J. H. LOCKE.

Grain-Separator.

No. 160,022. Patented Feb. 23, 1875.

FIG. 1

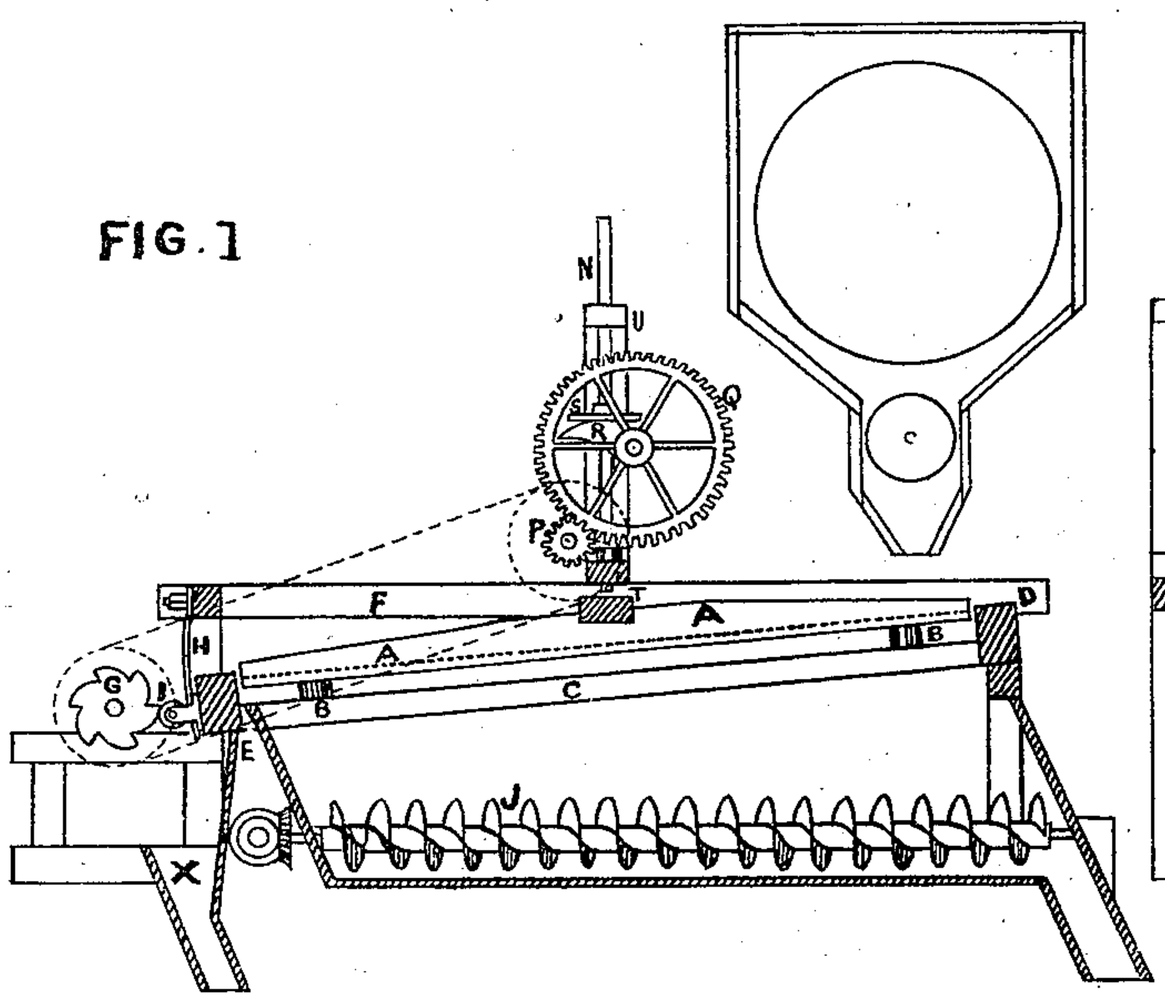
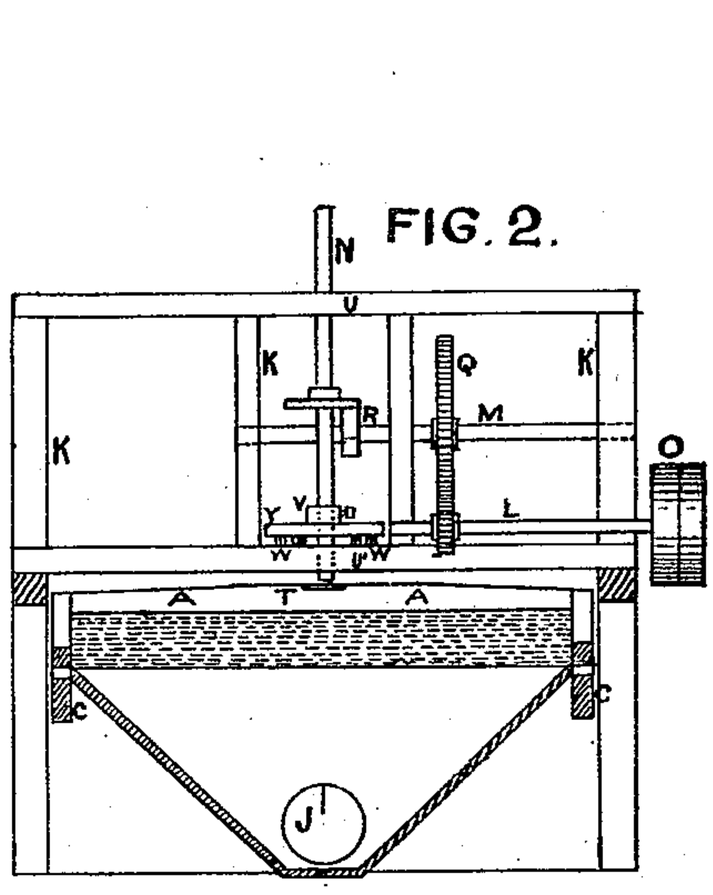


FIG. 2.



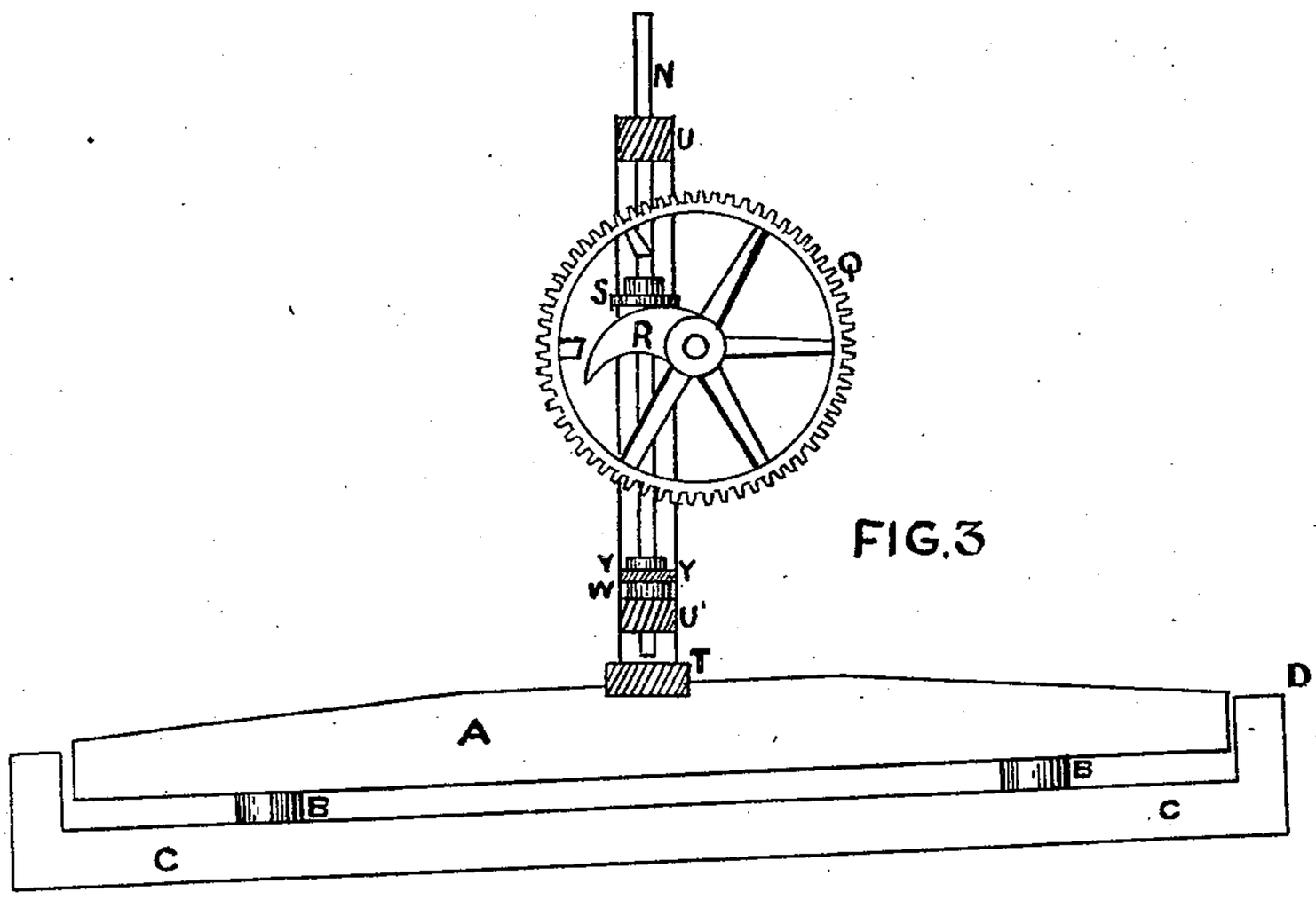


FIG. 3

Witnesses

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UNITED STATES PATENT OFFICE.

JOSIAH H. LOCKE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. **160,022**, dated February 23, 1875; application filed December 29, 1874.

To all whom it may concern:

Be it known that I, JOSIAH H. LOCKE, of the city and county of San Francisco, State of California, have invented an Improvement in Grain-Separators, of which the following is a specification:

The object of my invention is to prevent the screen-cloth, over which the grain passes in the process of sifting the chess from the wheat, from becoming choked with small and broken kernels, which usually fill the meshes of the screen and render it useless.

In the accompanying drawing, Figure 1 is a longitudinal sectional elevation of a separator to which my invention is applied. Fig. 2 is a transverse section of the same. Fig. 3 shows a side view of that part which constitutes my invention detached from the remaining portions of the separator.

In Fig. 1, A is the screen-frame, in which the screen-cloth is secured. This frame rests on four rubber springs, B B, and fits within another frame, C. The last frame C may swing on hinges at D, and rest on a cross-piece, E, of the main frame F. There is a ratchet-toothed wheel, G, bearing against the bottom end of the frame C, which, in revolving, gives a forward motion to the screen, and a spring, H, depended from the end cross-piece of the frame F, suddenly jerks back the screen and frame when the tooth of the ratchet releases it, thus giving the required sifting motion. The ratchet-toothed wheel may bear against a friction-roller, as shown at I, or it may simply bear against the frame, as preferred. The usual conveyer J is supplied, which receives its motion by connecting with suitable gears and a belt and pulleys, with the shaft carrying the ratchet-wheel G.

The machine, as far as above described, excepting the rubber springs B B and arrangement of the screen-frame A, is of common construction; and my improvement consists in providing an arrangement for periodically striking and jarring the screen-frame A with a sharp sudden blow, which produces the effect of clearing the meshes of the screen of any small grain which may have found lodgement therein.

On the main frame F of the machine I erect the frame K, which carries the countershafts L and M and the drop shaft or stamper N. The shaft L has a pulley, O, which belts with a pulley on the ratchet-wheel shaft, as shown in dotted lines, Fig. 1, from which it gets its motion. On this shaft L is the pinion P, which gears with the larger wheel Q on the second counter-shaft M. On this shaft M is the cam R, which bears against the tappet S, and, in revolving, lifts the stamper-shaft N, releasing at a proper height to give the required force to the drop. Secured across the frame A is a wooden piece, T, which receives the blow of the stamper-shaft. The stamper-shaft is held in position and guided by passing through the upper and lower cross-pieces U and U′ of the upright frame K.

To prevent the stamper-shaft from resting on the screen-frame after it has dropped there is provided at V a collar secured to the shaft, which strikes upon a strip of wood, Y, supported on rubber springs W W on one of cross-pieces U U′, the stamper-shaft passing freely through the strip of wood as it is operated. Thus, when the blow is given, it will have had sufficient force to compress the springs W W and permit the stamper to strike the screen-frame; but immediately the blow is given the springs expand and lift the stamper sufficiently to release it from contact from the moving screen-frame.

The machine is fed from above, the grain being distributed uniformly across the upper end of the screen, which is set slightly inclined, as shown. The chess and finely-broken wheat drop through the screen, and are conveyed away by the conveyer J, while the grain passes over the end of the screen into the hopper X.

What I claim as my invention is as follows:

1. The loose screen-frame A, resting on the rubber springs B B within the outer frame C, in combination with the drop-shaft N, substantially as and for the purpose hereinbefore set forth.

2. The rubber springs W W, supporting the strip of wood Y, in combination with the collar on the drop-shaft, substantially as and for the purpose hereinbefore set forth.

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Witnesses:

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