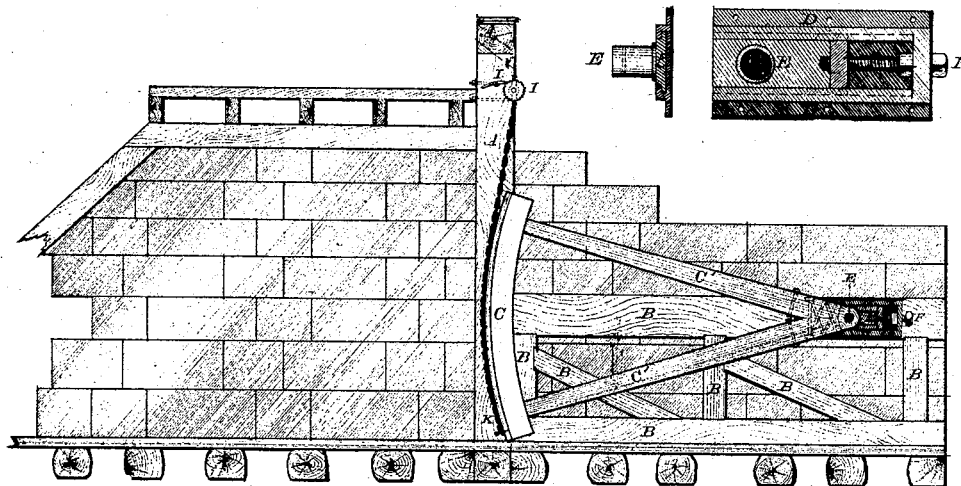


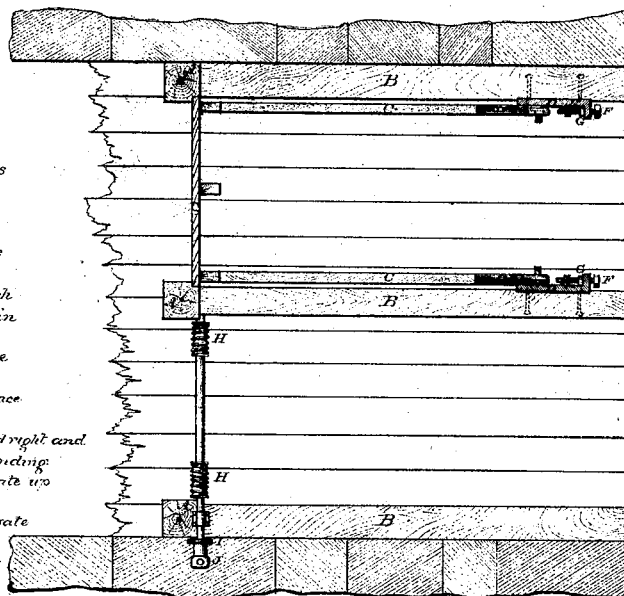
A. J. Whitney,
Canal Waste Way.
No. 109,984. *Patented Dec. 6. 1870.*



SIDE ELEVATION.

NOTES.

- A. Bulk-head posts & cap-posts rebated to receive the gate.
- B. Frame to support the gate.
- C. Gate and gate arm.
- D. Guide plate for holding slide and centre-pin in place.
- E. Slide and centre-pin to which gate is attached and kept in adjustment.
- F. Adjusting screw to regulate the position of the gate.
- G. Set-nut for holding gate in place when adjusted.
- H. Chain-driven with screw grooved right and left to prevent chain from binding.
- I. Ratchet-wheel and catch to hold gate up when raised.
- J. Bar head to raise and lower gate.
- K. Galvanized chains attached to bottom of gate for working the same.



PLAN.

Witness.
S. C. Smith
Notary Public

Andrew J. Whitney
Proclaiming

United States Patent Office.

ANDREW JACKSON WHITNEY, OF HARRISBURG, PENNSYLVANIA.

Letters Patent No. 109,984, dated December 6, 1870.

IMPROVEMENT IN CANAL WASTE-WAYS AND SLUICE-GATES.

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

I, ANDREW JACKSON WHITNEY, of Harrisburg, county of Dauphin, State of Pennsylvania, have invented certain Improvements in "Canal Waste-Way and Sluice-Gates," of which the following is a specification.

The nature of my invention relates to an improvement in waste-way and sluice-gates for canals and other similar purposes, where large gates are required for stopping and discharging water; and

It consists of a segmental gate, sliding in curved recesses or rebates in the bulk-head posts, and attached to radial arms, swinging on adjustable center pins, sliding in ways secured to the frame-work of the gate.

By means of my invention, the friction caused by the pressure of the water against the gate, as in the case of the ordinary slide-gate, is in a great measure, avoided, and the use of heavy machinery rendered unnecessary in raising and lowering the gate.

In the drawing—

Figure 1 represents a sectional view of my invention, and

Figure 2, a plan view of the same.

A A are the bulk head-posts, rebated to receive the ends of the segmental gate C.

B is the frame-work, to which the gate is secured.

The segmental gate C is attached to the radial arms C' C', at each end, which proceed from common centers, where they are secured and swing upon the center-pins E E.

The bases of said pins E E are planed, or otherwise

fitted to slide in ways or guides D D, attached to the frame B.

The said pins E E are capable of being moved back and forth in said ways by means of the adjusting screws F F, causing the gate to approach or recede from the recesses in the bulk-head posts, and thus to regulate and adjust the distance between their bearing surfaces as may be desired to secure the proper tightness of the joint with the least possible friction.

K K are chains, attached to the gate, and passing over the pulleys H H, which are provided with right-and-left screw-threads, as shown, which receive said chains as they are wound upon them, in the act of raising the gate, and prevent them from jamming or packing.

The said pulleys are operated by means of levers, which are inserted in the head J of the shaft, to which they are secured, and are held against the weight of the gate in any position, by means of the ratchet-wheel I, attached to said shaft and pawl I'.

Having described my invention,

What I claim is—

In combination with the segmental gate C and radial arms C' C', or their equivalents, the center pins E E, guides or ways D D, and adjusting screws F F, substantially as herein described.

ANDREW JACKSON WHITNEY.

Witnesses:

J. B. SPIERS,
JOS. SCHWEITZER.