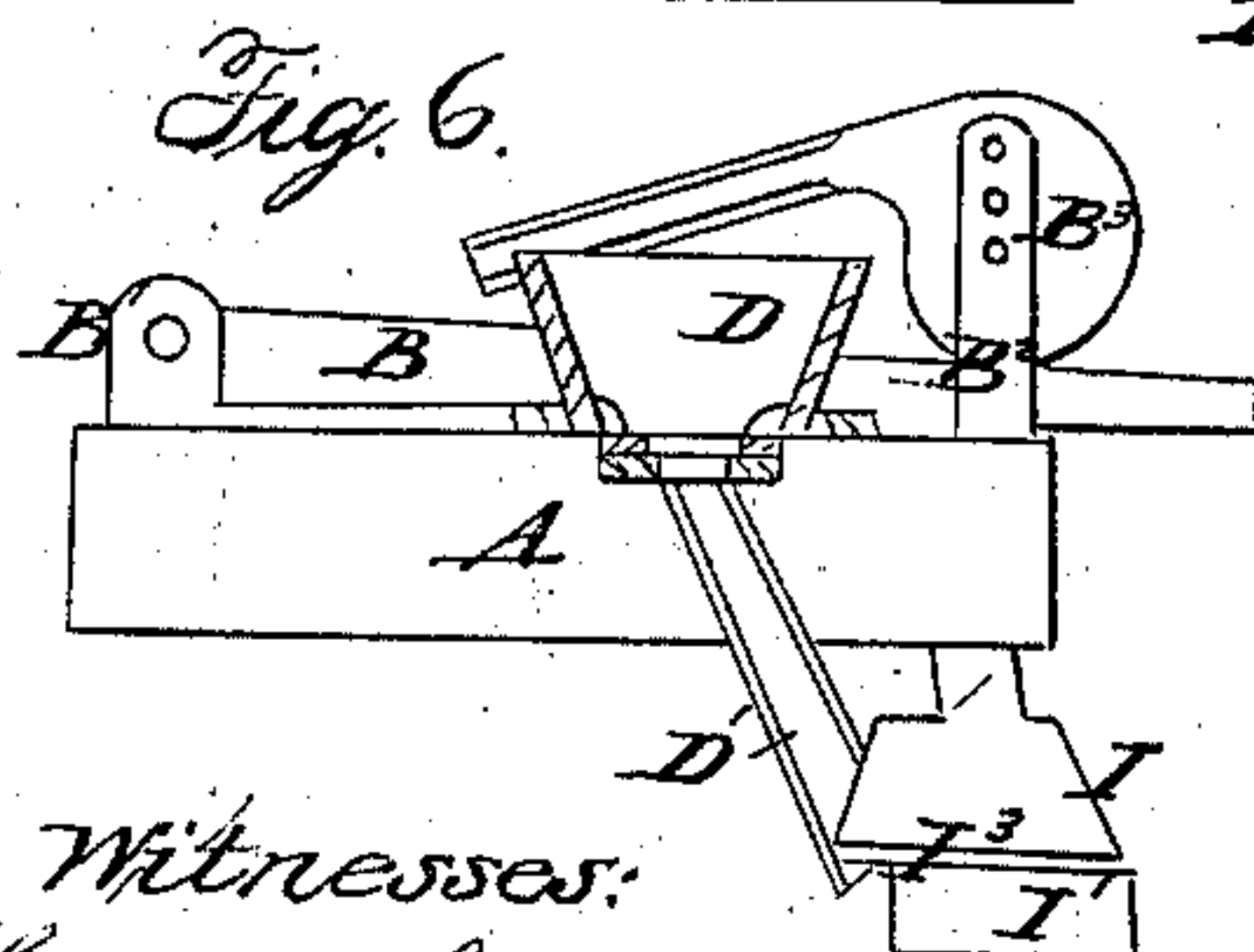
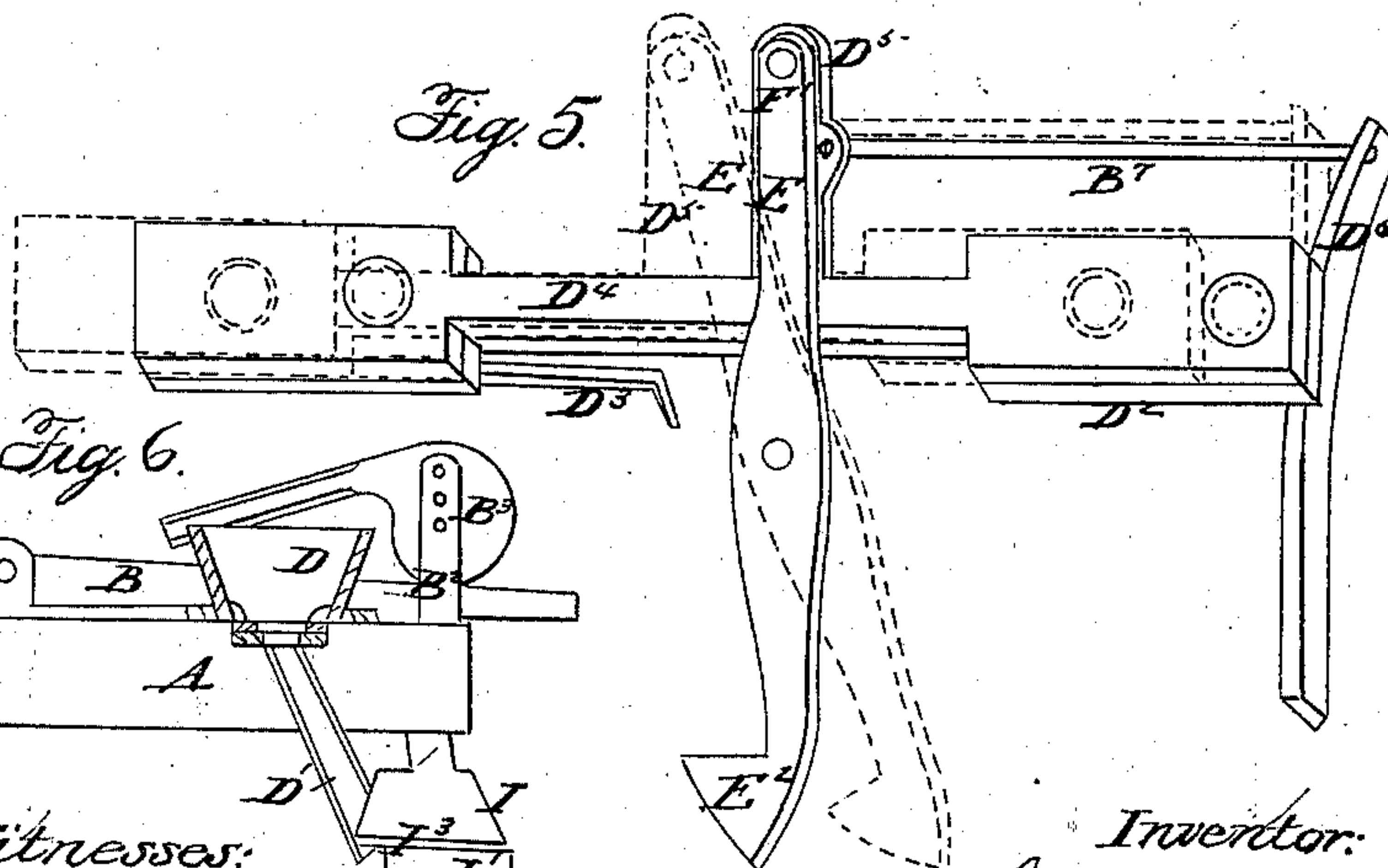
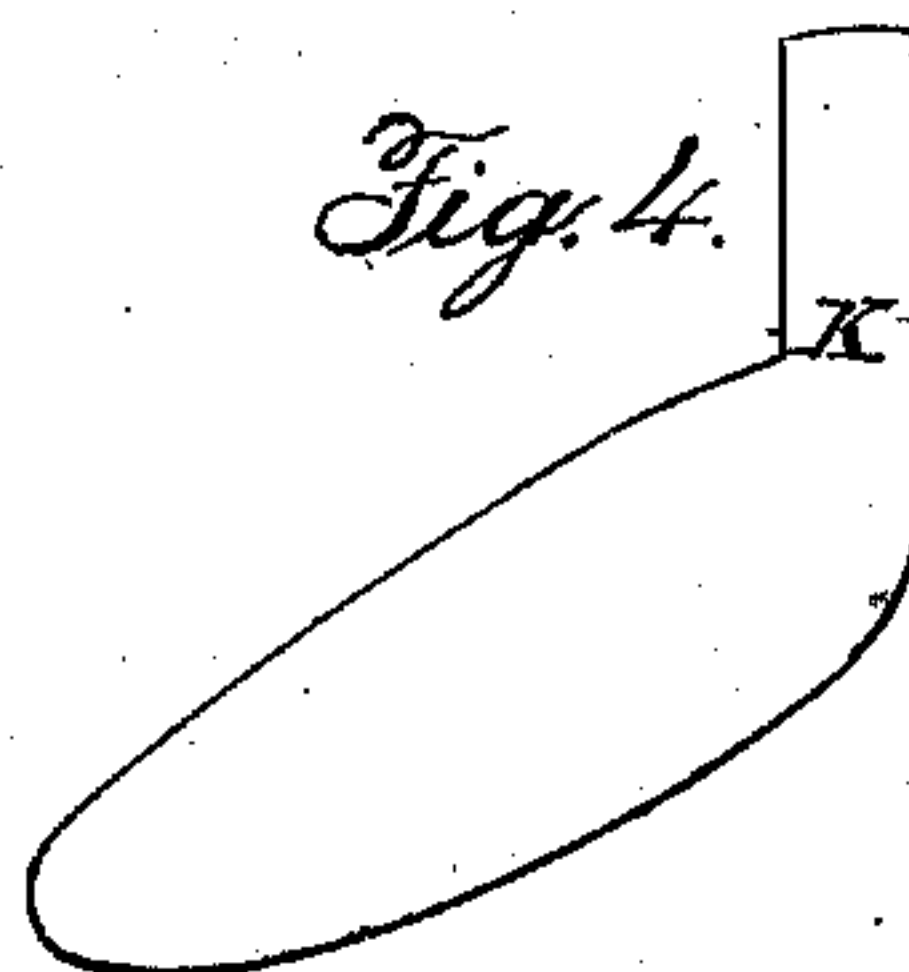
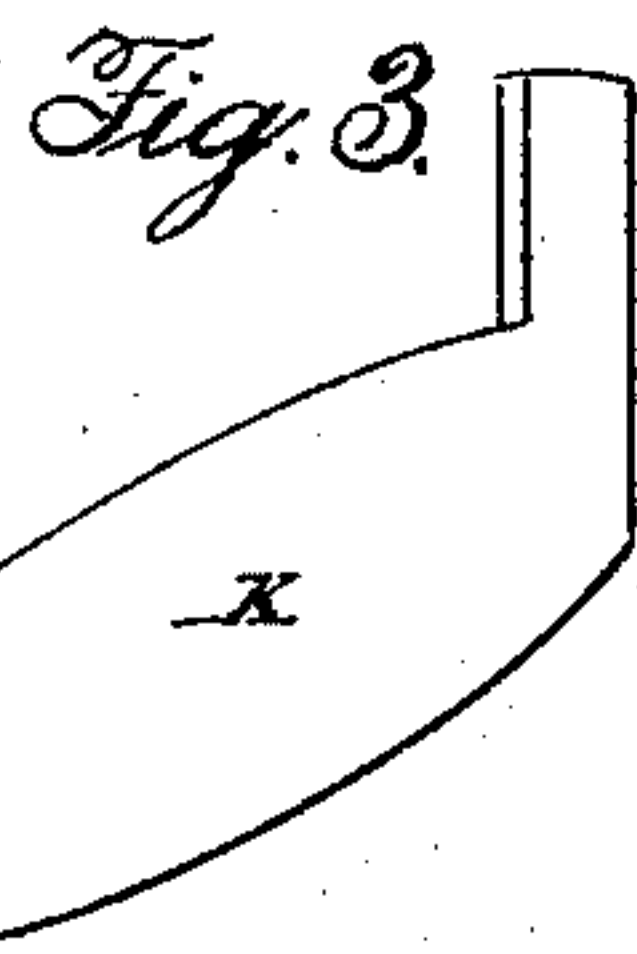
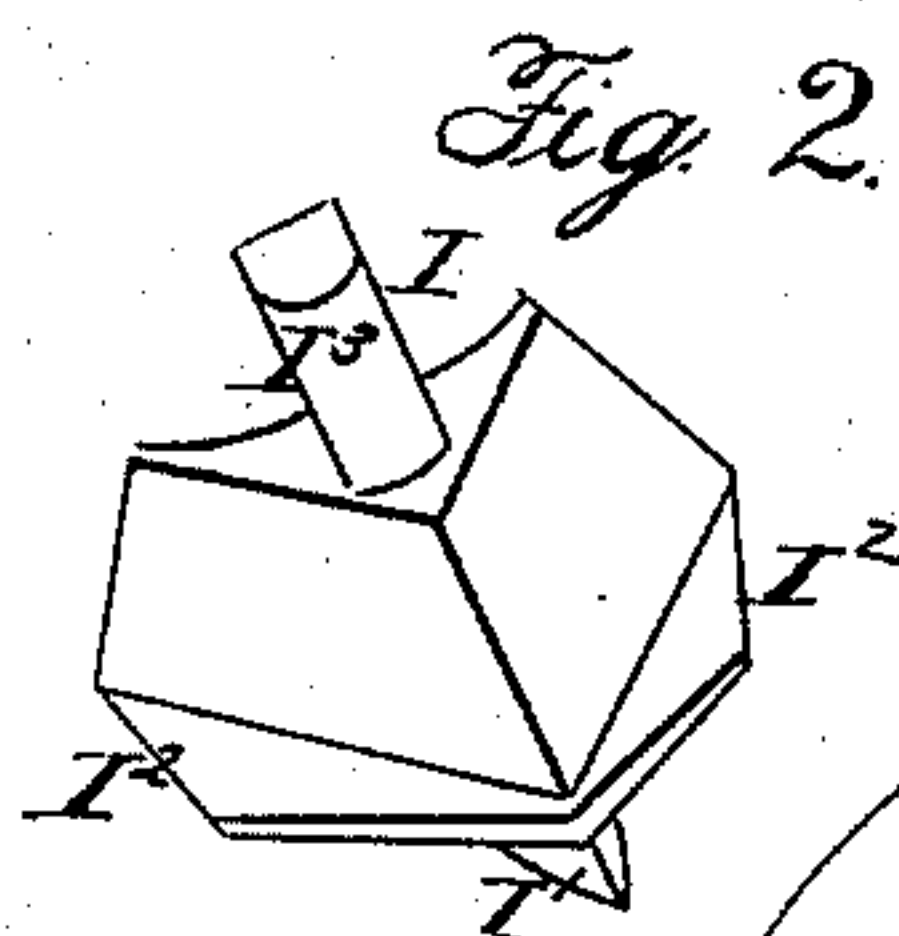
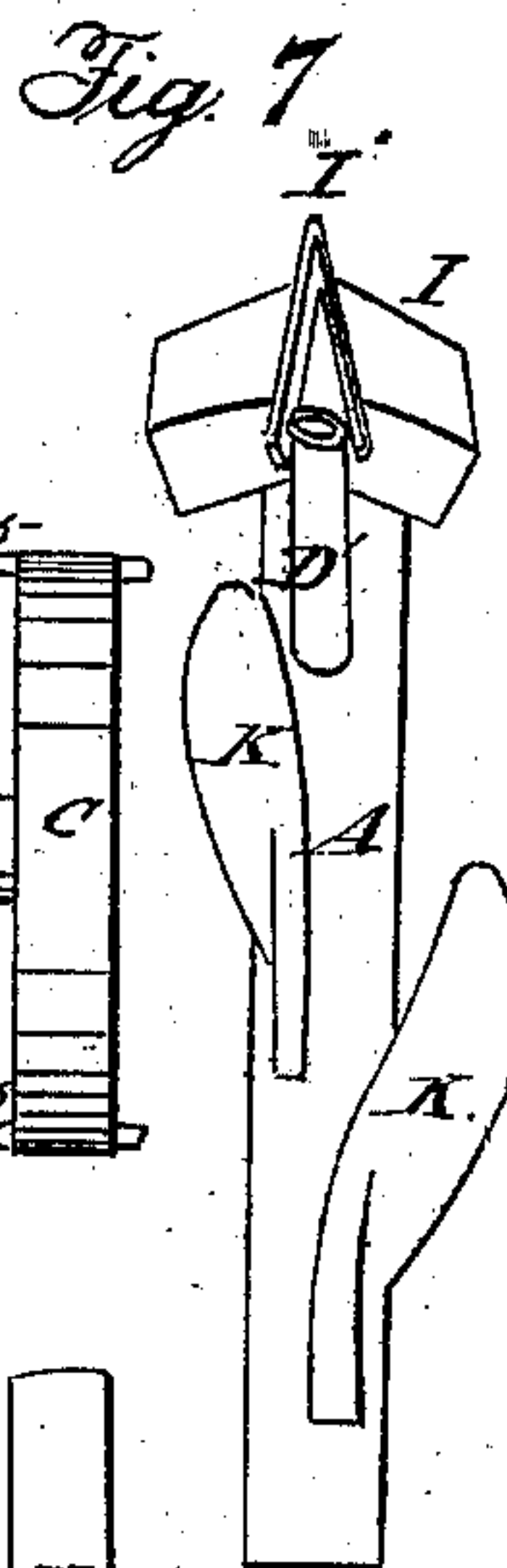


Corn-Planter.

Patented Aug. 27 1867.



Witnesses:
H. D. Alexander
John G. Crocker

Inventor:

Leurs Lurpah

United States Patent Office.

LEWIS LARCHAR, OF UTICA, NEW YORK.

Letters Patent No. 68,091, dated August 27, 1867.

IMPROVEMENT IN CORN-PLANTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, LEWIS LARCHAR, of Utica, Oneida county, New York, have invented a new and useful Improvement in Seed and Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description of said invention, and of the mode of operation of the same, reference being had to the annexed drawing, and to the letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a plan of the machine.

Figure 2 is a perspective view of the marking and clearing-tooth.

Figure 3 is a perspective view of the covering-tooth on one side.

Figure 4 is a like view of the same tooth on the outside.

Figure 5, a perspective view of the slides.

Figure 6, a side view of a part of the machine.

Figure 7, a perspective view of the under side of the teeth in one beam.

A is the frame; A¹ is a cross-beam; B, the tongue or pole; B¹, the bolt for holding the same; B², a standard; B³, a cam-lever; C and C, the wheels; C¹, the axle; C², a drum on the axle; C³, a pin therein; C⁴, a roller; C⁵ C⁵, markers on the wheels; D and D, the hoppers; D¹ and D¹, the spouts; D², the lower slide; D³, a catch-spring; D⁴, the upper slide; D⁵, an arm thereon; D⁶, a spring; D⁷, a connecting-rod; E, a lever; E¹, a pin by which it is attached to D⁵; E², a notch in the end of lever E; F, a cam-lever; G, a spring; H, a lever; H¹, a hole therein; H², a pin in the drum; I, marking and clearing-tooth; I¹ is the marking part; I², the clearing edge; I³, a standard; K, a covering-tooth.

The frame A may be of a rectangular form, of stout wood, having a cross-beam, A¹, near the front, under the slides. The tongue B is attached to the hind part of the frame by a horizontal pin, B¹, and it passes through an open standard, B², on the front beam; which arrangement allows the front of the machine to be raised or lowered, by means of the cam-lever B³ on the top of the tongue. In front, under the tongue, is a roller, C⁴, to regulate the depth to which the marker may go. It may be placed higher or lower, by changing the pin in the standard.

The wheels C and C are attached to the axle C¹, and turn with it in bearings in or attached to the side beams, and should each have their circumference equal to the distance between the hills in a row, or equal to twice or other convenient number of times such distance, as may be desired. And the distance between the wheels should be double the distance of the rows apart. On the edges of the wheels are markers C⁵ C⁵ for marking the position of the hills. There should be as many as the number of hills formed at each revolution of the wheels, and should be placed in such positions as that they will mark the ground directly opposite the hill.

The hoppers D and D are placed near the front of the machine. They should be the distance apart from centre to centre it is desired to place the rows, and the wheels should be half that distance each from its adjacent hopper. Thus, if it is desired to plant the corn in rows four feet apart, the hoppers should be four feet apart and the wheels eight feet apart from centre to centre; that is, two feet each from the hopper on the same side. Each hopper has a spout extending from the bottom to the ground D¹ and D¹. The slide D² extends across the machine and is directly over the spouts. It has holes of different sizes so arranged that when one hole is over one spout, a corresponding one in size will be over the other spout, according to the size of the grain to be sown, or the quantity to be dropped. This slide is held in place by the spring-catch D³. Directly over D² is a similar slide, D⁴, but having only one pair of holes, so arranged that when the machine is at rest the slide covers the bottom of the hoppers, and the holes are brought under the hoppers only when the seed is to be passed out. D⁴ has an arm, D⁵, extending towards the front of the machine. Extending from the upper ends of this arm, towards the other end of the machine, is a lever, E, which turns on a pin near its centre, and is connected with the arm D⁵ by a pin, E¹. The lower end of E is a cam, having a bevelled end and a notch at the end of the bevel. On the axle C¹ is a drum, C², in which are one or more pins, according to the number of hills to be made at each revolution of the wheels C and C. They are marked C³. This drum is just under the end of E. As the drum turns with the wheels, the pin C³ strikes the bevelled end of E, which presses the end of the lever to the right, and of course the end attached to D⁴ to the left also, until it brings the holes therein, one each under the hoppers, when the grain will pass out. When the pin C³ has

reached the notch E^2 , the lever E is freed from the pressure of the pin C^3 , and the slide D^4 is instantly drawn back by the rod D^7 , attached to the spring D^6 .

Under E , and at right angles to it, is a spring, G , which raises E above the pin C^3 , when it is not desired to have the slides move. At other times E is pressed down, so that the pin C^3 will catch it, by means of the cam-lever F lying directly upon it. Attached to the rear end of the frame is a lever, H , having an upward spring, with a hole, H^1 , in it, corresponding with a pin or pins, H^2 , on the drum. By depressing this lever with the foot, the hole catches the first pin H^2 on the drum and locks the wheels. These pins H^2 should be equal in number to the pins C^3 , and be arranged on the other end of the drum, at equal distances apart, a half, quarter, sixth, or the like, of the circumference from the pins C^3 respectively, according to their number.

On the front of the machine, and just before each spout, is a peculiarly formed tooth, I , the lower part of which marks the ground for the corn, and the upper part clears away the stones, clods, or sods, so as to allow the covering-teeth to cover the seed properly. This marking part is of V-form, and of such width at its rear open end, and of the necessary depth, to plant the corn properly. On this marking part is the clearing part, also of V-form but having much broader wings, and having its lower edge, which rests on the upper edge of the marking part, turned outward, I^2 .

The covering-teeth K are formed with an inward slope at the lower edge, towards the front, and a somewhat spoon form towards the centre, with an inward curve on the upper edge, towards the standard at the rear end, by means of which form the front under side will enter slightly the ground, and as it passes on will raise the loose earth up and turn it over upon the planted seed. One of these teeth is placed near the spout on one side of the hill, and the other behind it on the opposite side of the hill, at such distance apart in either direction as may be deemed most suitable to cover the seed and yet permit the stones to pass through.

The mode of operation is as follows: The seed is placed in the hoppers. The marking-teeth in front are regulated as to the proper depth by means of the roller C^2 in front. The machine is now started in the direction the rows are to run, and the marking-tooth will form a furrow of the desired depth and width, while the clearing part of the tooth removes from the surface along the furrows all stones, clods, sods, and the like.

The first hill may be formed at any desired point, by not pressing down the cam-lever F , or by leaving the wheels locked, until the proper time, when the pin C^3 in the drum will press the lever E to the right, and carry the slides D^4 , by means of the connection, through the arm D^5 , and pin E^1 to the left, so that the holes therein come under the hoppers. This allows the seed to pass out through both slides and down the spouts. As the cam on E is short, the slide D^4 is kept in such position only long enough to allow sufficient seed to pass out, when it is instantly retracted by the spring D^6 , and the hopper is closed and remains so until the point is reached where another hill is to be formed, when the said pin C^3 again moves the slide D^4 , and the seed is again dropped, and so on. The markers C^5 on the wheels form a mark opposite to each hill. As soon as the seed has been dropped and the ground cleared by the clearing-tooth, the covering-teeth on each side of the rows raise a little of the earth or mould and turn it once on to the furrow.

When the end of the row has been reached the front of the machine may be raised from the ground by the lever B^3 , and by pressing down, by the foot of the operator, the lever H , the pin H^2 will enter the hole H^1 , when the wheels will be locked, and the machine will cease to operate when it has passed half the distance between the hills from the last hill. It may now be slipped along to any convenient distance, and then be turned around on the inside wheel as a centre, and then slipped forward until the spouts are on a line with where they were when the wheels were locked, when the front may be lowered, the wheels unlocked, and then be run back over the field, the said wheel in the same track it made in forming the first rows; the other wheel being now the inside one, and which will run back on its track for the next row. As the wheels are half the distance of the rows apart from the adjacent hoppers, it is obvious the running of the inside wheel back in the same track will cause the third row to be at the same distance from the second that the second is from the first, and so on until the work is done.

The hills may readily be kept in a line by starting right and keeping watch of the cross markings made by C^5 . A seat may be placed over the centre for the driver, and a roller may be added if desired for covering the seed, and the machine may be adapted to one or two horses. By adding other pins to the drum C^3 , the hills may be as near together in the rows as may be desired.

The advantages of a machine so constructed are, it is simple and cheap, and of few parts, easily understood and managed, and not liable to get out of order. It also dispenses with all marking but such as the machine makes, while it clears the ground for the seed, and allows it to be covered in a proper manner.

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

1. The tooth I , constructed and operating substantially as described for the uses and purposes mentioned.
2. The said tooth I , and the teeth K K , one or more, in combination, for the uses and purposes mentioned.
3. The adjustment of the wheels C C , and the hoppers D D , relative to each other, as described, by means of which the rows will be at equal distances apart, as described.
4. The slide D^4 , and the lever E , and spring D^6 , and cam-lever F , constructed and operating in combination, substantially as described and for the uses and purposes mentioned.
5. The lever H , in combination with the pin or pins H^2 , on the drum C^2 , substantially as described and for the uses and purposes mentioned.

LEWIS LARCHAR.

Witnesses:

H. D. ALEXANDER,
JOHN G. CROCKER.