G. E. C. ROUSSEAU & F. GREGORY.

CURRENT MOTOR.

APPLICATION FILED APR. 15, 1912. RENEWED JUNE 9, 1913.

1,081,867.

Patented Dec. 16, 1913.

2 SHEETS—SHEET 1.

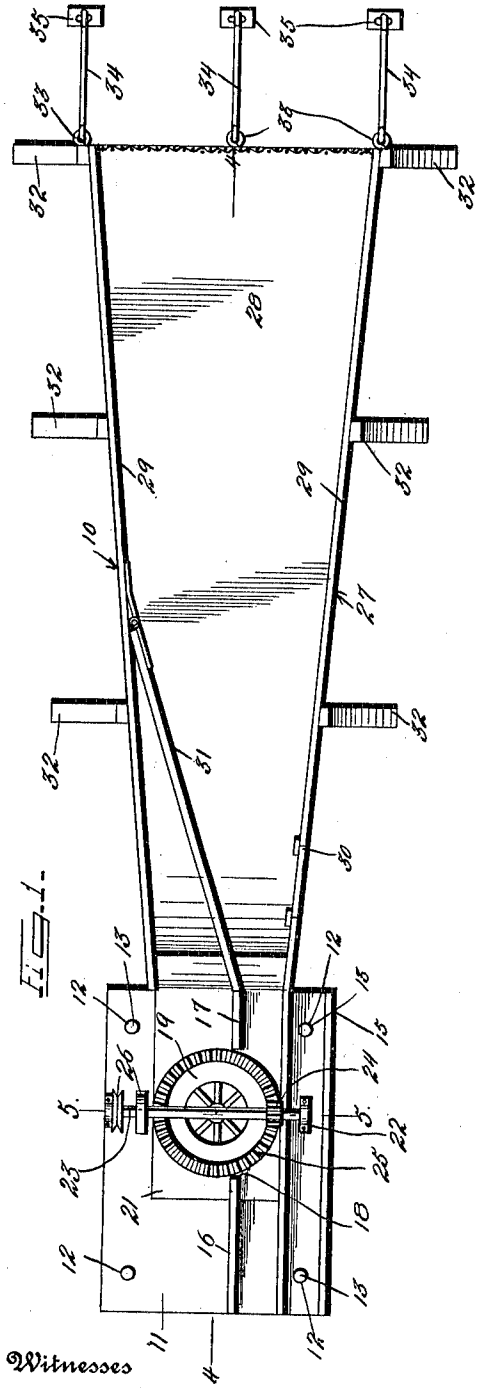


Fig. 1.

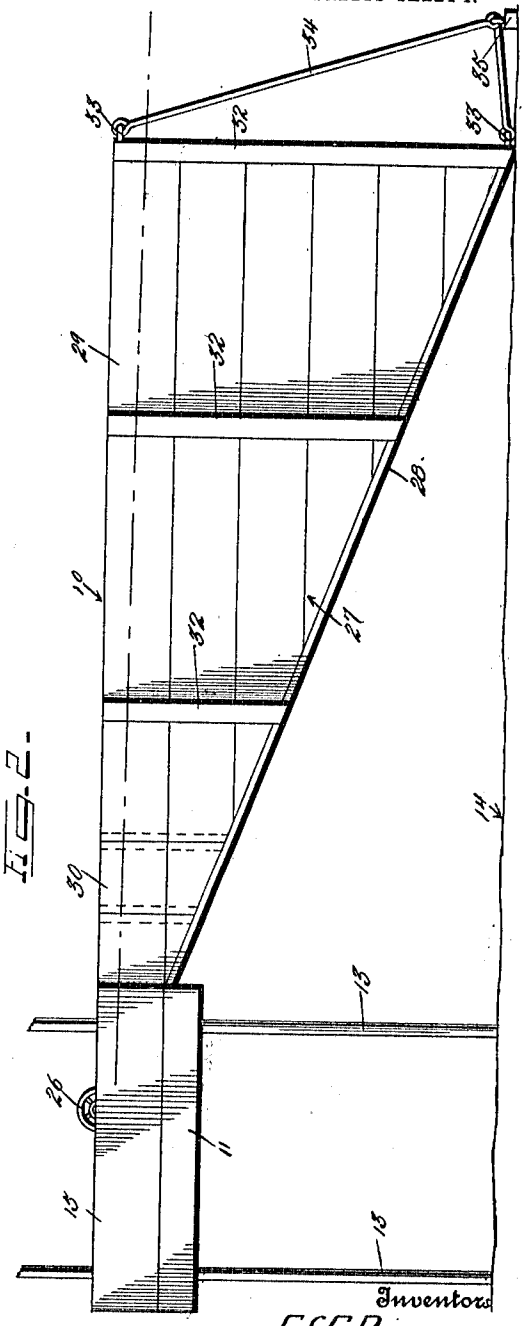


Fig. 2.

Witnesses

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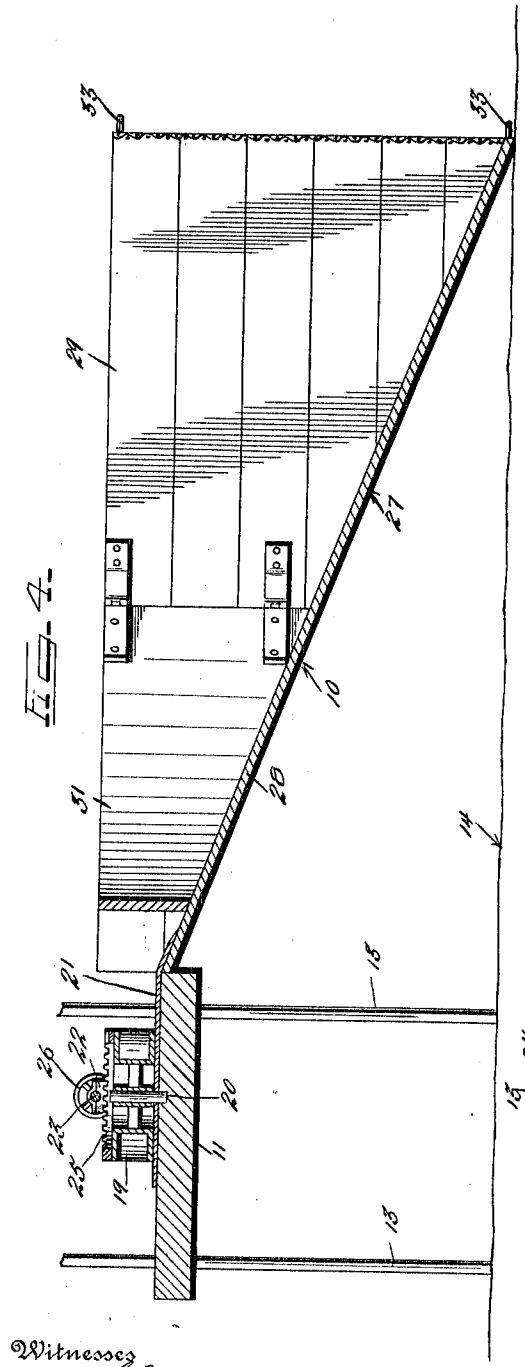


Fig. 4.

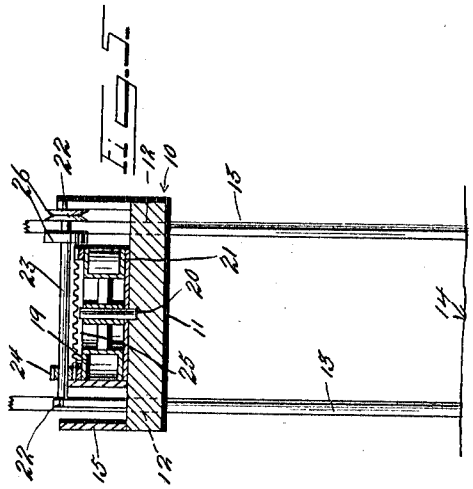


Fig. 5.

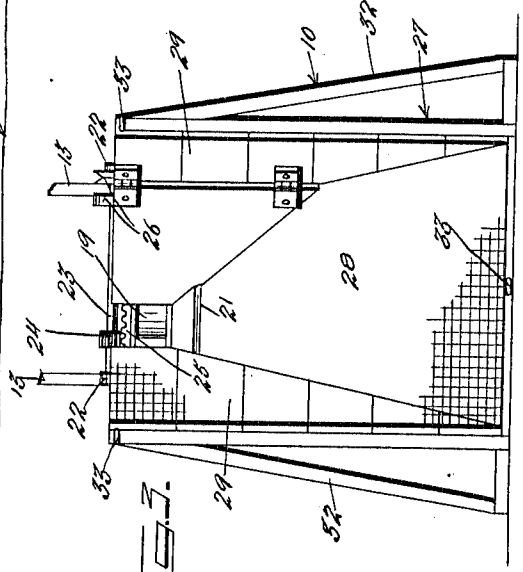


Fig. 3.

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UNITED STATES PATENT OFFICE.

GEORGE E. C. ROUSSEAU AND FRANK GREGORY, OF SACRAMENTO, CALIFORNIA.

CURRENT-MOTOR.

1,081,867. Specification of Letters Patent. Patented Dec. 16, 1913.

Application filed April 15, 1912, Serial No. 690,787. Renewed June 9, 1913. Serial No. 772,689.

To all whom it may concern:

Be it known that we, GEORGE E. C. ROUSSEAU and FRANK GREGORY, citizens of the United States, residing at Sacramento, in the county of Sacramento, State of California, have invented certain new and useful Improvements in Current-Motors; and we 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 new and useful improvements in current motors.

An object of this invention is the provision of a current motor and means for directing water thereto with sufficient force to drive the operating wheel from which power can be transmitted to a suitable object or objects.

Another object of this invention is the provision of a float which supports a pocket wheel and an anchored apron which leads to the said pocket wheel, the said apron being provided adjacent the float with means whereby the water can be prevented from passing through the float thus making possible the repairing of the device while disposed in a stream.

A further object of this invention is to improve and simplify devices of this character, rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use and readily operated.

With the above and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:—

Figure 1 is a top plan view of our invention. Fig. 2 is a side elevation thereof. Fig. 3 is an end view. Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 1, and Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 1.

Referring to the accompanying drawings by similar characters of reference throughout the several views, the numeral 10 designates generally our improved current motor which comprises a float 11 formed at its opposite corners with vertically disposed openings 12 adapted to loosely receive the supporting rods 13 which are embedded in the bed 14 of a stream thus providing a means whereby the said float 11 can rise and fall with the tide.

A longitudinal plate 15 is secured to the upper side of the float 11 adjacent one edge thereof and secured in spaced relation to this plate 15 are parallel plates 16 and 17 spaced apart at their inner ends to produce a passage 18 through which extends one side of a pocket wheel 19 journaled upon a shaft 20 which projects vertically from a plate 21 attached in any suitable manner to the upper face of the float 11.

Bearings 22 are attached to the upper side of the float 11 and support a rotatable countershaft 23 which carries keyed adjacent one end a pinion 24 arranged for intermeshing engagement with the teeth of a crown gear 25 which is attached to the upper side of the pocket wheel 19.

Obviously upon the rotation of the pocket wheel 19 a rotary movement will be imparted to the countershaft 23 from whence it can be transmitted by the pulleys 26 keyed upon the shaft 23 through the medium of belts or other suitable members not shown in the drawings.

The numeral 27 indicates an inclined apron having a bottom 28 and side walls 29 converging toward their upper ends, the upper end of the apron being connected to the float 11. The plate 21 is extended beyond the adjacent end of the float 11, and into the adjacent end of the apron 27 at which point it is secured to the bottom 27. The side walls 29 of the apron 27 which is attached to the plate 15 is provided with a gate way 30, while hingedly secured to the opposite side wall is a gate 31 adapted to register when in its normal position with the plate 17 and being capable of being swung to engage the side wall 29 at a point between the gate way 30 and float 11 thus serving when in this position to direct the flow of water through the gate way 30 and permitting the ready access to the various operating parts including the pocket wheel 19 and shafts connected therewith.

The outer end of the apron 27 and at points at intervals throughout its length are braced by suitable beams 32, while the said outer end of the apron has attached thereto eyes 33 to which are connected anchor lines 34 which are secured to the bed of the stream in any manner such as shown at 35. It should be understood in this connection that

various minor changes in the details of construction can be resorted to within the scope of the appended claims without departing from or sacrificing any of the advantages of the invention.

From the foregoing disclosures taken in connection with the accompanying drawings it will be manifest that a device of the nature described is provided which will fulfil all of the necessary requirements of such a device.

Having thus fully described this invention what we claim as new and desire to protect by Letters Patent, is:—

1. A current motor comprising a float, a rotary wheel mounted upon the float, an inclined apron leading to the float and having a gate in one side thereof and a swinging gate hinged to the opposite wall and adapted when closed to bear at its opposite ends against the portion of the side of the apron between the wheel and the gate in such side to close the water passage.

2. In a current motor the combination of a float, means for movably supporting the float, vertical plates secured to the float and producing a water passage, a water wheel extending into the passage, power transmitting means operated by the water wheel, an apron connected to the float, a gate-way in one side of the apron, and a swinging gate hinged to the opposite side of the apron and adapted to be swung into and out of position along the apron to open or close the water passage.

3. A water motor comprising a float, anchoring rods passing through the float, parallel plates secured to the float and extending perpendicularly therefrom producing a water passage, the plates at one side of the passage being spaced apart, operating means extending into the water passage between the spaced ends of the plates, an apron, said apron comprising a bottom and opposite side members, one of said side members being secured to the outer of the plates, said side member being provided with a gate way, the opposite side member being secured to the opposite side of the float, a plate secured to the float and extending within said apron and secure to the bottom thereof, a gate secured to the last mentioned side member for engaging the adjacent plate and directing water through the water passage, said gate also adapted to engage the opposite side member of the apron for directing the water through the gate way, and anchoring means for the apron.

In testimony whereof, we affix our signatures in presence of two witnesses.

GEORGE E. C. ROUSSEAU.
FRANK GREGORY.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."