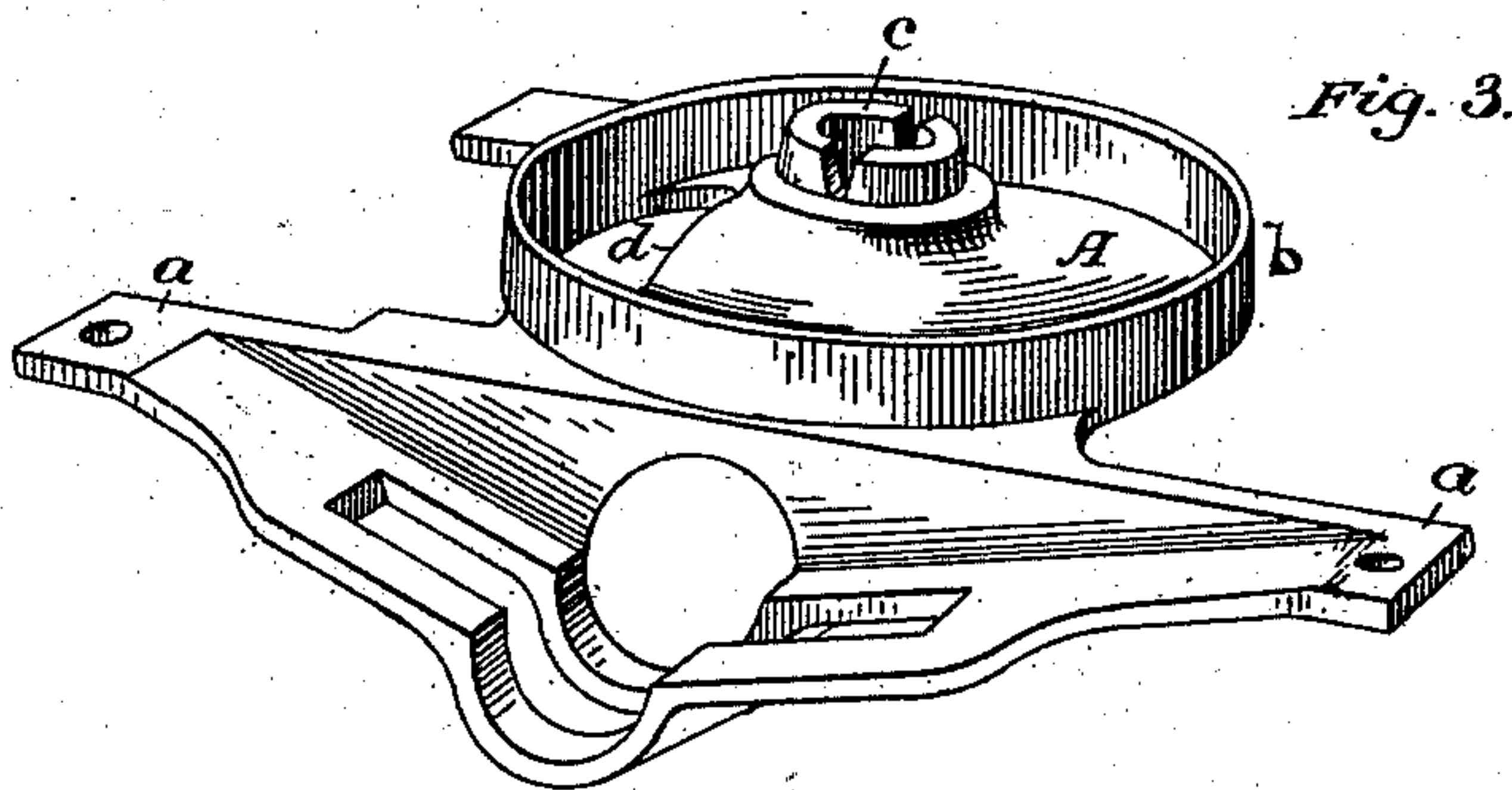
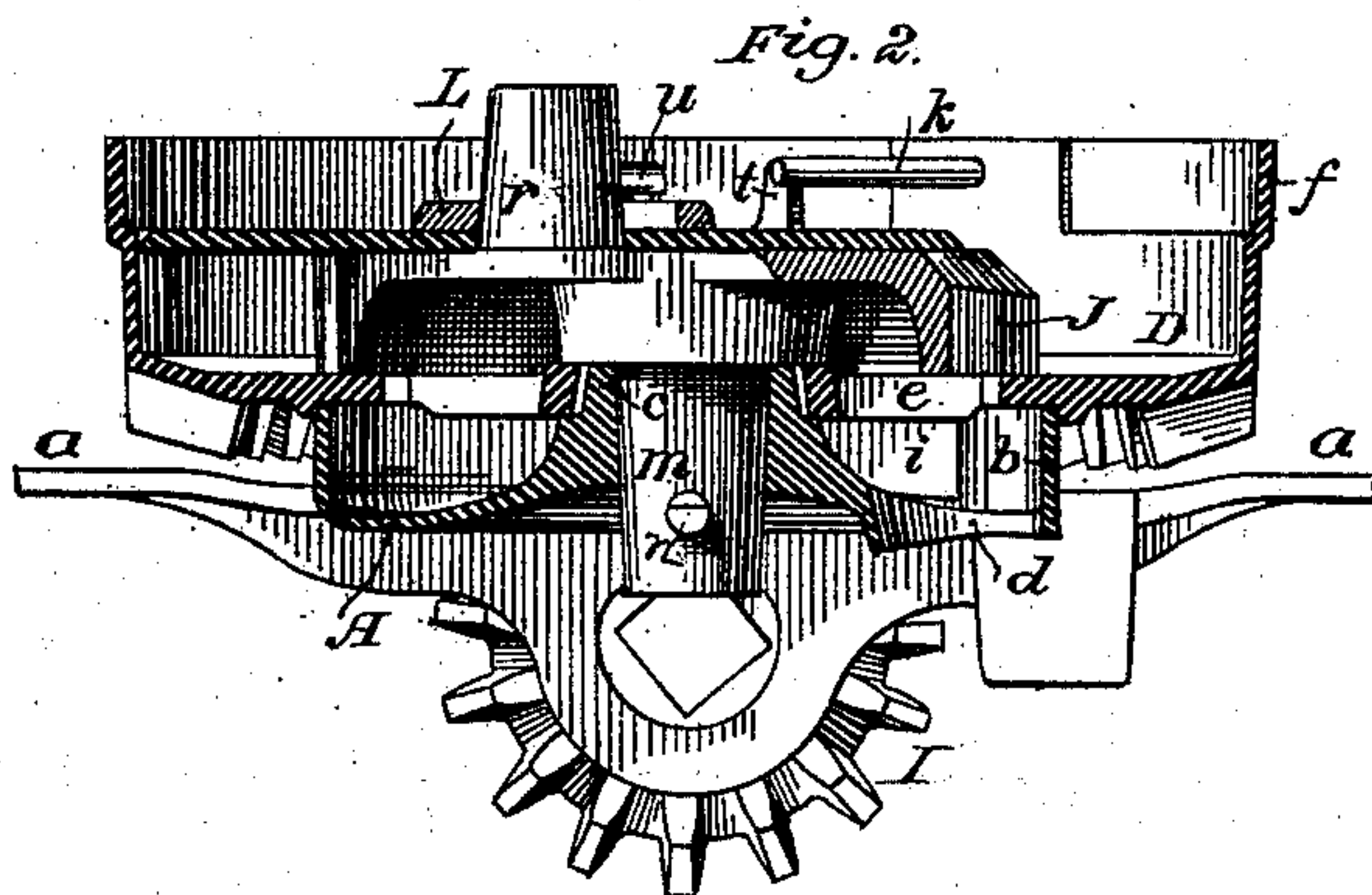
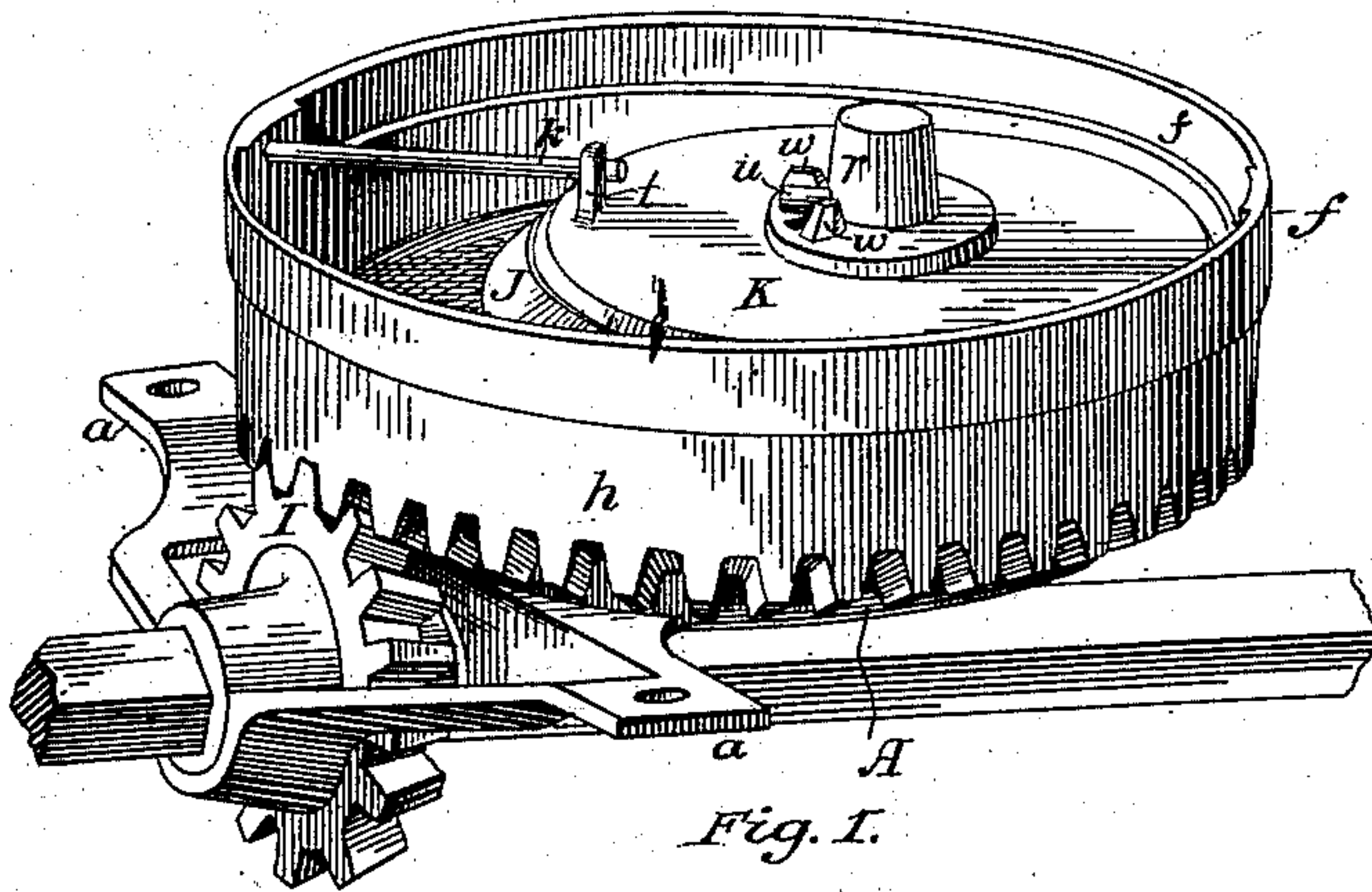


R. B. SHELDON & J. V. PEACOCK.
Force-Feed Device for Fertilizer-Distributor.

No. 227,998.

Patented May 25, 1880.



Witnesses:

Clarence Poole
S. H. Marshall

Inventor:

R. B. Sheldon
J. V. Peacock
By *Arthur A. Smith*
R. D. Smith

R. B. SHELDON & J. V. PEACOCK.
Force-Feed Device for Fertilizer-Distributor.

No. 227,998.

Patented May 25, 1880.

Fig. 4.

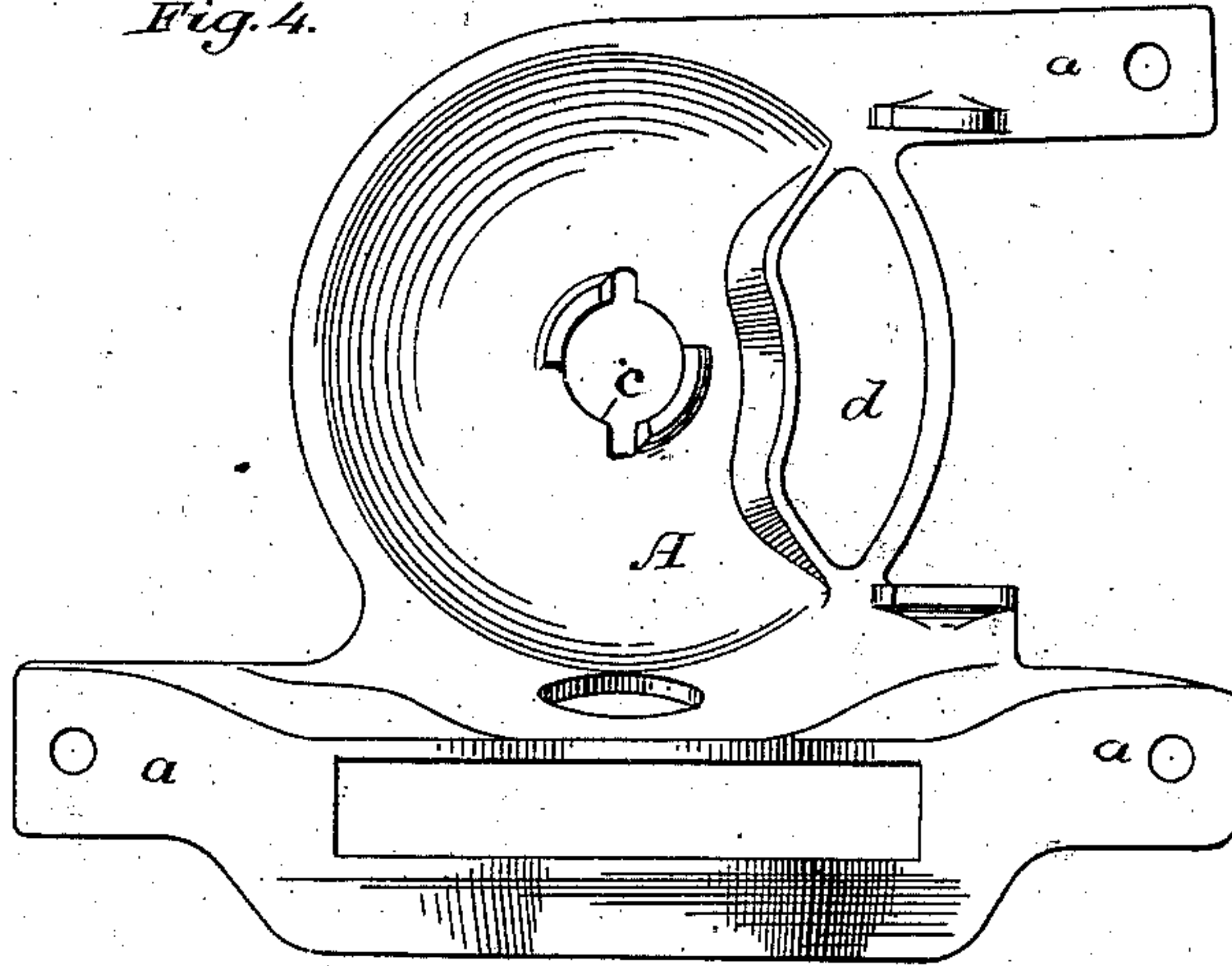


Fig. 5.

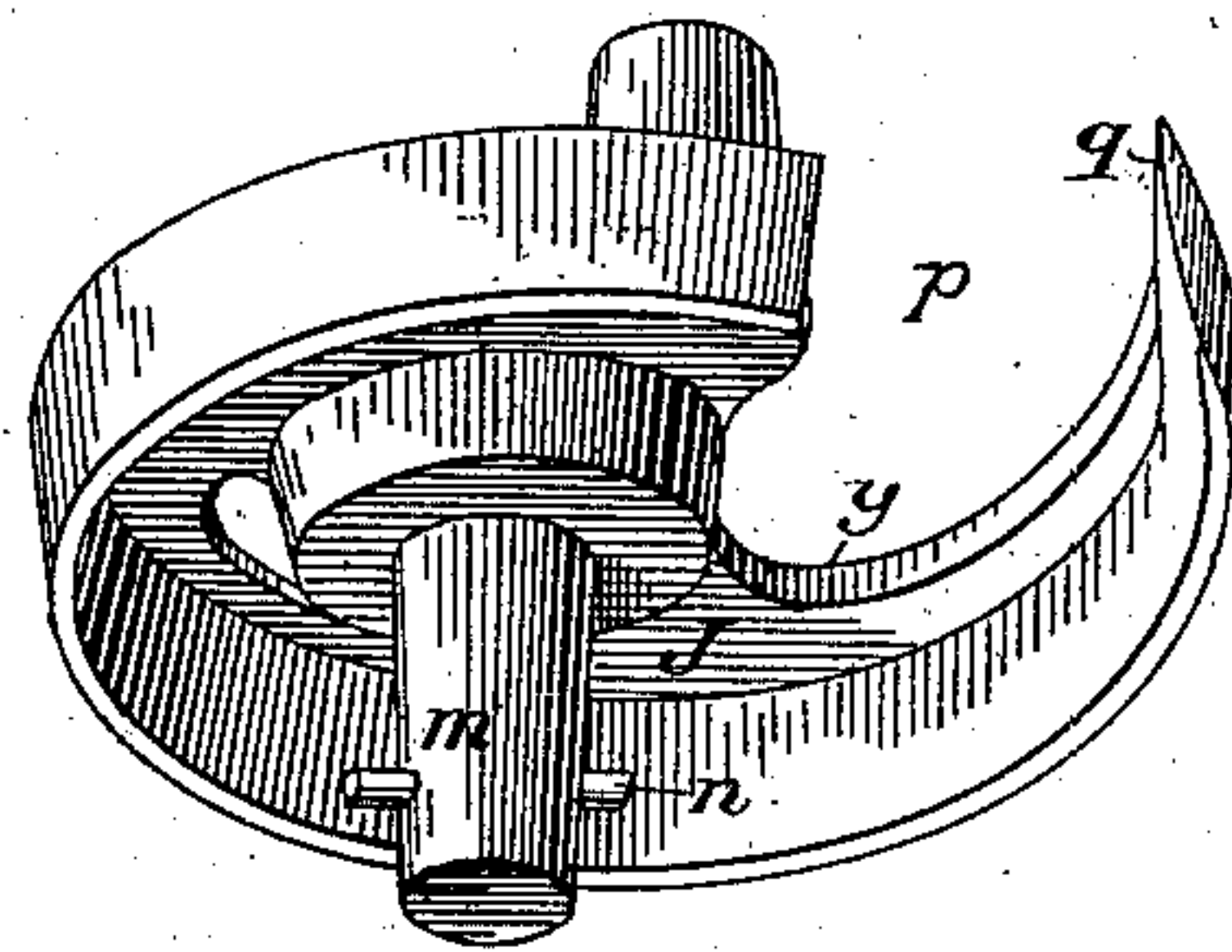
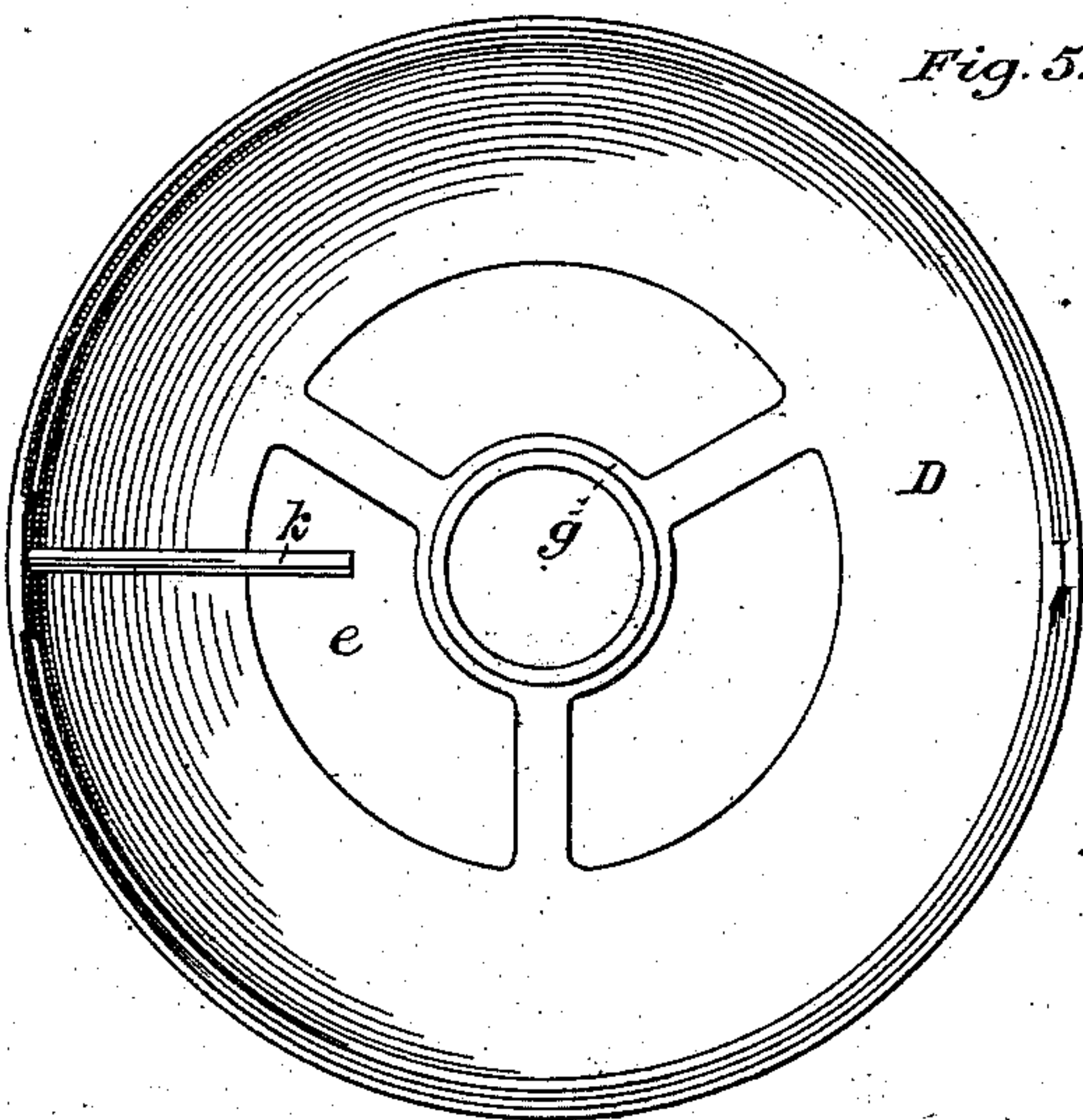


Fig. 6.

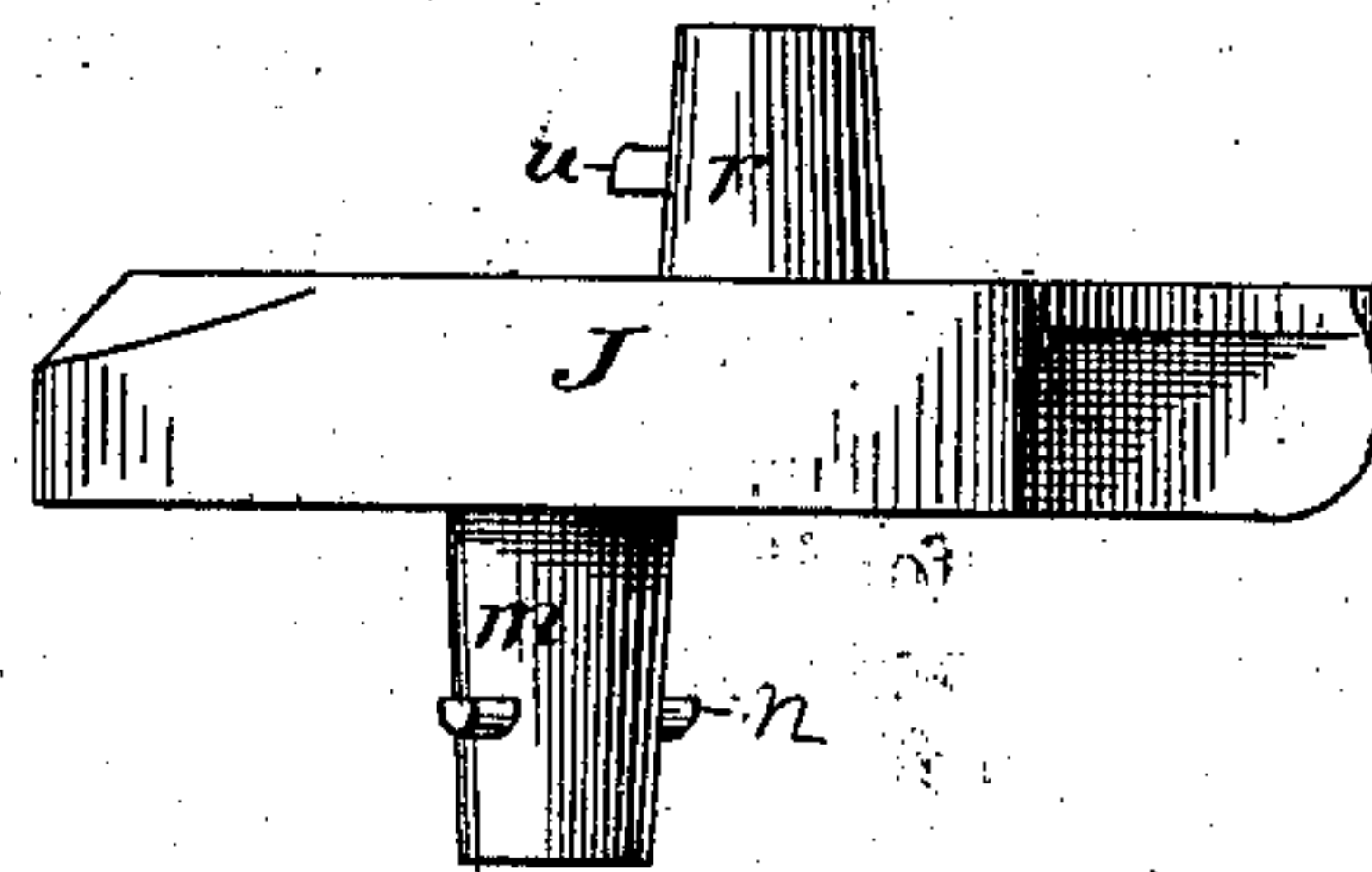


Fig. 7.

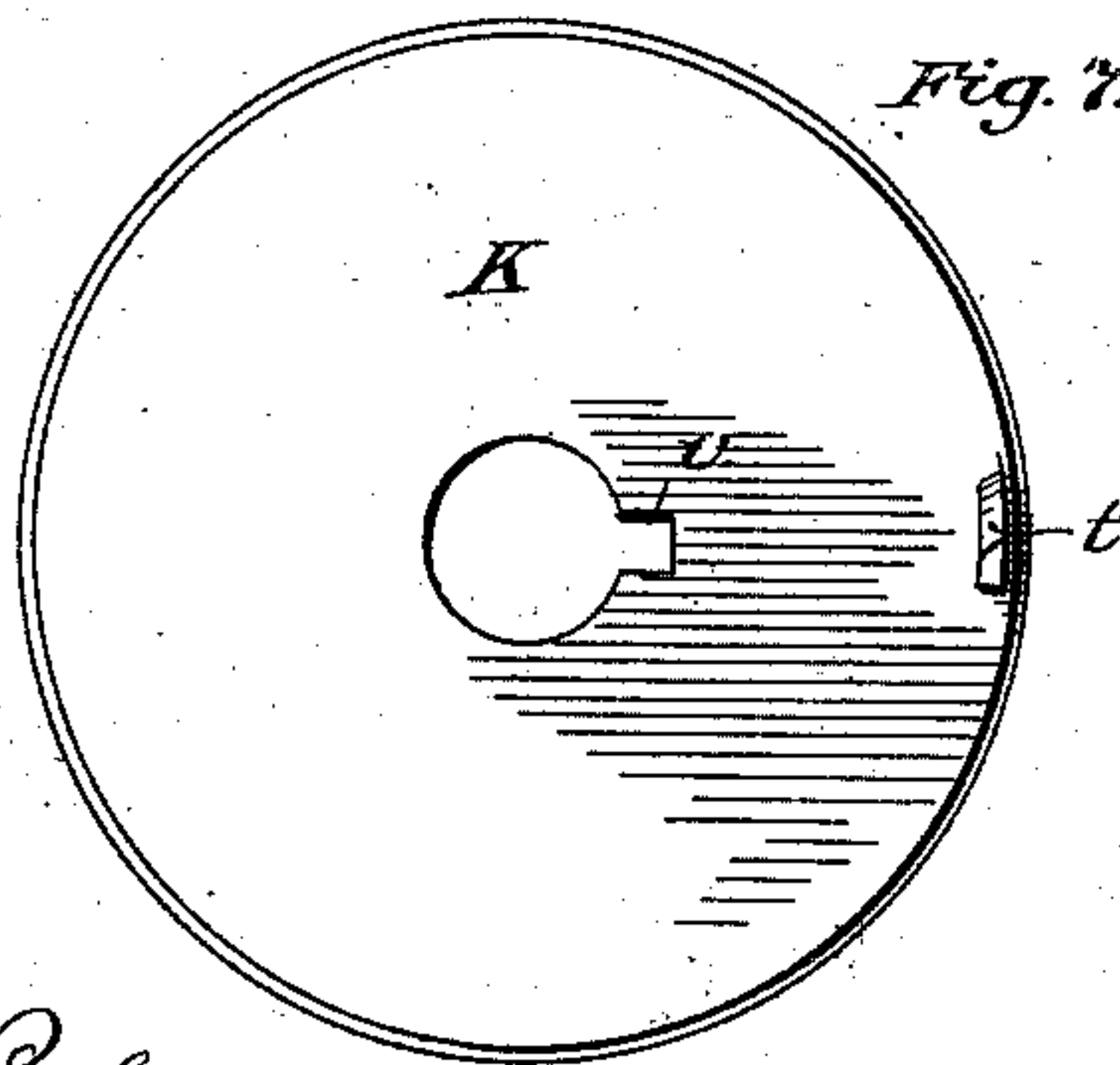
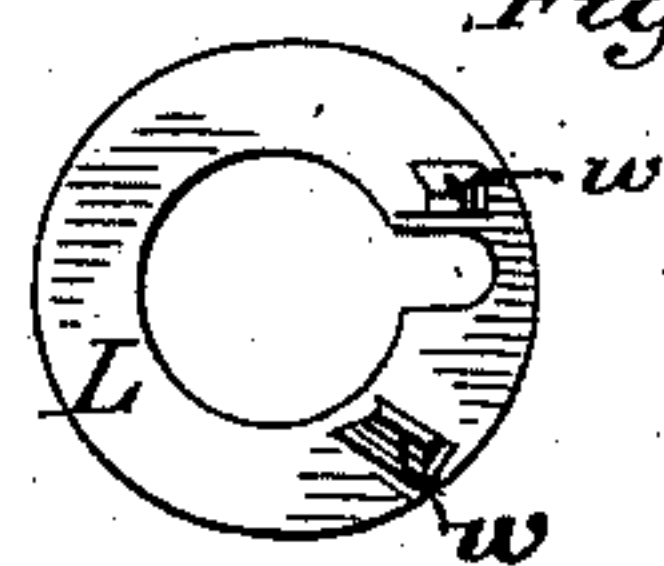


Fig. 8.



Witnesses:

C. Clarence Poole
L. W. Marshall

Inventor:

R. B. Sheldon
J. V. Peacock
By *Arthur Atty*
R. D. Smith

UNITED STATES PATENT OFFICE.

RICHARD B. SHELDON AND JOSEPH V. PEACOCK, OF SHORTSVILLE, N. Y.

FORCE-FEED DEVICE FOR FERTILIZER-DISTRIBUTERS.

SPECIFICATION forming part of Letters Patent No. 227,998, dated May 25, 1880.

Application filed January 17, 1880.

To all whom it may concern:

Be it known that we, RICHARD B. SHELDON and JOSEPH V. PEACOCK, of Shortsville, Ontario county, in the State of New York, have
5 invented new and useful Improvements in Force-Feed Devices for Fertilizer-Distributers; and we do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying
10 drawings, wherein—

Figure 1 is a perspective of our invention in operative condition. Figs. 2, 3, 4, 5, 6, 7, and 8 are views of the several parts detached.

It is well known that the distribution of fertilizers is difficult by reason of the general coherent character of such materials, which prevents disintegration by the agitators generally in use.

Our invention relates to a method of disintegration by slicing or cutting from the bottom of the mass, and by positive action feeding it out, by the operative parts of the machine, in an even and continuous stream; and it consists, essentially, in an eccentric circular revolving knife, against which the mass is
25 continually moved. There are also points relating to structure, which will be particularly referred to farther on.

A is the bed or frame plate, provided with
30 suitable lugs, *a*, for its attachment to the framework of the machine, and with a peripheral flange, *b*, which forms an upwardly-projecting rim around the bed-plate, to prevent the escape laterally of anything which descends to
35 said bed. At the center there is an upwardly-projecting hollow hub or bearing, *c*, to receive and hold the moving and stationary parts of the force-feed apparatus; and there is also, between the said hub and peripheral flange, a
40 discharge-opening, *d*, through which the final discharge takes place.

A cup-plate, D, having a central opening, *e*, and a peripheral flange or rim, *f*, is next provided and fitted to said bed A by a center
45 ring, *g*, connected to the outer portion of the cup-plate by spider-arms. The exterior bottom surface of the cup D rests upon the upper edge of the rim *b*, and exterior to its bearing-surface upon said rim there is a drooping
50 bevel-gear ring, *h*, to mesh with a driving-pin-ion, I, and be thereby rotated.

When the cup D is in place upon the bed A the ring *g* encircles the hub *r*, and there is a space between the bottom of said cup and the upper surface of the bed A.

The material fed by this device drops through
55 the opening *e* either directly into the discharge-hole *d* or upon the bed A. In the latter event it is swept around and into the hole *d* by the scraper or cleaner *i*, attached to one of the
60 spider-arms and extending radially across the entire surface of the bed A.

An arm or rod, *k*, extends radially inward from the rim *f* to engage with and move the
65 slicer, as will more fully appear hereinafter.

Next after the cup D comes the feeder J, which consists of a scroll-plate covered over the greater part of its extent. It is provided with a central hub or stud, *m*, fitted to the hub
70 *c*. When in place it holds the cup D in position, and is itself locked by the cross-pin *n*, which is turned aside beneath the bottom of the bed upon inclined surfaces, or otherwise
securely locked.

The scroll-feeder is hollow underneath, and
75 covers and incloses as with a wall the opening *e*, so that nothing can enter therein except through the space *p* between the ends of said scroll. The end *q* of said scroll reaches out to
80 a point almost in contact with the rim *f*, so that whatever may be carried forward upon the surface of the cup D will be swept against said end *q* and carried toward the center, where it is discharged through the opening *e*.

The upper surface of the feeder is provided
85 with a second stud, *r*, which is not axially coincident with the stud *m*, but is between that point and the point *q*. A circular knife, K, is located upon said stud *r*, and covers nearly the entire surface of the stationary feeder J. Its
90 edge all around is sharpened, and on its upper surface there is a lug, *t*, with which the arm *k* engages, and thereby causes said slicer to revolve with said cup D.

One of the objects of this improvement is
95 to render all the parts easily separable without the use of tools. To that end, therefore, we place a pin, *u*, permanently in the stud *r*, and make in the plate K a notch, *v*, so that said plate may pass down over said pin *u*; and
100 above the slicer-plate K we place the locking-plate L, which is provided with a similar notch

and with two lugs, *w w*, which limit the movement of said plate when in position.

It will be observed that all of these parts may be readily separated and reunited without tools whenever required, and that the forward motion of the movable parts in their revolution tends to carry the locking-pin *n* and the locking-plate *L* away from the notches, through which said parts may be liberated, and thereby maintain the lock.

The slicer *K*, it will be observed, has its axis eccentric to the axis of cup *D*, and therefore the fertilizer has an opportunity to descend below the plane of said plate on the side opposite its eccentric axis, and as the cup *D* revolves said portion will be carried against the edge of the revolving slicer *K* and severed. The severed fragments will pass into the scroll-feeder *J*, and be caused to drop through the openings and be discharged.

The forward edge, *y*, of the feeder is also made sharp, to assist the cutter in severing and to scrape clean the lower surface of the slicer.

The pinion *I* is constructed with projecting hubs, which rest in open bearings constructed on the side of the frame *A*, so that when the cup *D* has been removed said pinion may be lifted out of its bearings. It also has a rectangular axial opening to receive the line-shaft by which the device is to be driven.

Those portions of this apparatus which are shown herein and relate to the bed-frame, to the mode of securing the parts together by means of a stud from the scroll-feeder, which passes through the tubular hub of the frame and locks underneath the same, to the scroll-feeder with a continuous flange or rim, to a cleaner attached to the under surface of a revolving hopper, and to open hanging brackets, were the sole invention of Richard B. Sheldon.

These are, therefore, hereby disclaimed as joint inventions.

Those portions of the device herein shown which relate to the structure of the feeder and those parts which are below the same are included in a separate patent to us jointly, dated March 30, 1880, and numbered 226,121.

Having described our invention, what we claim is—

1. In a force-feed fertilizer-distributor, a revolving cup, *D*, and stationary feeder *J*, combined with a circular rotating slicer, *K*, whose axis is eccentric to the axis of said cup.

2. A force-feed fertilizer-distributor having a rotating cup, *D*, a stationary feeder, *J*, and an eccentric rotating slicer, *K*, combined with an arm, *k*, projecting inward from said cup and engaging with a lug on said slicer, so as to cause the same to rotate with said cup, as set forth.

3. The scroll-shaped feeder *J*, provided with the two hubs or studs *m* and *r*, not in line with each other, and provided with the locking-pin *u*, combined with the bed *A*, rotating cup *D*, slicer *K*, and the stationary lock-plate *L*, as set forth, whereby all the parts are united and held in place by the feeder *J* and hubs *m r*.

4. In a force-feed having a stationary stud, *r*, with a pin, *u*, and a rotating knife, *K*, mounted on said stud, the locking-plate *L*, provided with the central orifice and radial notch to pass over the pin *u*, combined with the stop-lugs *w*, whereby its motion is limited and the lock maintained while the machine is in operation.

RICHARD B. SHELDON.
JOSEPH VESEY PEACOCK.

Witnesses:

RUSSELL W. ROBERTS,
GEORGE H. DRUMMOND.