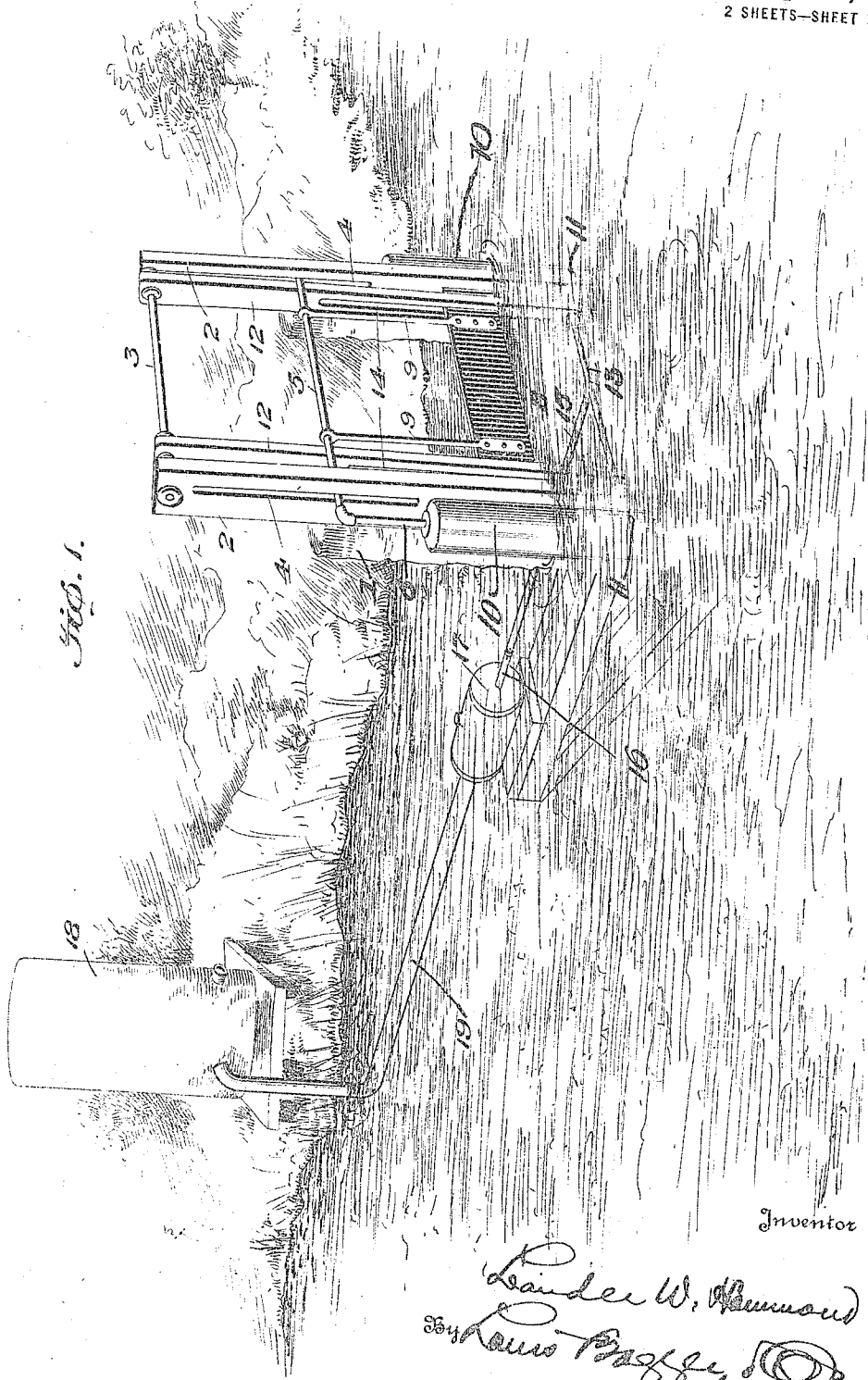


1,263,888.

L. W. HAMMOND,
WAVE MOTOR.
APPLICATION FILED JAN. 10, 1918.

Patented Apr. 23, 1918.
2 SHEETS—SHEET 1.



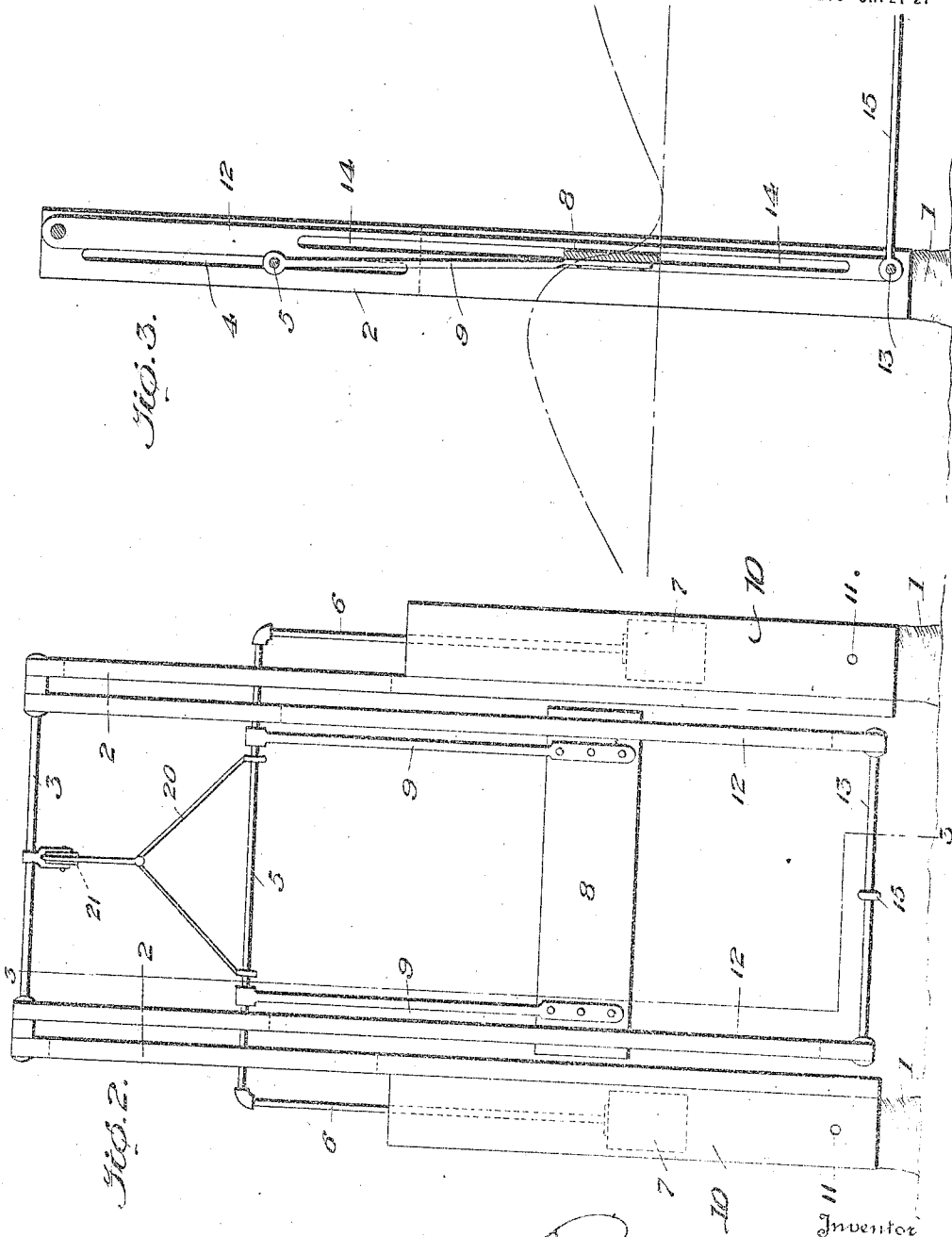
Inventor

Lester W. Hammond
By *Paul H. Coffey* Attorney

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Inventor
Lester W. Hammond
By *[Signature]*
his Attorney

UNITED STATES PATENT OFFICE.

LEANDER W. HAMMOND, OF PLAINFIELD, NEW JERSEY, ASSIGNOR OF ONE-THIRD TO J. T. VAIL AND ONE-THIRD TO THADDIUS CASNER, BOTH OF PLAINFIELD, NEW JERSEY.

WAVE-MOTOR.

1,268,888.

Specification of Letters Patent. Patented Apr. 23, 1918.

Application filed January 10, 1918. Serial No. 211,191.

To all whom it may concern:

Be it known that I, LEANDER W. HAMMOND, a citizen of the United States of America, residing at Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Wave-Motors, of which the following is a specification.

My invention relates to that class of wave motors wherein the wave power is adapted to effect an oscillatory movement to a horizontal pivoted impact member or gate.

The object is to produce a device which will utilize the wave power no matter what the distance of the rise and fall of the tide may be, the mechanism being so arranged as to keep the impact member in a certain predetermined position with relation to the crest of the waves.

In the drawings:

Figure 1 is a perspective view of a one-unit wave motor in which the power is used to operate a pump.

Fig. 2 is an enlarged front elevation of the motor proper, and,

Fig. 3 is a transverse vertical section on line 3—3 of Fig. 2.

1—1, represent two piles driven into the bottom of the beach to which is secured a frame consisting of vertical side members 2—2, extending therefrom to a height well above the surface of the water, said side members having arranged transversely therein at the upper end a rock shaft 3. These side members 2—2 are each provided with elongated slots 4—4 in which is horizontally arranged a cross-bar 5. Extending downwardly from the ends of the cross-bar 5, are supporting rods 6—6 to the lower end of which is secured suitable floats 7—7. Suspended from the cross-bar 5 is an impact member or power board 8, secured thereto by suitable supporting rods 9—9.

From the above construction it will be seen that the impact member or power board will rise and fall according to the rise and fall of the tide, owing to the fact that it is supported upon the floats 7—7 and in order that these floats may not be affected by the wash of the waves, I preferably incase them in suitable chambers 10—10, which are conveniently secured to the frame. These chambers are provided at their lower ends with comparatively small openings 11—11 to al-

low the water to seek its own level within the chambers and maintain the flow at a given height relative to the rise and fall of the tide. On account of the comparative small openings 11—11, a sudden rush of water like the surging of waves would have little or no effect upon the level inside the float chambers and therefore the floats 7—7 together with the impact member will rise and fall by the action of the tide only.

12—12, indicate two rock arms pivotally mounted upon the shaft 3, and adapted to extend well below the surface of the waves and connected together at their lower ends by cross-bar 13. These rock arms are preferably provided with elongated slots 14—14 to receive the outer ends of the impact member 8, which latter accordingly imparts the oscillatory movement to the rock arms 12—12. Connected to the rock arms through the cross-bar 13, is a pitman 15, which, in turn, is connected to a piston rod 16, of the pump 17, which is located in any suitable manner as to be actuated by the impact member 8.

18, indicates a tank into which the pump empties its charge through the conduit 19, wherefrom the supply of water may be utilized for operating a water turbine or like device.

As a means for raising the impact member out of the water when not in use or in case of a storm, I provide a cable 20, suspended from the pulley 21, which is attached to the cross-bar 5, having its outer free end secured to a windlass or other suitable means for reeling the same in when raising the impact member clear of the water.

In operating my device, as the waves roll in toward the shore, they carry the impact member or power part along with them until the wave passes out from under it, when the impact member will swing back until it is again engaged by the next wave, this motion, in turn, imparting a reciprocating motion to the piston rod of the pump, whereby the water is discharged from the pump into the tank or reservoir 18.

It is obvious that these several power units may be assembled in groups, say three or more, thereby increasing the capacity of the apparatus as a whole.

It is obvious that I do not wish to be limited to the exact structure as it is disclosed

herein and more or less slight changes might be made without departing from the general scope and utility of the above device.

I claim:

5 1. A wave motor comprising a frame, rock arms provided with vertically arranged slots, pivoted to said frame, and a swinging impact member vertically movable within said frame having its lower end received
10 within the slots in the rock arms.

2. A wave motor comprising a frame, float chambers carried thereby, floats arranged therein, a swinging impact member carried by said floats and a pair of rocker arms pivoted to said frame which are adapted to be
15 actuated by said impact member.

3. A wave motor comprising a frame, float chambers having openings at the lower

end thereof carried by said frame, floats arranged therein, a frame supported by said floats, an impact member carried by said frame, and a pair of rock arms pivotally supported by the main frame which are adapted to be actuated by said impact member. 20

4. A wave motor comprising a main frame, float chambers carried thereby, floats arranged therein, a frame guided within said main frame and supported by said floats, an impact member carried by said last mentioned frame, and a pair of rock arms pivotally supported by the main frame which are adapted to be actuated by said impact member. 25

In testimony whereof I affix my signature. 30
LEANDER W. HAMMOND.