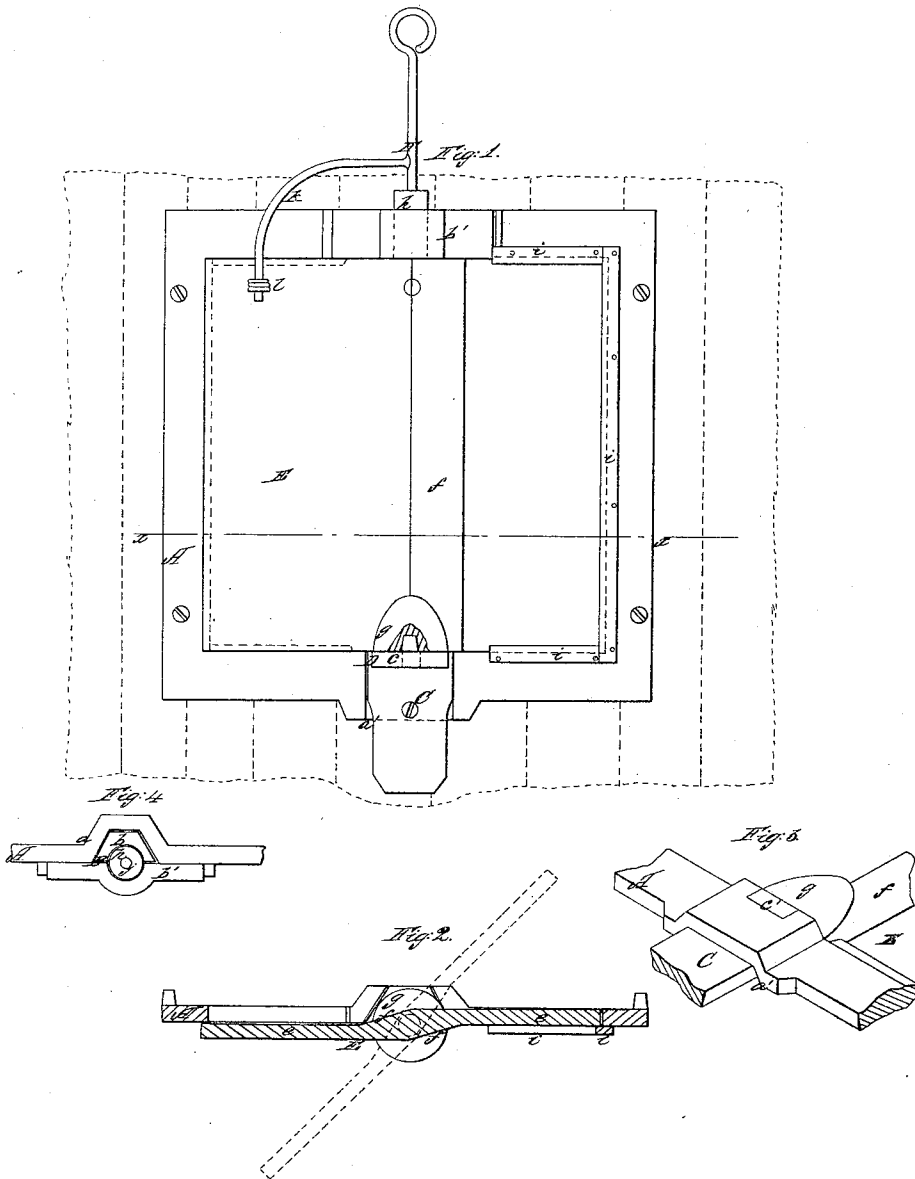


A. H. Griggs.

Canal Lock Gate.

N^o 42,761.

Patented May 17, 1864.



Witnesses:
J. W. Combs
J. W. Reed

Inventor:
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UNITED STATES PATENT OFFICE.

ALFRED H. GRIGGS, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN WICKETS FOR CANAL-LOCK GATES.

Specification forming part of Letters Patent No. 42,761, dated May 17, 1864.

To all whom it may concern:

Be it known that I, ALFRED H. GRIGGS, of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Wicket for Canal-Lock Gates; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front view of my invention; Fig. 2, a horizontal section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a detached perspective view of one of the bearings of the wicket; Fig. 4, a plan or top view of the other bearing of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The invention consists in a novel arrangement of the bearings of the wicket, whereby they can be removed when worn by use and replaced by new ones.

The invention farther consists in a novel manner of operating or opening and closing the wicket, as hereinafter fully set forth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a frame of rectangular form, and which I design to have of cast-iron. This frame is secured by bolts to the gate, a portion of which is shown in red in Fig. 1. This frame A is cast with two offsets or recesses, *a a'*, which are at the centers of its upper and lower ends, and in the upper offset, *a*, there is fitted one half, *b*, of a box or bearing, B, the other half, *b'*, being screwed to the frame A. In the lower offset, *a'*, there is fitted a plate, C, having at its upper end a horizontal bed, D, one half, *e*, of which is of semicircular form, and the other half, *e'*, of polygonal form, the part or half *e'* fitting in the offset *a'*, and preventing the turning of the plate C. At the center of the horizontal bed D there is an upright journal, *d*. (Shown in Fig. 1.)

E represents the wicket, which I design to have of cast-iron. It is of rectangular form and a trifle wider than the interior of the frame A. This wicket is formed of two vertical planes, *e e*, which are a trifle out of line with each other, the variation being equal to the thickness of the frame A, as shown clearly in Fig. 2. The two planes *e e* at their junction are of bevel form, as shown at *f f*, so that no

abrupt angles or shoulders will be presented to the action of the water. At the lower end of the wicket, at its center, there is a conical projection, *g*, which is cast with the gate and has an opening made in it to receive the journal *d*, and at the upper end of the wicket there is a journal, *h*, which is fitted in the box or bearing B. The wicket is thus allowed to turn freely in the frame A, and at one side of the frame A there are cleats *i*, against which one edge of the wicket E bears when closed, the opposite edge bearing against the side of the frame A, as shown clearly in Fig. 2. By this mode of constructing the wicket it will be seen that it presents a surface at right angles to the pressure of the water, and the wicket rendered capable of being opened with facility, and in case of the box or bearing B becoming worn it can be readily removed and replaced by a new one, and the journal *d* can also be replaced by a new one if worn by use.

In the upper end of the journal *h* there is made a hole, *j*, to receive the lower end of a rod, F, which is provided with a curved arm, *k*, the latter extending over to one side of the wicket and fitted in an eye, *l*, securely attached thereto. The wicket E is opened and closed by turning the rod F, the arm *k* serving as a means to connect the wicket with the rod. The usual way consists in having the hole *j* in the journal *h* made of square form, and the lower end of the rod F made of similar form, in order to turn or operate the wicket. This plan is defective, as the hole *j* and the square part of the rod soon wear, and the latter is liable to turn without turning the wicket—a difficulty which is fully obviated by my invention.

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

1. Constructing the box B of two parts, *b b'*, one of which, *b*, is fitted in an offset, *a*, in the frame A, in connection with the detachable plate C, provided with the journal *d* and fitted in offset *a'* in the frame A, substantially as and for the purpose set forth.

2. The rod F, provided with the curved arm *k*, fitted in the eye *l*, attached to the wicket, substantially as and for the purpose specified.

ALFRED H. GRIGGS.

Witnesses:

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