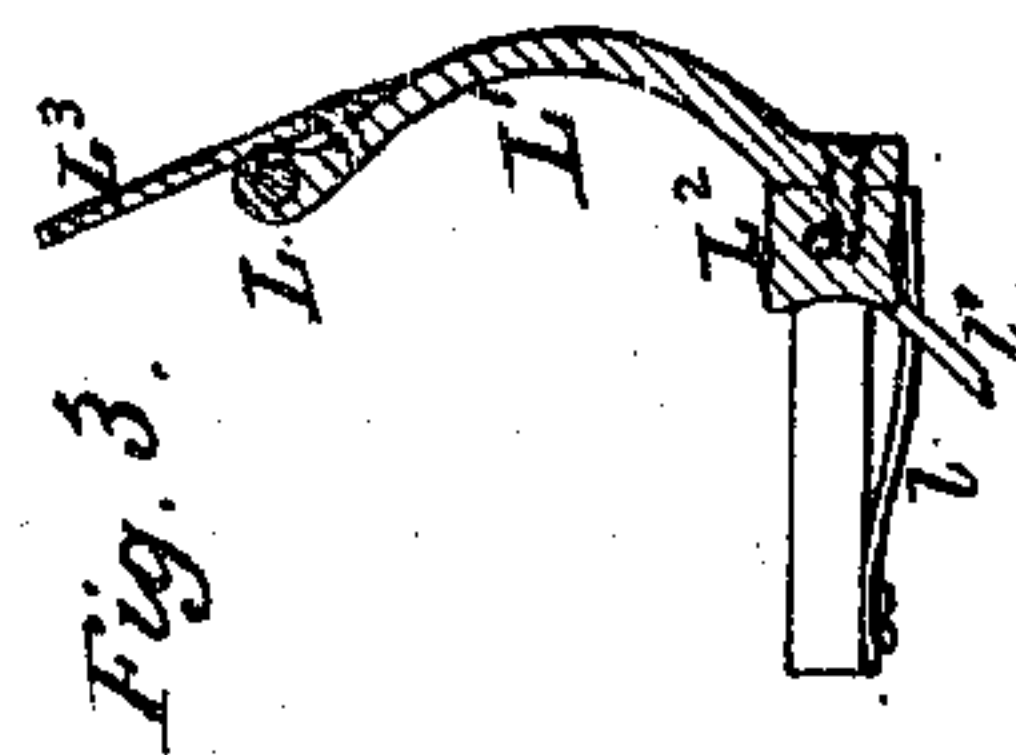
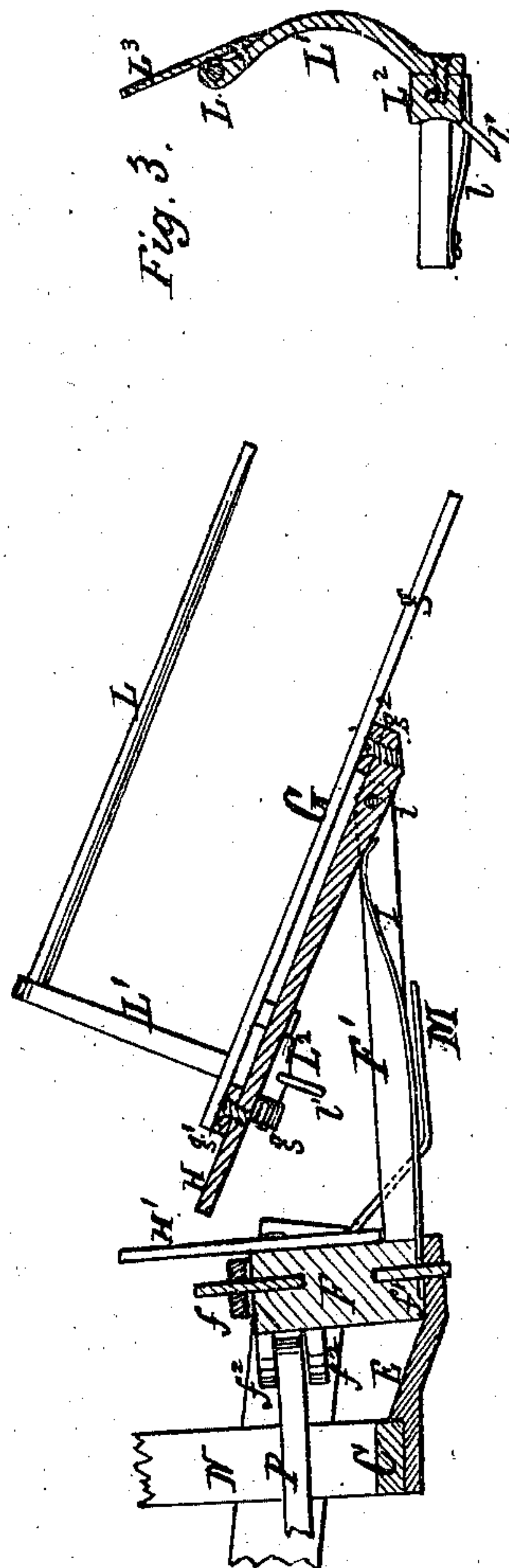
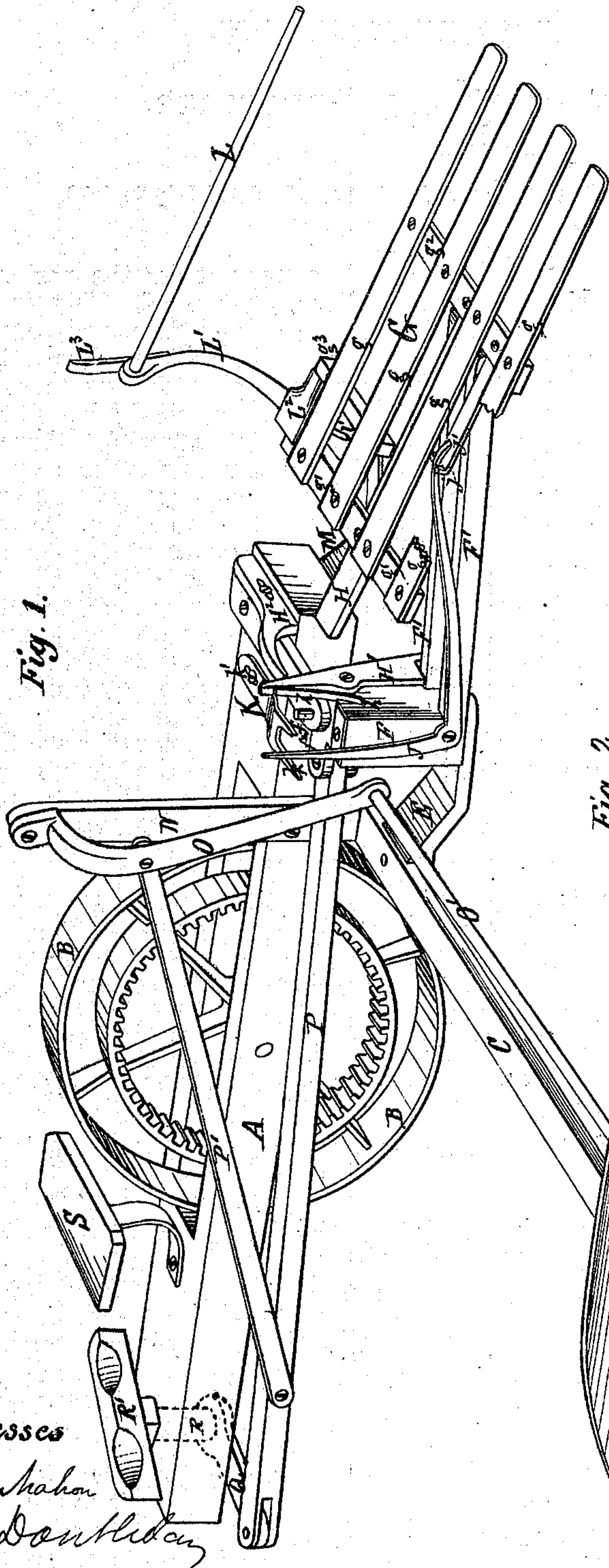


O. DORSEY.

Improvement in Harvester-Droppers.

No. 129,798.

Patented July 23, 1872.



Witnesses
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UNITED STATES PATENT OFFICE.

OWEN DORSEY, OF NEWARK, OHIO.

IMPROVEMENT IN HARVESTER-DROPPERS.

Specification forming part of Letters Patent No. 129,798, dated July 23, 1872.

To all whom it may concern:

Be it known that I, OWEN DORSEY, of Newark, county of Licking, State of Ohio, have invented certain new and useful Improvements in Side-Delivery Droppers for Harvesters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 represents a perspective view of so much of a harvesting-machine as is necessary to show my improvement. Fig. 2 is a longitudinal vertical section through the dropping-platform and its supporting-arm, and Fig. 3 is a transverse vertical section through the compressor-arm.

Similar letters of reference denote corresponding parts in all the figures.

My invention relates to that class of droppers or dropper-platforms in which the platform is swung upon a vertical pivot from a position behind the cutting apparatus, where it receives the grain to one at right angles (or nearly so) thereto, behind the main frame, where it is tilted to discharge the gavel out of the way of the team and machine on the succeeding round.

The invention consists, first, in the combination of a compressor with the swinging and dumping platform for preventing the scattering of the grain while the platform is moving into position to discharge the grain; second, in a novel arrangement of means for imparting the swinging or vibrating movements to the tilting-platform; third, in the arrangement of means for tilting the platform; fourth, in the arrangement of the compressor-arm, relative to the cut-off, whereby the latter, as it is moved into position to receive the falling grain while the gavel is being discharged, is made to operate the compressor; and, fifth, in certain details of construction and arrangement hereinafter described.

In the accompanying drawing, A represents the main frame of the machine, which may be of any usual construction and mounted on one or two driving-wheels, B, as preferred. C is the finger-bar, connected with the rear end of the frame A, and provided at its outer end with the usual divider D and grain-wheel D'. E is a shoe, which is connected to the finger-bar at its inner end, and, extending in rear of said

bar, affords a support for the vertical platform-shaft or pivot-block F. This pivot-block is, by preference, cast in one piece with the horizontal parallel supporting-arms F' F', upon the outer swinging ends of which the dumping-platform G is mounted; but it may be made of any suitable material, either wood or metal, with the arms applied to it by mortise or tenon, bolting, or other convenient manner, and it may be made in one piece with the pivots f f^1 , or the pivots may be applied as shown in sectional view, Fig. 2. The block F is provided with lugs or ears f^2 , to which the pitman is connected for operating the block and platform, as hereinafter described. The platform G, for purposes of lightness and strength, is, by preference, composed of light longitudinal slats g , which, when the platform is in position to receive the grain, lie parallel with the finger-bar, and which are united to transverse bars g^1 g^2 , arranged underneath bars g , so as to leave the upper plane surface of the slats unobstructed for the delivery of the grain when tilted, the bars g^1 g^2 being arranged, one, g^1 , at the inner end of the slats g , and the other, g^2 , near midway of the length of said slats. To the bars g^1 g^2 is attached a latch arm or bar, H, which extends inward beyond bar g^1 at the inner end of the platform, for locking or holding the platform in its horizontal position for receiving and conveying the grain to its point of discharge, as will be explained. H¹ is a spring-latch, pivoted to the platform-block F, and held in proper position for locking the latch-arm H by means of a spring, h . The latch-arm H is also made in the present instance to serve as the point of the pivotal connection between the platform and the arms F', as shown at i , Fig. 2; but it will be obvious that these may be separate, and that the latch-arm may be connected to the inner end of the platform only. I is a spring attached to the shoe E, or to the pivot-block or arms F' F', for tilting the platform when released from the latch H¹. J is an angular or bell-crank lever, pivoted to the pivot-block F, so as to move with it, with its lower horizontal arm extending outward by the side of the platform-supporting arm F', and passing through a loop or eye or over a plate, j , attached to the platform, the outer end of said arm being bent or hooked at j' to

limit the tilting movement of the platform. The vertical arm or lever J moves in contact with, and is operated by, an inclined or curved way or track, *k*, formed upon an overhanging plate, K, and so arranged that as the tilting-platform, after having discharged the gavel, is swung from the position shown in the drawing into a position to receive another gavel, the way or track *k* acts upon the vertical arm of lever J, and, depressing the outer end of the horizontal arm, serves to restore the platform through the connection with said arm to a horizontal position for receiving the grain, and in which position it is locked and held by the latch H¹, as above explained. The arm K, with its cam-way *k*, is made adjustable to regulate the movements and throw of the tilting-platform by a slot and set-screw at *k'*, or other suitable device for that purpose, and the latch H¹ is operated, for releasing the tilting-platform at the desired point for discharging the gavel, by means of an adjustable stop, H², which comes in contact with the upper end of said latch H¹ in a manner that will be readily understood without further explanation. L is a horizontal compressor-rod mounted in an arm, L¹, attached to a rock-shaft or head, L², which is pivoted in bearings in the inner transverse platform-bar *g*¹ and a supplemental bar or block, *g*³. The head or shaft L² is squared in one portion of its length, (shown in section, Fig. 3,) and has resting upon its lower face a flat spring, *l*, attached to bar *g*¹, which acts upon the square or flat face, and tends to prevent rotation of the shaft and to lock it in the position in which it may be set. L³ is an elastic rod or spring attached to the upper end of arm L² for depressing said arm, as will be hereinafter described. M is an arm-rod or stop attached to the rear end of the frame in position to strike and act upon a spur, *v*, on the shaft L² as the platform swings into position to discharge the gavel, in such manner as to overcome the tension of spring *l* and allow the shaft L² to be rotated to raise the compressing-rod L off the grain on the platform to the position shown in the drawing, where it remains until the platform has received another gavel and commences its movement toward the place of discharge, when it is again thrown down to hold the gavel and prevent scattering of the grain, as will be described. N is a post or upright, mounted either on the main frame, finger-bar, or inner shoe, as may be preferred; and to the upper end of this post a cut-off arm, O, is pivoted by its upper end, the lower end being provided with a socket to receive the swinging cut-off or horizontal rod or bar O', which is interposed to receive and support the falling grain while the platform is discharging its load. P is a pitman, connected at one end to the ears *f* of the vertical rake-pivot or block F, and at its other to the swinging end of an arm, Q, attached at its opposite end to a vertical rock-shaft, R, mounted in bearings in the main frame in advance of the driver's seat S. P' is

a second pitman, connecting the cut-off arm O with the pitman P in such manner that by the movement of the pitman P, which operates the swinging platform, the cut-off is operated simultaneously with the platform. R' is a rocking treadle-lever attached to the upper end of rock-shaft R, and arranged in convenient position to form a support for and to be operated by the driver's feet.

The operation of the parts above described will be readily understood. Supposing the parts to be in position represented in Fig. 1, the driver by pressing with his right foot upon the rocking-lever R' vibrates the shaft R, and with it the arm Q, giving to the pitmen P P' a backward thrust, which, in consequence of the arrangement of the point of connection of pitman P with the inner side of pivot-block F, serves to swing the platform inward and forward toward the finger-bar into position to receive the falling grain. While this is being done the elbow-lever J is operated by the cam-way *k*, as described, to restore the tilting platform to its horizontal position, in which it is locked by latch H¹, and simultaneously therewith the cut-off O' is swung backward and upward out of the way, allowing the grain accumulated thereon to drop upon platform G, the elastic arm or spring L³ yielding and passing underneath the cut-off O', when it springs upward and assumes a position immediately in front of cut-off O', where it remains until the gavel is completed. When this is done the movement of lever R' is reversed, and the dropper O' in descending comes in contact with arm L³, causing the arm L¹ to be thrown down until rod L rests upon and compresses the grain upon the platform, and prevents it from being scattered during the swinging movement of said platform. The cut-off O' descends into position to receive the falling grain, and the swinging movement of the platform is continued until the spur *v* strikes the stop-arm M, raising the compressor-rod L and releasing the grain, while simultaneously therewith the latch H¹, coming in contact with stop H², releases the platform-arm H, and allows the platform to be tilted by spring I, as above explained. When the platform is swung into position to receive the grain the outer ends of the slats composing the same pass underneath the rear extended end of the divider-board D, which overhangs said slats and prevents waste of grain at that point. The platform and cut-off, instead of being operated by the driver, may, if preferred, be connected with and automatically operated by the gearing of the machine in any convenient manner.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the holding or compressing-rod with the swinging dropper-platform, substantially as and for the purpose described.

2. The compressor-rod L, operating, in com-

bination with the dropping-platform, substantially as described, in combination with the cut-off for depressing, and the stop M or equivalent device for raising, said rod, as set forth.

3. The swinging and dumping platform and vibrating cut-off, in combination with the pitmen P P' and treadle-lever R', arranged and operated substantially as described.

4. The swinging and dumping platform G, provided with the latch-arm H, in combination with the pivoted latch H¹, for holding and releasing the platform, as described.

5. The combination, with the swinging and dumping platform, of the spring I, for tilting

the platform when released from its holding or locking device, as described.

6. The elbow-lever J and inclined or curved cam-way or track k, for operating the tilting-platform and returning it to its horizontal position for receiving the grain, as described.

7. The stop H² which operates the latch H¹ for releasing the platform, made adjustable, as described, for the purpose of regulating the point of discharge of the gavel, as set forth.

Witnesses:

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