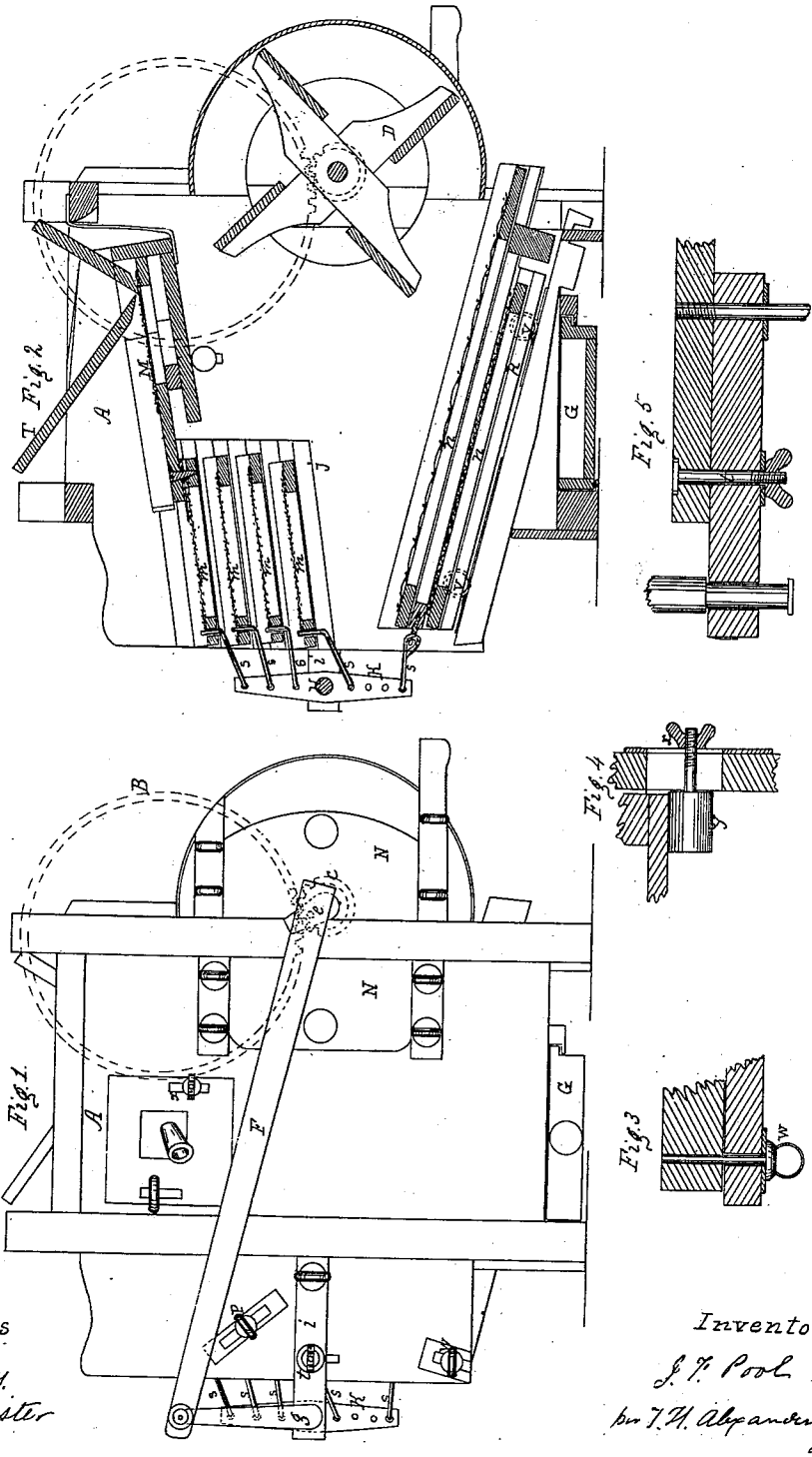
J. F. POOL.

SEPARATOR.

No. 73,382. Patented Jan. 14, 1868.



Witnesses

Jm. A. Ellis.

J. W. Mister

Inventor

J. F. Pool

by T. H. Alexander & Co.

Attys

United States Patent Office.

J. F. POOL, OF MONROE, WISCONSIN.

Letters Patent No. 73,382, *dated January* 14, 1868.

SEPARATORS.

The Schedule referred to in these Letters Patent and making part of the same.

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 a part of this specification, in which—

Figure 1 represents a side elevation of my separator.

Figure 2 is a longitudinal vertical section of the same.

Figure 3 is a horizontal section of the tray on which the frame of the lower screens is designed to rest.

Figure 4 is a horizontal section of the roller and screw by which the hopper-screen is elevated or lowered.

Figure 5 is a horizontal section of the arms on which rests the shaft designed to regulate the inclination of the screens.

The letter A represents the frame of my separator; B designates the driving-wheel which gears in the pinion C, placed on the fan-shaft; D represents the fan. On the end of the fan-shaft, opposite to the end occupied by the pinion C, is secured the metal plate *e*, with several perforations through it. To the said plate is adjusted, by means of a screw, the bar F, the opposite end of bar F being adjusted to the plate *g* by a pivot, which passes through one of several perforations in said plate. H represents a shaft, which has its bearings in the two arms I. The said arms are pivoted at their inner end, and their outer end can be elevated or lowered by means of the thumb-screw *t*, which penetrates a vertical slot in the side of frame A. It will be seen that the lower end of plate *g* is securely fastened to shaft H, for the purpose hereinafter explained. K designates a metal plate, through the middle of which the shaft H passes. In plate K is a series of perforations designed to receive the hooks *s*, the opposite ends of said hooks being fastened to the several screens with which my separator is supplied. It will be remarked that the four upper screens marked *m* are detached from each other, while the three lower screens *n* are connected, so that one hook *s* serves to operate them. The upper screen-frames *m* work in grooves made in the side pieces *j*, the said side pieces being made adjustable by the screw P, which passes through an oblique slot in the side of frame A. The two lower screens *n n n* rest on the ways R, or more properly on the rollers V V, which are pivoted in said ways. The ways R can be raised or lowered by the thumb-screw W. T represents the hopper, having directly under it the screen M. The frame of said screen is made to extend over the rear of the top screen *m*, and secured to it by a screw or pin. The angle of the screen, directly under the hopper, can be increased or diminished by the roller *y* and thumb-screw X, which passes through a vertical slot in the side of frame A. G represents a drawer, placed underneath frame A, to receive such substances as may pass through the lower screens. N represents the movable side pieces, which may be used to close the openings opposite the ends of the fan.

The operation of my separator is as follows: When the driving-wheel B is put in motion, it acts on the fan-shaft by means of pinion C. The motion of the fan-shaft is communicated to bar F, and from bar F to shaft H, by means of plate *g*. The bar F having a reciprocating motion, will impart the same motion to plate K, which being connected to screens *m* and *n* will give them the motion required to perform their office.

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

1. The thumb-screws P and W, when operating to adjust the screens *m* and *n*, in the manner described.

2. The screw X, in connection with a roller, *y*, for regulating the hopper-screen and hopper, as herein set forth.

3. The bar F, furnished with plates *g* and *e*, in combination with shaft H, plate K, and hooks *s*, the whole constructed substantially as set forth.

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

J. F. POOL.

Witnesses:

B. F. HANCOCK,

JOHN P. DIRCH.