

(Model.)

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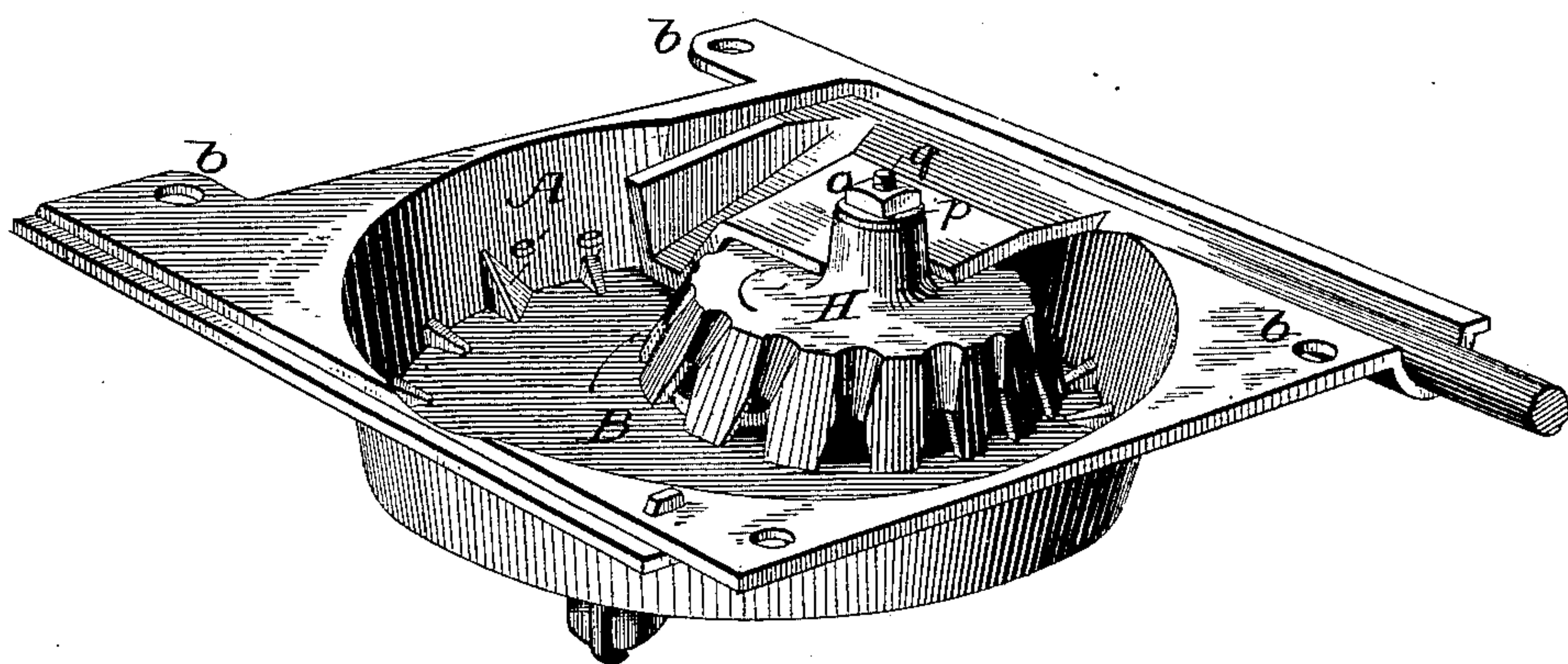
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FERTILIZER DISTRIBUTER.

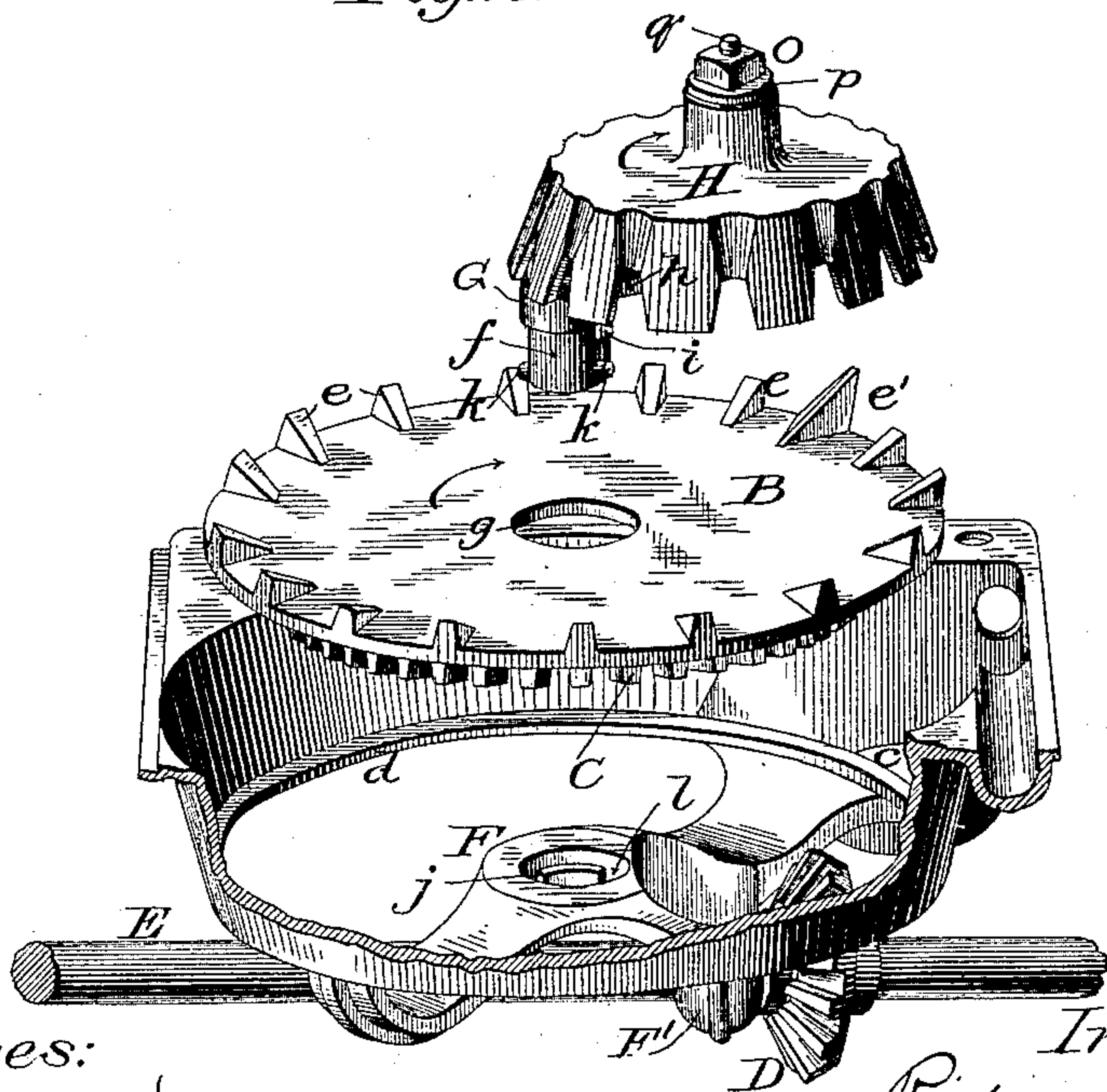
No. 318,045.

Patented May 19, 1885.

*Fig. 1.*



*Fig. 2.*



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(Model.)

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Fig. 3.

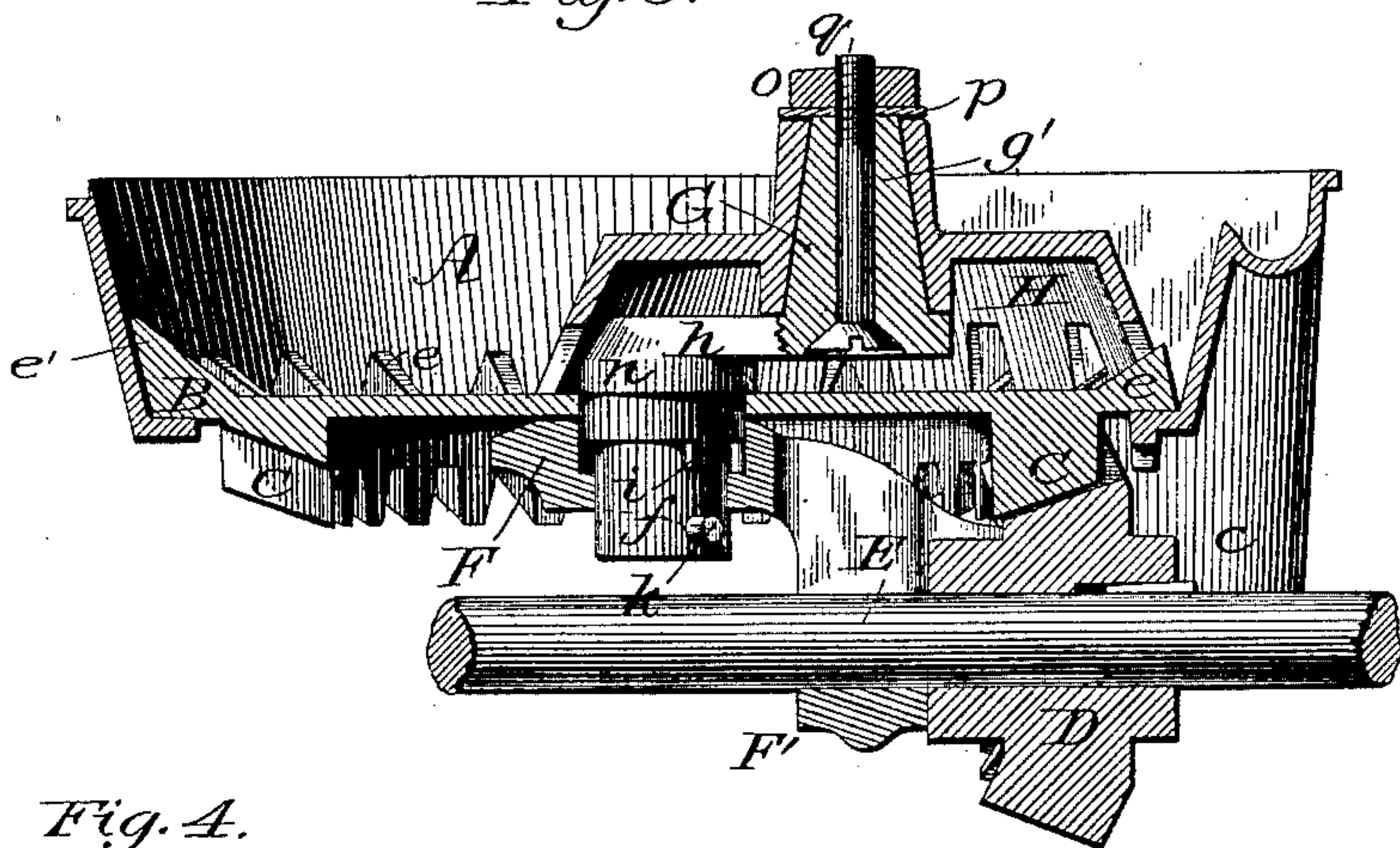
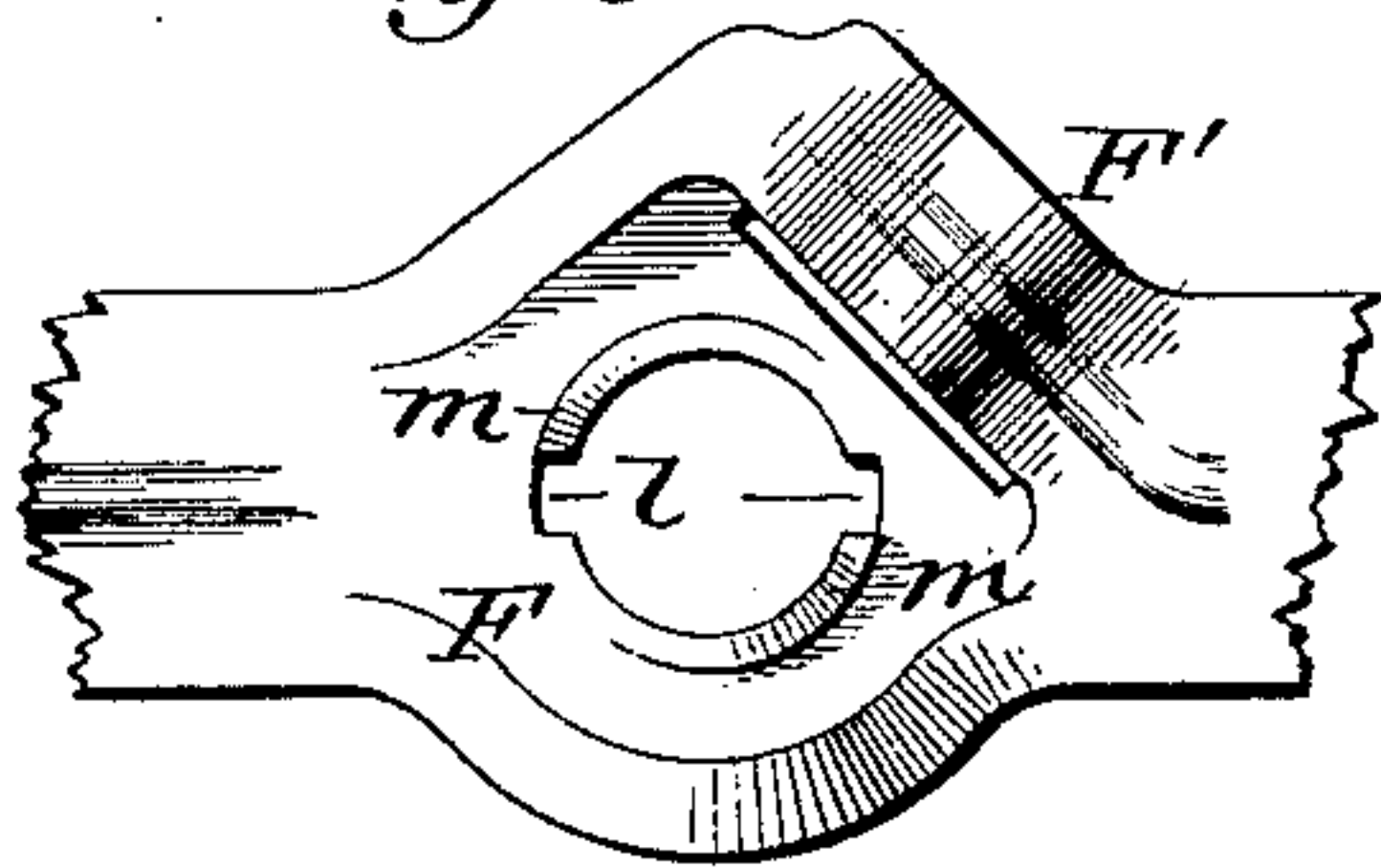


Fig. 4.



Fig. 5.



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(Model.)

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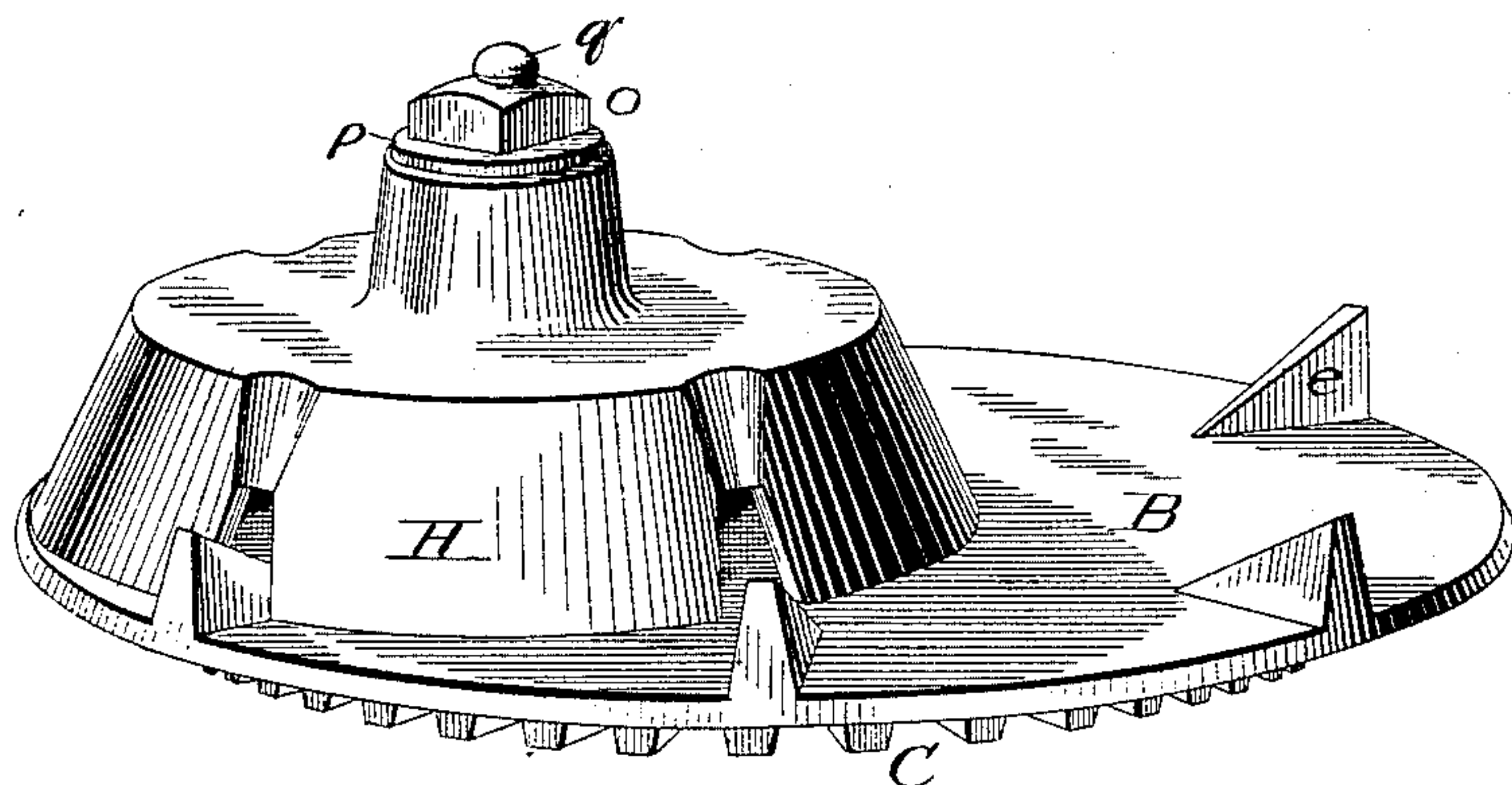
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FERTILIZER DISTRIBUTER.

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Patented May 19, 1885.

*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

RICHARD B. SHELDON AND JOSEPH V. PEACOCK, OF SHORTSVILLE, ASSIGNORS TO THE CROWN MANUFACTURING COMPANY, OF PHELPS, ONTARIO COUNTY, NEW YORK.

## FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 318,045, dated May 19, 1885.

Application filed March 5, 1885. (Model.)

*To all whom it may concern:*

Be it known that we, RICHARD B. SHELDON and JOSEPH V. PEACOCK, of Shortsville, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Fertilizer-Distributers, of which the following is a specification.

Our invention relates to fertilizer-distributers, and is designed as an improvement upon that for which Letters Patent of the United States were granted to Edwin D. Mead, dated October 3, 1882, and numbered 265,529.

The improvements consist in a novel construction of the support upon which the rotating cap or scraper is mounted, whereby the ready removal and replacement of the parts of the distributor is rendered possible.

In the accompanying drawings, Figure 1 is a perspective view of one of the distributers complete, ready for application to the fertilizer-hopper of a seed-drill or like machine; Fig. 2, a perspective view showing the parts separated and the cap or case partly broken away; Fig. 3, a vertical section in line with the driving-shaft; Figs. 4 and 5, detail views of the lower bridge in which the removable support is mounted; Fig. 6, a perspective view of the plate or disk and scraper as improved.

The general construction of the feeder is the same as in the patent above referred to—that is to say, the feeder consists of a cup or shell, A, of circular form and slightly reduced in diameter from the top downward, the upper portion of said cup being furnished with perforated ears *b*, to receive screws or other fastenings by which to attach it to a supply-hopper in a seeder or other machine. The shell or cup A is made with an outlet, *c*, at one side, and an extension formed at that point and within said cup or shell, which is formed with an open bottom and a narrow inwardly-turned flange, *d*, is placed a horizontal rotary plate or feed-disk, B. The lower face of the plate or disk B is formed with an annular gear-ring, C, the teeth of which mesh with and receive motion from a pinion, D, on the main driving-shaft E, which in turn receives motion directly or through suitable in-

intermediate gearing from a ground-wheel of the machine, as usual, the shaft passing beneath a series of distributers, carrying a pinion for each and giving motion to all, as is well understood.

The material to be fed rests upon plate or disk B and is carried forward by the rotation thereof to an outlet or discharge-opening, *e*, the movement of the material being rendered more certain by ribs or teeth *e*, formed upon the upper face of the plate near its periphery.

One or more of the teeth may be enlarged to form a scraper, *e'*, to clean the walls of the cup or shell.

The plate or disk B is centered in the cup and held in place by a central post, *f*, passing through an opening, *g*, in the plate, and thence downward into and through a bridge or support, F, extending beneath the cup from side to side and joined to the same at its ends, as best shown in Fig 2. The post *f* is formed upon a crank-shaped arm, G, bearing at its other end an upwardly-projecting post or stem, *g'*, which constitutes the axle or journal for the rotary cap or scraper H. This crank-arm is the leading feature of our invention. As more plainly shown in Fig. 3, it consists of the downwardly-turned post *f*, upwardly-turned post or stem *g'*, and intermediate connecting-bar, *h*. The post or shank *f* is formed with two lugs, *i*, on opposite sides, which enter between shoulders or abutments *j* in the hole or seat formed in the bridge or support F to receive the post, and which limit the distance to which said post may be turned. The lower end of said post or shank, which extends below the bridge or support F, is furnished with a cross-pin, *k*, the ends of which project outward from the opposite ends of the post, as shown in Fig. 2. The hole or socket in the bridge or support F is formed with vertical recesses or grooves *l*, through which the ends of pin *k* may pass when brought in line therewith, thus permitting the post to enter its seat and the pin *k* to pass below the bridge or support. When thus seated, the post is turned about its axis until the lugs *i* strike against the abutment *j*, the ends of the pin *k* being thereby carried out of line with the grooves *l*.



and riding upon inclines *m* on the under side of the bridge, thus at once drawing the post firmly to its seat and locking it against removal.

5 The post or stem *g'* forms, as before mentioned, the axle for a horizontal rotating scraper, H, formed with a downwardly-turned flange, which is notched to receive the projections or teeth *e e'* of the rotary disk B, from  
10 which it receives motion, as in the patent above mentioned; but instead of making the teeth or ribs *e* of the disk and the notches of the scraper equal or nearly equal in width to the intervening space, as has heretofore been  
15 customary, and as illustrated in Figs. 1, 2, and 3, we now remove or omit about two-thirds of the teeth and notches formerly used, thereby obtaining a much wider feeding-surface upon the disk between the teeth and a correspond-  
20 ly wider pushing and scraping face upon the scraper between the notches, as shown in Fig. 6. The teeth and notches are also made considerably higher than before. This change enables us to feed a larger amount of material  
25 and insures a perfect cleaning of the plate or disk between and behind the teeth, where hitherto a ridge of gummy pasty material has lodged, seriously interfering with the efficient operation of the distributor.  
30 Practical use of the improved form of disk and scraper demonstrates its marked superiority over the old form. (Shown in Figs. 1, 2, and 3.)

The grooves or notches *l* and cross-pin *k*  
35 are set in such relation to each other that the shank or post *f* can be seated in the bridge F only when the crank-arm G is moved out of its working position. The disk B rotates in the direction indicated by arrow in Figs. 1  
40 and 2, and it therefore tends constantly to carry the scraper H and the crank-arm G with it. We therefore so arrange the pin *k* and grooves *l* that the post *f* may be seated when the arm G and scraper H are slightly back of  
45 their normal or working position, speaking with reference to the direction in which the disk travels; hence the disk carries the scraper and its supporting-arm forward until the lugs *i* strike the abutment *j*, and thus limit the mo-  
50 tion. In this way the arm G is prevented from being accidentally displaced, and so long as it remains in position the disk B and scraper H are likewise held in proper working position. When, however, it becomes desirable  
55 to move the scraper and disk, or either of them, it is only necessary to swing the arm G backward until the lugs *i* strike the rear sides or abutments, *j*, when the arm may be lifted vertically and its shaft or post *f* be withdrawn  
60 from its socket, thus enabling the parts to be readily and thoroughly cleaned, as is frequently necessary, because of the gummy or pasty nature of the material fed.

The opening in the center of the plate or  
65 disk B is large enough to permit the lugs *i* to pass through it, and the shank or post *f* is made to fit said opening and form an axle

therefor, and is also formed with an annular shoulder to hold the disk down to its place.

The scraper-wheel H is retained upon the 70 stem or post *g'* by means of a nut, *o*, and washer *p*, as shown in Figs. 1, 2, and 3, the necessary screw-stem, *q*, being advisably cast in the stem in the manner indicated in Fig. 3.

Each bridge or cross-piece F is formed with 75 a hanger, F', to support the driving-shaft E and prevent its sagging, and thereby permitting the pinions D to get out of mesh with the teeth of the disks B.

No claim is made to the broad idea of con- 80 necting the cap or feeding-shell of a fertilizer-distributor to its supporting-post by means of a stem or shank having a lateral lug to pass through an opening and lock under a flange or ledge.

Having thus described our invention, what we claim is—

1. The herein-described fertilizer-distrib- 85 uter, consisting of shell or cup A, provided with bridge F, rotary disk B, crank-arm G, 90 provided with cross-pin *k*, and rotary scraper H, mounted upon the upper stem of said crank-arm, substantially as set forth.

2. In combination with a cup or case, A, provided with bridge F, having a central 95 socket provided with abutment *j*, and grooves *l*, crank-arm G, provided with lugs *i*, and cross-pin *k*.

3. The combination, in a distributor, of a cup or case, a bridge beneath said case hav- 100 ing a central hole or socket provided with vertical grooves, a crank-arm having a downwardly-turned post provided with a cross-pin, a rotary disk seated within the cup and encircling said post, and a rotary scraper 105 mounted on an upright post of the crank-arm, substantially as shown.

4. In a fertilizer-distributor, the combina- 110 tion of a cup having a bridge across its under side provided with a central socket having grooved walls, a rotary feed-disk seated in said cup, a rotary scraper, and a crank-arm having a downwardly-turned post at one end passing through the feed-disk and bridge 115 and provided with a cross-pin, and an upright post at the opposite end bearing the scraper, substantially as described.

5. In a fertilizer-distributor, substantially 120 such as described, the combination of a cup formed with a bridge having a grooved socket, a rotary feed-disk within said cup, a rotary scraper, and a crank-arm for supporting the scraper and holding the feed-disk in place having a supporting-post provided with a cross-pin, said post being adapted to turn a 125 limited distance within its socket to bring the cross-pin into or out of line with the grooves thereof, substantially as and for the purpose set forth.

6. In a fertilizer-distributor, the combina- 130 tion of a cup or shell, A, a rotary disk, B, provided with ribs or teeth *e*, and a rotary scraper, H, provided with notches to receive the ribs or teeth *e*, the spaces between the



teeth and between the notches being materially wider than the teeth and the notches themselves.

5 7. The combination, substantially as described and shown, of a cup or shell, a rotary disk having ribs or teeth on its upper surface, a rotary scraper acting in combination therewith and notched to receive the teeth of the disk, the disk and the scraper being respective-

ly, formed with extended feeding and scraping surfaces between their teeth and notches, as and for the purpose explained.

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