

(No Model.)

3 Sheets—Sheet 1.

I. IRIGOYEN.
SEEDER.

No. 587,503.

Patented Aug. 3, 1897.

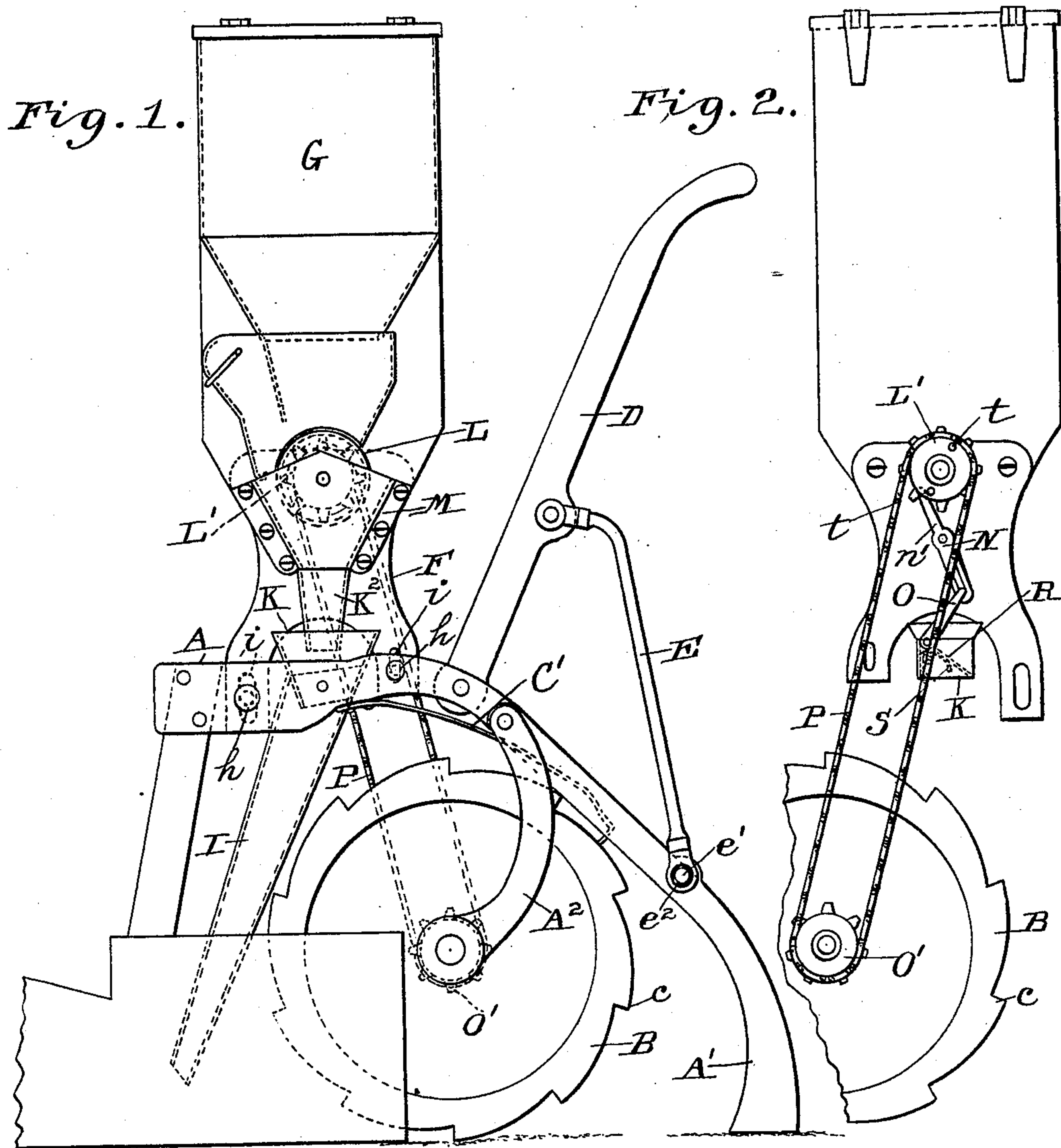


Fig. 12.

Witnesses
Joel Blackwood
Albert B. Blackwood.

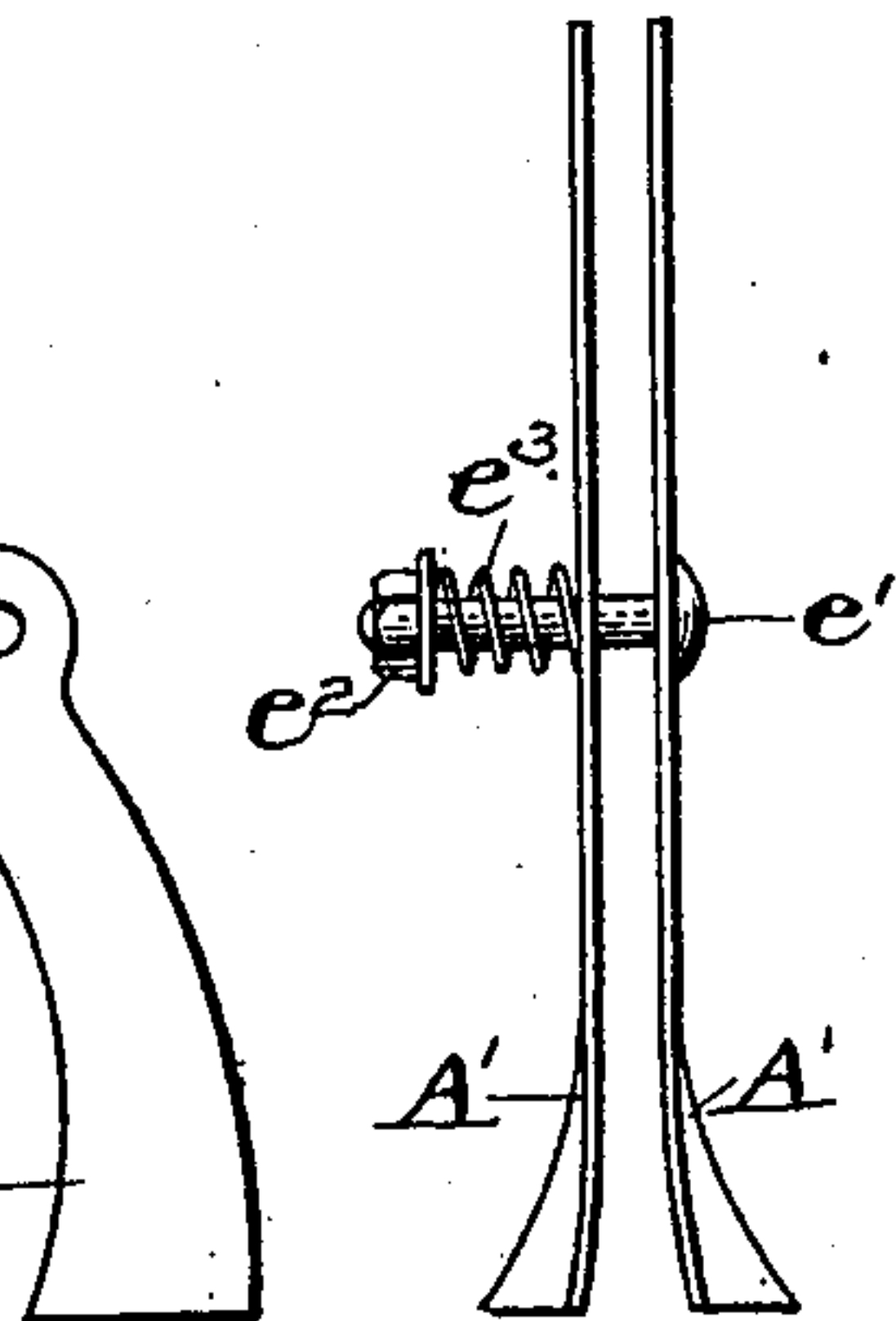


Fig. 13.

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Fig. 3.

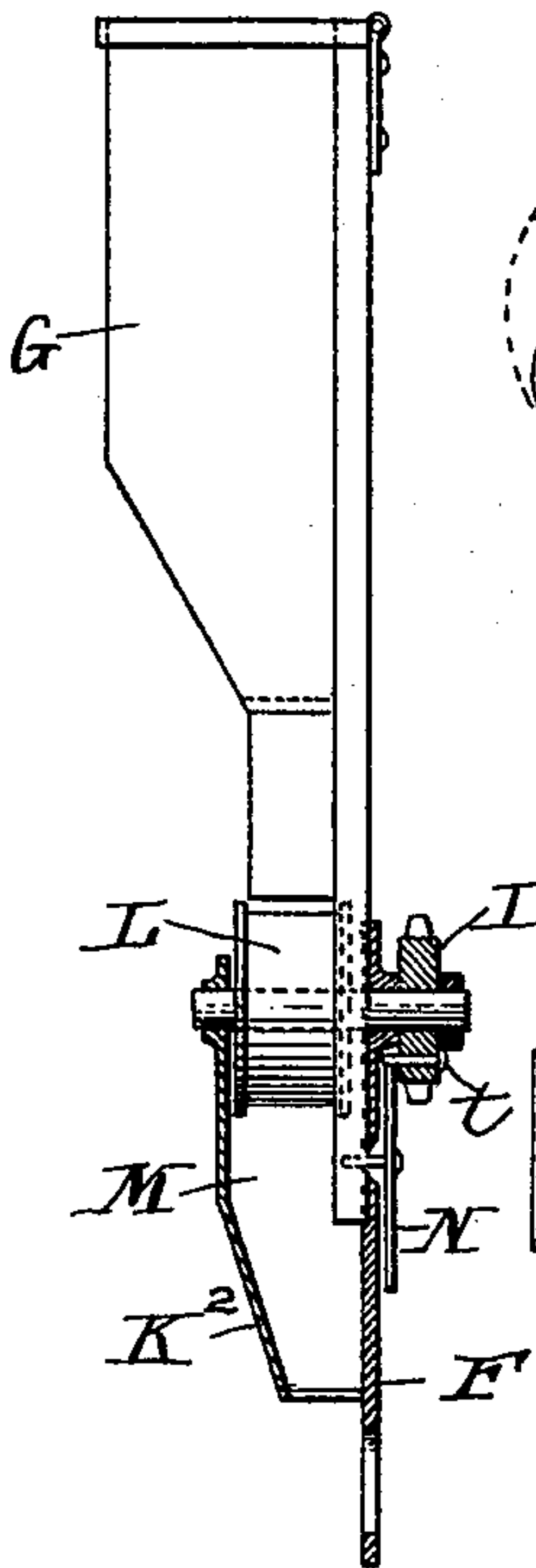


Fig. 5.

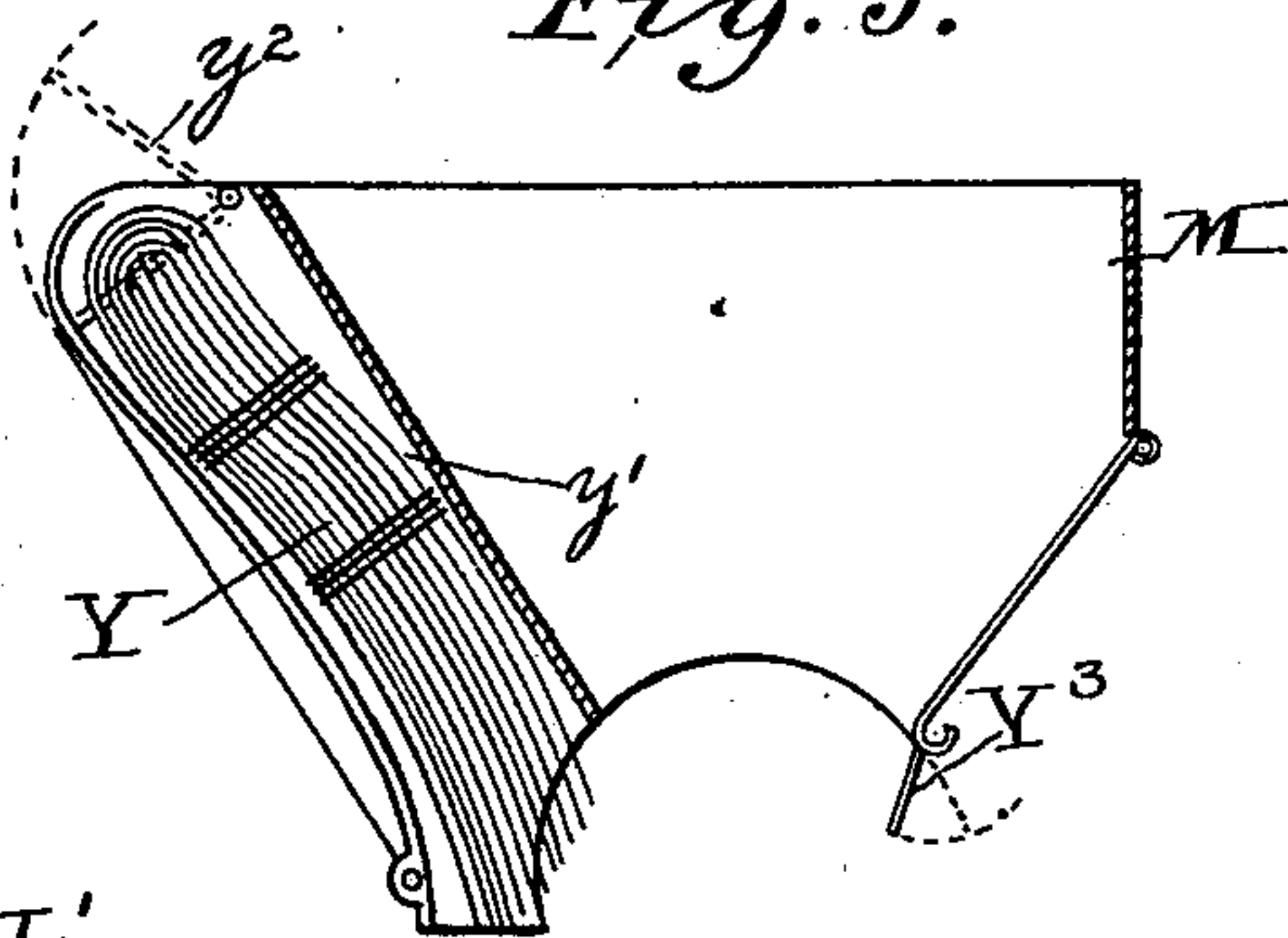


Fig. 6.

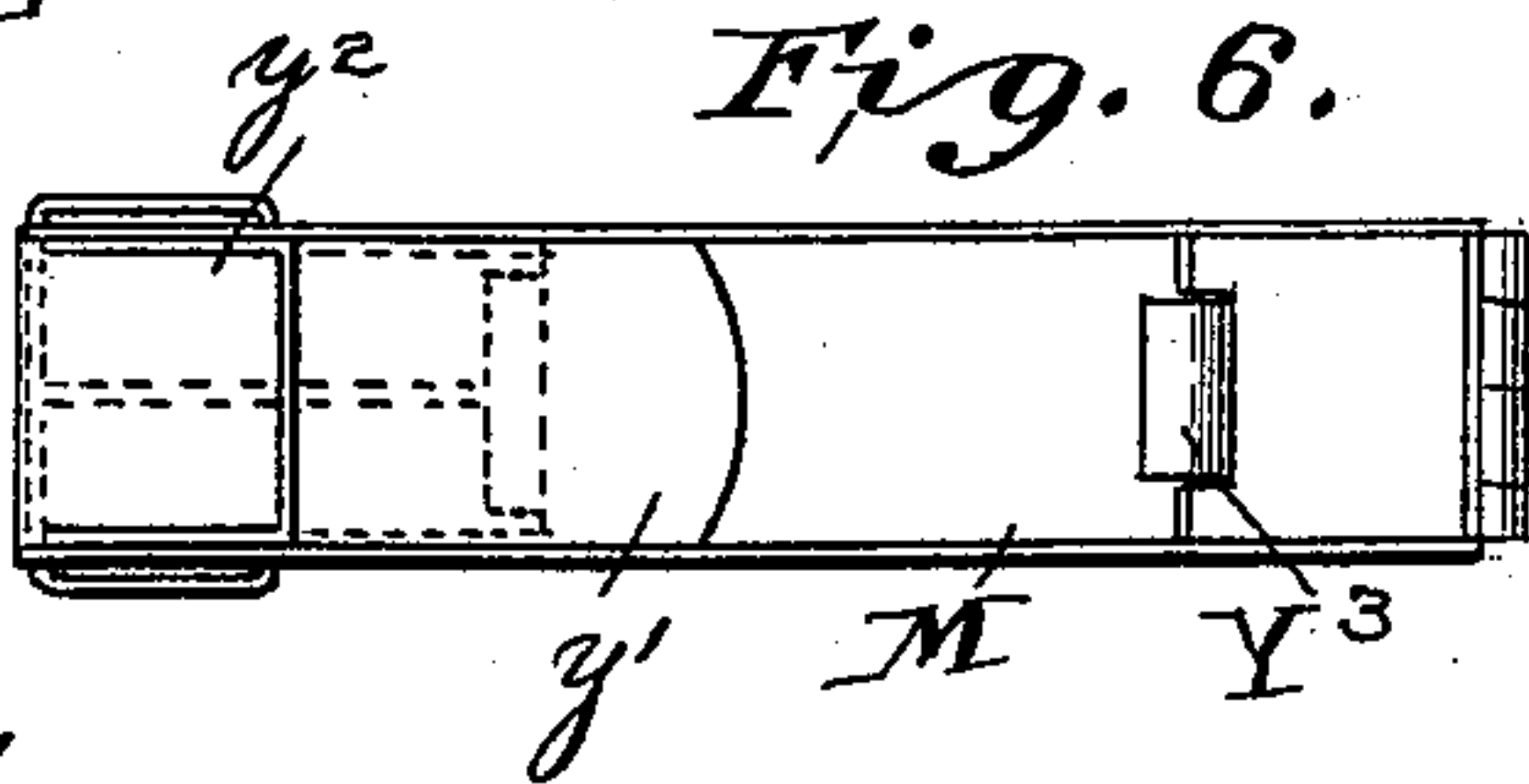


Fig. 7.

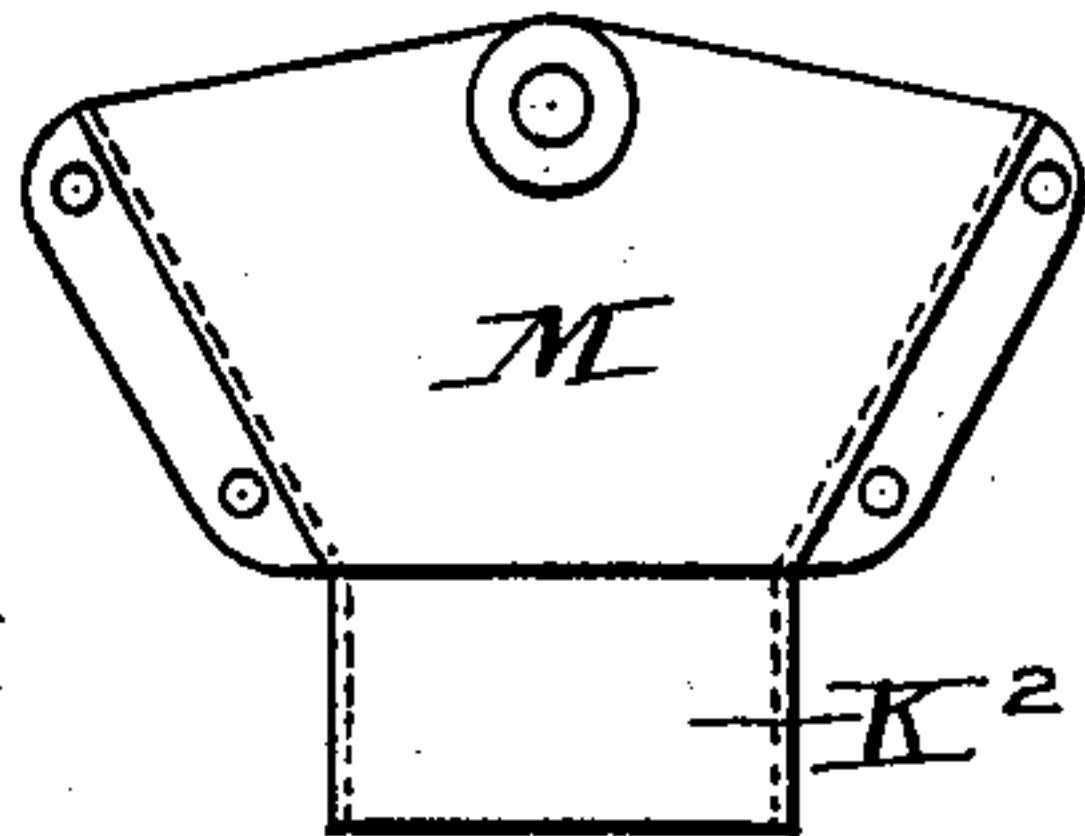


Fig. 8.

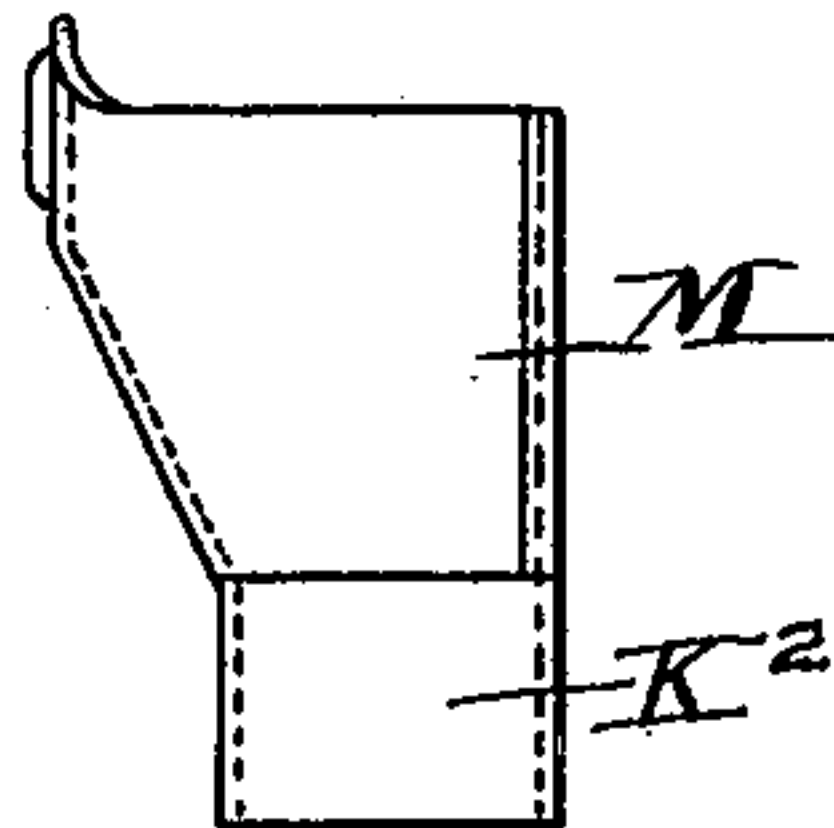


Fig. 4.

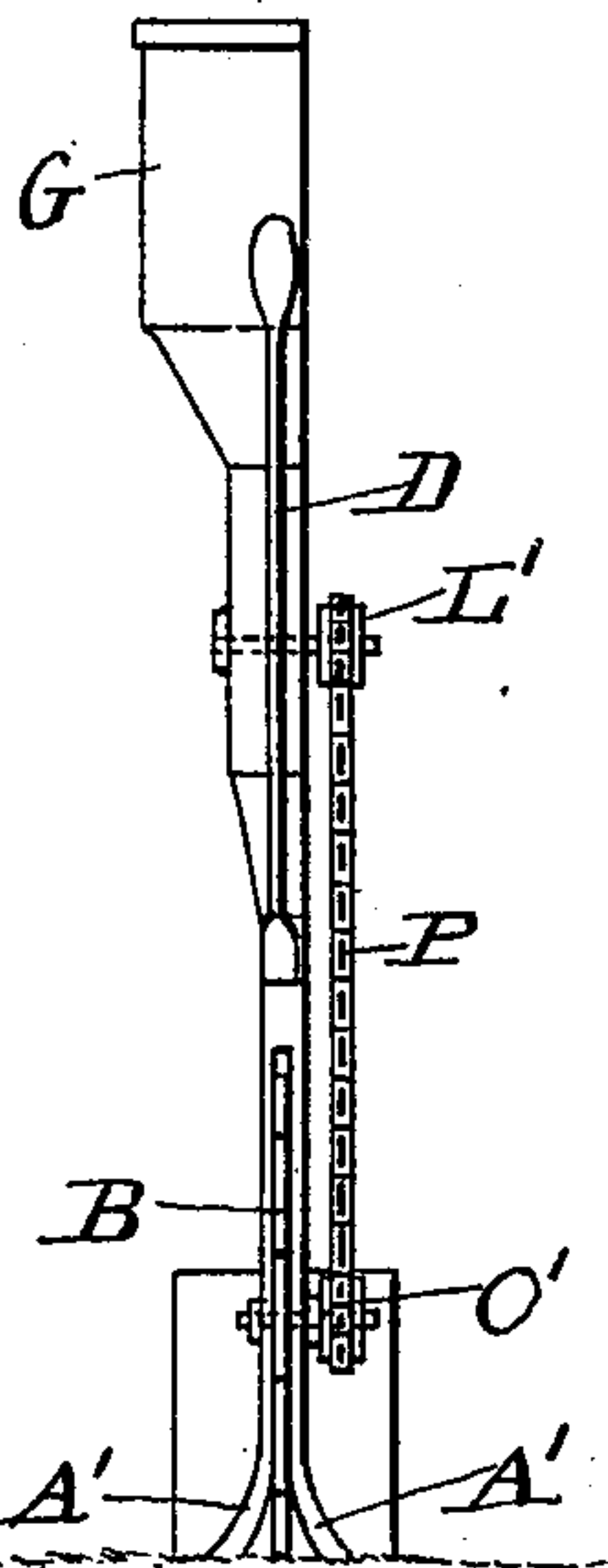


Fig. 9.

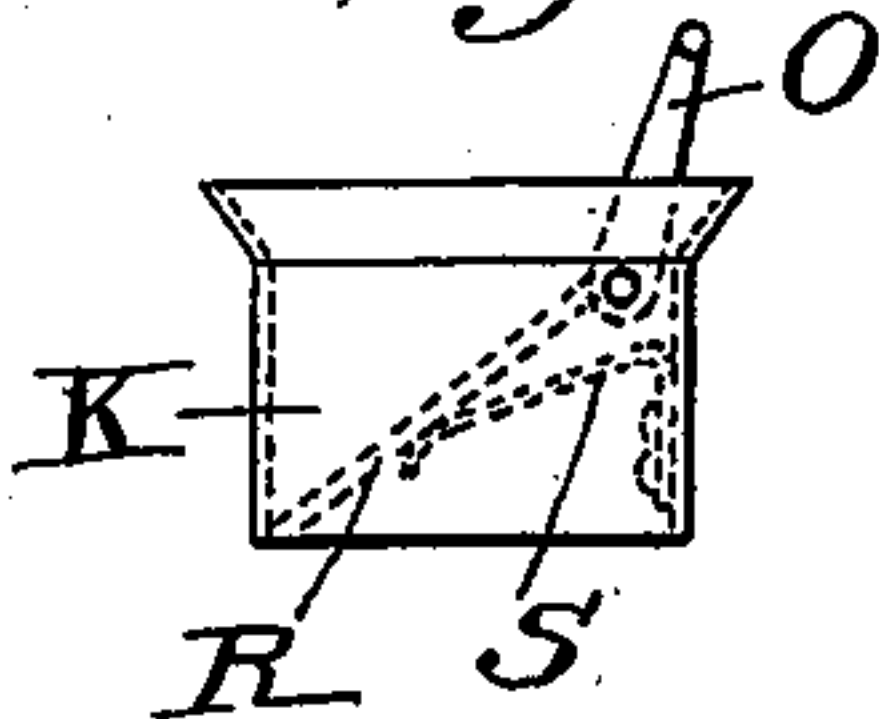


Fig. 10.

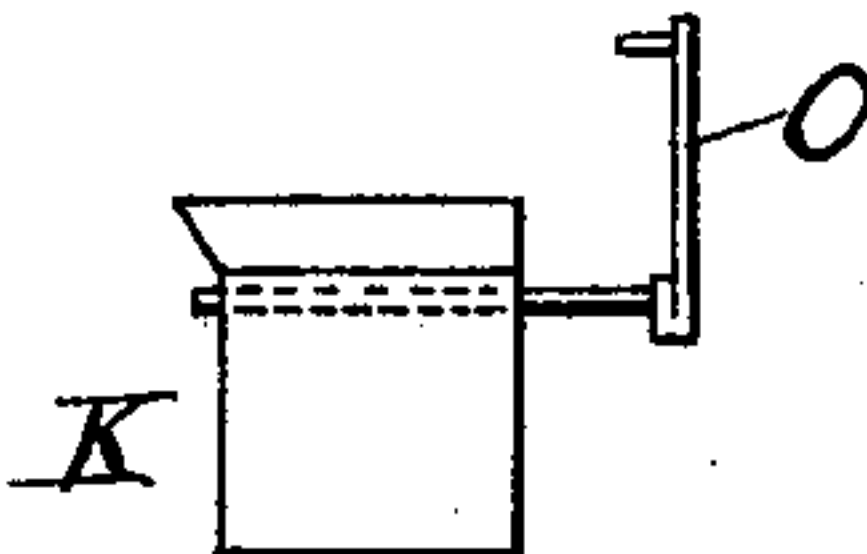
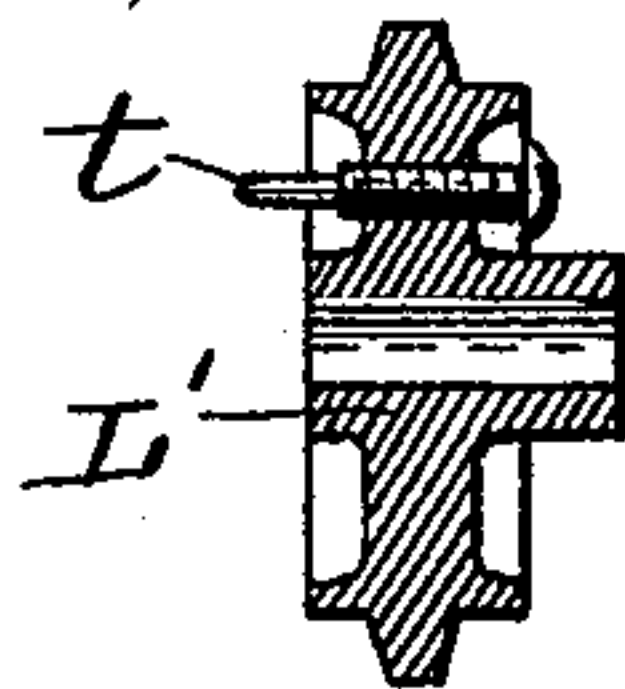


Fig. 11.



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Fig. 14.

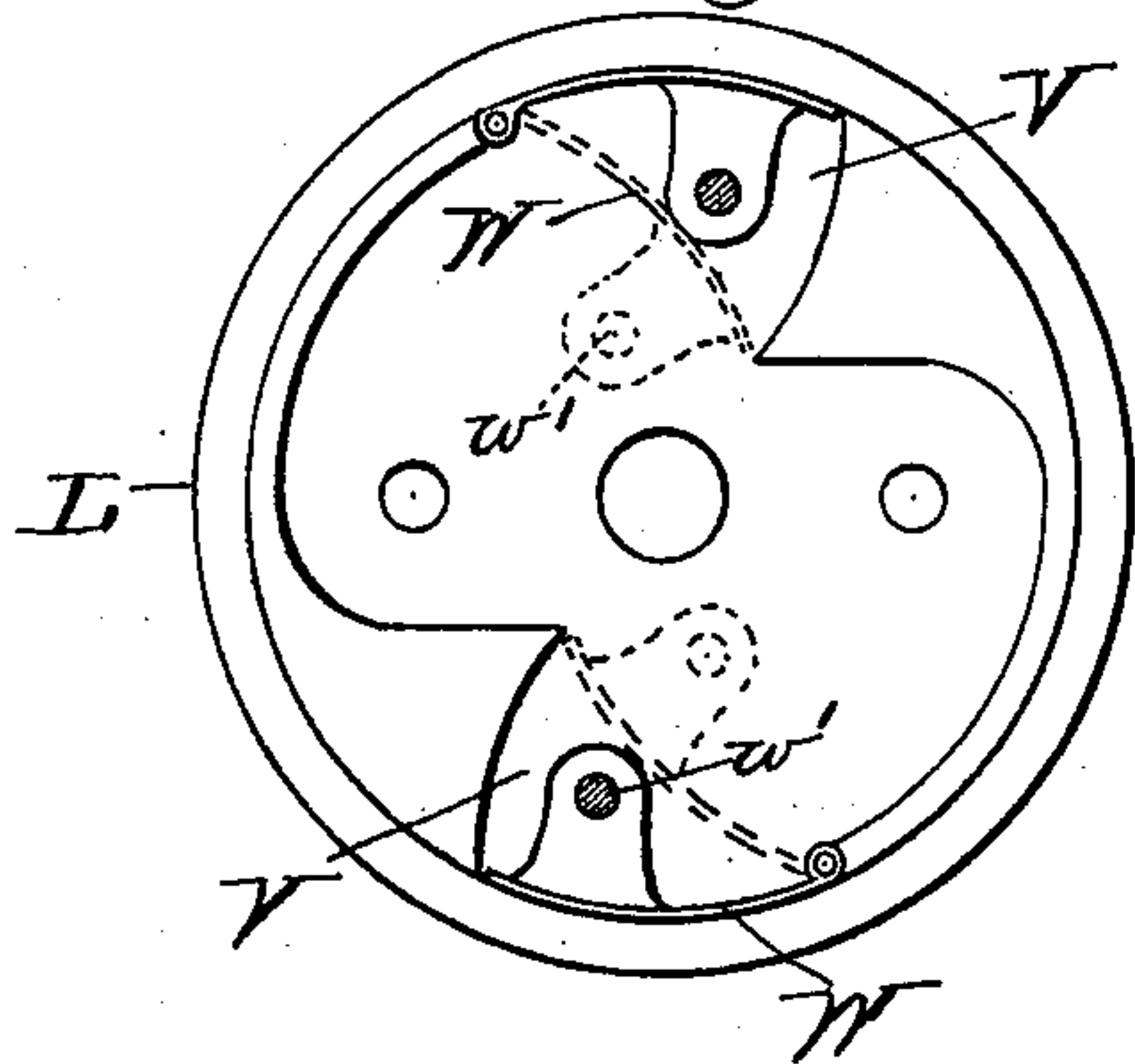


Fig. 15.

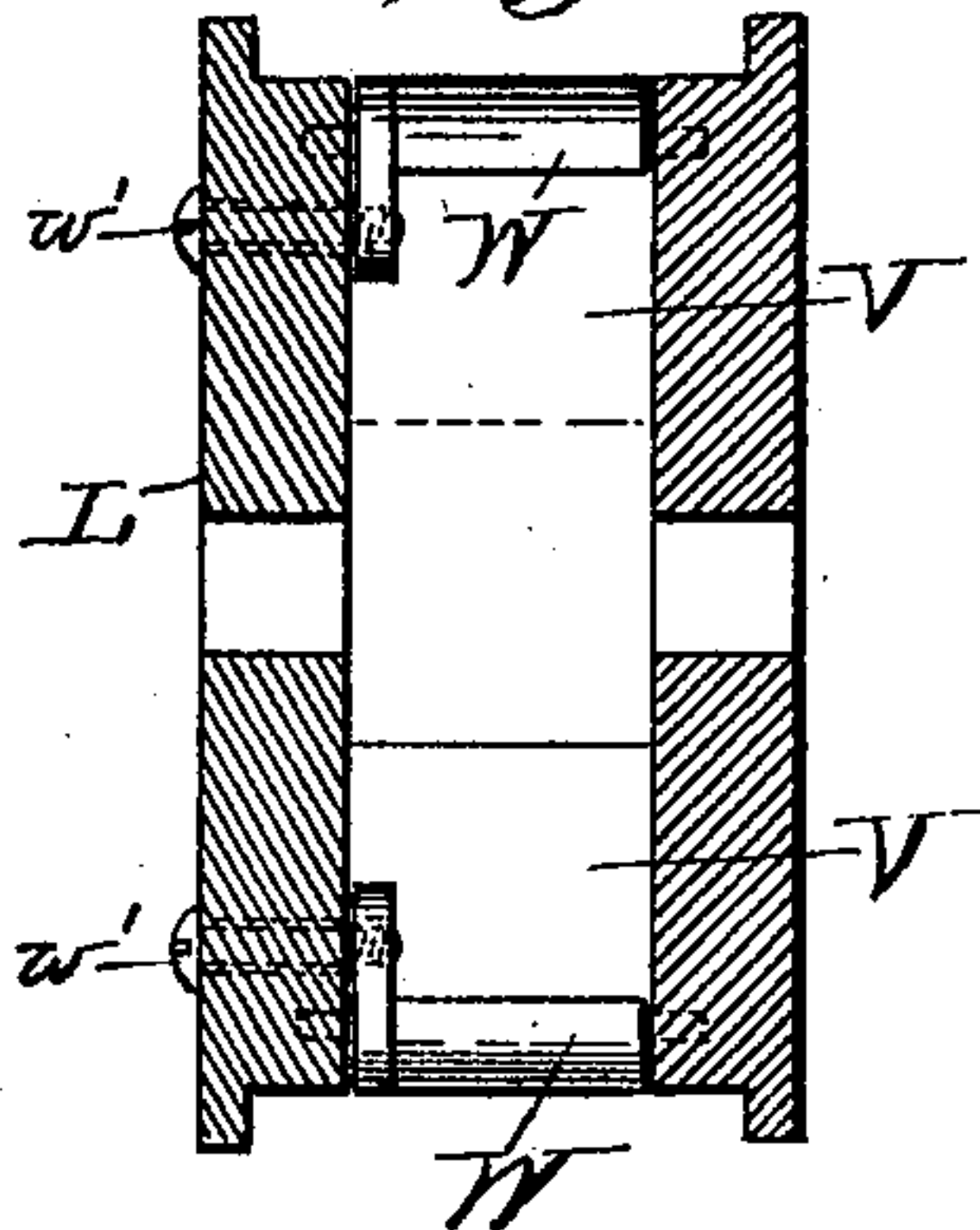


Fig. 16.

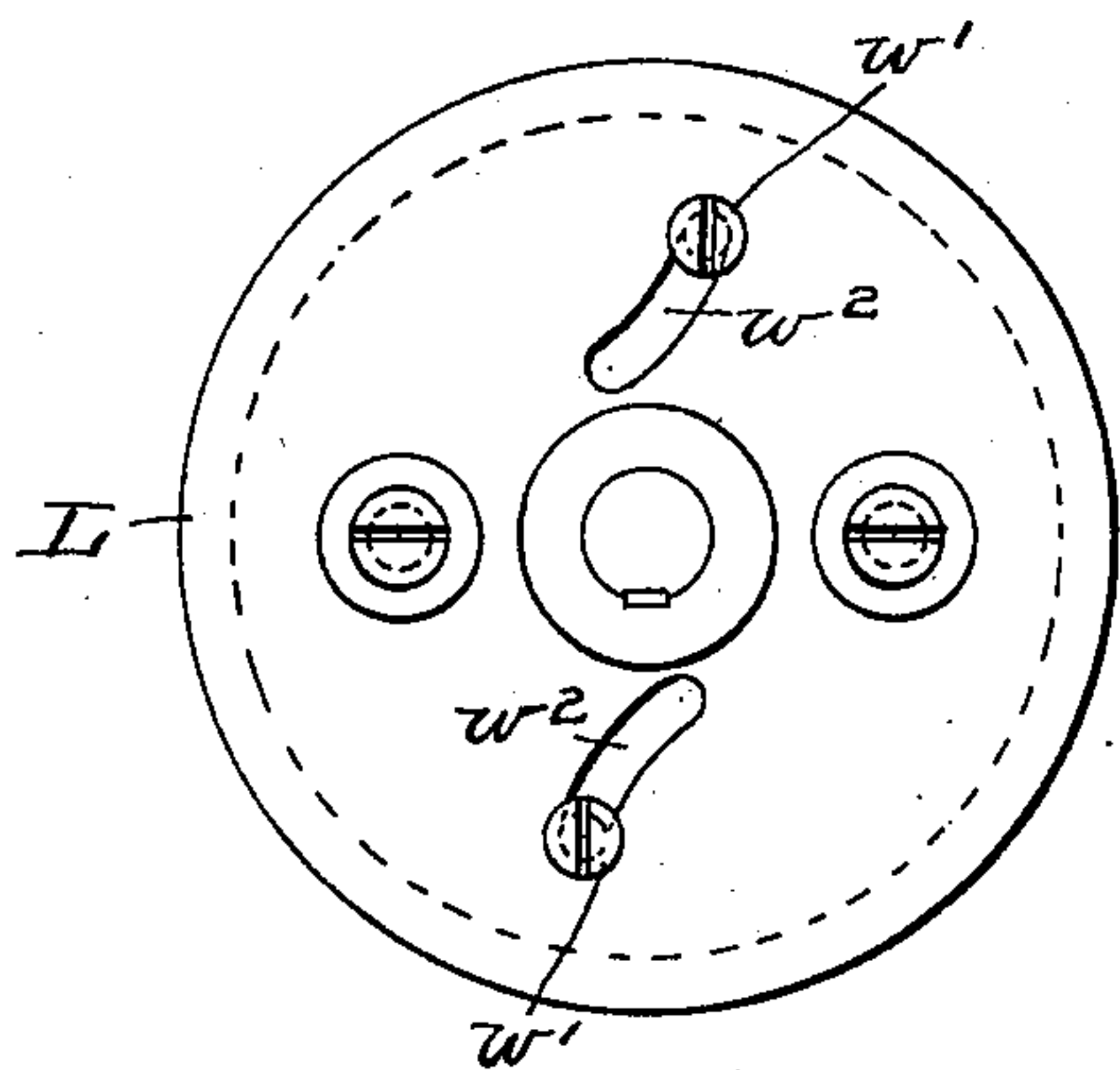


Fig. 17.

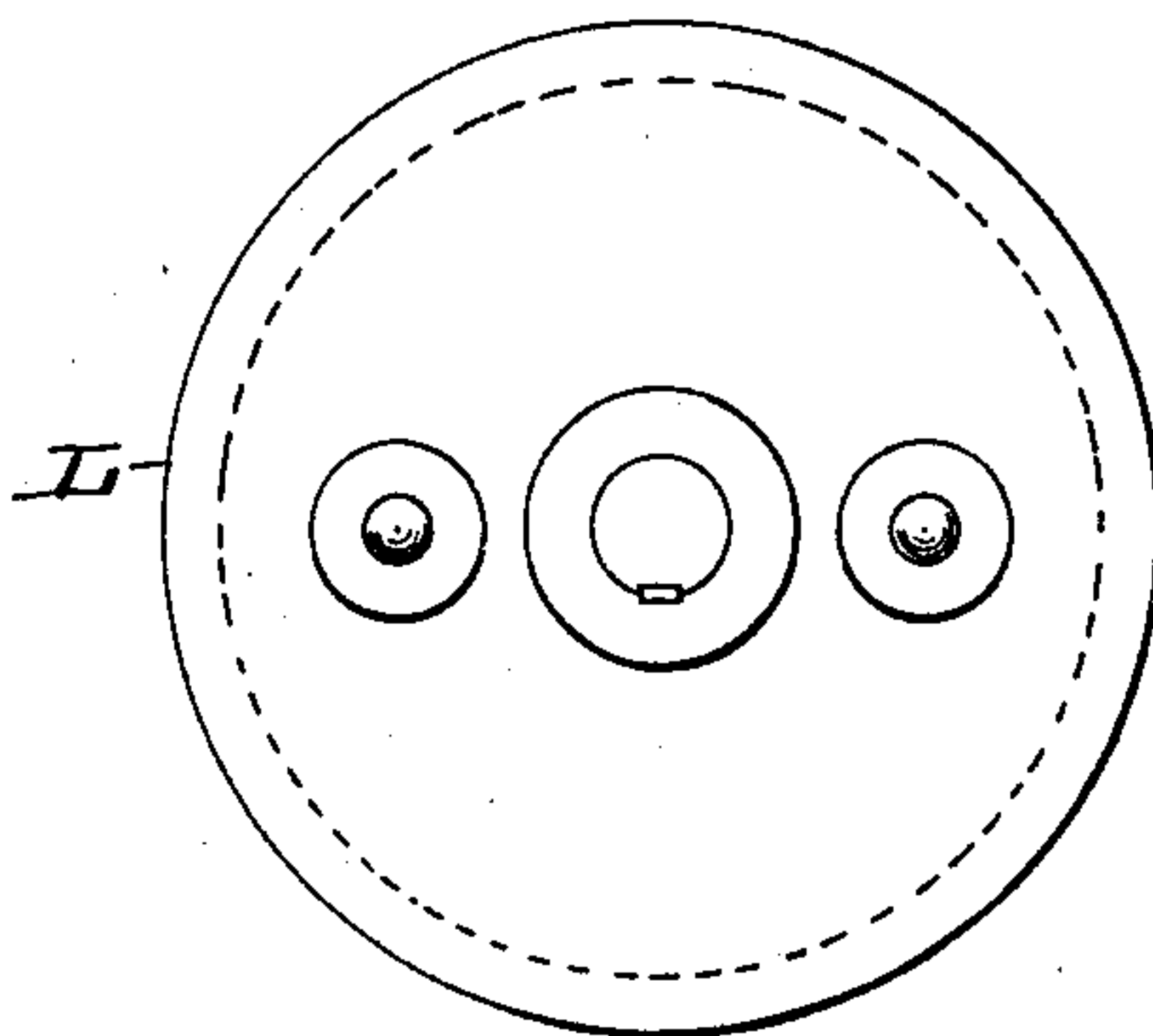


Fig. 18.



Fig. 19.



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UNITED STATES PATENT OFFICE.

ISMAEL IRIGOYEN, OF CHIHUAHUA, MEXICO.

SEEDER.

SPECIFICATION forming part of Letters Patent No. 587,503, dated August 3, 1897.

Application filed October 29, 1896. Serial No. 610,466. (No model.)

To all whom it may concern:

Be it known that I, ISMAEL IRIGOYEN, a citizen of Mexico, residing at Chihuahua, in the State of Chihuahua and Republic of Mexico, have invented certain new and useful Improvements in Seeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to seeding-machines such as are adapted to sow or plant all kinds of seeds in a continuous row or in hills and at the same time to cover them.

The principal objects of my invention are to construct a light compact machine of small dimensions having few parts, simple in form and operation, cheap in construction, adapted to be used in connection with all kinds of apparatus for plowing and seeding and for sowing all sizes of seeds, to prevent clogging in feeding, and to keep the covering parts and the wheels clear from dirt when operating.

The improvements constituting my invention are hereinafter described and particularly claimed, and are illustrated in the accompanying drawings, in which—

Figure 1 is a side view in elevation, partly in section; Fig. 2, a similar view from the opposite side, omitting some of the parts and showing more clearly others; Fig. 3, a transverse partly sectional view; Fig. 4, a rear view in elevation of part of seeder; Fig. 5, a sectional detail of brush-compartment; Fig. 6, a detail plan of seed-reservoir and agitator therein, and Figs. 7 and 8 front and side views of said reservoir; Figs. 9 and 10, details of seed-distributor; Fig. 11, a sectional detail of cog-wheel for actuating distributor; Figs. 12 and 13, details of covering-blades; Figs. 14 to 19, details of adjustable seed-cups.

Referring to the drawings, the supporting-frame of the apparatus is composed of two bars A, which at their upper ends are horizontal and at the rear are curved downward and terminate in two covering-blades A'. Secured to the plates A are curved arms A², which carry a driving-wheel B, the periphery of which is provided with ratchet-shaped teeth c. Also pivoted to the plates A are handles D, provided with a brace E, which is pivoted to the covering-blades A' on a bolt e'. By

these means the covering-blades are raised. The bolt e', secured to blades A', is provided with a nut and washer at e², and on the bolt is placed a spring e³, the object of which is to permit one of the blades to yield on meeting an obstruction.

Secured to the upper horizontal plates A is a hopper-frame F, and to the top of hopper-frame F is bolted a seed-reservoir G. The hopper-frame F is secured to the plates A by means of bolts h, passed through oblong slots i in the frame, by which means the plates A, carrying the covering-blades, are permitted to rock on bolts h, so as to permit the covering-blades to be raised from the ground by the handles D or to be raised automatically on meeting an obstruction.

I is a discharge-chute bolted to plates A and provided at its top with a seed-distributor K.

L is a feeder located at the top of the hopper-frame F and communicating above with the seed-reservoir G and below with the distributor K by means of a hopper K². On the same shaft with the feeder L is placed a cog-wheel L', which is driven by a sprocket-chain P from cog-wheel O', mounted on the shaft of the wheel B. The seed distributor or spreader K is provided interiorly with a plate R, hung at its upper end to a lever O, and thence extending diagonally downward across the distributor K, and is supported normally in this position by a spring S at its back.

The cog-wheel L' is provided on its face with pins l, set at desired intervals, with which a finger n' of a link N is adapted to engage, said link being connected to lever O of the distributor K. The feeder L is also provided on its periphery with cups V, having hinged false bottoms W, which can be set by screw w' in slots w², so as to increase or decrease the depth of the pocket and thereby regulate the quantity of seed to be fed at each interval.

Y is a brush inclosed in a separate compartment y' and pressed down and held against the feeder by means of a cover y², for the purpose of keeping the feeder clean.

Y³ is an agitator hinged to the reservoir G and extending into the reservoir M for keeping the seed therein loose and free.

C' is a steel spring-plate, one end of which is secured to the bottom or lower part of the

arms A and the opposite free end bent and resting on the teeth of the wheel B, the purpose of which is to act as a scraper to keep the wheel free from mud and dirt.

5 The operation of the apparatus is as follows: The apparatus may be pushed by hand or mounted on a plow or harrow. The machine is operated from the cog O' and the driving-wheel B by chain P and cog L' on the
10 feeder-shaft. The grain to be sowed or planted is placed in the reservoir M and kept loose by the agitator Y³. It then falls in cups V on feeder, the size, number, and position of which cups may be varied as desired. The feeder
15 drops the grain through hopper K² into the distributor K, where it falls onto the inclined plate R. This plate is operated by levers O and N and they in turn by the pins *t* on the face of cog L', corresponding in number to the feed-
20 cups, which action permits the grain at the proper intervals to fall into chute I and thence into the furrows. The covering-blades A', extending down on both sides of the furrow, effect the operation of covering the seed.

25 Although the dimensions of and material composing the apparatus are not essential, yet it can be stated that it may be made not to exceed two and one-half feet in height, about the same width, and not to exceed fifteen or twenty pounds in weight. The size
30 of cylinders, cups, and pulleys may be varied to meet the different kinds of seed to be sowed or planted.

Having thus described my invention, what
35 I claim is—

1. In a seeder in combination with the plates, A, arms secured to said plates and carrying a driving-wheel, a spring-scraper for said wheel on said plates, the hopper-frame
40 F secured to said plates, the seed-reservoir G, attached to said frame, said frame provided with a feed-distributor, a feeder between said reservoir and feed-distributor, said reservoir provided with a separate compartment, a
45 brush in said compartment and means for holding the said brush down against the feeder to keep the latter clean, a chute leading from the distributor through which the seed is discharged and yielding covering-blades, A', se-
50 cured to said plates, A, to cover said seed, substantially as described.

2. In a seeder, the combination with the seed-reservoir and seed-distributor, of the

feeder, L, between said reservoir and distribu-
ter, provided with seed-cups, V, said cups 55
provided with pivoted bottoms, and set-screws and slots for raising, lowering and setting said bottoms to increase the size of said pockets,
plate, R, in said distributor hung at one end
to a lever, O, a cog-wheel mounted on a shaft 60
above said distributor, means for connecting said cog-wheel with said lever to control the movement of the latter, a driving-wheel, and a chain connecting said drive-wheel and cog-wheel, substantially as described. 65

3. In combination with the bars A and covering-blades A', forming the frame, of the handle D and the brace-rod E, and the driving-wheel carried by said frame, substantially as described. 70

4. In combination with the frame A, A, of the discharge-chute, and the distributor K mounted on said frame, said distributor provided with the inclined plate R, the spring-support S, levers O and N, a hopper and hop-
75 per-frame above said distributor, a feeder and a seed-reservoir, a sprocket-wheel L' having on its face pins *t* mounted on the shaft of said feeder, a driving-wheel, a sprocket-wheel on the shaft of said wheel, and a sprocket-chain
80 connecting said sprocket-wheels, whereby the said distributor is operated through said levers and driving-wheel, substantially as described.

5. In combination with the arms A and covering-blades A' A' the rod on which said blades are mounted, and a spring, nut and washer, on said rod whereby one of the said blades is permitted to yield laterally from the other, substantially as described. 90

6. In a seeder the combination with the reservoir, the feeder, the sprocket-wheel mounted on the shaft of said feeder, said wheel provided with pins *t*, the hopper-frame F, the
95 hopper K², the distributor K, and the levers O, N, connecting the said sprocket-wheel and the said distributor, and the frame for supporting said distributor, substantially as described.

In testimony whereof I affix my signature 100
in presence of two witnesses.

ISMAEL IRIGOYEN.

Witnesses:

L. ELSASUR,
M. MÁRQUEZ.