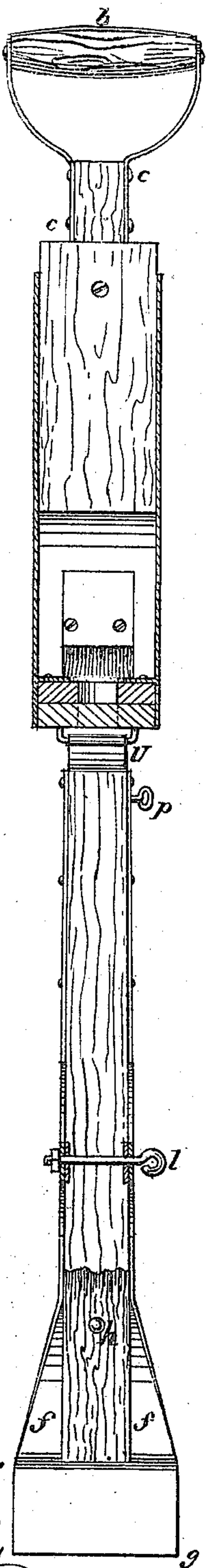
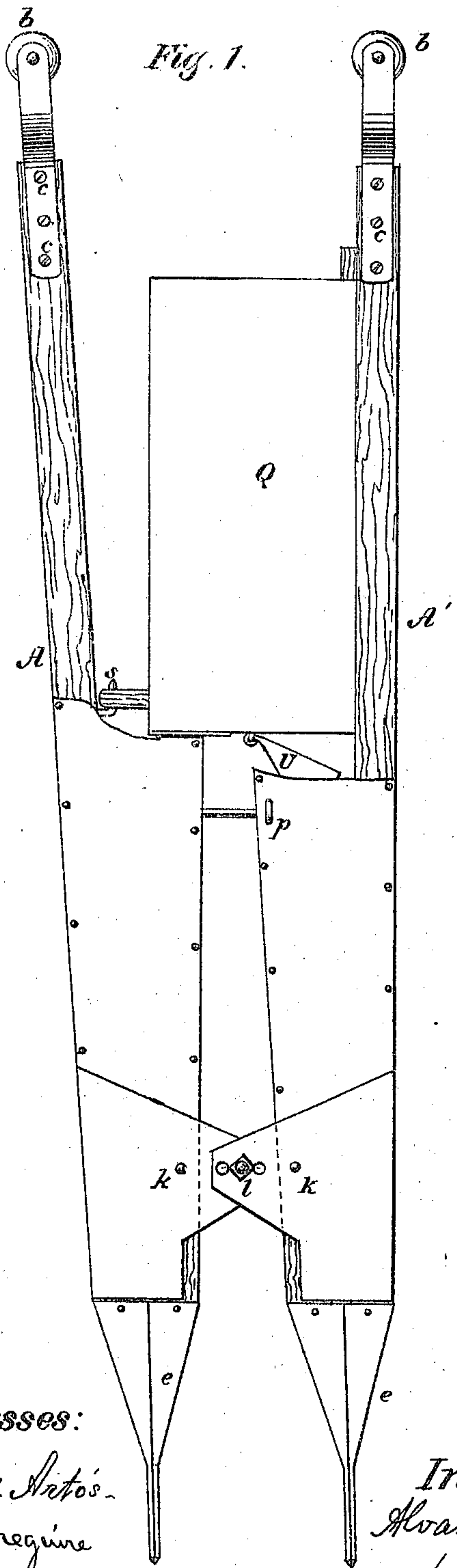


A. B. BUREN.
Corn-Planters.

No. 134,356.

Patented Dec. 31, 1872.



Witnesses:
Fred K. Arto's
J. F. Meguire

Inventor:
Alvan B. Buren
by his Attorney
[Signature]

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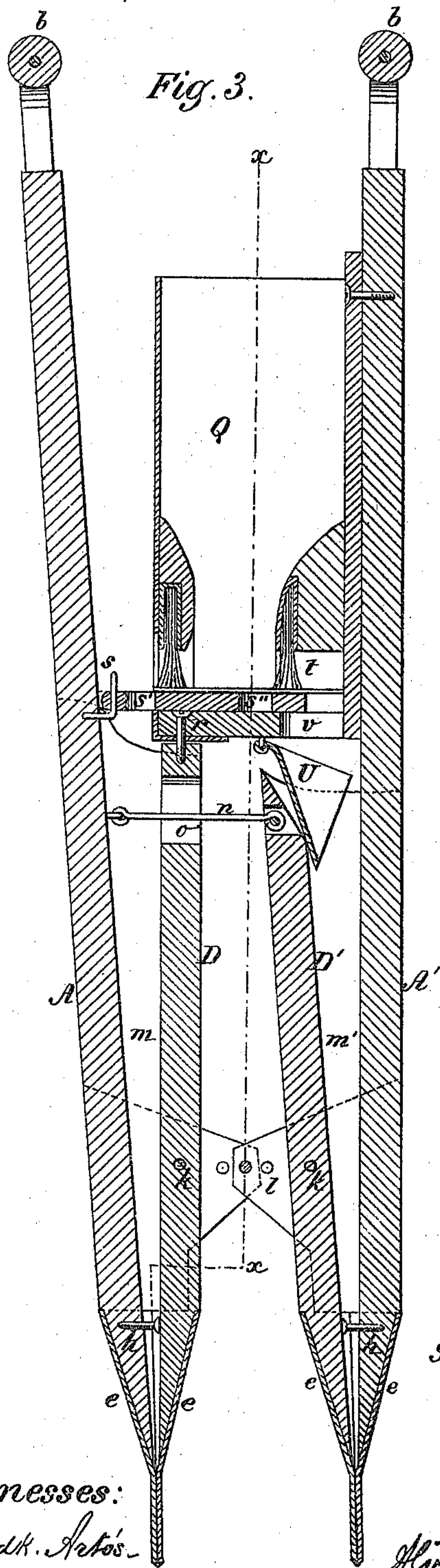


Fig. 3.

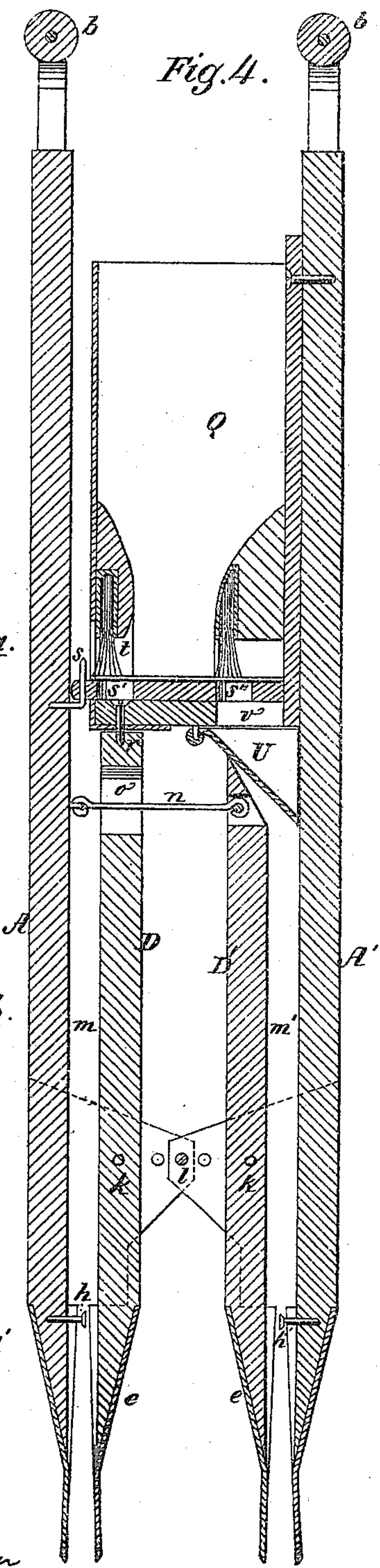


Fig. 4.

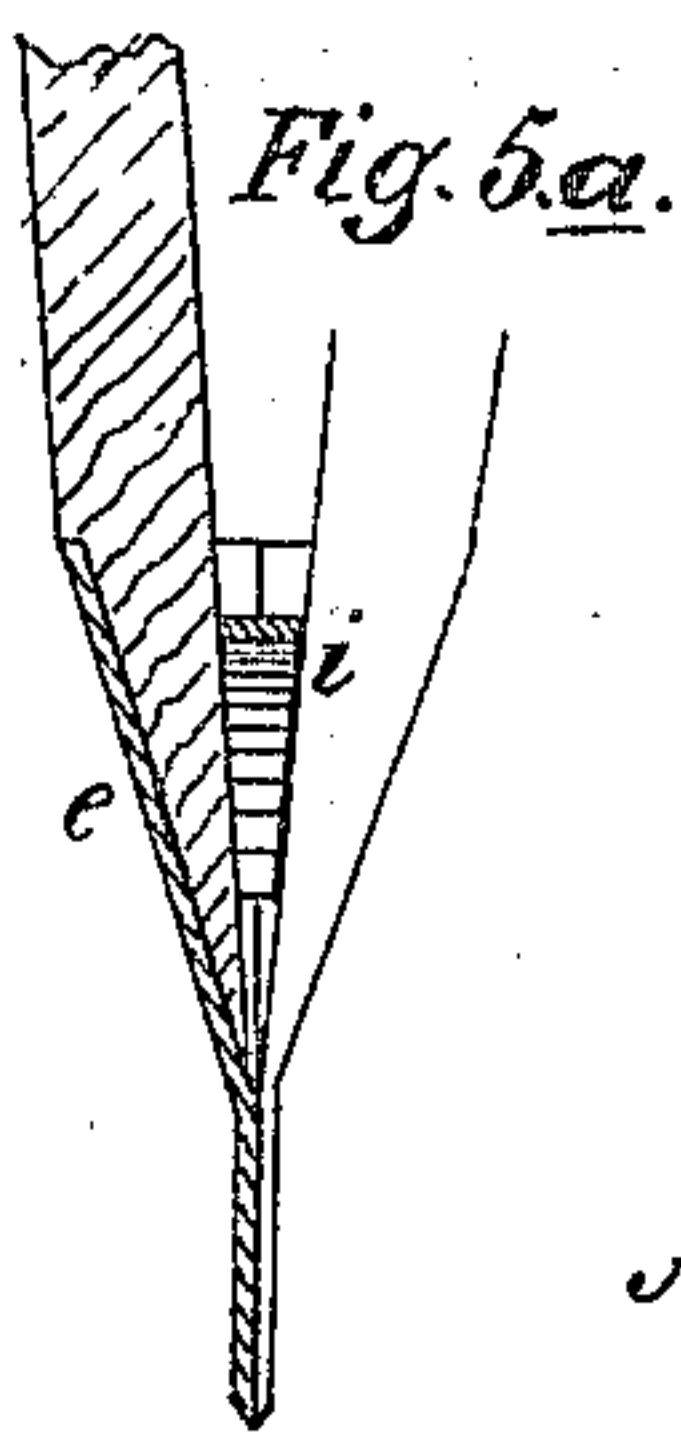


Fig. 5.a.

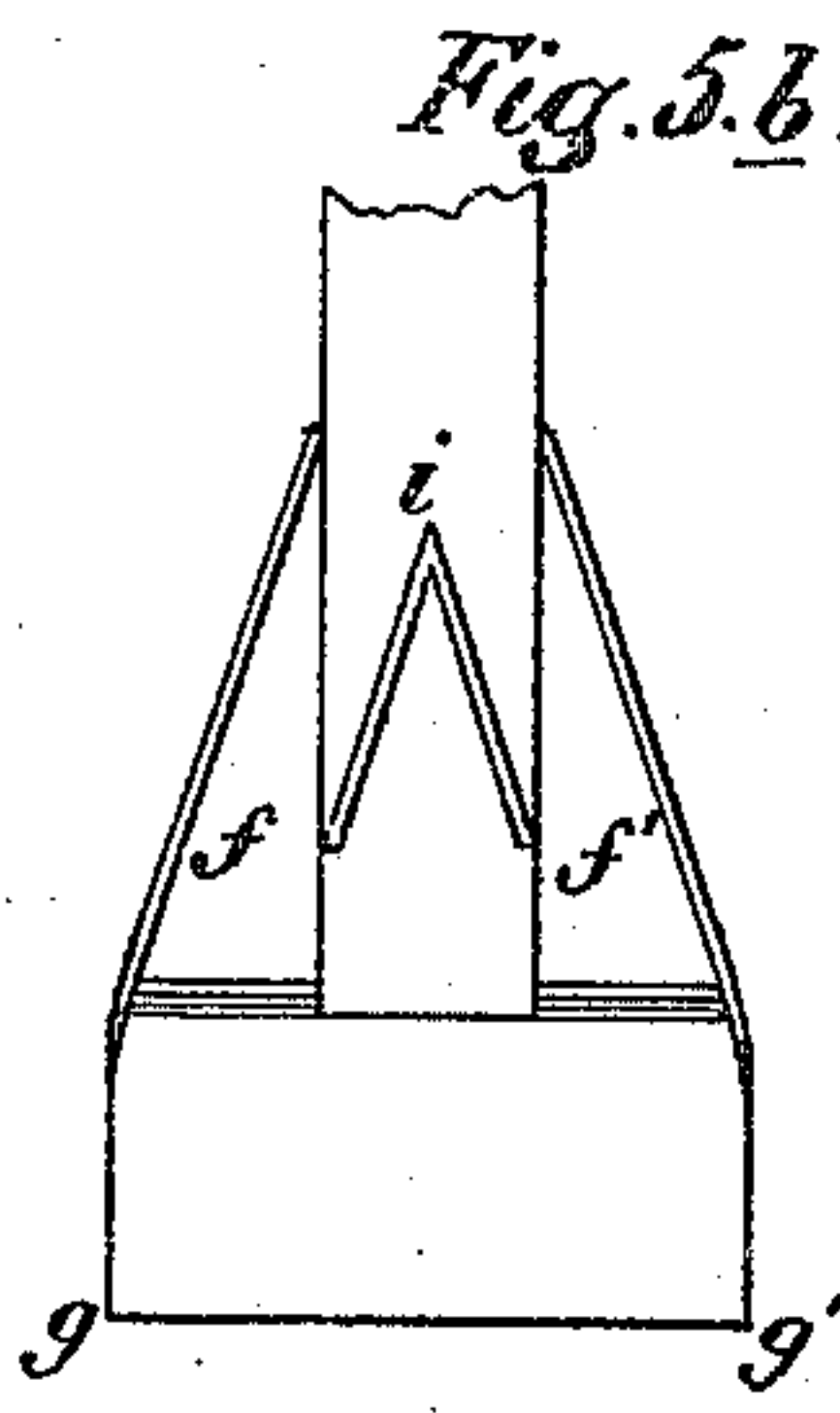


Fig. 5.b.

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by his Attorney

UNITED STATES PATENT OFFICE.

ALVAN B. BUREN, OF TRENTON, MISSOURI.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. 134,356, dated December 31, 1872.

To all whom it may concern:

Be it known that I, ALVAN B. BUREN, of Trenton, Grundy county, Missouri, have invented certain new and useful Improvements in Corn and Seed Planters; and I hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and the letters of reference marked thereon making part of this specification.

Figure 1 is an elevation. Fig. 2 is a section on line *x x*, Fig. 3. Fig. 3 is a sectional view of Fig. 1. Fig. 4 is a sectional view, showing the mode of operation. Figs. 5^a and 5^b are details, showing a modification.

My invention relates more particularly to hand corn-planters, but is applicable in many of its features to those operated by horse-power. The improvement consists in the combination and arrangement of the different parts, as hereinafter described.

A A' are the outer legs, made of strong wood, about one inch by seven-eighths in thickness. The handles *b b* at the upper end have their axes parallel to each other, and are adjusted by screws or bolts *c c*, to suit the height or convenience of the operator. D D' are the inner or shorter legs, of the same thickness, but only about half the length of A A'. The outer surfaces of the lower ends or feet of these legs are beveled, as seen at *e e*, and shod with metal plates. These plates are fitted upon the legs in such a manner as to form, when each pair of feet are brought together, a box-spade of such shape as will freely shed the dirt from the outside and contain within it channels *f f'* whereby the seed will be directed toward and fall from the outer corners *g g'* of the spades when the feet are separated. A scattering-pin, *h*, is inserted in the legs near the feet, for the purpose of throwing the grain outward and prevent its falling into the ground too closely together. Instead of the scattering-pin, a wedge-shaped block may be used, as shown at *i*, Figs. 5^a and 5^b. Each pair of legs A D and A' D' are coupled together by plates of metal fastened to A and A', and working upon pivots *k* in D and D'. This coupling can be extended or shortened, to increase the distance at which the grain shall be dropped, by shifting the coupling-pin *l* into the adjoining holes. Above the coup-

ling-plates each of the inner legs is connected to the outer one by flexible leather or cloth, so as to form narrow spouts or chutes *m m'*. The short rod *n* fastened to A and passing through a slot, *o*, in D, is secured to D' by the key-pin, *p*, and effects a simultaneous opening and closing of the spouts *m m'*. The hopper Q is fastened to the inside of A', and a tenon or pin, *r*, in the top of D, inserted in the bottom of the hopper, holds the two legs D and A' at the proper distance apart. The movable seed-slide, working in a slot in the hopper, is hooked upon A at *s*. This slide has round seed-cells *s' s''*, and the quantity of seed to be dropped can be increased by changing it for another with larger cells. The cut-off brushes are shown at *t*. The upper end of the leg D' is beveled, and automatically closes the angular box U, hinged to the bottom of the hopper against the aperture *v*, in order to receive and hold the grain until the proper moment to drop it into the chute *m'*. The throat of the hopper is narrowed by the conformation of the brush-blocks, and is therefore not liable to choke from the weight of the grain above.

The planter is operated by pressing together the handles *b b*, when a small quantity of grain will be forced from the hopper into the box U through the cell *s''* and aperture *v*. Separating the handles will open the chutes *m m'*, and draw out a small quantity of grain in the cell *s'*, which will fall into the chute *m*, while the grain in the box U simultaneously falls into *m'*, and is scattered by the pin *h* into the channels *f f'*. The spades being now inserted into the ground and the handles brought together again, as in Fig. 4, the seed will be dropped into the ground from the corners *g g*, simultaneously, and nearly in the form of a square, when four seeds only are dropped. By changing the slide for another with larger cells, a greater number of seeds can be dropped, but always in parallel rows, so that one row, if there be found too many plants, can be readily taken up by the plow without disturbing the other. The distance of these rows may be regulated by the pin and holes *l* in the coupling-plate. By using separate chutes and two droppers on one hill, I avoid the common liability to miss the dropping altogether, and secure the placing of the seeds at such distance apart as avoids bunch-

ing. The hopper being placed between the side pieces and supported on one of the short legs, the weight is equalized on both hands, and the planter may consequently be constructed of comparatively light materials.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. The combination of the two spouts or chutes *m m'*, formed by the legs *A D* and *A' D'*, and operated together upon the pivots *k k* by means of the rod *n*, substantially as shown and described, and for the purposes set forth.

2. The arrangement of the shifting coupling and pin *l*, in combination with the pivots *k k*, tenon *r*, and legs *A D* and *D' A'*, substantially as described and shown, and for the purposes indicated.

3. The rod *n* and key-pin *p*, in combination with the slot *o*, pivots *k k*, and legs, substan-

tially as shown and described, and for the purposes set forth.

4. The hinged box *U*, in combination with the beveled top of the leg *D'*, operated by the side piece *A* and rod *n*.

5. The channels *f f'* and spades *g g*, constructed as described and shown, and for the purposes set forth.

6. The arrangement of a corn-planter with the seed-hopper placed between the side pieces *A A'*, and supported upon the leg *D*, in combination with the hinged box *U*, the chutes *m m'*, the rod *n* and shifting coupling.

In testimony that I claim the above I have hereunto subscribed my name in presence of two witnesses.

Witnesses: ALVAN B. BUREN.

F. W. LOWEN,
DAVID CROOKS.