

T. J. BOTTOMS
Current-Wheel.

No. 207,488.

Patented Aug. 27, 1878.

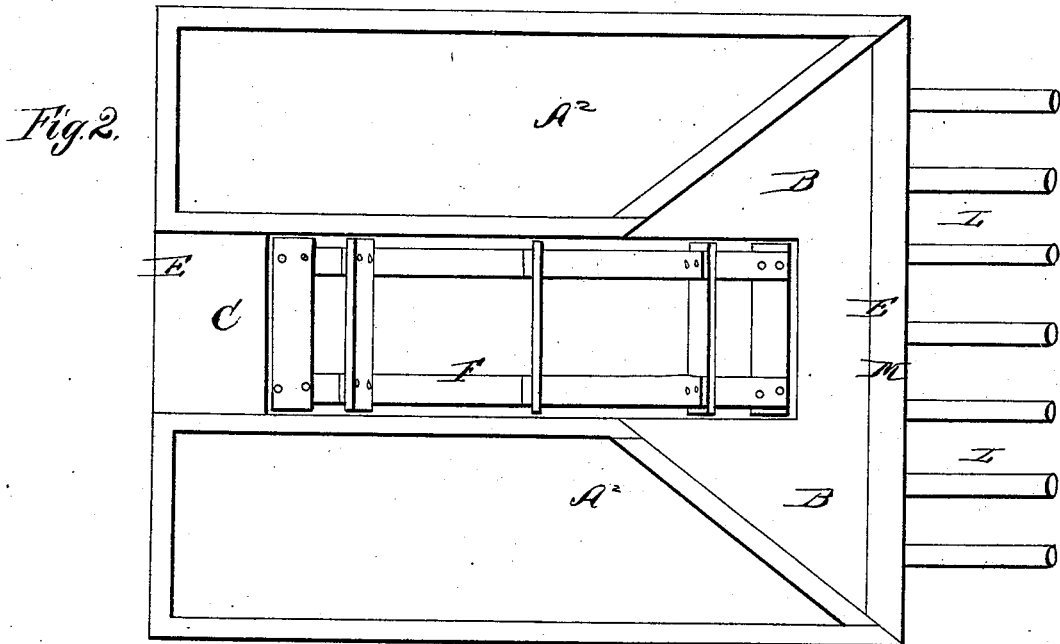
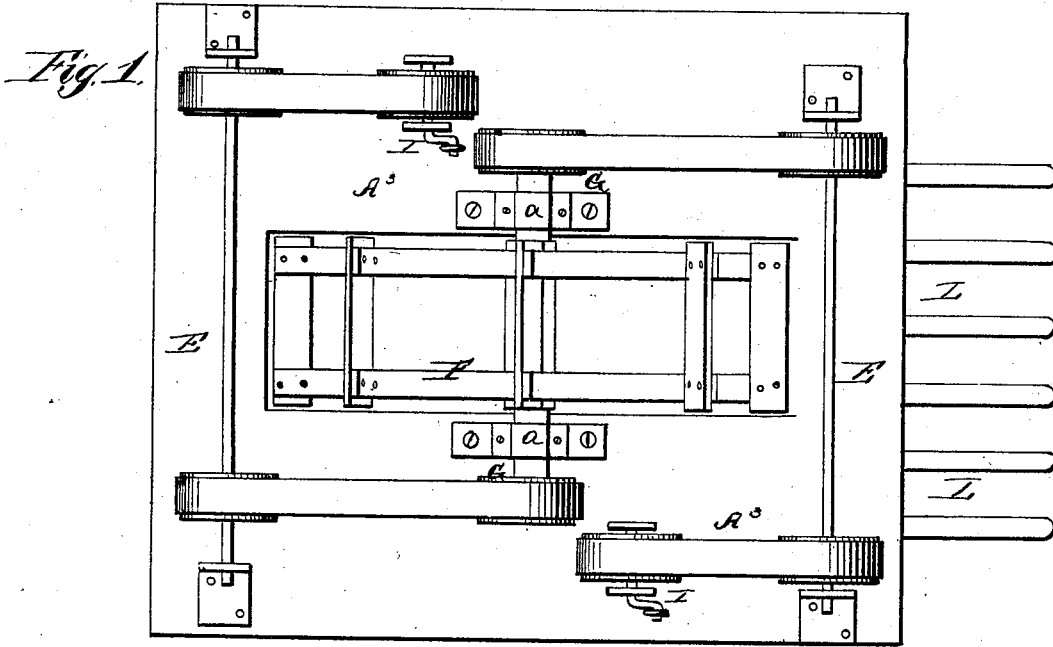


Fig. 3.

Witnesses:
H. M. Arthur
John C. Rogers.

Inventor:
Thomas J. Bottoms,
per
D. H. Alexander & Elliot

Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS J. BOTTOMS, OF THOMASVILLE, GEORGIA.

IMPROVEMENT IN CURRENT-WHEELS.

Specification forming part of Letters Patent No. 207,488, dated August 27, 1878; application filed August 14, 1878.

To all whom it may concern:

Be it known that I, THOMAS J. BOTTOMS, of Thomasville, in the county of Thomas and State of Georgia, have invented certain new and useful Improvements in Current-Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a water-wheel for utilizing a current of water, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view of my invention. Fig. 2 is a bottom view of the same, and Fig. 3 is a cross-section of one side thereof.

In the construction of my water-wheel I build two flat-bottomed boats, A A, of any suitable dimensions, placed parallel to each other, at such a distance apart as to allow the wheel to work between them. The front ends of these boats are made on a long bevel, so as to form, as it were, a V-shaped mouth, B, leading into a narrow channel, C, between the boats. The proportionate size of this channel and the entrance to the mouth may vary under different circumstances; but I have found that ordinarily, if the entrance to the mouth is, say, twenty feet wide, the channel C should be two feet wide, and then even a very sluggish current will cause a very rapid and powerful current through the channel C.

The boats A A are constructed so that their sides A¹ will project below the bottoms A²—say about two feet, more or less—for the purpose of confining the water, so that the action of the wheel will not throw it sidewise.

It will be understood that the boats A A sink down as far as the bottoms A², allowing the sides A¹ to extend below the surface of the water, thus holding, as it were, dead water between the bottoms A² and the bottom of the sides A¹, the effect of which is not only to increase the current operating the wheel, but prevents the washing out of the bottom of the stream between the sides.

The boats A A are covered at the top by platforms A³ A³, which are connected at their ends by cross-bars E E, to keep the boats the desired distance apart, each boat thus forming an air-chamber for buoying the entire device in the stream.

On the platforms A³ A³ are suitable bearings *a a*, in which are placed the journals of a paddle-wheel, F, and on said journals are secured pulleys G G, to be connected by belts or otherwise with any machinery to be driven.

By the construction of the devices as above described, it will readily be seen that the water is concentrated by the V-mouth B into the narrow channel C, so as to act with great power on the wheel F, and the sides A¹ of the boats, being below the surface of the water, will prevent the water from being thrown sidewise by the action of the wheel, and thus get the full force, not only of the regular current, but of the increased or concentrated current in the central channel C.

In case any water should get into the air-chambers or inside the boats A A, the paddle-wheel F may, by suitable pulleys, belts, and counter-shafts, be connected with pumps, for pumping out the same, as shown at I I.

Drift-wood or other trash is prevented from entering the channel C by means of inclined teeth or fingers L, secured to a bar, M, across the entrance to the mouth B.

The entire device may be anchored at any desired point in the stream.

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

A current water-wheel mounted upon two flat-bottomed boats, constructed to form a V-shaped mouth leading into a narrow channel between the boats, and having the sides of the boats projecting below the bottoms, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOMAS J. BOTTOMS.

Witnesses:

T. H. ALEXANDER,
W. C. MCARTHUR,