# G. E. PASSAGE.

## Grain-Separator.

**No. 221,604.** **Patented Nov. 11, 1879.**

*Fig: 1.*

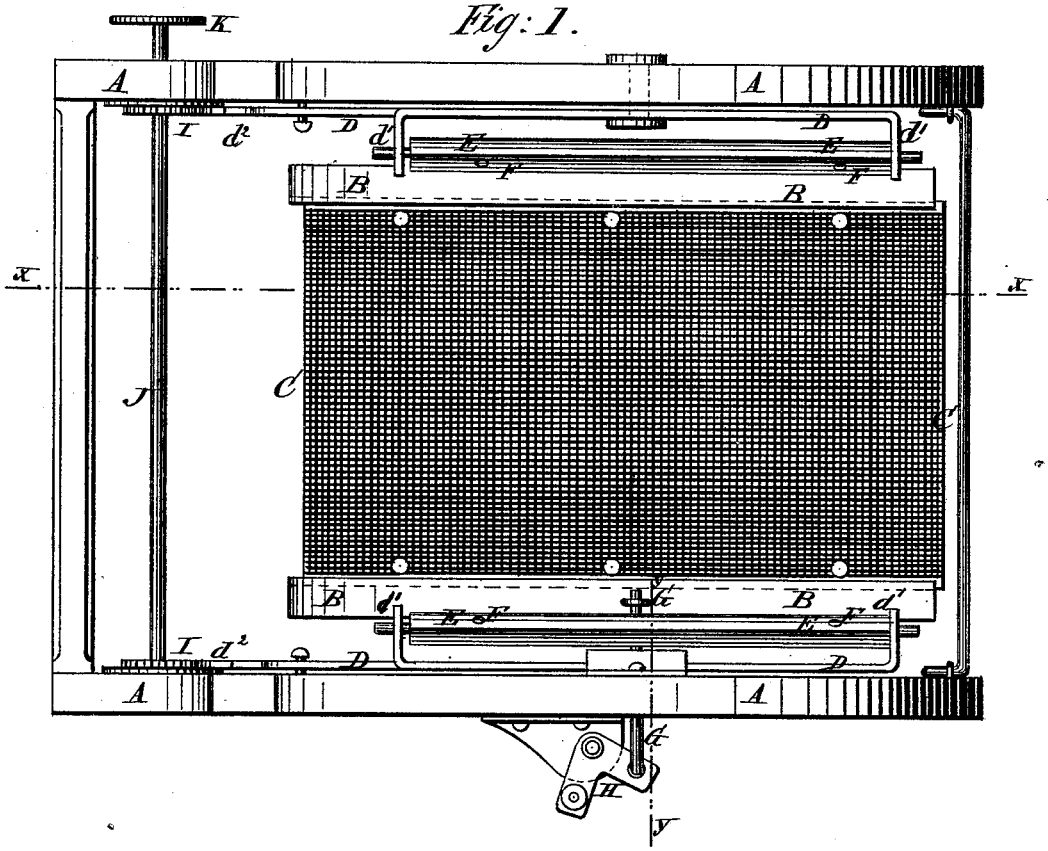



*Fig: 2.*

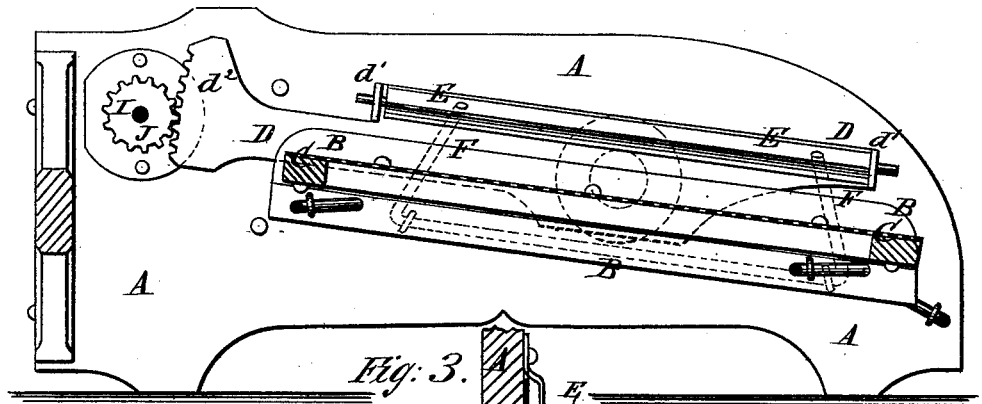
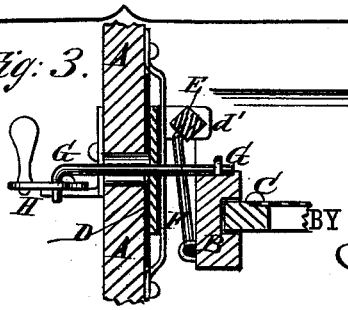



*Fig: 3.*




WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE E. PASSAGE, OF NUNDA STATION, NEW YORK.

## IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **221,604**, dated November 11, 1879; application filed March 19, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE E. PASSAGE, of Nunda Station, in the county of Livingston and State of New York, have invented a new and useful Improvement in Grain-Separators, of which the following is a specification.

Figure 1 is a top view of my improved adjuster shown as applied to a screen-shoe. Fig. 2 is a longitudinal section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a detail cross-section taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved device for adjusting the shoe to give any desired inclination to the sieve or screen, and which shall be so constructed that the said shoe may be adjusted while the machine is in motion, so that the operator can see the effect of the change, and can thus be able to adjust it so as to give the best effects, and which at the same time shall be simple in construction and convenient in use.

The invention consists in combining pivoted rock-bars with bars having lugs and rods pivoted to the lower part of the sides of the shoe, as hereinafter described.

A represents the casing of a fan-mill or separator.

B represents the shoe, the sides of which are grooved to receive one or more sieves or screens, C.

D represents two bars, which are pivoted to the sides of the casing A, and upon which are formed inwardly-projecting lugs *d'*.

To the lugs *d'* are pivoted the ends of the rock-bars E, to which are attached the ends of the loop or supporting wires or rods F. The rods F are pivoted to the lower part of the sides of the shoe B. The shoe B is thus hung from the pivoted bars D.

To one side of the shoe B is attached the end of a rod, G, which passes out through the cavity of the pivot of one of the bars D, which pivot is made hollow for this purpose. The outer end of the rod G is pivoted to an arm of the elbow-lever H, which is pivoted at its angle to a support attached to the casing or frame of the machine, and to the other end of which the power is applied in the usual way.

If desired, the shoe may be shaken by a pitman. If desired, the supporting-rods may be so arranged that the shoe B may be shaken longitudinally.

One end, $d^2$, of the pivoted bars D is extended, is widened, is curved, and has teeth formed in it, making it a segment of a gear-wheel.

The teeth of the segments $d^2$ mesh into the teeth of the gear-wheels I, attached to the rod J, which passes through and works in holes in the casing A, and to one of its ends is attached a hand-wheel, K, for convenience in turning it.

With this construction, by turning the rod J in one or the other direction, the inclination of the shoe B may be increased or diminished, as may be required.

With this construction the inclination of the shoe B may be adjusted while the machine is at work, so that the operator can see the effect, and can thus adjust it to exactly the point to produce the desired result. This capability of prompt and exact adjustment greatly increases the capacity of the machine.

What I claim as new is—

The pivoted rock-bars E, combined with the bars D, having lugs *d'*, and the rods F, pivoted to the lower part of the sides of shoe B, whereby the latter may be hung from said bars, as and for the purpose described.

GEO. E. PASSAGE.

Witnesses:

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MILES H. WAKEMAN.