

(No Model.)

3 Sheets—Sheet 1.

D. L. HAM.
COTTON PLANTER.

No. 453,973.

Patented June 9, 1891.

Fig. 1.

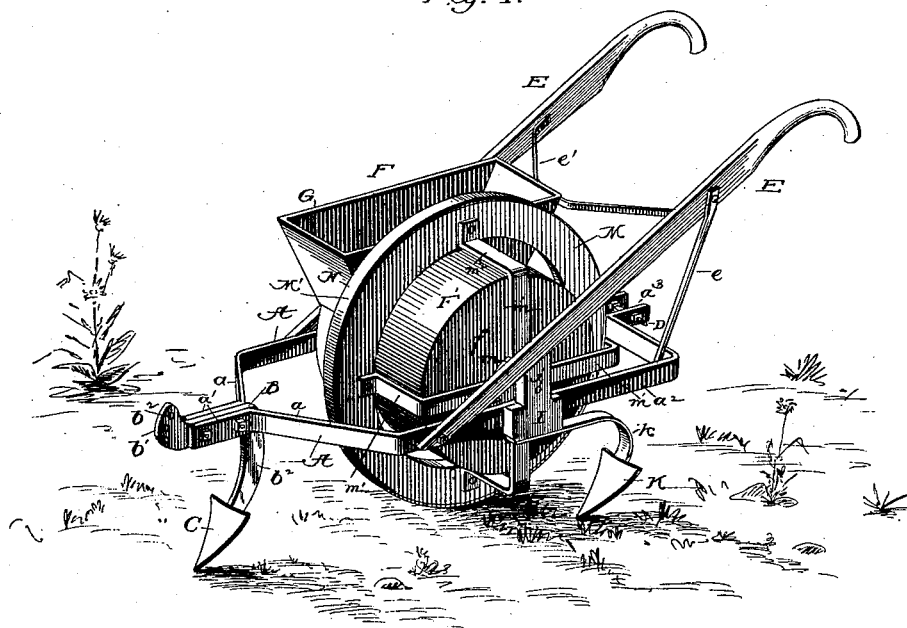
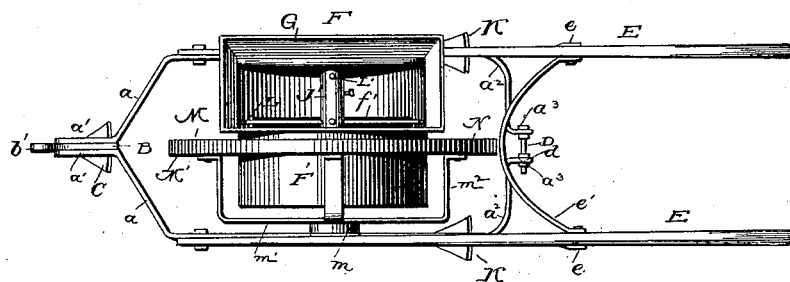


Fig. 2.



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Inventor:

Wrayton L. Ham,
By his Attorney, *J. R. Littell,*

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3 Sheets—Sheet 2.

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Fig. 3.

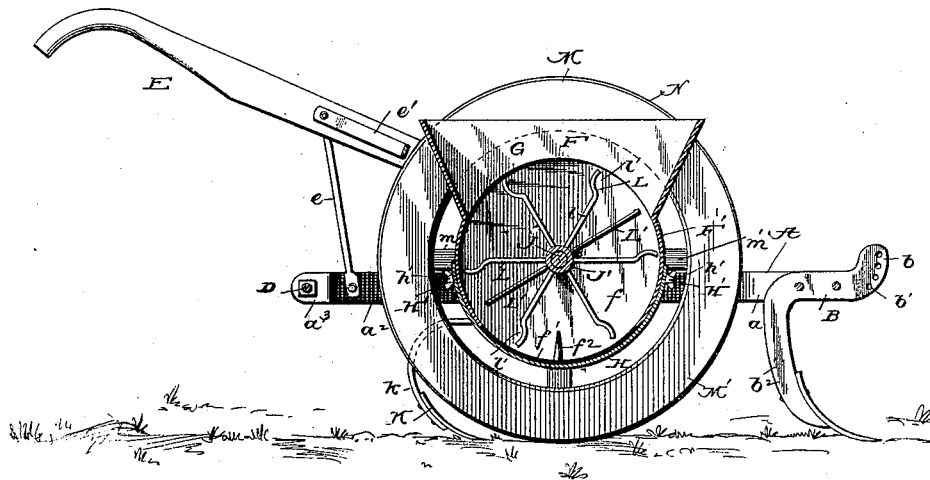
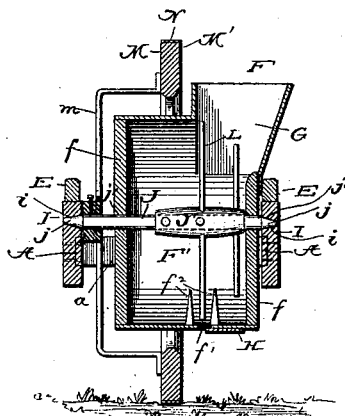


Fig. 4.



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(No Model.)

3 Sheets—Sheet 3.

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COTTON PLANTER.

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Fig. 5.

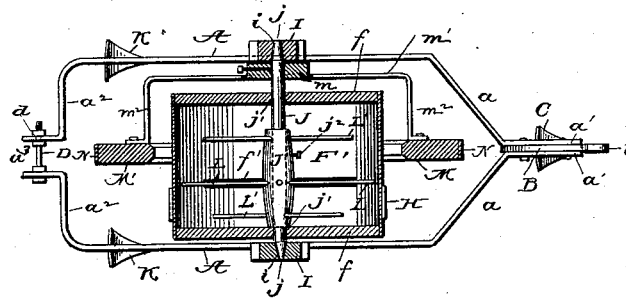


Fig. 6.

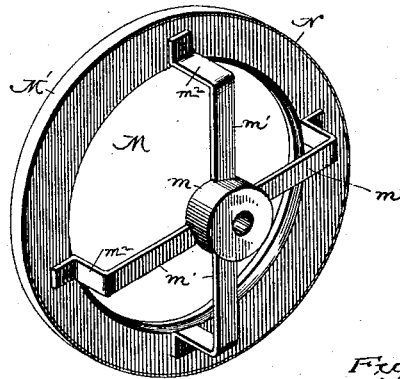


Fig. 7.

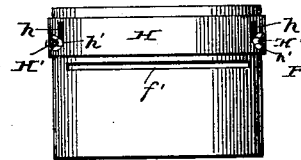
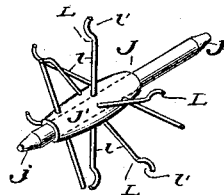


Fig. 8.



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UNITED STATES PATENT OFFICE.

DRAYTON L. HAM, OF PROSPERITY, SOUTH CAROLINA, ASSIGNOR OF TWO-THIRDS TO ALLEN H. HAWKINS AND HANDSOM C. MOSELEY, BOTH OF SAME PLACE.

COTTON-PLANTER.

SPECIFICATION forming part of Letters Patent No. 453,973, dated June 9, 1891.

Application filed September 11, 1890. Serial No. 364,603. (No model.)

To all whom it may concern:

Be it known that I, DRAYTON L. HAM, a citizen of the United States, residing at Prosperity, in the county of Newberry and State of South Carolina, have invented certain new and useful Improvements in Cotton-Planters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to cotton-planters of that class embodying a single carrying-wheel; and it has for its object to provide a planter of this character combining in its construction a carrying-wheel and hopper of such build whereby the weight of the latter and its contents is distributed at both sides of the former, thus equalizing the planter and securing a more perfect balance.

A further object of the invention is to provide, in combination with a planter of this character, feed-fingers of such formation as will adapt them to grasp the seed and force the same from the hopper.

A further object of the invention is to provide a cotton-planter in which the frame is adapted to be adjusted to take up the wear upon the shaft, and one which will also possess advantages in point of simplicity, inexpensiveness, durability, ease of operation, and general efficiency.

In the drawings, Figure 1 is a perspective view of a cotton-planter embodying my invention. Fig. 2 is a top or plan view. Fig. 3 is a vertical longitudinal sectional view illustrating the operation of the feed-fingers. Fig. 4 is a vertical transverse sectional view. Fig. 5 is a horizontal sectional view illustrating the adjustment of the frame. Fig. 6 is a detail perspective view of the carrying-wheel removed. Fig. 7 is a bottom or inverted plan view of the hopper, illustrating the feed-regulating slide. Fig. 8 is a detail perspective view of the shaft removed.

Corresponding parts in the figures are denoted by the same letters of reference.

Referring to the drawings, A A designates

two longitudinal parallel beams, preferably formed of metal, and provided with forwardly-convergent extensions \bar{a} \bar{a} , the latter terminating in longitudinally-disposed parallel end portions \bar{a}' \bar{a}' . Between the latter is bolted or otherwise secured a metal plate B, having a front upturned end \bar{b} , provided with a series of eyes \bar{b}' , said end forming a clevis, and a downturned rear end \bar{b}^2 , forming a standard for opener-plow C. The rear ends of the beams A are turned inwardly, as shown at \bar{a}^2 , and the extreme opposing ends are turned rearwardly to form parallel lugs \bar{a}^3 \bar{a}^3 . The latter are provided with coincident perforations \bar{d} \bar{d} for the reception of a bolt D, designed for adjusting the beams A transversely, the purpose of which will be hereinafter set forth. Handle-bars E E, mounted upon the frame, are provided, secured at their front ends to the beams A, and are supported at the desired incline thereto by rods \bar{e} \bar{e} , connecting the handle-bars and beams. The handle-bars are also braced by a transverse rod \bar{e}' , connecting the same.

F designates the hopper disposed between the beams A, and abuts against one of the same, to which it is rigidly secured. The hopper F comprises a cylindrical drum or receptacle F', disposed transversely with relation to the planter and constructed of sheet metal or other suitable material, the ends of said drum being closed by heads \bar{f} \bar{f} . Within the bottom of this drum at one side the center thereof and nearest the secured side of the hopper is provided a longitudinal feed-slot \bar{f}' , at each side of which project interior vertical spurs or spikes \bar{f}^2 \bar{f}^2 , designed to break clots of seed when they cover the feed-slot.

At the secured side of the hopper and on top of the drum F' is mounted an upwardly-flaring box G, opening into the drum and through which the hopper is adapted to be filled.

For regulating the feed of the seed a slide H is provided conforming to the periphery of the drum at the bottom thereof and disposed at the corresponding side of said drum upon which the box G is mounted. This slide is

adapted to be adjusted transversely, and to this end it is provided with transverse slots h , through which project bolts H' H' , rigidly secured to the drum and adapted to receive upon their outer threaded ends thumb-nuts h' for securing the slide against movement.

To the beams A are secured at corresponding points thereon bearing-blocks I I , which project above and below said beams. In the upper ends of these blocks are provided corresponding bearing-eyes i i , preferably of approximately conical shape, within which are adapted to be seated correspondingly-shaped bearings j j , formed at the ends of a transversely-disposed shaft J . The lower ends of the bearing-blocks are squared, as shown, and upon the under surface thereof are secured rearwardly-projecting curved standards k k , carrying at their free ends coverer-plows K K . The shaft J passes through eyes j' j' in the heads of the drum F' , and is provided within the box with a sleeve or hub J' , loosely mounted thereon and adapted to be secured against movement by a set-screw j^2 . A series of radially-disposed feed-fingers L are screwed or otherwise secured in this sleeve or hub and on a vertical line with the feed-slot f' , through which the ends of said fingers project during the rotation of the shaft. The feed-fingers L each comprise a straight body portion l , terminating in a concavo-convex end l' , adapted during the rotation of the shaft to grasp the seed and force the same through the feed-slot. At either side of the feed-fingers and secured to the sleeve J' are provided diametrically-arranged agitating-fingers L' for continuously stirring the seed during the operation of the planter.

M designates the carrying-wheel comprising a hub m , mounted upon the shaft adjacent to the unsecured side of the hopper. From the hub project a series of radially-disposed spokes m' , which extend in a straight line to beyond the periphery of the drum F' , and from thence turn inwardly over the latter and at right angles to the straight portion, as shown at m^2 . The free ends of the spokes are secured to a felly M' . The latter is interiorly of greater diameter than the exterior of the drum F' , and encircles the same close up to the box G at the top and the feed-slot at the bottom, thus throwing the weight of the hopper and contents upon both sides of the felly in lieu of at one side, as is generally the case. The felly is provided with a tire N .

The operation and advantages of my invention will be readily understood by those skilled in the art to which it appertains. The hopper is first filled through the box G and the feed-slide adjusted. As the carrying-wheel rolls upon the ground the feed-fingers are carried by the shaft, and owing to their peculiar construction force the seed through the feed-slot, the seed dropping upon the ground in sight of the operator.

When the bearings of the shaft become worn through constant use of the planter, the bolt D may be adjusted to draw the beams A nearer together, and thus tighten the bearings.

I claim as my invention—

1. In a cotton-planter, the combination, with a hopper comprising a cylindrical drum rigidly mounted in the frame, of a carrying-wheel mounted upon a shaft projecting through the hopper, and having its felly encircling the drum near its center and adapted to revolve around the same, substantially as and for the purpose set forth.

2. In a cotton-planter, the combination, with a hopper comprising a cylindrical drum provided with a feed-slot and an adjustable feed-regulating plate, of a shaft projecting through said drum and carrying feed and agitating fingers, and a wheel mounted on said shaft, having its felly encircling said drum at or near its center, substantially as and for the purpose set forth.

3. In a cotton-planter, the combination, with a hopper comprising a cylindrical drum and a shaft projecting centrally therethrough, of a carrying-wheel comprising a hub mounted on the shaft at one side of the hopper, a felly encircling the drum at or near its center, and right-angular spokes connecting the hub and felly, substantially as set forth.

4. In a cotton-planter, the combination, with a hopper comprising a cylindrical drum, a shaft passing centrally therethrough, and a carrying-wheel mounted on said shaft, of a sleeve loosely mounted upon the shaft within the hopper and carrying feed and agitating fingers, said sleeve being adapted to be bound to the shaft, substantially as and for the purpose set forth.

5. In a cotton-planter, the combination, with the main beams provided with bearing-blocks, a hopper disposed between said beams, and a shaft passing through the hopper and bearing in said bearing-blocks, of means for adjusting the bearing-blocks through the medium of the beams, whereby wear upon said bearings and bearing-blocks is adapted to be taken up, substantially as and for the purpose set forth.

6. In a cotton-planter, the combination, with the main beams having their front ends rigidly connected together, a hopper disposed between said beams, a shaft passing through the hopper, and bearing-blocks for the shaft secured to the beams, of a bolt connecting the rear intumed ends of the beams and adapted to adjust the bearing-blocks through the medium of the latter, whereby wear upon said bearings and bearing-blocks is taken up, substantially as and for the purpose set forth.

7. In a cotton-planter, the combination, with the main beams united at their front ends and carrying an opener-plow and a

clevis, of bearing-blocks mounted upon said beams and carrying coverer-plows, a hopper disposed between said beams, and a shaft passing through the hopper and bearing in 5 said bearing-blocks, and means for adjusting the beams to take up wear upon the bearings and bearing-blocks, substantially as and for the purpose set forth.

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

DRAYTON L. HAM.

Witnesses:

R. L. LUTHER,
GEO. E. HAWKINS.