

No. 611,874.

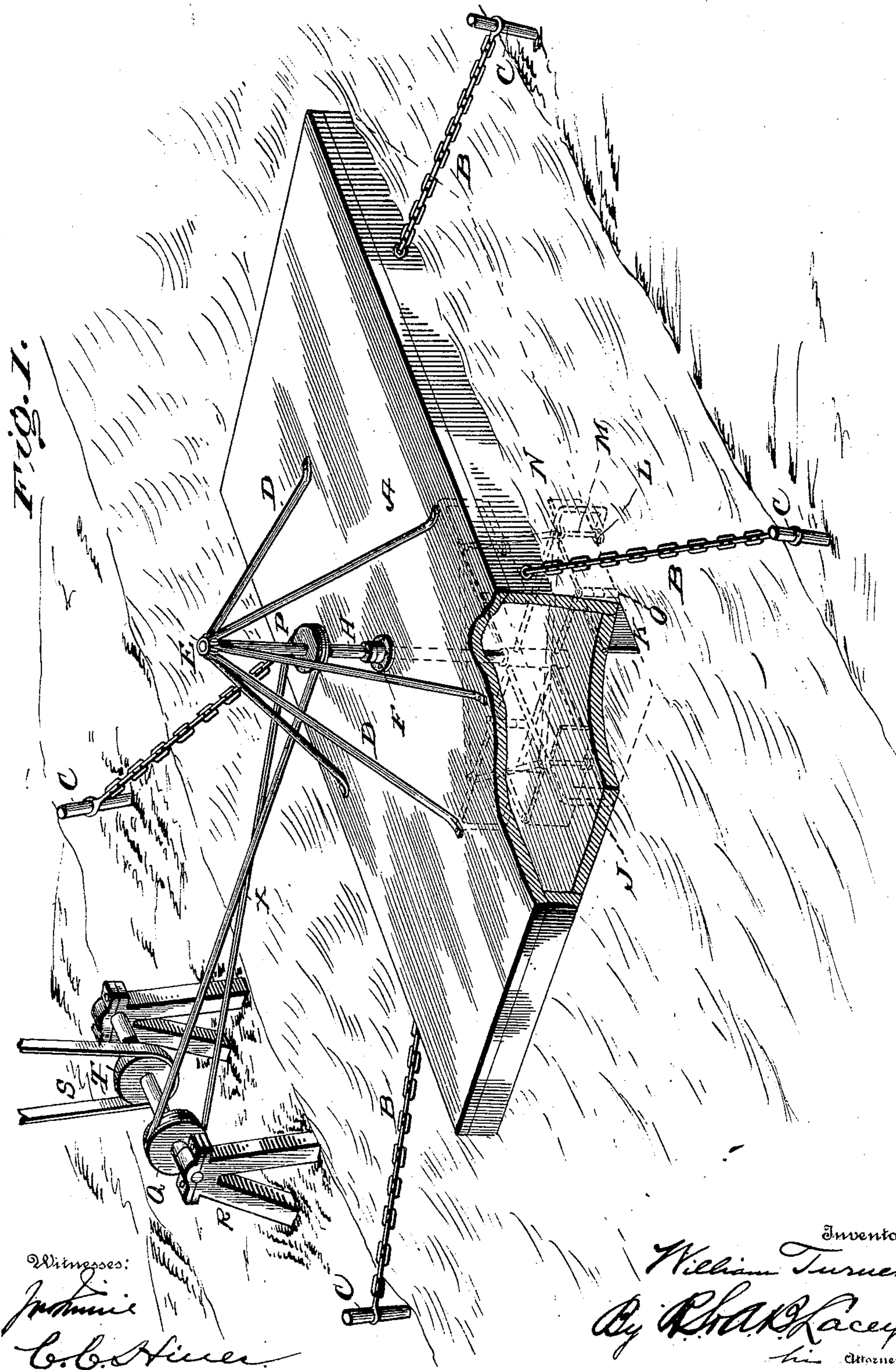
Patented Oct. 4, 1898.

W. TURNER.  
WATER MOTOR.

(No Model.)

(Application filed Mar. 9, 1898.)

2 Sheets—Sheet 1.



Witnesses:  
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Inventor:  
*William Turner*  
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his Attorneys

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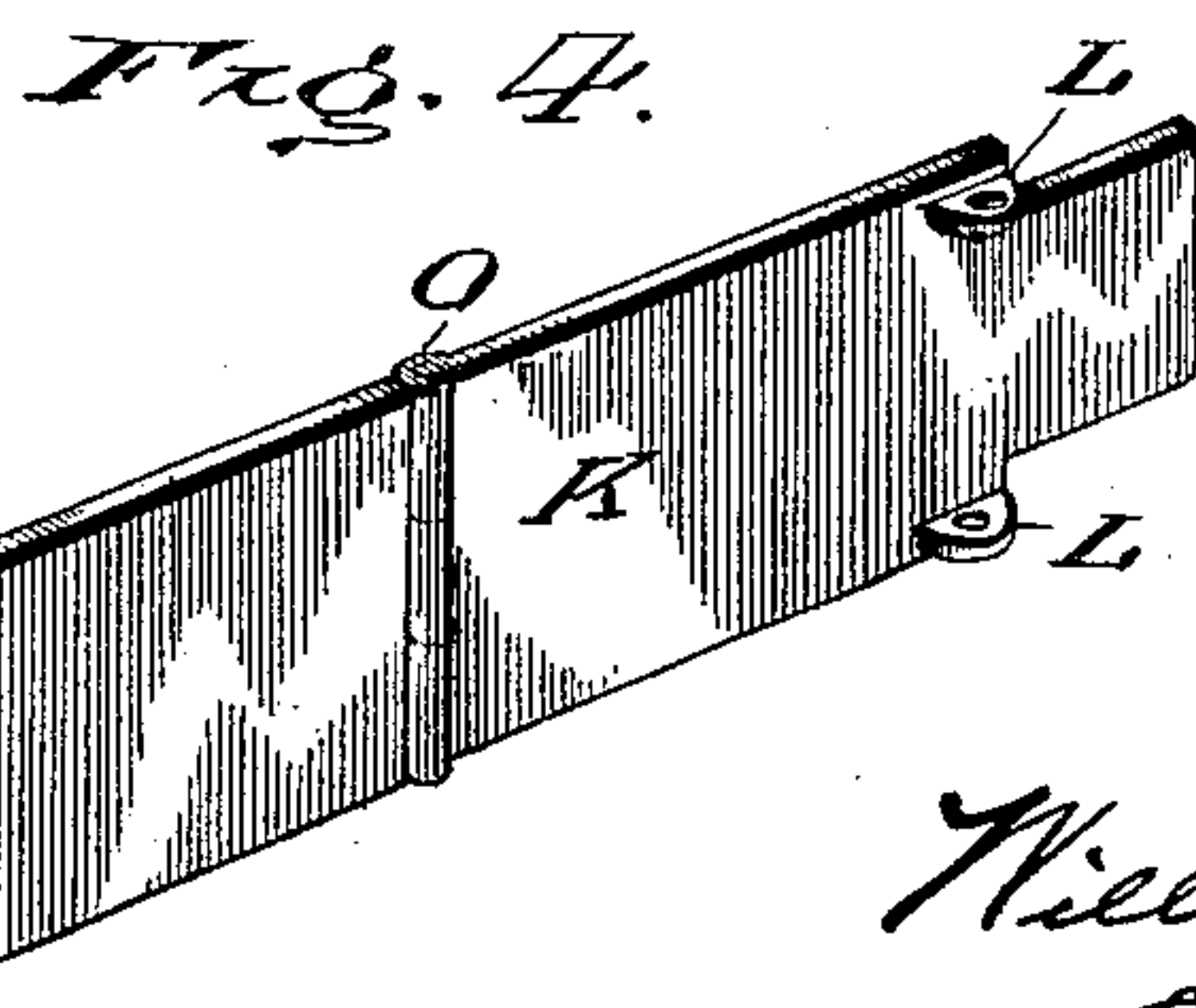
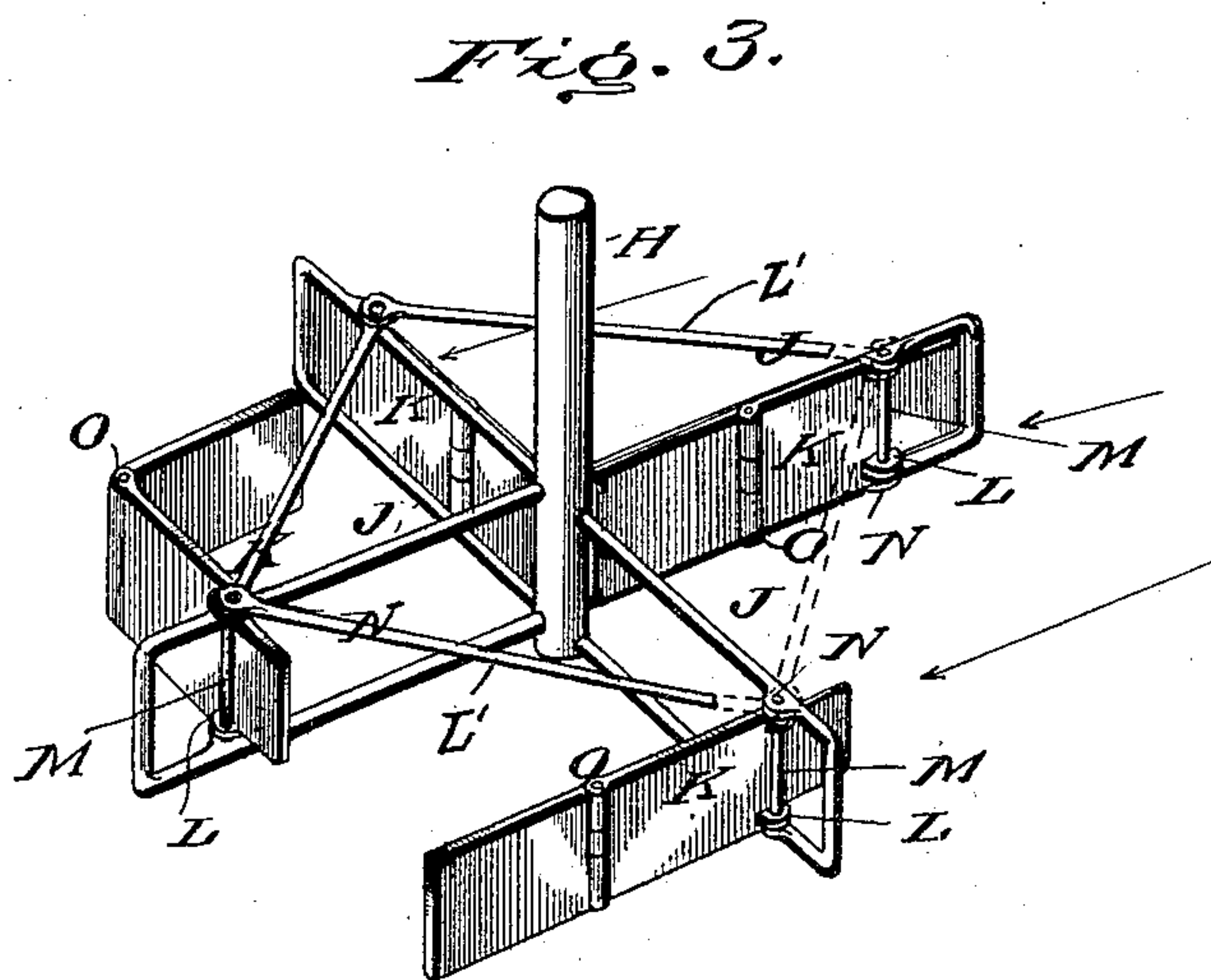
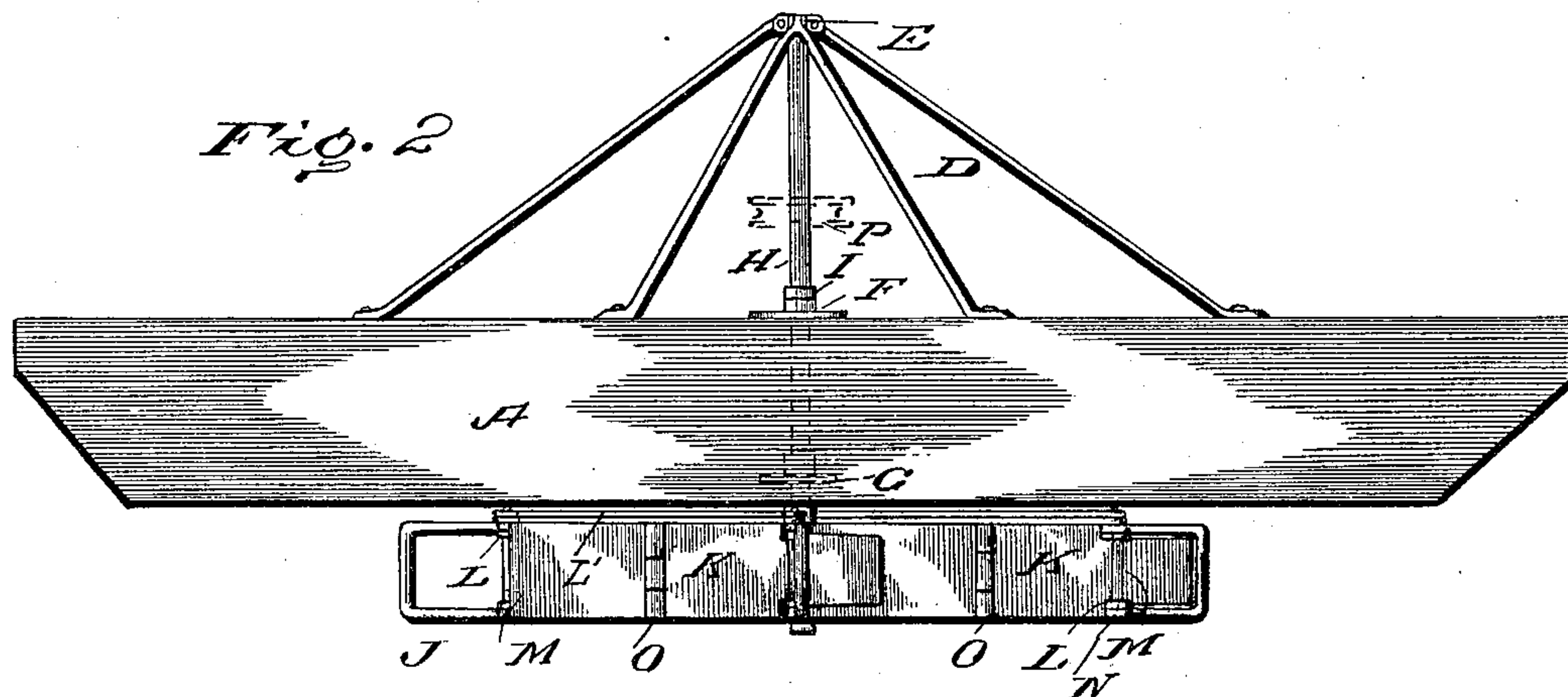
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Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM TURNER, OF WENATCHEE, WASHINGTON, ASSIGNOR OF ONE-HALF  
TO JOHN HENDERSON, OF SAME PLACE.

## WATER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 611,874, dated October 4, 1898.

Application filed March 9, 1898. Serial No. 673,225. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM TURNER, a citizen of the United States, residing at Wenatchee, in the county of Kittitas and State of Washington, have invented certain new and useful Improvements in Water-Motors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in water-motors, and has for its object to produce a device of this kind which will utilize the force of a swiftly-flowing stream to drive machinery for any purpose.

With this and other objects in view my invention consists of the novel details of construction and combinations of parts to be more fully described in the following specification and clearly set forth in the claim.

In the accompanying drawings, forming a part of this specification, in which like letters of reference indicate like parts, Figure 1 is a perspective view of my invention in operation. Fig. 2 is a side elevation thereof. Fig. 3 is a perspective view of the water-wheel, showing the relative positions of the blades; and Fig. 4 is a perspective view of one blade detached.

A represents a scow-shaped float anchored in mid-stream by means of chains B, which connect it with stakes C on the banks. On top of the float are secured a number of brace-rods D, arranged in a circle and meeting at a point, where they are connected to a journal-bearing E. Directly beneath this bearing E are two other bearings F and G through the top and bottom of the float, respectively, and in these three bearings is journaled a shaft H, carrying a collar I, resting on the bearing F to prevent the shaft from moving longitudinally.

On the lower end of the shaft H, beneath the float, is a water-wheel formed of a number of rectangular frames J, connected to the shaft and having blades K pivoted therein a short distance from the outer ends. These

blades K have projecting ears L, through which pass pins M, pivoting them to similar ears N on the frames. The frames are connected and rigidly stayed by braces L', secured to said pins. The width of the blades from the ears L to the inner ends is greater than the distance between the sides of the frames, thus preventing these ends from passing through the frames; but the portion of the blades beyond the ears L is reduced in width to pass through the frame and allow the blades to swing outward, for a purpose hereinafter described.

From the foregoing, in connection with Fig. 3 of the drawings, it will be seen that a current flowing in the direction of the arrows strikes the blades on the side of the wheel in such a way as to press them against their frames, thus holding them in a position to receive the full force of the current until the pressure on them has revolved the wheel sufficiently to bring them in a position where the current strikes them on the opposite side, when they swing on their pivots, taking a position which is of least resistance to the current and are carried upstream by the further revolution of the wheel to repeat the operation.

The blades are formed of two members hinged together at O for the purpose of allowing them to bend, so as to better conform to the path of least resistance on their return movement.

The power thus made available may be utilized for any desirable purpose through any of numerous methods of connection, such as the one I have shown, in which a grooved pulley P is secured to the shaft H between the bearings E and F and is connected by a belt X to another grooved pulley Q, journaled to a support R on the bank, from which a belt S, running on a pulley T, drives the machinery. (Not herein shown.)

It is obvious that changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

5 In a water-motor, a shaft suitably journaled, frames secured on the shaft, blades formed of members hinged together, ears on the blades and frames, and pins passing through the ears pivoting the blades to the frame, said blades being wider than the frame

on one end and narrower on the other, as described.

10

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM TURNER.

Witnesses:

A. H. LOW,

C. WILL SHAFFER.