

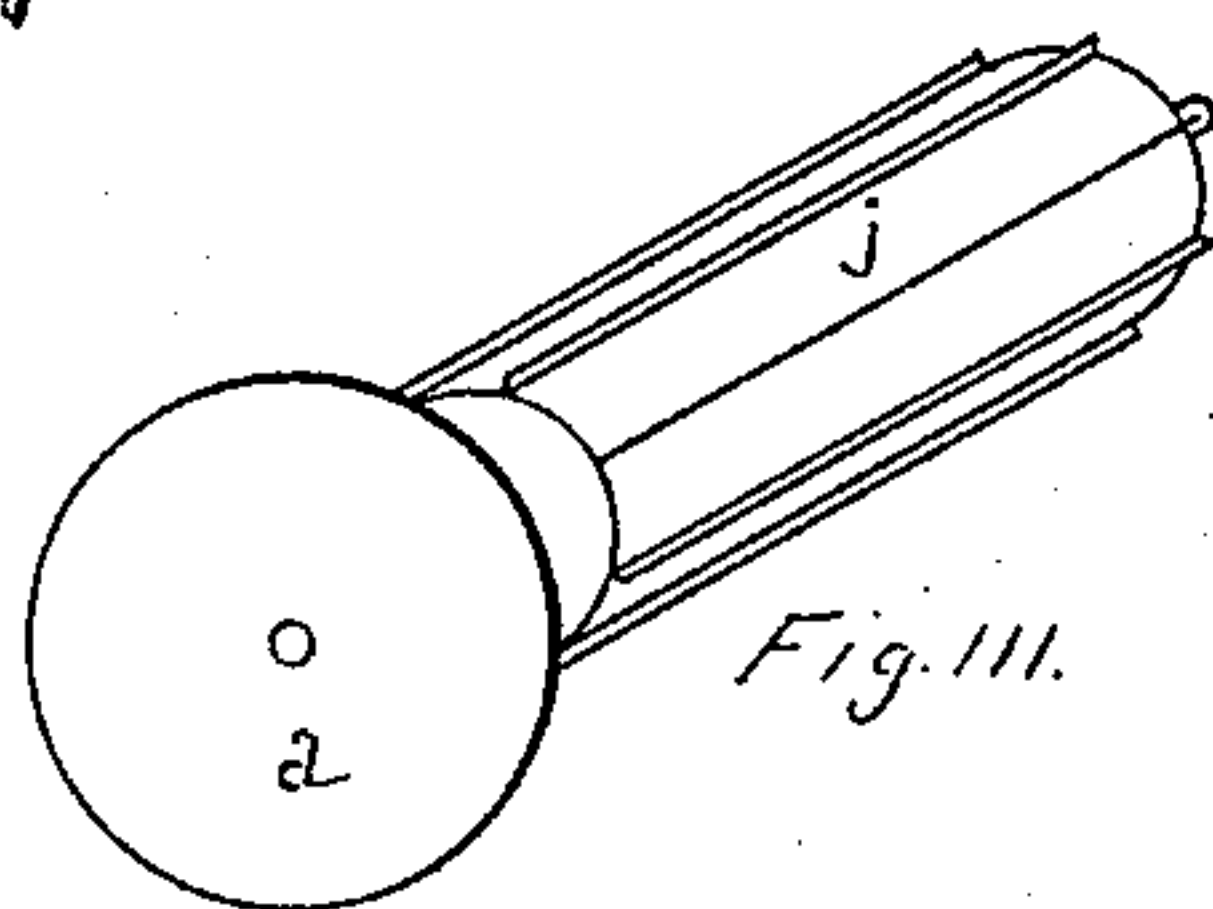
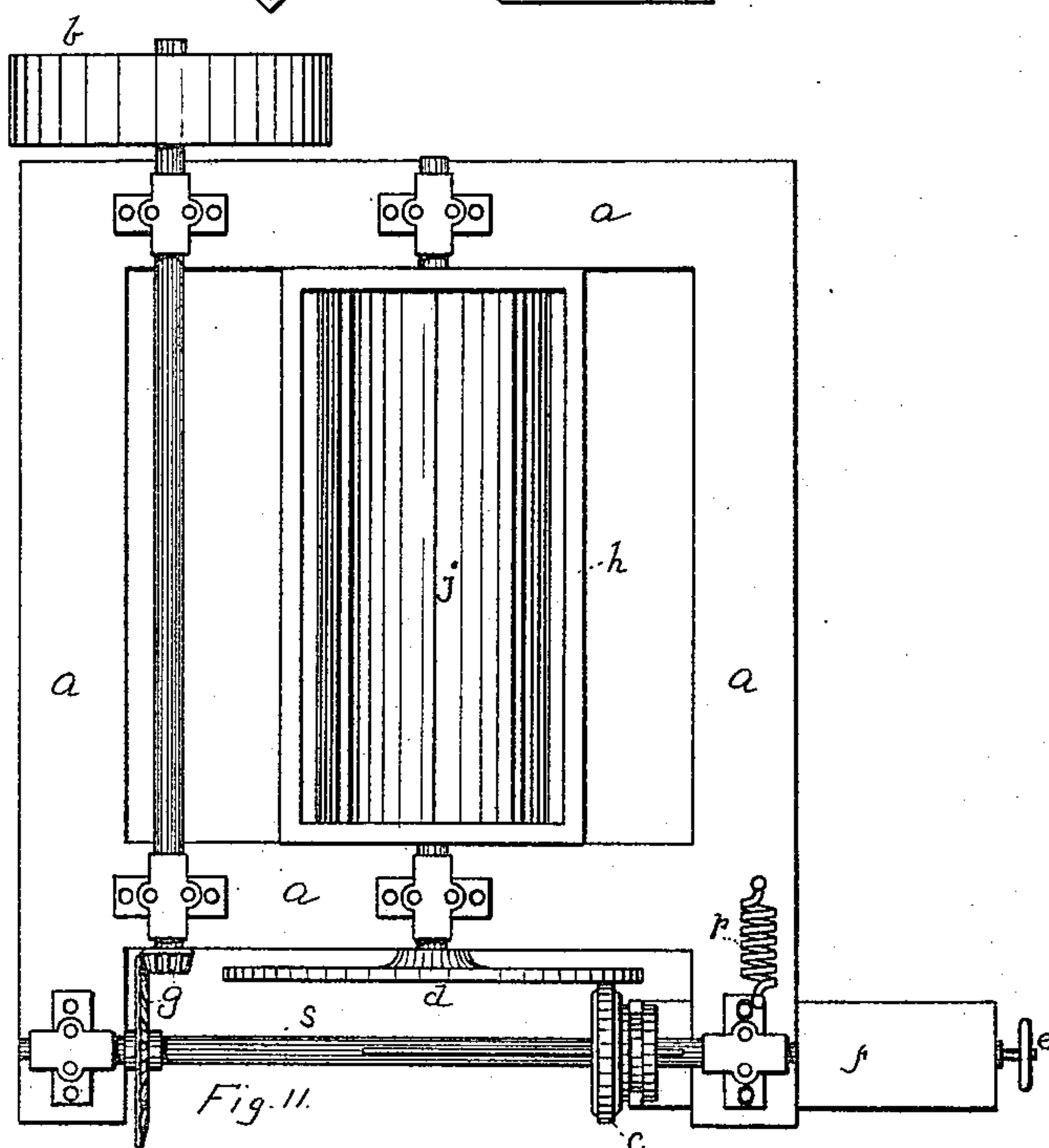
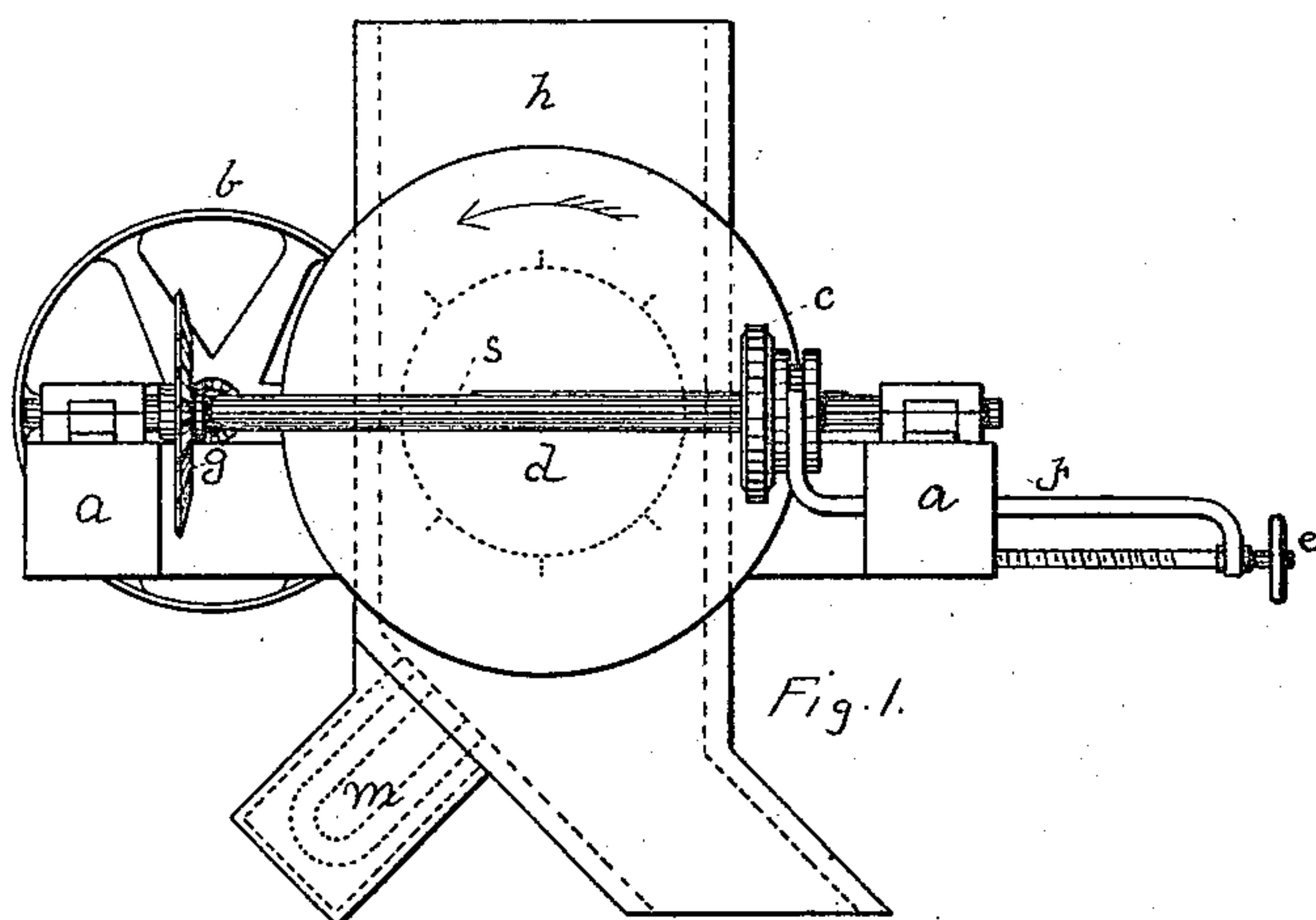
(No Model.)

2 Sheets—Sheet 1.

D. A. TOMPKINS.
SEED FEEDING MACHINE.

No. 440,935.

Patented Nov. 18, 1890.



Witnesses
P. O. Hebert
W. H. Thomas Jr.

Inventor:
D. A. Tompkins.

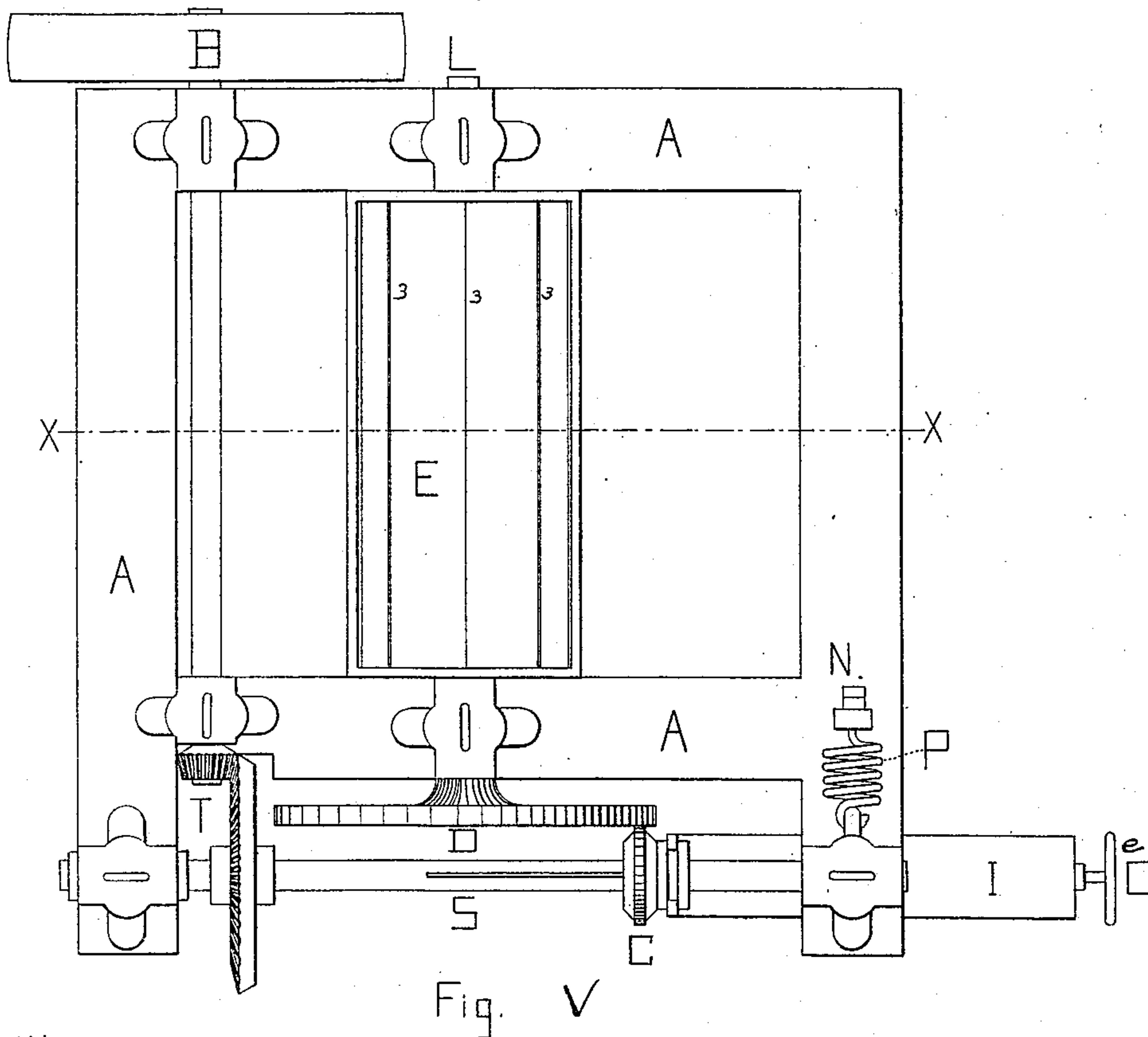
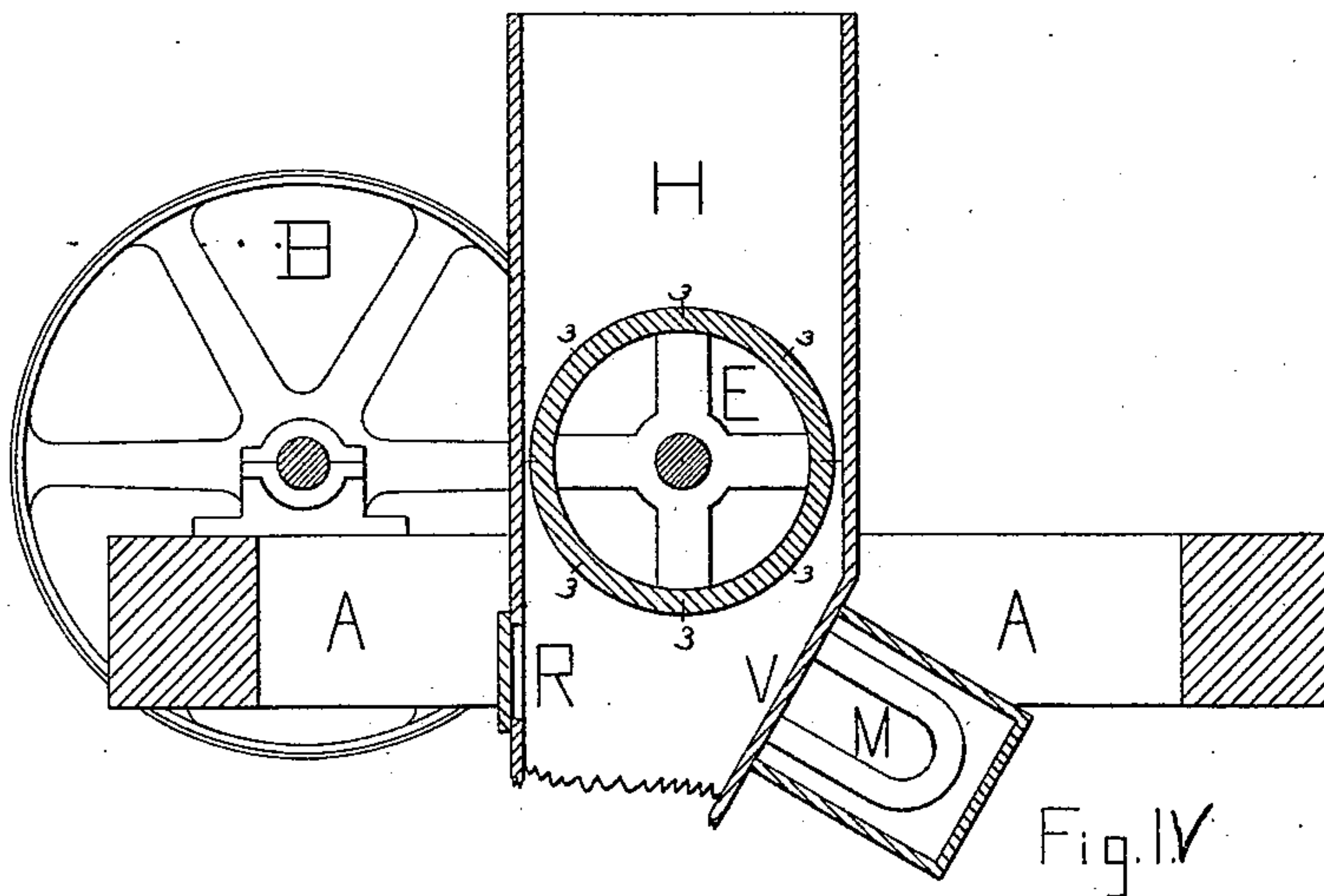
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WITNESSES
A. M. Miller Jr.
Fred. Oliver

INVENTOR
D. A. Tompkins

UNITED STATES PATENT OFFICE.

DANIEL A. TOMPKINS, OF CHARLOTTE, NORTH CAROLINA.

SEED-FEEDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 440,935, dated November 18, 1890.

Application filed February 27, 1889. Renewed October 20, 1890. Serial No. 368,714. (No model.)

To all whom it may concern:

Be it known that I, DANIEL A. TOMPKINS, a citizen of the United States, residing at Charlotte, in the county of Mecklenburg and State of North Carolina, have invented a new and useful Seed-Feeding Machine, of which the following is a specification.

The object of my invention is to provide a friction-gearing for connecting the fluted feeding-roller arranged in a hopper-box with the source of power; and the invention consists, more particularly, in a friction-gearing such as described, wherein the bearing of the shaft of the friction-wheel is adapted to yield laterally, and hence the friction-wheel is caused to yield laterally with respect to the friction-disk. The reason for having this method of feed motion is that the seed is forced through the hopper-box and cannot become clogged.

Again, if any article—such as a stone or nut—enters the machine the friction-wheel will slip on the disk, whereas if the roll is driven directly by gears some part of the machine would be broken in case a choke occurred.

In the drawings, Figure I shows an end elevation; Fig. II, a plan of the machine, and Fig. III a reduced view of the roller with its feeding-strips and disk. Fig. IV is a vertical section of the apparatus on line *x x*, Fig. V; and Fig. V, an enlarged plan of the same.

The frame of the machine is shown at *a a*. The pulley *b* is driven by a belt or other power. The shaft to which it is fast has on the opposite end a bevel-gear which engages a larger gear *g*, fast to the shaft *S*. The shaft *S* has a feather along about half its length. On this shaft is loosely fitted a friction-wheel *c*, which may be moved along the shaft by means of the bent lever *f*, which passes through the frame *a*. One end of this lever grasps loosely the friction-wheel *c* in such a way that the friction-wheel may revolve freely and at the same time may be moved along the shaft *S* as the lever *f* is moved in or out by means of an adjusting-screw embraced by one end of said lever *f* and provided with a hand-wheel for turning. The friction-disk *d* receives motion from the friction-wheel *c* and in turn drives the roll *j*, which revolves in a box or hopper *h*, to which the seed is fed in bulk. As the hand-wheel *e* is turned the bent lever *f* is moved, and with it the friction-

wheel *c* is shifted along the shaft *S*, the periphery of the friction-wheel *c* being at all times in contact with the disk *d*. The speed of the latter may be regulated perfectly by the hand-wheel *e*. The shaft *S* may revolve in bearings, one or both of which may have a certain amount of motion laterally or in a horizontal direction at right angles to the shaft. This is to allow of a proper adjustment of the pressure of the friction-wheel *c* on the disk *d*. One or both of the bearings may have a spring *p* to hold the friction-wheel to place against the disk *d*. The body of the roll *j* is of a less diameter than the width of the hopper or box *h*. The roll *j* has a number of flutes or strips 3 fastened to it parallel with its axis and projecting beyond its surface enough that as the roll revolves in the hopper the edges of the strips just clear the sides of the hopper-box.

The action of the machine is as follows: The pulley *b* receives motion from the main shafting by belt. The two gears *g* transfer the motion to the friction-wheel *c*. The friction-wheel being in contact with the disk *d* causes it to revolve, and with it the roll *j*. As the hopper *h* is full of seed, the flutes or strips on the roll cut off, as it were, a certain amount of seed and force them through the machine. If the amount delivered is too great, the hand-wheel *e* is turned so that the friction-wheel approaches the center of the disk *d*. After the seed has passed the fluted roll it falls upon an inclined plane, behind which is the magnet *M* for catching and retaining all undesirable bits of iron or steel in the seed. A hand-hole may be provided to allow the removal of the collected metal from time to time.

I am aware that it is old in friction-gearing to have the friction-disk yielding with respect to the friction-wheel, and that such a construction is shown, *e. g.*, in United States patent to Adler, No. 267,818, of November 21, 1882; but under this arrangement it is necessary to make the shaft of the friction-disk capable of sliding longitudinally.

In my construction, as pointed out in the claims, and where the friction-wheel is yielding and its shaft is adapted to yield laterally, I gain the important advantage of greater simplicity and cheapness of construction and a more ready arrangement and adjustment of and accessibility to the parts which cause the

friction disk and wheel to yield one with respect to the other.

Another advantage which springs from my arrangement is that the friction-disk can be
5 directly secured to the shaft of the fluted feeding roller without any intermediate or connecting gearing. This could not be done where the shaft of the friction-disk slides longitudinally, because it is important that no
10 longitudinal movement is imparted to the said fluted roller.

What I desire to claim as my invention and secure by Letters Patent is—

1. In a seed-feeding machine, the combination of a friction-disk and a friction-wheel

and a shaft on which said friction-wheel is mounted with a bearing capable of lateral motion and means for yieldingly urging it toward the friction-disk, all substantially as described.

2. In a seed-feeding machine, the combination of a friction-disk, a friction-wheel, and a shaft on which the friction-wheel is mounted with a bearing capable of lateral motion and a spring for forcing the bearing toward the
25 friction-disk, all substantially as described.

DANIEL A. TOMPKINS.

Witnesses:

FREDERICK OLIVER,
R. M. MILLER, Jr.