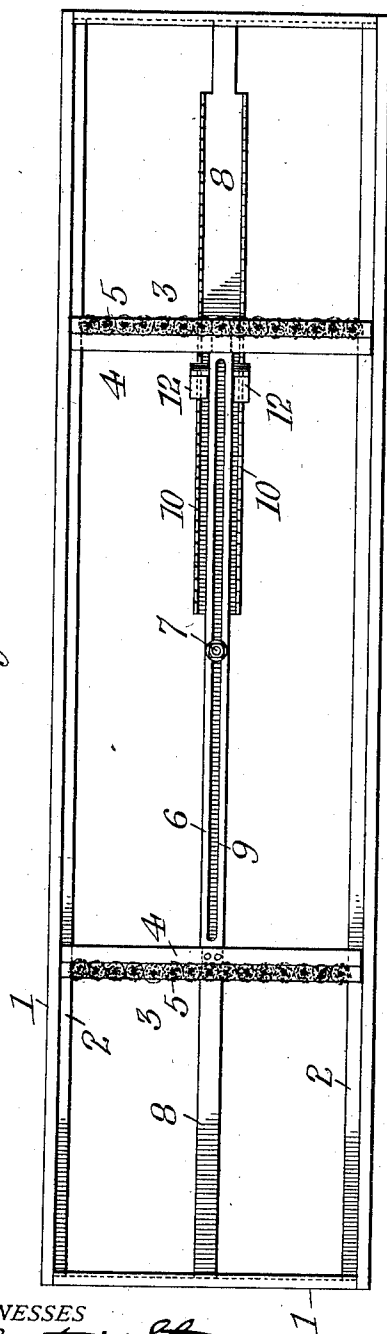


D. B. JOHNSON.
 BOLTING CLOTH CLEANER.
 APPLICATION FILED APR. 7, 1911.

1,002,584.

Patented Sept. 5, 1911.

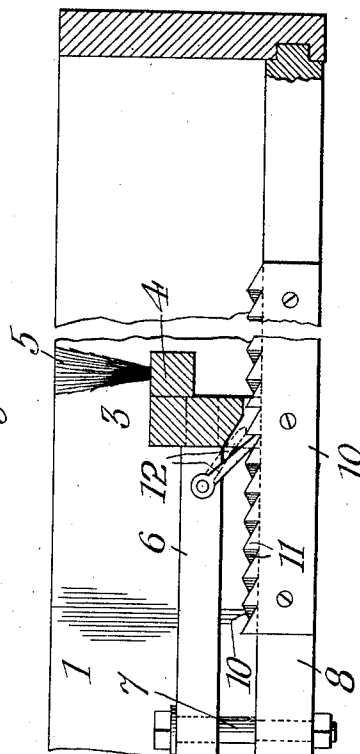
Fig. 1



WITNESSES

J. Austin Stone.
M. Ethel Lyons.

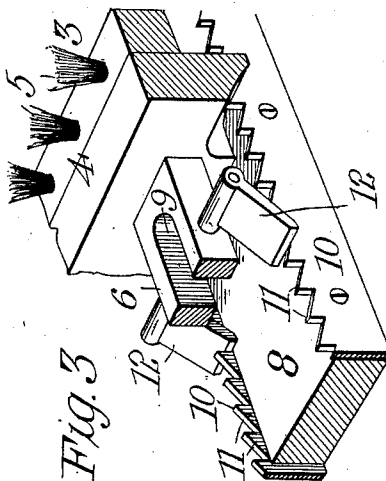
Fig. 2



INVENTOR

David B. Johnson
By Julian Adowee
 his Attorney

Fig. 3



UNITED STATES PATENT OFFICE.

DAVID B. JOHNSON, OF BLANCHESTER, OHIO, ASSIGNOR TO SPROUT, WALDRON & COMPANY, OF MUNCY, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BOLTING-CLOTH CLEANER.

1,002,584.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed April 7, 1911. Serial No. 619,620.

To all whom it may concern:

Be it known that I, DAVID B. JOHNSON, a citizen of the United States, residing at Blanchester, in the county of Clinton and State of Ohio, have invented certain new and useful Improvements in Bolting-Cloth Cleaners, of which the following is a specification.

This invention relates to improvements in devices for automatically cleaning the cloth of flour bolting sieves, and the object of the invention is to provide means whereby the movement of the brushes will be automatically reversed and the operation will be positive in either direction of movement.

A further object of the invention is to so arrange and construct the parts of the operating mechanism that the brushes will be compelled to move a full stroke in either direction before starting upon the reverse movement.

These stated objects and such other incidental objects as will hereinafter appear are attained in the device illustrated in the accompanying drawings, and the invention consists in certain novel features which will be hereinafter first fully described and then more particularly pointed out in the appended claims.

In the annexed drawings, Figure 1 is a plan view of a bolting sieve cleaning brush embodying my invention. Fig. 2 is an enlarged side view of one end of the device with the brush head in section. Fig. 3 is a detail perspective view of a portion of the device showing the rack bars and the pawls working over the same.

The sieve frame 1 may be of the usual or any desired construction, and operated by any preferred mechanism. Upon the sides of the sieve frame are longitudinal tracks or rails 2 upon which the brushes 3 are slidably mounted, the said brushes consisting of transverse bars or brush heads 4 and bristles 5 secured to and rising therefrom. As clearly shown in the drawings, two brushes are employed, which are spaced apart a distance equal to about one-half the length of the sieve and are connected by a longitudinal slotted bar or rod 6. This connecting bar or rod 6 is held to the sieve frame by a headed pin or stud 7, which rises from a longitudinal brace 8 extending between the ends of the sieve, the pin projecting upwardly through the slot 9 in the bar 6 and

having its head engaging over the walls of the slot so as to hold the bar in place, as will be readily understood. Upon the opposite sides of the brace 8 I secure the rack bars 10, which terminate short of one end of the sieve and of the center of the brace, and have their teeth 11 projected in opposite directions, as shown most clearly in Fig. 3. At one end of the connecting bar 6, on opposite sides of the same, are pivoted the pawls 12 which swing loosely upon their pivots and are adapted to ride upon and engage the teeth 11 of the rack bars 10.

The construction and arrangement of the several parts of the device being thus made known, the operation of the same will be readily understood and appreciated. The frame, comprising the brushes and the connecting bar extending between the same, is placed in position within the sieve, so that the ends of the brushes will bear upon the upper sides of the rails 2 and the retaining pin 7 is then inserted through the slot 9 into the brace 8, so that the brushes will be held firmly to the rails, and will be prevented from jumping or rising therefrom. Motion being imparted to the sieve in the operation of the bolter, one rack bar 10 will engage the corresponding pawl 12 so as to impart movement to the brushes in the same direction as that followed by the sieve, while on the reverse movement of the sieve the inertia of the brushes will prevent movement thereof. The opposite pawl, during this movement of the brushes, will remain inactive, and will simply ride over the rack bar upon which it rests, without engaging the same. When the brush has been moved to the center of the sieve, further movement will be arrested by the end wall of the longitudinal slot impinging against the pin 7 and the pawls 12 will swing by gravity into a vertical position beyond the end of the rack bar. Then when the sieve moves in the opposite direction, the pawls will ride over the ends of the rack bars and be automatically reversed so that the brushes will be prevented from moving in the direction previously traveled but may move in the opposite direction.

It will thus be seen that I have provided an exceedingly simple mechanism, which is not liable to get out of order, which will offer practically no obstruction to the downward flow of the flour, and which will re-

quire but very little attention on the part of the operator. The pawls are of such length that when riding upon the rack bars, they will assume an inclined position, as
 5 shown in Fig. 2, so that one pawl will ride idly over the teeth of the rack bar below the same, and the other pawl will be in position to enter the space between adjacent teeth and thereby positively arrest any back-
 10 ward movement of the brushes. The brushes will, consequently, be caused to travel in a step by step movement to the end of their stroke, so that the entire surface of the bolting cloth will be cleaned, the brushes
 15 being positively driven in opposite directions alternately and the impelling pawls automatically reversing at each end of the stroke of the brushes.

Having thus described my invention, I
 20 claim as new and desire to secure by Letters Patent:

1. The combination with a sieve, of a pair of independent rack bars secured thereto and having their teeth inclined respectively in opposite directions, a brush slidably
 25 mounted within the sieve, and pawls pivoted on the brush and depending therefrom to ride upon said rack bars, the pawls swinging in the same direction whereby they
 30 alternately engage their respective rack bars to cause movement of the brush in opposite directions.

2. The combination with a sieve, and its cleaning brush, of independent rack bars on
 35 one of said elements having their teeth inclined respectively in opposite directions, and a pair of pawls freely pivoted upon the other element and arranged to ride upon said rack bars, the pawls being arranged to
 40 alternately actively engage the teeth of their respective rack bars.

3. The combination with a sieve, and a cleaning brush mounted therein, of rack bars secured upon the sieve and having oppositely
 45 disposed teeth and having their ends spaced from the ends of the sieve, and a pair of freely swinging pawls on the brush riding over said rack bars and adapted to drop into the spaces beyond the ends of the same whereby they will ride over the rack bars
 50 and be automatically reversed upon further movement of the sieve.

4. The combination with a sieve frame, of a pair of brushes slidably mounted therein, a longitudinally slotted bar connecting said
 55 brushes, a headed pin passing through the said longitudinally slotted bar into the frame, and operating means mounted on the sieve frame and the said bar to impel the brushes from end to end of the sieve frame
 60 by the movement of the said frame.

5. The combination of a sieve having a central longitudinal brace, rack bars secured to the sides of the brace and having their
 65 upper edges above the same, the said rack bars terminating short of the ends of the brace and the upper edges of the said rack bars being formed into oppositely inclined teeth, brushes slidably mounted in the sieve,
 70 a connecting bar secured to and extending between the brushes, and freely swinging pawls mounted upon the sides of the said connecting bar and depending therefrom to ride upon and engage the teeth of the rack
 75 bars.

In testimony whereof I affix my signature, in presence of two witnesses.

DAVID B. JOHNSON.

Witnesses:

ALBERT R. BURNS,
 CLARENCE E. BAUM.