

No. 740,806.

PATENTED OCT. 6, 1903.

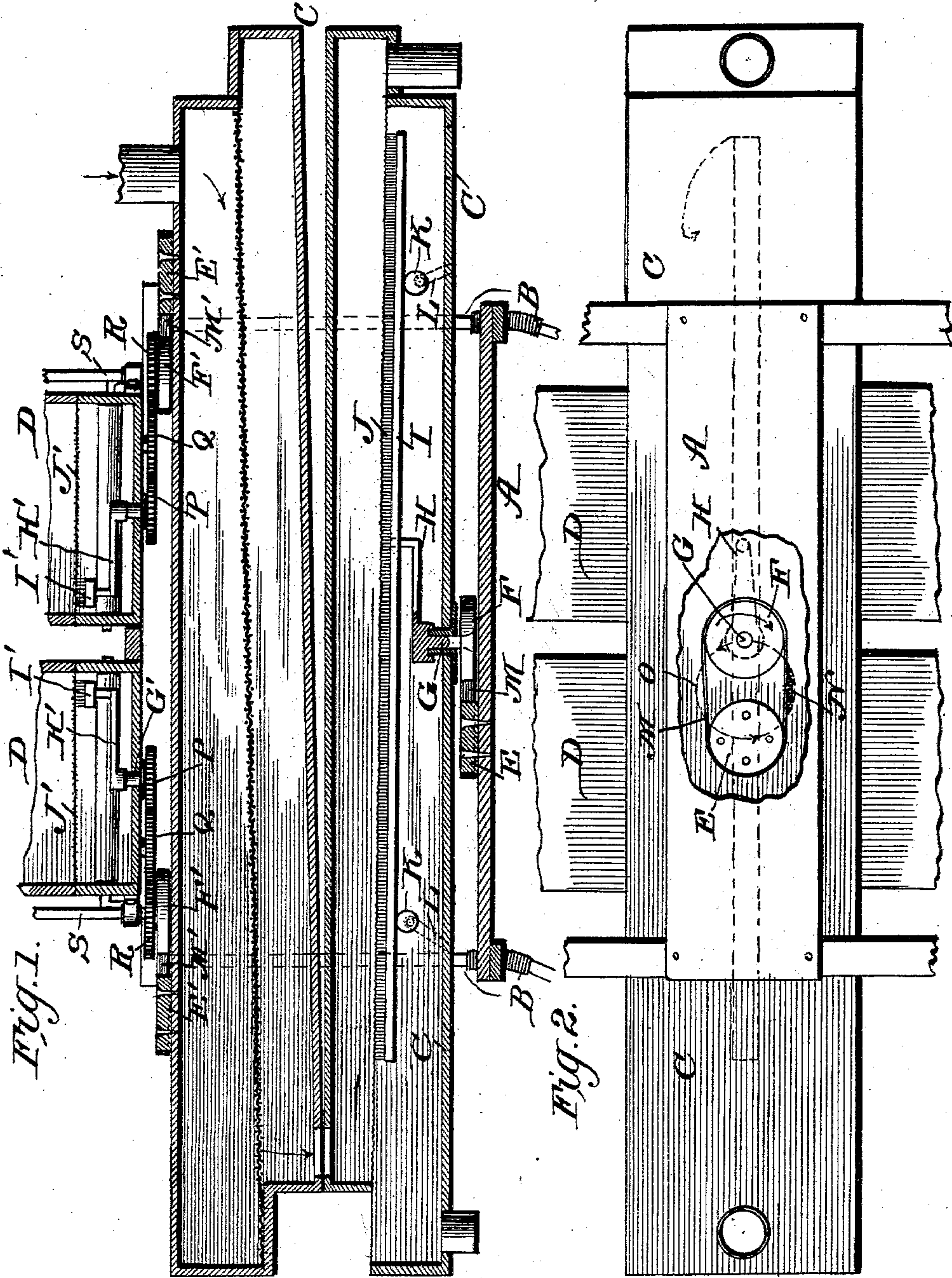
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CLOTH CLEANING ATTACHMENT FOR FLOUR BOLTS, &c.

APPLICATION FILED OCT. 11, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Jos. A. Ryan
Harrison B. Brown

INVENTOR

John Charles.

BY *Munn & Co.*

ATTORNEYS.

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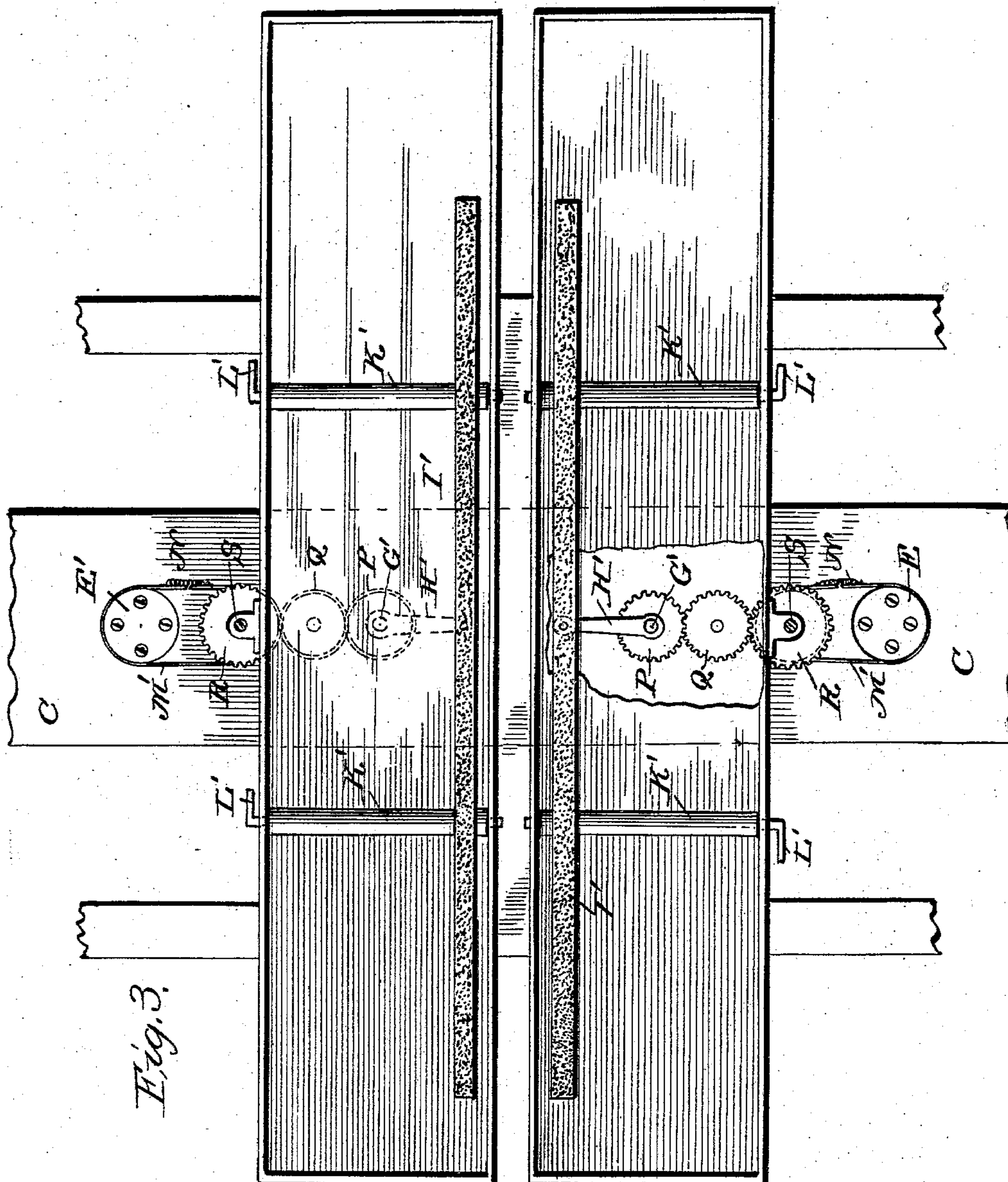
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UNITED STATES PATENT OFFICE.

JOHN CHARLES, OF CHARLTON, MARYLAND.

CLOTH-CLEANING ATTACHMENT FOR FLOUR-BOLTS, &c.

SPECIFICATION forming part of Letters Patent No. 740,806, dated October 6, 1903.

Application filed October 11, 1902. Serial No. 126,929. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHARLES, a citizen of the United States, residing at Charlton, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Cloth-Cleaning Attachments for Flour-Bolts, &c., of which the following is a specification.

The object of my invention is to provide improved means for brushing the cloth of flour-bolts, and to that end I have invented and constructed a novel and useful attachment of the character stated which while intended to be used in connection with flour-bolting machines having a gyratory motion is equally adapted to all sieves having a similar motion.

I make no claim in this application to any particular flour-bolting machine or sieve, nor do I claim that imparting a gyratory motion to similar apparatus is original with me, and therefore since flour-bolting machines, sieves, and similar apparatus having a gyratory motion are well known I deem it sufficient in the accompanying drawings, forming a part of this specification, to simply show an arrangement of bolting-boxes one above the other for illustrating one adaptation of my invention.

The invention consists of peculiar brushing means adapted to clean the cloth of flour-bolts and other sieves utilizing gyratory movement of two separate parts of the machine for effecting the operation thereof.

The invention consists, further, in the special construction, arrangement, and combination of parts hereinafter described in detail, with the novel features thereof pointed out in the subjoined claims.

In the drawings, Figure 1 is a vertical sectional view through an arrangement of flour-bolting boxes, part broken away, showing my invention in use. Fig. 2 is an inverted or bottom plan view of the parts shown in Fig. 1 with one member broken away, showing my peculiar brush-operating means with arrows and a dotted circle indicating their movement; and Fig. 3 is a top plan view of the same arrangement of bolting-boxes with the covers of the upper boxes removed and the bottom of one box broken away, showing

my peculiar devices for operating the cleaning-brushes in the upper boxes.

I have heretofore stated that this invention is not directed to any particular bolting apparatus or sieves, and consequently it becomes necessary in describing it to say that the invention is adapted only to bolting apparatus or sieve-machines in which two independent parts thereof have differential gyratory motions. These parts may consist of a single sieve-box or a plurality thereof arranged and supported by devices common with all such apparatus or machines having gyratory motion, and therefore I will briefly refer to the parts thereof necessary to a full understanding of my invention.

In Figs. 1 and 2 of my drawings, A indicates a suitable base-board supported by upright arms B of any well-known character adapted by common means to impart a gyratory motion.

C denotes sieve or bolting boxes having a similar motion, but differential with the motion of the base-board A. The upper boxes D, arranged at right angle with the boxes C, have gyratory motion opposite to the motion of the lower boxes C and are suitably supported therefor.

It is understood that the several features A, B, C, and D are independently supported by well-known means and that they have gyratory motions differing in movement.

The above statement will render the adaptation and use of my invention fully understood to those skilled in the art, taken in connection with the following detailed description of the several features employed by me and the operation thereof.

In carrying out my invention I fixedly secure to the upper side of the base-board A a circular block E. On the under side of the sieve-boxes C, I arrange a pulley-wheel F, fixed to the lower end of a vertical shaft G, extending into the sieve-box, as shown in Fig. 1. The pulley F and the block E may vary in size according to the movement to be given. The upper end of the shaft G has fixed thereto a crank-arm H, having its angular end loosely connected about midway of an elongated brush I, arranged to operate on the under side of the sieve-cloth J.

When I say "sieve-cloth" or "sieve," I would be understood to refer to any character thereof, such as bolting-cloth or any type of screen.

5 The brush I is adjustably held up against the sieve-cloth J by transverse eccentrically-supported bars K in the sieve-box. The bars K have handles L, located on the outside of sieve-box. (See Figs. 1 and 3.)

10 M denotes a belt extending around the circular block E and the pulley F. The ends of this belt M may be connected by a yielding coupling N.

In operation with the parts above described 15 it is apparent that the fixed block E and the shaft G will describe a circle, as indicated at O, Fig. 2, one around the other, so to speak, and during such movement of the parts, the block E being fixed or stationary on the base- 20 board A, obviously the belt M will impart a rotary motion to the pulley F in direction opposite to the planetary movement of parts E and F, (indicated by the arrow and dotted circle O.) Now with a pulley F a little dif- 25 ferent in size compared with the block E a very slow rotary motion will be imparted to shaft G, crank H, and the brush I. The latter should be as long as possible consistent with the movement imparted thereto by the crank 30 H, and being longer than the width of the sieve-box the sides of the latter will guide it to effectively brush and keep open the meshes of the sieve.

I have heretofore referred to upper sieve- 35 boxes (indicated at D) arranged at right angle with the lower sieve-boxes. I have further stated that the upper sieve-boxes have a motion similar to the lower boxes and that the motion of the several tiers thereof is in 40 different directions, being supported by arms and hangers common and well known in machines of similar character.

It being desirable to arrange brushes in the upper sieve-boxes I employ a crank H' and 45 brush I', supported by eccentric bars K', adapted to operate against the under side of the sieve J', all like similar features in the lower box C. The crank supporting-shaft G', with the upper boxes D, has a gear-wheel P 50 on its lower end meshing with a similar but intermediate gear Q, supported on the under side of the box, as shown, and in mesh with the gear-wheel R on a vertical shaft S, supported by hangers or suitable bearings T, 55 fixed to the outer side wall of the sieve-box, as shown in Fig. 1. The shaft S is driven by a belt M', pulley-wheel F', and fixed block E', all like similar features under the lower sieve-box C. It will be noticed in this con- 60 nection that the block E' is supported by and fixed to the upper side of the lower sieve-box C. Now the upper and lower sieve-boxes having in operation the differential gyratory motion above described it is apparent that

the block E' and the pulley F' will be given 65 the same movement imparted to similar features operating the brushes in the lower sieve-box.

I would have it understood that I do not 70 desire to be limited in the use of my invention with any particular number or arrangement of sieve-boxes and also that brushes may be arranged in each box adapted to clean two or more sieve-cloths. In Fig. 1 I show 75 the shaft S broken off; but the same may extend up along the side of the box and connect with and operate devices similar to those driving the crank-shaft G'.

Obviously the mechanism above described 80 may be variously modified without departing from the spirit of my invention.

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

1. The combination in a sieve-machine of 85 the character stated, separate sieve-boxes having differential gyratory movement, means for supporting the said boxes, brushing apparatus in each box adapted to operate against the sieve-cloth therein, connecting means on 90 the outside of the sieve-boxes whereby rotary motion is imparted to the said brushing apparatus, deriving power effected through movement of the sieve-boxes, substantially as described. 95

2. In combination with a sieve-machine, of the character stated, an elongated sieve-box, a brush within the sieve-box longer than a cross-section thereof and adapted to operate 100 against the sieve-cloth therein, a shaft having at one end a crank-arm connecting the said brush and at its other end revoluble means driven by a belt, the latter being connected with a separate part of the machine and deriving power through motion imparted 105 to the sieve-box, substantially as described.

3. The combination with flour bolting or sieving machines, bolting or sieving boxes arranged at right angle one with the other and supported by hangers and suitable arms, 110 in operation, imparting motion to the said boxes, brushes within the bolting or sieving boxes longer than a cross-section of its box, a crank-arm operatively connected with the said brushes, means within the said boxes 115 adapted to provide support for the ends of the brushes, a suitable shaft connecting the said crank-arm and revoluble means at its lower end, a fixed block upon each lower box, and a drive-belt connecting the said fixed 120 block with the revoluble means at the lower end of the said shaft, substantially as described.

JOHN CHARLES.

Witnesses:

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