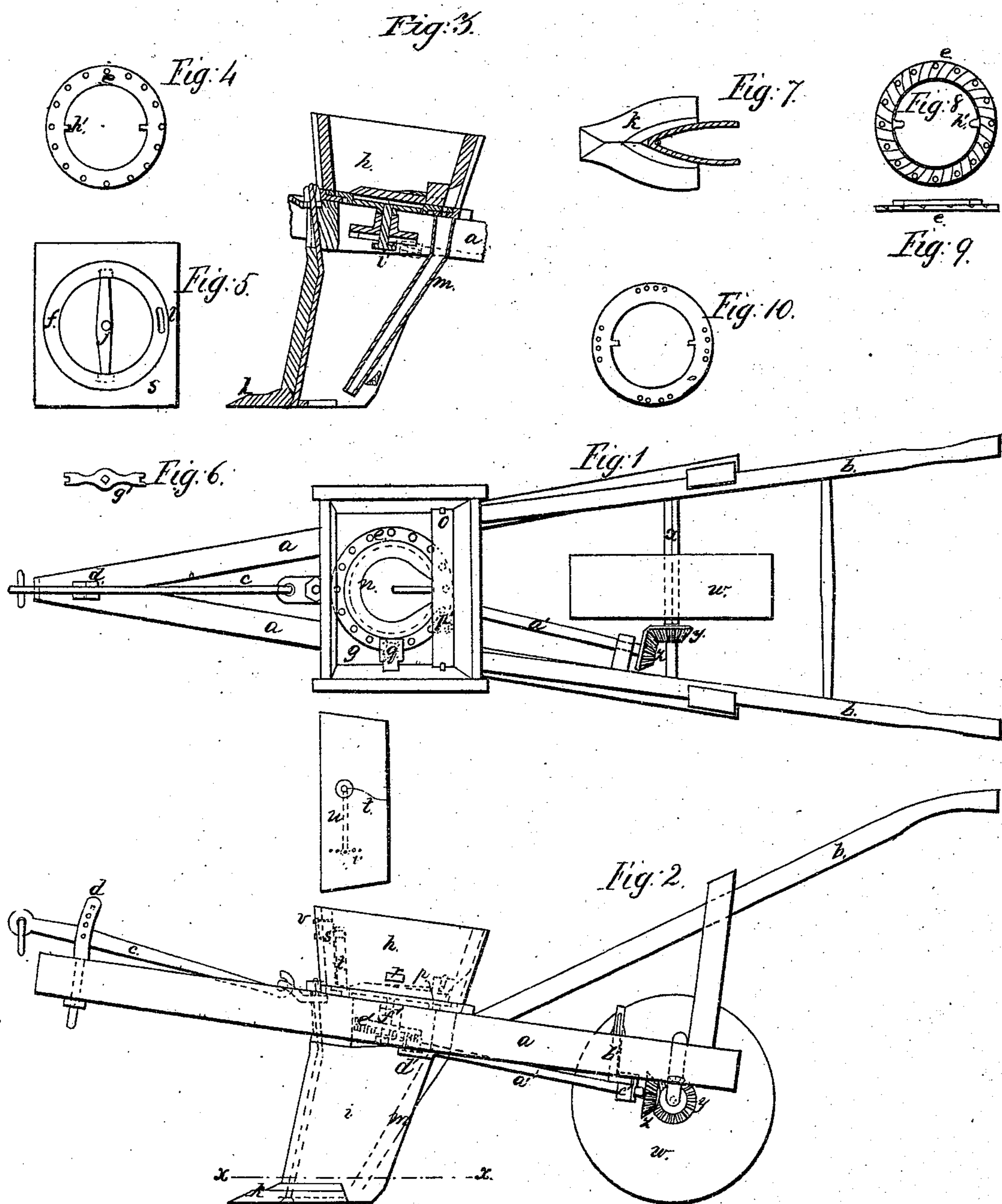


D. & H. Wolf.

Seed Planter.

N^o 10,682.

Patented Mar. 21, 1854.



UNITED STATES PATENT OFFICE.

DAVID WOLF AND HERMAN WOLF, OF NORTH LEBANON, PENNSYLVANIA.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 10,682, dated March 21, 1854.

To all whom it may concern:

Be it known that we, DAVID WOLF and HERMAN WOLF, of Lebanon, in the county of Lebanon and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Planting Corn and other Seeds; and we do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a plan or top view of the machine. Fig. 2 is a side elevation. Fig. 3 is a longitudinal vertical section of the central part of the machine. Fig. 4 is a top view of perforated plate. Fig. 5 is a top view of the bottom of the hopper or bed for the perforated plate. Fig. 6 is a notched cross-bar. Fig. 7 is a horizontal section of the double mold-board in the line *x x*, Fig. 2. Fig. 8 is the under side of perforated plate. Fig. 9 is the end view of the same. Fig. 10 is a perforated plate for planting in hills.

The same letters of reference indicate the same parts in the different figures.

The nature of our invention consists in forming on the under side of the perforated plates of rotary-action planting-machines certain curved grooves, to be hereinafter described.

The construction and operation of the machine are as follows, viz:

To the frame *a*, which is composed of two pieces meeting in front and diverging thence to the rear end, the handles *b* are attached, also the draft-bar *c* and clevis *d*.

An annular perforated plate, *e*, fits loosely in a circular rabbet, *f*, in the square plate or bed *g*, which is bolted to the frame *a*, and has a circular opening corresponding in size and position with the opening in the plate *e*. The hopper *h* is placed upon and is attached to the plate *g*.

To the under side of the frame *a* is secured a double mold-board plow, *i*, with cutting-edge in front and double-edged shovel-shaped share *k*.

Under the plate *g*, and corresponding with an oblong opening, *l*, in the rabbet *f*, is placed a tube, *m*, extending thence to the ground between the wings of the plow *i*.

The circular hopper-bottom *n*, a little larger than the openings in the plates *e* and *g*, is fastened to and sustained by a cross-piece, *o*, at-

tached to the rear end of the hopper *h*, on the inside.

To the under side of the cross-piece *o*, and bearing upon the annular plate *e*, is attached an elastic brush, *p*. Another brush, *q*, is attached to the inside of the hopper *h* at *r*, also bearing upon the plate *e*.

In the front end of the hopper *h*, and having its bearing therein, is a small shaft, *s*, to the inner end of which is attached an elastic scraper, *t*, the lower end of which bears upon the perforated plate *e*. On the outside end of the shaft *s* is keyed an arm, *u*, which is furnished with a hole at the end, through which a pin, *v*, passes into any one of a series of holes bored in the front of the hopper *h* in an arc of a circle of which the arm *u* is the radius, thus forming an adjustable apparatus by which the pressure of the scraper *t* against the surface of the plate *e* is regulated according to circumstances. The object of the scraper *t* is to cause the grains of corn or other flat seeds to lie upon their flat sides in the holes in the perforated plate *e* as they pass in succession under it, and if two grains should present themselves endwise or upright one will be scraped out and the other laid flat. If by accident both grains should be scraped out, the hole has ample opportunity to fill again in its passage under the brushes *p* and *q* to its outlet at *l*; but this contingency will seldom occur, as the scraper is capable of such delicate adjustments by means of the apparatus above described that its action is tolerably certain, and, if found necessary, one or more extra scrapers of similar construction can be added.

The roller *w* is fixed to the shaft *x*, which has its journals attached to the frame *a* at the rear end of the machine. The roller *w* serves a twofold purpose—viz., to cover the seed and close the earth over it, and to act as a driving-wheel to the internal machinery when the team is in motion. This is effected by placing on the shaft *x* a bevel-wheel, *y*, which works into another bevel-wheel, *z*, on the end of the longitudinal shaft *a'*. This shaft is supported at its rear end by the adjustable journal-box *c'*. This journal-box is made in the form of a right angle, the vertical or depending portion containing the bearing of the shaft *a'*, and the horizontal portion placed transversely on the under side of one of the frame-pieces *a*, where it is held in position by the hooked bolt *v'*,

which passes through the frame-piece *a*, and, by means of the nut and screw-thread on top of the frame, holds the journal-box *c'* firmly in its place, unless it is required to be shifted to accommodate a larger or smaller wheel, when different relative speed is required in the machine, in which case, the nut being unscrewed, the journal-box *c'* is readily adjusted and again secured by screwing down the nut.

The shaft *a'* is journaled at its forward end in the cross-piece *i'*, attached to the under side of the frame *a*, and is furnished with a pinion, *d'*, working in the toothed wheel *e'*, fixed on the vertical shaft *f'*, which has its journals in the cross-piece *i'*, and another cross-piece, *j*, attached to the plate *g*.

On a square on the top of the shaft *f'* is placed a movable cross-piece, *g'*, notched at the ends to fit the projections *h'* on the inside of the revolving perforated plate *e*. The plate *e* has on its under side a series of curved grooves, as represented in Figs. 8 and 9, which are intended to conduct all dirt, chaff, &c., which may insinuate itself between the plates *e* and *g* toward the periphery of the plate *e*, whence it falls through the opening *l* into the tube *m*. This is an important improvement, and obviates the difficulties occasioned by an accumulation of dirt, &c., between the plates, which, by separating them, may occasion derangement and irregularity in the operation of the machine in consequence of the small end of a grain of corn getting jammed between the plates.

The plate *e*, in the proportion as represented in Fig. 4, is calculated to plant corn in drills by single grains about one foot apart; but by another arrangement of holes, as in Fig. 10, we are enabled to plant three or four grains about one inch apart, then leave a vacancy of three

or four feet, thus leaving the corn in hills, which will allow it to be worked both ways, if attention is paid to starting the first hills at the end of the field in a true line.

When the team attached to the machine is set in motion, the hopper *h* being filled with corn, the plow *i* opens the furrow, and is followed by the roller *w*, bearing upon the ground, which, by means of the shaft *x* and wheels *y* and *z*, communicate motion to the shaft *a'* and pinion *d'*, which move the wheel *e'* and shaft *f'*, while the cross-bar *g'*, fitted on a square on the upper end of the shaft *f'*, causes the annular perforated plate *e* to revolve in the circular rabbet *f*, each hole in the plate *e* being of suitable size to contain only one grain of corn laid flatwise. If two should enter in any other position, one will be removed by the adjustable scraper *t* and the other placed in the proper position. The grain thus placed in the hole is carried round to the opening *l* in the plate *g*, through which it falls into the tube *m*, which conducts it into the furrow, where it is covered by any of the usual contrivances, and the earth is pressed upon it by the roller *w*.

What we claim as our invention, and desire to secure by Letters Patent, is—

The combination of annular revolving perforated plate *e*, with curved grooves on the under side thereof, constructed substantially in the manner and for the purposes described.

In testimony whereof we have hereunto signed our names before two subscribing witnesses.

DAVID WOLF.
HERMAN WOLF.

Witnesses:

JAC. B. WEIDLE,
JACOB WEIDLE.