

(No Model.)

2 Sheets—Sheet 1.

J. BOMGARDNER.  
GRAIN SHOCKING MACHINE.

No. 414,282.

Patented Nov. 5, 1889.

FIG. -3 -

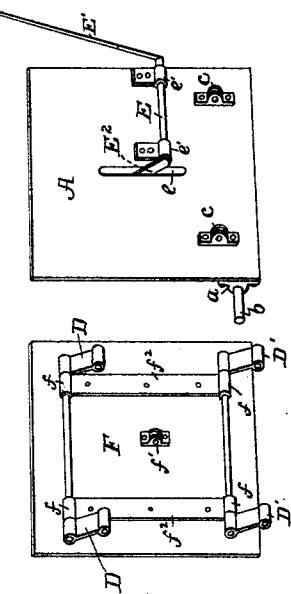


FIG. -2 -

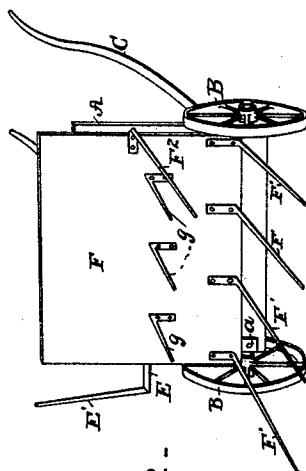
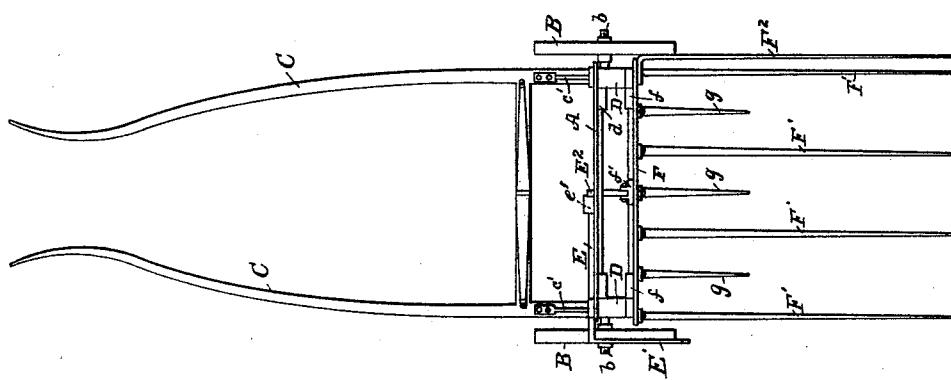


FIG. -1 -



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2 Sheets—Sheet 2.

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FIG. 4.

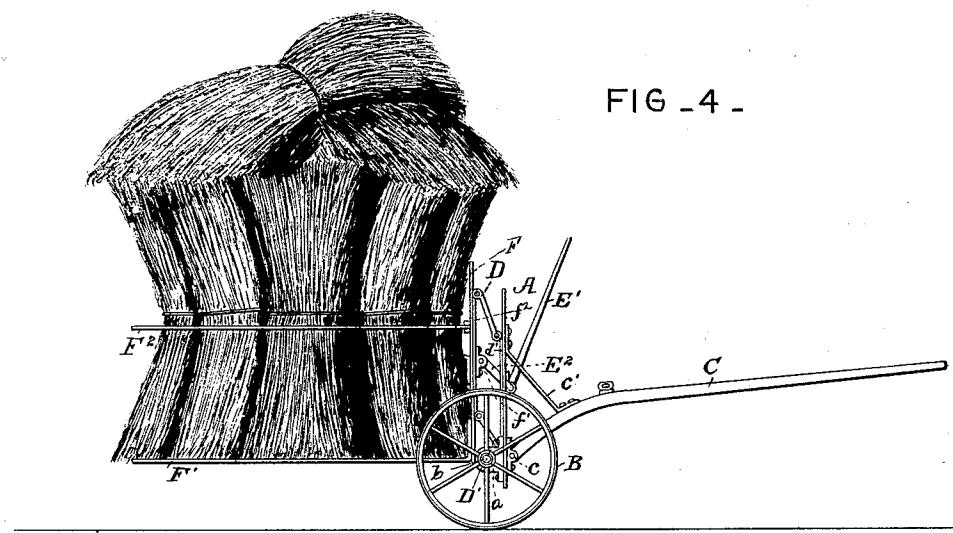
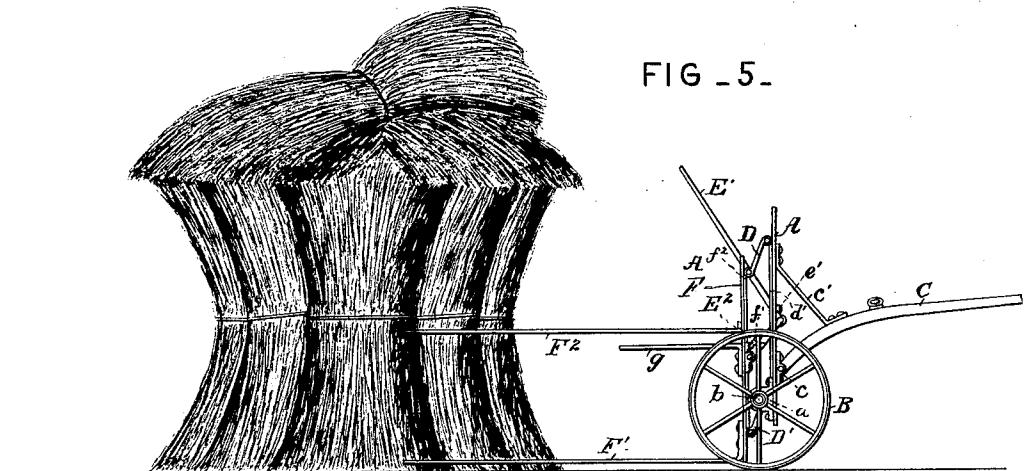


FIG. 5.



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Inventor:  
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# UNITED STATES PATENT OFFICE.

JOSEPH BOMGARDNER, OF SHANESVILLE, ASSIGNOR TO LEWIS MILLER, OF AKRON, OHIO.

## GRAIN-SHOCKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 414,282, dated November 5, 1889.

Application filed September 7, 1888. Serial No. 284,814. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH BOMGARDNER, of Shanesville, county of Tuscarawas, and State of Ohio, have invented a new and useful Improvement in Grain-Shocking Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

10 My invention relates to a machine having an adjustable tray for receiving and carrying bundles of grain, and upon which they are gathered and arranged in the form of a shock, after which they are deposited and left standing in such form on the ground; and it consists in a novel construction of said machine, whereby it is adapted not only to hold the bundles in upright position for forming the shock therein, but whereby the discharge of 15 the completed shock is facilitated; also, to certain details of construction and arrangement of parts of the machine hereinafter described and claimed.

20 In the accompanying drawings, Figure 1 is a plan view of a machine showing my improvements. Fig. 2 is a perspective view of the machine, looking from the rear. Fig. 3 is a perspective view of the upright frame-plate and tray-head plate or frame detached. Figs. 25 30 4 and 5 are side elevations illustrating the operation of the machine.

A indicates an upright rectangular plate or frame, which forms the main frame of the machine, upon which the bundle-tray is supported and adjusted, as will appear. To the sides of this upright plate or frame are secured plates *a*, having stud-axles *b* formed upon them, upon which the carrying-wheels *B* are journaled. These parts constitute what 35 40 I term my "truck." To the forward face of this upright plate or frame are secured lugs or ears *c*, to which the rear ends of the thills *C* are pivoted. Braces *c'* extend from the thills in front of the plate *A* up to near the 45 upper edge of the plate, making the connection of the latter with the thills rigid and supporting the plate in the upright position shown.

In suitable lugs or ears *d*, formed, preferably, on the ends of straps *d'*, secured to the

rear face of the frame-plate *A*, are pivoted links *D* *D* and *D'* *D'*, arranged in pairs, two near the upper edge or end of the plate *A* and two near the lower end thereof, similar to the links of a parallel-ruler, and the swinging 55 ends of these links are pivoted in like manner in lugs *f* on the ends of straps *f'* on the forward face of an upright frame or plate *F*, which by the arrangement of links described is adapted to be moved up and down bodily, 60 maintaining its upright position and parallel relation to plate *A*.

The plate *A* has at or near its center a vertical slot *e*, and upon one side thereof lugs *e'* *e'*, in bearings in which is journaled a 65 rock-shaft *E*, having a lever *E'* upon its outer end and upon its inner end a short arm *E*<sup>2</sup>, which passes through the slot *e*, and has its swinging rear end pivoted in a lug or bracket *f'*, fast on the forward face of the frame or 70 plate *F*. The length of arm *E*<sup>2</sup> corresponds with that of the links *D* and *D'*, and by operating the lever *E'* the attendant is enabled to raise or lower the frame or plate *F*, the latter swinging on the parallel links in a manner that will be readily understood.

To the lower edge or end of the plate or frame *F*, which forms the head-plate of the tray, a number of rearwardly-projecting parallel rods or fingers *F'* are secured, of suitable 80 size and at a sufficient distance apart to permit the stubble, when the plate and rods are lowered to the position shown in Fig. 5, to readily pass up between the rods, and so to act upon the grain for causing its discharge. 85 One side of the platform or tray is left open or without side guard-rods to permit the bundles to be placed on the tray-flooring without obstruction; but the opposite side has one or more guard-rods or fingers *F*<sup>2</sup> secured 90 to it in a plane above the rods *F'*, and parallel, or substantially so, with the latter, and which serve to uphold in upright position the bundles placed against them; and in about the same plane with or slightly below the 95 guard *F*<sup>2</sup> are a series of rearwardly-projecting rigid spurs or pointed rods *g* *g*, secured to the head plate or frame *A*, upon which the first bundles placed upon the tray are thrust, and which serve to hold in upright position 100

the bundles impaled thereon. These spurs are made shorter than the rods or fingers  $F'$  and  $F^2$ , and serve merely to uphold the bundles placed on the forward end of the tray or carrier, the bundles subsequently placed upon the tray being upheld by the bundles in front of them and by the guard rod or rods  $F^2$ .

The operation of the machine or bundle-shocker described will be readily understood.

10. The tray is raised into the position shown in Figs 2 and 4 for receiving the bundles, and is held in that position by any suitable means until the shock is formed, the machine being in the meantime drawn forward over the ground at the side of a reaping-machine for taking the bundles therefrom, or at the side of a row of bundles deposited on the ground by said machine, as preferred, and may be, if desired, provided with any suitable arrangement of seat for the driver; or the latter may walk beside the horse or team, as preferred. An attendant places the bundles upon the tray, the first so placed being thrust against the frame-plate  $F$  and upon the spurs  $g$  or against the guard  $F^2$  in upright position and resting on their butt-ends, and others in turn against those in front of them until the floor of the tray, composed of the rods  $F'$ , is filled, when others are placed on these, topping out the shock in the usual manner, after which the attendant, by operating the lever  $E'$ , lowers the tray until the rods  $F'$  pass down into the stubble and drag along upon the ground, when the shock will be caught and held by the ground and stubble until the rods  $F'$  and spurs  $g$  are drawn out of and away from it, when the tray is again raised and the operation repeated.

The operation, it will be seen, is very simple, requiring only the raising of the tray, the proper placing of the bundles thereon, and then the lowering of the tray to leave the grain standing in shock form on the ground.

Having now described my invention, I claim as new—

45. 1. In a machine for shocking grain, the combination, with the truck-frame, of an adjustable tray provided with an upright head-plate and parallel links interposed between

and connecting said head-plate and the truck-frame, substantially as specified.

2. In a machine for shocking grain, the combination, with the truck-frame and its upright plate or head, of an adjustable tray having a corresponding head-plate, the metal straps secured to the contiguous faces of said head-plates, and the interposed connecting-links, arranged and adapted to operate substantially as described.

3. In a machine for shocking grain, a tray or bundle-carrier consisting of an upright head-plate, a series of parallel rods forming the floor of said tray, a series of parallel fingers or spurs projecting in the same direction with said floor-rods, and a side rod or guard, all arranged substantially as and for the purpose described.

4. The combination, with the truck frame or plate, of the adjustable tray having the upright head plate or frame, the links connecting said head-plate with the truck-frame and the tray-adjusting lever, substantially as described.

5. The combination, with the upright truck frame or plate, of the upright tray-head plate connected to said truck-frame by parallel links and provided with floor rods or fingers, the side guard-rod and rearwardly-projecting spurs, and the lever for adjusting the tray, substantially as described.

6. In a machine for shocking grain, the combination, with the carrying-truck thereof, of an adjustable bundle-tray having the upright head-plate provided with rearwardly-extending floor-rods, rearwardly-projecting spurs or fingers rigidly secured to said plate and overhanging the tray-floor for upholding the bundles on said floor, and means, substantially as described, for adjusting said tray for depositing the bundles on the ground.

In testimony whereof I have hereunto set my hand this 3d day of September, A. D. 1888.

JOSEPH BOMGARDNER.

Witnesses:

JOHN C. DONAHEY,  
A. D. GRIBBELL.