

(No Model.)

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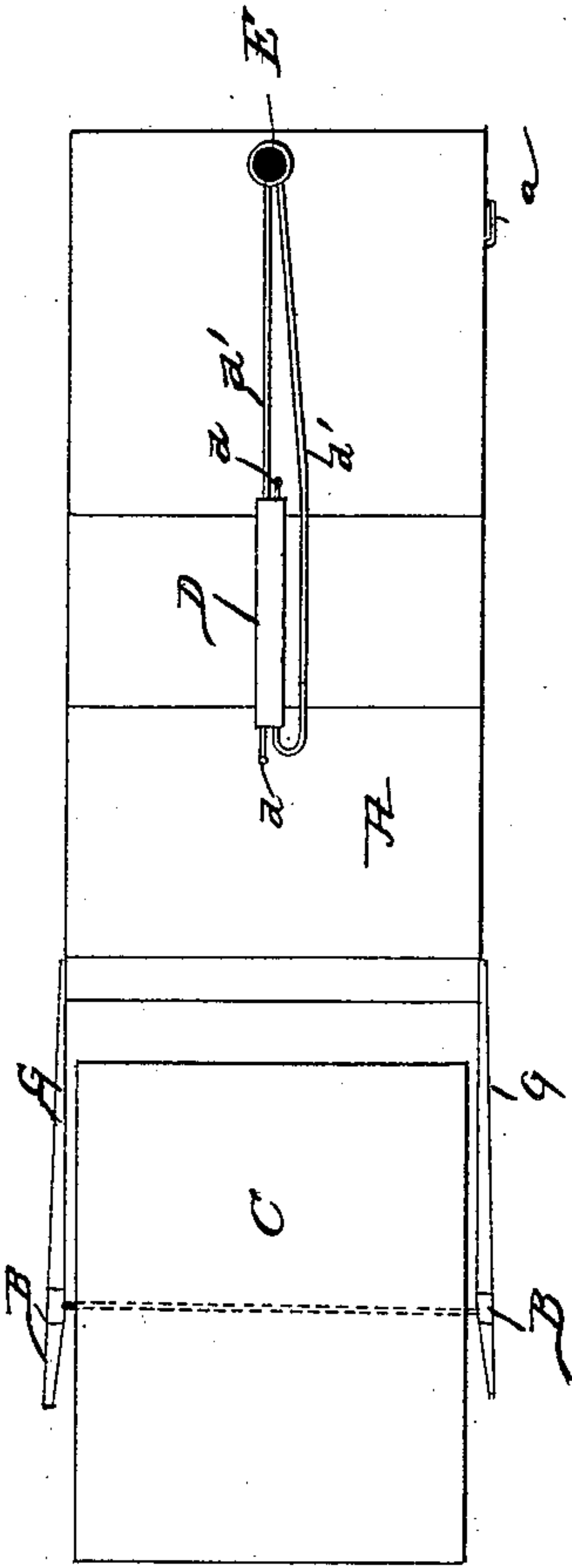
B. D. OWEN.

MACHINERY FOR IRRIGATING PURPOSES.

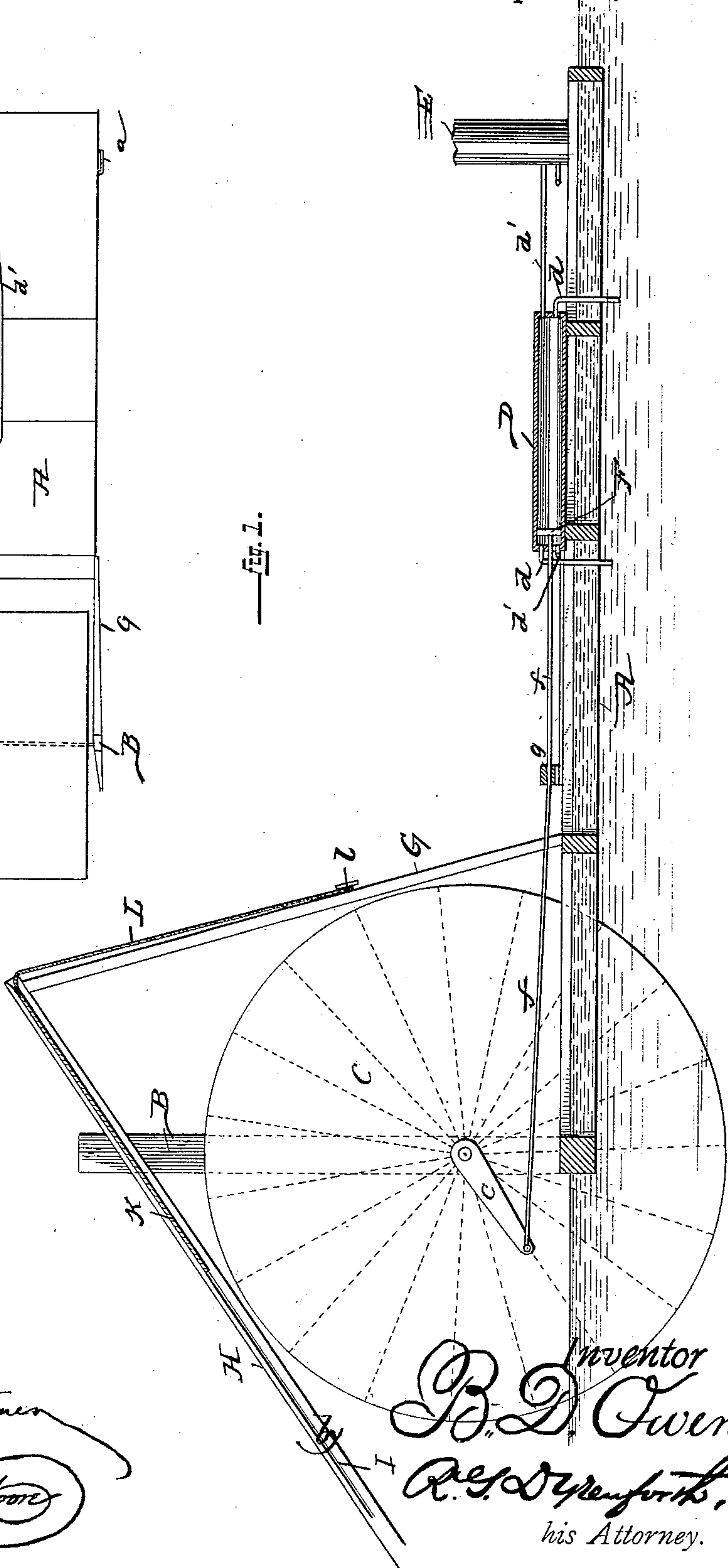
No. 390,136.

Patented Sept. 25, 1888.

—Fig. 2.



—Fig. 1.



Witnesses:

*M. M. Mortimer*  
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Inventor :  
*B. D. Owen,*  
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his Attorney.

(No Model.)

2 Sheets—Sheet 2.

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MACHINERY FOR IRRIGATING PURPOSES.

No. 390,136.

Patented Sept. 25, 1888.

Fig. 3.

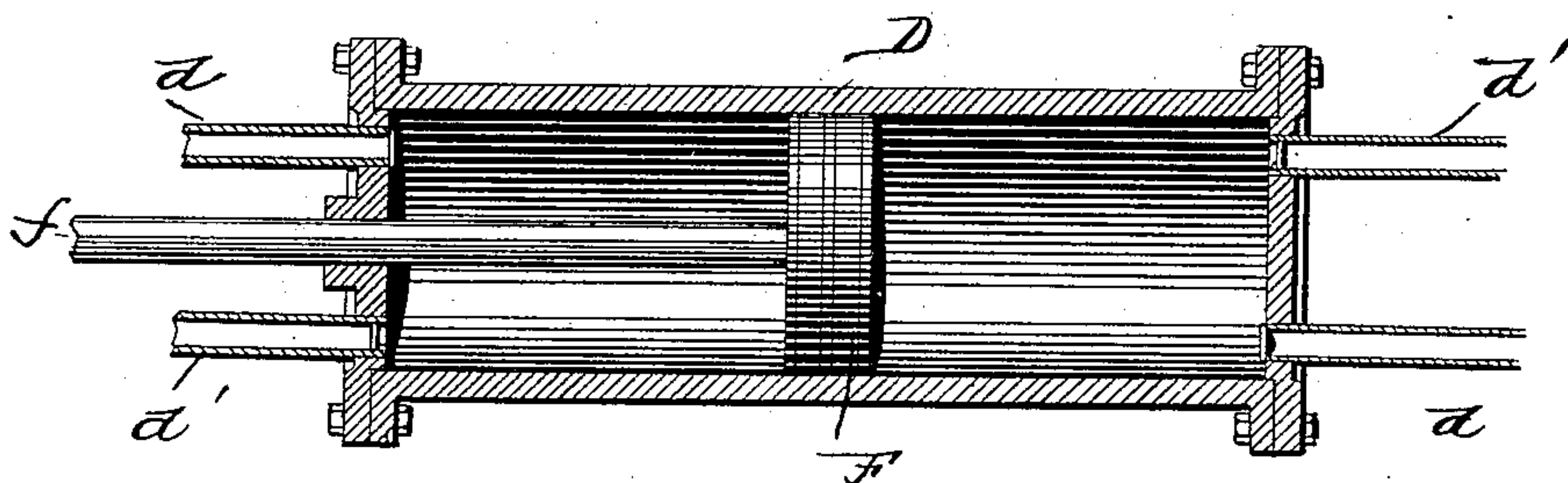


Fig. 4.

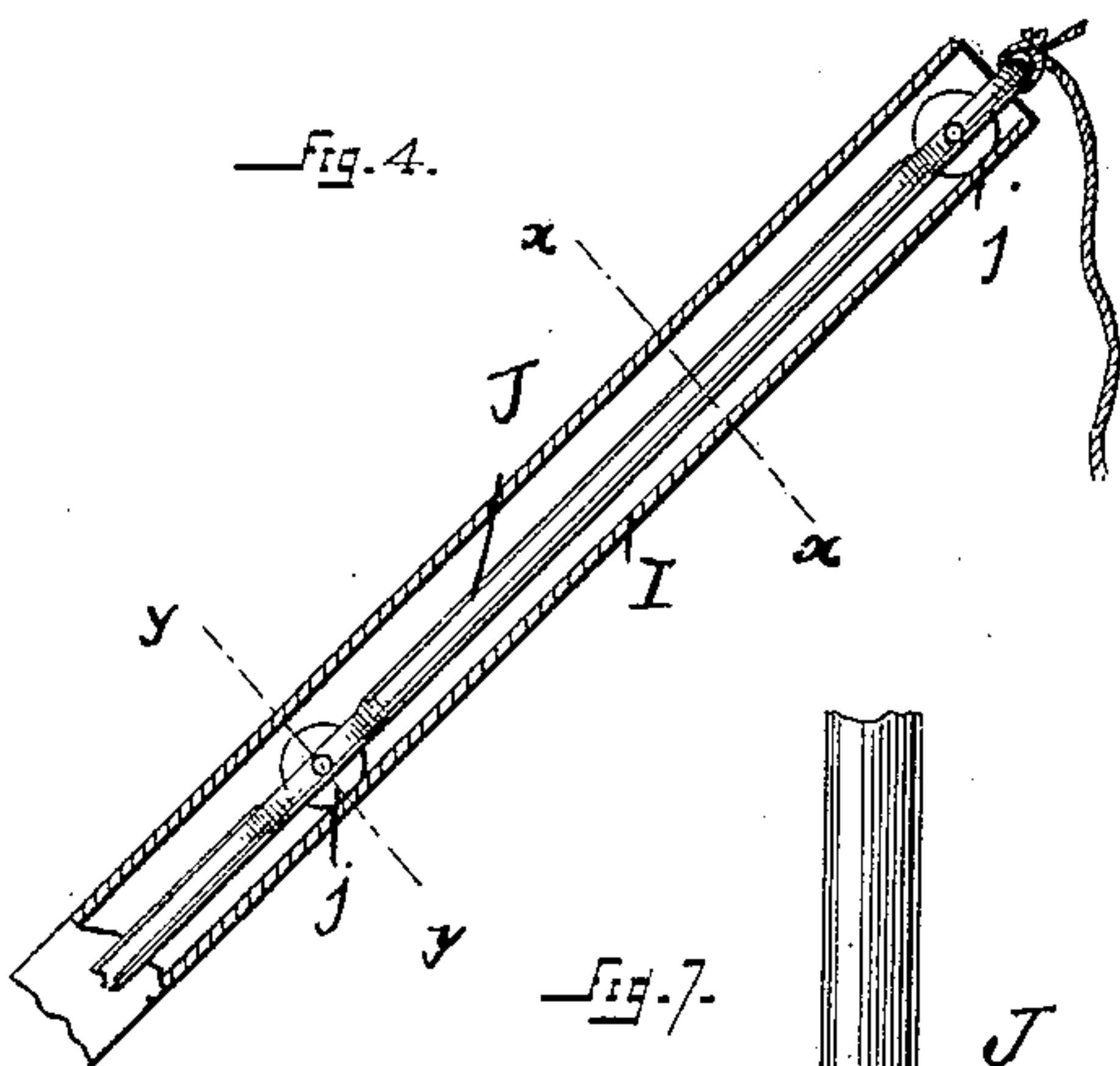


Fig. 5.

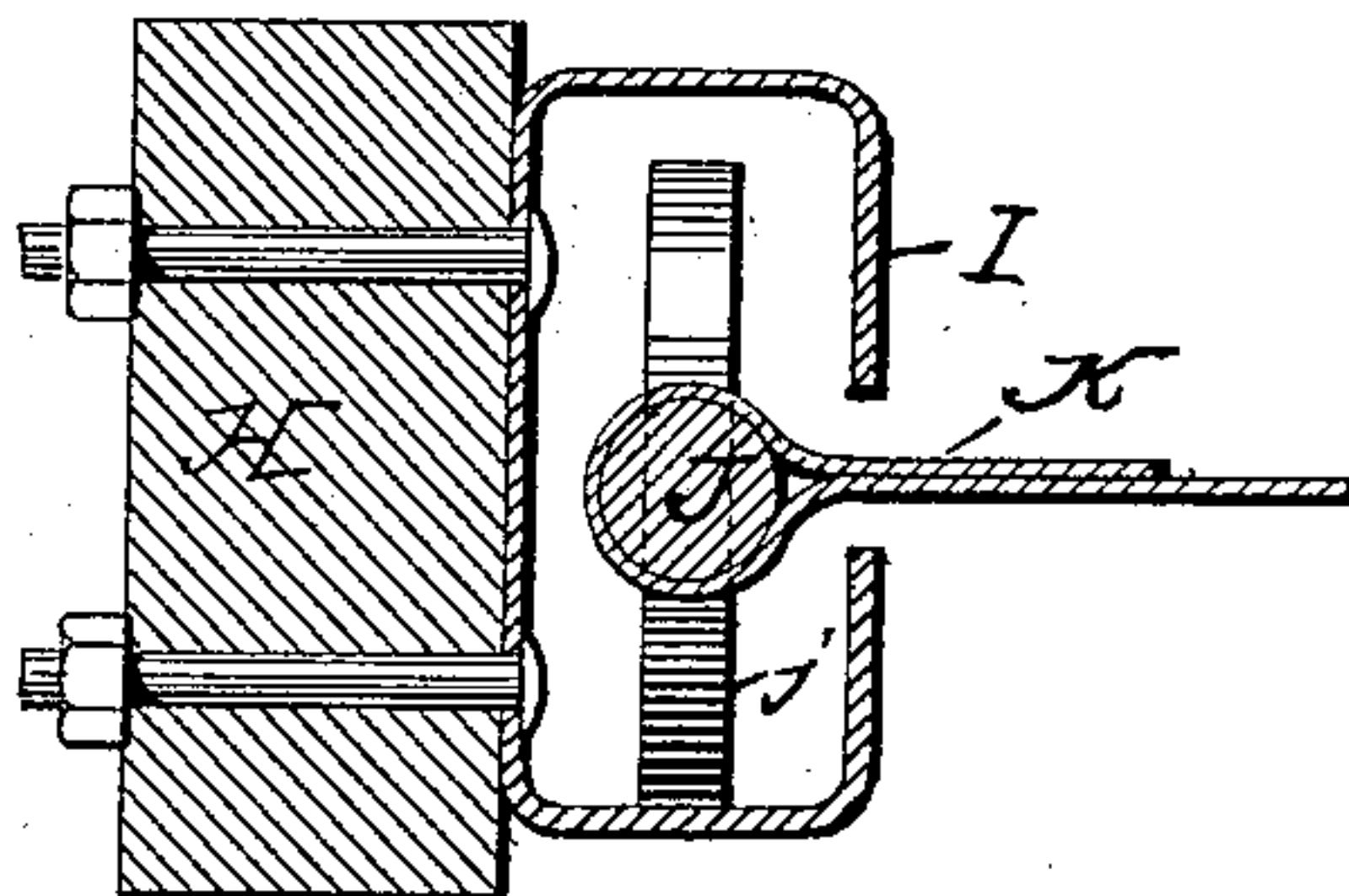


Fig. 6.

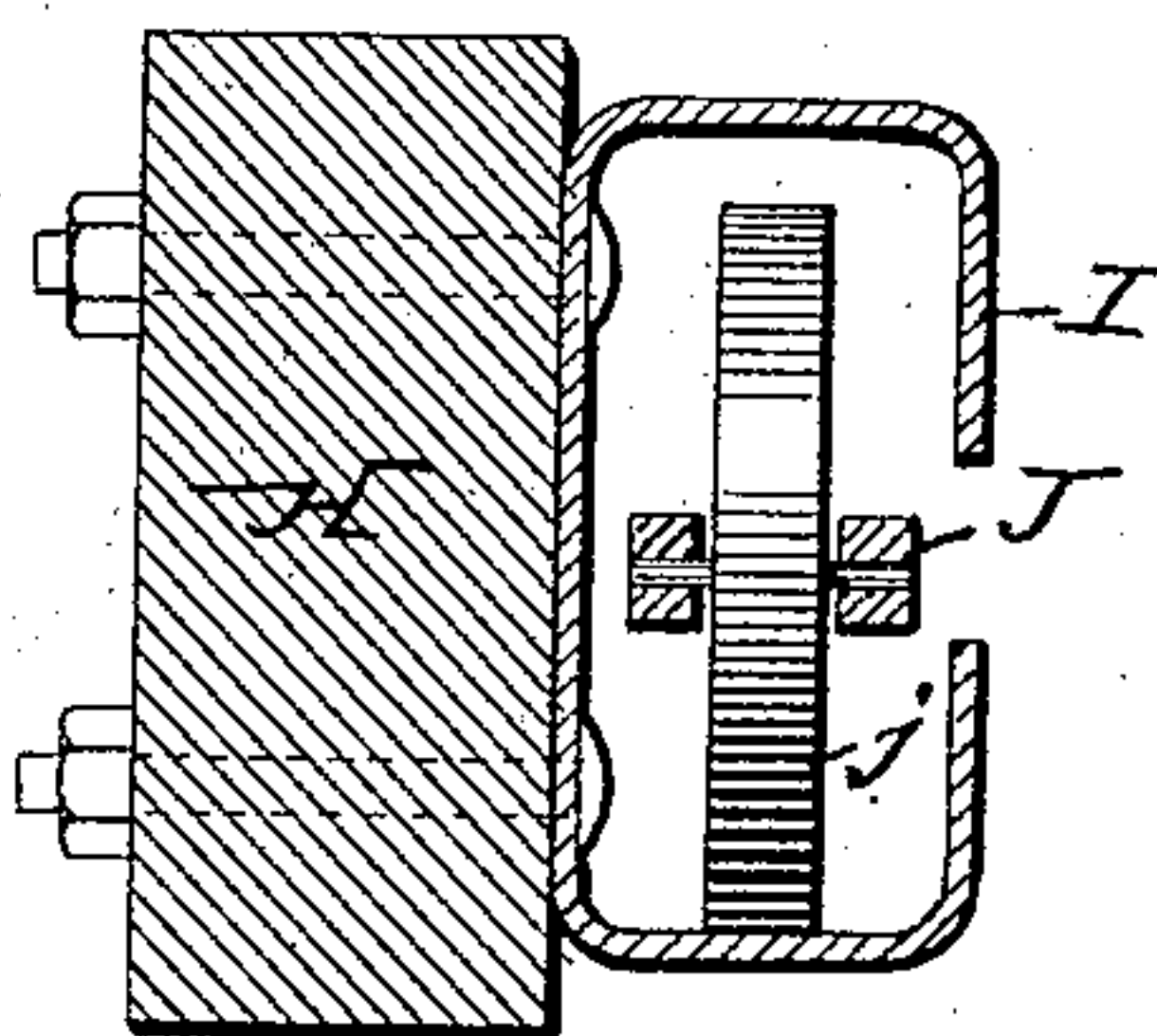
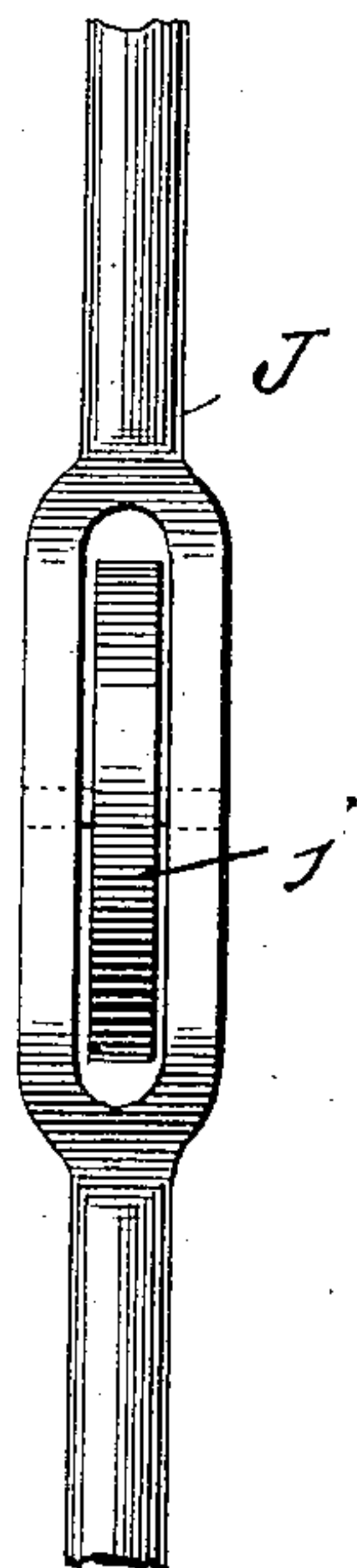


Fig. 7.



Witnesses:  
W. W. Mortimer  
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Inventor :  
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# UNITED STATES PATENT OFFICE.

BENAJAH DOTTE OWEN, OF WACO, TEXAS.

## MACHINERY FOR IRRIGATING PURPOSES.

SPECIFICATION forming part of Letters Patent No. 390,136, dated September 25, 1888.

Application filed July 2, 1887. Serial No. 243,278. (No model.)

*To all whom it may concern:*

Be it known that I, BENAJAH DOTTE OWEN, a citizen of the United States, residing at Waco, in the county of McLennan and State of Texas, have invented certain new and useful improvements and combinations of machinery—namely, a combined hydraulic and pneumatic motor for irrigating purposes and for utilizing as a motive power to drive other machinery the combined force of a current of water and to some degree the force of the wind, (and according to my knowledge and belief the same has never been in public use or on sale in the United States prior to this application;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention is a machine for irrigating and other purposes.

The object of the invention is to provide a machine of simple, durable, and cheap construction adapted to be placed in a stream and be operated by the current and by the wind to throw water on the land for the purpose of irrigating, or to force water through piping for household and other purposes.

The invention resides in a machine for irrigating, consisting, essentially, of a float provided with standards having a water-wheel journaled therein, a pump having a piston connected to a crank on the shaft of the wheel, and a shield of pliable material connected to the rods and provided with rollers attaching it to a slide, as clearly hereinafter set forth.

The invention is illustrated in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a longitudinal sectional view of an irrigating-machine constructed in accordance with and embodying my invention, the same being moored in a stream. Fig. 2 is a top plan view of the same. Fig. 3 is a longitudinal sectional view of the cylinder, with the induction and eduction pipes, with the piston therein in side elevation. Fig. 4 is a detail view of the rod having the rollers journaled therein sliding in the guides or ways and to which the shield or guard is attached. Fig. 5 is a sectional view taken on the line *xx* of Fig.

4. Fig. 6 is a sectional view taken on the line *yy* of Fig. 4, and Fig. 7 is a detail plan view of a part of the rod carrying the guard or shield and the roller journaled therein.

Referring by letter to the drawings, in which like letters of reference indicate corresponding parts in all the figures, A designates the boat or float, of any desired dimensions, adapted to be moored in a stream and be anchored by suitable means attached at the loops or fastenings *a*.

B designates uprights or standards secured to the float, and in which is journaled a water-wheel, C, provided with an arm or crank, *c*, the purpose of which will presently appear.

Secured or attached to the float is a cylinder, D, provided at each end with an induction-pipe, *d*, which extends down into the water, and also at each end with eduction-pipes *d'*, which connect with the discharge-pipe or other conduit, E. The induction and eduction pipes are each provided with valves, which may be of any desired construction.

F designates a piston situated in the cylinder D, and having its rod *f* passing through a guide or bearing, *g*, secured upon the float, and also connected to the crank *c* on the wheel C.

G designates inclined braces secured at one end to float and at the other end to the ends of the inclined arms or pieces H, which are secured or attached to the uprights or standards B. The inclined pieces H have rigidly secured to them strips of metal bent to form guides or ways I, with a space left between their ends, for the purpose to be described.

J designates rods having rollers *j* journaled in them sliding in the guide or ways of the inclined pieces, and on the rods J is fastened a sheet of metal, K, as clearly shown in Fig. 5 of the drawings, which forms a guard adapted to be slid in the ways to shield the wheel from the wind or to allow the wind to exert its force against it. To the upper end of one or both of the rods J is secured a cord upon chains L for sliding the shield, as described, and a button, arm, or extension, *l*, on which the end of the rope may be fastened, is provided.

From the foregoing description, taken in connection with the drawings, the operation of my invention will be readily understood, but may be stated briefly as follows: The current of the stream causes the wheel to revolve, which



communicates motion to the piston by means of its rod, causing the piston to slide or move back and forth in the cylinder and draw the water into the cylinder through the induction-pipes at each end, and force it out through the eduction-pipes to the discharge-pipe, the valves in the pipes operating by the action of the piston.

It is evident that a machine constructed as described is very simple and cheap, and is thoroughly efficient in operation, possessing features which would commend it to all desiring one for the purpose named.

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

1. In a machine for irrigating, the combination of a float provided with standards, a water-wheel journaled therein, a pump having a

piston-rod connected to a crank on the shaft of the wheel, and a shield constructed of pliable material connected to rods having rollers and adapted to slide in stationary ways, substantially as described.

2. In a machine for irrigating, the float having the standards in which the wheel is journaled, inclined bars secured to said standards above the wheel, inclined brace-bars extending from the inner end of said inclined bars to the float, and a guard or shield working in the inclined bars, substantially as and for the purpose described.

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

BENAJAH DOTTE OWEN.

Witnesses:

D. C. BOLINGER,  
JNO. L. DYER.