

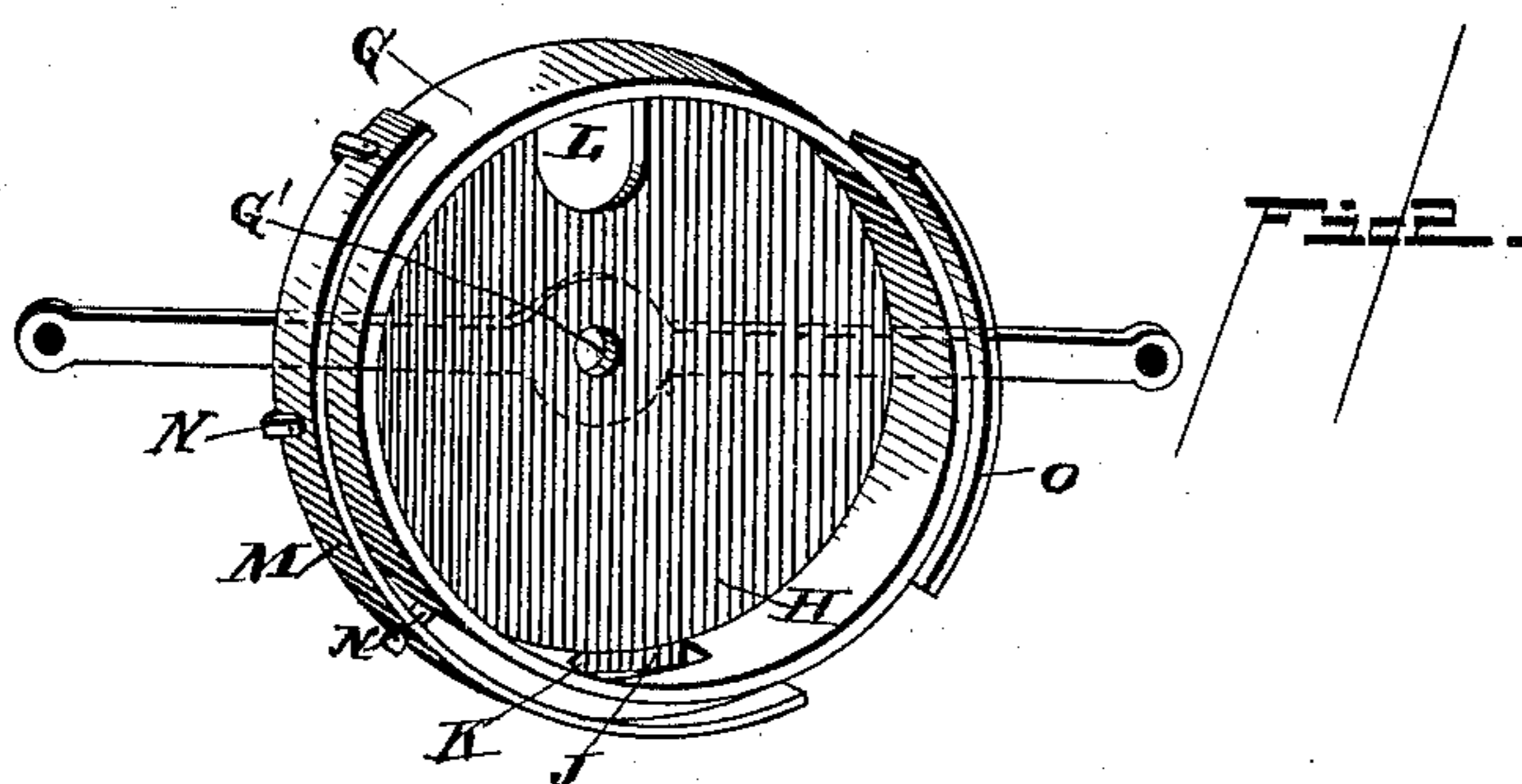
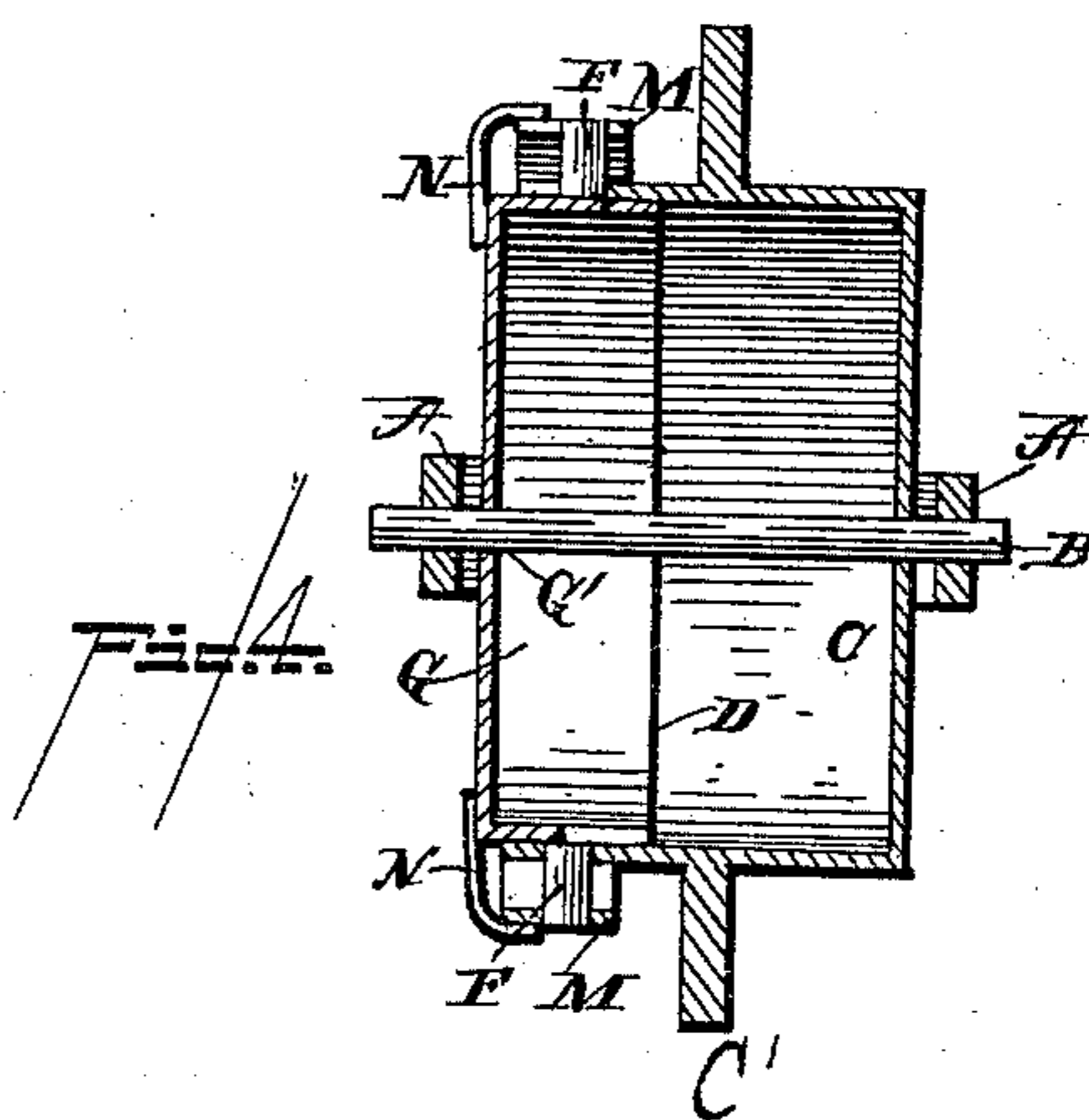
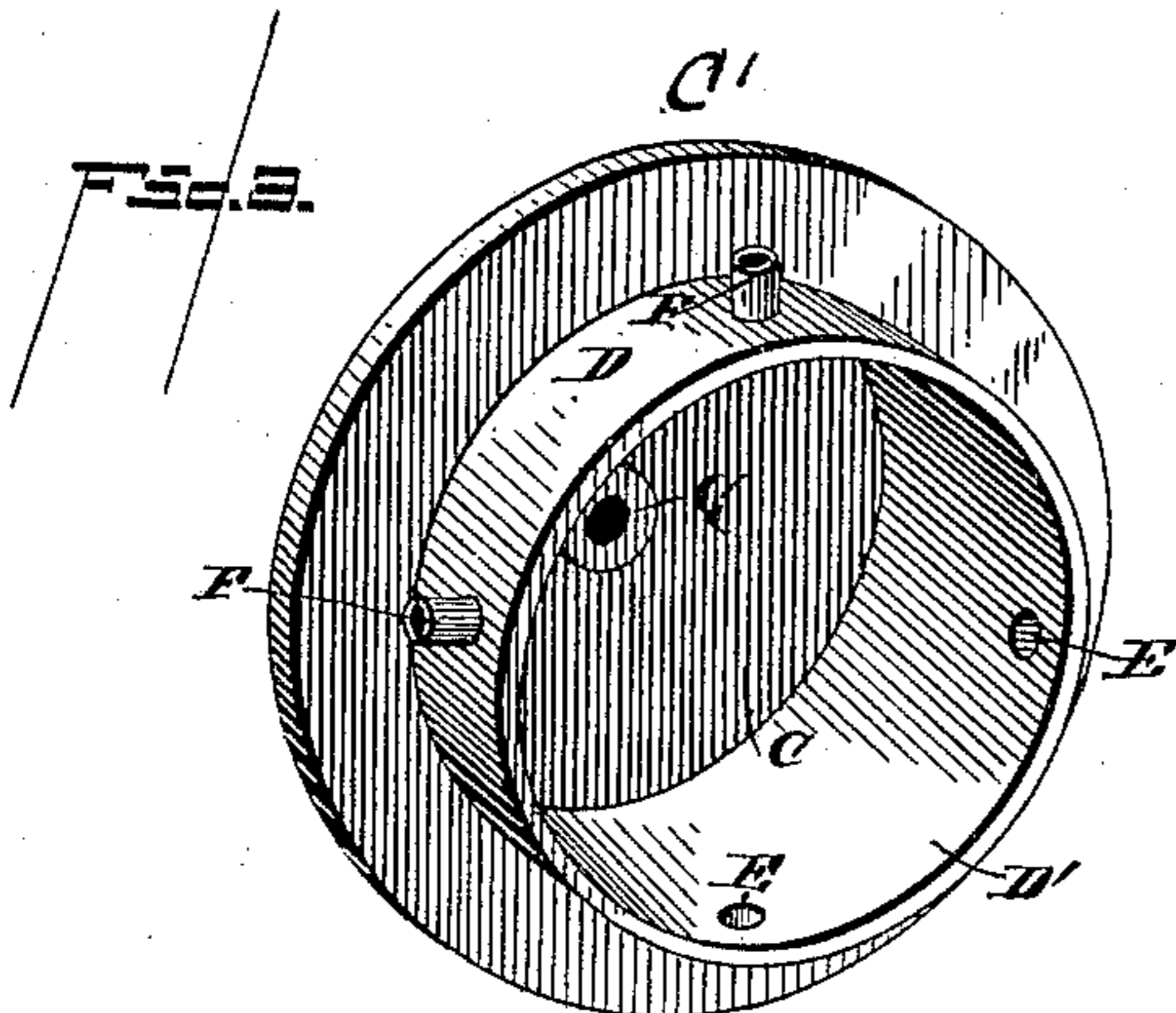
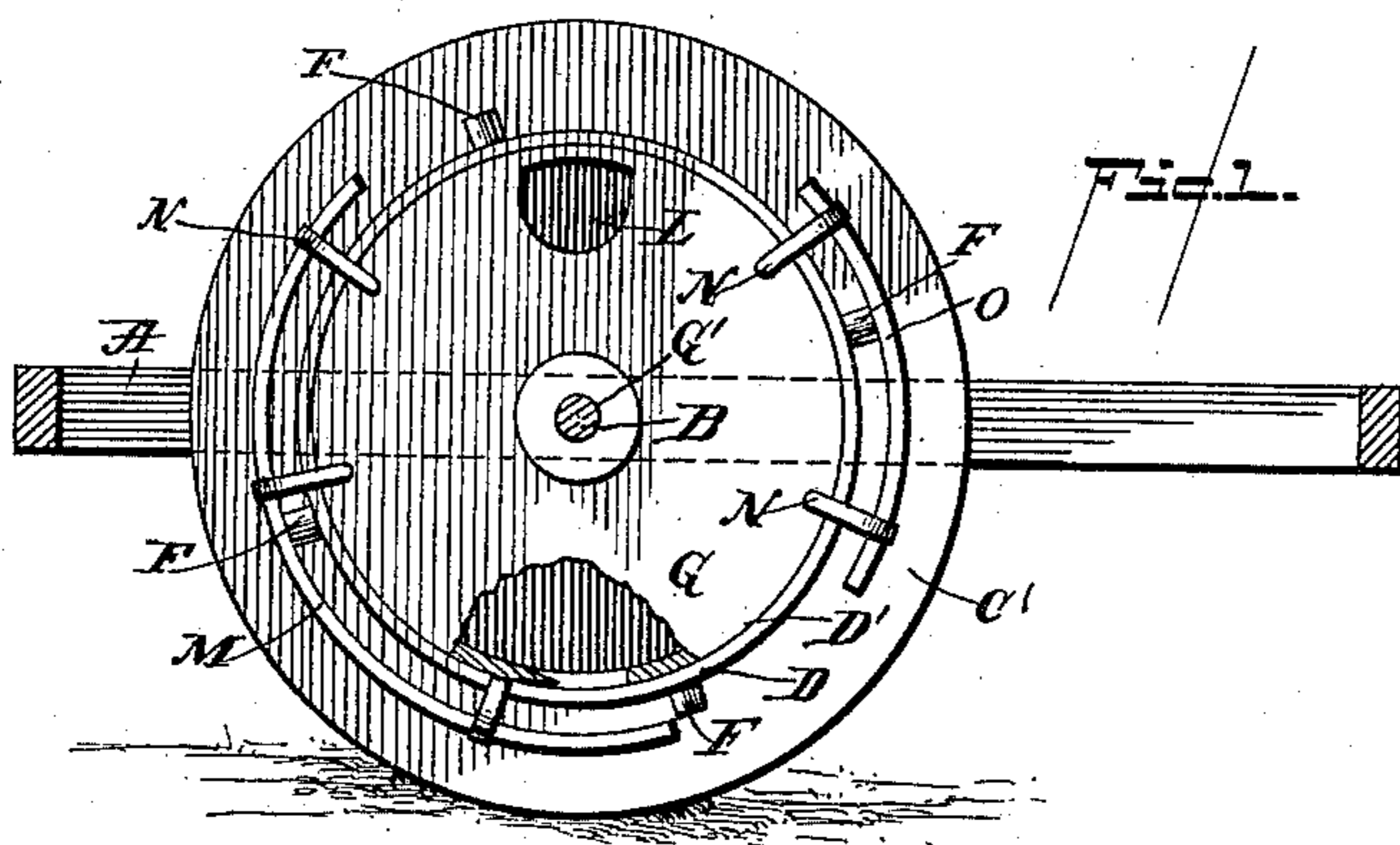
(No Model.)

E. D. GAINES.

# POTATO PLANTER.

No. 387,222.

Patented Aug. 7, 1888.



WITNESSES.

Edwin L. Jewell

Chas Helm.

INVENTOR,

H. Darwin Gaines.

By JOHN G. MANAHAN.

his Attorney.

# UNITED STATES PATENT OFFICE.

E. DARWIN GAINES, OF STERLING, ILLINOIS.

## POTATO-PLANTER.

SPECIFICATION forming part of Letters Patent No. 387,222, dated August 7, 1888.

Application filed February 23, 1888. Serial No. 264,915. (No model.)

*To all whom it may concern:*

Be it known that I, E. DARWIN GAINES, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented certain new and useful Improvements in Potato-Planters; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention has reference to certain improvements in potato-planters; and it consists, essentially, of a revolving circular receptacle having a central annular tread around its periphery, and designed to be suitably journaled in a frame and to be drawn by direct attachment thereto or by a connection to some vehicle. The revolving receptacle aforesaid is fitted at one end to project over and traverse the periphery of a fixed head, which latter communicates internally with the interior of said revolving receptacle, and is provided with an outer seed-exit in its lower portion.

In the drawings, Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a detail of the fixed head thereon, in reverse from the position it occupies in Fig. 1. Fig. 3 is a perspective of the revolving receptacle in the position shown in Fig. 1, with the fixed head removed therefrom. Fig. 4 is a cross-section in a vertical plane.

A is an ordinary rectangular frame, within which is suitably journaled, by means of a transverse axle, B, the revolving chamber or seed-receptacle C. Chamber C has a hollow interior and peripheral traction-flange, C', as shown in Fig. 3, and upon the side opposite to that shown in Figs. 1 and 2, which, for convenience, will be termed the "outside," has an ordinary closed smooth surface.

On the inner face of said outside, and projecting inwardly, is formed, integral with the wall of the chamber C, a circular shell, D, which is closed at its outside by the outer wall of said chamber and has an open inner end, D'. In the periphery of the shell D is formed, at suitable intervals, seed-openings E, within which are seated rigidly short seed-discharge tubes

F, of suitable size to permit the passage of the potatoes or other seed.

G is a second circular shell, having a closed outer end, H, suitably affixed rigidly to the frame A, and provided with central openings, G', in said end H for the passage of the axle B. In Fig. 2 the view is from the center of the machine toward the outside thereof and toward the closed end of the shell G, showing the internal construction thereof. The shell G is of such size and conformation that when reversed from the position shown in Fig. 1 it will extend sufficiently far within the circular wall of the shell D to cover the entrance of the seed-holes E in the latter.

It is obvious that the revolution of the chamber C will carry with it the shell D, attached thereto, and cause said shell to traverse the exterior of the shell G. In the extreme lower portion of the shell G is provided an elongated slot or opening, J, through which the seed carried within the shell D and shell G drops into the exits F and the seed-openings E, as they pass below said slot so as to communicate therewith. In the forward movement of the machine the shell D passes backward under the shell G and forward over the top thereof. The rear wall of the slot J is therefore formed into a cutting-edge, K, so as to prevent any lodgment of the potatoes therein, by cutting through such of the latter as may come in contact with said cutting-edge K.

L is an exterior opening, in and near the top of the end H of the shell G, for the admission of seed within said shell.

M is a suitable guard, conformable to the exterior of the shell G, and suitably attached, by means of radial braces N, to the closed end of the shell G, and extends from very slightly beyond the front wall of the slot J backward to near the upper end of the shell G. The interval between the guard M and the periphery of the shell G is that of the length of the seed-exit tubes F, and the purpose of said guard is to close the outer end of the seed-exit F, so as to prevent the passage directly of the received seed from within the shell G and to cause said seed to be taken through the slot J in measured quantities only. When the seed-exits F have reached the upper end of the guard M, their outer ends will be sufficiently

near a vertical position that no seed will drop therefrom until such seed-tubes have progressed beyond the vertical and partially on their succeeding downward movement.

5 A second circular guard, O, surrounds the front portion of the shell G, in the same relative position thereto hereinbefore described in reference to the guard M, and prevents the escape of the seed from the tubes F until said  
10 seed-tubes have progressed nearly to the bottom of the shell G. An interval between the lower end of the guard O and adjacent end of the guard M is provided, of sufficient width to permit the seed then within the tubes F to drop  
15 therefrom to the earth, said seed-tubes being refilled through the slot J, as they pass between the latter and the guard M. The open interval between the upper ends of the guards M and O is not essential to the working of the  
20 machine, but is advantageous in permitting the operator to see whether the seed-caps as they pass that interval are properly filled, and as the seed-tubes in traversing said upper interval have their outer ends upward, whereby the  
25 seed is retained therein by its own gravity, there is no necessity for covering the interval last named.

It will be understood that the inner ends of the seed-tubes F are constantly closed by the  
30 wall of the shell G, except when said tubes make their transit beneath the slot J, at which location and time they are filled, as aforesaid, by the gravity of the seed contained within said shell G, the open end of the shell G being  
35 projected within the shell D sufficiently far to seal the inner ends of the seed-tubes F, except where the latter pass under the slot J, as aforesaid.

The open end of the shell D may be formed  
40 slightly divergent and the shell G with the same conformation, in which construction the lower portion of the wall of the shell D will descend slightly toward the closed end of shell G, and the slot J being formed in the rim of  
45 the shell G next to the end H, such conformation assists the seed in gravitating toward said slot.

My machine is of course carried upon the revolving chamber C, and said chamber is ro-  
50 tated by traction. At each revolution of the chamber C each of said ducts F will receive and discharge their respective capacities of seed. The seed-ducts F may be of such frequency, therefore, in the wall of the shell D as  
55 to make the deposit of the seed at any desired interval; so, also, the seed-ducts F can be made with a capacity to measure any desired quan-

tity for a single deposit. The shell D may be made removable, so as to provide for the substitution of other like shells furnished with  
60 seed-openings E and ducts F, of the varying size and capacity or the capacities of the openings E, and seed-ducts F may be adjusted in any other suitable manner. For planting of potatoes, little or no change from the original con-  
65 struction will be required.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. The combination of the revolving cham-  
70 ber C, containing an interior circular shell, D, adapted to be rotated by the traction of said chamber, and the fixed shell G, having a closed outer end and open inner end adapted to be  
75 partially inserted within the shell D, and provided with slot J, substantially as shown, and for the purpose described.

2. The combination of the rotating shell D, provided with seed-openings E and radial seed-  
80 ducts F, and the fixed shell G, having a closed outer and open inner end adapted to be inserted within the shell D, and also provided with seed-entrance L and seed-exit J, substantially as shown, and for the purpose described.

3. The combination of the circular seed-  
85 chamber D, adapted to be rotated by traction, and provided with seed-openings E and seed-ducts F, the fixed shell G, having a closed outer end, and its inner end adapted to be projected partially within the fixed shell G, and  
90 provided with seed-exit J, and exterior guards, M and O, adapted to close the outer ends of the seed-ducts F during a portion of their orbital movement, substantially as shown, and  
95 for the purpose described.

4. The combination of the frame A, a revolving chamber, C, suitably pivoted therein, so  
as to be rotated by traction in the forward movement of said frame, and provided interi-  
100 orly with the circular shell D, having seed-openings in its periphery, the shell G, provided with seed-exits J, and suitably attached to the frame A and projected partially within the  
shell D, so that the seed-openings in the latter  
will register at the opening J, and the exterior  
105 guards, M and O, substantially as shown, and for the purpose described.

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

E. DARWIN GAINES.

Witnesses:

JOHN G. MANAHAN,  
VIRGIL S. FERGUSON.