(No Model.)

C. H. VICKERY.

MIDDLINGS PURIFIER.

No. 344,021. Patented June 22, 1886.

Fig. 1.

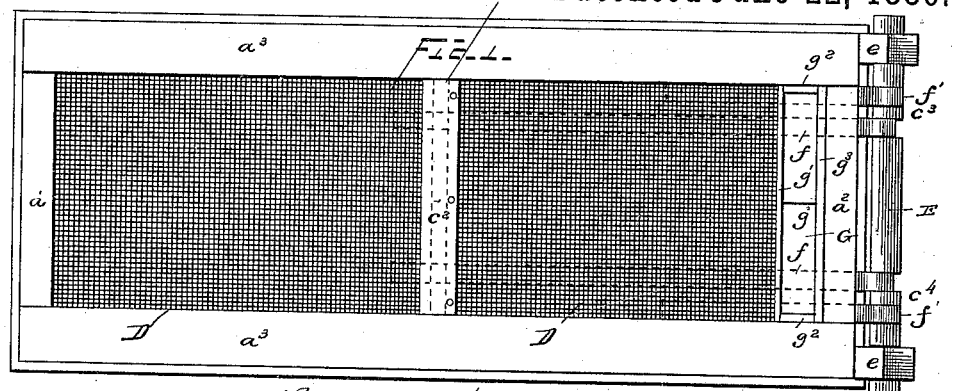


Fig. 2.

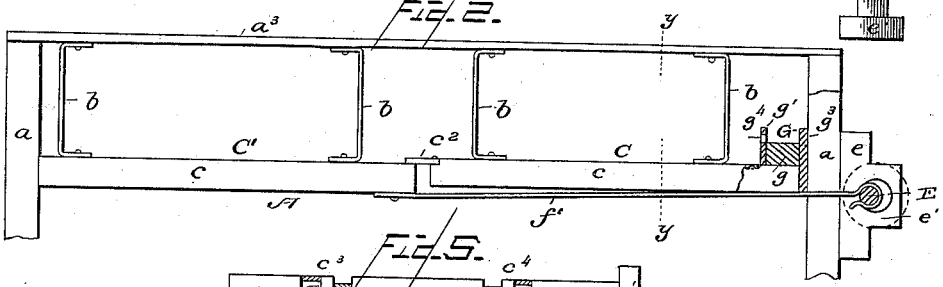


Fig. 5.

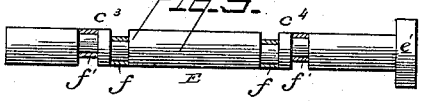


Fig. 4.

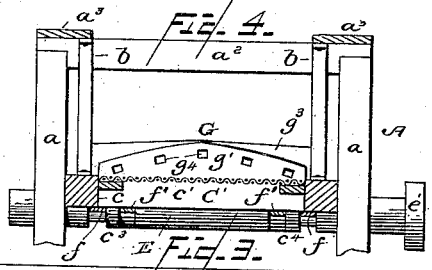
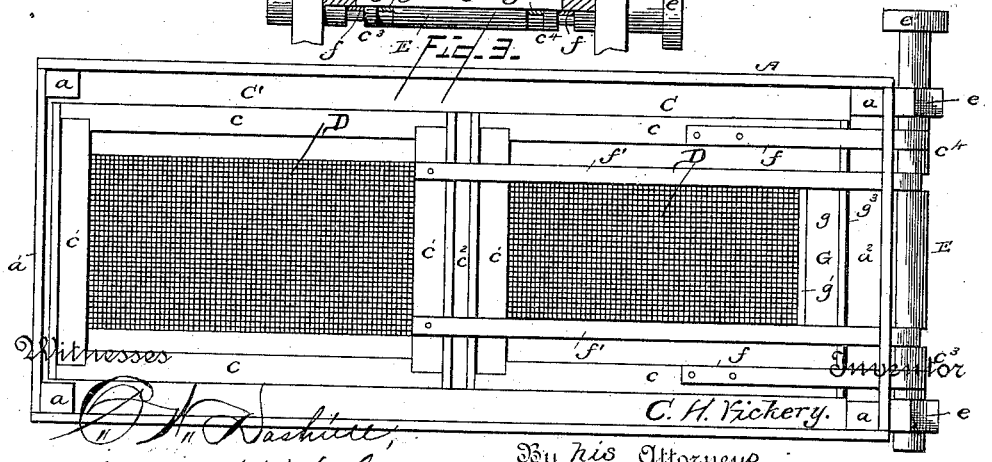


Fig. 3.



Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

CHARLES H. VICKERY, OF ATTICA, NEW YORK.

MIDDLINGS-PURIFIER.

SPECIFICATION forming part of Letters Patent No. 344,021, dated June 22, 1886.

Application filed February 5, 1886. Serial No. 190,930. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. VICKERY, a citizen of the United States, residing at Attica, in the county of Wyoming and State of New York, have invented a new and useful Improvement in Middlings-Purifiers, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in middlings-purifiers; and it consists in the construction and combination of the several parts for service, substantially as hereinafter described, and specifically pointed out in the claims.

In the drawings, Figure 1 represents a plan view of a middlings-purifier embodying my invention, the top removed to show details of construction. Fig. 2 is a side elevation thereof, partly in section. Fig. 3 is a bottom plan. Fig. 4 is a transverse sectional view taken on the line *y y* of Fig. 2, looking outward toward the operating-shaft. Fig. 5 represents a longitudinal section through the shaft from end to end thereof.

Referring to the drawings, in which similar letters of reference denote similar parts, A designates the frame of the machine, consisting of upright corner-posts *a* and inclosing side and end walls, *a' a²*, respectively.

a^3 designates longitudinal rails that extend from end to end of the machine, at the upper side edges thereof, for the purpose of providing a support, to which are secured the upper ends of spring-hangers *b*, the lower ends of which are secured to the upper surfaces of the side rails, *c*, of the shakers or screens C C'.

C C' designate the shaker-screens, having the usual construction common to machines of this class—*i. e.*, side rails, *c*, end rails, *c'*, and bolting cloth or wire D, secured to the upper surfaces thereof. The screens or shakers C C' are placed and operate in nearly the same horizontal plane, and at such distance from each other that their adjacent ends when at the least distance from each other shall not touch. (See Fig. 2.)

c^2 designates a projecting ledge or strip of metal secured to the inner end rail of the screen C, which projects over the end rail of the screen C', whereby material passes freely from one to the other of said screens.

E designates a driving-shaft journaled in bearings *e*, secured to the corner-posts *a* at the head of the machine. The shaft E is provided at one end with a pulley, *e'*, and upon its body, at or near each of the corner-posts within the same, with eccentrics c^3 c^4, in pairs, and placed opposite to each other. (See Fig. 5.) Each pair of the eccentrics is connected by pitmen *f f'* with the screens C C', respectively, the former of said pitmen, *f*, extending and secured to the lower surface of the side rails of the screen C, while the latter, *f'*, extend and are secured to the screen C', for the purpose of giving motion to said screens, each of which moves in a direction opposite to the other at the same instant.

G designates the material-distributing trough or guide, and is located at the head of the screen C, upon the upper surface thereof, and extends transversely of said screen. Said trough is provided with a double-inclined bottom, *g*, the highest point of which is at its middle imperforate side wall, *g'*, end walls, g^2, and rear wall, g^3, having a series of perforations, g^4, formed therein in line with the doubly-inclined bottom, through which the material passes, thrown by the longitudinal shaker from the trough G to the surface of the bolting cloth or wire of the screens.

I have not herein shown the means for passing material to the trough G, as such forms no part of the present invention. Such, however, may consist in any desired construction.

By the arrangement of parts, as shown and described herein, it will be seen that, inasmuch as the screens C C' move simultaneously in opposite directions the movement of the one counterbalances the movement of the other, whereby all jar or shock is avoided and the use of stays or braces not required.

Having thus described my invention, I claim—

1. The combination of the frame A, depending spring-hangers *b*, secured thereto, screens C C', working nearly in the same horizontal plane, the driving-shaft E, eccentrics c^3 c^4, in pairs at each end thereof, pitmen *f' f'*, connecting screen C' to each of one pair of eccentrics, pitmen *f f*, attached to screen C and connected to the other set of eccentrics, and a ledge, c^2, secured to one screen and projecting

over the other screen, to convey material from one to the other, as set forth.

2. The combination, with the longitudinally-reciprocating screen, of the transverse distributing-trough provided with the double-inclined bottom g, the highest point of which is the center imperforate side wall, g', end wall, g^2, and rear walls, g^3, having perforations g^4 on a line with the bottom, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES H. VICKERY.

Witnesses:
DANIEL P. STEDMAN,
JEHIEL W. DANLY.