

T. CRANE.
Hand-Seeder.

No. 17,080.

Patented Apr. 21, 1857.

Fig. 1.

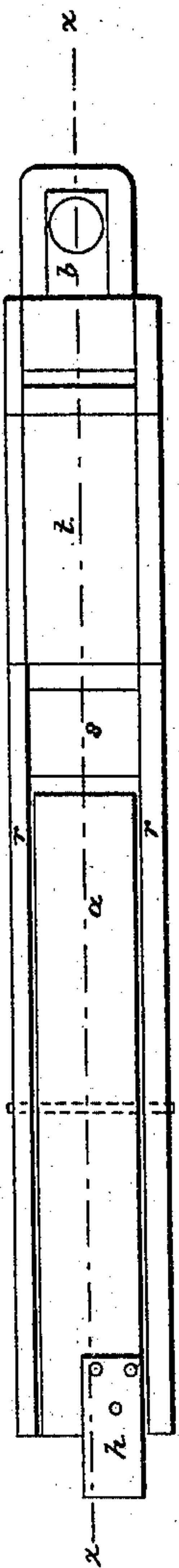


Fig. 2.

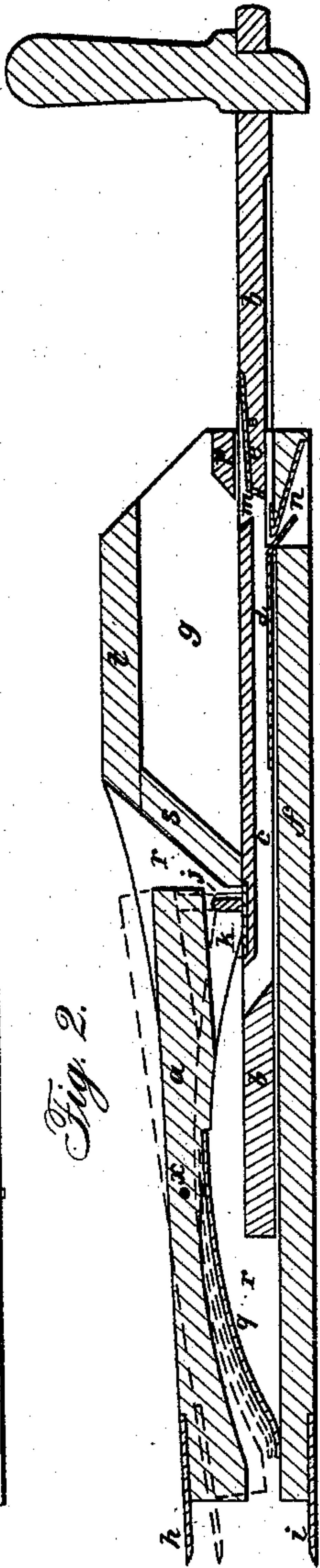


Fig. 3.

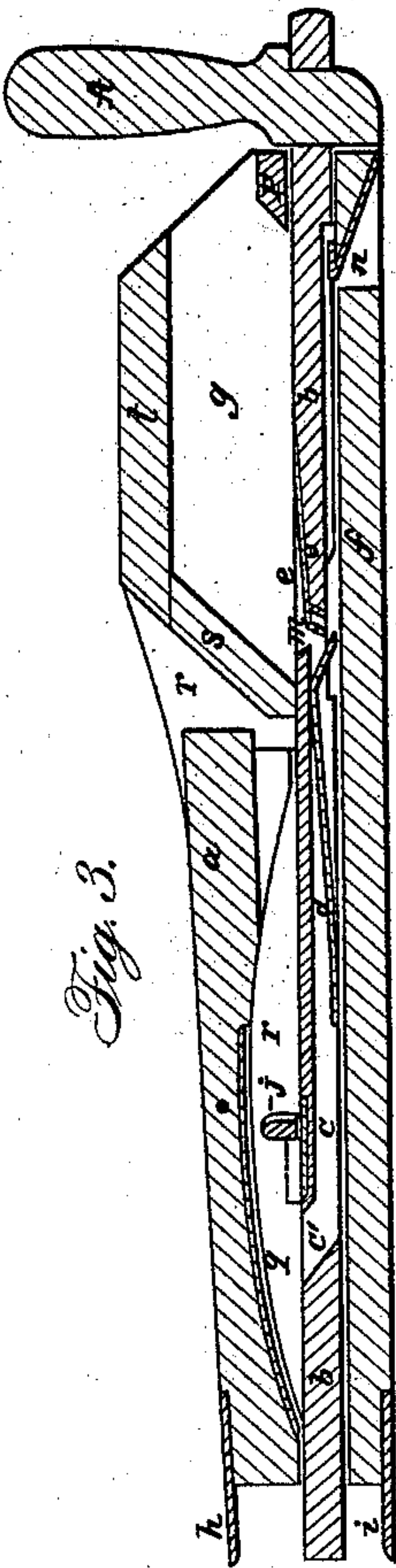


Fig. 4.

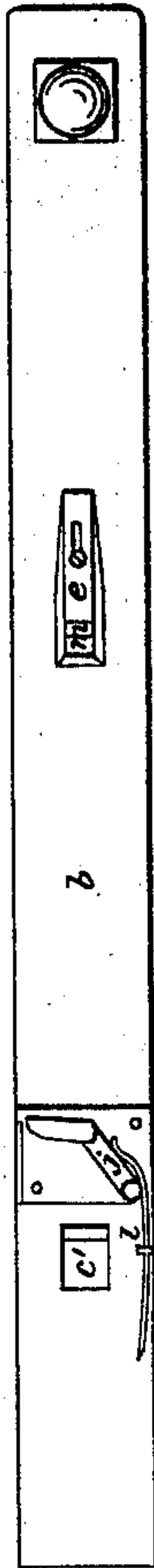


Fig. 5.

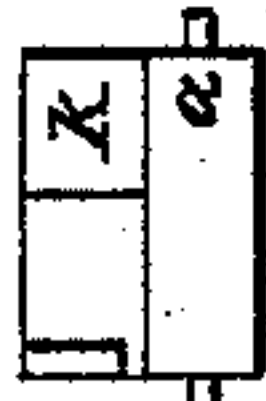


Fig. 6.



UNITED STATES PATENT OFFICE.

THOMAS CRANE, OF FORT ATKINSON, WISCONSIN.

IMPROVEMENT IN HAND SEED-PLANTERS.

Specification forming part of Letters Patent No. 17,080, dated April 21, 1857.

To all whom it may concern:

Be it known that I, THOMAS CRANE, of Fort Atkinson, in the county of Jefferson and State of Wisconsin, have invented a new and useful Improvement in Hand Seed-Planters; 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 is a front view of my improved planter; Figs. 2 and 3, longitudinal sections in the line *x x* of Fig. 1; Fig. 4, an outside view of the sliding slat *b* detached; Fig. 5, an inside view of said slat; and Fig. 6, an end view of the oscillating portion *a* of the planter, detached.

Similar letters refer to corresponding parts in all the drawings.

The body of my improved seed-planter is composed of the back *f*, the sides *r r*, the bottom and front side, *s t*, of the seed-box *g*, and the guiding cross-bar *p*. The sliding slat *b* works freely within the body of the planter, being guided in its movements between the back and sides thereof by the inner extremity of the bottom *s* of the seed-box, acting in conjunction with the guiding cross-bar *p*.

Below the seed-box an oscillating block, *a*, which has a concave inner surface, is pivoted between the sides *r r* of the body of the planter. A spring, *q*, whose width corresponds with that of the block *a*, is combined therewith, and acts against the back *f* of the planter in such a manner as to throw outward the lower extremity of said block and bring the shoulder *k* at its upper extremity in contact with the outer side of the sliding slat *b*, as shown in Fig. 2, thereby forming a receptacle within the spring *q* for the portion of seeds which the upward movement of the sliding slat *b* removes from the seed-box *g*, preparatory to depositing the same in the ground during the downward movement of said slat.

An angular-shaped arm, *j*, is pivoted to the portion of the sliding slat *b* which is embraced by the concavity of the block *a*, and is acted upon by a spring, *l*, in such a manner as to throw it into the position shown in Fig. 4 when the said arm is not otherwise acted upon. When the slat *b* is drawn upward, the arm *j* passes under and beyond the shoulder *k* of the block *a*, which movement, in conjunction with the action of the spring *q*, suddenly oscillates the said block upon its central pivots. The

said slat is arrested in its upward movement by the striking of the arm *j* against the lower extremity of the bottom *s* of the seed-box, as shown in Fig. 2.

A longitudinal groove, *c*, is formed in the inner side of the sliding slat *b*, which groove communicates with the opposite side of the slat by means of apertures at each extremity of said groove, as shown in Fig. 3.

A flat spring, *d*, is secured to the inner side of the sliding slat *b*, as shown in Fig. 5. The width of the spring *d* is such that it springs freely into the groove *c* in said slat, and the shape of the upper end of said spring is such that when it is permitted to spring inward it will form a pocket within the aperture *m* at the upper end of the groove *c*, for the reception of the proper number of kernels or seeds to be planted at one operation; and just before the said sliding slat reaches its extreme upper position the upper extremity of the spring *d* will pass into the inclined aperture *n* in the back *f* of the planter and be drawn outward into the position shown in Fig. 2 at the time the said slat reaches its extreme upper position, and thereby permits the seeds carried upward by said spring within the aperture *m* to descend freely within the groove *c* and pass through the aperture *c'* at its lower extremity into the receptacle within the concavity of the spring *q* of the oscillating block *a*. Then the downward movement of the sliding slat *b* will drive the seeds or kernels forward before its lower end and deposit them in the earth.

An incising-plate, *i*, projects from the lower extremity of the back *f* of the planter, and a similar incising-plate, *h*, projects downward from the lower extremity of the oscillating block *a*. Should any of the kernels or seeds fail to be thrust into the ground by the lower end of the sliding plate *b*, the sudden inward movement imparted to the plate *h* at the lower extremity of the block *a* by the upward movement of the slat *b* will unerringly insure the covering of all the seeds carried downward by the descending movement of said slat.

The angular arm *j*, combined with the sliding slat *b*, does not impede its descent, for the reason that the shoulder *k* at the upper end of the block *a* is of such a shape that the said arm glides freely around its inner angle during the descent of said slat.

The incision-plate *i* at the lower extremity

of the back *f* of the seed-planter serves to prevent the spreading of the seeds as they are driven downward by the sliding slat *b*, and also arrests the soil as it is thrown inward by the plate *h* at the bottom of the oscillating block *a*, and thereby assists in covering the seeds with the proper depth of soil.

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

1. The combination of the pivoted and spring-actuated block *a* with the grooved and perforated sliding slat *b*, substantially in the manner and for the purpose herein set forth.

2. The combination of the spring *d* with the grooved and perforated sliding slat *b* in such a manner that the inclined aperture *n* in the back of the planter will operate said spring, substantially in the manner and for the purpose herein set forth.

The above specification of my new and useful improvements in seed-planters signed and witnessed this 5th day of February, 1857.

THOMAS CRANE.

Witnesses:

S. R. CROSBY,
W. F. HOVEY.