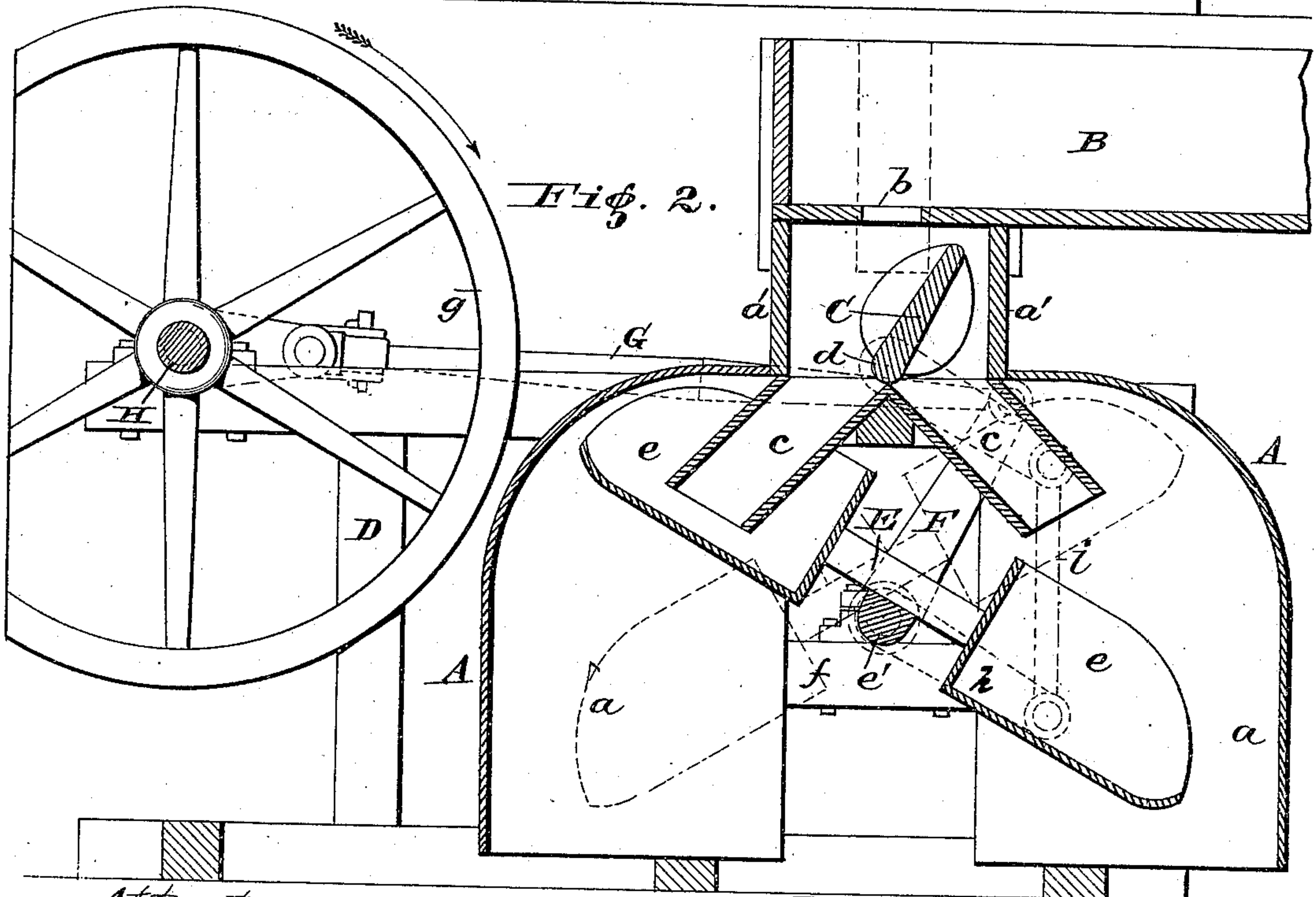
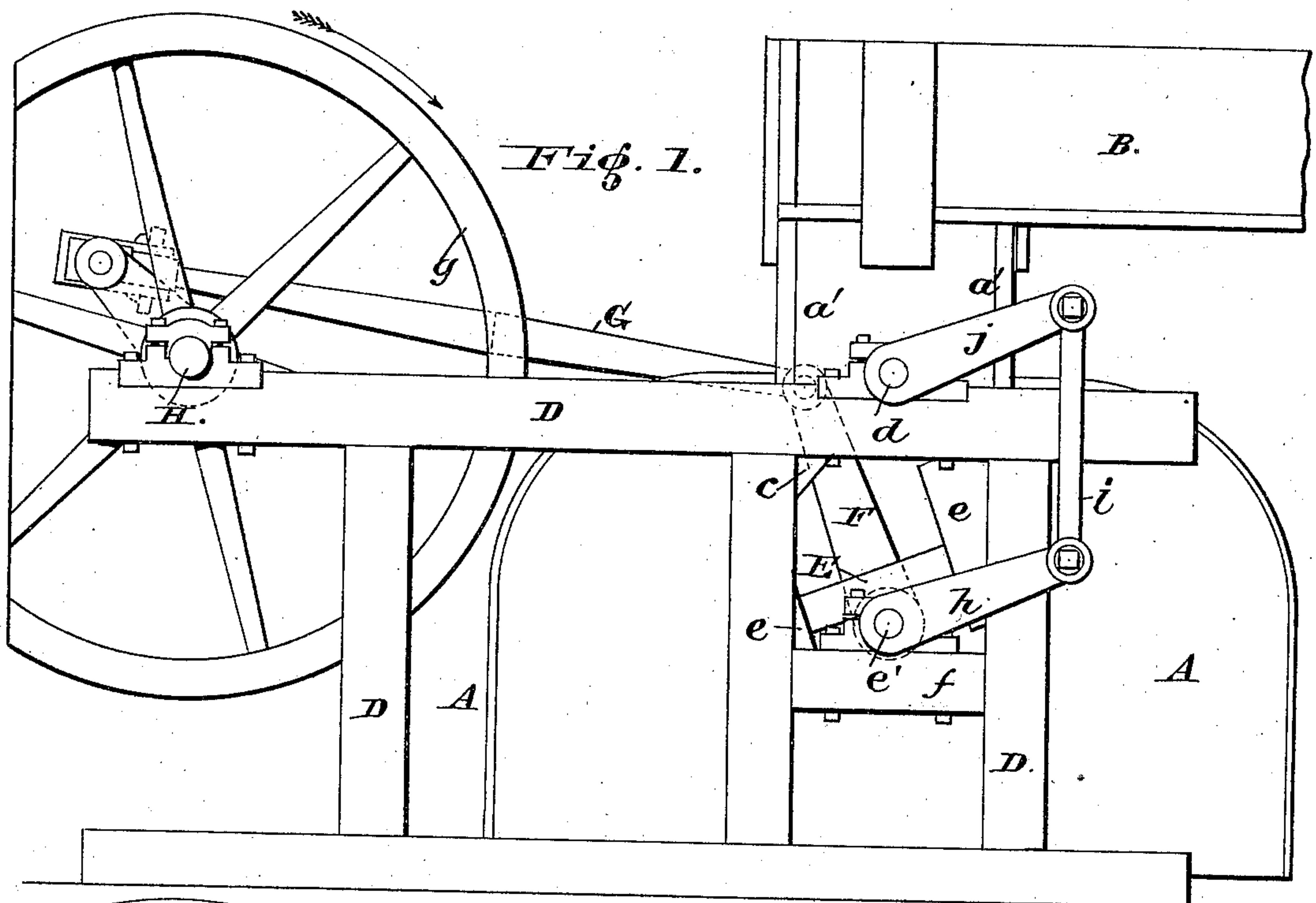


(No Model.)

P. S. KEELE.
Hydraulic Engine.

No. 235,254.

Patented Dec. 7, 1880.



Attest:
W. L. Pennie.
J. W. Foster

Inventor.
Peyton S. Keele.
By J. William Foster
Atty.

UNITED STATES PATENT OFFICE.

PEYTON S. KEELE, OF PINE CREEK MILLS, MISSOURI.

HYDRAULIC ENGINE.

SPECIFICATION forming part of Letters Patent No. 235,254, dated December 7, 1880.

Application filed October 7, 1880. (No model.)

To all whom it may concern:

Be it known that I, PEYTON S. KEELE, a citizen of the United States, residing at Pine Creek Mills, in the county of Howell and State of Missouri, have invented certain new and useful Improvements in Water-Powers; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved water or hydraulic motor. Fig. 2 is a sectional elevation thereof.

This invention has relation to improvements in that class of hydraulic motors employing a centrally pivoted or hung beam, with a bucket at each end adapted to receive a flow of water from a spout or chute, and employing a gate controlling the flow of water to the chutes operated in connection with the pivoted beam; and it consists in so combining the gate with the pivoted or bucket beam that the action of the water on the buckets themselves will operate the gate, thereby simplifying and lessening the mechanism and the operation, substantially as hereinafter more fully set forth.

In the accompanying drawings, A indicates a casing with two discharging-legs, *a a*, and at its upper side a central supply-neck, *a'*. Superposed above this neck is a flume, B, with an opening, *b*, centrally disposed with the interior of the neck to supply it with water.

To the lower end of the neck *a'* are supplied or secured two spouts or chutes, *c c*, with their under side preferably arranged so as to form an apex at the center of the lower end of the neck, at which point the gate C is pivoted, as clearly indicated in Fig. 2.

C is the gate or valve, pivoted as aforesaid, with its pivot or axis *d* passing through the neck *a'* and bearing, preferably, in boxes upon the horizontal timbers of the supporting-frame D. This gate or valve is located to operate within the neck *a'*, as presently will be more fully set forth.

E is the beam or lever, having a bucket, *e*, of the form shown in Fig. 2, at each end, and centrally secured upon a pivot or axis, *e'*, bearing in boxes upon cross beams or timbers *f* of the frame D. One end of this axis or shaft *e'* is connected, by an arm or crank, F, to the pitman G, connecting with the crank or driving shaft H, journaled upon the distant end of the frame D and carrying the fly or balance wheel *g*. The other end of the shaft *e'* is connected to an arm, *h*, articulated to a pitman, *i*, in turn similarly connected to a second arm or crank, *j*, connected to the axis of the valve or gate C.

It will be noticed that as the water flows from the flume into the neck *a'*, with the valve or gate C in the position shown in Fig. 2, it will pass through the chute on that side and into the bucket directly thereunder, the action of which, as soon as the bucket has received sufficient water to overbalance and elevate the bucket on the other end of the lever or beam E, will be to depress the filling bucket, and, of course, permit it to discharge its water. Simultaneous with this action of the buckets the valve or gate C will be directly acted upon or reversed by the mechanism *h i j*, connecting it to the shaft or pivot of the bucket-lever E, so as to open the formerly-closed or opposite chute and permit the water to flow through it into the just elevated bucket to cause it to be acted upon similarly to the depressed bucket; also, simultaneous with this movement of the buckets or lever E the arm F, attached to the shaft or pivot of the bucket-lever E, will be acted upon, so as to give the pitman G a stroke in one direction and impart to the driving-shaft H a partial rotation, which is rendered continuous by the constant and rapid vibratory action of the lever E, with its alternately filling and discharging buckets.

This invention is simple and efficient in operation and easily constructed.

Having thus fully described my invention, I claim and desire to secure by Letters Patent—

In a hydraulic motor, the combination, with the casing A, having the legs *a a* and neck *a'*,

with its lower end provided with the meeting
chutes *cc*, of the lever *E*, with buckets *e* on its
ends, and an axis or pivot, *e'*, provided at one
end with an arm, *F*, connected by a pitman,
5 *G*, to a driving-shaft, *H*, and having connect-
ed to its other end a second arm, *h*, and the
valve or gate *C*, with its pivot or axis pro-
vided with a crank or arm, *j*, connected to the

lever-arm *h* by a pitman, *i*, substantially as
and for the purpose set forth. 10

In testimony whereof I affix my signature
in presence of two witnesses.

PEYTON S. KEELE.

Witnesses:

JOSEPH A. REEVS,
ADAM BROWER.