

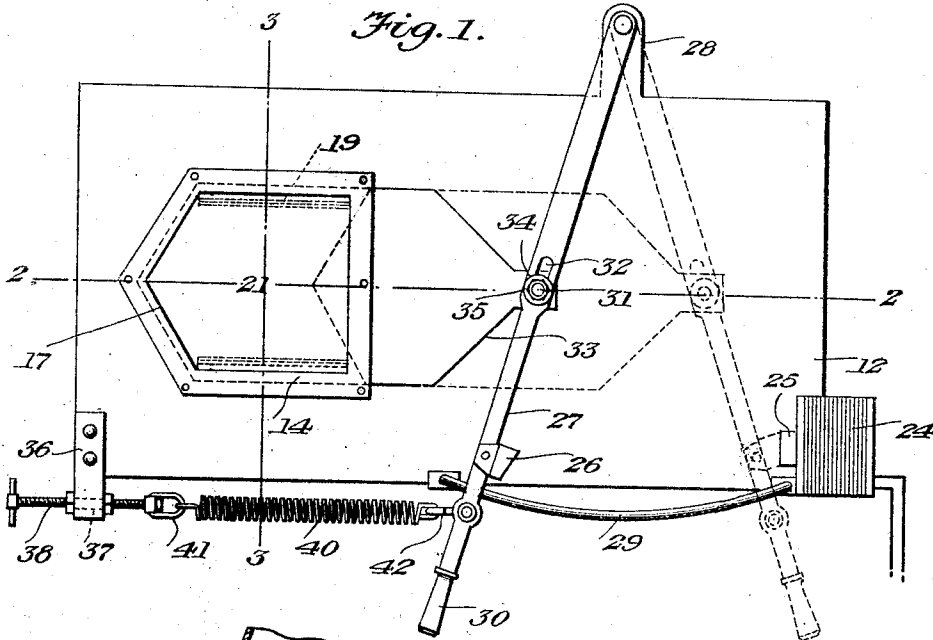
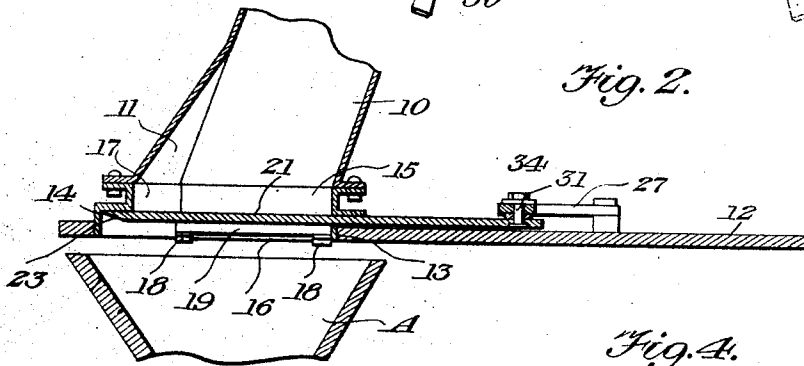
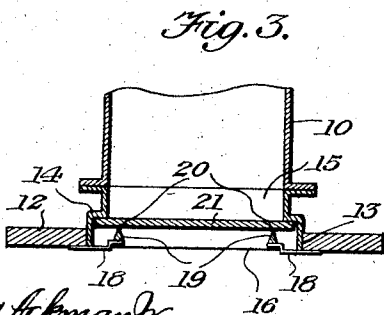
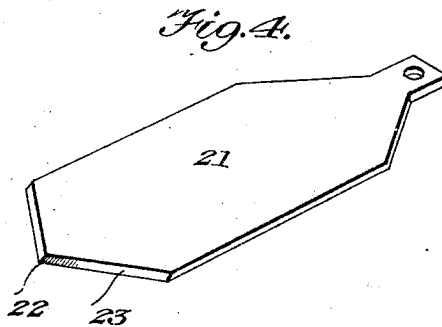
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1,536,874

P. R. BATES

CUT-OFF VALVE

Filed Nov. 22, 1921



Ed. Ackmann,
Allen R. Whittington,
WITNESS:

Peter R. Bates
INVENTOR

BY *Victor J. Evans*
ATTORNEY

UNITED STATES PATENT OFFICE.

PETER ROYSTER BATES, OF GRAHAM, VIRGINIA.

CUT-OFF VALVE.

Application filed November 22, 1921. Serial No. 517,149.

To all whom it may concern:

Be it known that I, PETER ROYSTER BATES, a citizen of the United States, residing at Graham, in the county of Tazewell and State of Virginia, have invented new and useful Improvements in Cut-Off Valves, of which the following is a specification.

This invention relates to improvements in valves.

An object is to provide a cut-off valve for use in mills embodying novel features of construction whereby the flow of grain, seed or the like from a bin or other holder will be completely stopped whenever the mill should cease to operate for any reason whatever.

Another object is to provide a cut-off valve which operates automatically under the influence of an electromagnet which is controlled by the electric circuit furnishing the necessary operating power for the mill.

With the above and other objects in view, the invention consists in certain novel features of construction combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings:

Figure 1 is a top plan view of the invention with the spout removed and showing the valve in full lines in closed position and in dotted lines in open position.

Figure 2 is a vertical sectional view taken on the line 2—2 of Fig. 1.

Figure 3 is a sectional view taken on line 3—3 of Figure 1.

Figure 4 is a detail perspective view of the valve.

Referring now to the drawings, in which like characters of reference designate corresponding parts throughout the several views, the numeral 10 designates an inclined square grain spout of any suitable length which is provided at its lower end with a V-shaped projection 11 and is adapted to convey grain, seed or the like from any suitable source of supply to a mill indicated generally at A.

A horizontal frame 12 is located between the mill and the lower end of the spout and is provided with an opening 13 at one end receiving a valve casing 14 which is provided with an inlet opening 15 and an outlet opening 16 for the purpose of establishing communication between the end of the spout and the mill.

The casing is removably secured to the

a V-shaped extension 17 defining a valve seat which communicates with the V-shaped projection 11 of the spout.

Secured to the lower surface of the frame and extending inwardly from the opposite edges of the opening 13 are a plurality of relatively short arms 18 supporting triangular shaped slides 19 provided with sharp edges 20 so as to separate the grain and permit the same to pass upon opposite sides thereof incident to the movement of an elongated valve 21. The valve 21 has a pointed end 22 provided with beveled edges 23 which are adapted to engage the V-shaped extension of the casing and cooperate with the sharp edges of the triangular shaped slides to prevent the clogging of grain when the valve is moved.

An electromagnet 24 secured to one end of the support and included in the electric circuit which operates the mill is provided with a core 25 adapted to magnetically attract an armature 26 carried by a lever 27 which is pivotally mounted upon a bracket 28 secured to one side of the frame. A curved slide 29 is secured to the opposite side of the frame and supports the outer end of the lever which is provided with a handle 30. A bolt 31 extending from a tapering extension 33 of the valve passes through an elongated slot 32 formed in the lever and is retained in position by means of a suitable lock nut 34 and washer 35.

Secured to the opposite end of the frame is a bracket 36 provided with a threaded transverse opening 37 and receiving an adjusting screw 38 provided with a T-shaped handle 39 for the purpose of regulating the tension of a coil spring 40 provided with a cap 41 which has a swivelled connection with the adjusting screw and is removably secured to a hook 42 extending from the lever adjacent to the handle 30 thereof.

In use, when the mill is working, the lever is moved toward the electromagnet so that the contact 26 will be energized by the electric contact 25 and retain the valve in open position against the tension of the spring. However, should the mill cease to operate for any reason whatever, the electric contact 26 will be de-energized and consequently the spring will actuate the valve and stop the flow of grain.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent, I

desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the
5 scope of what is claimed.

What I claim is:—

The combination with an inclined square spout provided with a V-shaped projection, of a casing provided with a V-shaped extension and removably secured to said spout, a
10 frame surrounding said casing, a lever pivotally mounted on said frame, a pointed

bevelled edged valve slidably mounted in said casing and pivotally connected to said lever, sharp edged guide means for supporting said valve in operative position and to separate material in the spout when the valve is in open position, electrical means for retaining said valve in open position and spring means for seating said valve when
15 the electrical means is deenergized. 20

In testimony whereof I affix my signature.

PETER ROYSTER BATES.