(No Model.) 2 Sheets—Sheet 1.

A. R. LEWIS.

WATER MOTOR.

No. 560,589. Patented May 19, 1896.

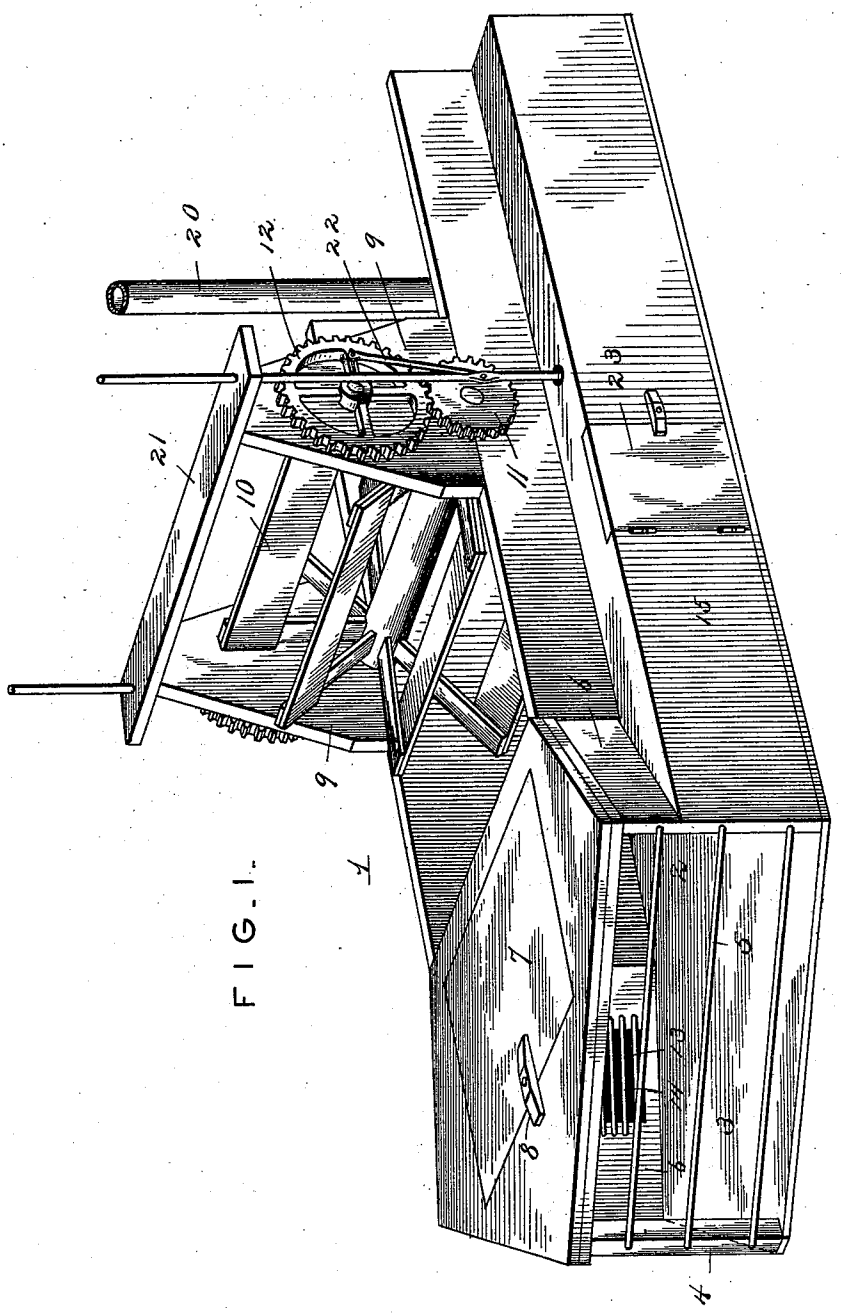

FIG. 1.

Inventor

Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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FIG. 2.

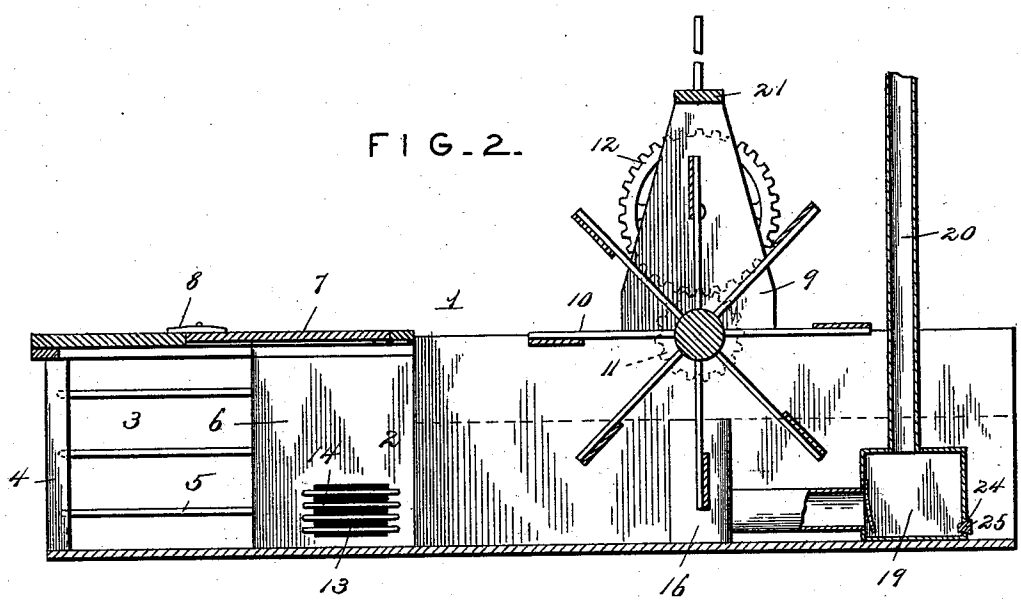
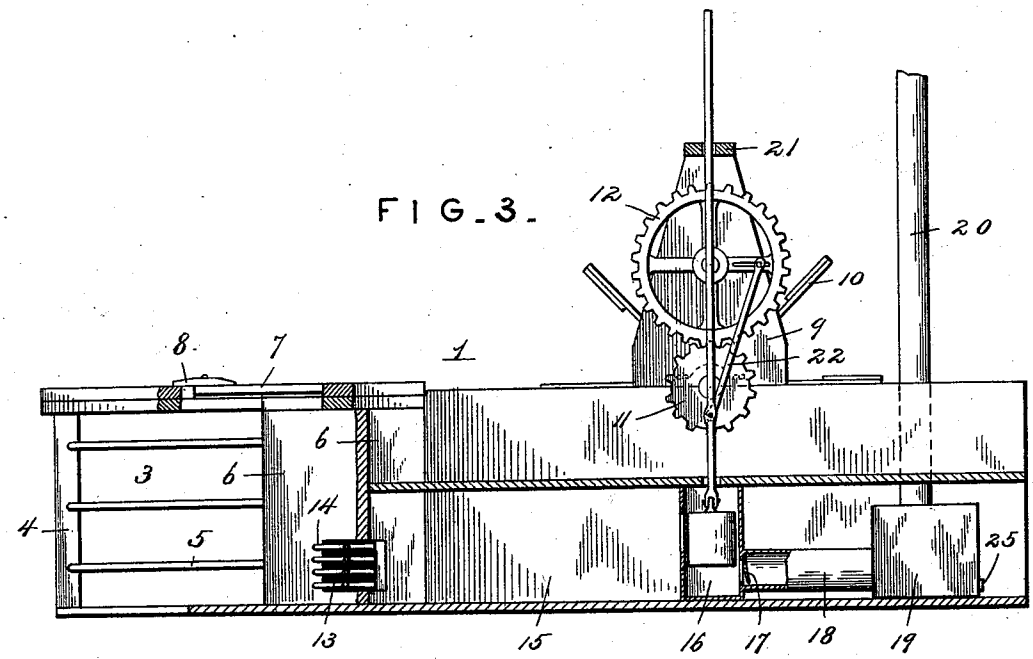


FIG. 3.



Inventor

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UNITED STATES PATENT OFFICE.

ALLEN R. LEWIS, OF SHELTON, WASHINGTON.

WATER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 560,589, dated May 19, 1896.

Application filed October 30, 1895. Serial No. 567,399. (No model.)

To all whom it may concern:

Be it known that I, ALLEN R. LEWIS, a citizen of the United States, residing at Shelton, in the county of Mason and State of Washington, have invented a new and useful Water-Motor, of which the following is a specification.

My invention relates to water-motors particularly designed for use in connection with pump mechanism; and the object in view is to provide a floating motor adapted to be anchored in a stream or body of running water and having the pump mechanism supported thereby.

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 claims.

In the drawings, Figure 1 is a perspective view of a motor constructed in accordance with my invention. Fig. 2 is a vertical central section of the same. Fig. 3 is a vertical section taken parallel with the plane of Fig. 2 and through the pump-cylinder and contiguous parts.

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

The frame of the motor embodies a runway 1, with which communicates a flared chute or mouth 2, a fender 3, which is tapered or V-shaped in plan, being arranged in front of the chute or mouth and consisting of a vertical nose-beam 4, which is connected by fender-rods 5 with the front edges of the walls 6 forming the chute. A gate 7 is hinged at one edge to the top of the runway at its front end, and is adapted to occupy a vertical position in the throat of the chute to cut off the flow of water through the runway, said gate, when the apparatus is in operation, being arranged in a horizontal position and being secured in said position by means of a turn-button 8 or its equivalent.

Standards 9 rise from the side walls of the runway for the support of the water-wheel 10, which thus operates between the planes of the walls of the runway, and the trunnions of the water-wheel are fitted with pinions 11, which mesh with gears 12, also mounted upon the standards.

Inlet-openings 13 are formed in the cheeks or walls of the chute 2, said openings being provided with gratings or fenders 14 to prevent the entrance of floating articles which may pass between the wider-spaced guard or fender-bars 5, and communicating with the inlet-openings are conductors 15, which communicate with the front sides of pump-cylinders 16. These cylinders communicate by means of valved openings 17 and rearwardly-convergent conductors 18 with a reservoir 19, from which leads a service-pipe 20.

The plunger-stems are arranged at their upper ends in suitable guides 21 near the upper ends of the standards, and are connected by means of pitmen 22 with the gears 12, whereby vertically-reciprocatory movement is imparted thereto. In the sides of the conductors 15 are arranged doors 23, which may be removed to expose the interiors of said conductors and thereby allow the cleaning thereof, and an outlet-opening 24 in the reservoir 19 is filled with a removable plug 25 for a similar purpose.

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 this invention.

Having described my invention, what I claim is—

1. The combination of a parallel-sided runway, a flared chute or mouth communicating with the front end of the runway and having forwardly-divergent walls, a V-shaped fender arranged in front of the chute or mouth and provided with spaced guard or fender bars, a water-wheel mounted in the runway, cylinders arranged at the sides of the runway and fed by conductors communicating with openings in the forwardly-divergent walls of the chute or mouth, and plungers arranged in the cylinders and operatively connected with the water-wheel, substantially as specified.

2. The combination of a runway having a flared chute or mouth, a gate arranged in the throat of the chute or mouth, means for arranging the gate in its open position, a fender arranged in front of the chute or mouth, a water-wheel arranged in the runway, cylinders arranged upon opposite sides of the runway, conductors connecting the cylinders with openings in the forwardly-divergent

walls of the chute or mouth, said openings having fenders, plungers operating in said cylinders and operatively connected with the water-wheel, a reservoir having valved connections with the cylinders, and a service-pipe in communication with the reservoir, substantially as specified.

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

ALLEN R. LEWIS.

Witnesses:
J. F. RILEY,
CHAS. MCREAVY.