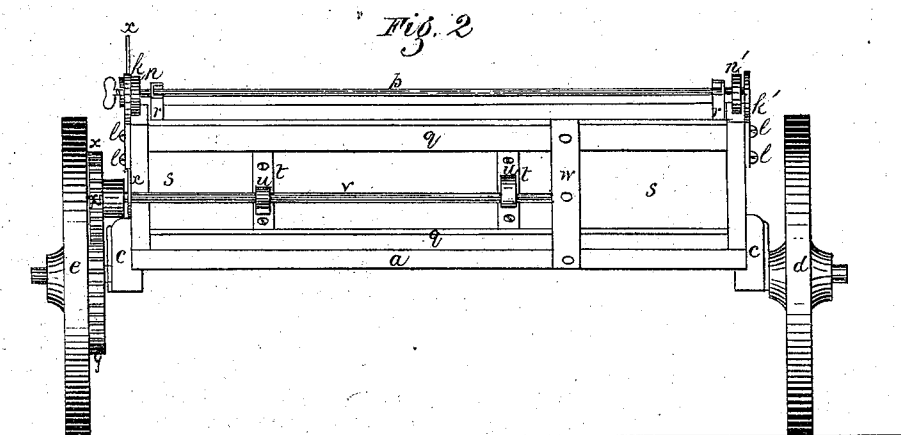
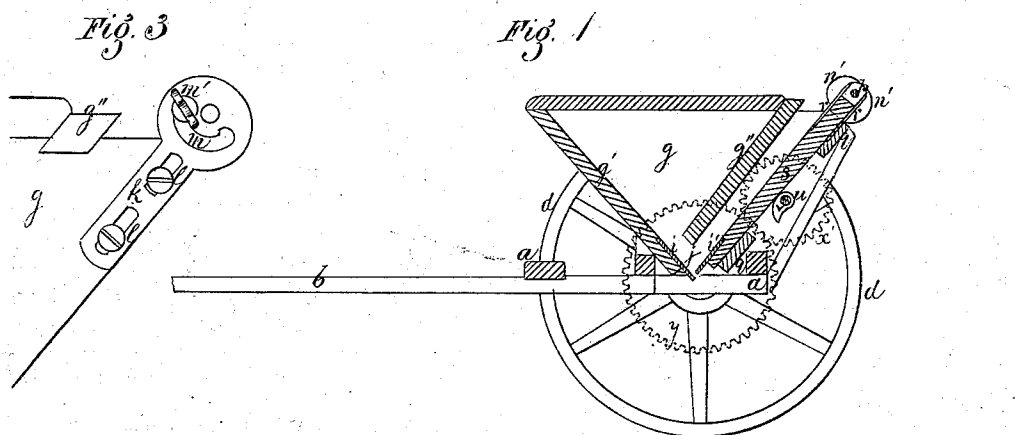


Grain-Drills.

Patented Feb. 18, 1873.



Witnesses
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James W. Leno.

Inventor
Sherman R. Myer
by his atty-
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UNITED STATES PATENT OFFICE.

SHERMAN R. NYE, OF WINCHENDON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND CHARLES J. RICE, OF SAME PLACE.

IMPROVEMENT IN GRAIN-DRILLS.

Specification forming part of Letters Patent No. 135,932, dated February 18, 1873.

To all whom it may concern:

Be it known that I, SHERMAN R. NYE, of Winchendon, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Machines for Sowing Seeds and Fertilizing Material, &c., of which the following is a specification:

Figure 1 of the accompanying drawing is a central vertical longitudinal section, and Fig. 2 is a rear view of my improved machine.

The present invention relates to certain new and useful improvements in machines for sowing seed, &c., and plaster or other fertilizing material; and has for its principal object the sowing of the seed, &c., by automatic means in an even, expeditious, and effective manner. My improvements consist in a device to accommodate the mouth of the body or hopper to different-sized seed or other material desired to be used.

In the drawing, *a* represents a bottom frame provided with shafts *b* or pole, and having on the sides suitable upright standards *c* for the support of axles, on which revolve wheels *d* and *e*. Connected with and extending up from the frame *a* is a hopper or body, *g*, formed with a sloping front, *g'*, and a sloping back, *g''*, inclining toward each other at the bottom, where they form a longitudinal outlet or mouth, *j*. The inside of the front *g'* is provided at the bottom with a longitudinal metal plate, *i*. Connected with the sides of the hopper *g*, at the rear, are adjustable standards *k k'* formed with slots to admit of their up and down adjustment on, and of their being held by, screws *l*, or otherwise suitably arranged to allow of their being readily raised and lowered. One of the standards *k* is formed in the upper portion with a curved slot, *m*, which receives a thumb-screw, *m'*, provided with a suitable screw-nut and washer and connecting with a cam, *n*, attached to near the end of a longitudinal rod, *p*, which has a similar cam, *n'*, near its other end, the ends of the rod *p* being supported by the adjustable standards *k k'*. Hung to the rod *p* by metal plates *r*, or otherwise connected to it so as to turn and be raised or lowered, is an inclined back or apron, *s*, which extends down behind and below the back *g''*, and be-

tween it and an inclined open frame, *q*, connected with the rear end of the sides of the hopper *g*, which extend beyond the back *g''*; or the apron may be arranged to form the back of the hopper *g*. The back or apron *s* is provided on the inside at the bottom with a longitudinal metal plate, *i'*, and on the back with a suitable plate or plates, *t*, to receive the action and prevent the wear on the apron of an eccentric cam or cams, *u*, connected with and operated by a longitudinal arbor, *v*, one end of which turns in a bearing supported by a vertical bar, *w*, attached to the frames *a* and *q*; and the other end being supported by the side of the hopper *g* and the bottom of a pivoted lever, *x*, which is provided for the purpose of throwing the arbor *v* in and out of gear. The arbor *v* is connected with and revolved by a gear-wheel, *x'*, that engages with and is actuated by a gear-wheel, *y*, connected with, so as to be revolved by, the wheel *e*.

The operation of my invention is as follows: Seed or fertilizing material, &c., being deposited in the hopper *g*, and the machine being propelled, the arbor *v* is, by the action of the gear-wheels *x'* and *y*, to which motion is imparted by the wheel *e*, revolved so that the cam or cams *u* are alternately carried against and released from the plates *t*, so that the back or apron *s* turning on the rod *p* is carried back and forth so that the bottom of the back or apron *s* is brought toward or carried from the bottom of the inclined front *g'*, so as to close and open the mouth *j* through which the seed or fertilizer, &c., is thus at regular intervals allowed to fall so as to be evenly deposited on the ground. The apron or back *s* is raised or lowered so as to enlarge or lessen the outlet or mouth *j*, so as to permit seeds, &c., of various sizes to be used and to increase or diminish their flow by means of the cams *n n'* connected with the rod *p* and operating on the top of the sides of the hopper *g*, they being adjusted and held in the desired position by the thumb-screw *m'* traveling in the curved slot *m*, and by means of the adjustable standards *k k'* or by any other suitable arrangement of mechanism for obtaining like results that may be preferred.

Having thus fully described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

A back or apron, *s*, turning on a rod, *p*, provided with eccentric cams *n n'* adjusted by a thumb-screw, *m'*, engaging in a curved slot, *m*, formed in one of two adjustable standards, *k k'*, connected with a hopper or body, *g*, of a sowing-machine, so as to raise and lower the

apron or back *s*, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SHERMAN R. NYE.

Witnesses:

A. H. MERRILL,
E. S. MERRILL.