D. J. WEDDLE.

PROPELLER.

APPLICATION FILED JUNE 3, 1908.

915,136.

Patented Mar. 16, 1909.

Fig. 1.

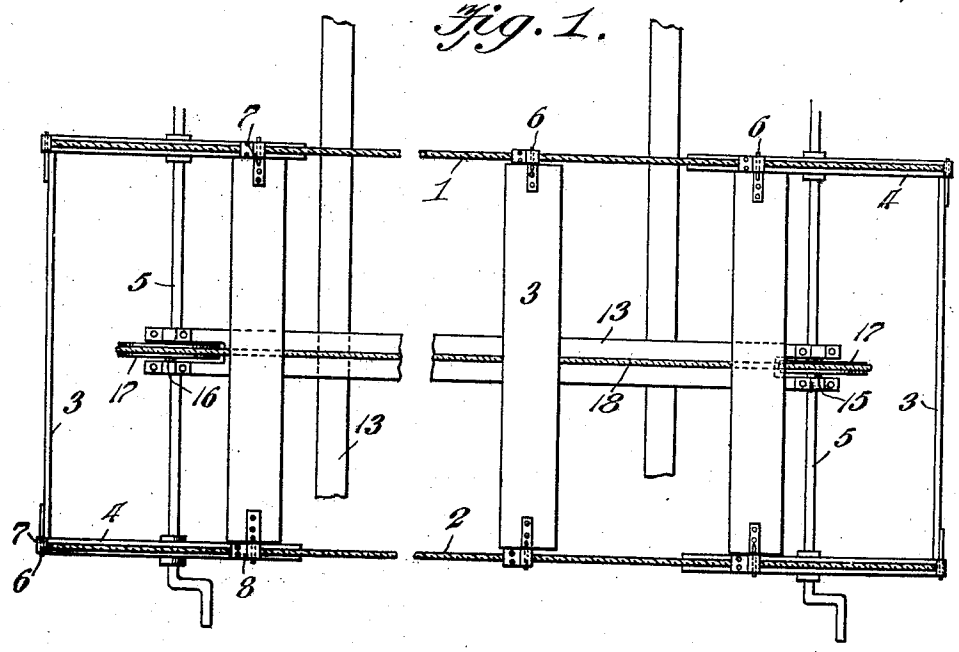


Fig. 2.

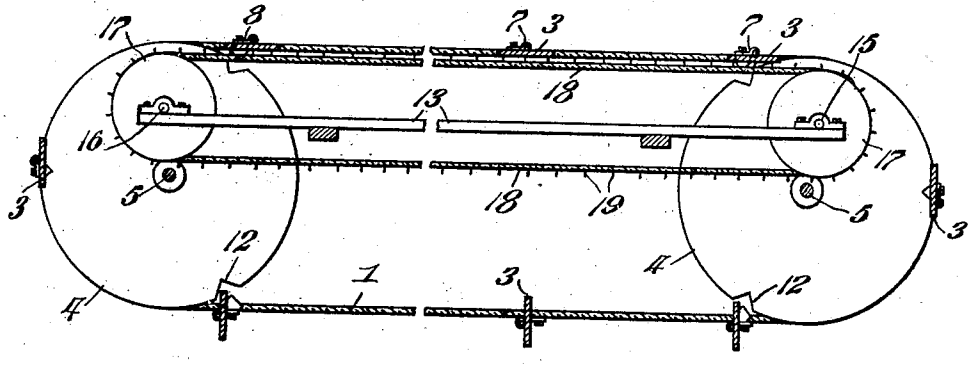
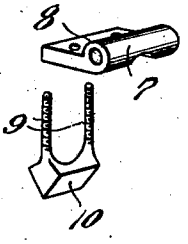


Fig. 3.



Witnesses

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PROPELLER.

No. 915,136. Specification of Letters Patent. Patented March 16, 1909.

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To all whom it may concern:

Be it known that I, DAVID JOSEPHUS WEDDLE, a citizen of the United States, residing at Suisun, in the county of Solano and State of California, have invented new and useful Improvements in Propellers, of which the following is a specification.

This invention relates to the class of endless or cable paddle-carriers chiefly designed for propulsion of water craft, the object being to improve the general construction, whereby the friction is minimized and a maximum percentage of energy utilized.

Another object of the invention is to provide a device of this character in which the blades are presented to the water edgewise with the periphery of the wheel, and after leaving the wheel the blades assume a vertical position to present a broad surface and after leaving the water the blades are flattened in their return across the top of the cable.

With these and other objects in view the invention resides in the novel construction of elements and their arrangement in operative combination, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a top plan view of an endless carrier-paddle constructed in accordance with the present invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a detail perspective view of the clip and tooth.

The endless carrier comprises companion cables or chains 1 and 2 held in spaced relation with each other by a plurality of paddles 3, and engaging grooved wheels 4 mounted upon suitable axles 5 secured in bearings connected with a suitable frame in which the device is adapted to operate. The flights or paddles 3 are provided centrally near their longitudinal ends with suitable trunnions or pintles 6, and these pintles are adapted to engage with an eye 7 provided upon a clip 8 secured to the cables 1 and 2 by the vertically extending threaded prongs 9 of the tooth members 10. The body of the clip 8 is provided with suitable spaced openings adapted for the reception of the prongs 9 and the clip and tooth are securely retained in position upon the cables by any preferred securing elements engaging the threaded prongs of the teeth. The grooved wheels 4 are each provided with a number of V-shaped cut away portions or notches 12, spaced from each other a distance to agree with that of the teeth 10 upon the cables, and these teeth 10 are adapted to engage within the notches 12 as the device is operated. By this arrangement it will be noted that the cables traveling in the direction of the arrow in Fig. 2, the flights or blades 3 will travel with the wheels and lie closely against its periphery until after it is freed from engagement with the wheel. This, it will be noted, presents a feathered or edge stroke to the water, and after the flight has become freed from the wheel 4 the force of the water will cause it to turn upon its pintles and present a broad surface to the water as it assumes a vertical position. It will be further noted that when the flights contact with the opposite wheel 4 the teeth 10 will engage with the notches 12 and thus force the flights to assume an angle with the periphery of the wheel which they engage, thus presenting a small surface of resistance to the water as the flights are raised to be returned to operative position.

In order to flatten the flights as they return to operative position over the top surface of the cable 2, I have provided a suitable frame 13, having a longitudinally extending portion positioned centrally between the grooved wheels 4. This longitudinal member is provided with suitable bearings 15 adapted for the reception of axles 16, upon which are mounted the wheels 17. These wheels 17 are each positioned approximately in a vertical line with the axles 5 of the wheels 4, and are of a size lesser than the distance between the axle 5 and the periphery of the wheels 4. The wheels 17 are preferably grooved and are adapted for the reception of an endless cable 18. This cable 18 is preferably provided with a plurality of spikes or teeth 19, and these teeth 19 are adapted to engage with the flights 3 after they have left the wheel 4 to retain them in a flattened position until they are positioned upon the opposite pair of wheels 4 to be brought into operative engagement with the water.

Having thus fully described the invention what is claimed as new is:

1. An endless carrier comprising spaced companion cables and paddles pivotally connected with the cables, and an endless cable positioned central of the carrier near the upper portion thereof and adapted to contact the paddles at the upper portion of the carrier to sustain them in a flattened position.

2. An endless carrier comprising spaced companion cables and paddles pivotally connected with the cables, and an endless cable provided with spurs positioned central of the carrier near the upper portion thereof and adapted to contact the paddles at the upper portion of the carrier to sustain them in a flattened position.

3. An endless carrier comprising spaced companion cables positioned in grooved pulleys provided with V-shaped notches upon their peripheries, clips having eyes upon the cables, teeth having prongs engaging the clips and securing them to the cables, paddles having trunnions engaging the eyes of the clips, an endless cable provided with spurs positioned central of the carrier near the upper portion thereof and adapted to contact the paddles and sustain them in a flattened position.

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

DAVID JOSEPHUS WEDDLE.

Witnesses:

W. G. BAILEY,

E. A. DAVIS.