

No. 681,913.

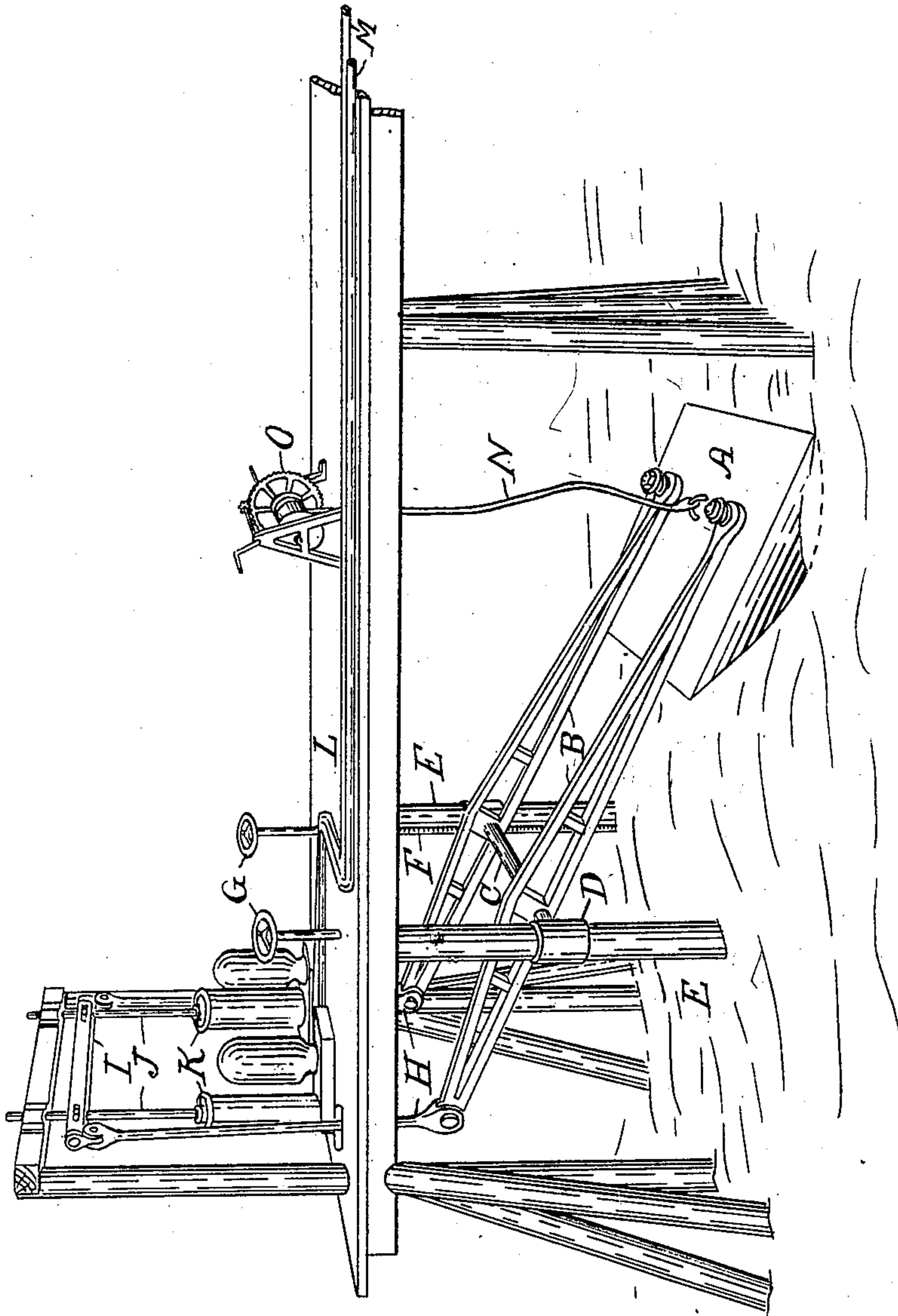
Patented Sept. 3, 1901.

D. S. GILLESPIE.

WAVE MOTOR.

(Application filed July 25, 1900.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

DELOS S. GILLESPIE, OF LOS ANGELES, CALIFORNIA.

## WAVE-MOTOR.

SPECIFICATION forming part of Letters Patent No. 681,913, dated September 3, 1901.

Application filed July 25, 1900. Serial No. 24,829. (No model.)

*To all whom it may concern:*

Be it known that I, DELOS S. GILLESPIE, a citizen of the United States, residing at Los Angeles, county of Los Angeles, State of California, have invented new and useful Improvements in Wave-Motors, of which the following is a specification.

My invention relates to that class of wave-motors which utilize the force of the waves and swell of the water by means of a buoyant float; and the object thereof is to provide a simple and efficient motor that is comparatively inexpensive in construction and operation. I accomplish this object by the mechanism described herein and illustrated in the accompanying drawing, forming a part hereof, which is a perspective view of my wave-motor and connecting mechanism.

In the drawing, A is a buoyant float, being an air-chamber adapted to ride upon the wave, to which by suitable joints are fastened levers B, pivotally mounted on shaft C, the ends of which are rigidly held by suitable bearings on sleeves D, which have a vertical movement, when desired, on piles E, of which there are two, said movement being controlled by screws F, having hand-wheels G, by which to operate said screws, and thereby raise or lower sleeves D, carrying shaft C and levers B, as the tide rises and falls, so that float A shall be in the best possible position to receive the force of the incoming wave. To the other ends of levers B are attached pitman-rods H, which at their outer ends are connected with cross-head I, which is connected with the piston-rods J of pumps K, by means of which water is pumped to operate the desired machinery. (Not shown.) Pumps K are preferably located on wharf L, and the water is led to and from them by pipes M. In order that the float shall not be damaged by storms, I attach rope N thereto and fasten the other end to windlass O, so that the float may be raised above the reach of the storm-waves.

I have shown my device applied to operate water-pumps; but, if desired, air-pumps or any other suitable mechanism for utilizing its power may be used.

By my construction I am able to utilize the swells of the ocean when there are no waves,

and thus secure a constantly-operating motor.

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

1. A wave-motor, comprising a wharf having a plurality of supporting-piles; sleeves mounted on two of said piles; screws adapted to move said sleeves vertically on said piles; a shaft rigidly affixed to said sleeves; levers pivotally mounted on said shaft; a floating air-chamber connected to one end of said levers; pitman-rods connected to the other end of said levers; a cross-head connected to the upper ends of said pitman-rods; and a pump connected to said cross-head.

2. The herein-described wave-motor mounted on the wharf L, comprising float A; trussed levers B, connected thereto and pivotally mounted on shaft C; shaft C affixed to sleeves D; sleeves D, slidably mounted on piles E; screws F, adapted to move sleeve D on piles E; pitman-rods H, connected to levers B and to cross-head I; cross-head I connected to piston-rods J; piston-rods J, and pump K.

3. In a wave-motor, the combination with the rigid supporting structure of a buoyant float, operatively connected thereto by means of levers fulcrumed on said structure; levers pivotally mounted on a cross-shaft, the shaft having means for vertical adjustment on said structure, comprising the sleeves D, having bearings for the cross-shaft C and screw-threaded opening for the screw F, carrying handle G; and the screw F; the said levers being secured to the float at one end and operatively connected with pumps at the other end by means of pitman-rods secured at one end to the operating-levers, and at the other end to a cross-head to which the piston-rods of the pumps are secured.

4. The combination in a wave-motor of the rigid structure L, having upright supports E, vertically-trussed operating-levers B, pivotally mounted on the cross-shaft C, the long arms of the levers being secured to the actuating-float A, and the short arms pivotally secured to the pitman-rods H; the pitman-rods H, operatively connected with the cross-head I; pumps K having piston-rods J, secured to the cross-head; the piston-rods J;



the cross-shaft carrying the operating-levers  
having adjusting means, comprising the sup-  
porting-sleeve D providing supports for the  
cross-shaft, and having threaded openings  
5 to receive and engage the screw F, provided  
with handle G.

In witness that I claim the foregoing I

have hereunto subscribed my name, this 19th  
day of July, 1900, at Los Angeles, California.

DELOS S. GILLESPIE.

Witnesses:

G. E. HARPHAM,  
MATTIE MCGINNIS.