H. McCarty.

Canal Lock Gate.

No. 3,493. Patented Mar. 16, 1844.

Fig 1.

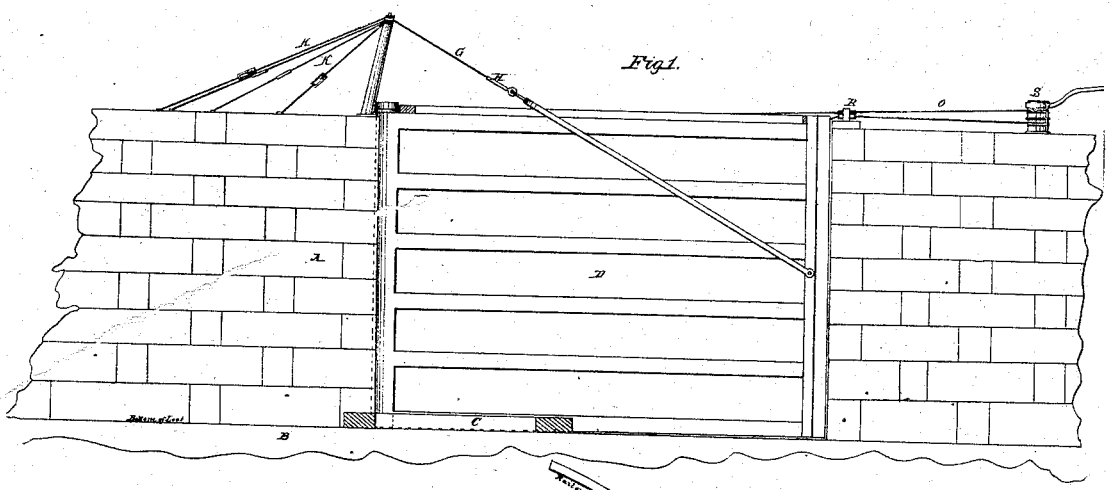

Fig 2.

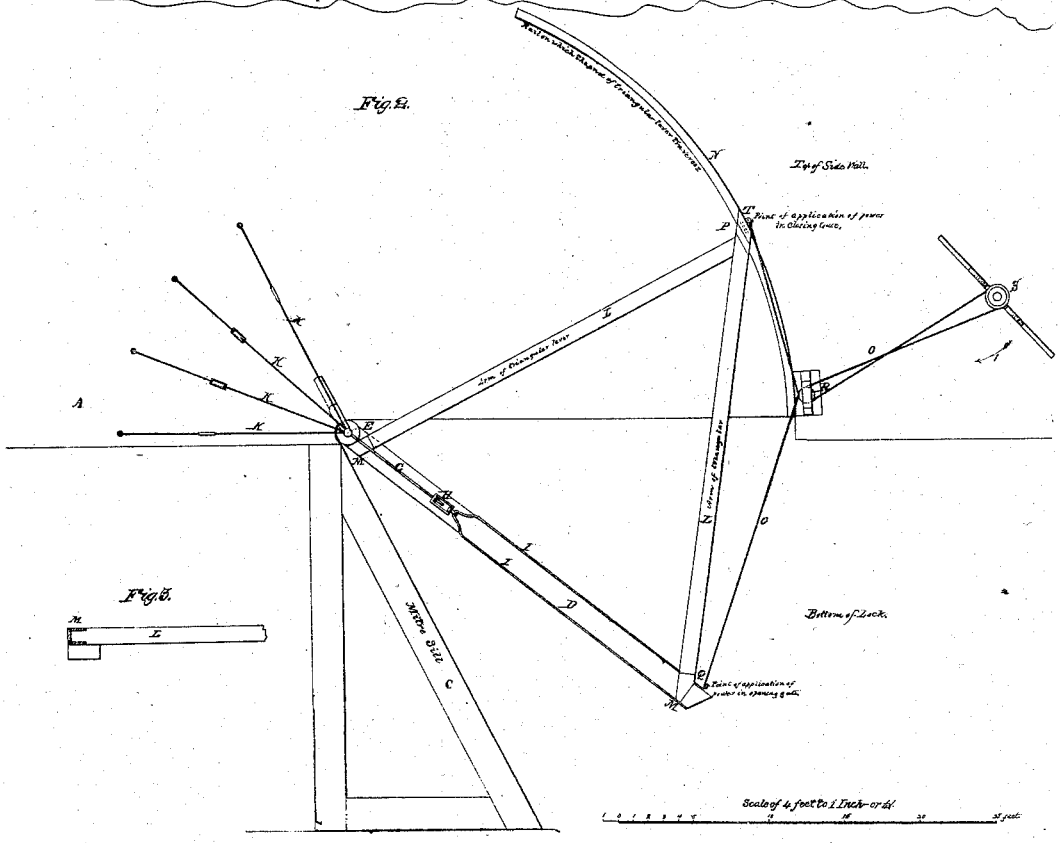

Fig 3.

UNITED STATES PATENT OFFICE.

HENRY McCARTY, OF PITTSBURGH, PENNSYLVANIA.

MANNER OF SUSPENDING, OPENING, AND CLOSING CANAL-LOCK GATES.

Specification of Letters Patent No. 3,493, dated March 16, 1844.

To all whom it may concern:

Be it known that I, HENRY McCARTY, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful and Improved Method of Suspending and Working or Opening and Shutting Lock-Gates, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification, of which—

Figure 1 is an elevation, showing the gate swung open. Fig. 2 is a plan showing the gate swung partly open. Fig. 3 section of hinged lever.

A represents the side of the lock made in the usual manner; B, the bottom of the lock; C, the miter sill against which the gate shuts; D, the gate made in the usual manner.

The following is the combination and arrangement of parts that I make use of for suspending and opening and closing the gate and which constitutes my invention and improvement. The same description of combination and arrangement of parts is applied to the opposite gate of the lock. A description of one will answer for the other.

E represents an inclined post resting upon the hollow-quoin coping at an angle of about 60, 70 or 80 degrees with a horizontal plane; or at any suitable angle—bringing the head or top of the same perpendicularly over the center of the heel post of the gate and having a pin inserted into its lower end or foot which enters a corresponding aperture in the coping stone to prevent slipping. To the head of this inclined post is suspended the gate by means of a screw rod G swivel H and stirrup I, at an angle of about 45 degrees or at any suitable angle, the stirrup being fastened to the toe post of the gate by a bolt or other proper fastening passed through the same and the lower or outer extremities of the stirrup. The inclined post to which the gate is suspended must be firmly braced by means of swivel chains K made fast to the head of the post and to eye bolts let into the walls of the lock.

A triangular lever L is hinged to the top of the gate by means of strong hinges M M, one arm of said triangular lever being attached to the gate near the toe post and the other arm to the gate near the heel post, the last mentioned arm being also fastened to the before mentioned arm near its outer extremity which reaches over the top of the side wall of the lock to a segment rail way N over which it traverses in opening and closing the gate, having an anti friction pulley P let into said outer extremity for reducing friction.

The point of application of the power in opening the gate is at the toe post which is effected by means of a rope or chain O made fast to an eye bolt Q and carried around a pulley R in a frame or box on the side walls and from thence to a windlass S. The point of application of power for closing the gate is at the outer extremity of the arm L of the triangular lever over the segment rail way and is effected by means of attaching the other end of the rope or chain to an eye bolt T inserted into the outer extremity of said arm and carrying it thence around the before mentioned pulley R which has two grooves and from thence to the windlass S. By turning the windlass in the direction indicated by the arrow N. 1 the gate will be closed. Then by reversing the movement of the windlass the gate will be opened, the operation being similar to a steering wheel.

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

The before described mode of suspending and opening and closing gates for locks and other places by means of the aforesaid combination and arrangement of the inclined post E, rod G, swivel H, stirrup I and hog chains K, and the triangular hinged lever L, segment way N, cord O, pulleys R and windlass S by which the expense of construction is reduced and the old rail way and rollers at the bottom of the lock and the chains for opening and closing the gates placed in the water where they are subject to constant oxidation and breaking and where they cannot be reached without much difficulty when out of order, are entirely dispensed with.

HENRY McCARTY.

Witnesses:

WM. P. ELLIOT,

ALBERT E. JOHNSON.