

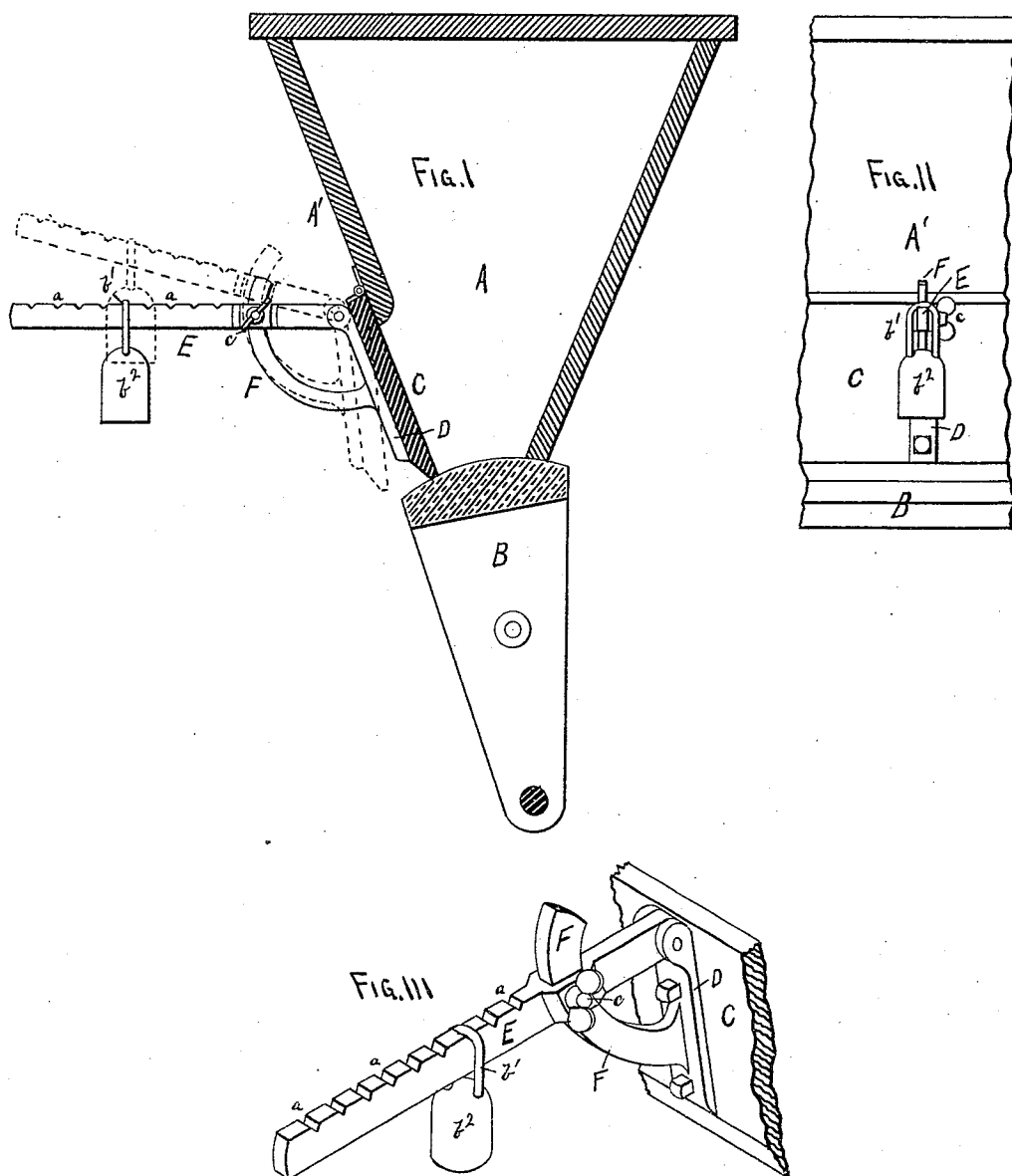
(No Model.)

S. POTTS.

FEED GOVERNOR FOR MIDDLEINGS PURIFIERS, &c.

No. 248,879.

Patented Nov. 1, 1881.



WITNESSES.
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UNITED STATES PATENT OFFICE.

SAMUEL POTTS, OF MINNEAPOLIS, MINNESOTA.

FEED-GOVERNOR FOR MIDLINGS-PURIFIERS, &c.

SPECIFICATION forming part of Letters Patent No. 248,879, dated November 1, 1881.

Application filed January 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL POTTS, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Feed-Governors for Middlings-Purifiers, &c., of which the following is a specification.

This invention relates to the feed-hoppers of middlings-purifiers and similar machines, and has for its object the adjustment of the hinged wing which controls the discharge-opening in the hopper, so as to adapt it to fit hoppers of different angles, and at the same time keep the counterpoise in a horizontal plane and further the rendering of the counterpoise adjustable with reference to the angle at which it acts upon the wing, for the purpose of determining the rate of feed.

In the accompanying drawings, Figure I is a sectional view through the feed-hopper and feed-works, showing the manner of arranging and attaching the governor. Fig. II is a front elevation of the governor and a portion of the hopper and feed-strip. Fig. III is a perspective view of the governor detached.

A is the feed-hopper, and B an oscillating feed-strip, of a middlings-purifier, formed in any of the well-known ways. The lower part of the front A' of the hopper is wanting, and the opening thus left covered by a wing or door, C, hinged at the top to the front A', and resting in close contact at the bottom with the feed-strip B, so that when the wing is closed no material can escape.

Attached to the front of the wing C is a metal strip, D, having pivoted in its top a bar, E, projecting outward in a horizontal line, and provided with notches *a* at regular intervals, in one of which the bail *b'* of a weight, b^2 , rests, to enable the latter to be adjusted nearer to or farther from the wing to increase or decrease the pressure upon the wing.

F is a curved segment, cast in one piece with the strip D, and passing upward through a slot in the bar E, upon which the latter is held at any desired point by a set-screw, *c*, so that it may be set in a horizontal line no matter what the angle of the hopper may be. The bar E will be set by the segment F so that it is in a horizontal line when the wing C is closed, thus enabling me to adapt the governor to spouts

and hoppers of different angles, and then the operator, having determined the amount of material it is proper should pass through the feed-slide in a certain time, adjusts the weight b^2 so that just that amount of material in the hopper will press hard enough upon the wing C to open it and permit an even, constant flow. Then, if a greater amount is fed into the hopper, a greater pressure will be brought to bear upon the wing, open it wider, and allow a greater amount to pass through until the increased supply ceases, when the weight b^2 will return the wing to its former place, thus preventing the hopper or spouts from becoming choked or clogged. Another advantage gained by this arrangement is that, should the supply of material be less than what the weight b^2 is set for, it will be held back until enough accumulates to open the wing.

In the ordinary manner of arranging the feed-slide by set-screws any increase of material fills up the hopper and spouts and chokes or clogs them, so that constant watching is necessary, while, on the other hand, any less supply than what the slide is set for will feed irregularly, usually on one side or the middle, and not the full width of the shaker, thus interfering with the proper action of the air-currents by leaving a portion of the sieve uncovered by the material; but by my device any increase of supply over what the weight b^2 is set for will open the wing C wider, and permit a faster flow, and prevent clogging, while any decrease of supply will not exert sufficient pressure to open the wing, but will be held back until enough has accumulated, it being well known that an entire stoppage of the flow and then an even feed is better than a steady uneven feed or a supply insufficient to cover the whole surface of the cloth.

This feeder may be applied to any kind of machine or spout requiring such a governor.

The bar E may be arranged with or without the segment F, as the latter is only necessary to enable the same governor to be applied to hoppers of different angles.

What I claim as new is—

1. The combination, with a feed-hopper, of a hinged wing controlling the size of the discharge-opening, said wing being provided with a counterpoise which is adjustable as to the

angle at which it acts upon the wing, for the purpose of determining the rate of feed.

2. The combination of hopper A, hinged wing C, adjustable weighted bar E, and feed-strip B, the several parts being adapted to operate substantially as set forth.

3. The combination and arrangement of the hopper or conduit A, hinged wing C, horizontal graduated weighted bar E, and segment F,

having the set-screw *c*, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

SAMUEL POTTS.

Witnesses:

C. N. WOODWARD,
LOUIS FEESER.