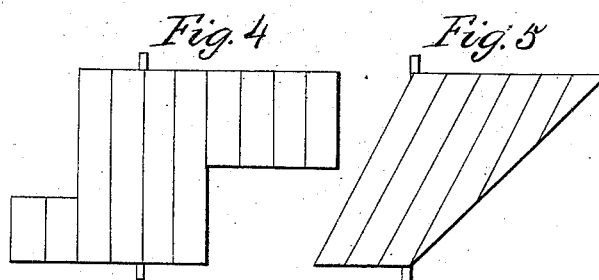
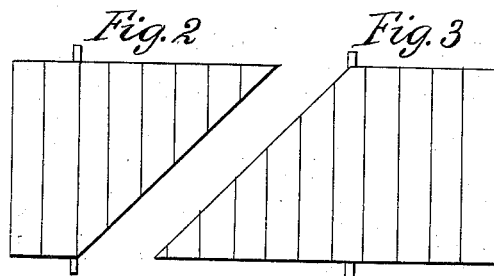
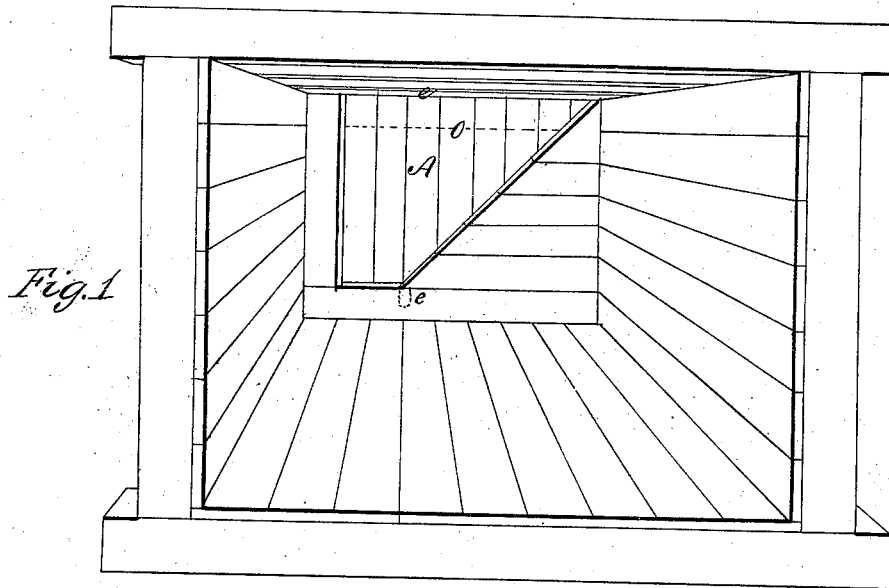


*Yau & How,
Water Gate,*

No 7,468.

Patented June 25, 1850.



UNITED STATES PATENT OFFICE.

HIRAM YAW, OF BOSTON, AND THOS. P. HOW, OF BUFFALO, NEW YORK.

WASTE-GATE.

Specification of Letters Patent No. 7,468, dated June 25, 1850.

To all whom it may concern:

Be it known that we, HIRAM YAW, of Boston, in the county of Erie and State of New York, and THOMAS P. HOW, of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Waste-Gate, of which we hereby declare the following to be a full and exact description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of our invention consists in providing mill ponds, canals, and reservoirs, with a waste gate hung upon a vertical axis the lower part of which is made wider one side of the axis than it is the other, the side which is narrowest toward the bottom of the gate being sufficiently wider than the other toward the top that the balance of the pressure of the water will change from one side of the axis to the other, and open and close the gate as the water rises and falls.

Figure 1, in the accompanying drawings is a perspective view representing a gate of this description hung in a flume. A represents the gate which is hung in its place upon journals represented by the dotted lines *e, e*, and also clearly shown in Fig. 2, which is a side elevation of the gate. When

the water rises to the dotted line *o*, the pressure upon one side of the axis is balanced by that on the other, but if the water rises a short distance above that point, the pressure is greater one side of the axis than it is the other and the gate is thrown open, and when the water falls a short distance below that point, the pressure is greatest the other side of the axis, and the gate will shut.

Figs. 3, 4 and 5 show gates of different proportions built upon the same principle.

What we claim as our invention and desire to secure by Letters Patent, is—

A waste gate which is hung upon a vertical axis the lower part of which is made wider one side of the axis than it is the other, the side which is narrowest toward the bottom of the gate being sufficiently wider than the other toward the top, that the balance of the pressure of the water will change from one side of the axis to the other, and open and close the gate as the water rises and falls.

HIRAM YAW.
THOMAS P. HOW.

Witnesses:

H. B. BURT,
L. LE. CLEAR.