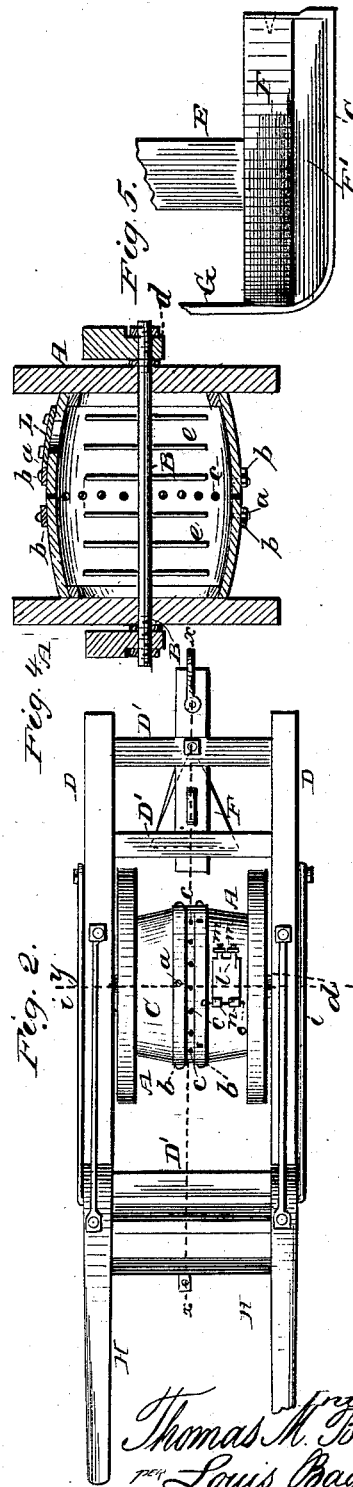
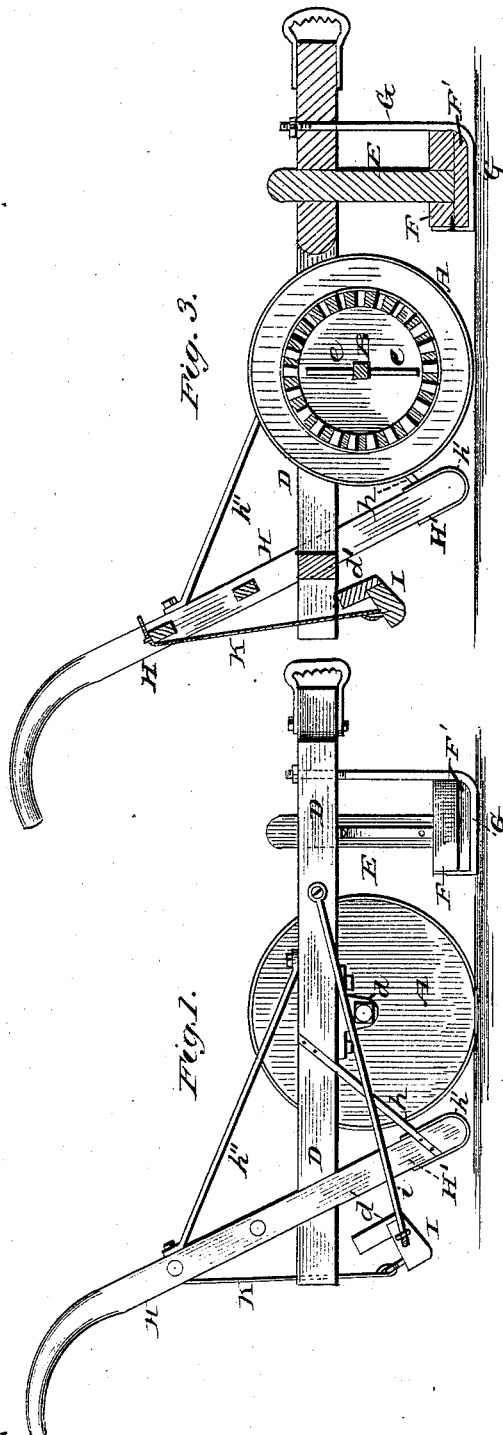


T. M. BARNA.
Cotton-Planter.

No. 216,548.

Patented June 17, 1879.



Witnesses
Fred G. Dietrich
August Peterson

Inventor
Thomas M. Barna.
Per Louis Baggett
his attorney

UNITED STATES PATENT OFFICE.

THOMAS M. BARNA, OF TARBOROUGH, NORTH CAROLINA.

IMPROVEMENT IN COTTON-PLANTERS.

Specification forming part of Letters Patent No. **216,548**, dated June 17, 1879; application filed January 25, 1879.

To all whom it may concern:

Be it known that I, THOMAS M. BARNA, of Tarborough, in the county of Edgecombe and State of North 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, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation. Fig. 2 is a top plan. Fig. 3 is a vertical section through the line *x x* in Fig. 2. Fig. 4 is a similar section on line *y y*; and Fig. 5 is a perspective side view of my improved opener, which forms a part of the planter.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to cotton-planters or rather cotton-seed drills; and consists in an improved construction and combination of parts, having for its object to produce a planter which shall be strong, durable, easily operated by unskilled labor, and absolutely certain in its operation.

In the drawings, *A A* are the wheels, and *B* the rotating axle, which passes centrally through the cylindrical or barrel-shaped receptacle or hopper *C*, the heads of which are secured concentrically upon the inner sides or faces of the wheels or disks *A A*.

D D are the side pieces of the frame, provided with boxes *d d*, in which the projecting ends or spindles of the axle *B* are journaled, and united to each other by cross-pieces *D' D'* at the front and back, so as to make a solid and substantial frame.

Projecting downward from one of the front cross-beams, *D'*, is a post, *E*, which carries the opener or furrower. This consists of a triangular flat block, *F*, made of wood, shod or cased with metal, upon the under side of which is a boat-shaped shoe, *F'*, extending midway the entire length of block *F*, and which, like the opener-block itself, of which it forms a part, is shod with or incased in metal. Along the under side or keel of the piece or shoe *F'* is a flattened rod, *G*, curved at its front end to conform to the curvature of the boat-shaped

shoe *F'*, and then passing upward parallel to the post *E*, and secured at its upper end in the front cross-beam, *D'*, of the frame.

If preferred, the opener *F F'* may be made in one piece of cast-iron, in which case the rod *G* does not pass under the shoe *F'*, as in the drawings, but is secured in the upper front corner of block *F*, and tapped upon the cross-piece *D'* at its upper end, in like manner as in the drawings.

H H are the handles, secured in the ends of side beams, *D D*, below which they extend, and are braced by iron rods or straps *h h*.

I is the coverer, which consists of a beam or plank, beveled on its under side, and hinged, by two long rods, *i i*, one at each end, to the front part of the side beams, *D D*, of the frame. Upon the middle of the coverer is placed a deflector-plate, *d'*, back of which is the strap or cord *K*, for elevating or lowering the coverer, the upper end of which (strap *K*) is secured, adjustably, to the upper brace or cross-piece of the handles *H H*. The coverer is prevented from lateral play by the lower extensions, *H'*, of the handles, which impinge on the rods *i i*, and serve as guides for these in their upward and downward motion. These handle-extensions *H'* are rounded off and shod with iron, as shown at *h'*, to prevent wear, and form, with the side pieces, *D*, and braces *h*, a compact and solid frame, the upper part of which is strengthened by the braces *h''*, as shown.

The cylindrical or barrel-shaped seed-box or rotary hopper *C*, which is suspended between the disks or wheels *A A* in the manner described, so as to rotate with these, is provided on its middle with a series of circumferential openings, *c c c*, about one inch in diameter, and arranged at a distance apart from each other of about one inch and a quarter only, which said openings or drills are flanged on each side by hoops or bands *b b*, which are secured adjustably upon the cylinder by set-screws *a a*, working in transverse slots in the bands. By this arrangement the bands *b b* serve as a gage for the drill-holes *c*, and also as guards to prevent these closely-placed openings from becoming choked up by the soil through the sinking of the wheels into the same when in a soft or damp condition.

The rotary axle *B* is provided with a series

of parallel transverse rods or arms, *eee*, which, when the machine is in operation, rotate with this and with the hopper, causing the seed, as it falls through these, to be separated and rubbed, distributing the separate or detached seeds over the lowermost part of the hopper, just over the openings *ccc*, through which the seed is drilled, into the furrow made to receive it.

The cover *L*, for the opening in the seed-cylinder through which the seed is placed, is provided with two bands, *ll*, terminating at one end in short bolts or pins, which are inserted through staples *mm*, and at the other in projecting slotted ears, fitting upon corresponding staples *nn*, and retained in place by a pin, *o*. By this means of attachment I dispense with hinges, which are apt to be knocked off in operating the machine, and produce a simple, yet secure, fastening for the door.

I am aware that "rotary hoppers," so called, have been made with a series of circumferential openings or slots, through which the seed contained within the hopper is dropped or discharged; and I am also aware that agitators within a rotary hopper have been used for the purpose of stirring or agitating the seed; but by the combination of the hopper with the agitator as herein described—that is, the transverse arms *eee* passing through the axle, and rotating with this and with the hopper, instead of within it, or remaining stationary while the hopper rotates—I produce not only a segregation or separation of the individual seeds, but a rubbing process, caused by their falling, of their own gravity, between the fingers *eee* as the hopper rotates.

By the arrangement of the drill-holes *ccc* in

the manner described, and the combination of the hopper, agitator, and guards *bb*, I produce or cause a continuous, unbroken drilling of the seed not attained by this class of machines as heretofore constructed. Besides, this planter, it will be observed, is exceedingly simple in its construction, making it strong, durable, and easily operated, which is the great desideratum with implements of this nature, which are often subjected to rough and careless usage, and its construction is such as to adapt it, if desired, for sowing guano or other fertilizers with the same satisfactory results as cotton-seed—that is, distributing the fertilizer evenly and regularly, with the cotton-seed or separately, and without lumping the fertilizer, as in the case of the ordinary droppers.

If desired, the wheels *AA* may be made of cast-iron, of any suitable and ornamental pattern or design.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a cotton-planter, the frame composed of side pieces, *DD*, and handles *H*, having downward-projecting extensions *H'*, arranged as specified, in combination with the opener *FF'*, rotary hopper *C*, and coverer *Ii*, all constructed and arranged in the manner and for the purpose substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

THOMAS M. BARNA.

Witnesses:

TIMOTHY P. WHITNEY,
JOHN NORFLEET.