(No Model.)

H. P. CHAPMAN.

MIDDLINGS PURIFIER.

No. 345,954. Patented July 20, 1886.

Fig. 1

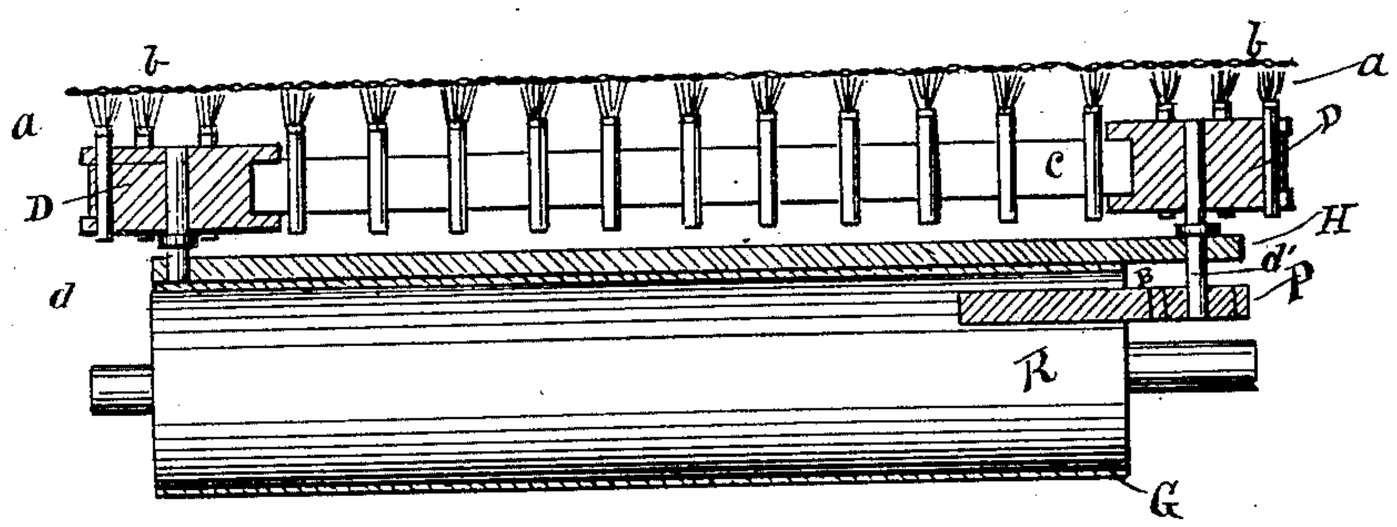
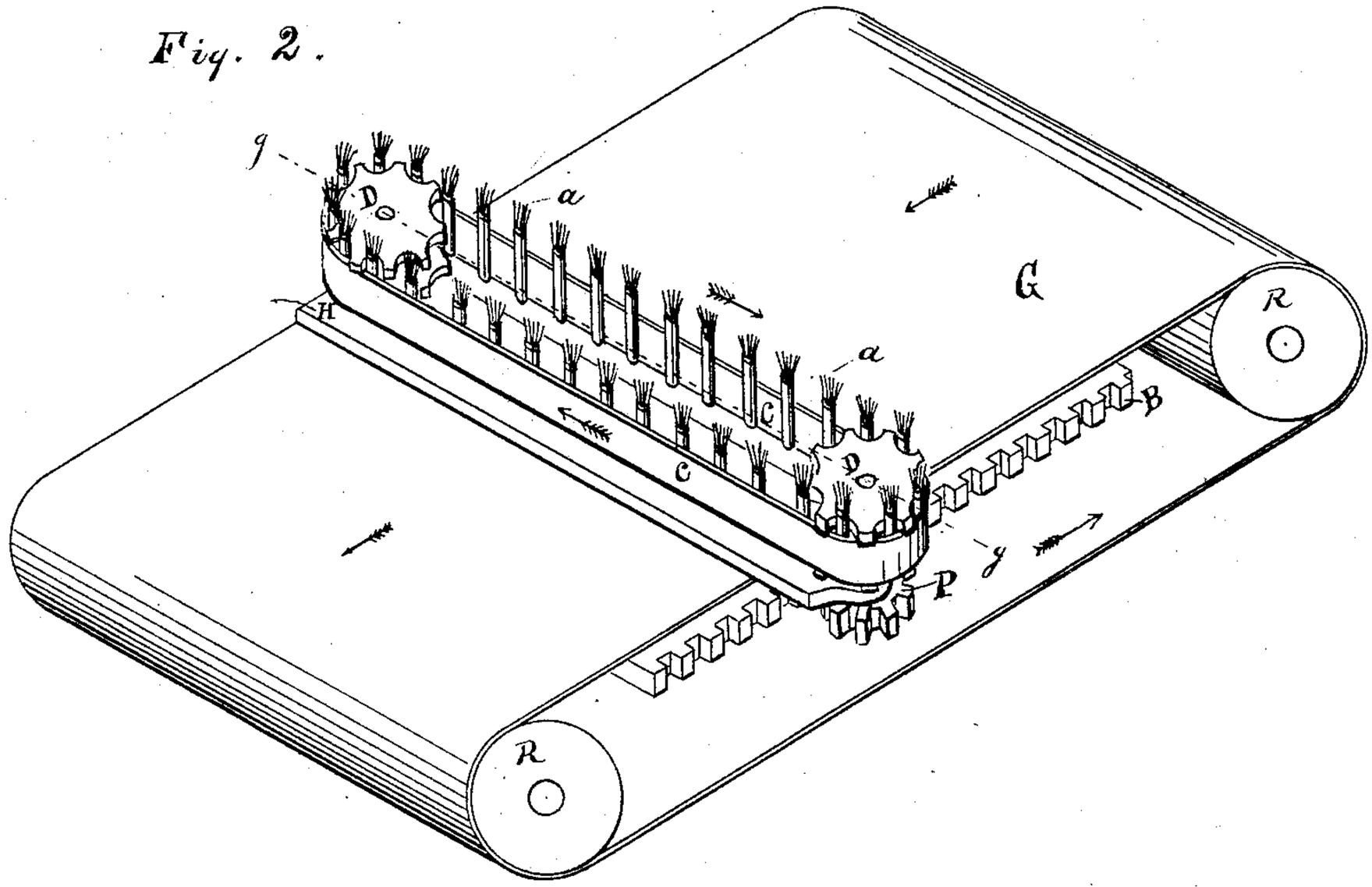


Fig. 2.



Witnesses:
N. C. Barton
A Barton

Inventor:
Horace P. Chapman

UNITED STATES PATENT OFFICE.

HORACE P. CHAPMAN, OF AKRON, OHIO, ASSIGNOR OF ONE-THIRD TO SEBRA M. JONES, OF SAME PLACE.

MIDDLINGS-PURIFIER.

SPECIFICATION forming part of Letters Patent No. 345,954, dated July 20, 1886.

Application filed October 21, 1885. Serial No. 180,537. (No model.)

To all whom it may concern:

Be it known that I, HORACE P. CHAPMAN, a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Middlings-Purifiers, of which the following is a specification.

My improvements relate to brushes or cleaning devices whereby the meshes of the cloth or screen of a middlings purifier, flour-bolt, or similar device are kept free, so as to allow the passage of the flour, middlings, and air.

My invention consists in a device for cleaning the screens of middlings-purifiers, in which the tufts of the brushes are secured to an endless moving belt, whereby they are moved across the under side of the screen in one direction, said belt being in turn secured to a carrier, whereby it is moved across the screen in a direction transverse to its own independent movement, as hereinafter fully described, and more particularly pointed out in the claims.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a vertical section of the cloth and cleaning devices. Fig. 2 is a perspective view with the cloth removed.

b b represent the cloth or screen of a middlings-purifier, and *a a* a series of tufts or brushes mounted vertically upon an endless belt, *c*, whereby they are moved across the under side of the screen, as hereinafter more fully described, said belt *c* being in turn secured to and moved across the under side of the screen in a direction transverse to its own movement by a carrier or belt, G, which is shown driven by rollers R R. The endless belt *c* passes over pulleys or sprockets D D, which are secured to the belt G through the medium of the base H, one of said pulleys being journaled loosely upon its fixed axis *d*, while the other is secured to its axis *d'*, which is journaled in the base H and carries at its lower end a pinion, P. Between the rollers R is supported rigidly a rack-bar, B, whose teeth engage the teeth of the pinion P on axis *d'*. It will be observed that the result of this arrangement is, that the belt *c* during the movement of the brushes in contact with the cloth (in other words, when in the position shown in the drawings) will be driven in parallel planes across the belt G by the meshing of pinion P with the rack B. The brushes *a* will then be made to travel across the cloth and subject every portion of the latter's meshes to their cleaning action.

I am aware that it has been proposed to mount a rotary brush upon a carrier to which a reciprocating movement is imparted, the axis of the brush being provided with a pinion, which meshes with a corresponding fixed rack, whence it derives its rotation.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination, with a screen and an endless belt traversing the under side thereof in one direction, and having brushes secured thereto, of a carrier to which said belt is secured, whereby it is made to traverse the screen in a direction transverse to its own movement, substantially as set forth.

2. The combination, with the screen and a carrier traversing the under side thereof, of an endless belt having brushes secured thereto, pulleys or sprockets over which said belt passes, a pinion, and a fixed rack with which said pinion engages, whereby the endless brush-carrying belt is made to traverse the under side of the screen in a direction transverse to that in which it is moved by the carrier, substantially as set forth.

3. In combination with a screen, an endless belt, a brush arranged parallel to the screen, pulleys or sprockets supported thereon, a second endless belt on said pulleys or sprockets transverse of said first belt, a series of brushes mounted on said second belt, and means for operating both belts, substantially as described.

4. In combination with a screen, a main brush-supporting belt, a second belt supported transversely on the first and carrying brushes, substantially as described, pulleys or sprockets for operating said second belt, and a pinion and rack for operating said pulleys or sprockets by the motion of the first belt, substantially as set forth.

HORACE P. CHAPMAN.

Witnesses:
H. C. SANFORD,
S. M. JONES.