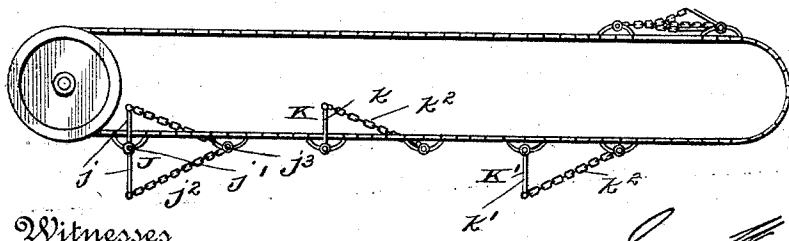
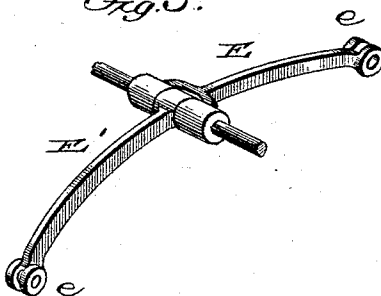
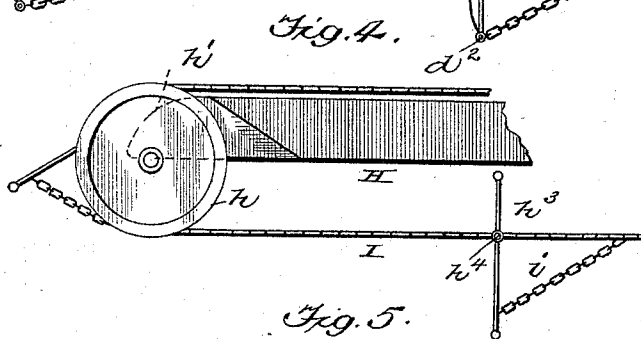
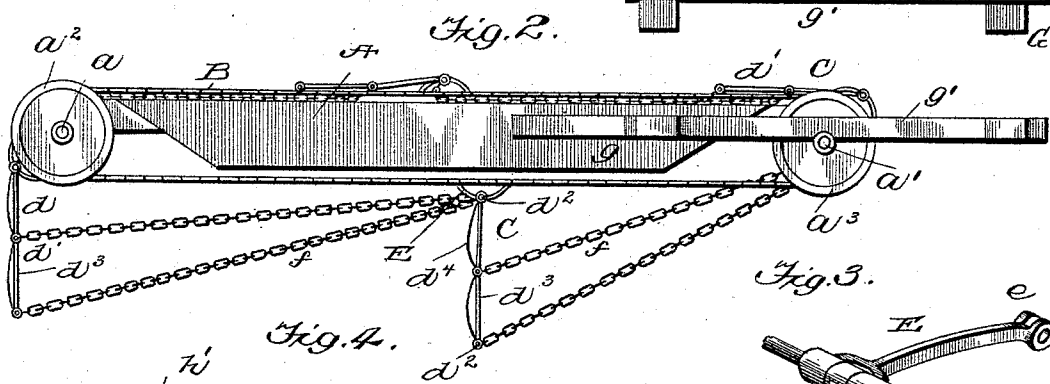


J. W. McCOY.
WATER MOTOR.

Patented May 9, 1893.



John S. Hodges.

Inventor
 John W. McGoy.
 By John W. McGoy.
 Attorney

UNITED STATES PATENT OFFICE.

JUAN WALKER MCCOY, OF WEST BERKELEY, CALIFORNIA.

WATER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 497,195, dated May 9, 1893.

Application filed July 14, 1892. Serial No. 440,025. (No model.)

To all whom it may concern:

Be it known that I, JUAN WALKER MCCOY, of West Berkeley, in the county of Alameda and State of California, 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.

This invention relates to certain new and useful improvements in water motors, and has for its object the production of a simple, inexpensive and durable motor designed to be anchored in a stream or current of water which will impart motion to the motor.

The invention comprises a scow having corresponding pulleys at its ends, endless belts encompassing said corresponding pulleys, and floats secured to said belts and capable of automatically folding themselves to conform to their different positions, said floats being held in fixed relation to the current of water.

The invention also comprises the detail construction, combination and arrangement of parts, substantially as hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 is a plan view of my improved motor. Fig. 2 is a side elevation thereof. Fig. 3 shows in detail the arms for connecting the floats to the chains. Figs. 4 and 5 are views of modifications of my invention.

Referring to the drawings, A designates a scow of ordinary construction; a , a' shafts mounted at the bow and stern thereof; and a^2 , a^3 grooved pulleys keyed on said shafts, said pulleys being adjacent to the sides of the scow. Around the corresponding pulleys a^2 and a^3 are passed endless chain belts B, which fit in the grooves of said pulleys.

C designates a series of floats movable with the chain B. In Figs. 1 and 2, each float is shown composed of two sections d , d' , loosely connected together. These sections are of approximately rectangular shape and are composed of a central and two outer longitudinal rods or pipes d^2 and end-rods d^3 . To

each section d , d' , is secured a strip of heavy canvas d^4 against which the current of water is designed to strike when the floats occupy a perpendicular position. The inner section d of each float is secured to each of the chains B by two curved arms E, E'. These arms at their outer ends have eyes or holes e through which suitable bolts, hooks or their equivalent are passed for attachment to the chains. The inner ends of these arms overlap, and are made tubular, the end of arm E being forked so that the tubular end of arm E' will fit therebetween. The inner longitudinal rod of the inner section of each float is passed through these tubular ends and hence the floats are pivotally connected to the chains, and are held from contact at their inner ends with said chains by the curvature of said arms. To the central longitudinal rod and also to the outer rod of each float are connected the outer ends of stay chains f , the outer ends thereof being secured to the innermost longitudinal rod of the next preceding float. In this way all the floats are connected together, and as each is lowered from the scow at the bow thereof into the water it is made to occupy a perpendicular position, and the current striking against the canvas of the float will move the latter toward the end of the scow. Hence motion is imparted to the driving chains and all the floats are made to move therewith, two or more floats always being acted upon by the current.

While I have shown and described but two driving chains and two sets of corresponding pulleys, yet it is obvious that in motors of large size additional pulleys and chains may be employed.

Any suitable means may be used for anchoring the motor scow, but that shown consists of a mooring scow G from which extends a frame g . From side arms of this frame project bars g' which are rigidly secured to the sides of the motor scow.

In Fig. 4 I have shown a slight modification of my invention. In this form the pulleys h are mounted centrally on a line with the bottom of scow H, and they extend just

above the top of the latter. At its ends h' , h^2 the scow is curved, as shown. The floats h^3 are shown as being made in one section and are pivoted at h^4 to chains I, thus making
 5 one portion of the float beyond the chains slightly longer than the other. Thus as the floats are lowered into the water the heavier sides will fall beneath the chains and the float is made to hang perpendicularly by
 10 stay chains i connected thereto and also to chains I. As the latter chains revolve and carry the floats up over the stern said floats will gradually be lowered into a horizontal position, and the curved portions at the bow
 15 will cause the floats to properly enter the water.

In Fig. 5 I have illustrated another modification of my invention. The centers of the pulleys are on a line with the bottom of the
 20 scow, and the floats J are made in two sections j mounted centrally on a rod j' . To the outer and central rods of each float are connected the ends of stay-chains j^2 which at their convergent ends are attached to cross-
 25 rods j^3 secured to the driving chains. When thus formed the two sections composing each float can fold over, one on the other as shown at the upper right hand end of Fig. 5. Or instead of connecting both sections of the float
 30 to the said pivot rod, each half of the float may be connected to separate pivot rods, as shown at K and K', Fig. 5. The float K consists only of the upper half section k , while the float K' is composed of the lower half or
 35 section k' . Each of these halves or sections is held by stay chains k^2 attached thereto and to the rods j^3 .

The advantages of my invention are apparent to those skilled in the art to which it
 40 appertains. It will be specially observed that the same is simple in construction and

inexpensive and that by means thereof strong motor power is secured.

I claim as my invention—

1. The herein-described water motor, comprising the scow, the shafts at the ends thereof having pulleys thereon, the endless chains encompassing said pulleys, the floats pivotally connected to said endless chains and composed of parallel longitudinal rods, corresponding end-rods, strips of canvas, and the stay chains, substantially as set forth.

2. The herein-described water motor comprising the scow, the shafts at the ends thereof having pulleys thereon, the endless chains encompassing said pulleys, the floats composed of inner and outer longitudinal rods, corresponding end-rods and strips of canvas, the arms connected to the inner longitudinal rod of each float and attached to said endless chains, and the chains connecting the floats in series, substantially as set forth.

3. A water-motor of the class herein-described, comprising the scow, the shafts at the ends thereof, the pulleys thereon, the endless chains encircling said pulleys, the floats formed in sections and composed of three longitudinal rods or pipes and corresponding end-rods, the arms secured to said chains and having overlapping tubular ends supporting one of the rods of each of said floats, and the stay chains connected to the central outer longitudinal rods of said floats, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JUAN WALKER MCCOY.

Witnesses:

ELIZABETH MCCOY,
 MCCOY CHAPPELL.