

(Model.)

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GRAIN DRILL.

No. 263,359.

Patented Aug. 29, 1882.

Fig. 1.

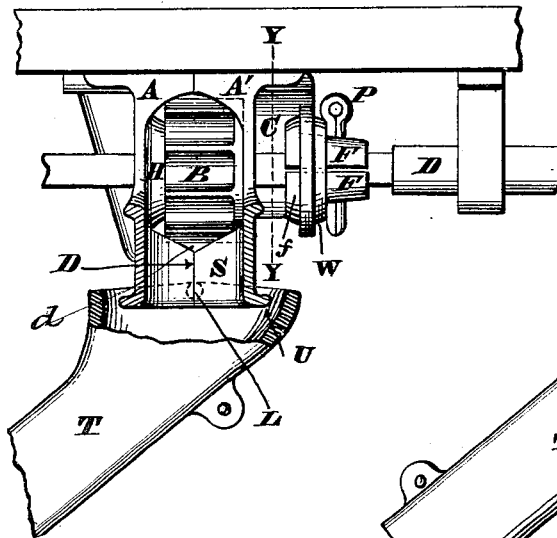


Fig. 2.

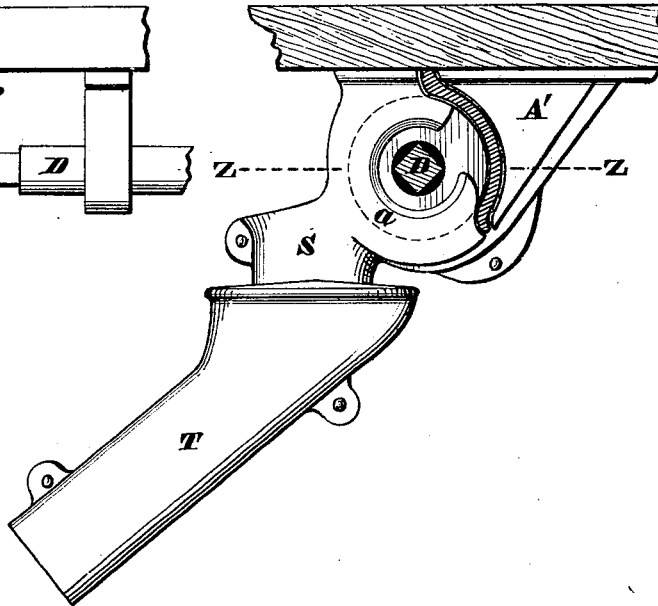


Fig. 3.

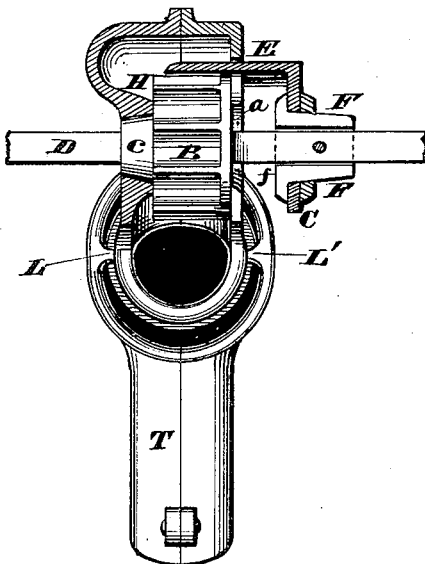


Fig. 4.

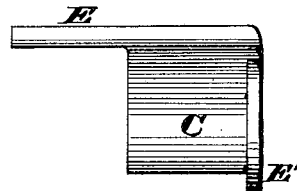
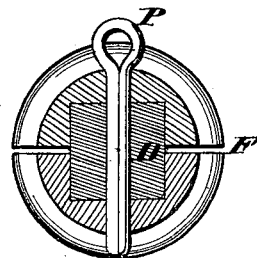


Fig. 5.



Attest.

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UNITED STATES PATENT OFFICE.

GEORGE W. RUDE, JOHN R. RUDE, AND HORACE G. SWOPE, OF LIBERTY,
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GRAIN-DRILL.

SPECIFICATION forming part of Letters Patent No. 263,359, dated August 29, 1882.

Application filed August 16, 1881. (Model.)

To all whom it may concern:

Be it known that we, GEORGE W. RUDE, JOHN R. RUDE, and HORACE G. SWOPE, of Liberty, Union county, Indiana, and JOHN L. RITER, of Brownsville, Union county, Indiana, have invented new and useful Improvements in the Feed Mechanism for Grain-Drills; and we do hereby declare the following to be a full and complete description of the same, reference being had to the accompanying drawings, forming part of our application.

Our invention relates to that class of grain-drills known as "force-feed;" and the novelty consists in the mechanism combined and arranged in the manner hereinafter described.

In the accompanying drawings, Figure 1 is a rear view of a seed-cup and its interior working parts. Fig. 2 is a vertical section, in side elevation, taken through the line Y Y, Fig. 1. Fig. 3 is a horizontal section through the line Z Z, Fig. 2, and taken in the plane of the sliding shaft. Fig. 4 is a view of the sliding cut-off. Fig. 5 is an enlarged view, in section, showing the manner of fastening the cut-off to the sliding shaft.

A and A' are the walls of the seed-cup.

B is the feed-wheel, journaled in the bearing c. This wheel is non-adjustable—that is to say, it does not slide laterally to allow a greater or less quantity of grain to be sown, but remains in a stationary position in that respect.

C is the cut-off for limiting the supply of grain to the feed-wheel. This cut-off, which is almost semicircular in cross-section, with reverse edges, is so formed that it neatly fits the circumference of the feed-wheel B, and when adjusted entirely covers said wheel and closes the feeding-throat of the cup. The turning back of the edges of the cut-off in reversed curves enables the breast of the cut-off to form a closer joint with the feed-wheel, and better prevents the grain from escaping past such edges than would be the case if the edges were not turned back.

E is a guide cast onto and made part of the cut-off, and is for guiding in its lateral motion, and also serves to hold the cut-off in its proper position. It is for this latter purpose that the guide-piece is made to extend out so much farther than the cut-off itself. Apertures are

cast in the walls of the seed-cup in order to allow this guide to work back and forth.

D is the horizontal feed-wheel sliding shaft, to which is attached the cut-off C in the following manner: The cut-off has a ring, E', cast with it, and this ring encircles the sliding shaft, there being, however, between it and the shaft a removable sleeve, F, having a flange, f, on one of its ends. Eyes or apertures are cut into this sleeve, through which a spring-key, P, is inserted. The sleeve is tapering, and may be made in halves, as shown, for convenience of handling, or it may be of one whole piece, as desired. The pin P penetrates the sleeve and sliding shaft, thereby fastening the cut-off to the shaft in an effective manner.

W is a washer, which, with the flange of the sleeve F, forms a guideway embracing ring E', and prevents any sagging motion that might take place. The object of this method of fastening the cut-off is to afford a ready means of attaching or of replacing the cut-off in case it should be broken or injured in any manner. All that is necessary to be done is to draw the pin P out, slip the washer from its place, and remove the sleeve. This will allow the cut-off to be detached and replaced with one that is uninjured by drawing out the shaft sufficiently.

H is a hub or swell on the interior of one of the walls of the seed-cup, and this hub, as will be seen, is of smaller diameter than the feed-wheel. This is for the purpose of admitting the grain to both the periphery and end of the feed-cup, thus securing a more perfect flow of the grain.

S is the vertical tube forming part of the cup. This tube is cut away, as seen at d, Fig. 1, so as to form an oblique discharge. The grain passes from the feed-wheel to this oblique discharge, and thence into the inclined tube T, to which is fastened the rubber tube for conveying the grain to the hoes. The tube S has a flange, U, and the inclined discharge-tube has a flaring mouth, upon the inner sides of which are lugs L and L', which fit over the flange upon the tube S, thus forming a flexible lock by which both are connected and held together.

It will be observed that the end wall of the

cup opposite the hub H has an enlarged opening, *a*, Fig. 2, to prevent the cramping of the feed-shaft.

Have thus fully described our invention, we claim—

1. The combination, with the rotating non-adjustable scalloped wheel-cylinder, of the feed cup or case having the swell H upon its inner side adjacent to the end of the wheel, and of the laterally-moving cut-off slide, substantially as described, for the purpose specified.

2. The combination, with the rotating non-adjustable scalloped wheel-cylinder, of the feed cup or case having the swell upon its inner side, the cut-off slide having the curved portion C, with the back or reversed-curved edges, the narrow guiding-extension E, projecting forward from the part C, so that when the latter is drawn back so as to uncover the wheel said ex-

tension will guide the cut-off without obstructing the feed, and the ring E', and the shaft to which the slide is secured.

3. The combination, with the ring E' of the cut-off slide, of the removable two-part sleeve F F, having the flanges *f*, the washer W, the perforated shaft D for operating the cut-offs, and the pin P, passing through the two-part sleeve and the shaft, and operating to hold the ring E' of the cut-off tightly clamped between the flange *f* of the sleeve and the washer W, substantially as described.

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Witnesses:

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