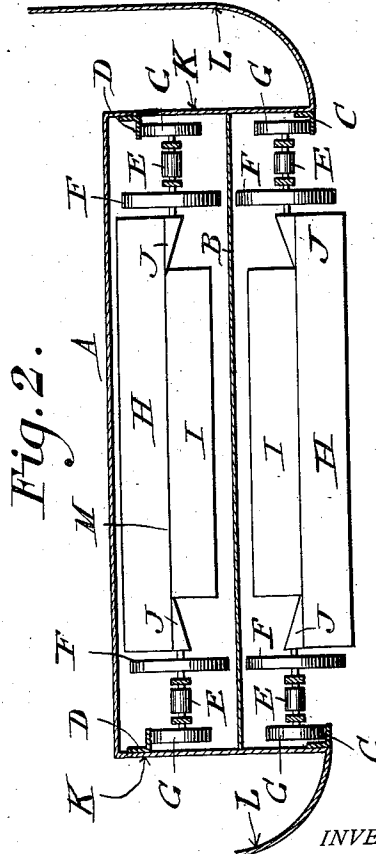


Fig. 2.

WITNESSES

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OTTO AUGUST ANDREW PETERSEN, OF NEW ORLEANS, LOUISIANA.

ENDLESS-BELT PROPELLER.

1,014,512.

Specification of Letters Patent.

Patented Jan. 9, 1912.

Application filed April 17, 1911. Serial No. 621,696.

To all whom it may concern:

Be it known that I, OTTO AUGUST ANDREW PETERSEN, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have
5 invented an Endless-Belt Propeller, of which the following is a specification.

My invention relates to improvements in propellers for boats, ships and other water
10 craft, in which an endless chain belt is used.

Figure 1, is a side view, with the side of boat removed. Fig. 2, is a cut-through-center view. Fig. 3, is a section of arrangement looking between the belts.

15 Similar letters refer to similar parts throughout the several views.

A, is the hull proper.

B, is the lower hull or partition between the belts, the extreme ends are to be above
20 the water level to prevent the water from running over it, the bow end when going forward, and the stern end when going backward. This lower hull or partition B, has one or more openings to not allow the
25 water, that may get in, to get above the water level.

C, is a strip placed below on the side of wall K, so as to prevent the chain or belt
30 from dropping too low, the wheels G running on it.

D, is a strip along the bottom of the hull A, on side of wall K so as to engage with the wheels G, to prevent paddles H (of which I is a part) from touching the bot-
35 tom of hull A. If the strips C and D are made of wood, they should be faced with metal, where the wheels G touch, to prevent wear.

40 E, is a chain belt which carries the whole around.

F, is a wheel placed between the paddle H, I and chain E which keeps the part I of the paddle from touching the lower hull or partition B.

45 G, is a wheel placed on the outer side of chain E, which serves as a bearing when engaging with the strip D and keeping the part H of the paddles from touching the bottom of hull A, and below, when touching
50 strip C, prevents the whole from dropping too low. By aid of the wheels F and G, the whole is prevented from touching at any time, so as not to retard its movement.

55 H, I, is a paddle which catches the water and carries the boat or ship in the direction desired. The part H of paddle extends out-

side of the diameter of the wheel F, so that in the event of striking a sand bar or shallow place in the water, or if used on land, the boat or ship will rest on the paddles on
60 ground and the wheels F on bottom of the lower hull or partition B, which will carry it forward or backward. The part I of the paddles not extending to the outer diameter, of the wheel F, is left clear of all parts.
65 The paddle has been divided into two parts to facilitate in fastening the canvas M to it, and the lug J, with the aid of a pin or axle, in fastening to wheels and chain, to keep in
70 position. I, may reach as far across as H to the wheel F.

J, is a lug by which the paddles H, I are fastened to the chain E, and the wheels F and G. Any suitable fastening may be
75 used. K K are walls or side pieces projecting below the bottom of the hull A far enough to keep the working parts in position. Said walls K are preferably, though not necessarily, merged into hull walls L, as
80 shown in Fig. 2.

M, in Fig. 3, is a piece of canvas or some other fabric suitable for that purpose, this keeps the paddles H, I in position, being fastened to them, it forms a belt, prevents their
85 turning and presents a full moving surface or nearly so in the water. The object is to have the whole surface, or nearly so, exposed to the water and to utilize the traverse of the lower stretch of the belt in the propulsion of the boat. The canvas M, also
90 serves to hold the paddles H, I in position in case of a break in the chain belt, so the part can be carried to above the water line for repairing, and serve as a guard in case
95 of striking an obstruction, which will have to penetrate this outer canvas M, the lower hull or partition, B, and the inner or returning canvas M, before it will penetrate the
100 hull proper A, which greatly reduces the danger of sinking in case of striking an obstruction. This canvas or fabric M may be omitted, but in such cases a lug should be attached to some of the links in the chain E, to fasten the paddles H, I to, so as to prevent them from turning, and then will only
105 need a wheel on the outer side of the chain E, where the wheel G is. This will materially reduce its cost.

N, are wheels or drums over which the whole revolves and returns.
110

One or more belts or series may be used, as some bottoms may be too wide, and make

the strain too great on the chains or belts. The belts may be made to return above deck, or between decks, instead of under the hull, this would lessen the draft of a boat or ship, as it will bring the part that propels nearer the hull, thereby gaining that space required for the lower hull or partition B, and belts to return. Enough room will have to be allowed on side of belt for loading and unloading. The whole may be manipulated by a stern wheel boat, the stern wheel serving as a drum and driving same with sprockets to engage in the chains, or side wheels may be used to carry it around.

I claim:

1. The combination of a boat hull having side portions extending below its bottom and also having lower and upper longitudinal rails on the inner sides of said side portions, a partition wall extending longitudinally of the hull and between the side portions thereof at a point intermediate the lower rails and upper rails; said partition wall being separated by an intervening space from the bottom of the hull and being provided with upwardly deflected end portions, transverse shafts journaled in the hull adjacent the ends of the partition wall and provided with wheels, belts mounted on said wheels and having lower and upper stretches respectively disposed below and above the partition wall, an endless apron disposed between said belts, paddles connected with and disposed at opposite sides of and at right angles to the apron, axles

extending between and connecting the belts and the apron and two wheels on each of the axles; one of said wheels being relatively arranged to travel against the upper side of one of the lower rails and against the underside of one of the upper rails, and the other of said wheels being relatively arranged to travel against the partition wall and also to extend a greater distance beyond the inner side of the apron than the paddles on said inner side, for the purpose set forth.

2. The combination of a boat hull having side portions extending below its bottom and also having lower and upper longitudinal rails on the inner sides of said side portions, a partition wall extending between said side portions, at a point between the lower and upper rails, a belt suitably supported in the hull with its stretches disposed at opposite sides of the partition wall and having paddles at its opposite sides, and two sets of wheels carried by the said belt; one set of wheels being relatively arranged to travel against the upper sides of the lower rails and against the under sides of the upper rails, and the other set of wheels being relatively arranged to travel against the partition wall and also to extend a greater distance beyond the inner side of the belt than the paddles on said inner side.

OTTO AUGUST ANDREW PETERSEN.

Witnesses:

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