

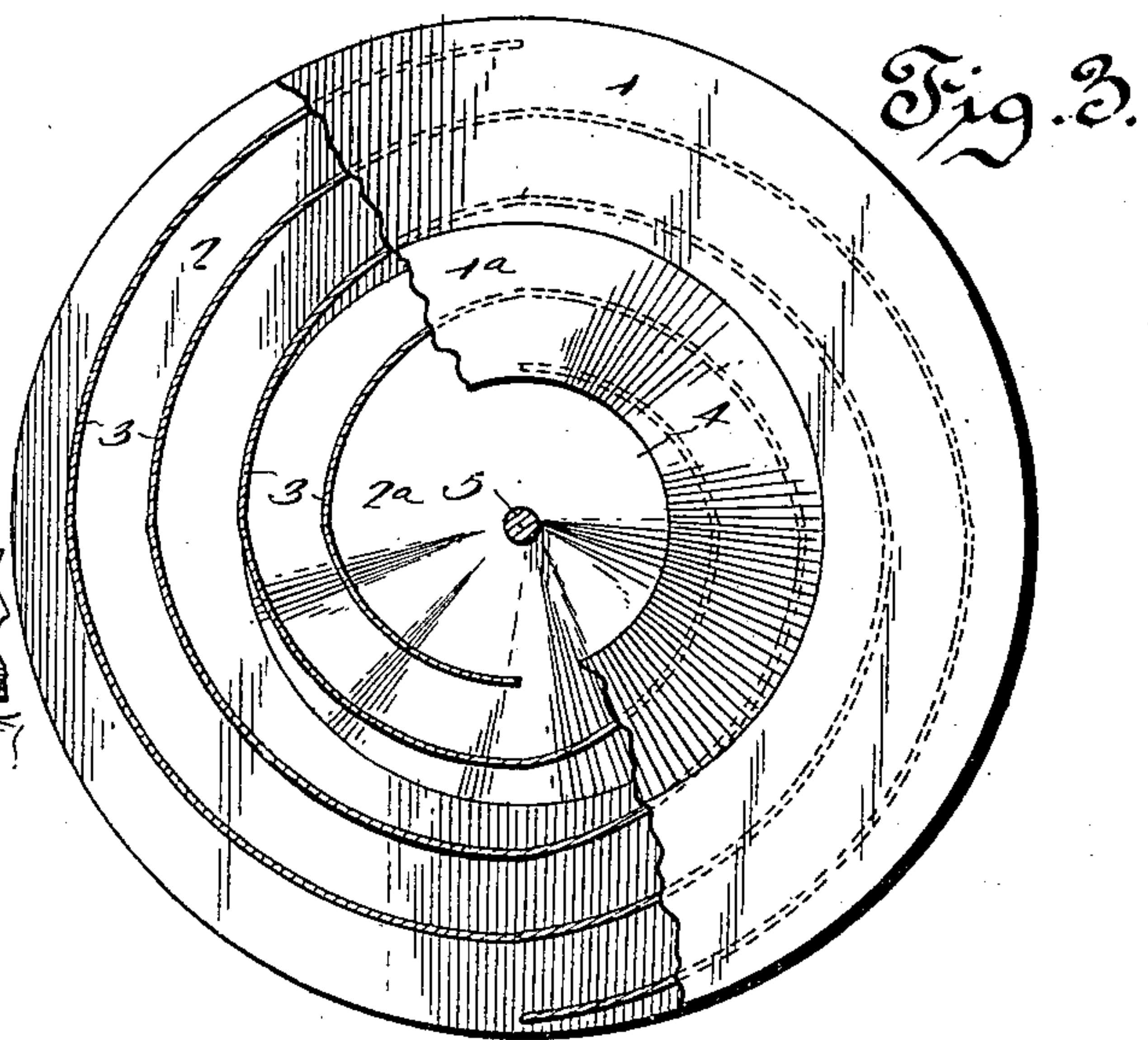
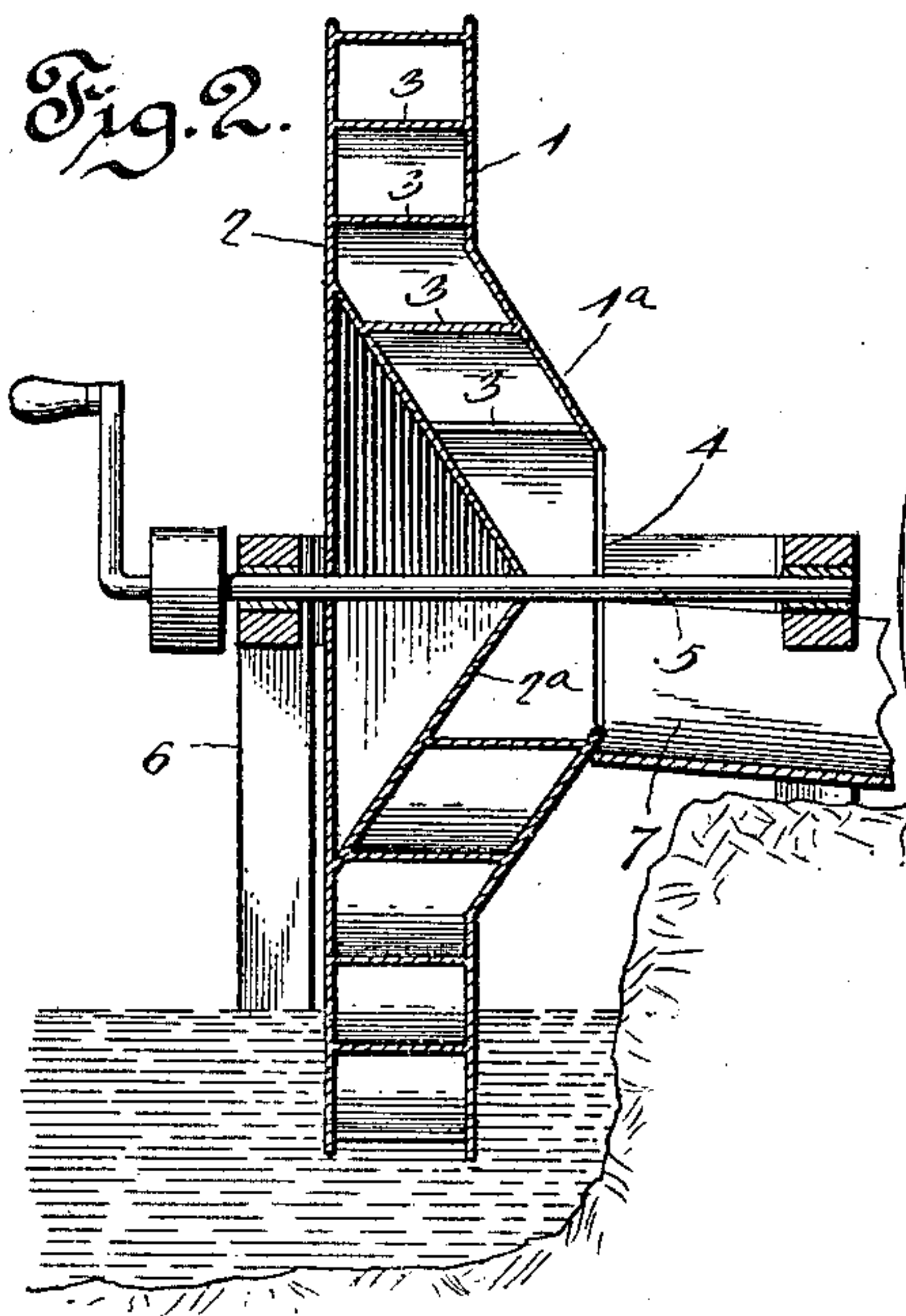
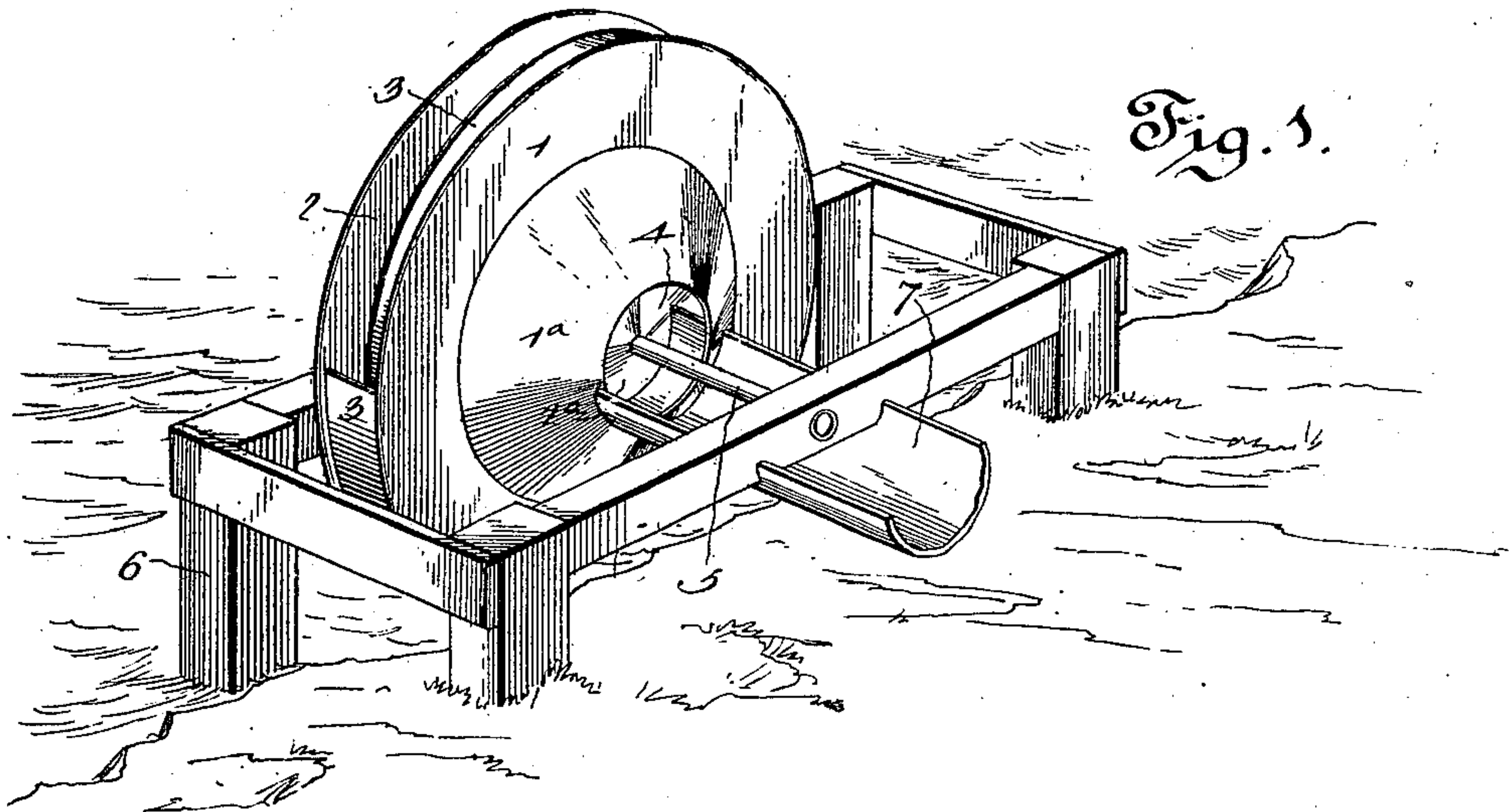
No. 632,194.

Patented Aug. 29, 1899.

A. D. MOREY.
ELEVATOR.

(Application filed Dec. 8, 1898.)

(No Model.)



Witnesses

Frank Culverwell
[Signature]

By his

Arthur D. Morey, Inventor.
Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ARTHUR DEWITTE MOREY, OF OWYHEE, OREGON.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 632,194, dated August 29, 1899.

Application filed December 8, 1898. Serial No. 698,642. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR DEWITTE MOREY, a citizen of the United States, residing at Owyhee, in the county of Malheur and State of Oregon, have invented a new and useful Elevator, of which the following is a specification.

My invention relates to an elevator for water, sand, gravel, &c., adapted to be used for dredging purposes in connection with placer-mining or to elevate water for purposes of irrigation; and the object in view is to provide a simple, compact, and efficient rotary elevator having improved means of discharge, particularly adapted for allowing the escape of solid substances, such as sand or gravel, which may be held in suspension or may be carried forward by the liquid.

Further objects and advantages of this invention will appear in the following description and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of an elevator or pumping apparatus constructed in accordance with my invention. Fig. 2 is a vertical section of the same, taken parallel with and in the plane of the axis of rotation. Fig. 3 is a face view of the wheel partly broken away to show the interior construction.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

The elevator or pump embodying my invention is of the rotary type, consisting, essentially, of side plates or heads 1 and 2, between which is arranged a plurality of spiral strips or blades 3, any desired number of which may be employed to suit the size of the wheel and the requirement of the apparatus, each blade or strip being arranged at one end to form the outer wall of an inlet-opening located at the periphery of the wheel and at the other end adjacent to an axial discharge-opening 4, located adjacent to the center of the wheel. The wheel is supported by means of a shaft 5, arranged axially and mounted in suitable bearings in a supporting-framework 6 of a construction adapted to the location and functions of the elevator, the elevation of the shaft being such as to submerge the lower portion of the periphery of the wheel.

In order to facilitate the discharge of the material elevated by the wheel, I preferably

provide the side walls thereof with parallel coned portions 1^a and 2^a, which are concentric with the axis of rotation and bulge laterally toward the discharge-opening 4, the blades or strips, which are arranged between the side walls, being carried laterally between said coned portions as they approach the discharge-opening. This construction and relative arrangement of parts have the effect of directing the stream of water laterally as it approaches the outlet, and hence accomplishes the efficient discharge of the material without waste and without allowing the falling back of the same to lower folds or coils of the blades or strips. Any suitable means may be employed for conveying material to the point of use, a trough 7 being indicated in the drawings.

It will be understood that the number of blades or strips, and hence the number of inlet-openings at the periphery of the wheel, will vary according to the circumference of the wheel and the desired rapidity of discharge as proportioned to the rate of rotation, any suitable means for communicating motion to the shaft of the wheel being employed, a pulley 8 being indicated in the drawings as adapted to be traversed by a belt, (not shown,) and, furthermore, it will be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described my invention, what I claim is—

An elevator consisting of the side plates or heads 1, 2, the parallel cone portions 1^a 2^a which are concentric with the axis of rotation, and bulge laterally toward the discharge-opening 4, and the shaft 5 upon which the wheel is journaled, combined with interposed spiral blades or wings arranged in gradually-widening curves around the axis of the wheel, a trough 7 for carrying off the water, and a suitable framework in which the wheel and the trough are mounted, substantially as shown and described.

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

ARTHUR DEWITTE MOREY.

Witnesses:

WM. MILLER,

J. J. CORTRIGHT.