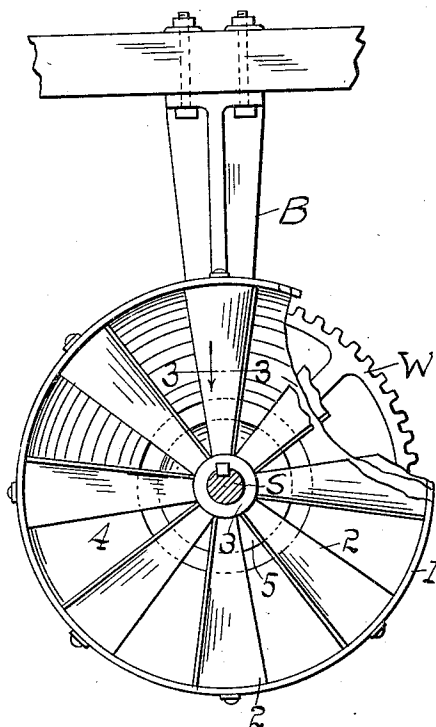
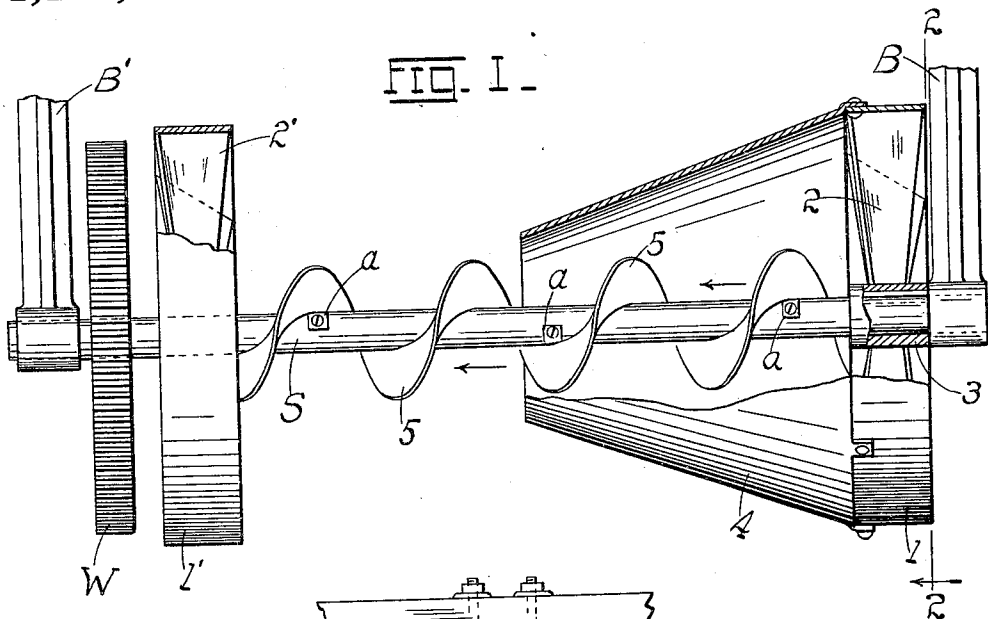


S. TERZIAN.
CURRENT MOTOR.
APPLICATION FILED APR. 9, 1914.

Patented Feb. 16, 1915.

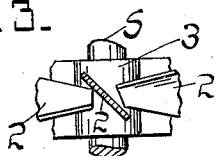
1,128,636.



WITNESSES:

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FIG. 3.



INVENTOR.

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CURRENT-MOTOR.

1,128,636.

Specification of Letters Patent.

Patented Feb. 16, 1915.

Application filed April 9, 1914. Serial No. 830,679.

To all whom it may concern:

Be it known that I, SAHAG TERZIAN, citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Current-Motors, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in current motors; and it consists in the novel features of construction more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a middle longitudinal section through the wheel; Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1; and Fig. 3 is a sectional detail on the line 3—3 of Fig. 2.

The object of my invention is to construct a water-wheel or current motor adapted to operate while wholly or partially submerged below the surface of the stream which actuates the same, special consideration being had for increasing the efficiency of the wheel as a motor, to the highest possible limit.

The advantages of the invention will be fully apparent from a detailed description thereof which is as follows:

Referring to the drawings, B, B', represent suitable hangers forming supports for the wheel-shaft S, the latter being provided adjacent to the hanger B' with a gear wheel W from which power may be transmitted to any suitable machinery, not shown, the connections beyond the gear wheel falling within the purview of the ordinary mechanic. Disposed on the shaft S adjacent the hanger B is a wheel comprising an outer cylindrical band or rim 1, and blades 2 radiating from the hub 3 keyed to the shaft, the rim having secured thereto a conical hood or casing 4 which extends over a portion of the shaft, the latter having secured thereto adjacent the gear wheel W a second wheel on the order of that carried by the shaft adjacent the hanger B, said second wheel being composed of an outer band or rim 1' and radial blades 2', and being in all respects identical with the first wheel described. The wheel 1', 2', is spaced a suitable distance from the hood 4 as shown. Disposed along the shaft S between the wheels described is a spiral blade 5 preferably secured to the shaft through the medium

of clips or lugs *a* cast with the blade 5, or in any other suitable mechanical manner.

The operation is substantially as follows: the apparatus is submerged wholly or partially in the stream, the current traversing the cone 4 from the base toward the apex (or from right to left in Fig. 1). It will be seen that the current first acting on the wheel 1, 2, will be constrained to pass through the cone 4 whose gradually diminishing cross-sectional area imposes on the current a progressively increasing or accelerating velocity, the current under such increased velocity acting on the blade 5 within and beyond the confines of the cone, and finally emerging from the narrow end of the cone into the open, where, at its normal rate of flow it engages the second wheel 1' 2', thus imposing rotation on the shaft S. After leaving the wheel 1, 2, the energy of the current is concentrated on the blade 5 by the walls of the cone 4 (or its equivalent, such as a hollow pyramid), the combined action of the current against the two radially bladed wheels and the spiral blade increasing the efficiency of the motor to the highest possible limit.

It will be seen from the foregoing that the current thus traverses the motor at different velocities at different points, the action of the current against the blade 5 materially assisting the driving action of the current exerted initially against the wheel 1, 2.

Features illustrated but not alluded to are well known in the art, and a description thereof is here unnecessary.

Having described my invention, what I claim is:

1. A current-motor comprising a shaft, radial bladed wheels on said shaft spaced apart, a spiral blade disposed on the shaft between the wheels, a casing secured to the rim of one of the wheels and extending over a portion of the shaft between the wheels, said casing having walls converging from the rim of the wheel carrying the same toward the opposite wheel, and operating to produce an acceleration in the velocity of the current acting on the spiral blade.

2. In a current motor, a suitable shaft, a radial bladed wheel on said shaft, a spiral blade mounted on said shaft in front of said bladed wheel, means coupled to the radial bladed wheel for accelerating the flow of

the current after it has acted on the radial bladed wheel, thereby causing it to act with increased force on the spiral blade aforesaid.

- 5 3. In a current-motor, a suitable shaft, a radial bladed wheel on said shaft directly presented to the flow of the current, a spiral blade mounted on the shaft in front of said radial bladed wheel, and presented to the
10 flow of the current after the latter has acted upon the radial bladed wheel, a second radial bladed wheel mounted on the shaft in front of the spiral blade, and presented to the flow of the current after the latter has acted upon
15 the spiral blade, a conical casing secured to the first mentioned radial bladed wheel and extending over a portion of the spiral blade, and operating to accelerate the flow of the

current acting upon said spiral blade, said current being free to act upon the last radial bladed wheel. 20

4. In a current motor, a suitable shaft, a radial bladed wheel on said shaft, a spiral blade mounted on said shaft and extending
25 away from said wheel, a conical casing secured to the periphery of said wheel and converging toward said spiral blade, said casing operating to accelerate the flow of the current past the spiral blade.

In testimony whereof I affix my signature, 30
in presence of two witnesses.

SAHAG TERZIAN.

Witnesses:

EMIL STAREK,
JOS. A. MICHEL.

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