

No. 666,456.

Patented Jan. 22, 1901.

H. BANNING & F. C. CAREY.

WAVE MOTOR.

(Application filed Sept. 15, 1900.)

(No Model.)

Fig. 1

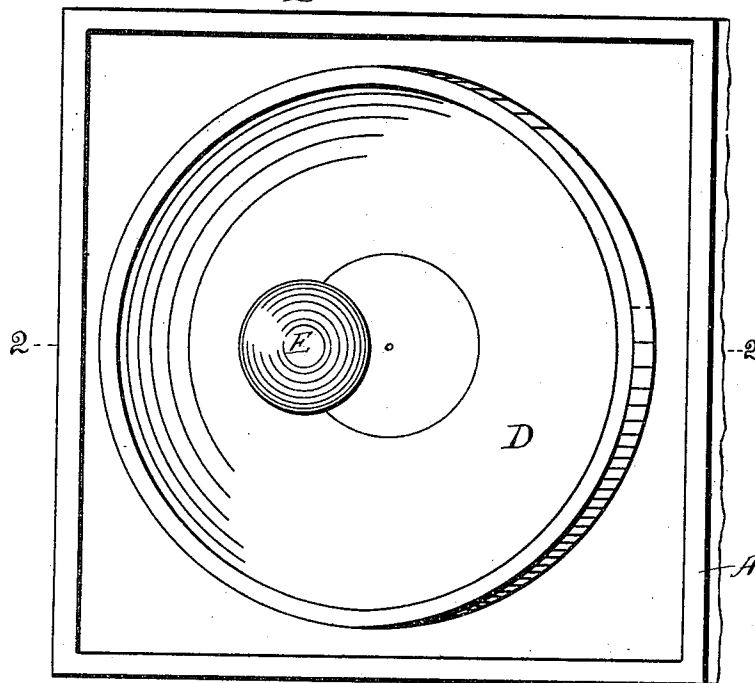
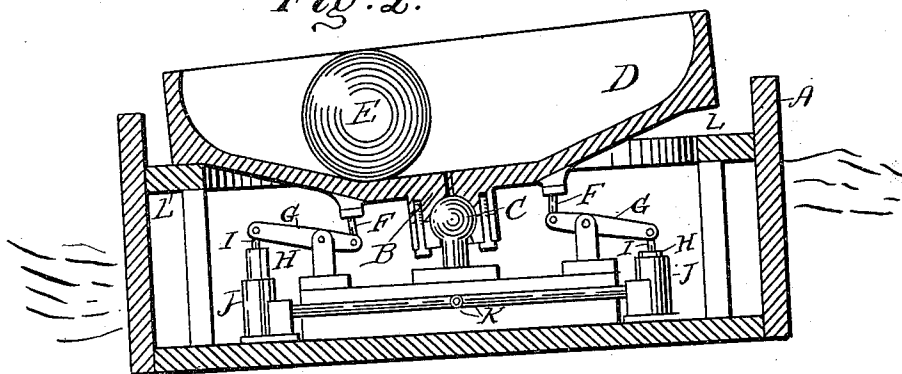


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HANCOCK BANNING AND FRANK C. CAREY, OF LOS ANGELES, CALIFORNIA.

WAVE-MOTOR.

SPECIFICATION forming part of Letters Patent No. 666,456, dated January 22, 1901.

Application filed September 15, 1900. Serial No. 30,166. (No model.)

To all whom it may concern:

Be it known that we, HANCOCK BANNING and FRANK C. CAREY, citizens of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Wave-Motors, of which the following is a specification.

Our invention relates to that class of wave-motors in which power is obtained by means of a rolling weight carried in a floating vessel, the weight being caused to roll from point to point in the vessel as the vessel assumes different positions caused by the motion of the waves; and the object thereof is to provide a simple and inexpensive mechanism that will utilize the power generated by the waves. We accomplish this object by the mechanism described herein and illustrated in the accompanying drawings, forming a part hereof, in which—

Figure 1 is a plan view of our wave-motor. Fig. 2 is a central vertical section of the same, the rolling weight being shown in elevation.

In the drawings, A represents the floating vessel, in which is mounted on the universal pivot-joint C a saucer-shaped receptacle D, in which ball E is free to roll. Under the receptacle D are levers G, pivotally mounted on supports resting on the bottom of vessel A, one of the ends of said levers being attached to the piston-rods I of the pumps J and the other ends of the levers being operatively connected with projections on the under side of the receptacle by means of connecting-rods F. The discharge-ports of all the pumps are connected to a common discharge by pipes K.

We have illustrated our device as applied to operating pumps, as we think by that means the power may be best utilized; but, if desired, the power may be utilized by other well-known devices.

In the operation of our device the vessel is placed in a body of water subject to wave motion. Whenever either side or end of the vessel is raised by the action of the wave, the ball in the receptacle immediately rolls to the lowest point thereof, thereby depressing it on that side until it contacts with the stop-timbers L. The movement of the receptacle in the vessel A will operate the pumps.

We have shown our device adapted to operate pumps to raise water or compress air, as we deem that method best adapted for the utilization of the power generated; but it is

obvious that there are other ways in which a weighted ball rolling around the outer edge of the receptacle or from one side to the other may be utilized for power purposes.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A wave-motor, comprising a vessel; a saucer-shaped receptacle, pivotally mounted in the center thereof; a globular weight in said receptacle, adapted to roll about therein; and means, substantially as shown, to utilize the power generated.

2. The herein-described wave-motor, comprising a floating vessel A, adapted to be tilted about on the waves; the saucer-shaped receptacle D, pivotally mounted in said vessel, and having a limited movement therein; a rolling weight E in said receptacle, adapted to move freely therein; pumps J in said vessel operatively connected with the receptacle, whereby the tilting movement of the vessel, caused by the waves, will operate the pumps.

3. A device to utilize the power of the waves, comprising a vessel, adapted to be moored in water, subject to wave motion, and to have a free movement therein; saucer-shaped receptacle arranged to have a free tilting movement therein; a spherical rolling weight in said receptacle, adapted to roll about therein; pumps mounted in said vessel below the receptacle and having discharge-ports connected with a common discharge-pipe, operating-levers mounted in bearings fixed to the vessel, one end of each of said levers being pivotally connected with the piston of the pumps, and the other ends being pivotally connected with projections on the receptacle whereby any movement of the receptacle different from that of the vessel, will operate the pumps.

4. In a wave-motor, the herein-described saucer-shaped receptacle pivoted in a floating vessel, and having a limited tilting movement therein, and a spherical weight in said receptacle, adapted to roll freely around therein.

In witness that we claim the foregoing we have hereunto subscribed our names, this 7th day of September, 1900, at Los Angeles, California.

HANCOCK BANNING.
FRANK C. CAREY.

Witnesses:

G. E. HARPHAM,
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