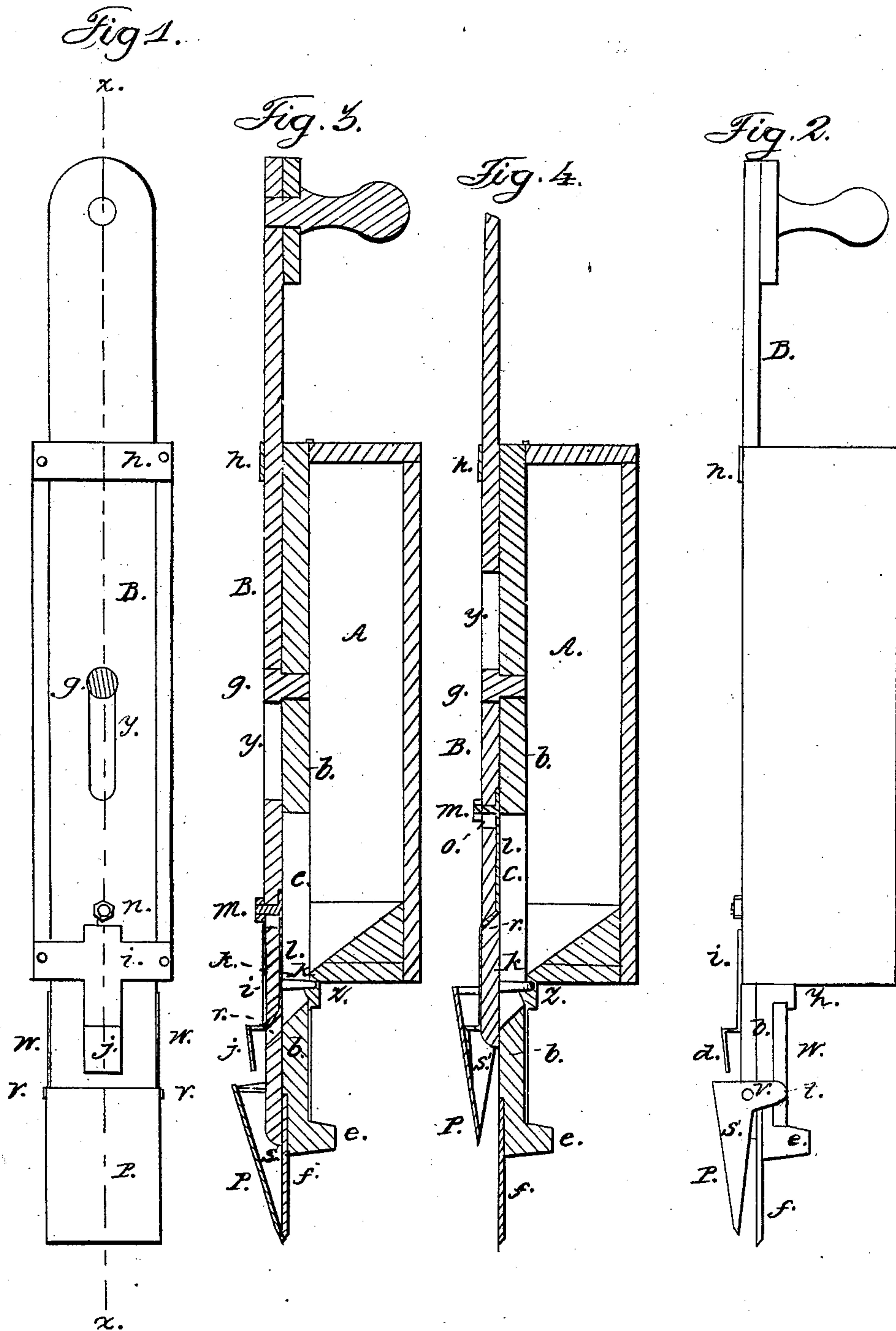


C. H. DANA.

Hand-Seeder.

No. 12,995.

Patented June 5, 1855.



# UNITED STATES PATENT OFFICE.

CHARLES H. DANA, OF WEST LEBANON, NEW HAMPSHIRE.

## IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 12,995, dated June 5, 1855.

*To all whom it may concern:*

Be it known that I, CHARLES H. DANA, of West Lebanon, in the county of Grafton and State of New Hampshire, have invented a new and Improved Seed-Planter; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification—

Figure 1 being a front elevation of my improved seed-planter; Fig. 2, a side elevation thereof; Fig. 3, a section in the line *x x* of Fig. 1; and Fig. 4, a central section, showing the seeding apparatus in a different position from that shown in Fig. 3.

Similar letters indicate like parts in all the figures.

My new and improved seed-planter is composed of the seed-box A and the staff B, together with their attachments, which are combined with each other, substantially as represented in the drawings and hereinafter described.

The front side, *b*, of the seed-box descends a short distance below the body of the box, and has a steel plate, *f*, secured to it, which is flush with the face thereof, and descends below its lower extremity a distance equal to the depth which it is desired to insert the seeds in the ground. The lower extremity of the projecting portion of the box-front *b* is prevented from entering the ground during the planting operation by its lateral projection or shoulder *e*. The sides of the seed-box project forward beyond the front *b* thereof far enough to form a recess for the reception of the staff B between them, and the staff is secured in said recess by means of the transverse plates *h i*, (which are secured to the edges of the sides of the box,) and by the pin *g*, which projects from the front of the box into the slot *y* in the staff. This arrangement allows the box to slide freely upon the staff a distance equal to the length of the said slot *y*. A slot, *c*, is formed in the center of the front side, *b*, of the box, which slot descends a short distance below the bottom of the box, and a brush, *k*, inserted into the projection *z*, just below the bottom of the box, fits into the slot *c* and forms the lowest extremity of the seed-box, as shown in Figs. 3 and 4.

A vibrating mouth piece, *p s s*, is connected to the lower end of the staff B by means of

the sides *s s* of the said mouth-piece embracing the edges of the staff and the joint-pins *v v* passing through the said sides of the mouth-piece into the staff, as shown in Fig. 2. When the seed-box is at its lowest position upon the staff B the lower extremity of the portion *p* of the said mouth-piece is in contact with the lower extremity of the plate *f* and the sides *s s* of said mouth-piece are in contact with the edges of said plate, as shown in Fig. 3, which forms a depositing mouth or receptacle for conveying the seeds into the ground. Ears *t t* project rearward from the upper extremities of the sides *s s* of the vibratory mouth-piece and closely embrace the metallic plates *w w* on the edges of the lower portion of the staff B, as shown in Fig. 2. It will consequently be perceived that an upward sliding movement of the staff upon the seed-box will cause the friction of the ears *t t* against the plates *w w* to open the vibratory mouth-piece, as shown in Figs. 2 and 4, and a downward sliding movement of said staff upon the seed-box will instantly throw the said vibratory mouth-piece into the closed position shown in Fig. 3.

The seeds are conveyed into the said depositing-mouth by means of the inclined aperture *r* in the staff B, which is covered during a portion of the movement of the box upon the staff by the plate *i*, and operates as follows, to wit: When the planter is held by the staff the weight of the seed-box will carry it to its lowest position upon the staff, as shown in Fig. 4. In this position the seeds in the box, having free access to the aperture *r* in the staff, will fill it, and when the staff B is made to slide downward upon the seed-box in the planting operation the said movement will first close the mouth-piece *p s s* upon the incising-plate *f* and form a closed mouth for the reception of the seeds. The aperture *r* will carry its seeds below the brush *k*, and will discharge them at its outer orifice as soon as it is opened by passing below the inclosing-plate *i* into the position shown in Fig. 3. The said position, (represented by Fig. 3) is obtained at the moment that the shoulder *e* at the lower extremity of *b* strikes against the ground. The seeds are guided into the planting-receptacle as they emerge from the orifice *r* by the projection *j* from the plate *i*, (represented in Figs. 3 and 4.) As soon as the staff B is drawn upward the



action of the shoulders *t t* of the mouth-piece *p s s* against the plates *w w* will throw open the said mouth-piece into the position shown in Fig. 2, and consequently cause the seeds to be deposited at the extreme bottom of the incision formed by the planting-receptacle as it is forced into the ground.

The size of the seeding-aperture *r* may be varied at pleasure by means of the sliding plate *l*, the set-screw *m*, and the slot *o*, (represented in Figs. 3 and 4,) or by any other method that may be deemed expedient. The depth that it may be desired to deposit the seeds in the ground by the use of this apparatus may be governed by varying the length of the slot *y* in the staff in any convenient manner.

The projection *j* at the lower extremity of the plate *i* not only serves to guide the seeds into the planting-receptacle, as before described, but it also serves to open the mouth-piece *p s s* when the handle *B* is drawn into the position shown in Fig. 4, in case the ears *t t* of said mouth-piece should fail to perform their duty in consequence of the too close adhesion of the mouth-piece to the plate *f*, produced by its being operated in a moist and adhesive soil.

Having thus fully described my improved seed-planter, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The arrangement of the hinged vibratory mouth-piece *p s s* at the lower end of the staff *B* with the projecting portion of the front side, *b*, of the seed-box, and with the incision-plate *f* descending therefrom in such a manner that a downward-sliding movement of the said staff upon the seed-box will close the said mouth-piece upon the incision-plate and form an incising planting-receptacle for depositing the seeds in the ground, and an upward-sliding movement of the said staff upon the seed-box will force open the said mouth-piece and leave the seeds in the extreme bottom of the incision formed by the said planting-receptacle, substantially as herein set forth.

2. The arrangement by which I positively insure the opening of the mouth-piece *p s s* of the planting-receptacle at each upward movement of the handle *B*—viz., by means of the projecting portion *j* of the plate *i*, which is secured to the seed-box or its equivalent, operating substantially as herein set forth.

The above specification of my improvement in seed-plinters signed and witnessed this 17th day of January, 1855.

CHAS. H. DANA.

Witnesses:

O. F. RUSS,  
ELIJAH BLASDELL.