J. BROWN.

Middlings-Purifier.

No. 162,269. Patented April 20, 1875.

Fig. 1.

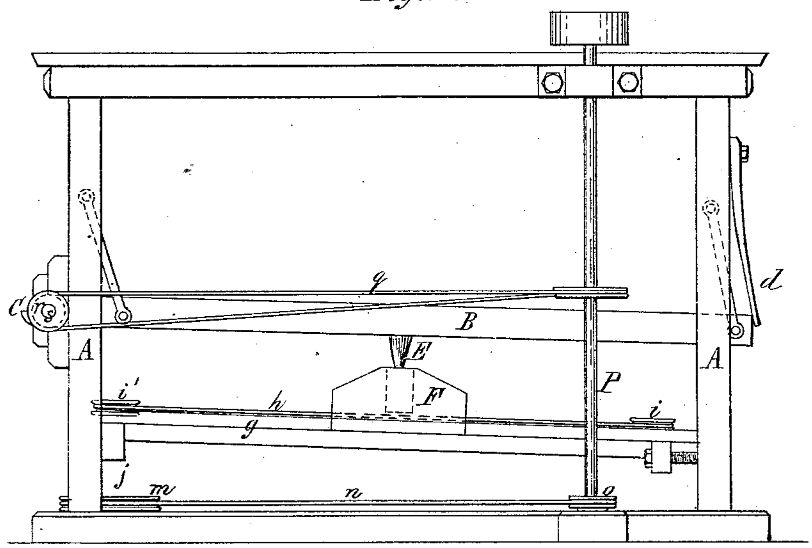


Fig. 2.

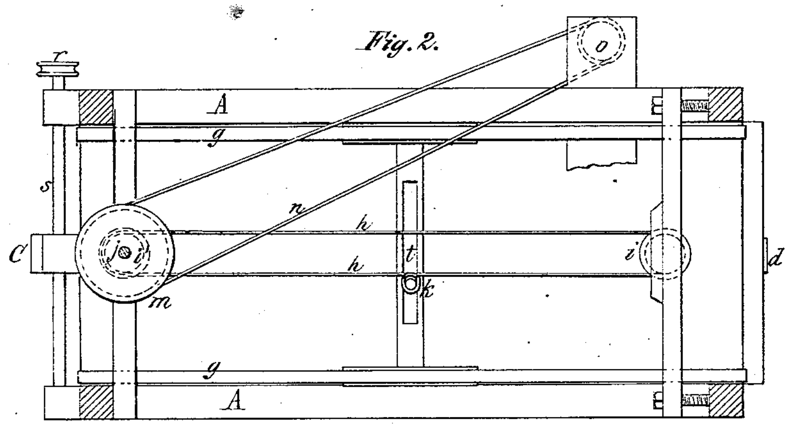


Fig. 3.

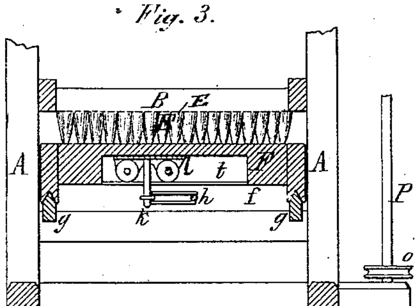
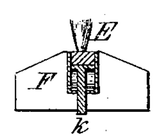


Fig. 4.



J. J. Bonner
Ernst Hoddick } Witnesses

John Brown Inventor
by Jay Hyatt Atty.

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UNITED STATES PATENT OFFICE.

JOHN BROWN, OF BUFFALO, NEW YORK.

IMPROVEMENT IN MIDDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. **162,269**, dated April 20, 1875; application filed August 25, 1874.

To all whom it may concern:

Be it known that I, JOHN BROWN, of the city of Buffalo, in the county of Erie and State of New York, have invented a certain Improvement in Machines for Dressing Flour and Purifying Middlings, of which the following is a specification:

My improvement relates to that class of machines in which a flat screen is employed in connection with a brush for keeping the meshes of the same clear.

The invention consists of the peculiar means, hereinafter described, by which a reciprocating movement is imparted to the brush underneath the screen.

In the accompanying drawings, Figure 1 is a side elevation of a machine provided with my improvements. Fig. 2 is a bottom plan view thereof; Fig. 3 is a cross-section through the brush-frame; Fig. 4 is a longitudinal section of the latter.

Like letters of reference designate like parts in each of the figures.

A represents the frame of the machine; B, the screen, of any suitable construction, to which a shaking, vibrating, or other required movement may be imparted by any of the well-known means employed for the purpose, that shown in the drawings being a toothed cam, *c*, at one end, and a return-spring, *d*, at the opposite end. E is a brush, one or more of which is attached to a suitable frame, F, sliding on suitable ways *g*, running longitudinally underneath the screen. *h* is an endless belt or cord arranged between the ways *g*, and passing at one end around a small grooved pulley, *i*, mounted on a vertical stud, and around a similar pulley, *i'*, at the opposite end, attached to the upper end of a vertical shaft, *j*. *k* is a pin or stud projecting downward from a longitudinal groove in the under side of the cross-piece *f* of the brush-frame, and engaging in a ring or eye secured to the endless cord *h*. The pin *k* is so secured in the groove *t* of the cross-piece *f* as to freely slide therein. As represented in the drawings, this pin is attached to a shuttle, *l*, fitting in the groove *t*, the shuttle being provided with friction-rollers at each end to lessen the friction as the shuttle slides back and forth.

Motion may be imparted to the endless cord in any suitable manner, the means represented in the drawings being a pulley, *m*, on the lower end of the shaft *j*, driven by a belt, *n*, connecting with a pulley, *o*, on a vertical driving-shaft, P, while a belt, *q*, transmits motion from this shaft to a pulley, *r*, on the end of the cam-shaft *s*, by which the screen is actuated. The machine being set in motion, the brush-frame, connected with the endless belt, as above described, is caused to travel with it back and forth under the screen, the groove in the cross-piece *f* and the shuttle *l* permitting the stud *k* to readily shift its position laterally as it passes around the pulleys *i i'* at each end of its movement. A uniform reciprocating motion is thus readily imparted to the brush in a simple, cheap, and efficient manner.

I do not claim broadly the combination, with a screen or belt, of a brush provided with an abutment or bearing, and an endless band, provided with a projection for imparting an intermittent reciprocating motion to the brush, as such is not my invention; but

What I claim as my invention is—

1. The combination, with a screen, of the endless belt *h*, and a brush-frame secured to the endless belt by a coupling capable of a free lateral movement relative to the brush-frame, so as to permit the coupling to pass around the pulleys with the endless belt, and thereby impart a reciprocating movement to the brush, substantially as hereinbefore set forth.

2. The combination, with the screen, brush-frame, and endless belt, of the groove *t*, and shuttle or sliding coupling *k l*, substantially as and for the purpose hereinbefore set forth.

JOHN BROWN.

Witnesses:

J. J. BONNER,

ERNEST HODDICK.