(No Model.)

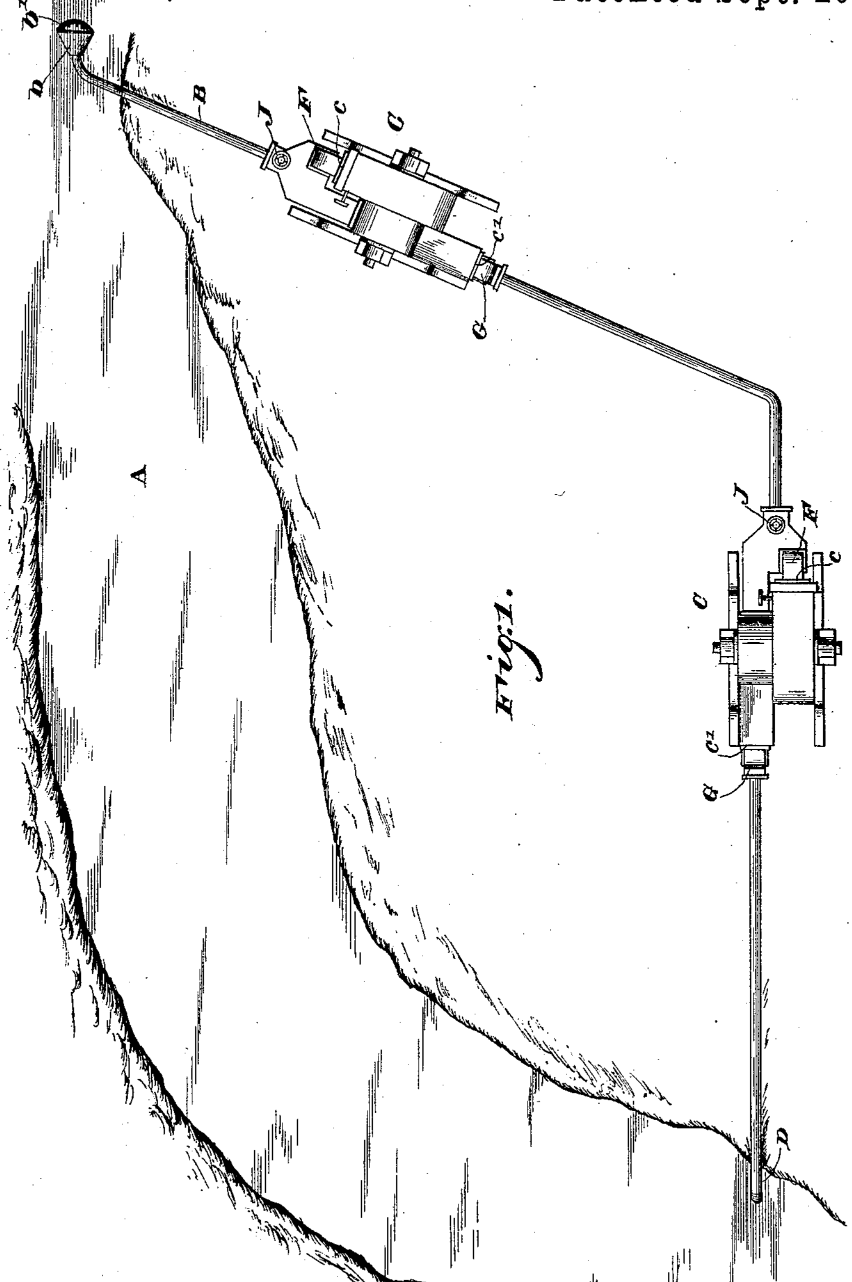
2 Sheets—Sheet 1.

M. VAN ENSLEY.

HYDRAULIC MOTOR.

No. 482,976.

Patented Sept. 20, 1892.



Witnesses

B. S. Ober

D. P. Wolhaupter

Inventor

Martin Van Ensley

By his Attorneys,

C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2

M. VAN ENSLEY.

HYDRAULIC MOTOR.

No. 482,976. Patented Sept. 20, 1892.

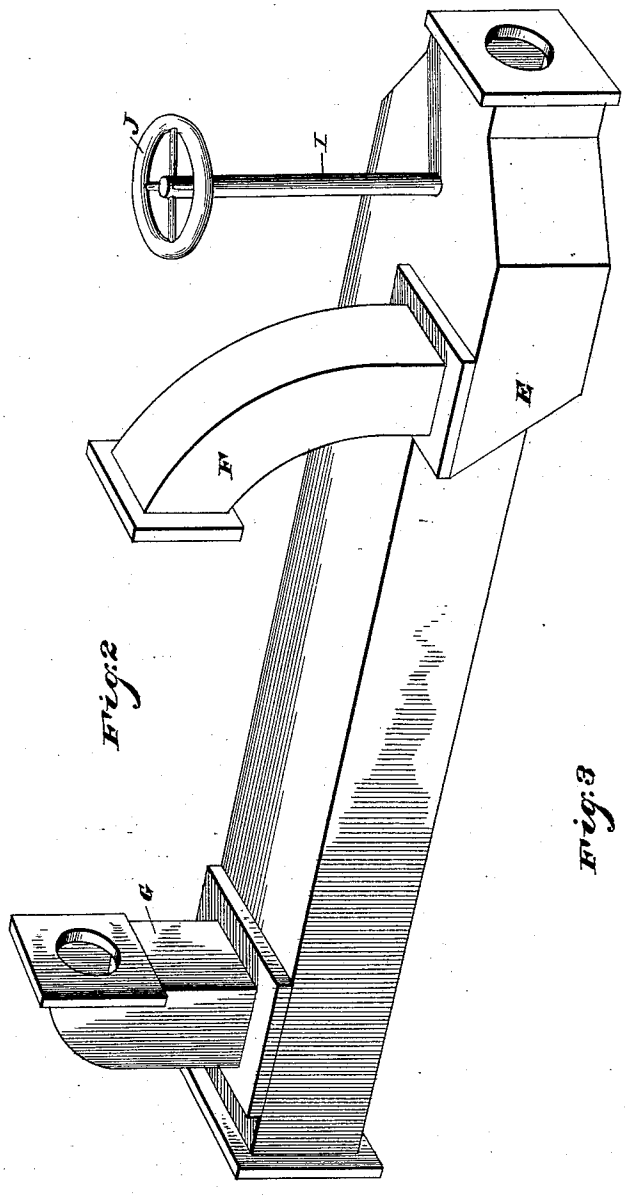


Fig. 2

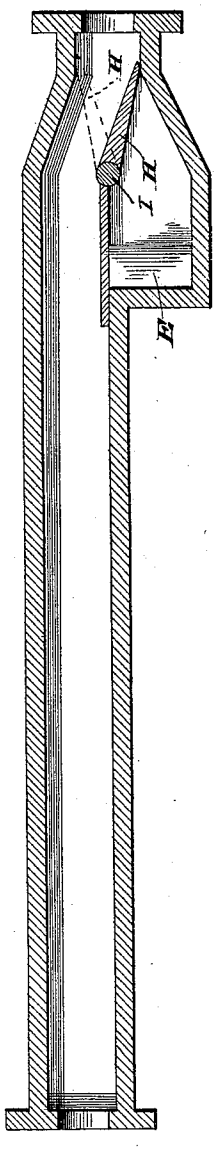


Fig. 3

Witnesses

B. S. Oberholtzer

D. P. Holthaupter, Jr.

Inventor

Martin Van Ensley,

By his Attorneys,

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

MARTIN VAN ENSLEY, OF McMINNVILLE, OREGON.

HYDRAULIC MOTOR.

SPECIFICATION forming part of Letters Patent No. 482,976, dated September 20, 1892.

Application filed November 14, 1891. Serial No. 411,885. (No model.)

To all whom it may concern:

Be it known that I, MARTIN VAN ENSLEY, a citizen of the United States, residing at McMinnville, in the county of Yam Hill and State of Oregon, have invented a new and useful Hydraulic Motor, of which the following is a specification.

This invention relates to hydraulic motors, and more particularly with relation to the flumes or pipes used to conduct the head of water from a running stream to the motor; and it has for its object to provide a flume or water-way used in connection with the hydraulic motor described and claimed by me in a contemporaneous application filed November 12, 1891, Serial No. 411,687, which fully covers the same, and as an improvement upon said wheel the same has for its object to provide a flume or system of piping that is designed to receive the water from a running stream and conduct the same over and upon the land through one or a series of hydraulic motors in any direction or course desired and to direct the discharge into the stream at a point below the receiving end of the flume, which will give the required fall or head to the stream of water.

With these and many other objects in view, which will readily appear as the nature of the herein-described improvement is fully understood, the invention consists in an inclosed flume or system of piping used for supplying hydraulic motors located upon *terra firma* and constructed in the novel manner hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a plan view of a stream of running water and a system of piping or a flume used in connection with a series of water-wheels and constructed in accordance with my invention. Fig. 2 is a detail in perspective of a section of the flume or piping. Fig. 3 is a detail horizontal sectional view through one of the water-controlling gates and the receiving-pipe.

Referring to the accompanying drawings, A represents a stream of running water having a suitable head or fall to be used for operating hydraulic motors. At a suitable or desired point in said stream, as illustrated in the drawings, an inclosed flume or main conducting-pipe B is placed therein and is provided at its receiving end with a flared or funnel terminal *b*, that is designed to concentrate the force of the current and thereby direct the same through the flume or pipe under the full pressure or head of the stream, and the mouth of said flared or funnel end is inclosed by suitable screen or fender *b'*, which prevents drift or other foreign matter from being carried through the conducting pipe or flume and interfere with the operation of the motors supplied from said flume. The inclosed flume or conducting-pipe is carried from its flared receiving end over and upon the land in any direction desired and in connection with any number of water-wheels C, which are of the type described in my pending application referred to and serially numbered 411,687, and having the upper receiving end *c* and the lateral oppositely-disposed lower discharge-opening *c'*, from which the water from the entirely-inclosed wheels of said motors is discharged, and said inclosed flume or main conducting-pipe is led back to the stream A to a point D, where the water carried thereby is discharged, and said discharging-point is located a suitable distance down the stream to give sufficient head or pressure to the water. At the point along said inclosed flume or point at which the motors are located the same is provided with a lateral water-passage E, with which communicates the offstanding and upwardly-extending curved receiving pipe or spout F, which is designed to be coupled to the hydraulic motor at its inlet opening or spout *c*, and thus carry the water therethrough, and said inclosed flume or main conducting-pipe is further provided below said supplemental receiving-spout F with a shorter discharge spout or pipe G, communicating directly with the main passage of the flume or water-pipe and designed to be coupled to the lower and laterally-disposed discharge-opening *c'* of the hydraulic motor. Directly in front of the lateral receiving-passages E in said flume is located the water-gate H, mounted upon the stem I, controlled by the operating-wheel J, and said gate is designed to be thrown over and inclosing the lateral passages E when it is desired for the water to pass uninterruptedly through the flume and pass the motors which it is not desired to operate, and, on the other hand, when the wheels or motors are desired to be operated the said gate is thrown back against the wall of the

flume or water-way, and thus directs the water through the lateral passage E and the communicating receiving-spout F, from thence through the motor and out through the discharge pipe or spout G, as will be readily understood.

The construction and operation of my improvement are thought to be apparent without further description.

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

In a hydraulic motor, the combination, with water-wheels having end receiving and discharge openings, of the inclosed conducting flume or pipe adapted to conduct the water from one point of a stream over the land and to a lower point of the same stream and provided with a flared or funnel terminal at the receiving-point of said flume, a fender inclosing said funnel end, lateral receiving-passages projecting out of the path of said flume at certain intervals, upwardly-extending receiving-spouts communicating with said lateral passages and adapted to be connected with the receiving-openings of the water-wheels, supplemental discharge-spouts adapted to be connected with the discharge-openings of said wheels and communicating with the main portion of the flume, and an oscillating gate adapted to either direct the water through said lateral passages or uninterruptedly through said flume, substantially as set forth.

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

MARTIN VAN ENSLEY.

Witnesses:
C. W. TALMAGE,
R. M. DICKINSON.