

J. F. POOL.
Grain-Separators.

No. 152,514

Patented June 30, 1874.

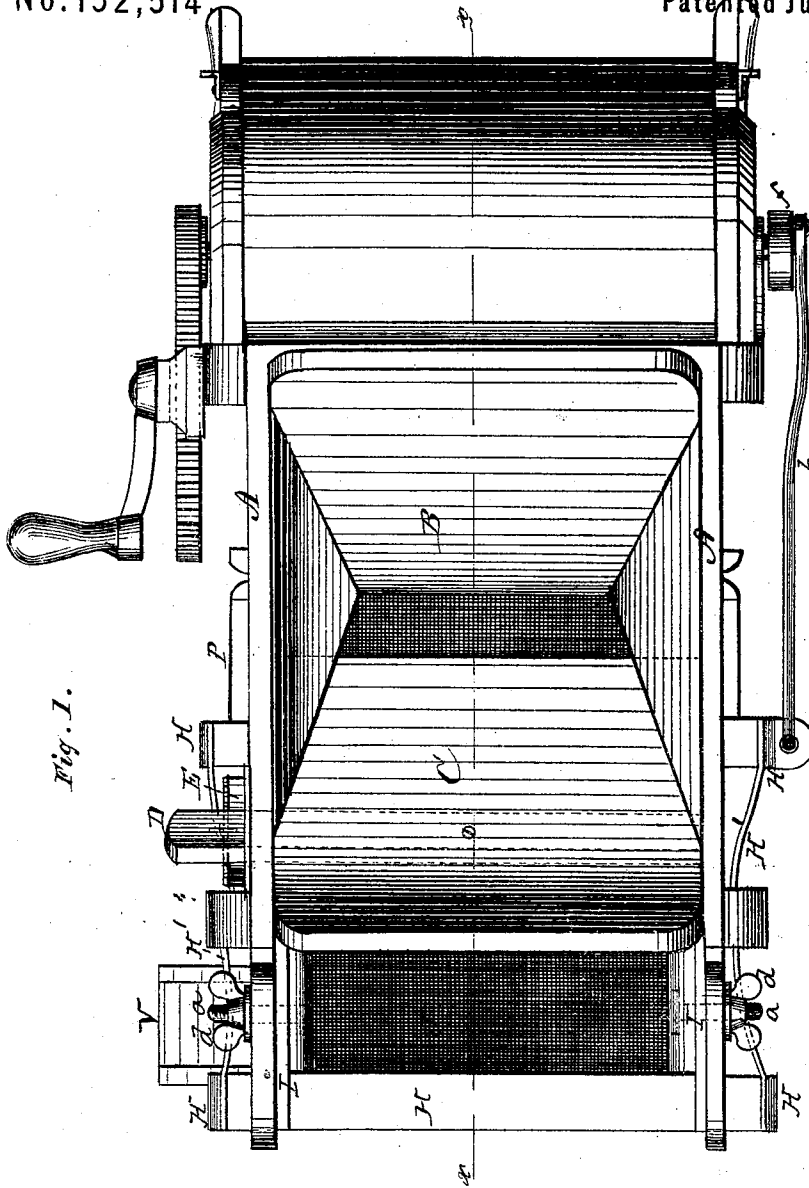


Fig. 1.

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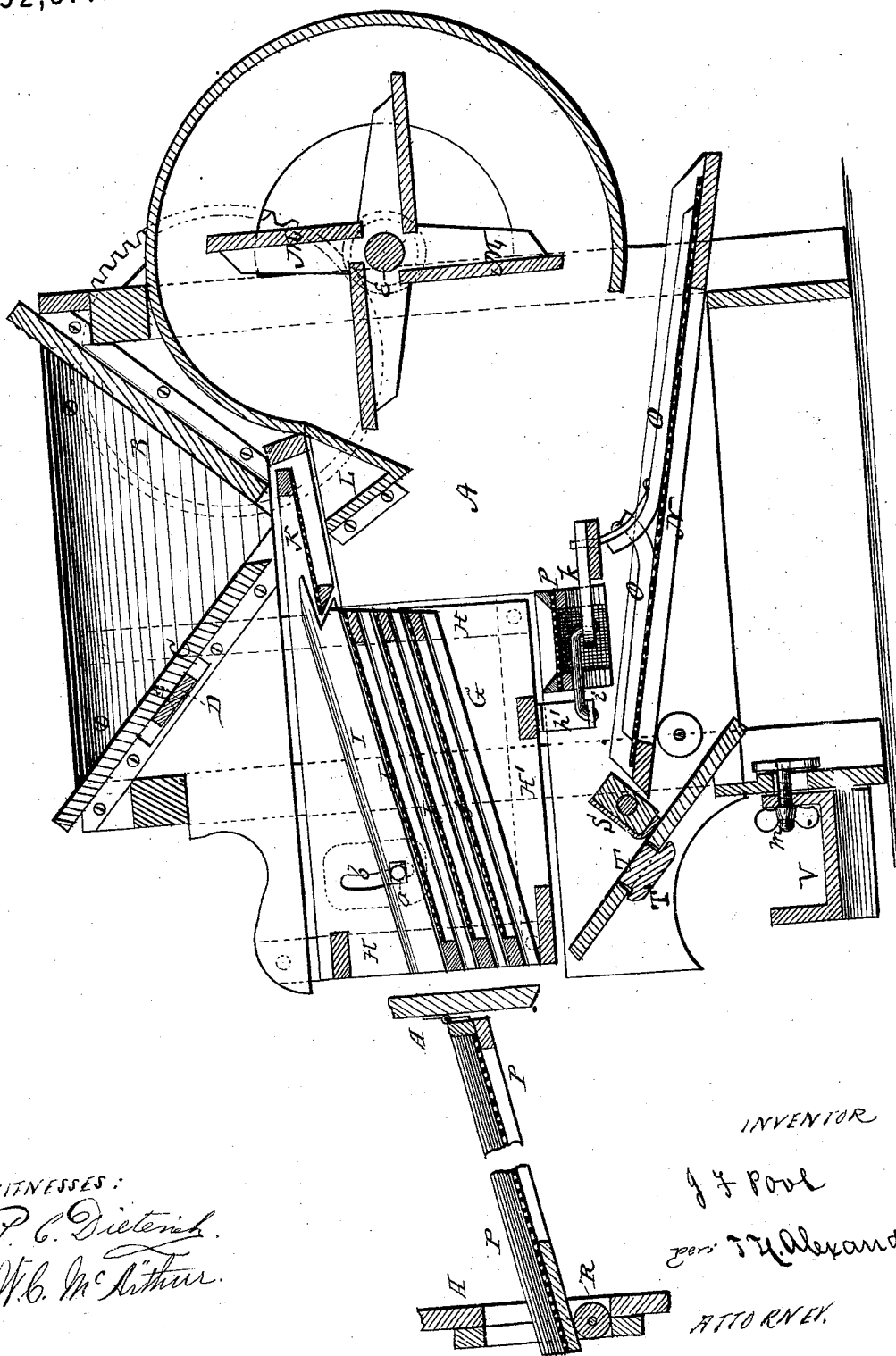
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Fig. 2.



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JOSEPH F. POOL, OF MONROE, WISCONSIN, ASSIGNOR TO HIMSELF, GEORGE W. WITTENMYER, AND DANIEL S. YOUNG, OF SAME PLACE.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **152,514**, dated June 30, 1874; application filed May 12, 1874.

To all whom it may concern:

Be it known that I, J. F. POOL, of Monroe, in the county of Green and State of Wisconsin, have invented certain new and useful Improvements in Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in the construction and arrangement of certain parts of a grain-separator, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view of my grain-separator, and Fig. 2 is a longitudinal vertical section of the same.

A represents the frame of my separator, and B the hopper thereof. C is the board forming one side of the hopper, which is movable, for regulating the amount of grain to pass through. The movable hopper-board C is operated by means of a lever, D, and ratchet E, the weight of the grain holding the board at any desired height. G represents the shoe, suspended by means of straps H H, and provided on the inner side, at each side, with a longitudinally-grooved side piece or cheek, I, in which the sieves J J are placed. The sieves are held in the cheeks by means of a wire passing down the side of the cheeks through the sieves. The cheeks I I are adjusted up and down by means of bolts *a a* passing through the cheeks and through curved slots *b b* in the sides of the shoe, and held at any desired height by thumb-nuts *d d* screwed upon the ends of the bolts. By this means the sieves may be adjusted at any angle desired. In the upper rear part of the shoe is a hopper-screen, K, and below the same is a seed-box, L. M represents the fan, and *e* the fan-shaft. N is the lower screen in the separator. The shoe G receives the usual shaking side motion from the fan-shaft *e* by means of a crank, *f*, on the end thereof, connected by a pitman, *h*, with the outer end of vibrating lever *k* projecting from within the machine.

An arm formed on this lever within the machine is, by a rod, *i*, connected with an arm, *h'*, on the shoe. The inner end of the lever is connected with two spring-arms, O O, attached to the lower screen N, whereby this screen obtains the necessary motion. These devices may be made adjustable by a series of holes in the ends of the lever *k* or arm *h'*, so that more or less shake may be given to either the screen or the shoe without interfering with the amount of shake of the other. P represents the usual shaking side spout, under the outer end of which is a roller, R, to reduce the friction and render the movement more easy. The shoe G is further provided on each side with a horizontal metal strap, H', as shown in Fig. 1, fastened to the inner side of the uprights of the frame, whereby the shoe is held in place firmly when changing sieves, and the motion imparted to the shoe is rendered more elastic and continual, thereby making the mill run easier and more even. At the front or upper end of the lower screen N is a cut off, S, to prevent any foul seeds or grain which may pass through the sieves at this end of the shoe being carried onward with the perfect grain. These are then carried out through the opening T into the spout V. This opening may be closed by a slide or door, T', as shown in Fig. 2, when the opening is not to be used. This spout is pivoted at one end, and adjusted at any desired angle, by means of the set-screw *m*.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of shake-shoe G, arm *h'*, rod *i*, with lever *k'*, which lever imparts motion to screen N, substantially as set forth.
2. The combination of the cut-off S, opening T, and vertically-adjustable spout V, substantially as and for the purposes specified.
3. The combination of the adjustable spout V, opening T, cut-off S, and lower screen N, all arranged as and for the purposes set forth.

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

JOSEPH F. POOL.

Witnesses:

S. W. ABBOTT, -
W. H. READ.