(Model.)

H. P. TENANT.

FORCE FEED GRAIN DRILL.

No. 256,763. Patented Apr. 18, 1882.

Fig. 1.

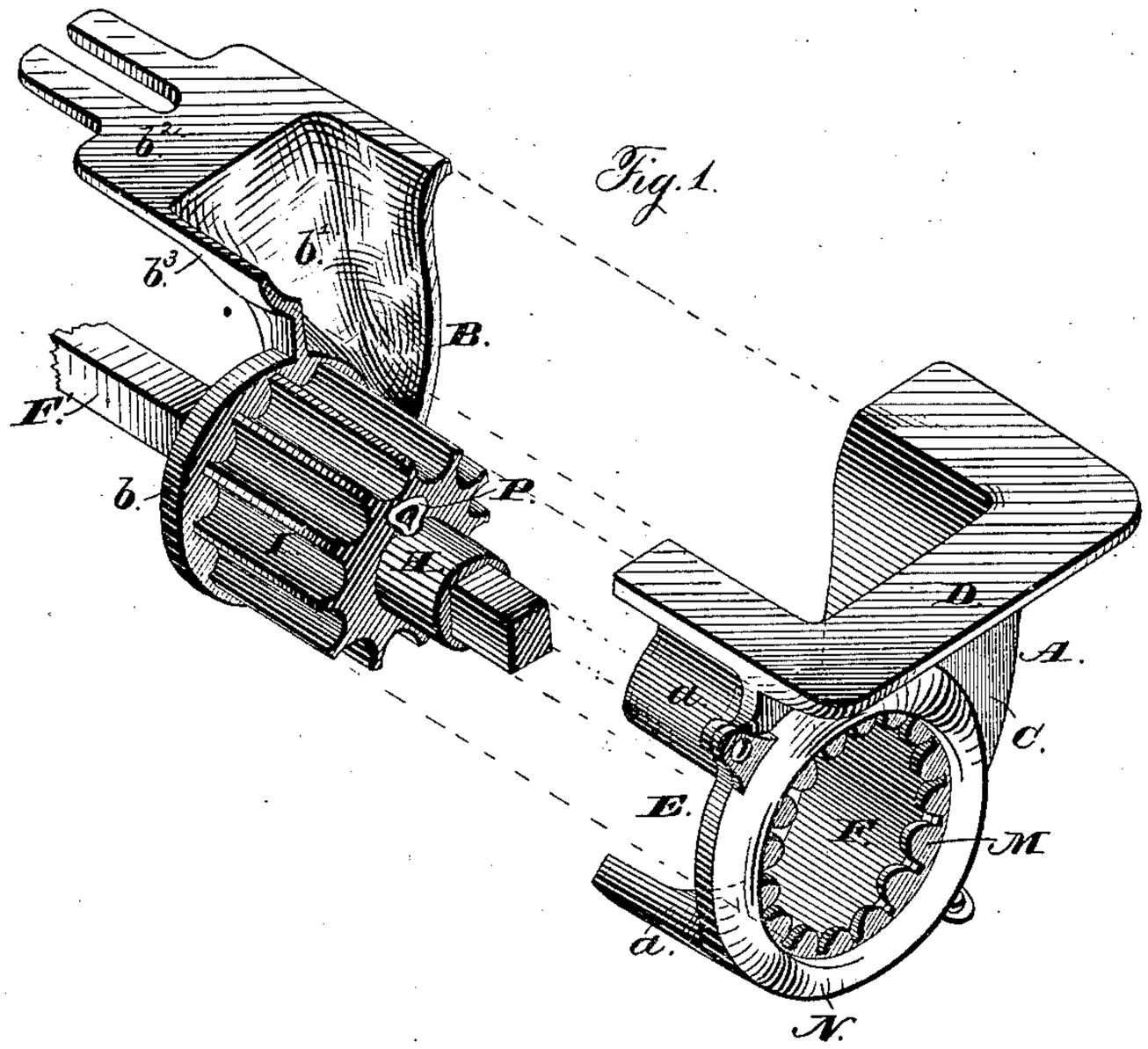


Fig. 2.

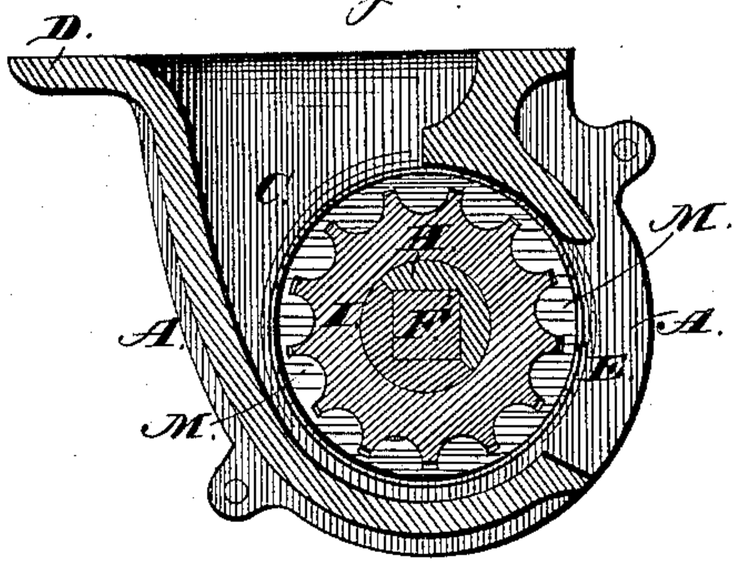


Fig. 3.

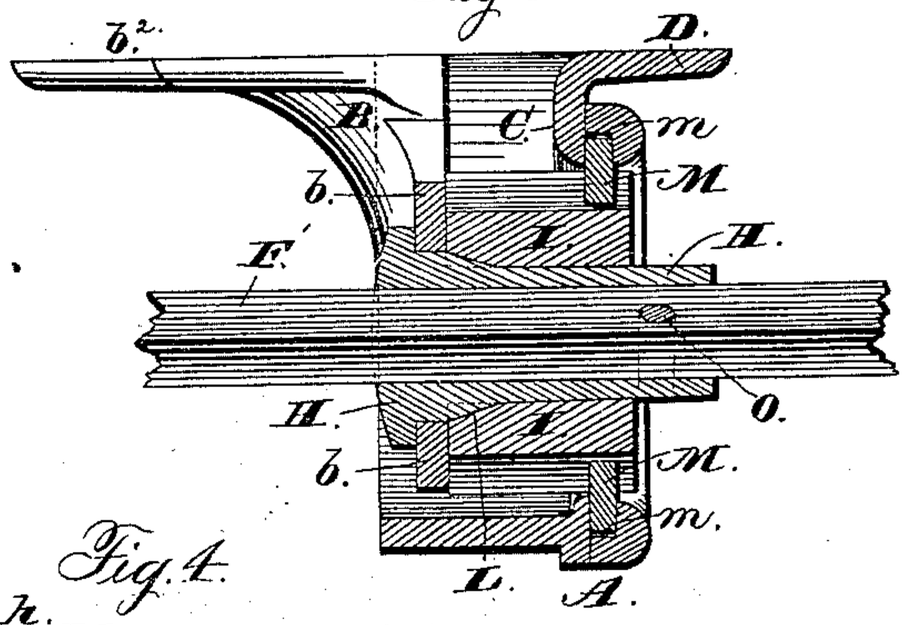
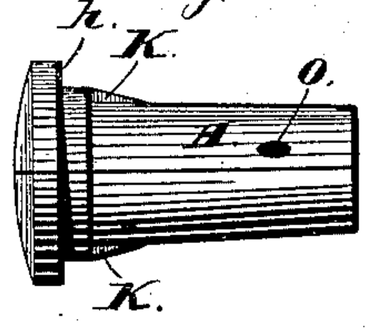


Fig. 4.



Witnesses.
Jas. E. Hutchinson.
J. A. Rutherford.

Inventor.
Hanson P. Tenant,
By his Attorney,
James L. Norris.

UNITED STATES PATENT OFFICE.

HANSON P. TENANT, OF RICHMOND, INDIANA.

FORCE-FEED GRAIN-DRILL.

SPECIFICATION forming part of Letters Patent No. 256,763, dated April 18, 1882.

Application filed February 18, 1882. (Model.)

To all whom it may concern:

Be it known that I, HANSON P. TENANT, a citizen of the United States, residing at Richmond, in the county of Wayne and State of Indiana, have invented new and useful Improvements in Force-Feed Grain-Drills, of which the following is a specification.

This invention relates to a seed-cup for force-feed seeding-machines, and has for its objects to improve the construction of the cup, whereby the feed can be cut off or regulated at will; to improve the connection between the shaft and the feed-wheel, whereby the latter will be prevented from any rotary or sliding movement independent of the shaft; and to improve the connection of the several parts of the operative portions of the device. These objects I attain by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, representing the two parts of the cup detached. Fig. 2 is a transverse section through the cup and feed devices. Fig. 3 is a longitudinal section through the same, and Fig. 4 is a detached side view of the divided thimble.

The outer stationary section, A, which constitutes the main portion of the seed-cup, comprises the curved body *a*, the vertical wall C at one side of said body, and the horizontal flange D, extending around the upper edge of the body, as illustrated in Fig. 1. A discharge-opening, E, is formed through the curved body B, and a circular opening, F, is formed through the vertical wall for the feed-wheel. The inner sliding section, B, which constitutes an adjustable cut-off for varying the size of the discharge-opening and for expanding or contracting the area within the seed-cup, consists of a plate having a vertical lower portion, *b*, and an outwardly-curved upper portion, *b'*, that is concaved upon its side next to the section A and provided with a laterally-extending lip, b^2.

The lower semicircular part, *b*, of the said plate is formed with a central opening for a thimble, that fits upon a shaft, F, while the concavity of the upper portion of the plate is concaved and bent outwardly to impart a flare to the seed-cup, so that the seed will readily pass into the latter. The lateral extension b^2 of said plate or inner section is formed with a slot, through which a bolt will pass when the seed-cup is secured below the hopper.

The shaft F, employed for rotating the feed-wheel, is made rectangular in cross-section, and upon it are fitted the two halves of a divided thimble, H, each half of which is formed with a semicircular flange, *h*, at one end, so that when the two parts of the thimble are fitted together upon the shaft a continuous flange will be formed.

I indicates the hollow fluted feed-wheel, which is fitted upon the thimble and keyed thereon by means of the gibs K upon the thimble entering wedge-shaped notches L formed within the feed-wheel at one of its ends.

Upon the outer side of the vertical wall C of the main section of the seed-cup is located a rotary rosette, M, which works within an annular seat, *m*, that is formed in a ring-plate, N. This ring-plate is provided with suitable perforated lugs, through which the screws or bolts pass that are employed for securing the ring-plate to the seed-cup. The rosette has an interior line of scallops, which fit the fluted face of the feed-wheel, so that while the seed will be prevented from passing out through this side of the seed-cup the feed-roller will be free to work back and forth through the rosette. When the several parts described are fitted together the inner sliding section, B, will be fitted within the outer section, A, the curved top edges, b^3, of the former resting upon the grooved portions *a'* of the latter, whereby the inner section will be held in place and properly guided. The thimble passes through the opening in the side plate of the inner slidable section, the gibs entering the fluted feed-wheel, which is within the seed-cup and at the inner side of said plate, while the flange of the thimble is brought up against the outer side of the plate, thereby preventing the escape of seed at this side of the seed-cup. By means of this connection of parts, when the shaft is shifted in the direction of its length the slidable section will be moved within the outer main section of the seed-cup, so as to vary the area within the cup, and also regulate the size of the discharge-opening, and as the thimble and the feed-wheel both partake of this movement a greater or less area of surface of the feed-wheel will be exposed, it hav-

ing been explained that the feed-wheel can be pushed through the rosette as occasion may require.

In order to lock the divided thimble upon the shaft, and also to prevent the feed-wheel from slipping upon the thimble, a hole, O, will be drilled through the two parts of the thimble and through the shaft, and a split or linch pin, P, be inserted in said holes.

What I claim is—

1. The combination, in a seed-cup, of the inner sliding section, B, with the divided thimble passing through said section and fitted upon the rotary shaft, and the feed-wheel locked upon the thimble upon the inner side of the sliding section, the said thimble having a flange fitted against the outer side of the section, substantially as described.

2. The combination, with the two-part seed-cup, of the divided thimble fitted upon the rotary shaft and formed with the gibs K, and the feed-wheel fitted upon the thimble and provided with recesses receiving the said gibs, substantially as described.

3. The combination, in a seed-cup, of the outer section formed with a vertical wall, C, with the rotary rosette located within an annular recess formed in a cap-plate secured to the outer side of said wall, and the fluted feed-wheel fitted in the rosette and locked upon a thimble that is secured upon the shaft and adapted to rotate in one of the sections of the seed-cup, substantially as described.

In testimony whereof I have hereunto set hand in the presence of two subscribing witnesses.

HANSON P. TENANT.

Witnesses:

E. H. DENNIS,

JOSEPH B. CRAIGHEAD.