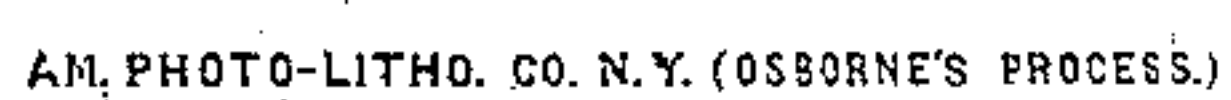


### Grain-Drill.

Patented Aug. 16. 1853.



# UNITED STATES PATENT OFFICE.

JACOB MUMMA, OF MOUNT JOY, PENNSYLVANIA.

## IMPROVEMENT IN DRAFT APPARATUS OF SEED-PLANTERS.

Specification forming part of Letters Patent No. 9,940, dated August 16, 1853.

*To all whom it may concern:*

Be it known that I, JACOB MUMMA, of Mount Joy, in the county of Lancaster and State of Pennsylvania, have invented a new and useful Improvement in Seed-Drills; and I do hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes it from all other things before known, and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings.

My improvement in seed-drills consists in combining a pole (for the horses) with a supporting and directing wheel, so as to relieve the horses from the strain they incur in other drills, and also to be enabled to run the drill straight forward or keep it in its course, even if the horses deviate considerably. To effect this I employ a pole, *p*, having a swing motion laterally and vertically, (see Fig. 4,) and a directing-wheel, *f*, serving also as a supporting-wheel for the front of the drill. With a fixed pole or shafts, as usually employed, there is no necessity of a supporting-wheel in front, and the weight of the drill is in part sustained by the horses; but in such cases when the plow enters the ground, then the pressure upon the horses becomes excessive. This evil is obviated by the employment of a pole having a vertical swing in combination with a supporting-wheel in front; and it is evident that neither

of these devices alone would answer the purpose to any practical extent, for if the supporting-wheel alone should be used with the ordinary single-tree attachment, then the drill would be very apt to run upon the horses' heels.

Another advantage I have gained by making the supporting-wheel to swivel, and thus become a guide wheel, in combination with the lateral swing of the pole, is that of keeping the drill in straight or parallel rows. It is difficult to do this with any drill with which I am acquainted upon the most level land, and upon uneven land impracticable. The directing-wheel is governed by the lever *h'* in the hands of the operator, which he secures in the notches *h*, or not, at pleasure. This wheel *f* swivels in the beam in the usual way of a swivel wheel; and it will be evident that the horses may deviate from the track while the drill is kept on in its course. This pole has the vertical and lateral swing by means of the common double-joint couplings. (See Fig. 4.)

What I claim as my improvement in seed-planters is—

The combination of a tongue having motion vertically and laterally with the directing and supporting wheel, substantially as set forth.

JACOB MUMMA.

Witnesses:

WM. GREENOUGH,  
JOHN L. SMITH.