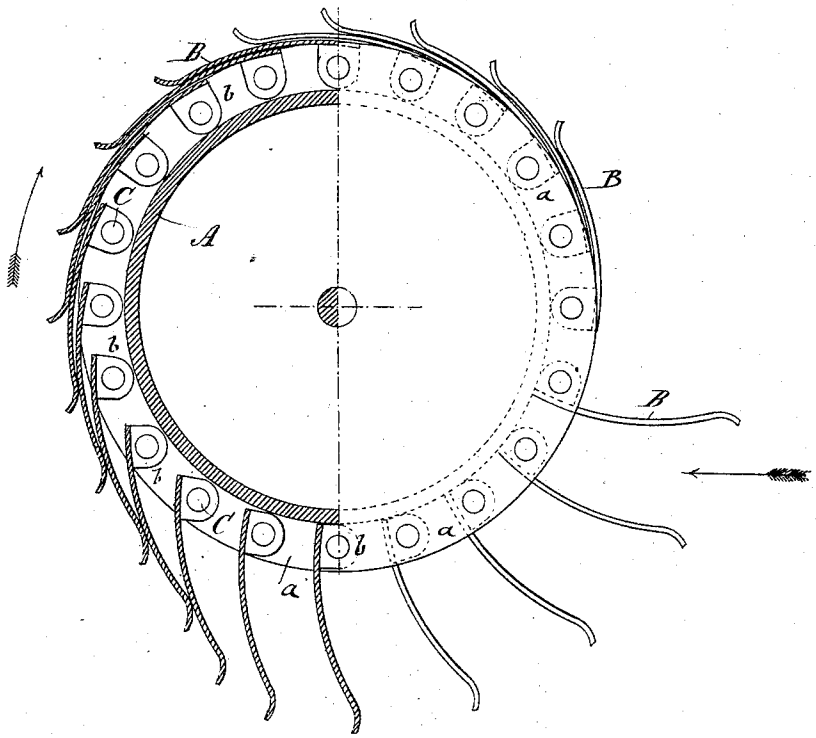
(No Model.) 2 Sheets—Sheet 1.

F. PALLAUSCH.

HYDRAULIC OR PNEUMATIC MOTOR.

No. 302,769. Patented July 29, 1884.

Fig. 1.



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(No Model.)

2 Sheets—Sheet 2.

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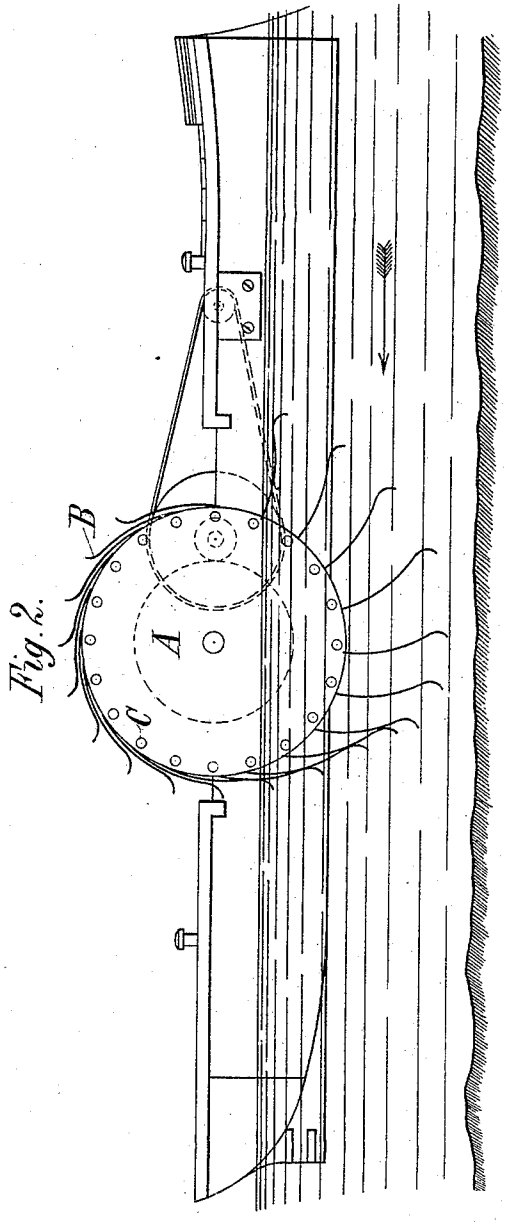


Fig. 2.

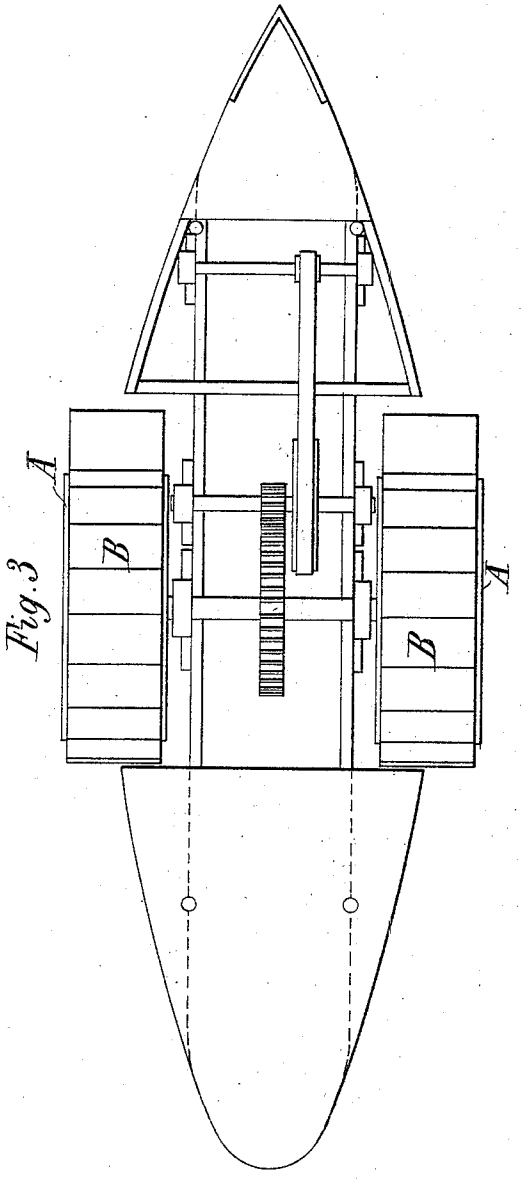


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANZ PALLAUSCH, OF VIENNA, AUSTRIA-HUNGARY.

HYDRAULIC OR PNEUMATIC MOTOR.

SPECIFICATION forming part of Letters Patent No. 302,769, dated July 29, 1884.

Application filed October 31, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANZ PALLAUSCH, a citizen of the Austro-Hungrian Empire, residing at Vienna, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Hydraulic or Pneumatic Motors, of which the following is a specification.

This invention has reference to an improved paddle-wheel which may be used either as a water-wheel, or as a wind-motor, or as a ventilator, and which may be mounted either horizontally or vertically and worked at any level of the water and in a state of total submersion.

In the accompanying drawings, Figure 1 represents a side elevation, one-half being in section, of my improved paddle-wheel in position for use either as a water or wind wheel. Figs. 2 and 3 represent, respectively, a side view and plan of a vessel with my improved paddle-wheel.

Similar letters of reference indicate corresponding parts.

The paddle-wheel is composed, chiefly, of an air-tight drum, A, the circumference of which is provided with flanges *a a*, to which are pivoted or hinged a number of paddles, B, by means of ears *b b* and transverse pivot-pins C, secured to the flanges *a a*. The paddles B are made of concave-shape with a slight convex bend at their outer ends. By their hinge-connection with the drum A the paddles overlap each other and form thereby an almost perfect cylindrical surface around the same, while, when in working order and exposed to a current of water or air, those paddles at one side are thrown in outward direction until their inner ends abut against the surface of the drum, while those on the opposite side are closed by the force of the current.

The paddle-wheel may be mounted and used in different ways. It may be employed in open streams or rivers or in side channels at every level of the water and without the use of races or water-ways. It may also be mounted upon stationary ships or floats, as shown in Figs. 2 and 3 of the annexed drawings, where the wheels are mounted upon a horizontal shaft and may transfer the force of the water for different industrial purposes, as for the working of dynamo-machines, &c. It may also be mounted vertically upon piles on the sea-shore, to be actuated by the tide, as a reversal of the current does not affect the motion of the wheel, which always turns in one direction. This drum-wheel may also be employed as a wind-motor or as a ventilator.

The material of which these wheels may be constructed depends upon the character of the force and the employment of the motor. If the wheels are to operate in large rivers, the drum and paddles are to be made of steel or iron. For smaller rivers they are made of wood and iron combined. The wind-motors and ventilators may be constructed of lighter material.

I am aware that water or wind wheels composed of a rotary drum and a series of folding paddles pivoted thereto are not new; but in my wheel the outer ends of the paddles are slightly outturned to catch the current, so as to readily open the paddles. By this construction the paddles are not dependent upon gravity to cause them to open, but open readily whenever the current strikes the outturned ends, in whatever position the wheel may be placed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A water or wind wheel consisting of an air-tight rotary drum and a series of concave paddles pivoted thereto and adapted to shut closely around said drum, said paddles being slightly outturned at their outer ends, substantially as described.

2. A water or wind wheel consisting of an air-tight rotary drum provided with circumferential flanges and a series of concave paddles adapted to shut closely around said drum, the inner ends of said paddles being provided with ears, and the outer ends thereof being slightly outturned, and pivoted pins passing through said flanges and ears, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FRANZ PALLAUSCH.

Witnesses:

SAMUEL WERTHEIM,

CLARENCE M. HYDE.