

(No Model.)

H. COMMANDOER.
WAVE POWER.

No. 440,397.

Patented Nov. 11, 1890.

Fig. 1.

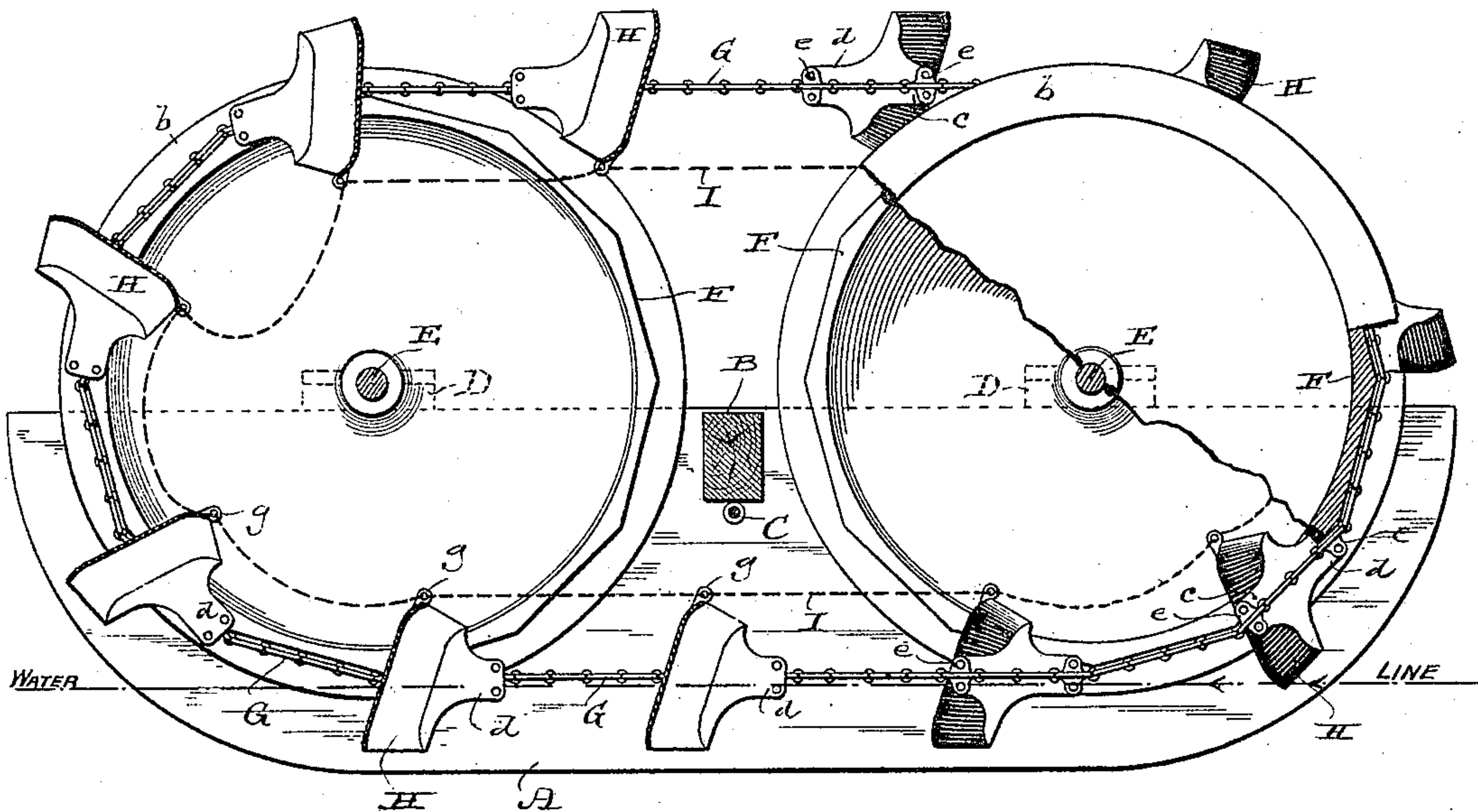


Fig. 2.

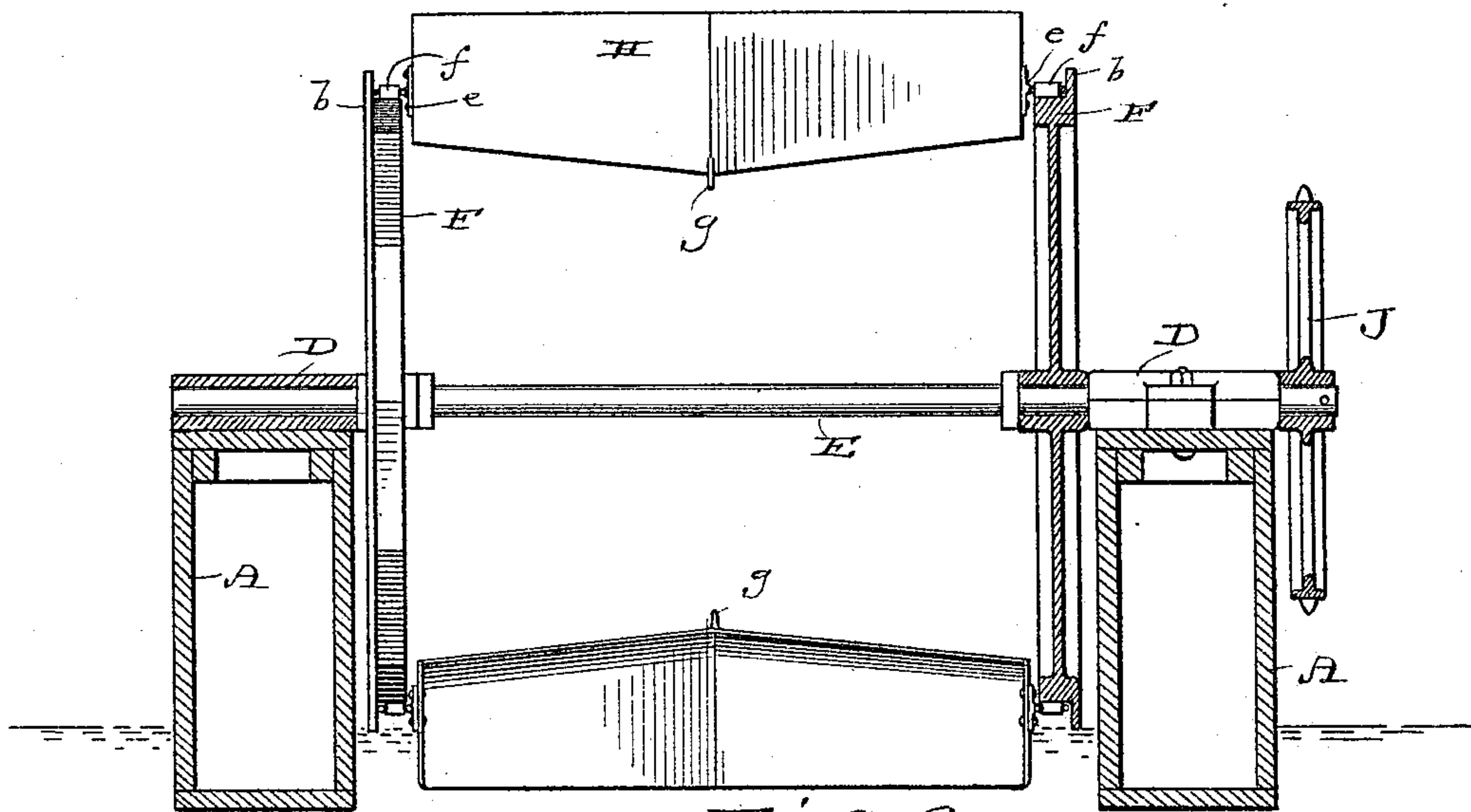
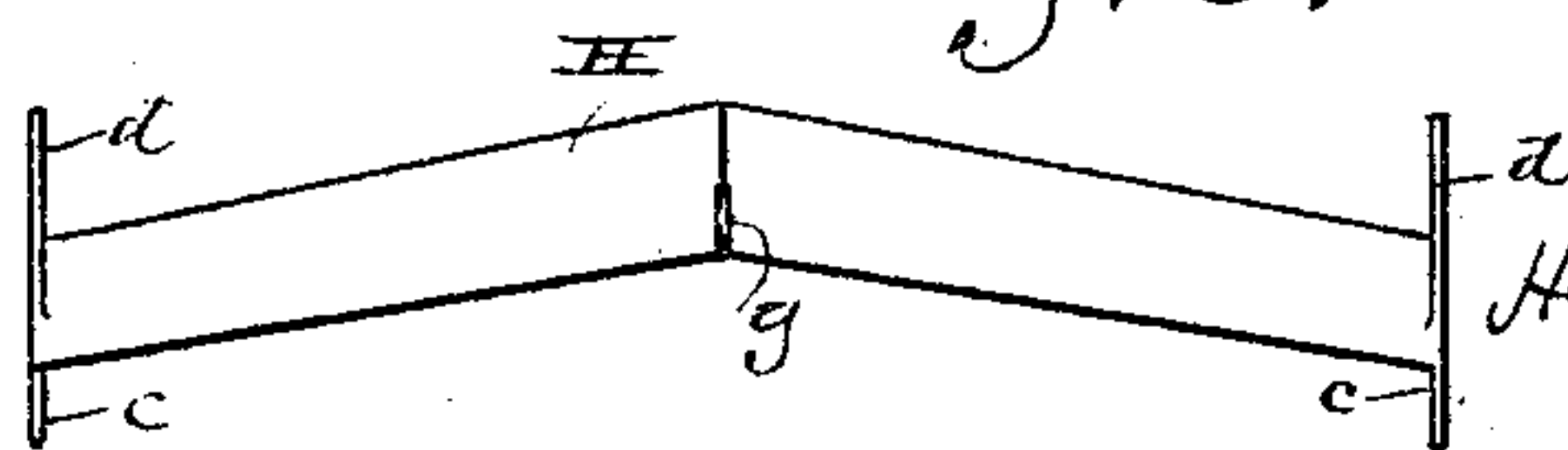


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

HERMAN COMMANDOER, OF MILWAUKEE, WISCONSIN.

WAVE-POWER.

SPECIFICATION forming part of Letters Patent No. 440,397, dated November 11, 1890.

Application filed September 9, 1890. Serial No. 364,458. (No model.)

To all whom it may concern:

Be it known that I, HERMAN COMMANDOER, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented
5 certain new and useful Improvements in Wave-Powers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention consists in certain peculiarities of construction and combination of parts,
10 to be hereinafter described with reference to the accompanying drawings, and subsequently claimed.

In the drawings, Figure 1 represents an elevation, partly in section, of a wave-power constructed according to my invention; Fig.
15 2, a transverse section of the same, and Fig. 3 a detail plan view of one of the buckets constituting part of said invention.

Referring by letter to the drawings, A A represent parallel floats united by a cross-beam and rod B C, each float being provided with bearings D for transverse shafts E E,
20 arranged at a suitable distance apart. Fast on the shafts, adjacent to the floats, are polygonal wheels F, and arranged on these wheels are link belts G G, the latter being restricted as to lateral play by means of flanges b, forming parts of said wheels. Connect-
25 ing the link belts G G at regular intervals are buckets H, and the latter are united throughout the series by means of a stay-chain I intermediate of said belts.

Each of the buckets H is triangular in form,
35 or, in other words, the sides thereof sheer off from a central line somewhat in the shape of the bow of a boat, whereby the least possible resistance is offered to the water. Extended fore and aft from the extremities of the buckets are ears c d, and lateral pintles e on these ears engage bearings f on the links of the belts G G. One extremity of the center line of each bucket is provided with an eye g, and this eye connects with the stay-chain I, while at
40 the same time I prefer to curve both the upper and lower edges of said buckets in order to increase the resistance to waves.

As shown in Fig. 2, at least one of the shafts

E has a power-transmitting wheel J fast thereon, and one or more of such wheels may be
50 applied to both of said shafts.

It is intended that a mechanism similar to that above described shall be anchored in a sheet of water where there is no appreciable current, the lower line of buckets H being
55 partially submerged and at an angle to the surface of said water. The waves, striking against the rear of the partially-submerged buckets, impel them forward, thereby imparting motion to the link belts G G to turn the
60 wheels F and shafts E E, this motion being further transmitted through the medium of the wheel or wheels J and such gearing as may connect therewith.

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

1. A wave-power comprising parallel floats, transverse shafts having their bearings on the floats, wheels fast on the shafts, parallel belts
70 arranged on the wheels, buckets connecting the belts at intervals of their length, and a stay-chain connecting all the buckets in the series, substantially as set forth.

2. A wave-power comprising parallel floats,
75 transverse shafts having their bearings on the floats, wheels fast on the shafts, parallel belts arranged on the wheels, and a series of triangular buckets having their extremities connected to the belts, substantially as set forth.
80

3. A wave-power comprising parallel floats, transverse shafts having their bearings on the floats, the wheels F, fast on the shafts, the link belts G G, arranged on the wheels, the buckets H, connecting the belts at intervals
85 of their length, and the stay-chain I, connecting all the buckets in the series, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in
90 the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

HERMAN COMMANDOER.

Witnesses:

H. G. UNDERWOOD,
WM. KLUG.