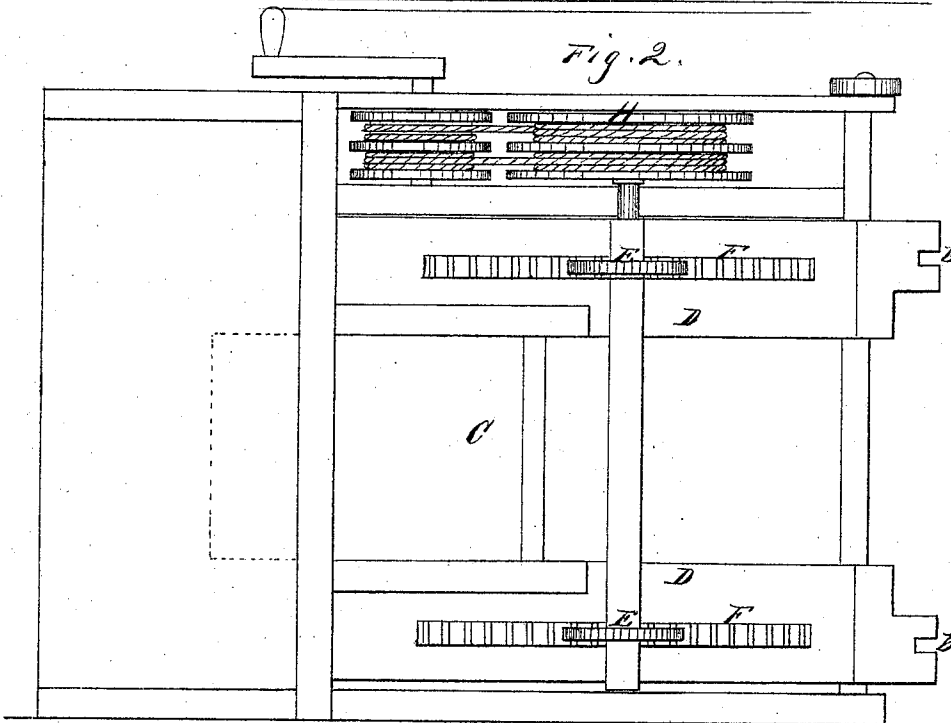
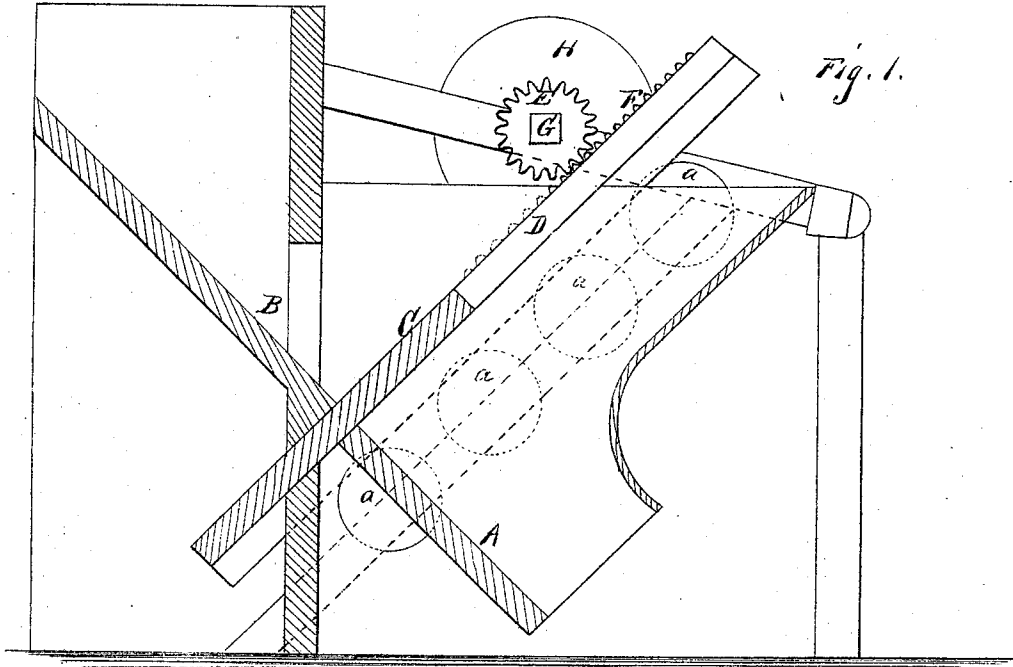


J. M. THOMPSON.

Improvement in Chute-Gates.

No. 131,477.

Patented Sep. 17, 1872.



Witnesses.  
Wm R. Bone  
Charlie Brown

Inventor.  
James M. Thompson

# UNITED STATES PATENT OFFICE.

JAMES M. THOMPSON, OF QUINCY, CALIFORNIA.

## IMPROVEMENT IN CHUTE-GATES.

Specification forming part of Letters Patent No. 131,477, dated September 17, 1872.

### *To all whom it may concern:*

Be it known that I, JAMES M. THOMPSON, of Quincy, county of Plumas, State of California, have invented an Improved Chute-Gate; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to an improved manner of constructing and operating the gates or cut-off devices employed upon inclines or chutes for detaining and discharging whatever is run down the incline. The device is particularly applicable to the chutes in mines down which coal and ores are sent to the car or other vehicle which conveys them away. The gate is intended to move across the chute or incline and detain the descending coal or ore until a car is in position to receive it at the lower end. The gate is then withdrawn and the load passing down the chute is landed in the receptacle awaiting it.

My invention consists in so constructing and operating the gate that it can readily be withdrawn to dump the ore without the usual liability of being blocked or prevented from closing by the lodgment of pieces of coal or ore between it and the bottom of the chute.

In order to more fully illustrate and explain my invention, reference is had to the accompanying drawing forming a part of this specification, in which—

A represents a chute or inclined way, down which coal, ore, or other substance is sent or conveyed to a receptacle at the lower end. At the point along the chute where it is desired to construct the gate or cut-off I place a curb, B, in the usual manner, having the usual opening through which the ore is to pass. The gate C, which detains and releases the ore, is placed just below this opening in the curb, moving at right angles, or nearly so, to the

chute A, and directly through it. The gate is provided with two arms, D D, which extend upward from each upper corner, each arm being provided with a rack, F, extending lengthwise with it. Beneath the gate and upon each side is a series of friction-wheels or rollers, *a a*, upon which the gate rests and moves, a groove, *b*, being provided, if desired, in which they move as in a track. A horizontal shaft, G, extends across the frame, carrying upon each end a pinion, E, in the proper position to engage with the racks F. To either end of this shaft can be attached a wheel, H, which may be cogged, if desired, or operated as shown as a pulley, so that by means of other suitable gearing the shaft G can be revolved so as to cause the gate to be moved in and out through the bottom of the chute. By moving this gate upward through the floor of the chute, when it is desired to check the flow of the ore or rock, or to entirely stop it, there is no danger of its movement being clogged or stopped with lumps of ore or rock becoming wedged between it and the bottom of the chute as in the ordinary gate, and by moving it upward or downward the flow of the coal or ore can be regulated at will, or entirely stopped when desired.

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

In the combination with a chute or incline, A, for conveying solid substances, the arrangement of the curb B and the gate C, whereby the gate closes the passage by being raised through the floor of the chute, so as not to be obstructed by the contents thereof, substantially as set forth.

In witness that the above-described invention is claimed by me I have hereunto set my hand and seal.

JAMES M. THOMPSON. [L. S.]

Witnesses:

CHARLIE BROWN,  
WM. R. BOONE.