J. D. FIELD.

Seed-Planter.

No. 59,829. Patented Nov. 20, 1866.

Fig. 3.

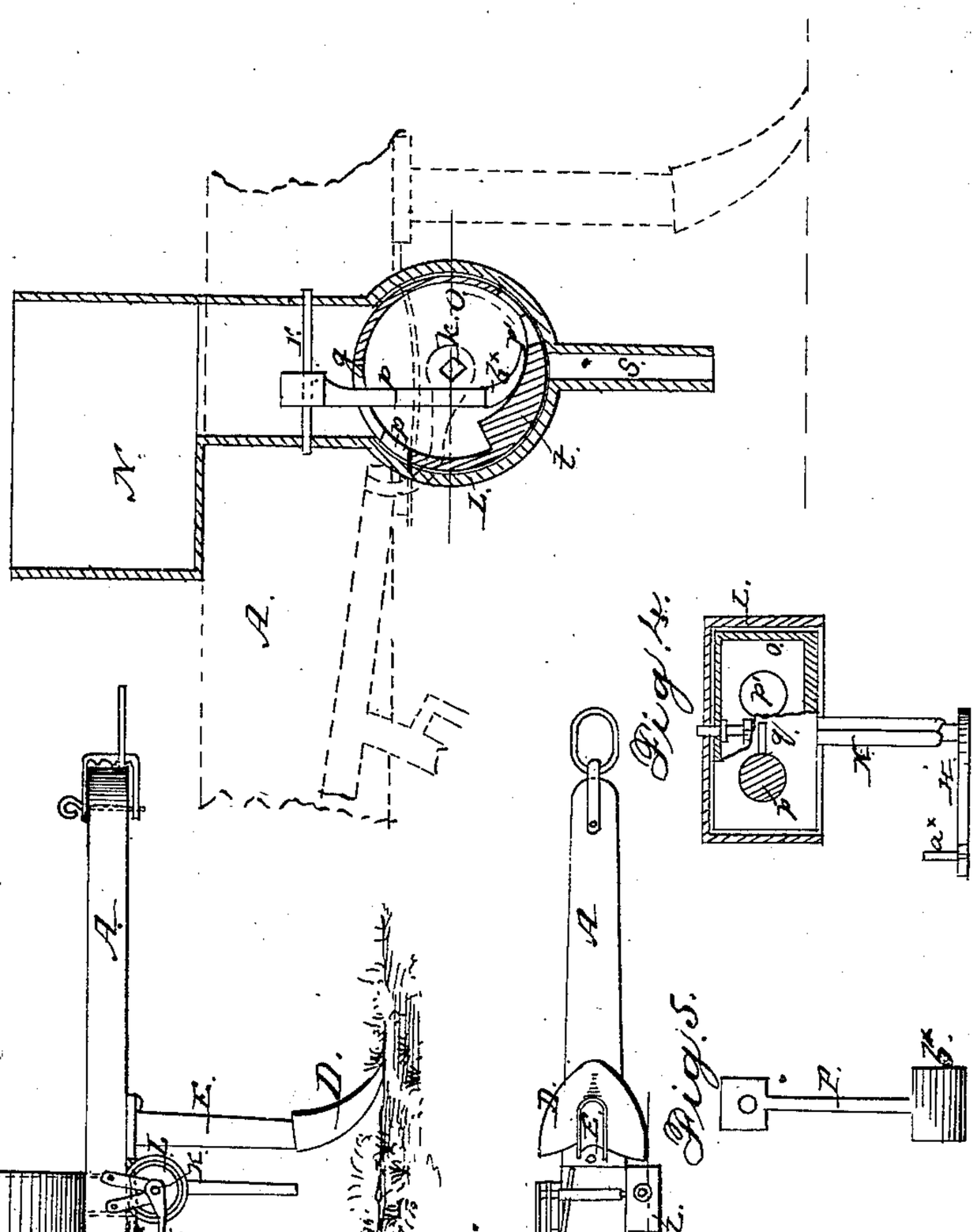

Fig. 1.

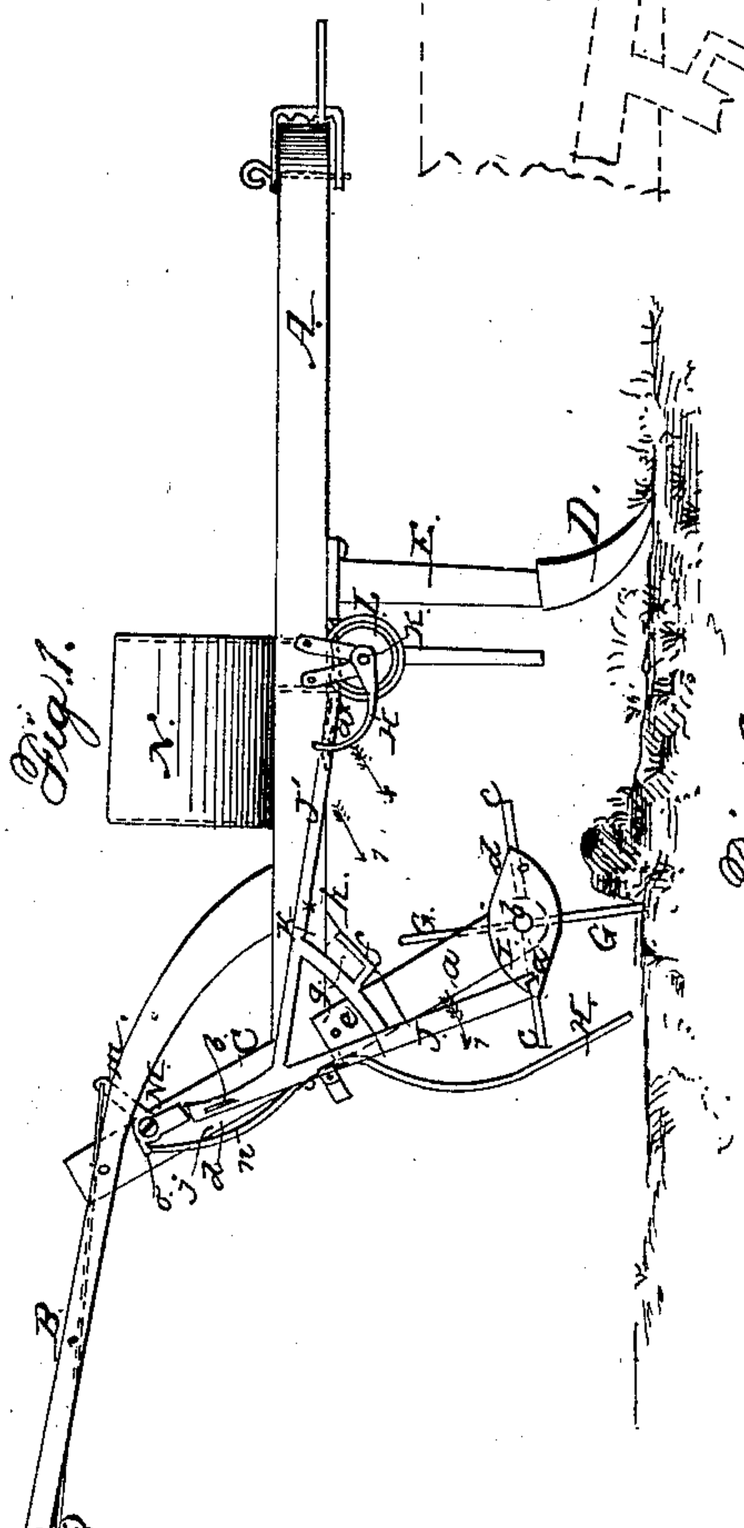

Fig. 4.

Fig. 2.

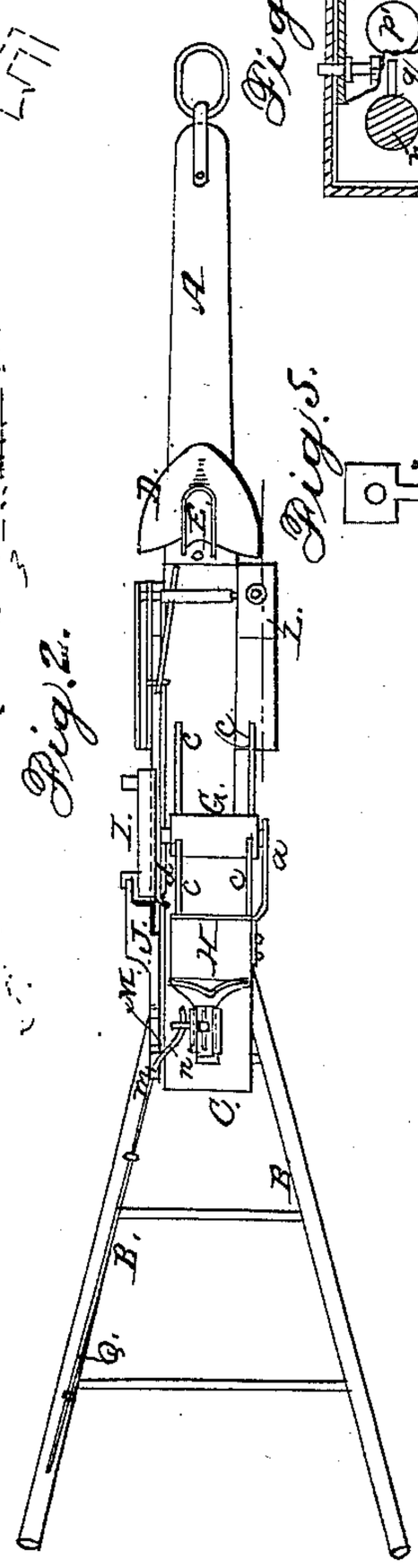

Fig. 5.

WITNESSES:
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IMPROVEMENT IN SEEDING MACHINE.

J. D. FIELD, OF KEOKUK, IOWA.

Letters Patent No. 59,829, *dated November* 20, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. D. FIELD, of Keokuk, in the county of Lee, and State of Iowa, have invented a new and improved Seeding Machine, and I do hereby declare that, the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a side view of my invention.

Figure 2 an inverted plan of the same.

Figure 3 an enlarged side sectional view of the seed-dropping mechanism pertaining to the same, taken in the line *x x*, fig. 2.

Figure 4, a horizontal section of fig. 3, taken in the line *y y*.

Figure 5, a detached view of a part pertaining to the seed-dropping mechanism.

Similar letters of reference indicate like parts.

This invention relates to a new and improved seeding machine of that class in which the seed-dropping mechanism is operated by the hand or foot of the operator, and not automatically. The device is designed to plant and cover corn in check rows after the ground has marked off one way, the device also admitting when desired of a fertilizer being sown previous to the seed being planted. A represents the beam of the implement, B B handles attached thereto, and C an inclined standard secured to the rear of the beam; D is a furrow opener attached to the lower end of a standard, E, which is secured to the beam. These parts are constructed and arranged quite similar to an ordinary cultivator plough, and therefore do not require a minute description, as they are well known. To the lower end of the standard, C, there is attached at each side a metal bar, *a*, and between the lower ends of these bars a shaft, *b*, is fitted and allowed to turn freely. This shaft, *b*, has a metal plate attached to it which projects at equal distances from opposite sides of the shaft, and forms two scrapers or shovels, G G, and *c* represents rods which project from the shaft *b* at opposite sides, and at right angles with the scrapers or shovels G G, simply to catch in the earth and turn shovel or scraper. H represents another scraper or shovel which is attached to the rear of the standards C, and extends down at the rear of the shovels G G, as shown clearly in fig. 1, and is designed for a coverer. To one side of the shaft, *b*, there is attached a cam I, from the outer side of which two pins, *d d*, project, and J J′, represent two arms which are connected by a curved bar, *e*, the latter having a square loop, *f*, formed on it, through which a pin, *g*, passes into a bar, *h*, fitted in the angle between the beam and standard. On the outer end of the pin *g*, a button K* is attached to fit over the loop *f*, and keep the bar *e*, and arms, J J′, to the side of the beam and standard. One of the arms, J, is longer than the other one, J′, and has an oblong slot, *i*′, made in it, through which a pin, *j*′ passes into the standard; said slot admitting of an up and down movement of the arms, J J′, and the arms also allowed a lateral vibratory movement on the pin *j*′. The lower end of the arm, J, rests upon the periphery of the cam I, while the other arm, J′, rest or bears upon a pin *a** at the outer end of an arm, K, on a shaft *k*, which passes horizontally through a hollow cylinder or case, L, underneath the beam, A, said arm, K, having a spring, *l*, bearing against it, or rather against the under side of the pin *a**, which spring has a tendency to force the arm K upward. To the side of the standard C, directly over the arm J, there is a bent or right angular bar, M, secured by a pivot, *m*, and this bar M has a spring, *n*, bearing against it underneath a lip, *o*, which spring has a tendency to keep the lower part of the bar M in line with or over the upper end of the arm J, as shown in fig. 1. On the upper surface of the beam, A, there is placed a seed box, N, which communicates with the case L, (see fig. 3,) and within the case, L, there is placed a hollow cylinder O, said cylinder being on the shaft *b*. The cylinder O has two holes, *p p*′, made in its periphery at opposite points, and the upper hole, *p*, has a slot, *q*, extending from it. P is an upright bar, the upper end of which is secured in the lower part of the seed box by a rod, *r*, passing through it. This bar, P, passes down through the hole *p*, into the hollow cylinder O, and the lower end of the bar P is curved to form a shoe or cut-off, *b**, to cover the lower hole *p*′ in the hollow cylinder O, when said hole is brought in line with a discharge pipe *s*, the slot *q*, which extends from the hole *p*, admitting of a certain degree of vibration of cylinder O. Within the cylinder O, below the shoe or cut-off *b**, there is a projection *t*, having a curved inclined upper surface, as shown clearly in fig. 3. The operation is as follows: As the implement is drawn along the furrow opener, D, opens the furrow into which the seed is dropped. The shaft, *b*, is rotated in consequence of the ends of the scrapers or shovels, G G, and the rods, *c*, coming in contact with the

ground. A continuous rotation of shaft *b* is not permitted in consequence of the pins, *d d*, coming in contact with the lower end of the arm J; and one of said pins always holds a scraper, G, downward, so that it will gather or scrape up a quantity of earth before it, as shown in fig. 1. As the cam I rotates, it acts upon the arm J, and moves both arms, J J′, and the arm K in the direction indicated by arrow 1, until one of the pins, *d*, strikes the lower end of the arm J, when the scrapers or shovels, G G, are instantly stopped, and the lower scraper or shovel commences to scrape or shovel up the earth in front of it. When the several parts are in this position, the cylinder O is in the position shown in fig. 3, the lower hole, *p′*, being out of line with the tube *s*, and the upper hole *p* in such a position that the seed from the hopper or seed box, N, cannot pass through it, and the hole *p′* becomes filled with seed. When the tube *s* arrives over the spot where the seed is to be dropped the attendant actuates the bar M, by pulling a wire, Q, attached thereto, and throws the lower end of M off from the arm J, so that the latter, as well as the arm J′ and arm K, may rise under the action of the spring *l*, and the cylinder O moved back so that its lower hole, *p′*, will pass underneath the shoe or cut-off, *b**, and in line with tube *s*, and the seed in *p′* be discharged into tube *s*, and conveyed into the furrow, while at the same time the upper hole, *p*, is in such a position to allow the seed to pass into the cylinder from the hopper, the cylinder receiving the seed and discharging it at the same time, and in the same ratio, thereby preventing all choking or clogging.

As the arm J rises, the scrapers, or shovels G G turn, and the fixed scraper H throws the earth gathered up by one of the scrapers or shovels G over the seed. The arms J J′ drop by their own gravity as soon as the pin *d* at the lower end of the arm J passes it. The furrow opener, D, may be detached at any time when it is desired to drop a fertilizing material in the hills previously to dropping the seed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The intermittingly rotating scrapers or shovels G G, and rods *c*, in combination with the fixed scraper H, arranged to operate in the manner substantially as and for the purpose set forth.

2. The arms J J′, in combination with the cam I, having the pins *d d* attached, the arm K, and spring *l*, for operating the cylinder O, substantially as and for the purpose specified.

3. The cylinder O placed within the case L, which communicates with the seed box N, and provided with the holes *p p′*, and an inclined projection *t* within it, in combination with the bar P, with shoe or cut-off *b** attached; all arranged to operate substantially as and for the purpose set forth.

J. D. FIELD.

Witnesses:

JOHN BRUCE,

J. A. VIALE.