

A. CRABTREE.
MIDDLINGS PURIFIER.

No. 171,551.

Patented Dec. 28, 1875.

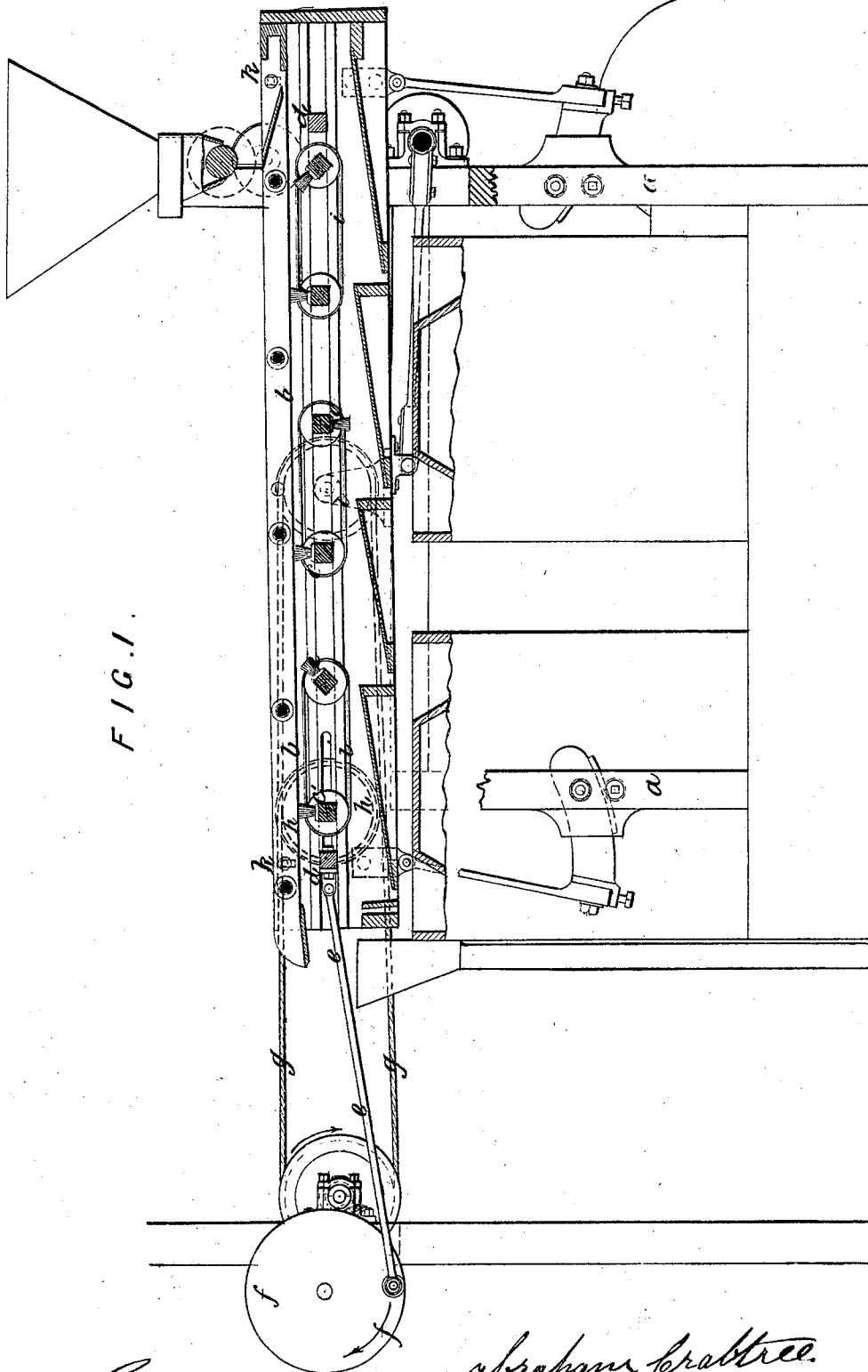


FIG. 1.

Witnesses { George Davis
John Hughes

Abraham Crabtree.

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FIG. 2.

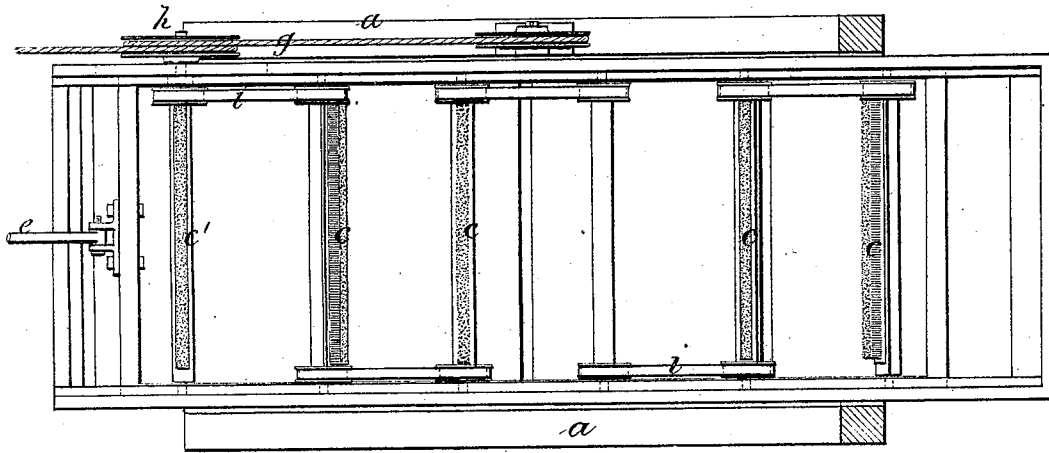


FIG. 4.

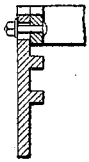
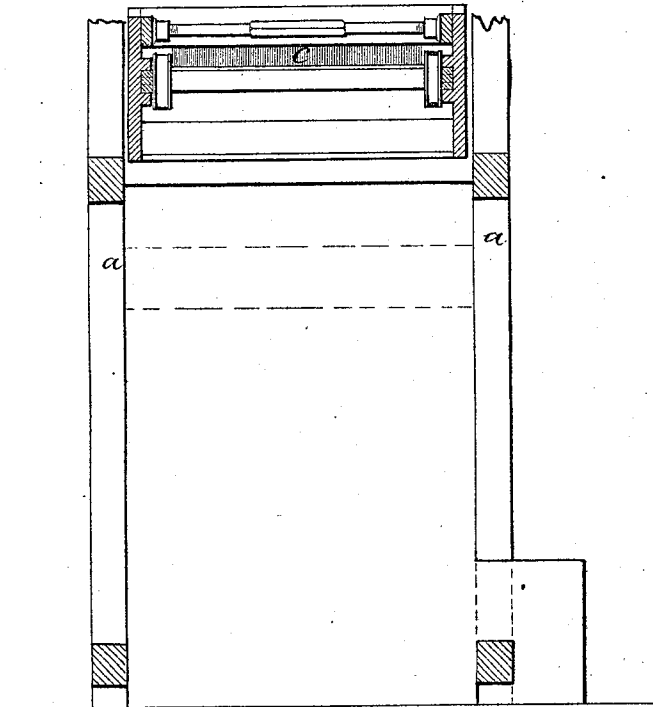


FIG. 3.



Witnesses *George Davis*
John Hughes

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UNITED STATES PATENT OFFICE.

ABRAHAM CRABTREE, OF BACUP, GREAT BRITAIN.

IMPROVEMENT IN MIDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. **171,551**, dated December 28, 1875; application filed June 11, 1875.

To all whom it may concern:

Be it known that I, ABRAHAM CRABTREE, of Bacup, in the county of Lancaster, Kingdom of Great Britain and Ireland, have invented improvements in the construction of machines known as "middling separators or purifiers," of which the following is a specification:

This invention relates to those machines (used by millers for separating the finer from the coarser portions of middlings flour) called "middlings separators or purifiers"; and consists in a simple and effective mode of operating a series of revolving clearing-brushes arranged beneath the bolting-cloth, as hereafter described.

In the annexed drawing, which forms part of this specification, Figure 1 represents a vertical and longitudinal section of a middlings-separator, with my improvement shown applied thereto. Fig. 2 is a plan view of the same; Fig. 3, a vertical transverse section thereof; and Fig. 4 is a detached section of a portion of the same, hereinafter referred to.

Letters *a a* refer to the frame and ordinary parts of the machine, and *b b* is the ordinary silk sieve. *c c* are the revolving brushes, mounted beneath the sieves *b b*, in a frame or carriage, *d d*, to which a slow reciprocating motion is imparted by means of an arm, *e e*, connected to it, and to a crank-pin fixed on a face plate, *f f*, to which a slow revolving motion is imparted by means of a worm and worm-wheel, or in any other convenient manner; or the reciprocating motion may be communicated to the carriage *d d* by an eccentric or other suitable mechanism, and the brushes *c c* are at the same time caused to revolve by means of an endless cord or band, *g g*, which takes one turn round a pulley, *h h*, keyed on the axis of one of

the brushes *c'*, and thus causes it to revolve, and at the same time allows the carriage *d d* to travel backward and forward. The other brushes *c c* on the carriage *d d* are driven from the first by other endless bands or cords *i i*. The traverse to and fro of the frame or carriage *d d* should be about equal to the distance between the brushes, or rather more, and thus every portion of the under side of the silk sieves is kept constantly brushed, and choking or clogging of the sieves is prevented, the sieves *b b* at the same time having a short and rapid reciprocating motion given to it, as usual, and by the ordinary means. In order to allow of the sieve being lowered in the event of the brushes becoming worn I elongate or slot the holes in the side frame, through which pass the bolts for fixing the sieve thereto, as shown at *k k* in Fig. 1, and in the detached section of this part at Fig. 4.

I claim as my invention—

1. The combination of the reciprocating carriage *d*, in which rotate a series of clearing-brushes, *c*, communicating motion to each other, with the operating-pulley *h*, keyed on the axle of one of these brushes, substantially as described.

2. The combination of a clearing-brush, *c'*, rotating in the reciprocating carriage *d*, with the pulley *h*, driven by an endless band, *g*, taking one turn round its periphery, as set forth.

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

ABRAHAM CRABTREE.

Witnesses:

GEORGE DAVIES,
JOHN HUGHES.