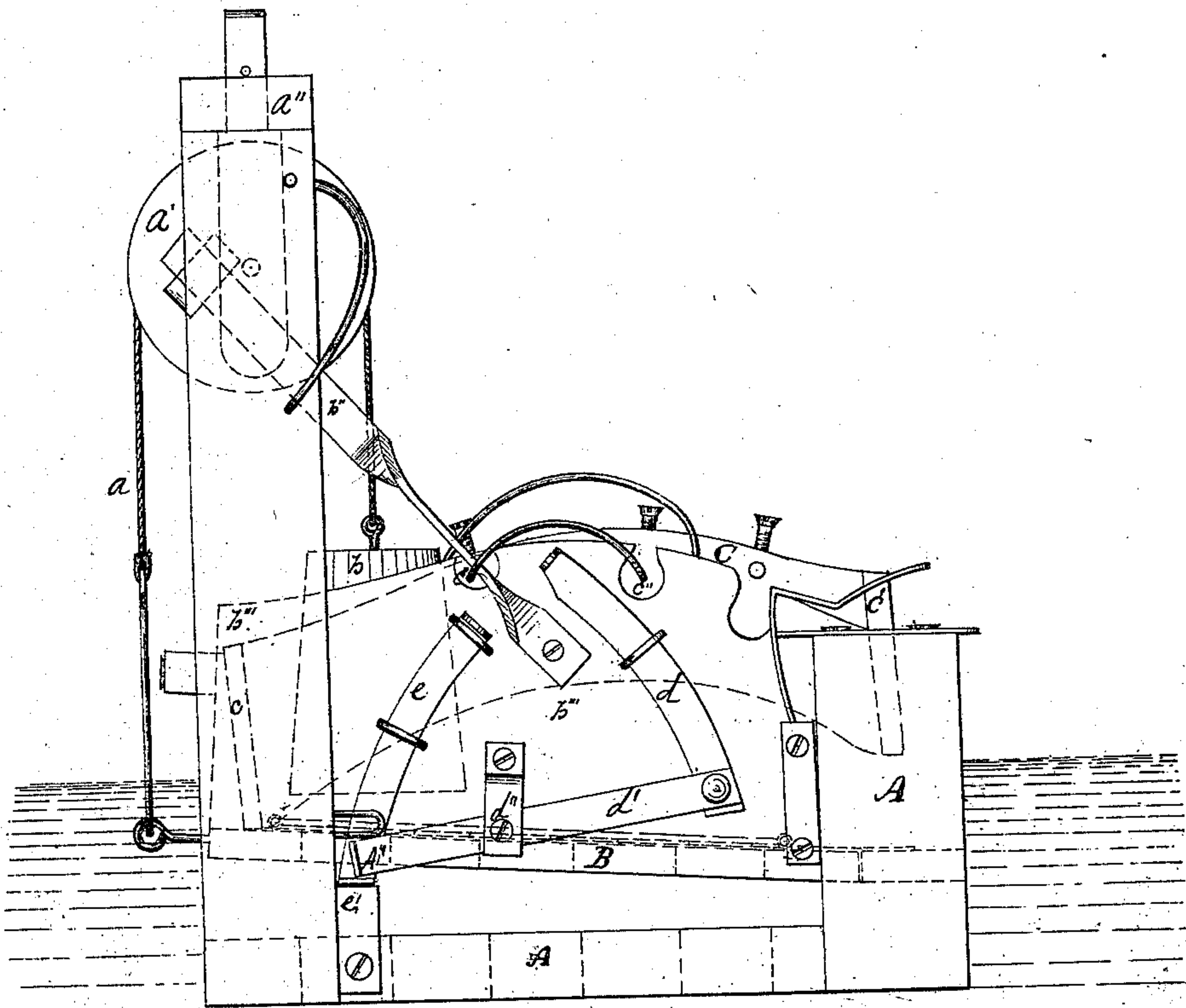


J. Q. A. Schoonover,

Water Current Motor.

No. 100,673.

Patented Mar. 8. 1870.



Witnesses

C. O. Brown

E. Julius

Inventor

J. Q. A. Schoonover by
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UNITED STATES PATENT OFFICE.

JOHN Q. A. SCHOONOVER, OF LEBANON, OHIO, ASSIGNOR OF ONE-HALF TO
JAMES S. TOTTEN, OF SAME PLACE.

IMPROVEMENT IN WATER-CURRENT MOTORS.

Specification forming part of Letters Patent No. 100,673, dated March 8, 1870.

To all whom it may concern:

Be it known that I, JOHN Q. A. SCHOONOVER, of Lebanon, in the State of Ohio, have invented a new and useful Improvement in Obtaining Water-Power; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and letters of reference marked thereon, making a part of this specification.

This invention consists in a platform so arranged in the bed of a river or brook as that the current causes it to vibrate, and thus supply power that may be turned to account in running machinery.

To enable those skilled in the art to make and use my invention, I now proceed to describe its construction and operation.

Similar letters in the drawings refer to like parts.

A is a frame constructed to sit in the bed of a river or brook, where the water is shallow, next to either bank.

B is a platform set in the frame A, having its sides open to the current, said platform being jointed at its front or upstream end to the side of the frame A in any manner that shall prove water-tight. The rear or downstream side of the platform is loose in the frame and connected by a cord, *a*, passing over a pulley, *a'*, suspended from the cross-piece *a''*, with a weight, *b*, which overbalances the platform, when empty, sufficiently to keep its end pieces, *b'''*, up against the stops of the frame-work A.

A rectangular frame, C, is pivoted centrally of the end pieces of the platform, the sides of the frame forming gates *c c'*, which alternately open and close the sides of the platform under the operation of a swinging and weighted lever, *b''*, pivoted at its lower extremity to the outside of one of the end pieces, *b'''*, of the platform, and alternately striking arms *c''* projecting outward from the frame C through recesses in the end pieces, *b'''*. The lever *b''* is thrown toward the downstream side, when the loose side of the platform B is elevated by the weight, by means of a flat curved bar, *d*, placed in a staple against the outside of the piece *b'''*, and jointed at its lower end to the extremity of a straight flat lever, *d'*, whose fulcrum is at *A'* in the corner-post, and which is pivoted to the end piece, *b'''*, at *d''*. When, therefore, the loose side of the platform rises, the lever *d'*, being

fixed at *A'*, must necessarily rise at its other end, pushing the curved bar *d* before it, and the latter pushing the swinging lever *b''* before it, and the swinging lever closing the gate *c* and opening the gate *c'*.

The apparatus, as it sits in the stream, is provided with a head-gate, which shuts the water off until such time as the machine is required to be set in operation, when, on raising the head-gate, the water flows upon the platform and, being shut off from beneath it at all points, causes it to sink. As the platform sinks, a curved bar, *e*, placed in a staple against the outside of the end piece, *b'''*, opposite the bar *d*, and resting at its lower end upon a seat, *e'*, of the main frame, meets the swinging lever and throws it toward the upstream side, thus causing it to close the gate *c'* and open the gate *c*. This clears the platform of water, and it once more rises, automatically opening the gate *c'* and closing the gate *c*, as before, and thus the operation goes on, resulting in a continuous vibration of the platform, which vibration may be taken advantage of to work a pump for the elevation of a column of water sufficient, when the platform is twelve feet square and submerged one foot, to give forty-horse power or run three pairs of burrs. Or the pump may be dispensed with and the motion of the platform communicated to wheels through connecting-rods, or the power be utilized in other ways, without the expense of a dam or race or the existence of a head, and in times of drought as long as there remains sufficient water in the stream to work the platform. The latter is pierced with sundry orifices, which are closed by a perforated plate, by raising which the water is allowed to flow through the platform without causing it to vibrate.

I claim as my invention—

1. The platform B, pivoted in a sustaining frame-work, and caused to vibrate by the alternate action of a weight and a current of water, substantially in the manner described.

2. The platform B, vibrating gates *c c'*, swinging lever *b''*, and shifting apparatus *d d' e*, combined and arranged substantially as described.

JOHN Q. A. SCHOONOVER.

Witnesses:

WM. B. ROACH,
T. R. THATCHER.