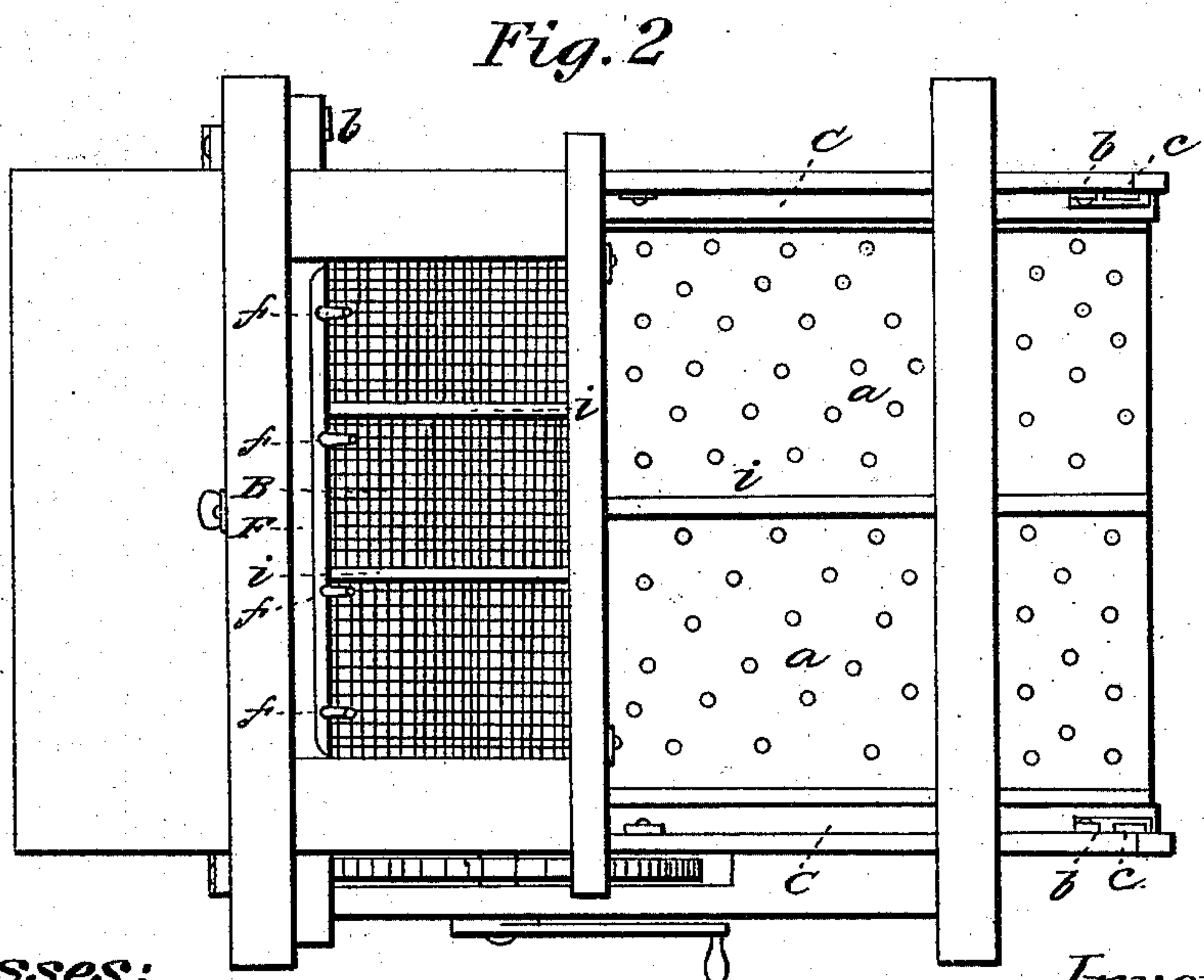
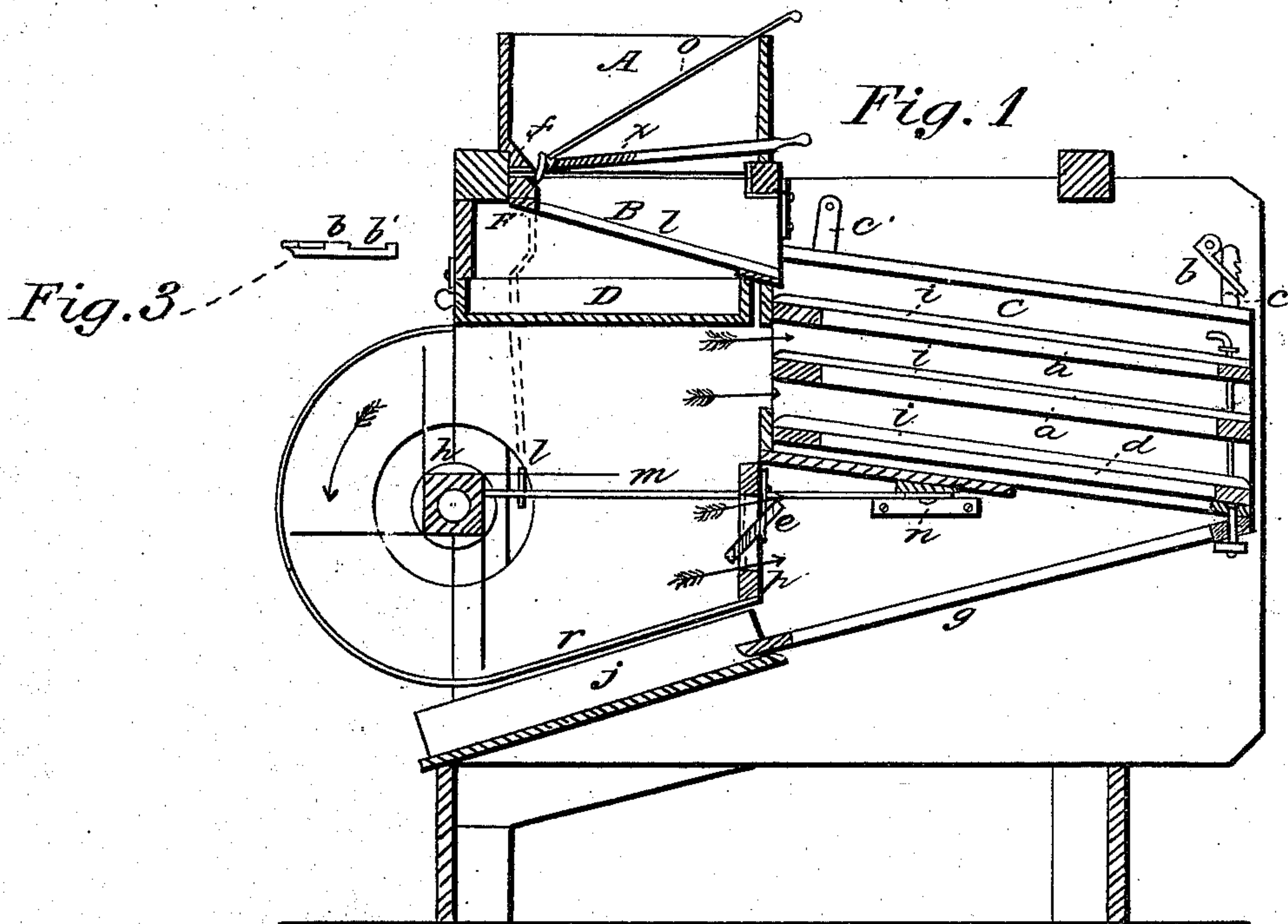


PERRY & WHEAT.

Grain Winnower.

No. 100,441.

Patented March 1, 1870.



Witnesses:

Wm. Loughborough
J. H. Clement

Inventors:

Chauncey Perry
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United States Patent Office.

CHAUNCEY PERRY AND JAMES E. WHEAT, OF ROCHESTER, NEW YORK.

Letters Patent No. 100,441, dated March 1, 1870; antedated February 26, 1870.

IMPROVEMENT IN GRAIN CLEANERS.

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

To all whom it may concern :

Be it known that we, CHAUNCEY PERRY and JAMES E. WHEAT, of Rochester, in the county of Monroe, and State of New York, have invented certain new and useful Improvements in Grain Cleaners; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specification, in which—

Figure 1 is a vertical section, taken longitudinally through the machine.

Figure 2 is a top view of our invention.

Figure 3 is a top view of the suspending-hook *b*.

The nature of our invention will be understood by reference to the drawings and specification, and to enable others to make and use it, we will describe its construction and operation.

We make the frame of our grain cleaner in any of the usual forms, and upon the top we place a supply-hopper, *A*, fig. 1, which is provided with two slides, *o* and *x*. The slide *o* may be made of sheet metal or other suitable material, and is guided by grooves or otherwise cut in the sides of the hopper at a proper angle, as shown.

Under the slide *o*, and resting in a groove cut nearly or quite horizontally in the sides of the hopper, we use the secondary regulating slide *x*, operated by a suitable handle. It is obvious that the slide *x*, after being once adjusted, will not be shifted by the jar of the machine, to which the slide *o* is liable, while the inclination of the latter causes the grain to fall down to the throat of the hopper.

Immediately under the hopper *A* we provide a fine screen, *B*, figs. 1 and 2, inclined toward the rear of the machine, upon which the grain first falls from the hopper.

This screen vibrates transversely, and by its operation separates the grass-seed from the grain, and delivers it into the drawer *D*, provided underneath.

To the upper bar *F* of this screen we secure the teeth *f*, projecting into the throat of the hopper. The vibrating motion of the teeth and bar prevents the clogging of this passage by chaff, headings, or other substances.

The shoe *C* may be made in the ordinary form, being suspended by the straps *c c'*, to allow longitudinal motion, and having screens *a d* secured to it in a suitable manner.

For the purpose of adjusting the inclination of the shoe and screens, we ratchet one edge of the rear straps *c*, and provide hooks *b*, having notches *b'*, fig. 3, in one side slightly longer than the width of the straps, into which the latter drop. The hooks are suspended by screws or pins, and when locked upon the straps assume the diagonal position shown in fig. 1.

To adjust the shoe it is only necessary to raise or

lower it, and allow the hooks to drop into the required notch of the straps.

Upon the fan shaft, and inside of the frame of the machine we secure the disk-cam *h*.

This cam operates a bell-crank lever, *m*, fig. 1, which is forked to embrace it, and which is pivoted to the side of the machine at *n*, the other arm being connected to the shoe as shown.

To the lever *m* we connect the upright lever *l*, (shown mostly by dotted lines in fig. 1,) which is pivoted at its center to the machine, and at the upper end to the bar *F* of the upper screen. Thus the cam *h* communicates a transverse motion to the screen *B* and a longitudinal motion to the shoe *C*.

Below the shoe, and partaking of its motion, we use the ordinary cockle screen *g*, secured to the shoe at one end by a bolt or other suitable means, and resting at the lower end upon the delivery chute *j*.

Between the wind chest and the lower screens we place a partition, *p*, fig. 1, through which an opening is cut nearly across the machine. Into this opening the valve *e* is fitted, turning upon pivots, and retained by a button, either open, as shown in full lines, or closed, as shown in dotted lines.

The bottom of the wind chest is closed by the sheet *t*, which is brought up and secured to the partition.

The object of this arrangement of the valve *e* is to divide the blast, so as to use it partly for removing any light substances which may pass down from above upon the lower screen, as often occurs in chaffing.

When separating partially-cleaned grain the valve *e* is closed, directing the blast entirely between the screens of the shoe, as indicated by the arrows. The effect of this is to prevent light stuff from falling through the screens *a*, since it is buoyed up by the concentrated blast, and rolled off at the rear of the machine.

On the upper sides of any or all of the screens we use one or more longitudinal ribs *i*, the object of which is to divide the grain as it falls upon the screens, and prevent its piling or gathering at one side, thus accomplishing a more even distribution over the surface.

The valve *e* may be controlled by a rod extending to the outside of the machine.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The arrangement of the division ribs *i* longitudinally upon the screens of grain cleaners, substantially as and for the purposes set forth.

2. Suspending the rear end of the screen shoe *C* by means of the eccentric clamping hooks *b* and straps *c*, as shown and for the purposes set forth.

CHAUNCEY PERRY,
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Witnesses:

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