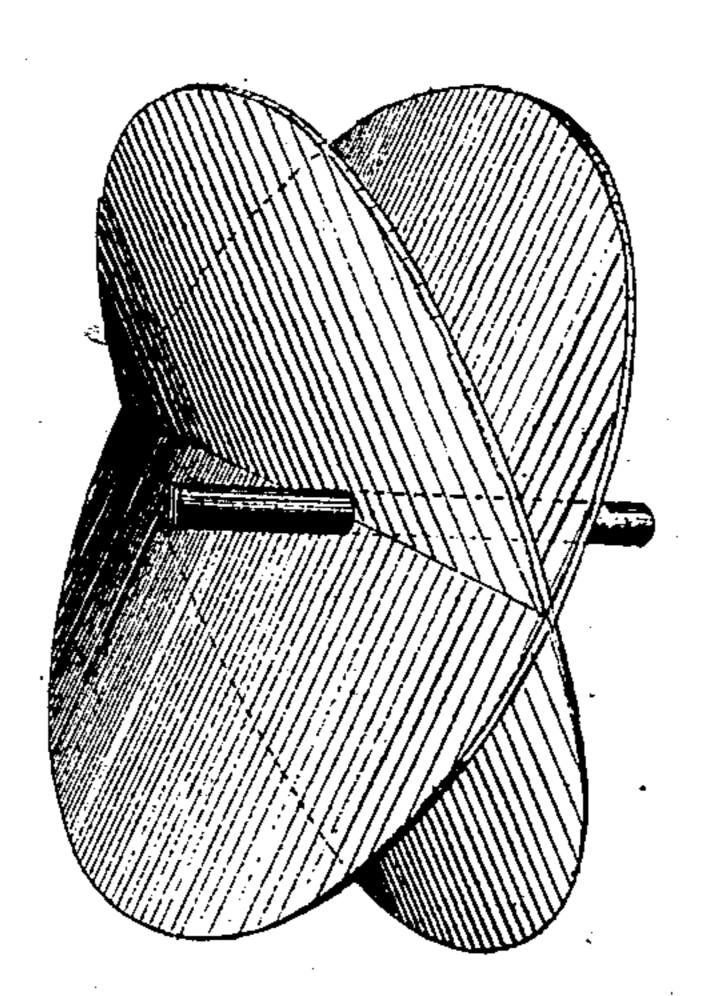
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## Anited States Patent Office.

## A. C. LOUD, OF SAN FRANCISCO, CALIFORNIA.

Letters Patent No. 102,747, dated May 3, 1870.

## IMPROVEMENT IN PROPELLING-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, A. C. Loud, of the city and county of San Francisco and State of California, have invented a new and useful Improvement in Propellers; and I do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable others skilled in the art to which my invention appertains to fully understand and use it, reference being had to the accompanying drawing forming part of this specification, and in which my invention is represented by a perspective view.

This invention relates to a new and improved device for propelling vessels through water, whereby increased speed, as well as other advantages, are obtained, as compared with any other method now

known or in use; and

The invention consists in placing upon a revolving horizontal shaft two or more disk-wheels, secured upon said shaft at an angle varying from a right angle about fifteen degrees, (more or less,) so that the disks shall intersect each other along a right line passing transversely through the shaft, and forming a common diameter of both disks.

In the drawings—

A represents the shaft, and

B B', the two disks which form the wheel.

The parts of the wheel B B' are designed to be smooth on their inner and outer sides or faces, and either attached to the shaft by a hub or center with arms, or they may be entire disks, as seen in the drawing, with suitable centers or hubs.

They may be made of either wood or metal, and as thin as consistent with strength and durability.

In diameter they may be about the same as the orbinary steamboat paddle-wheel, so that they may be attached to the common steamboat-shaft, and be revolved in the ordinary wheel-houses.

The disks or parts B B' are fastened together along the common diametrical line a, by means of bolts or rivets, or in any other suitable manner, so that the two disk-wheels form a single wheel, placed on each side of the boat, like ordinary paddle-wheels.

From the lateral swaying of each disk, during the rotation of the wheel, its action on the water approaches nearly to that of the tail of a fish in its effect, or to that of an oar when used in sculling. It enters the water as a wedge, and lifts little or no water in rising.

The propelling force is exerted constantly during the revolution of the wheel, thereby giving a steady and uniform motion to the boat, with an impetus greatly exceeding that imparted by the common paddle-wheel, from the application of a given power.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The propelling-wheel herein described, consisting of two disks or wheels, B B', secured in an oppositely-inclined position upon a shaft, A, so that they intersect each other along a common diametrical line, a, substantially as described and for the purpose specified.

A. C. LOUD.

Witnesses:

S. C. KEMON, CHAS. A. PETTIT.