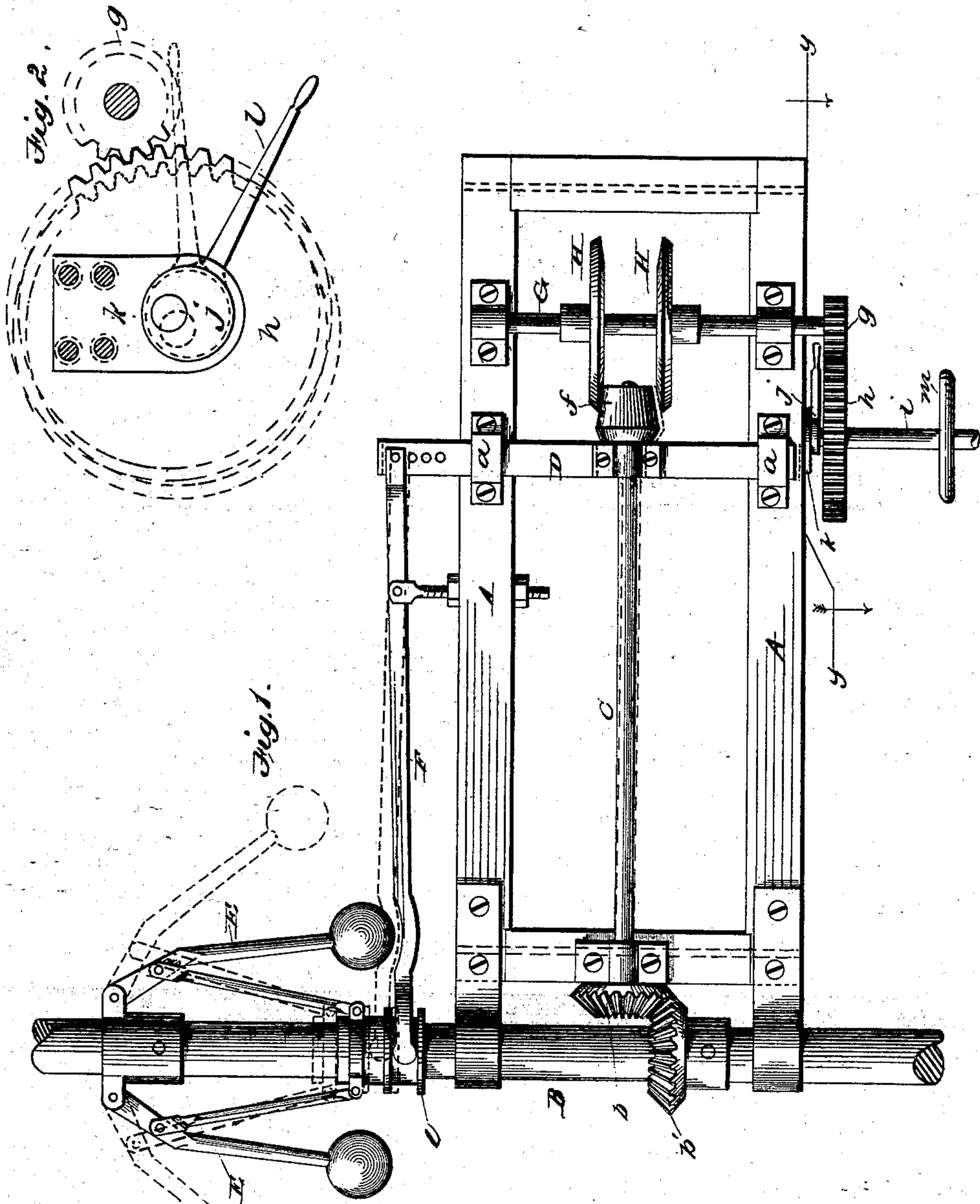


(No Model.)

D. & A. NARRACONG.  
WATER WHEEL GOVERNOR.

No. 274,811.

Patented Mar. 27, 1883.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

DAVID NARRACONG AND ARTHUR NARRACONG, OF REEDSBURG, WISCONSIN.

## WATER-WHEEL GOVERNOR.

SPECIFICATION forming part of Letters Patent No. 274,811, dated March 27, 1883.

Application filed November 24, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, DAVID NARRACONG and ARTHUR NARRACONG, citizens of the United States, residing at Reedsburg, in the county of Sauk and State of Wisconsin, have invented certain new and useful Improvements in Water-Wheel Governors; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in regulators particularly adapted for water-wheel gates, and has for its object to cause the automatic adjustment of the gate at the required angle of opening to vary the flow of water upon the wheel; and the invention consists in the combination and arrangement of parts, substantially as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a side view of our improved water-wheel-gate regulator. Fig. 2 is a sectional view on the line *y y* of Fig. 1.

In carrying out our invention we employ a suitable upright support, preferably in the form of a frame, A, one end of which is fastened to the water-wheel shaft B. Upon this frame or support A is journaled a horizontal shaft, C, one of whose boxes is secured to a vertical slide, D, guided in staples or eyes *a*, fastened to the upper and lower pieces of the frame or support A. One end of the shaft C is provided with a beveled pinion, *b*, gearing with a corresponding pinion, *b'*, with its sleeve fixed upon the water-wheel shaft B. Upon the upper portion of the shaft B are hung the governor-arms E, provided with the usual balls, and connected to a sliding collar, *e*, upon the shaft B.

F is a lever fulcrumed upon the frame or support A, and having one end adjustably connected, as shown in Fig. 1, to the upper end of the vertical slide D.

G is a vertical shaft journaled upon the frame or support A, and having parallel beveled frictional disks H, between which is arranged a beveled roll, *f*, secured to the shaft

C. This shaft has also a small cogged disk, *g*, gearing with a larger cogged disk, *h*, upon the water-wheel-gate shaft *i*. The shaft *i* has its upper end bearing in an eccentric, *j*, suitably hung in a bracket, *k*, secured to the frame A. The eccentric *j* has a lever or handle, *l*, to permit its operation by hand, when desired. The shaft *i* has also a hand-wheel, *m*, to enable the opening of the water-wheel gate to set the wheel in action.

It will be observed that (it being assumed that the wheel is in motion) when the speed of the shaft B or wheel increases beyond the minimum speed the roll *f* of the shaft C will be caused to engage with the lower disk H by the depressing of the slide D, effected by the elevation of the longer arm of the lever F, it being lifted by the outward, flying action of the governor-arms E, and thus cause the turning of the gate-shaft, so as to partially close the gate. The reverse movement of parts will take place when the speed of the shaft B on the water-wheel fails to reach the minimum speed.

From the foregoing it will be seen that the flow of the water upon the wheel will be regulated so as to preserve a minimum speed of the water-wheel shaft.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. In a water-wheel-gate regulator, the combination, with the gate-shaft and the shaft having the parallel friction-disks adapted to engage with the shaft receiving motion from the water-wheel shaft, of the toothed disk arranged on the gate-shaft, the handled eccentric forming a bearing for the gate-shaft, and the toothed sector arranged on the shaft carrying the friction-disks, substantially as and for the purpose set forth.

2. In a water-wheel-gate regulator, the combination, with the gate-shaft and the shaft having parallel friction-disks adapted to engage with the shaft receiving motion from the water-wheel shaft, of the toothed disk arranged on the gate-shaft, the handled eccentric forming a bearing for the gate-shaft, the toothed sector arranged on the shaft carrying the friction-disks, and the hand-wheel arranged upon the gate-shaft, substantially as and for the purpose set forth.



3. In a water-wheel regulator, the combination, with the water-wheel shaft and gate-shaft, of the shaft receiving motion from the aforesaid shaft, and adapted to communicate motion to either of two disks attached to a shaft  
5 having a toothed disk, the gate-shaft toothed disk, the slide supporting one end of the shaft gearing with the water-wheel shaft, the lever connected to the said slide, and the governor-

arms and adjuncts, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

DAVID NARRACONG.

ARTHUR NARRACONG.

Witnesses:

A. DARRENOUGUE,

M. DARRENOUGUE.