J. M. WILDERS.

Thrashing-Machines.

No. 144,721. Patented Nov. 18, 1873.

fig. 1.

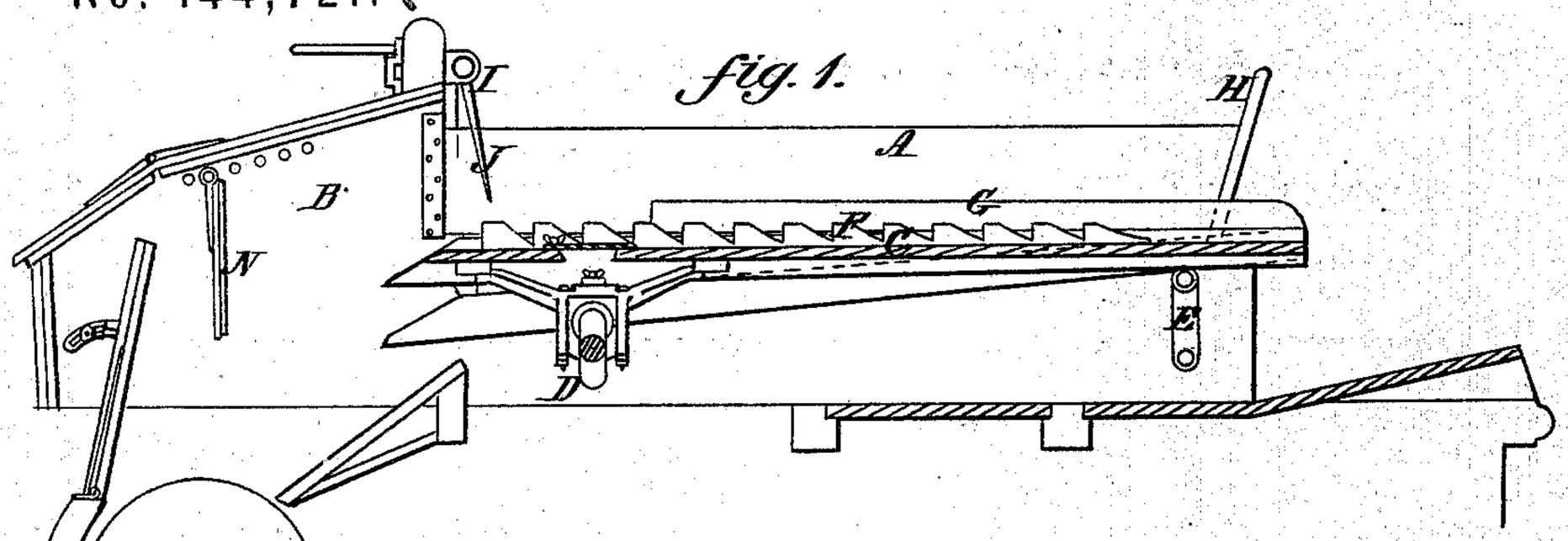


fig. 2.

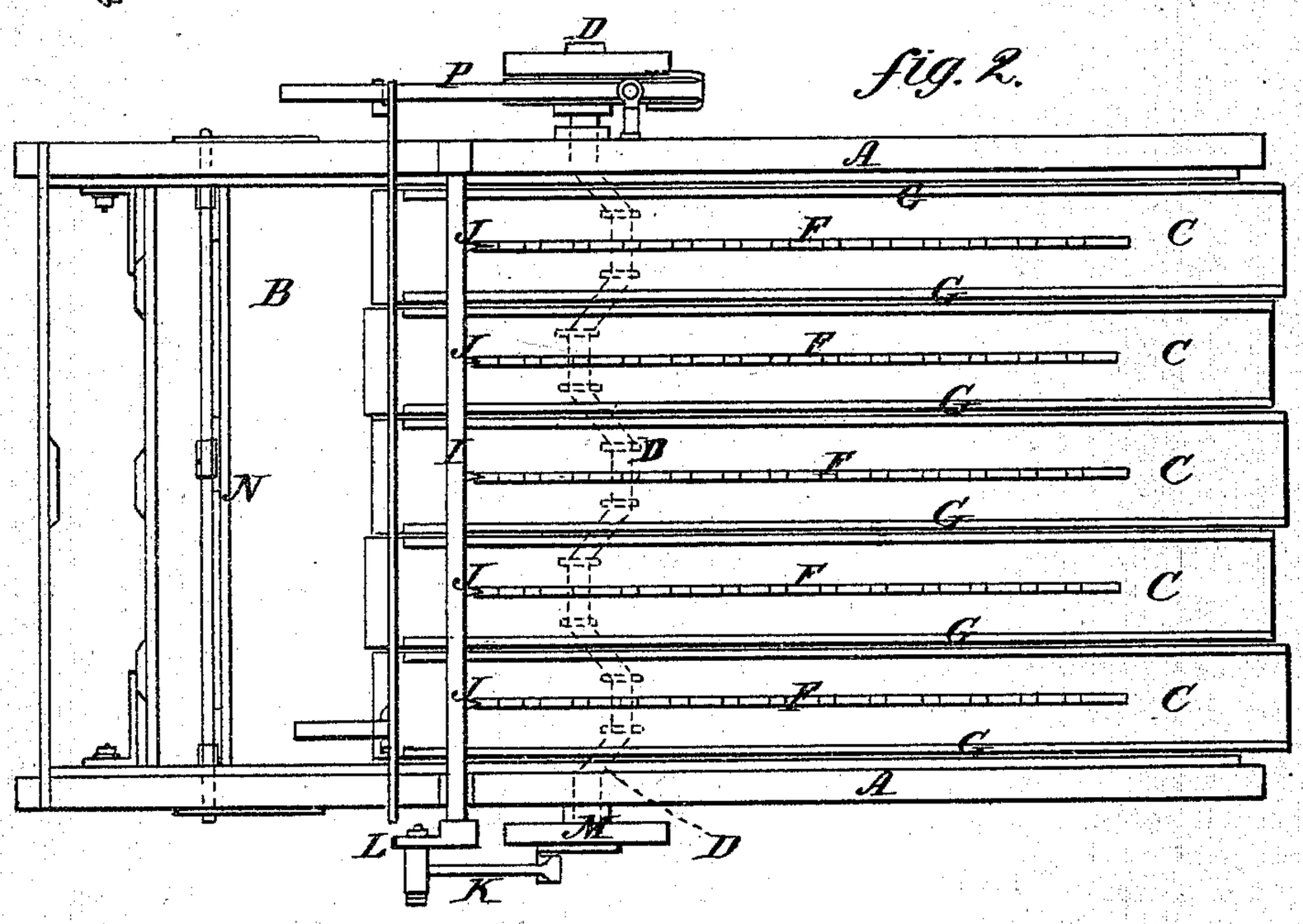
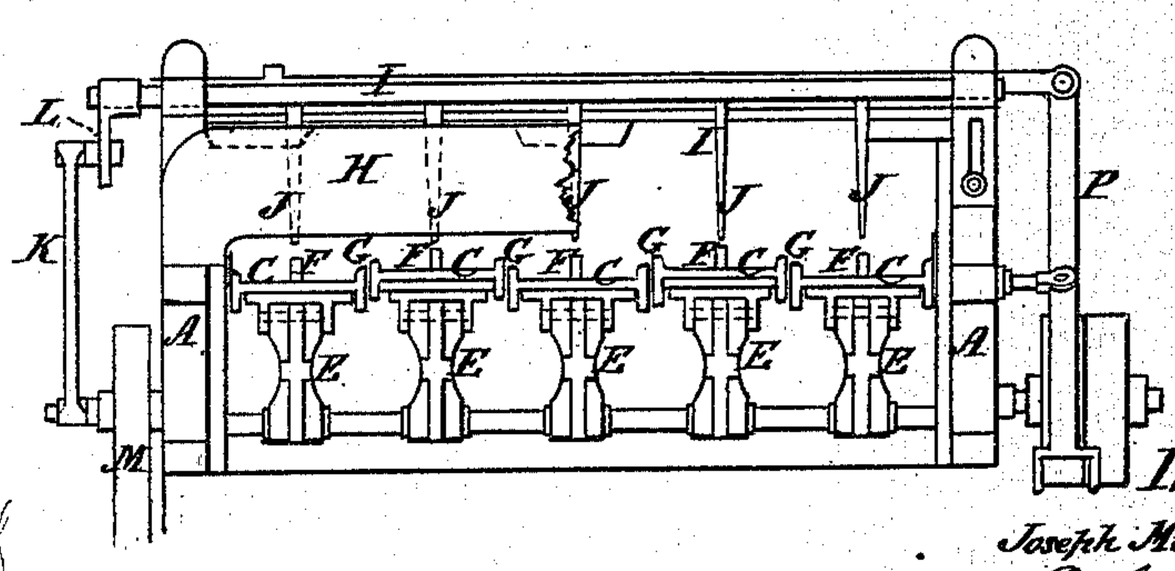


fig. 3.



Witnesses.

J. West Wagner.

J. H. Rutherford

Inventor:

Joseph Musson Wilders.

By C. A. Sleicher

his Attorney.

UNITED STATES PATENT OFFICE.

JOSEPH M. WILDERS, OF CROXTON-KEYRIAL, ENGLAND, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM SILVERWOOD, OF BALTIMORE, MD.

IMPROVEMENT IN THRASHING-MACHINES.

Specification forming part of Letters Patent No. **144,721**, dated November 18, 1873; application filed September 4, 1873.

To all whom it may concern:

Be it known that I, JOSEPH MUSSON WILDERS, of Croxton-Keyrial, in the county of Leicester, Kingdom of England, farmer, have invented a new and useful improvement, being an Apparatus for Feeding Grain-Thrashing Machines, of which the following is a specification:

The object of my invention is to furnish an apparatus to feed thrashing-machines automatically and spread the grain for the action of the thrashing-cylinder, whereby the operation is facilitated, the saving of labor effected, and the avoidance of accidents which frequently happen in feeding thrashing-cylinders direct by hand; and my said improvements consist in operating the toothed carrier-boxes for the grain by the crank-shaft and the pivoted coupling-arms, the joint action of these being such that the delivering ends of the boxes will have a greater vertical movement than their receiving ends, whereby the carrier-boxes are caused to dive down and pass back beneath the grain in their feeding movement, combining with the vibrating toothed feeders a vibrating adjustable rake-head, arranged at the junction of the throat of the cylinder-hood with the feeder, to act as a distributer and regulator, and can be set to feed at any pace required; and in the combination of a suspended swing-board with the vibrating toothed feeders and the thrashing-cylinder, for receiving the grain as it is fed from the vibrating feeders, straightening and directing it onto the cylinder, so as to be carried between the cylinder and the concave in a position to insure the best and cleanest thrashing action of the cylinder upon the grain.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of the grain-feeding apparatus as applied to the cylinder of a thrashing-machine. Fig. 2 is a top view, and Fig. 3 a cross-section.

The feeder-frame A is of suitable construction for arrangement upon the top of a thrashing-machine, and with a hood, B, which covers the revolving thrashing-cylinder, prevents the scattering of the grain and escape of dust, as shown in Fig. 1. A series of shaking carriers or boxes, C, are arranged lengthwise within this frame, and mounted upon a crank-shaft, D, at one of their ends, and upon pivoted couplings or arms, E, at the other, so that the turning of the crank-shaft D will impart a vertically advancing and receding movement to the feeders C, to carry the unthrashed grain which is thrown thereon forward to the cylinder, and to dive down and pass back beneath the grain for repeating the feeding movement. These carriers C form narrow boxes, each having a central lengthwise-notched bar, F, and raised sides G, with the discharging ends whereof entering the hood B just above the thrashing-cylinder, and are beveled off. The attendant cuts the band of the sheaf and throws the latter upon the feeding-boxes C, against a tail-board H, when the vibrating movement of the boxes C opens or spreads the sheaf and carries the grain forward to the cylinder by the notched bars F, while the boxes C serve to receive and conduct any loose grains into a trough at the receiving end. The movement imparted to these feed-boxes C by the crank-shaft D causes their discharging ends to rise and fall above and below the movement of their receiving ends, in order to give to them the peculiar movement necessary to feed the grain forward; and the cranks D are so disposed to each other as to lift and forward a series of the feeders C, and simultaneously depress and carry backward another set of feeders, and in this way spread and feed the loose sheaf of grain by the toothed bars catching into it and carrying it with their movement. At the junction of the feeders C with the hood B there is arranged in front of the opening a rake-regulator, I, the arms J whereof vibrate over the ends of the feeders C, and serve to retard and level the grain, and thus regulate and evenly distribute its feed to the cylinder. It is made adjustable, and can be set to feed the machine any pace required by means of a rod, K, connecting a crank, L, on the regulator-rod I with a crank or wrist-pin wheel, M, on the crank-shaft, so that, by this connection, the movement of the feeders C and the regulator J will be simultaneous and from the same crank-shaft. A suspended swing-board, N, is arranged within the hood above the thrashing-cylinder, and in front of the open-

ing through which the grain is fed, and against which board it is thrown from the feeders, so that it falls evenly upon the cylinder, and is thereby more evenly carried into the concave and thrashed; and, in connection with this swing-board, the concave may be provided with a board, hinged and also made adjustable, to widen or lessen the throat of the cylinder. The feeders may be thrown in and out of gear by a clutch device, P, within reach of the sheaf-band cutter.

The thrashing-machine and its feeder may be operated by any suitable power.

The outside feeding-boxes are provided with sides, and the feeder-frame A also has raised sides to inclose the feeders. The adjustment of the regulator I may be made by means of a slot in the crank-arm L, or by holes in the connecting-rod K.

Having described my invention, I claim—

1. The toothed carrier-boxes C, operated by the joint action of the crank-shaft D and the pivoted coupling-arms E, to give a greater vertical movement to the delivery than the receiving ends of said boxes, as and for the purpose described.

2. The combination, in a thrashing-machine, of an automatically-feeding platform of notched vibrating bars, C F, with an adjustable vibrating regulator, I J, and a thrashing-cylinder, as described.

3. The hinged guide-board N, in combination with the vibrating feeder C and thrashing-cylinder, as described.

4. An automatic grain-feeder for thrashing-machines, having a grain-feeding platform of vibrating notched bars, C F, an adjustable vibrating regulator and evener, I J, an operating crank-shaft, D, and hinged guide-board N, the several parts being constructed and arranged for joint operation as described.

In testimony whereof I have hereunto set my hand this 18th day of June, A. D. 1873.

JOSEPH MUSSON WILDERS.

Witnesses:

F. F. HIBBERT,

JOHN SWIFT.