

No. 118,532.

Patented Aug. 29, 1871.

Joseph C. Hite.

Paddle Wheel.

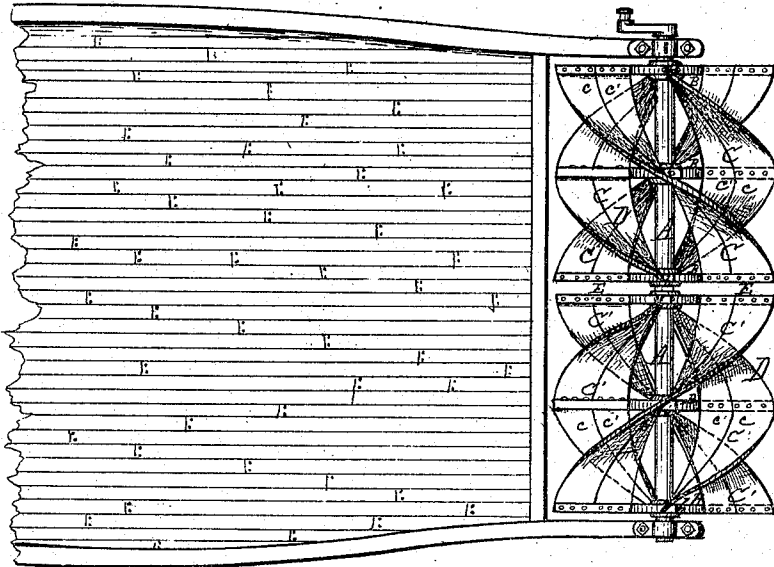


Figure 1.

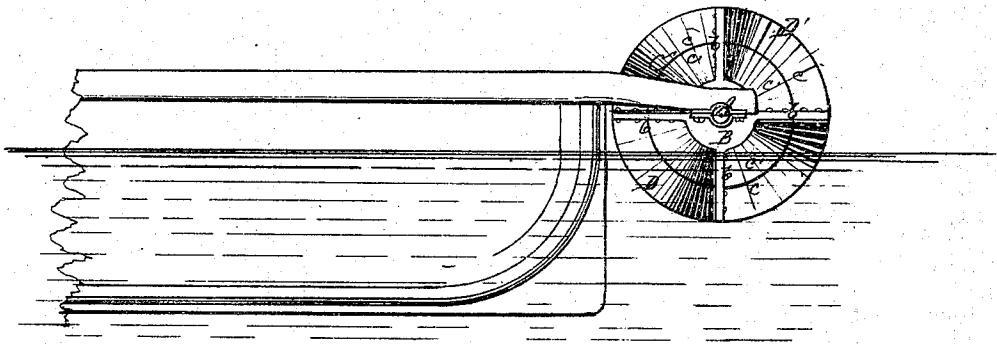


Figure 2.

Witnesses:

Robert Burns.

J. W. Ferthel.

Inventor:

Joseph C. Hite

By his Atty
Ferthel & Co.

UNITED STATES PATENT OFFICE.

JOSEPH C. HITE, OF MOUND CITY, ILLINOIS, ASSIGNOR TO HIMSELF AND CHARLES
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IMPROVEMENT IN PADDLE-WHEELS.

Specification forming part of Letters Patent No. 118,532, dated August 29, 1871.

To all whom it may concern:

Be it known that I, JOSEPH C. HITE, of Mound City, in the county of Pulaski and State of Illinois, have made certain new and useful Improvement in Paddle-Wheels for Marine Propulsion; and I do hereby declare the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

This invention relates to the use of paddles or buckets of a spiral form which enter the water on the power stroke with an increased power to propel, and on the return stroke leave the water without lifting the same. The nature of said invention is in the arrangement of two sets or series or any multiple of sets of paddles, forming right-and-left spiral wheels to act separately or in conjunction with each other, with greater power and useful effect to produce or receive propulsion than many paddle-wheels in common use.

To enable those herein skilled to make and use my said invention, I will now more fully describe the same, reference being had to the accompanying drawing, of which—

Figure 1 is a top plan, showing my improved wheel applied to the stern of a vessel. Fig. 2 is a side elevation.

My said wheel in its application and use for propelling vessels upon the water may be arranged upon the sides of the deck and hull or at the stern, as required, and ordinarily used. The said wheel will be supported upon a proper wheel-shaft, A, resting in pillow-blocks, or otherwise supported, and connected properly, to be operated by the engine or power source in manner usual. To the wheel-shaft A is keyed or bolted a proper number of armed flanges, B, to the arms C of which is securely bolted the series of spiral-shaped metal buckets C C', generally four in number, as represented in Fig. 1. The series D has its buckets C arranged parallel to each other,

while the buckets C' of series D' are arranged spirally reversed to series D, said series conjointly forming a right-and-left spiral wheel, as clearly shown in Fig. 1. The wheel thus formed may have a varying opening, E, to prevent a lift of the water, or be entirely closed, as deemed most practicable. Also, the buckets C C' may be constructed in sections or strips *c c'*, and bolted so as to be removable, to allow for the adjustment of said buckets or wheel, in accordance with the varying depth of the vessel, in manner usual. (See Fig. 1.) The right-and-left buckets C C' in their action propel, and at the same time force the water centrally toward each other; thus an increased propelling power is at all times achieved. The spiral shape and the inclination achieved prevent said buckets from lifting the water on the return stroke, while it will be noticed that on the power stroke all excessive jar is avoided, and loss of power, occasioned when the wheel-paddles enter nearly or quite horizontal with their broad surfaces and strike the water, is here practically overcome.

My improved paddle-wheel is cheap, light, and durable in construction. Its form of construction greatly reduces its size and weight; a greater velocity can be imparted to it, and in its revolving propelling action an increased speed of the vessel is achieved—advantages readily apparent.

Having thus fully described my said invention, what I claim is—

A right-and-left spiral wheel, C C', separated by an opening, E, constructed and arranged as described.

In testimony of said invention I have hereunto set my hand.

JOSEPH C. HITE.

Witnesses:

J. W. HERTHEL,
ROBERT BURNS.