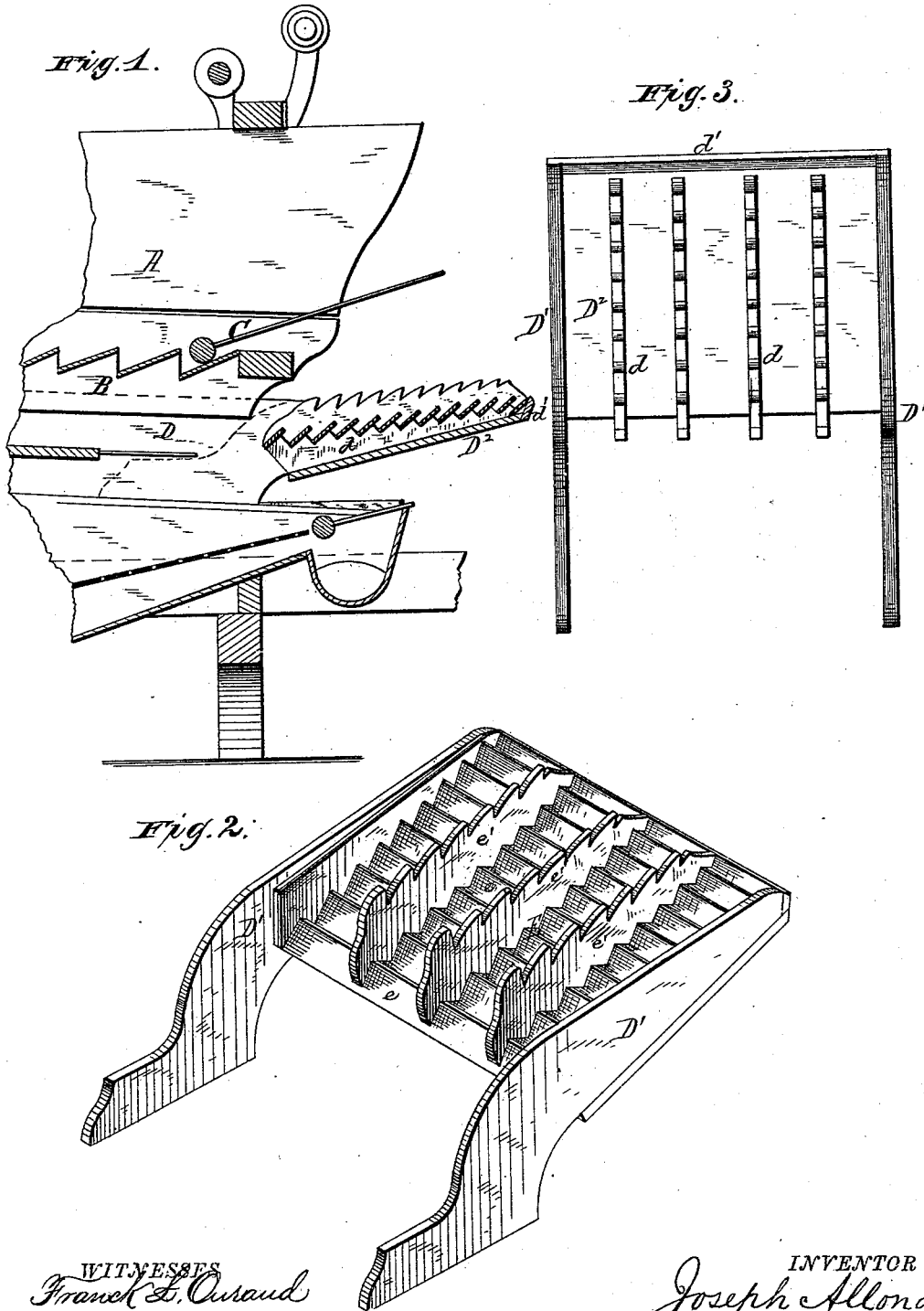


J. ALLONAS.
Grain-Separator.

No. 213,156

Patented Mar. 11, 1879.



WITNESSES
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JOSEPH ALLONAS, OF MANSFIELD, OHIO.

IMPROVEMENT IN GRAIN-SEPARATORS.

Specification forming part of Letters Patent No. 213,156, dated March 11, 1879; application filed January 3, 1879.

To all whom it may concern:

Be it known that I, JOSEPH ALLONAS, of Mansfield, county of Richland, State of Ohio, have invented certain new and useful Improvements in Grain-Separators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents one end of the separator in vertical longitudinal section with my improvements applied. Fig. 2 is a perspective view of my improved extension-pan, with the removable slatted screen applied, and Fig. 3 is a plan view of the same with the slatted screen removed.

Similar letters of reference denote corresponding parts wherever used.

My invention relates to a novel construction of the removable extension of the vibrating shaker described in my patent of October 22, 1878; and consists in providing the extension-pan with a series of stepped longitudinal strips for upholding the straw above the return chute-board in such manner as not only to assist in freeing the grain from the straw, but also in effectually preventing the grain from being swept off by the moving straw.

It further consists in providing the extension-pan with a removable screen fitting over the stepped strips on the return chute-board, and having also stepped longitudinal strips, which serve to uphold the straw, &c., above the escaping grain while assisting in forcing the straw onward to the point of discharge, as hereinafter explained.

In the accompanying drawings, A represents a portion of the frame-work of the machine; B, the vibrating straw-carrier, provided with lifting shaking-fingers; C and D, the lower reversely-vibrating shaker, said parts being constructed and arranged as in my patent above referred to, or in any usual or preferred manner. The discharging or tail end of the lower vibrating shaker is provided with a removable extension-pan, consisting of side pieces, D¹, adapted to be readily connected by bolts, set-screws, or otherwise with the end of the separating-shaker D, and connected by an intermediate flooring, D², having a backward inclination, as shown, and forming the

return chute-board herein referred to. This flooring has attached to its upper face a number of longitudinal strips, *d*, stepped on their upper edges or faces, or provided with a series of short risers inclining upwardly and outwardly, and terminating in right angles or abrupt steps or shoulders facing the discharge end. (See Figs. 1 and 3.)

By this construction it will be seen that the straw, chaff, &c., is adapted to be moved readily forward over the inclines upheld by the strips *d* above the chute-board, over which the escaping grain returns to the shoe or screen, while any backward movement of the straw is effectually prevented by the square shoulders or steps of the strips *d*. The outer end of the chute-board has an upwardly-inclined strip, *d'*, attached to it, which further serves to prevent any grain from being swept off by the straw, tailings, &c., and insures its return by the chute-board, as explained.

E is a removable slatted screen or pan composed of side bars or plates connected by a series of inclined overlapping transverse slats, *e*, arranged to conform in number and inclination to the risers on the stepped strips *d*, and fitting snugly thereon, upheld above the chute-board D², as shown in Figs. 1 and 2. The overlapping edges of these strips are separated sufficiently to permit the ready escape of the grain between them to the return chute-board, and the screen thus formed is provided with a number of notched or stepped strips, *e'*, intermediate between the side boards, similar to those at *d* on the chute-board, and operating in a similar manner to uphold and force the straw, chaff, &c., onward to the point of discharge.

Under some conditions of the grain this construction will be found of great advantage, as facilitating the immediate escape of the grain from the action of the moving mass of straw, &c., while under other conditions the chute-board with its stepped strips *d* will be found sufficient to effectually prevent the loss of grain escaping from the lower vibrating shaker, as ordinarily constructed.

Parts of the machine not particularly described may be constructed in the usual or any preferred manner.

Having now described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. The removable extension *D*¹ to the lower vibrating shaker, provided with the return chute-board and the stepped longitudinal strips *d*, substantially as and for the purpose described.

2. The removable pan or screen *E*, provided with the inclined stepped slats *e* and the notched strips *e'*, substantially as and for the purpose described.

3. The combination, with the extension-pan *D*¹, having the return chute-board and the longitudinal strips, as described, of the removable slatted screen *E*, provided with the notched strips *e'*, arranged and operating substantially as described.

JOSEPH ALLONAS.

Witnesses:

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