

J. CREAGER & W. F. THOMPSON.  
MIDDLINGS-SEPARATORS.

No. 194,585.

Patented Aug. 28, 1877.

Fig. 1.

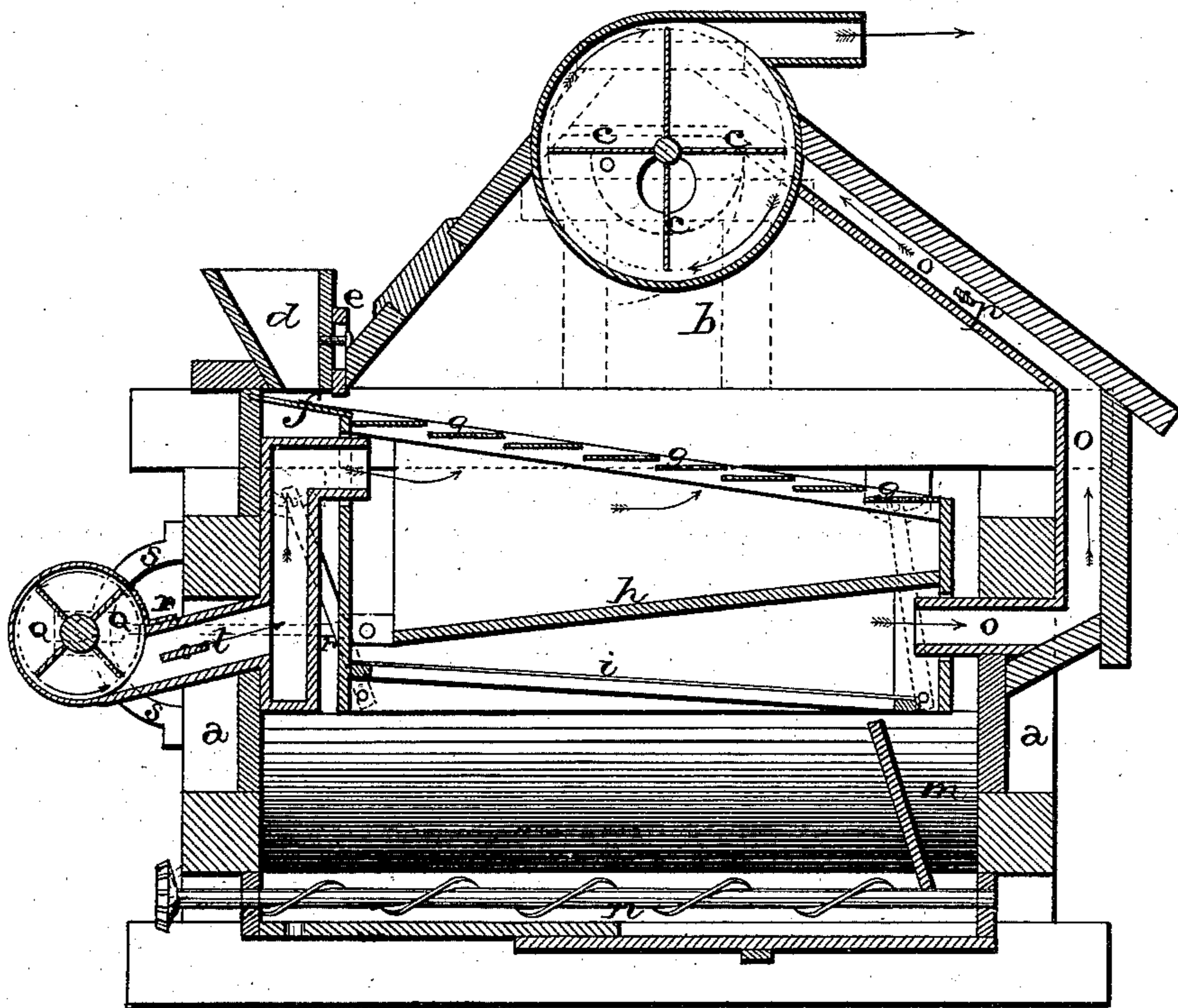
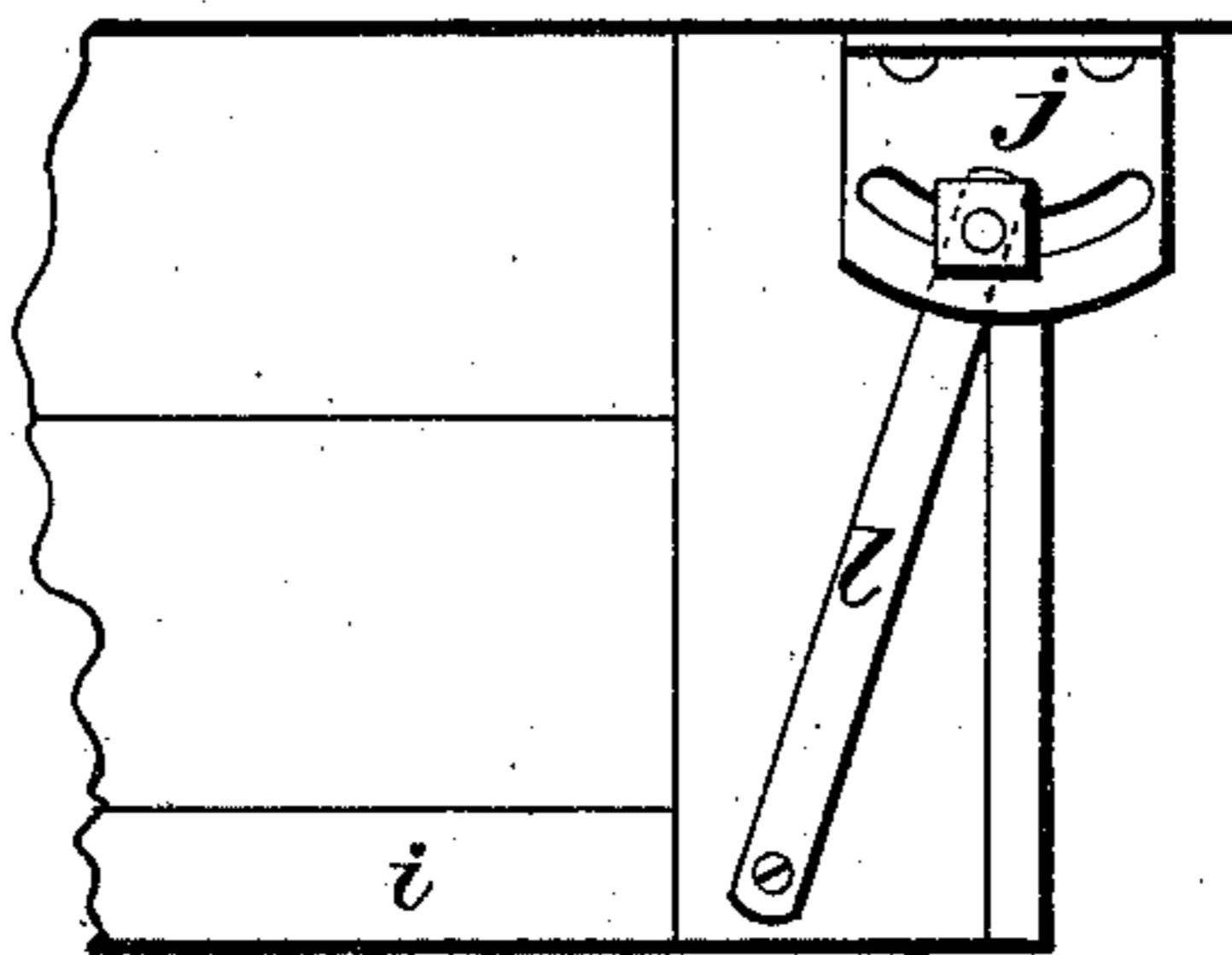


Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JACOB CREAGER AND WILLIAM F. THOMPSON, OF BOSCOBEL, WISCONSIN.

## IMPROVEMENT IN MIDLINGS-SEPARATORS.

Specification forming part of Letters Patent No. **194,585**, dated August 28, 1877; application filed July 10, 1877.

*To all whom it may concern:*

Be it known that we, JACOB CREAGER and WM. F. THOMPSON, of Boscobel, in the county of Grant and State of Wisconsin, have invented certain new and useful Improvements in Middlings-Purifiers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in middlings-purifiers; and it consists in the arrangement and combination of parts that will be more fully described hereinafter, whereby a cheap, simple, and effective machine is produced.

The accompanying drawings represent our invention.

*a* represents a frame, of any suitable shape, size, or construction, that may be preferred. Upon the top of this frame is the suction-chamber *b*, into which the blast passes after it has passed through the middlings. In the extreme top of this suction-chamber *b* is placed the suction-fan *c*, which draws in all light stuff, such as light bran, flour-specks, and dust, and blows them into the dust-chamber. Upon one end of the frame is placed the hopper *d*, which is provided with a slide, *e*, for the purpose of regulating the supply to the feed-board *f*. From this feed-board the middlings pass down over the slats *g*, of which there may be any desired number, and which are separated from each other by just a sufficient space to allow the blast of the lower fan to pass freely through it. As the middlings slowly drop from one slat to another upon this sieve, the blast carries away all impurities and little particles, so that the middlings will be clean before they pass upon the cloth sieve. When the middlings reach the lower end of this slat-sieve they fall upon the carrying-board *h*, which conveys them to the cloth sieve *i* just below. This cloth sieve is hung upon the slotted hanger *j* by means of

the springs *l*. These springs are made adjustable at their upper ends in the slotted hangers, so as to enable the operator to cause the middlings to pass over the slat and cloth sieves slowly or rapidly, thereby giving the miller an opportunity to regulate the working of both sieves to the work which is to be performed by them. From the end of the cloth sieve the tailings fall into a receptacle, *m*, while the flour falls into the conveyer-spout *n*.

From the space between the carrier-board and cloth sieve there is made a suction-spout, *o*, provided with a valve, *p*, and which spout communicates with the fan *c* in the top of the frame, so as to draw all light impurities from the flour that may have escaped being drawn away from the slat sieve. Upon the outer end of the frame is placed the blast-fan *Q*, the shaft of which is also provided with eccentrics, to which the outer ends of the connecting-rods *r* are attached. This shaft is supported in suitable bearing *s*, and is provided with a pulley upon one end, over which passes a belt for driving the upper fan. As soon as this lower fan is started in motion the blast passes into the frame up through the slats, while the two sieves are shaken back and forth by the cams and connecting-rods. In the mouth of the spout from this lower fan is placed a valve, *t*, for regulating the force of the blast air current.

Having thus described our invention, we claim—

The arrangement of the suction-fan *c* in the top of the chamber *b*, slats *g*, board *h*, sieve *i*, spout *o*, and blast-fan *Q*, the parts being combined for operation substantially as shown.

In testimony that we claim the foregoing we have hereunto set our hands this 28th day of June, 1877.

JACOB CREAGER.  
WILLIAM FEARGUS THOMPSON.

Witnesses:

JOHN RUKA,  
JOHN D. NELSON.