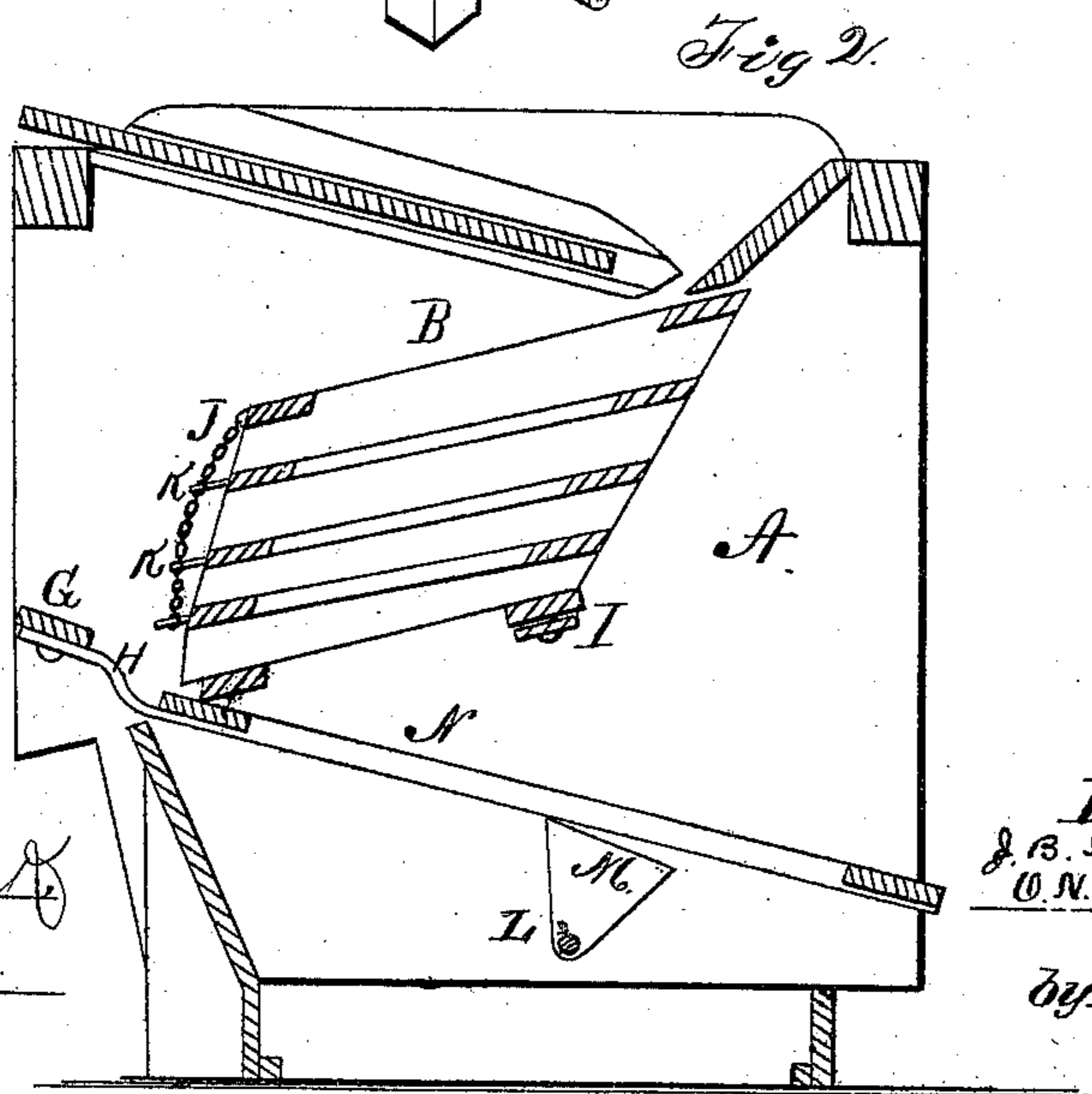
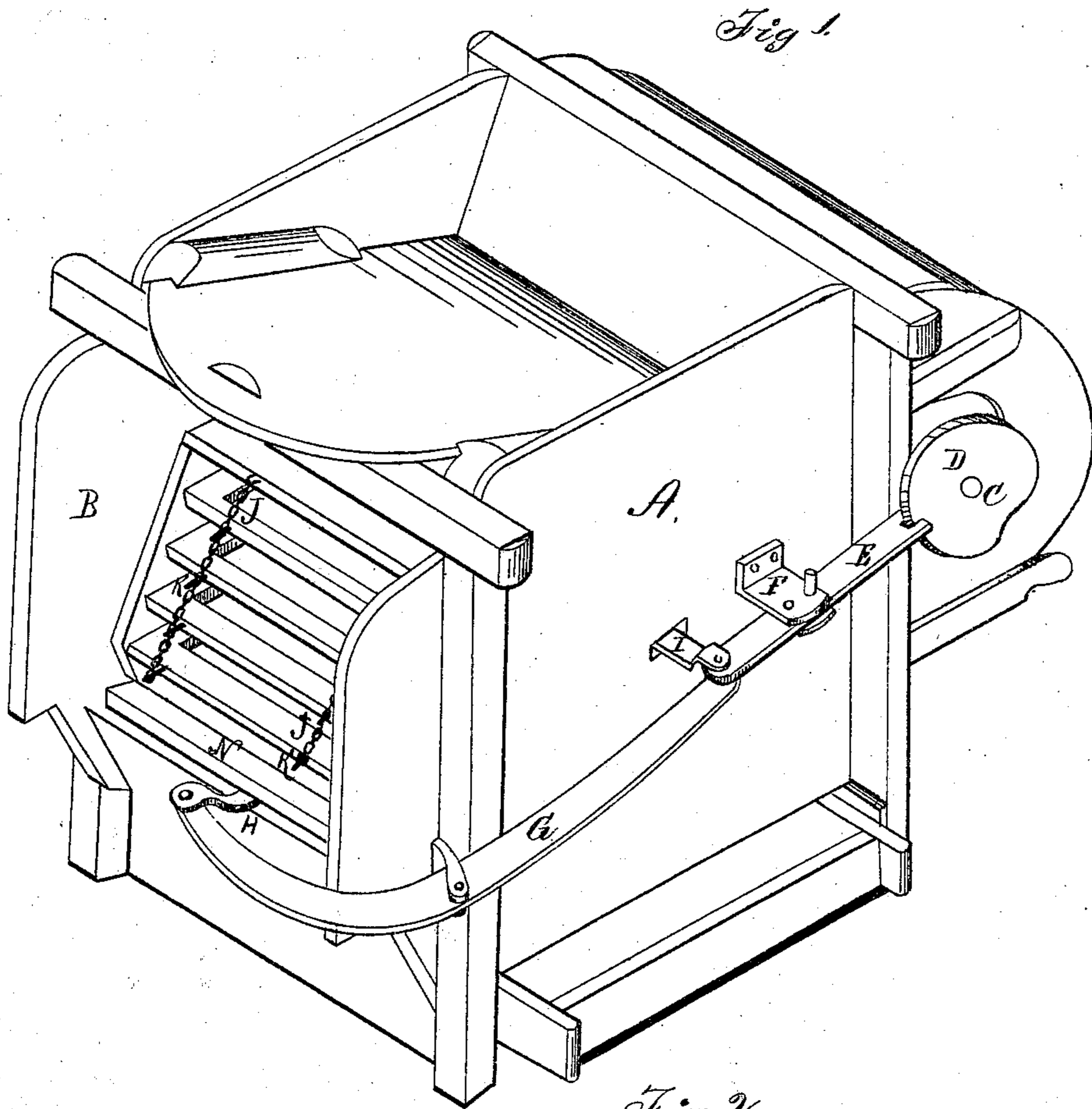


J. B. KING & O. N. CRONKITE.

Grain-Separators.

No. 133,648.

Patented Dec. 3, 1872.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JEREMIAH B. KING AND ORRA N. CRONKITE, OF SACRAMENTO, CAL.

## IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 133,648, dated December 3, 1872.

*To all whom it may concern:*

Be it known that we, JEREMIAH BROWN KING and ORRA N. CRONKITE, of Sacramento, in the county of Sacramento and State of California, have invented an Improved Grain Separator and Cleaner; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The object of our invention is to provide an improved machine for separating and cleaning grain; and it consists, mainly, in the employment of a peculiar device from which to transmit the shaking motion to the screens; and, also, in a novel arrangement by which we are enabled to give a side motion to the main frame with its screens while we give the lower or cheat-screen an end motion, the whole being accomplished by one set of connections.

Referring to the accompanying drawing for a more complete explanation of our invention, Figure 1 is a perspective view, and Fig. 2 is a vertical section.

A is the body of a separator or cleaner, and B is a screen-frame, within which any suitable number of screens may be placed. The shaft C, upon which the fans are secured, extends outside sufficiently to allow the irregular disk or plate D to be keyed to it and thus revolved. This disk is so formed that its surface has different planes, and it has thus an irregular or wabbling motion as it rotates. An arm, E, is pivoted to the side of the machine at F, and it is so forked as to clasp the edge of the plate D. The plate is caused to move easily by means of friction-rollers on the sides of the forked end of the arm, and as the plate rotates it communicates a reciprocating side movement to the arm E. Another arm, G, is jointed to the end of the arm E and similarly pivoted. The arm G is bent to the form of a bell-crank lever, the pivot being at the angle so that the side movement is converted into an end movement at the outer end of the lever. This outer

end is connected with the cheat-screen N by means of a pitman, H, and the screen is supported upon triangular rocking-blocks M, secured upon the shaft L, so that as the screen is moved it receives a sudden jar from each of the two corners of the triangle alternately, and this keeps it clear. The upper screen-frame is suspended by hangers, and is connected with the joint between the arms E and G by a rod or pitman, I, and by this means it receives a motion at right angles with that of the lower screen, and this keeps everything loosened up so that the screens will not become clogged. In order to adjust the screens in the screen-frame and raise or lower their outer ends so as to accommodate them to the varying force of the blast and wind, we employ chains or links J J, which are secured to the upper end. Pins K project from the screen and enter the links at any desired height, and the screens are thus at any time easily adjusted.

By this arrangement we are enabled to produce a grain-cleaner of very superior efficiency.

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

1. The irregular or cam-plate D, in combination with the vibrating arm E, the bent lever G, and the two connecting-rods H and I, for the purposes substantially as herein described.

2. The screen N, in combination with the rock-shaft L, with its upwardly-projecting triangular blocks M, for the purpose of giving an abrupt upward movement to the screen, substantially as described.

In witness whereof we have hereunto set our hands and seals.

JEREMIAH BROWN KING. [L. S.]  
ORRA N. CRONKITE. [L. S.]

Witnesses:

JAMES J. CARTER,  
PATRICK J. HARNEY,  
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