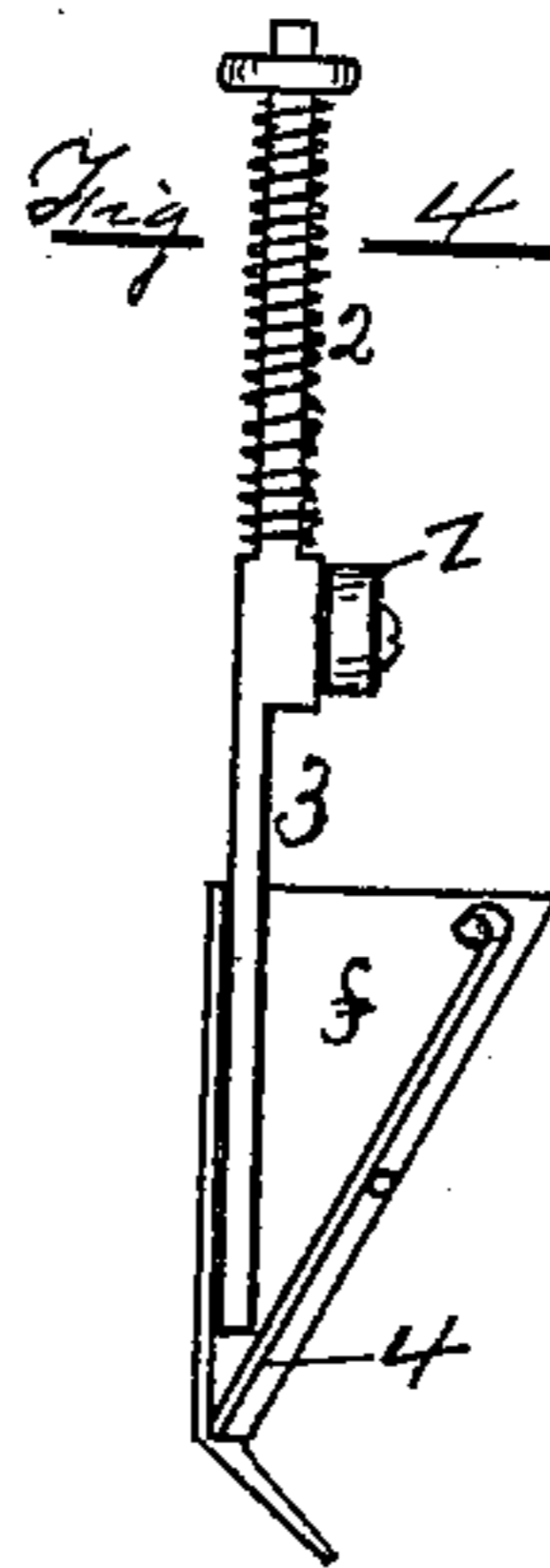
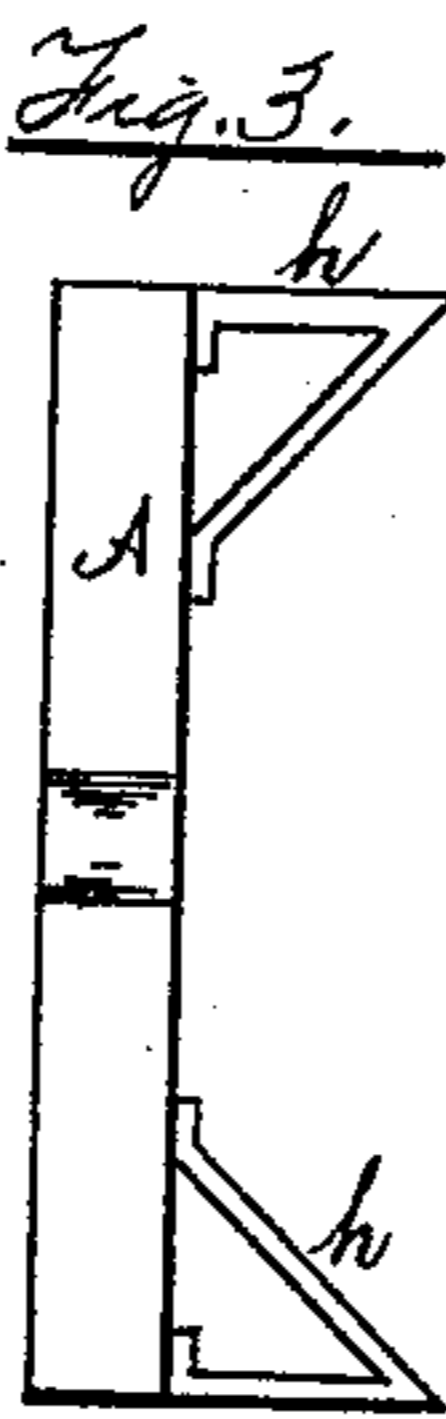
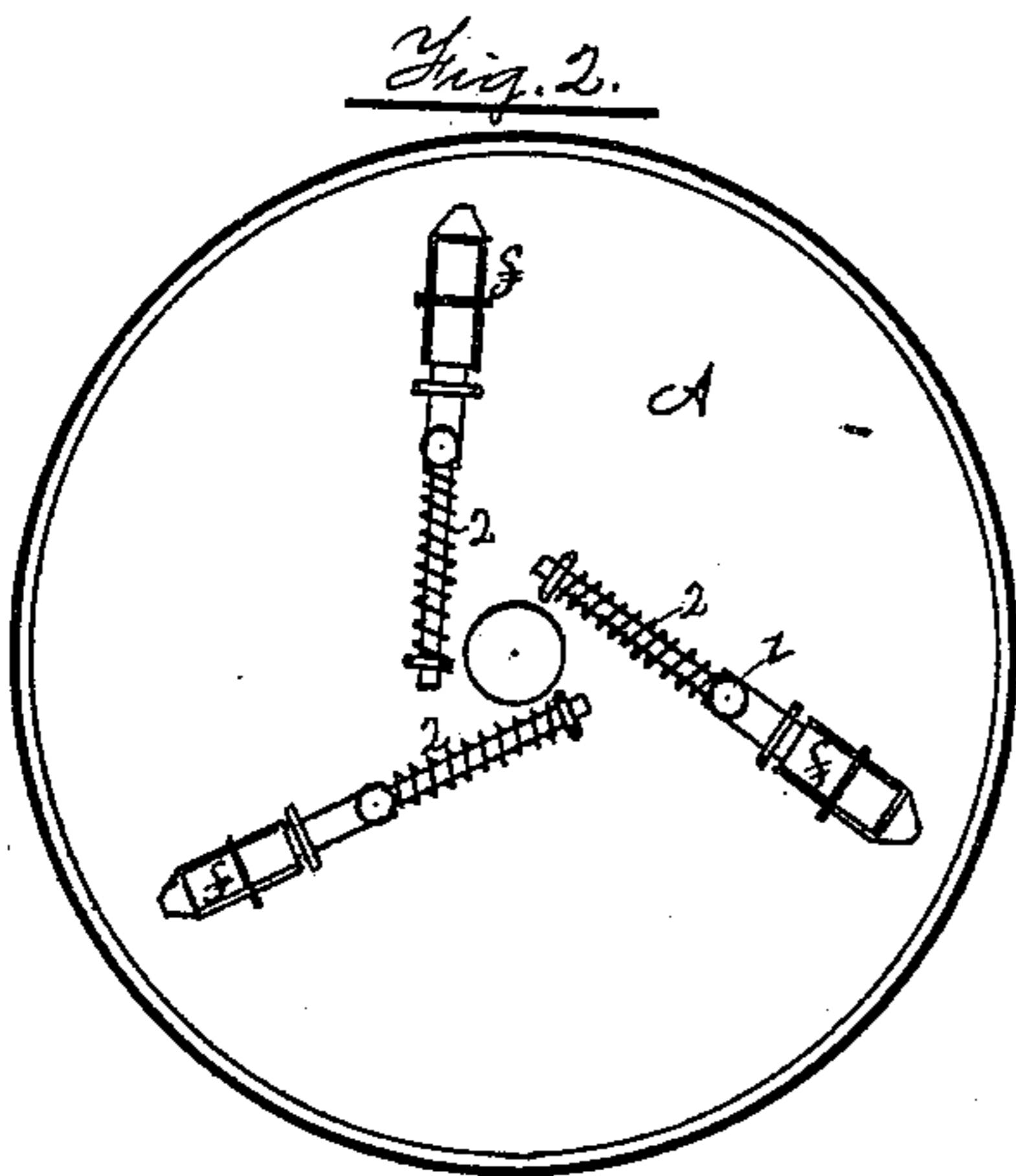
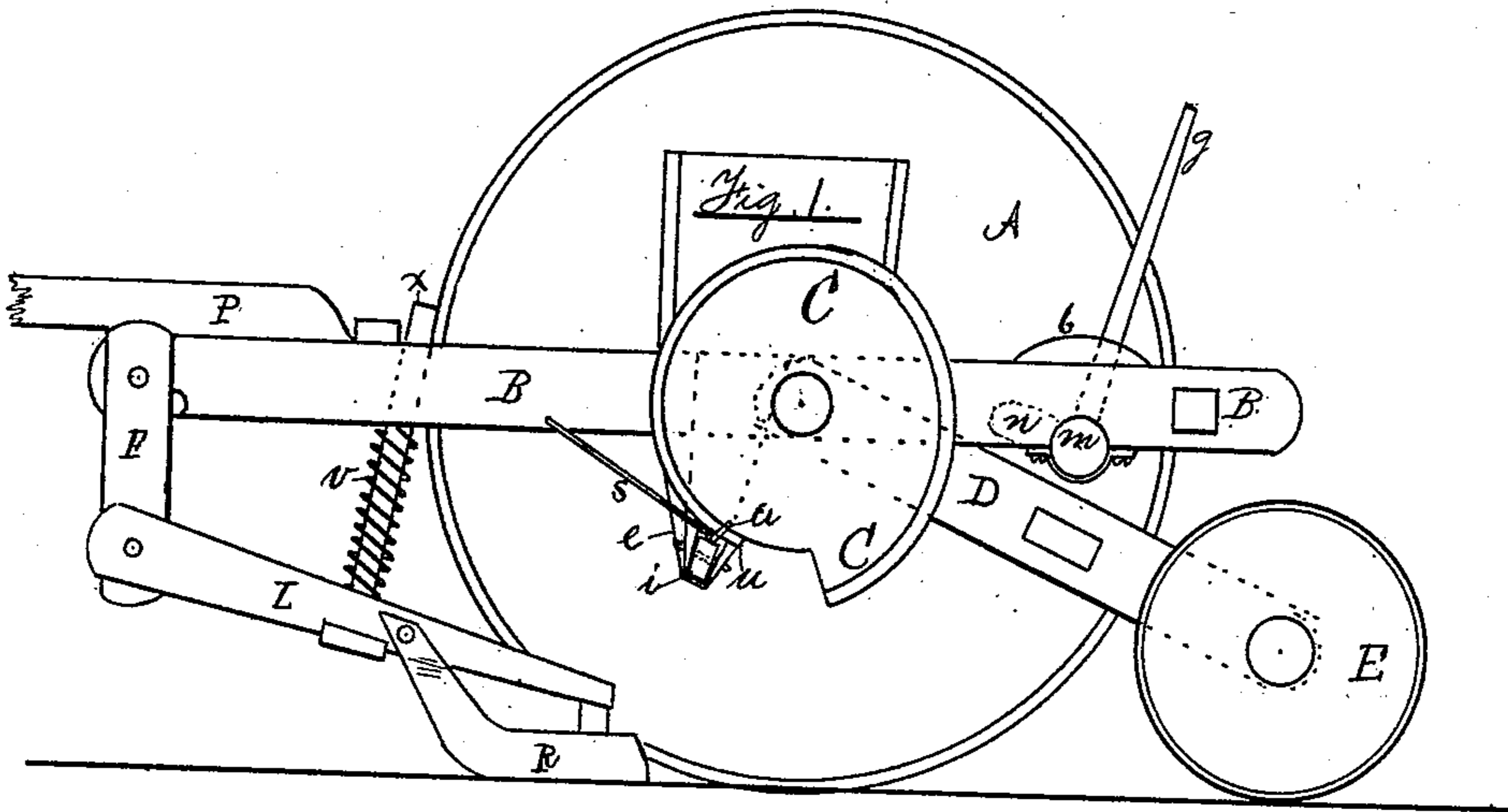


C. H. CRONK.  
SEED-PLANTER.

No. 177,379.

Patented May 16, 1876.



Witnesses

Thos. H. Hutchins  
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# UNITED STATES PATENT OFFICE.

CHARLES H. CRONK, OF MARENGO, IOWA.

## IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 177,379, dated May 16, 1876; application filed March 4, 1876.

*To all whom it may concern:*

Be it known that I, CHARLES H. CRONK, of Marengo, Iowa county, and State of Iowa, have invented certain Improvements in Seed-Planters, the construction and operation of which I will proceed to explain, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation of the machine; Fig. 2, a side elevation of one of the drive-wheels on its inner side; Fig. 3, a cross-sectional view of one of the drive-wheels, showing the marking-arms; and Fig. 4, a side elevation of one of the dropping-spouts.

The nature and object of this device are to plant or drill seeds in the ground automatically, and without the necessity of marking the ground in advance; and to enable others skilled in the art to make and use my invention, I will proceed to explain its construction and operation.

In the drawings, B, Fig. 1, represents the main frame, resting on the axle of the traveling drive-wheel A. The main frame of the machine has two such main beams, connected together by suitable cross-beams, (shown in said figure.)

In Fig. 1 we see the opposite drive-wheel A, the nearer one having been taken off its axle to admit of seeing the parts behind it.

C is a cam, fixed rigidly to the main frame of the machine, and is used to operate the plungers 3 in the dropping-spout *f*. This cam C is in the shape of a scroll, in the interior of which the rollers *z*, Fig. 4 and Fig. 2, roll as the wheels A travel, by means of which the plungers 3 of the dropping-spout *f* are raised until the friction-roller *z* drops out at the opening at the lower end of the cam C at *u*, Fig. 2. Just as the plunger 3 is about to dive into the dropping-spout *f*, in consequence of its being let loose from the roller *z*, having rolled out of the cam C at *u*, the dropping-spout *f* engages with the lower end of the spring *s* at *a*, by means of which the valve *i* is opened, and the grain in the spout *e* is at that instant let fall into the dropping-spout *f*, after which the plunger 3 is forced down by means of the coil-spring 2 until it opens the lower end of the valve 4 in the dropping-spout *f*, and lets the grain fall on the ground immediately be-

hind the shoe R, which prepares a furrow to receive it when it is run over and covered by the covering-wheel E.

Fig. 2 represents the inner side of one of the main drive-wheels, having the dropping-spouts attached by means of staples at either end.

In Fig. 2 you will observe the position of the several dropping-spouts, which may be any number and attached in any suitable manner desired. By means of this arrangement the grain is dropped automatically without the use of an assistant.

The shoe R is attached to the rear end of the beam L, which is hinged to the post F, which hangs from the front end of the main frame B. This beam L operates up and down as the shoe R travels over inequalities of the ground, and is kept in place at work by means of the post *x* and coil-spring *v*, no matter what the unevenness of the ground may be. The shoe R is split and open at its rear end, as such shoes are ordinarily constructed to make a furrow to receive the grain. The arms *h* are placed on the outer sides of the drive-wheels A at the required distances apart, so that as the wheels roll they will leave a mark, so the machine can be started so it will drop exactly opposite that dropped before, by means of which it becomes unnecessary to mark the ground in advance. The marking-arms are placed on the wheel generally just on the opposite side to the dropping-spouts *f*, so the hill will be dropped just opposite the mark left by the arm *h*. The frame D, which carries the covering-wheels E, hinges at its front end loosely to the axle of the drive-wheels A, as shown in Fig. 1. More or less weight can be placed on the covering-wheels E by means of the lever *g*, which is attached to the roller *m*, to which is attached the cam *n*. As the lever *g* is thrown forward the cam *n* will engage with the beam D, causing the weight of the machine to rest as much as desired on the covering-wheels E. The lever *g* may be held at any place by a notched segment, 6.

This machine may be used to plant any kind of grain usually planted with this class of machines, and may be varied in form or size to accommodate it to any circumstances

or soil. The whole machine is calculated to be drawn by horses, as are such machines generally, which are attached to the pole P.

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

The shoe R, frame L F B D, springs *v*, post *x*, lever *g*, roller *m*, cam *n*, and covering-wheel

E, all combined and arranged to operate in conjunction with each other, as and for the purposes set forth.

CHARLES H. CRONK.

Witnesses:

JOHN MILLER,  
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