

No. 695,842.

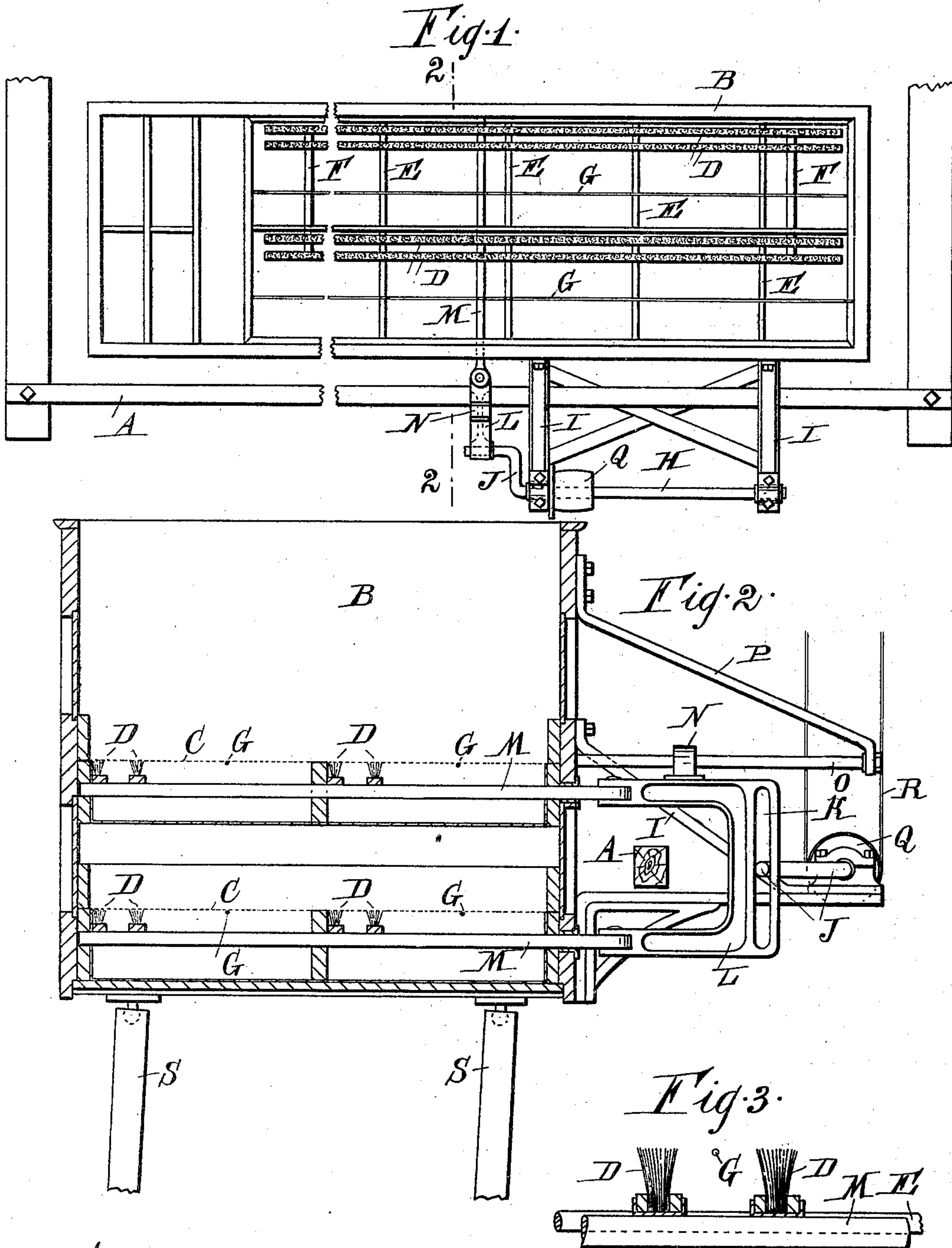
Patented Mar. 18, 1902.

T. SCOTT.

CLOTH CLEANING ATTACHMENT FOR GYRATORY SIFTERS.

(Application filed Oct. 26, 1900.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS SCOTT, OF BENDIGO, VICTORIA, AUSTRALIA.

CLOTH-CLEANING ATTACHMENT FOR GYRATORY SIFTERS.

SPECIFICATION forming part of Letters Patent No. 695,842, dated March 18, 1902.

Application filed October 26, 1900. Serial No. 34,482. (No model.)

To all whom it may concern:

Be it known that I, THOMAS SCOTT, flour-miller, a subject of the Queen of Great Britain, residing at Wills street, Bendigo, in the State of Victoria, Australia, have invented Improvements in Cloth-Cleaning Attachments for Gyratory Sifters, of which the following is a specification.

This invention relates to what are known as "box-sifters," "scalpers," "graders," or "bolt-ers;" and its object is to provide a simple and efficient means for keeping the cloth from becoming choked up, and therefore in an efficient state to separate the flour from any impurities or coarse particles. Many devices have been suggested for accomplishing this object, among which are comparatively loose chains mounted inside the box, so as to rest upon the upper surface of the cloth in such a way that when the oscillatory motion is imparted to the sifter these chains shake to and fro over the surface of the cloth, the idea being that they will prevent it from becoming choked up. Other devices have also been used—such, for instance, as a number of small brushes arranged to work under the cloth and operated by a pawl-and-ratchet arrangement as the sifter is oscillated. Some millers have introduced beans and other seed into the flour in order to help the dressing by keeping the cloth clear, and it has also been suggested to use a number of separate brushes each mounted upon an antifriction-ball resting upon a wire-gauze or other support under the cloth, so that they can move freely around under that particular section of it beneath which they are placed. None of these various devices have in practice been found satisfactory. Now according to this invention brushes are mounted under the cloth and extend from one end to the other of the sifter and are so arranged as that they can be slid laterally to and fro by suitable mechanism driven from any convenient source of power which is independent of the oscillatory motion of the sifter. In order, however, that this invention may be clearly understood, I will describe same by reference to the accompanying drawings, in which—

Figure 1 is a plan of a sifter with the cover removed, illustrating the application of the invention thereto. Fig. 2 is a vertical trans-

verse section on line 2 2, Fig. 1; and Fig. 3 is a sectional detail illustrating the construction of one of the brushes used, as above mentioned, for cleaning the cloths of box-sifters.

A represents the usual stationary framing which serves to support the gearing used for driving the sifter B, together with the ordinary feeding and discharge chutes.

C C represent the cloths through which the flour is to be dressed and which at present are liable to become clogged by the flour.

D D represent brushes which are arranged longitudinally in the box below the cloth C and rest upon guide-bars E, extending across said box B, as shown. By preference the brushes D are arranged in pairs, two in each half of the box, so that each pair of brushes will operate upon the under side of each half of the cloth. Said brushes extend practically from one end to the other of the sifter and are connected together at or near their ends by tie-bars or connecting-pieces F. This construction admits of the brushes being moved laterally to and fro in the box, and therefore insures the entire surface of the under side of the cloth being operated upon by the brushes at intervals. In order to keep the brushes D clear of flour, which would otherwise tend to cake upon them, a wire G is arranged to extend from one end to the other underneath each half of the sifter, as indicated in the drawings, said wire being set in the path of the brushes D slightly beneath the level of the cloth C, so that said brushes will on passing contact with it, and thus remove any flour which might otherwise tend to cling to and clog them.

Various mechanical arrangements may be devised for imparting the requisite lateral motion to the brushes D. They must, however, be driven from an independent source of power to that which oscillates the sifter B. The arrangement of mechanism which I prefer is illustrated in the drawings and consists of a shaft or spindle H, mounted in brackets I, projecting from the side of the box B and formed or fitted at its end with a crank J, working within a slot or groove K in a cross-head L, whose upper and lower ends are connected by rods M to the brushes D. The cross-head L is provided with a lug N, work-

ing along a guide-rail O and supported by a bracket or stay P, extending downwardly and outwardly from the upper edge of the box B. The crank shaft or spindle H is fitted with a pulley Q, to which motion is imparted by a belt, as indicated at R, leading from a counter-shaft or other convenient source of power.

The box B can be mounted upon a vertically-projecting oscillatory support S or upon depending straps or otherwise so long as it is free to oscillate or gyrate, said motion being imparted to it by the ordinary cranks or otherwise in the usual manner.

By using the wire G, which is preferably made of tinned steel, it is practicable to use brushes made of soft horsehair, because said wire G serves to keep said brushes clear of flour, and therefore in good working order, whereas otherwise it would be necessary to use bristles, which, being hard and unyielding, might possibly in some cases pierce the cloth

and in any case would tend to wear it out very quickly.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

In a machine of the class described, a plurality of cloths arranged to have a gyrating or oscillating motion, brushes extending across and contacting with the under side of the cloths and reciprocating independent of them, rods for reciprocating the brushes, a bracket, a slotted cross-head slidable on and supported by said bracket to which said rods are secured, and a driven crank slidable in the slot of said cross-head, substantially as set forth.

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Witnesses:

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