

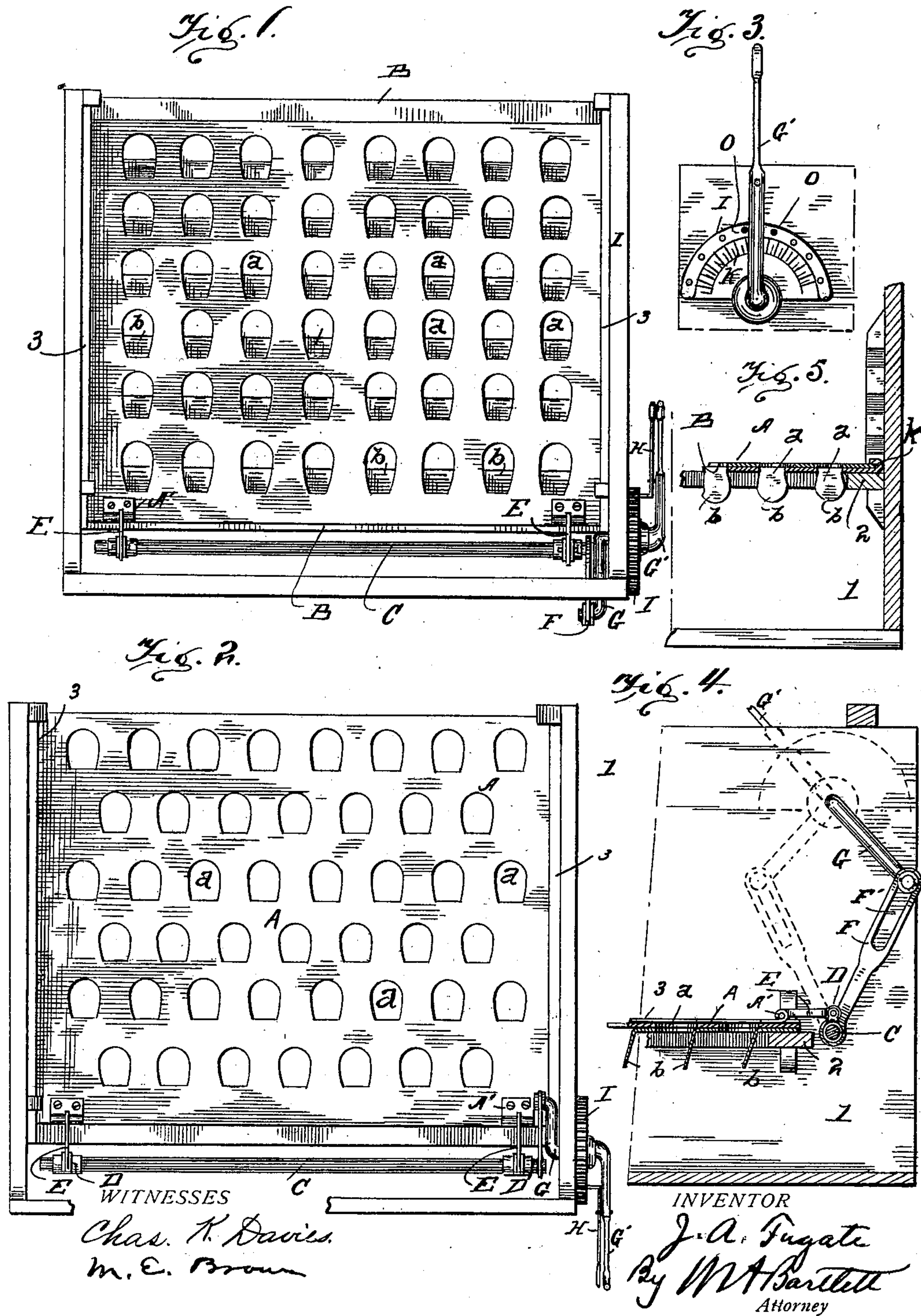
No. 627,640.

Patented June 27, 1899.

J. A. FUGATE.
SCREEN OR RIDDLE.

(Application filed Mar. 16, 1899.)

(No Model.)



UNITED STATES PATENT OFFICE.

JOHN A. FUGATE, OF IRVING, OREGON.

SCREEN OR RIDDLE.

SPECIFICATION forming part of Letters Patent No. 627,640, dated June 27, 1899.

Application filed March 16, 1899. Serial No. 709,311. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. FUGATE, a citizen of the United States, residing at Irving, in the county of Lane and State of Oregon, have invented certain new and useful Improvements in Screens or Riddles, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to adjustable screens or riddles for threshing and grain-cleaning machines.

The object of the invention is to produce a screen or riddle in which the openings for the passage of grain or other substance with which the screen is used may be adjusted by a simple mechanism which is not likely to be disarranged by the shaking of the screen and which may be adjusted by a simple movement, substantially as hereinafter described.

Figure 1 is a top plan of the screen or riddle and connections by which the openings in the screen may be adjusted, the screen-openings being partly closed. Fig. 2 is a top plan of a modification of the same with the openings fully open. Fig. 3 is a broken side elevation of shifting lever and connections. Fig. 4 is a broken longitudinal detail section of riddle and box, showing inside view of connections from lever. Fig. 5 is a broken cross-section of screen and box.

The screen or riddle is in any usual or suitable box or hopper, and usual means are employed to shake the screen or otherwise impel the grain along the face thereof.

35 The screen proper is composed of two plates A and B, of sheet metal, having perforations *a* therethrough. The lower plate B has the tongue-pieces *b*, extending downwardly at an angle, these pieces being cut at one end and bent, instead of being entirely removed from the plate, as are the parts which form the openings in plate A.

45 The lower plate B by preference is firmly attached to the frame or hopper 1 by means of any suitable frame or casing, as 2.

50 The upper plate A has holes *a* the same in size and location as the openings in the lower plate and lies on said plate, being held down at each side edge by a lath or strip 3, secured to the frame, or by the edge *k* of the lower plate turned over the upper, as in Fig. 5. The

holes in the plates may be in rectangular rows, as in Fig. 1, or may be in oblique rows, as in Fig. 2, or otherwise. The shaking of the riddle will bring the grain to the holes. Of course the arrangement of the holes in the two plates must be uniform. Sheet A can be slipped lengthwise of sheet B, so as to bring the holes in each plate in register when all the holes are open, as in Fig. 2, or the sheet can be moved lengthwise, so that the holes are partly closed, as in Fig. 1.

In order that the openings in the plates may be regulated as to size without stopping the machine, mechanism is provided for shifting the plate A, which I will now describe. A rock-shaft C is supported in suitable bearings in the frame or casing, near one end of plate A, extending across the casing. This rock-shaft has short rigid arms D, which are pivotally connected by pitmen or links E to the plate A or to ears A' thereon. The rock-shaft C has a rigid arm F, connected to the shaft C near the frame or casing. This arm is slotted, as shown at F'. A crank-lever G has its bearings in the frame or casing, and its crank end extends through the slot in the arm F. Outside the casing the crank-lever has a rigid operating lever-arm G'. Power applied to arm G' to swing said lever causes the lever F to swing, and thus rock the shaft C, and by means of the arm-and-link connections the plate A will be shifted, thus opening or closing the holes through the plates A B to a greater or less extent, according to the position of lever G', and as the plate A is connected at both sides of the shaft C this movement is easy and uniform. The lever G' is held in its adjusted position by a locking-dog H, connected to said lever in usual manner and engaging the curved rack I, as shown in Figs. 1 and 2, or the lever G' may be held by pins O entering holes in the perforated arc-plate I', Fig. 3. The plane face of rack I has a scale or index K, and this scale bears a fixed relation to the openings in the screen. Hence the position of lever G' or dog H with relation to said rack or index will indicate the size of the operative openings in the riddle or screen.

The adjustment of plate A by the mechanism described can be made in an instant of time, and without stopping or checking the

thresher or winnowing machine, so that the screen is fully under the control of the operator.

I am aware that screens with adjustable
5 plates to regulate the size of openings are not broadly new. My invention relates to the mechanism by which such adjustment is easily made without delay and to just the
10 amount desired, the adjustment being indicated.

What I claim is—

1. In a screen or riddle, the frame, fixed perforated plate and movable perforated
15 plate arranged as described, the rock-shaft having lever-arms connected by links to the movable plate and having a rigid slotted arm, the crank-lever having its crank in the slot in said arm, and the operating-lever connected

to said crank-lever, all combined substantially as described. 20

2. In a screen or riddle, the fixed perforated plate, movable perforated plate, rock-shaft, and connections therefrom to the movable plate, the rigid slotted arm on the rock-shaft, the crank-lever extending through said slot, 25 the hand-lever rigid with the crank-lever and carrying a locking-pawl, and the notched segment having an index, said pawl engaging said segment and indicating the plate adjustment, all combined substantially as described. 30

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. FUGATE.

Witnesses:

GREEN ZUMWALT,
E. R. SKIPWORTH.