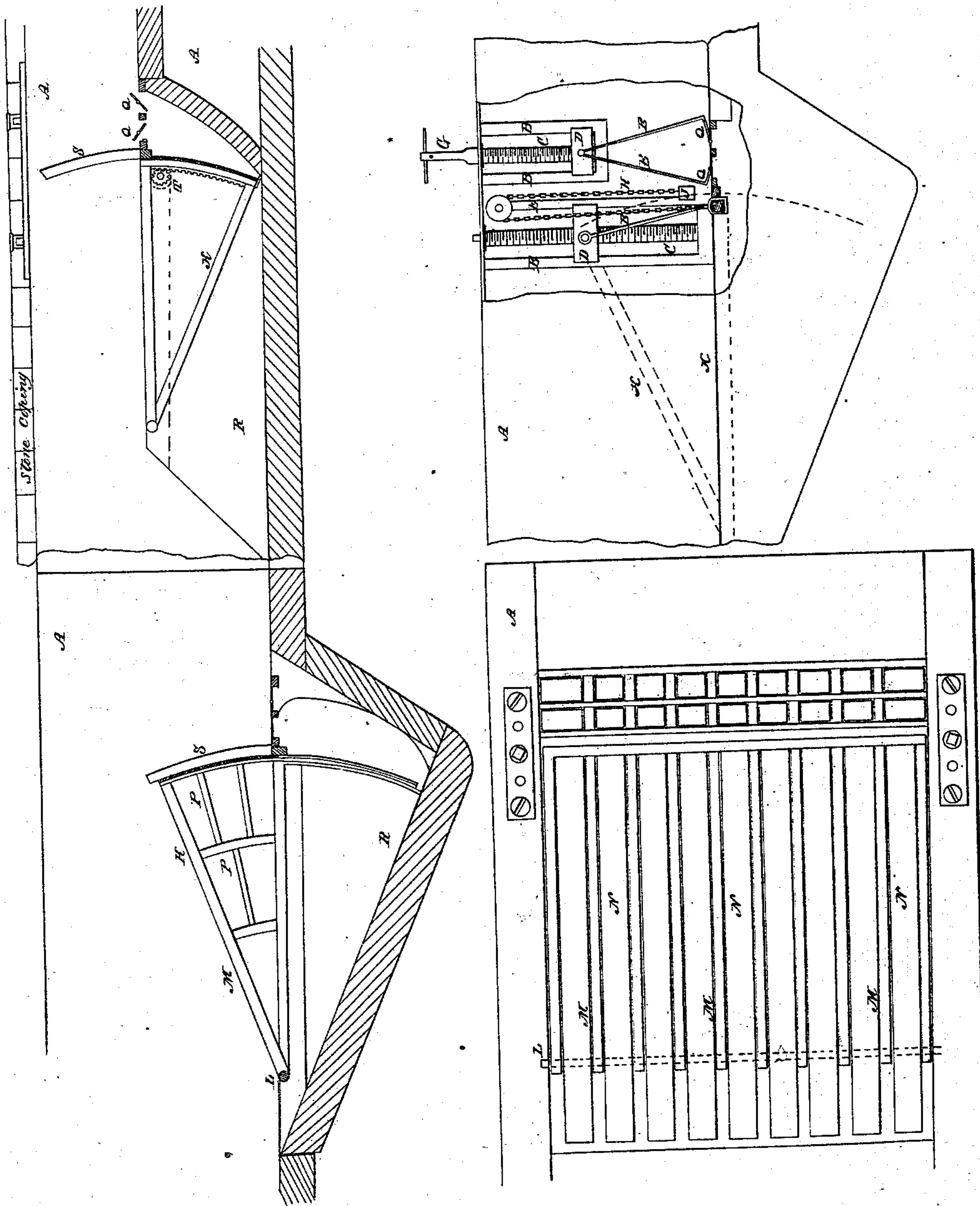


*M. Bishop.*

*Canal Lock.*

*N<sup>o</sup> 68,833.*

*Patented Sep. 17, 1867.*



*Witnesses*

*John A. Mook*

*Franklin Reigart*

*Inventor*

*Martin Bishop*

# United States Patent Office.

MARTIN BISHOP, OF PUTNAM, OHIO,

*Letters Patent No. 68,833; dated September 17, 1867.*

## IMPROVEMENT IN CANAL-LOCKS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, MARTIN BISHOP, of Putnam, Muskingum county, State of Ohio, have invented improvements in Canal-Locks and Submerged Gates for canals or rivers; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction of the gate, with its shaft and arms fitting between subdivisions, and resting below the bottom of the canal; also, the corresponding shaped chambers beneath the bottom of the canal, the adjustable wickets, and the movable device for making the gate water-tight when raised; and the object of my invention is to have a perfect lock when the gate is up, and when down it is a canal for the water to pass along with its regular flow; or when submerged in a river it is a complete ship-channel or lock whenever required.

A represents the side walls. B are openings or chambers in the walls for the purpose of containing the hoisting machinery or apparatus, such as a screw, C, with a travelling-burr, D, moving up or down, with side pitmen E as guides to operate their movements on the screw, as the screw is operated by the wrench or levers G above. To the gate K a chain, H, and weight, J, are attached to raise and counterbalance the raising of the gate K. The gate K is attached to a shaft, L, extending across the lock, located at the bottom of the lock and fastened into the walls at each end. On this shaft L the arms M of the gate operate, and radiate to the circular periphery or face of the gate. The arms, fitting in between the subdivisions N, are built of masonry, iron, or timber. The centre of the gate is braced by cross-timbers P. Q Q are wickets, connected by shafting couplings extending across the lock to allow the water to pass down into and through the lower chamber R that is located underneath the bottom of the lock, shaped similar to the shape of the gate, for the gate to rest in when lowered, which allows the upper side of the gate to form the flooring of the lock. A flanged and grooved closing apparatus or device, S, on each side of the wall, shaped similar to the convex face of the gate, and movable, makes the gate water-tight when raised, by closing the joint between the gate and the wall. I also have a rack and pinion, T, attached to the inside of the face of the gate, that may be used instead of the screw, if deemed necessary, or I may be enabled to use this rack and pinion with a chain and weight, or operated by the power of the water upon a wheel above, or bevel gearing.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction of the gate, operating on its shaft L, with its arms M fitting between the divisions N; and having bracing P P, and resting below the bottom of the canal in the correspondingly shaped chamber R, as herein described and for the purpose set forth.

2. I also claim the chamber R, constructed as described, with subdivisions N N located beneath the bottom of the canal, as herein described and for the purpose set forth.

3. I also claim, in combination with such chamber and gate, the adjustable wickets, operated as described and for the purpose set forth.

4. I also claim, in combination with the gate, the movable device or apparatus S, as herein described and for the purpose set forth.

MARTIN BISHOP.

Witnesses:

J. FRANKLIN REIGART,

JOHN S. HOLLINGSHEAD.