

(No Model.)

F. A. PRICE.

BRUSHING APPARATUS FOR SIEVES.

No. 301,154.

Patented July 1, 1884.

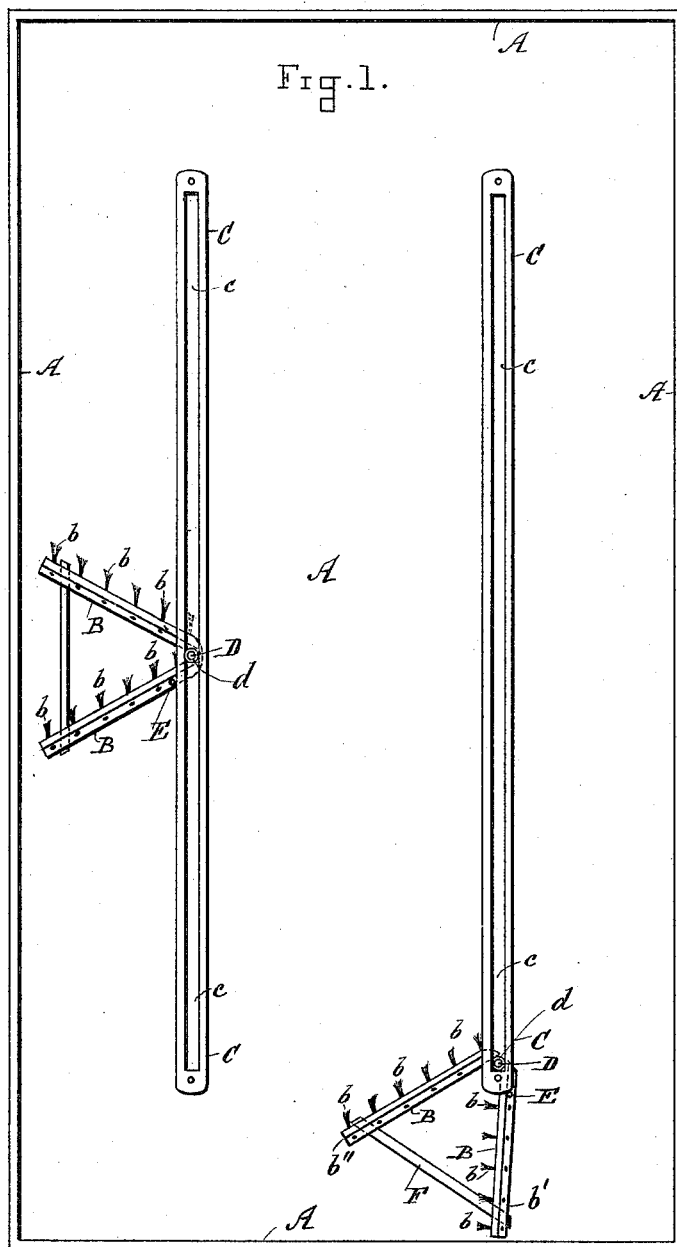
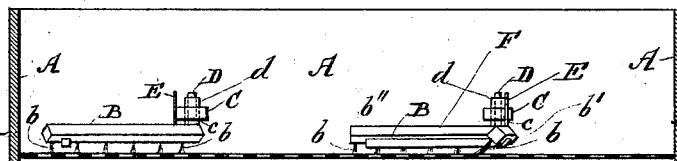


Fig.2.

Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERICK ANDREW PRICE, OF BARNAWARTHA, VICTORIA, AUSTRALIA.

BRUSHING APPARATUS FOR SIEVES.

SPECIFICATION forming part of Letters Patent No. 301,154, dated July 1, 1884.

Application filed March 4, 1884. (No model.) Patented in England September 6, 1883, No. 4,288.

To all whom it may concern:

Be it known that I, FREDERICK ANDREW PRICE, a subject of the Queen of Great Britain, residing at Barnawartha, in the Colony of Victoria, Australia, but temporarily at the Office for Patents, 6 Lord Street, Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements in Brushing Apparatus for Sieves, (for which I have received Letters Patent in England, dated the 6th day of September, 1883, No. 4,288,) and the following is a specification thereof.

Sieves used for the purpose of screening meal, middlings, and other material are at present kept from clogging or becoming choked in their meshes by the use of revolving brushes passed to and fro over the sieving-surface, or by balls rolling thereon, or by similar methods usually requiring extraneous separate mechanism to drive or work them.

The object of this invention is to provide a traveling brush which will work to and fro or in a continuous path over the surface of the sieve, being propelled by the motion of the sieve. It is clearly shown in the annexed drawings, in which—

Figure 1 is a plan view of a reciprocating sieve, and Fig. 2 an end elevation, in section, of the same.

In these, A is a reciprocating sieve, of ordinary construction, hung by any suitable supports, and agitated by crank or otherwise; but as such do not form part of the invention, and are readily understood by all engineers versed in this class of machinery, they are omitted from the drawings for the sake of clearness. B are the traveling brushes. The brushes B have their bristles *b* inclined in a direction contrary to that in which they travel, as plainly shown in Fig. 1. The shaking or vibratory motion of the sieve causes the brushes to travel along it. As the sieve moves in the direction meeting the points of the bristles of the brush the friction between the brush and the sieve-surface carries the brush forward; but when moving in the opposite direction the friction is not sufficient to carry the brush back. The sieve thus during its forward motion grips the bristles *b* through their being inclined to meet

it, but during the return motion the sieve slides past the inclined bristles, the inclination being such that the surface of the sieve does not catch them. The sieve, as heretofore stated, may be supported or suspended in any suitable manner to receive a reciprocating motion. The brushes are carried in a fixed guide or frame, C, suspended by rods or otherwise from above, preferably from the same support or beam from which the sieve is hung. This guide or frame C is placed at any convenient height above the sieve-surface, but preferably just sufficiently high to allow the brush passing freely for the purposes of turning. Attached to the brush is a small pin, D, which works in the slot *c* of the frame C, and moves to and fro therein as the brushes are carried along. The pin D is preferably provided with a friction-roller, *d*. The roller *d* travels in the groove or slot *c* from end to end to guide the brushes, and at the ends forms a pivot for the brushes to turn upon. A second pin, E, is placed in the frame-work of the brush, and travels against the outside of the frame C. The pin E keeps the brush in a straight course; otherwise it would be inclined to move in a circle, instead of lengthwise of the sieve. If the invention were applied to circular sieve, the brush would keep going round on the pivot in a fixed center, and without a guide-frame. Two brushes are shown in the drawings, but one only or a greater number may be used; but I prefer two rather than one, as less space is then left in the corner of the sieve unbrushed.

While the brushes may be of any desired shape or construction, I prefer those of V shape shown, as by this shape they are prevented sticking in turning at the end of the slide. When traveling the length of the sieve, both sets of brushes *b* come into play to propel the brush along; but when turning, the set of bristles attached to the arm of the brush *b'* are inoperative when the brush is in position shown at F, the bristles on the other arm, *b''*, serving to carry the brush on until those at *b'* are acted upon on the return journey. These, then, carry the brush on until both are again acted upon. It is not necessary that the brush should work on the top of the sieve, as it may

equally well be worked against the bottom of the sieve, with the addition of a hook on which the brush would rest and be kept up against the sieve. The brush will work in any position, provided it is kept against the cloth.

Although I prefer the means hereinbefore described for adjusting and actuating the brush, the invention is not confined to these exact details, as brushes with bristles set obliquely may be constructed and arranged in different ways, but at the same time be carried backward and forward by the motion of the sieve, a single brush stretching across each end of the brush by a short chain, and each ring sliding upon a wire or rod stretched above sieve, the brush having two upright pins, which upon contact with a suspended stationary bar reverse the motion.

Having thus described my invention, what I claim is—

1. In combination with an agitated sieve, a brush having oblique bristles resting against the sieve, substantially as set forth, whereby the motion of the sieve causes the brush to travel.

2. In combination with a reciprocating sieve, a brush supported in guides, substantially as described and shown, so that whichever way it travels its bristles shall remain in contact with the sieve and point in a backward direction.

3. The combination of an agitated sieve for granular or pulverulent material, a brush resting against the said sieve, and having oblique bristles, through which it is caused to travel by the agitation of the sieve, and a stationary guide or frame for causing the brush to travel back and forth lengthwise of the sieve.

4. The combination, with a reciprocating sieve for sorting granular or other material, of the stationary guide or frame C and the traveling brush B, having oblique bristles in contact with the sieve, substantially as and for the purpose described.

5. The combination, with a reciprocating sieve, A, and stationary guide or frame C, of the traveling brush B, with the bristles *b* set obliquely to the surface of the sieve, and the guide-pins D and E, substantially as described.

6. The combination, with the agitated sieve and the stationary guide or frame, of the traveling brush consisting of the arms *b'b''*, bristles *b*, and the guide-pins E and D, substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDK. A. PRICE.

Witnesses:

W. P. THOMPSON,
J. O. O'BRIEN.