(No Model.)

R. S. CARR.

CUP FOR SEEDING MACHINES.

No. 292,893. Patented Feb. 5, 1884.

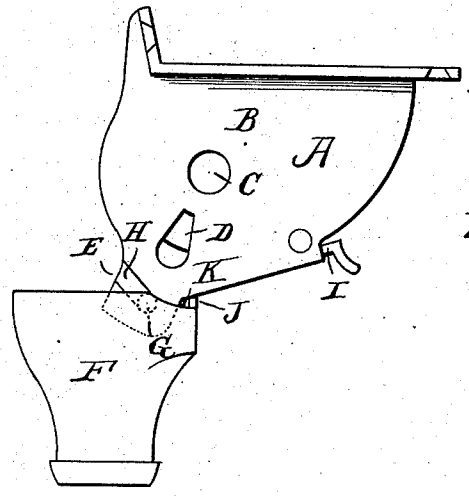


Fig 1

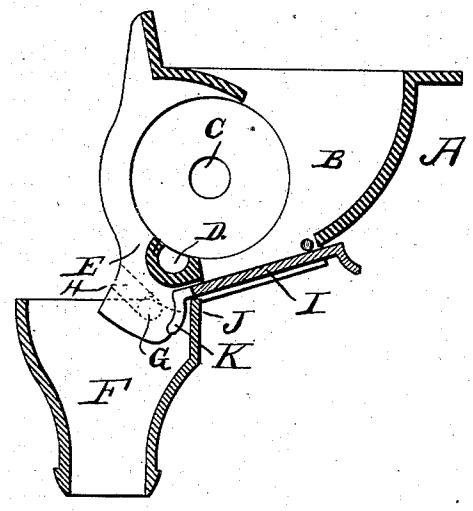


Fig 2

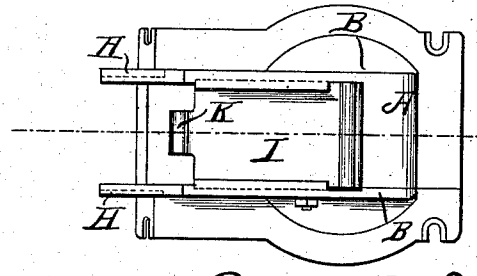


Fig 3

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UNITED STATES PATENT OFFICE.

ROBERT S. CARR, OF HAMILTON, OHIO, ASSIGNOR TO JOHN W. SOHN, OF SAME PLACE.

CUP FOR SEEDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 292,893, dated February 5, 1884.

Application filed October 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT S. CARR, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Cups for Seeding-Machines, of which the following is a specification.

This invention pertains to the force-feed cups used in connection with seeding-machines; and it relates to such construction of the cup as to permit the passage from it of all the seed when the cups are to be cleaned, in order to change the seed or store the machine.

The invention further relates to such construction of the cups, in connection with the mouth-piece of the attached pivoted seed-conductor, that said mouth-piece, while free to oscillate upon its pivot, is not liable to become accidentally detached from the cup.

The nature of the invention will be clearly understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a side view of the seed-cup embodying my improvements; Fig. 2, a vertical section of the same; and Fig. 3, a bottom view of the same, the mouth-piece of the seed-conductor being detached.

In the drawings, A represents a seed-cup of substantially the usual form, arranged to be secured, along with a series of similar ones, to the bottom of the grain-box of the seeding-machine; B, the side walls of the cup; C, holes through the side walls for the driving-shaft of the cups; D, the aperture in the side walls, through which slides the grain-gate; E, the outflow-point of the cup; F, the mouth-piece, adapted to serve the usual flexible seed-conductor; G, the supporting-pivots of the mouth-piece, and H the slot in the side walls of the cup, for receiving the pivots of the mouth-piece. The parts referred to are all constructed substantially as usual in the general run of force-feed seed-cups, and their general relation to the present invention is such as to permit in them all of the modifications and variations of structure usual in this general class of seed-cups.

Continuing the reference to drawings, I is a sliding gate in the bottom of the seed-cup, fitted to move freely in guides in the side walls, and to serve, when withdrawn to the rear, to open freely the extreme bottom of the seed-cup; J, the rear wall of the mouth-piece, and K a latch projecting downward from the front end of the gate I into the mouth-piece in front of the rear wall, J.

The seed-wheel and the grain-gates are not shown, as they form no part of the present invention, and do not require any special modification from the usual forms in connection with it.

Force-feed seed-cups are arranged to provide a body of grain below the bottom of the seed-wheel, a function of said wheel being to affect the top of this body of grain, and carry the grain forward and lift it over an outflow-lip of some character. One of the consequences of this peculiarity of force-feed seed-cups is that with an empty seed-box the seed-cups are incapable of entirely emptying themselves, a small body of grain always remaining unaffected in the shallow chamber below the seed-wheel. In changing the character of grain to be planted, it is desirable to thoroughly clean the seed-cups, in order that the body of grain below the seed-wheels may consist entirely of the new grain. In storing the machine at the close of the seeding season it is always desirable that the cups contain no seed or other matter to foul the parts.

In my present invention all the grain will discharge from the seed-cup by opening the bottom gate, I, which is done by pulling it rearward. This gate offers ready facilities for emptying the seed-box of small lots of grain in case the character of grain is to be changed or the machine to be stored. The bottom gate, I, is arranged at an inclination, as clearly shown, and its opening motion is therefore a rising one. By this arrangement the tendency of the gate is to remain closed.

The mouth-piece F of the seed-conductor is hooked upon the nose of the seed-cup in the usual manner, and is removed in the usual manner by carrying it upward and forward until its pivots leave their supporting-slots.

In the operation of seeding-machines, the raising and lowering of the drill-teeth has a tendency, through the medium of the conductors which reach into them, to accidentally un-

hook the mouth-pieces, and allow them, with their attached conductors, to fall. In my construction the latch-piece K, on the front end of the bottom gate, prevents the usual disengagement, be it accidental or intentional, of the mouth-piece. The mouth-piece, hanging in its normal position, cannot be carried forward sufficiently to disengage the pivots from their slots, being prevented by the rear wall of the mouth-piece coming into contact with the latch-piece of the gate. If, however, the lower portion of the mouth-piece be swung forward, its rear wall will then pass under the latch-piece of the gate, and the desired disengagement is easily effected. By this means the accidental disengagement of the mouth-piece is prevented without at all interfering with its ready disengagement, when desired.

The bottom gate not only serves as a lock for the mouth-piece, but the mouth-piece also serves as a lock for the bottom gate. It will readily be seen that the latch-piece K prevents the bottom gate being opened while the mouth-piece occupies its normal position. By swinging the bottom of the mouth-piece forward, as previously mentioned, the gate is at liberty to be opened.

I claim as my invention—

1. In a force-feed seed-cup arranged to carry a body of grain below the seed-wheel, and having an opening in its bottom, the combination of side walls of the cup, provided with grooves at the bottom, and a bottom gate fitted to slide in said grooves and close the opening in the bottom of the cup, substantially as and for the purpose set forth.

2. The combination of a seed-cup provided with open slots for supporting the pivoted mouth-piece, hung by pivots to the seed-cup, and a sliding piece fitted to the bottom of the seed-cup, and having a latch-piece projecting into the mouth-piece to prevent the accidental disengagement of the mouth-piece, substantially as set forth.

3. In a seed-cup arranged to carry a body of grain below the seed-wheel, the combination of a bottom opening for draining the cup, a mouth-piece hung to the nose of the cup, and a sliding gate at said opening, provided with a latch-piece projecting downward into the mouth-piece, substantially as and for the purpose set forth.

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