(No Model.)

J. W. SWALES.

Wave Power.

No. 242,233. **Patented May 31, 1881.**

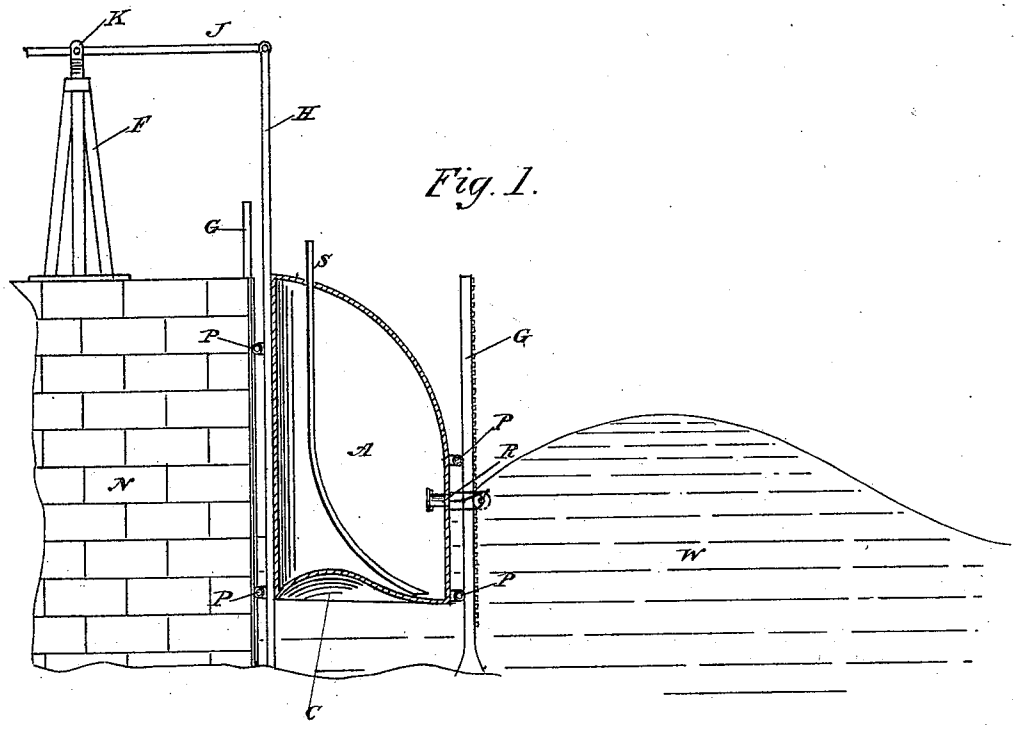


Fig. 1.

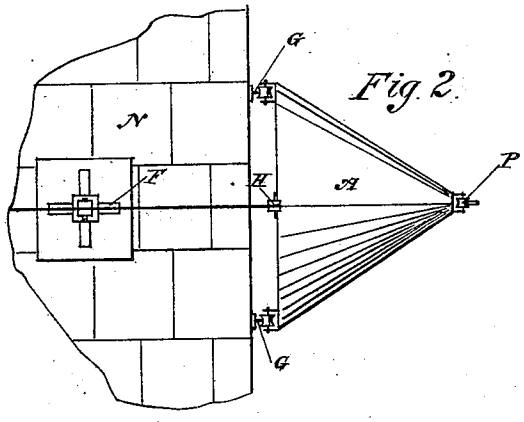


Fig. 2.

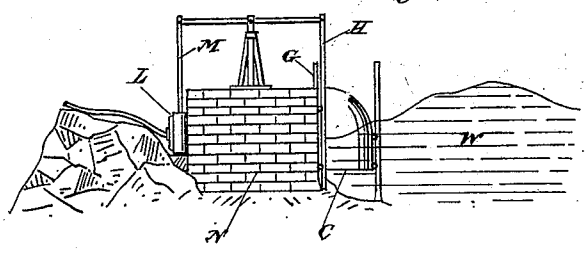


Fig. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JOHN W. SWALES, OF SAN FRANCISCO, ASSIGNOR TO HIMSELF AND HENRY CAVENDISH, OF ALAMEDA, CALIFORNIA.

WAVE-POWER.

SPECIFICATION forming part of Letters Patent No. 242,233, dated May 31, 1881.

Application filed January 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. SWALES, of San Francisco, California, have invented a new and useful Improvement in Wave-Power, of which the following is a specification.

Figure 1 is an elevation showing a section of a buoy; Fig. 2, a plan view; and Fig. 3 an elevation, showing the construction and operation of my improved wave-power.

A represents the buoy; G, the guides; P, the guide-pulleys; H, the upright connecting-bar; J, the lever; L, the pump; M, the pump-rod; K, the lever-pivot; F, the upright frame; N, the foundation-wall; C, the concave bottom of the buoy, and W the wave; R, the air-pump, and S the discharge-pipe.

The following is the construction and operation of the same: The buoy is constructed with a sharp front to extend out from the wall or abutment N like the bow of a boat, to cut the wave and prevent jar or concussion. It has also the concave C, to confine and secure the momentum of the wave. The wall or abutment N is designed to raise the wave to a greater height than it attains in its usual flow, thus lifting the buoy to a considerable height, for the purpose of securing a still greater elevation of the wave. Guide walls or wings may be employed, but I have adopted the straight wall to receive the force of the wave from a direction directly in front. Thus the upward current, striking the under concave, C, forces the buoy with additional momentum. I also employ the air pump and compressor R, which is any ordinary air-pump, to operate by a gear with the guide G, as shown, to force air into the buoy, and cause it to discharge from the pipe S, should any small leak occur and water be liable to accumulate in the buoy.

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

The buoy A, having the forward bow-point, and the concave bottom, and the air-pump R, and discharge-pipe S, when operated in the guides G, substantially as and for the purposes set forth.

JOHN W. SWALES.

Witnesses:
JOHN H. REDSTONE,
HENRY CAVENDISH.