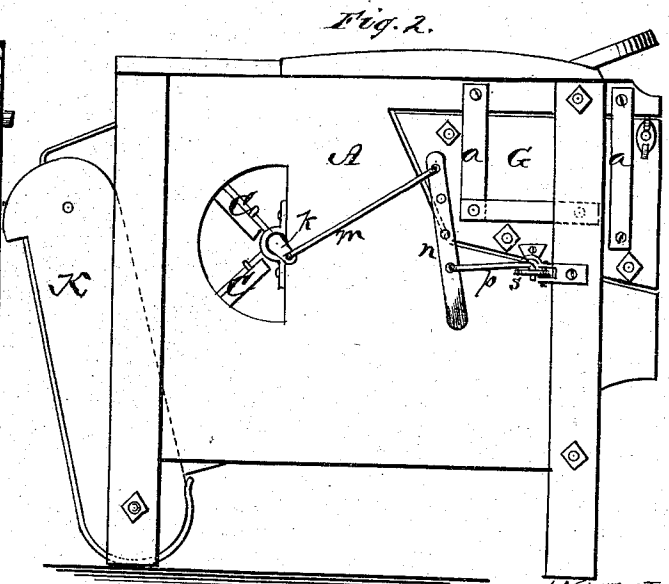
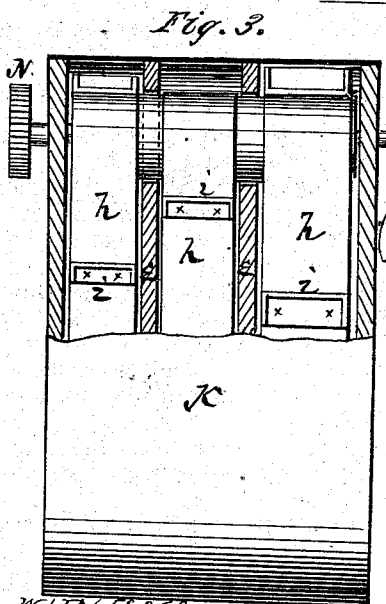
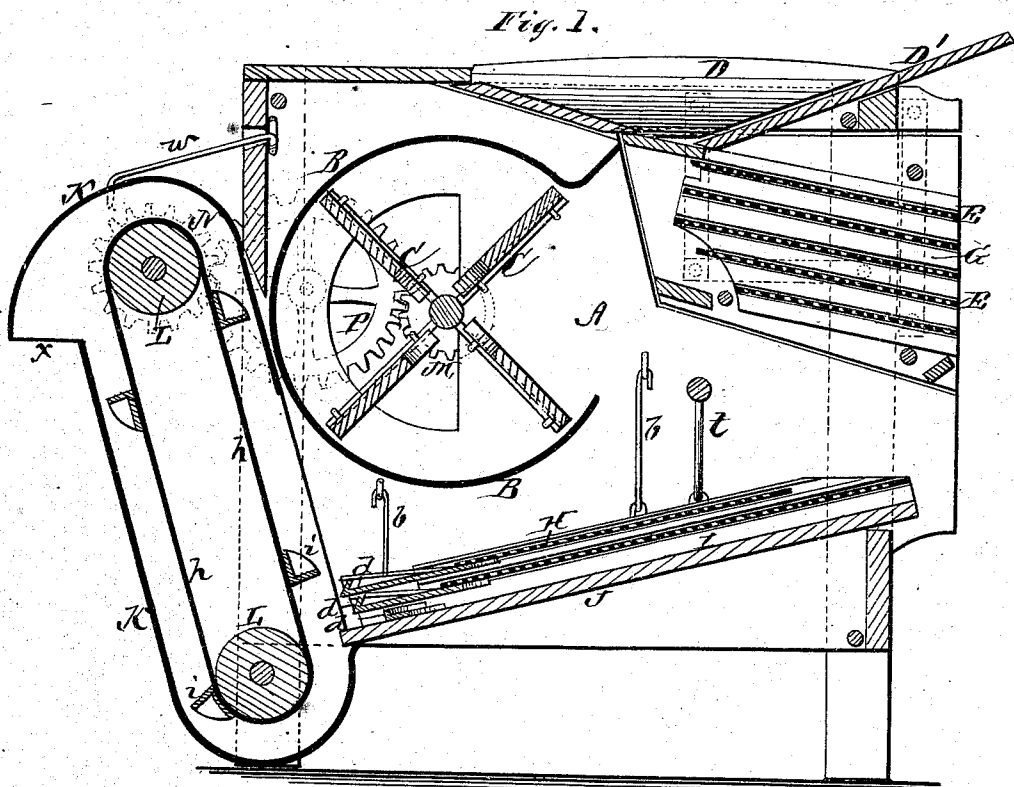


M. D. JUDKINS.
Grain-Separator.

No. 159,581

Patented Feb. 9, 1875.



WITNESSES:

P. C. Dietrich.
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UNITED STATES PATENT OFFICE.

MARK D. JUDKINS, OF GLENWOOD, MINNESOTA.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **159,581**, dated February 9, 1875; application filed January 15, 1875.

To all whom it may concern:

Be it known that I, MARK D. JUDKINS, of Glenwood, in the county of Pope and State of Minnesota, have invented certain new and useful Improvements in Fanning-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a fanning-mill, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a longitudinal vertical section of my fanning-mill. Fig. 2 is a side elevation of the same, in reduced dimensions. Fig. 3 is a front view of the elevator, partly broken open to show the interior thereof.

A represents the frame of my fanning-mill, with fan-case B entirely within the same. Within the case B is the revolving fan C, constructed in any suitable manner. D is the hopper, provided with the slide D', for regulating the flow of grain from the hopper onto the gang of five sieves E E, arranged in the shoe G. This shoe is suspended by means of straps *a a*, as shown.

During the passage of the grain to and through these sieves, the blast from the fan acts thereon to remove all dust, dirt, &c., and the grain passes from said sieves onto the sieves H H, in the lower shoe, I, which is suspended by means of rods *b b*, and provided with a bottom board, J. The lower ends of the two sieves H H and of the bottom board J are provided with discharge-spouts *d*, so as to discharge different qualities of grain into different compartments of the elevator. K represents the elevator-case, provided with a roller, L, at each end, around which pass the endless belts *h h*, provided with elevator-buckets *i i*. The belts are separated by means of partitions *e e*, forming three compartments corresponding with the three dis-

charge-spouts, *d*, and each having its own elevator for carrying the grain upward and emptying it through apertures *x*, at which bags should be hung on suitable hooks to receive the grain.

Upon a stud projecting from one side of the frame A is placed a cog-wheel, P, provided with a suitable crank-handle for turning it, and gearing with a pinion, M, on the end of the fan-shaft, and a pinion, N, on the journal of the upper elevator-roller L. At one end of the fan-shaft is a crank, *k*, connected by a rod, *m*, with an arm, *n*, projecting at right angles from one end of a rock-shaft, R, having its bearings in the sides of the frame A. The arm *n* is, by a rod, *p*, connected with one end of a pivoted elbow-lever, *s*, the other end of which is connected to the side of the shoe G. The rock-shaft R is provided with arms *t*, connected to the sides of the lower shoe, I.

By these means the various parts obtain their required motions—that is, the fan and elevators a revolving motion, the upper shoe a laterally-vibrating motion, and the lower shoe a longitudinally-vibrating motion.

The fanning-mill thus constructed is simple and cheap to manufacture, easily taken down for shipment and put up again, not liable to get out of order, and effective in operation.

The elevator-case K is held in place by means of hooks *w*, and can be easily removed if not desired for use.

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

In a fanning-mill, the combination of two or more sieves, H H, having separate discharge-spouts *d d d*, and an elevator having separate deliveries for each sieve, substantially as and for the purpose specified.

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

Witnesses: MARK D. JUDKINS.
HIRAM P. GALLUP,
LUCAS KELLS.