(No Model.) 2 Sheets—Sheet 1.

L. ALSUP.

COTTON PLANTER, CHOPPER, AND CULTIVATOR.

No. 364,698. Patented June 14, 1887.

Fig. 1.

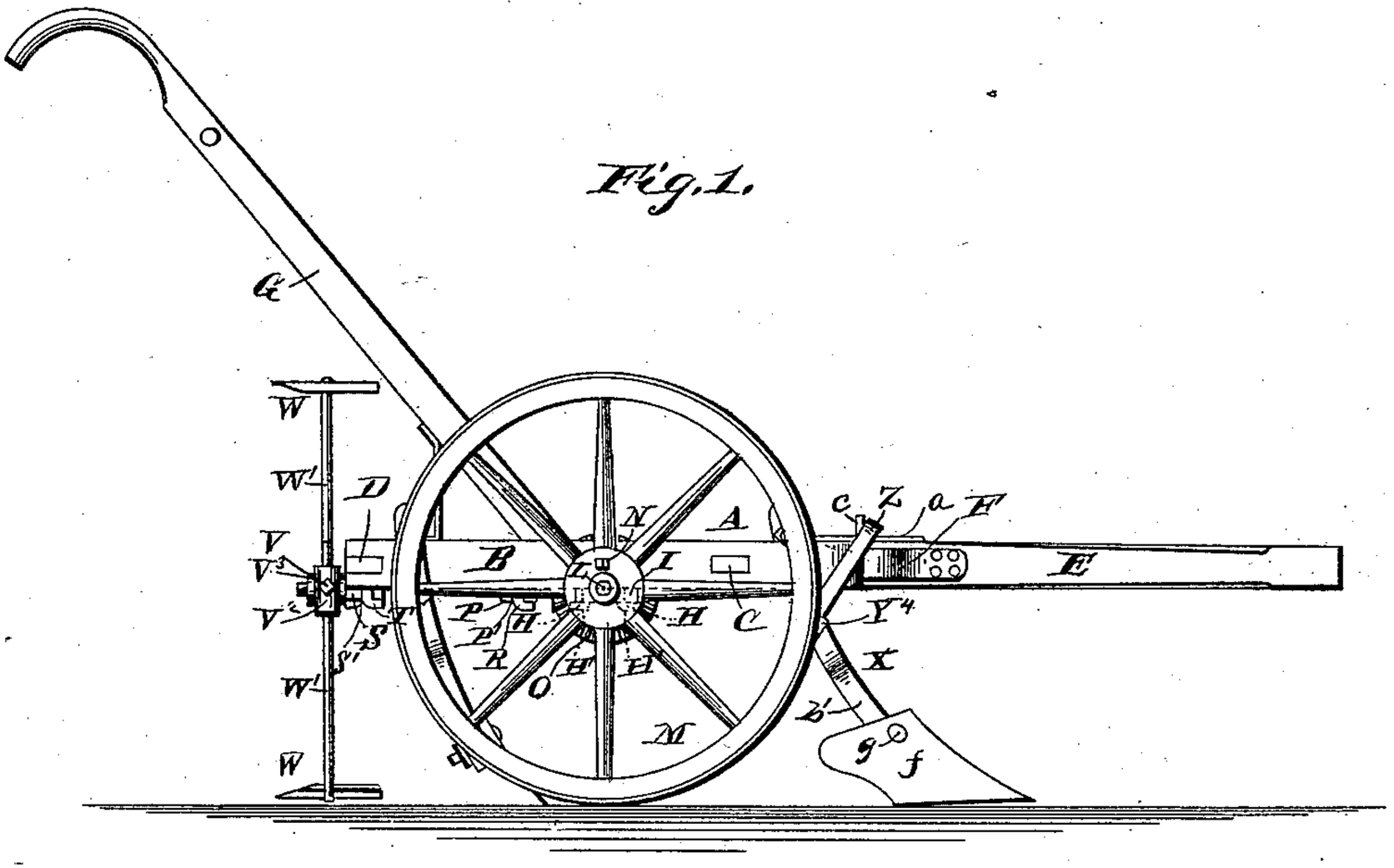


Fig. 2.

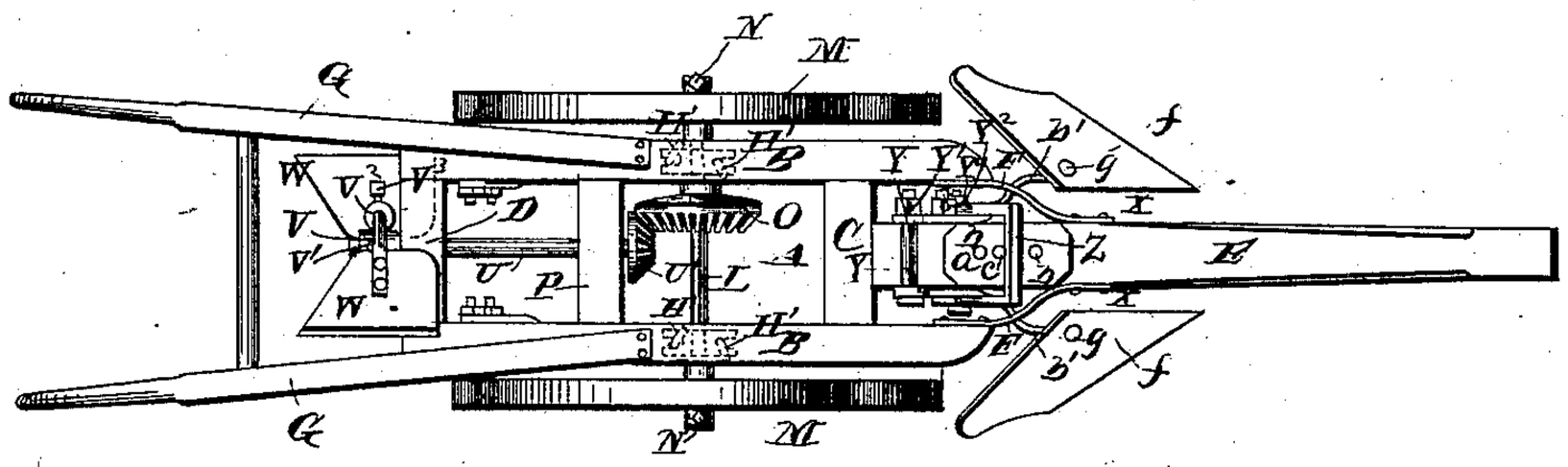
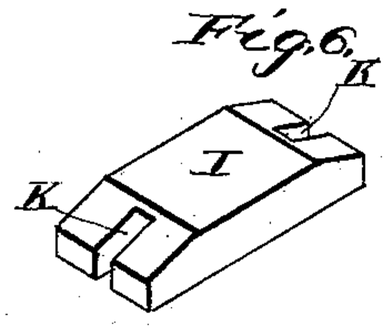


Fig. 6.



Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

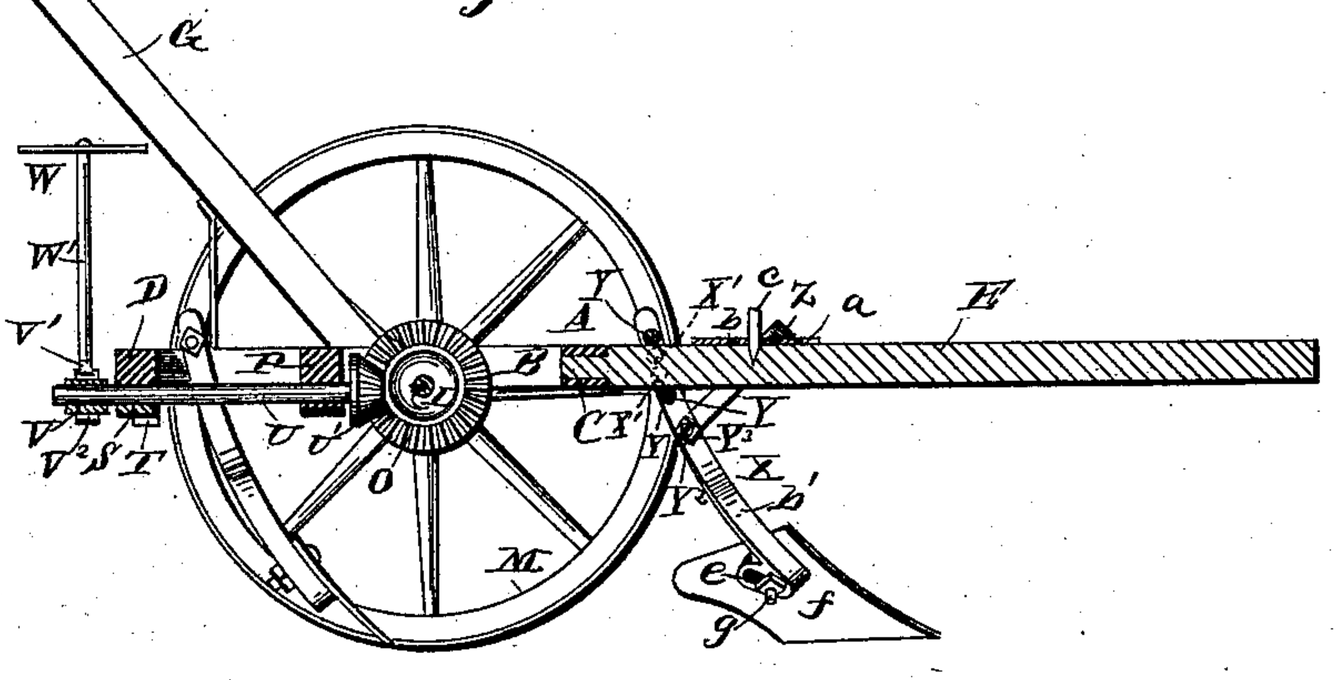
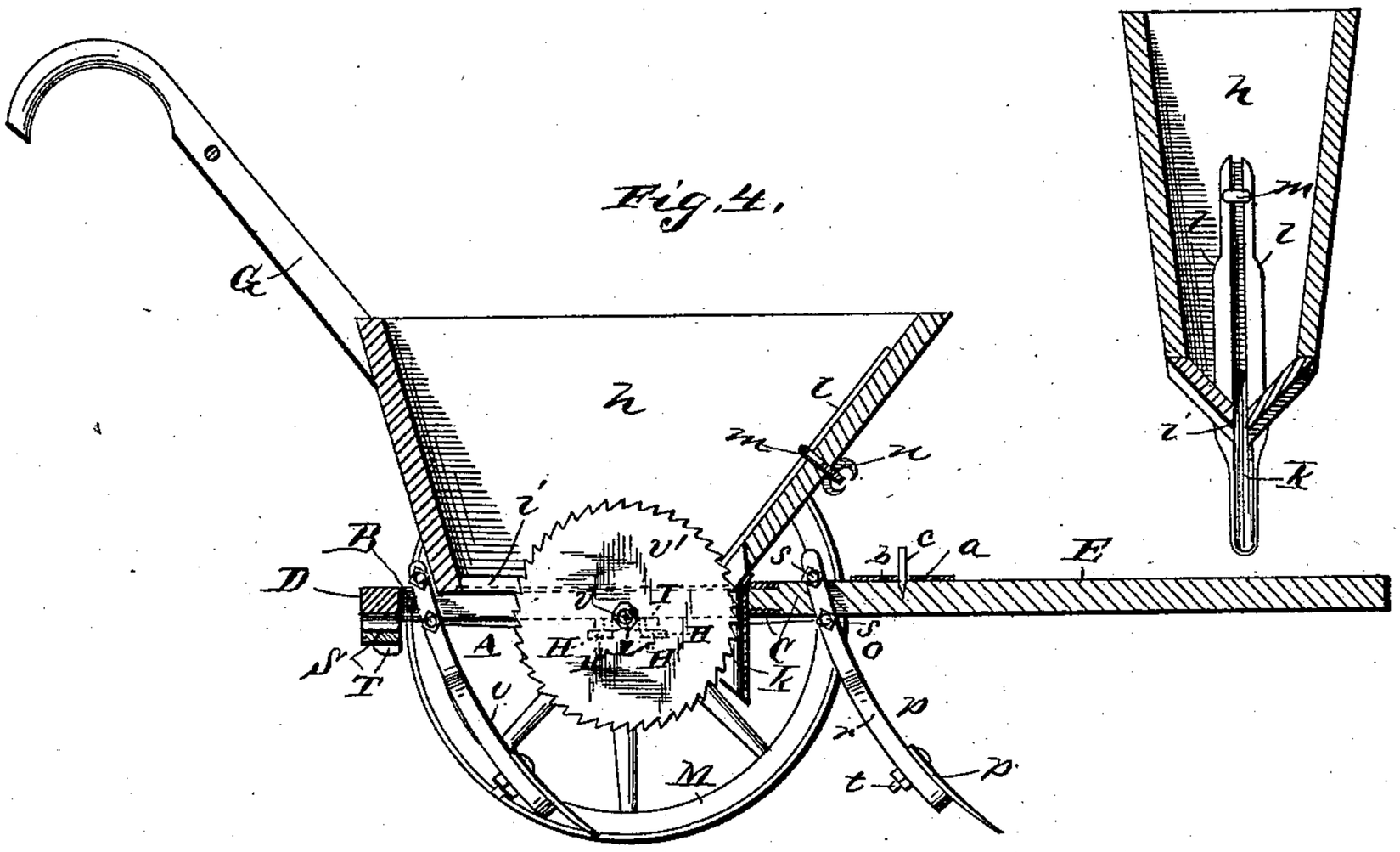


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE.

LYCURGUS ALSUP, OF BARTTAHATCHIE, MISSISSIPPI.

COTTON PLANTER, CHOPPER, AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 364,698, dated June 14, 1887.

Application filed October 8, 1886. Serial No. 215,715. (No model.)

To all whom it may concern:

Be it known that I, LYCURGUS ALSUP, a citizen of the United States, residing at Barttahatchie, in the county of Monroe and State of Mississippi, have invented a new and useful Improvement in Cotton Planters, Choppers, and Cultivators, of which the following is a specification.

My invention relates to an improvement in cotton planters, choppers, and cultivators; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a machine, embodying my improvements, adapted for use as a cotton chopper and cultivator. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal sectional view of the same. Fig. 4 is a similar view showing the machine adapted for use as a cotton-planter. Fig. 5 is a transverse section through Fig. 4. Fig. 6 is a detail view.

A represents a rectangular frame comprising side bars, B, a cross-bar, C, which connects the side bars near their front ends, and a cross-bar, D, which connects the rear ends of the side bars. From the center of the cross-bar C projects the tongue E, which is braced in position by means of metallic straps F, which connect the tongue with the front ends of the side beams.

G represents the handles, which are attached to the rear portion of the frame A, and extend upwardly and rearwardly therefrom, similar to plow-handles. To the under sides of the side bars of the frame A, near the centers thereof, are secured turn-bolts H, which are provided at their lower ends with right-angled arms H′.

I represents bearing-blocks, which are adapted to bear against the under side of the side bars, B, and in the ends of the said blocks are open slots K, through which the heads of the bolts H extend. By turning the said bolts their arms H′ are arranged transversely under the ends of the block, so as to secure the latter firmly on the under side of the frame.

L represents a shaft, which is journaled in the blocks I, and is provided at its extremities with supporting-wheels M, the hubs of the said wheels being provided with clamping-screws N, that are adapted to engage the ends of the shafts, so as to secure the said wheels rigidly thereto. Near the central portion of the shaft is secured a gear-wheel, O.

P represents a transverse bar, which is provided at its extremities with open slots P′. Turning-bolts R, which are similar to the turning-bolts H, are secured to the under side of the frame A, at a suitable distance in rear of the shaft, and to these turning-bolts the transverse bar P is attached, in the manner heretofore described.

S represents a bearing-block, which is similar to the block I, and is provided with open slots S′, and the said block is attached to the rear cross-bar of the frame A by means of turning-bolts T.

U represents a longitudinal shaft, the rear portion of which is journaled in the block S, and the front portion of which is journaled in the transverse bar P, and extends forwardly therefrom. To the front end of the shaft U is attached a gear-pinion, U′, that engages the gear-wheel O.

V represents a sleeve or collar, which is clamped to the rear end of the shaft U by means of a screw, V′. The said sleeve or collar is provided on opposite sides with sleeves V^2, which extend at right angles to the major axis of the sleeve or collar G, and the said sleeves V^2 are each provided with a set-screw, V^3.

W represents the chopping-hoes having the straight handles or rods W′, which enter the sleeves V^2, and are secured thereto in any desired adjustment by means of the screws V^3.

From the foregoing description it will be readily understood that the chopping-hoes may be extended to any desired distance from the shaft U, and thereby caused to chop in the ground at any desired depth.

X represents a pair of standards, the upper ends of which are provided with a series of openings, X′. One of these standards is placed on each side of the rear end of the tongue, and bolts Y pass through the openings X′ above and below the tongue, and are provided on their threaded extremities with clamping-nuts, Y′ by means of which the upper ends of the standards are rigidly clamped to the

rear portion of the tongue. A transverse bolt, Y^2, extends through the standards X at a suitable distance below the tongue and connects the said standards together. Nuts Y^3 work on the threads of the said bolt and bear against the inner opposing side of the standards, so as to spread the same apart for a suitable distance.

Z represents a U-shaped clamping-yoke, which passes over the tongue in advance of the standards, and bears upon a plate, *a*, with which the upper side of the tongue is provided, and the arms of the said yoke are secured on the outer ends of the bolt Y^2 by means of clamping-nuts Y^4. The plate *a* is provided with a longitudinal series of openings, *b*, and a pin, *c*, is inserted in one of the said openings and bears against the rear side of the yoke, and the latter thus serves to brace the standards X in position on the tongue and prevents the same from moving rearwardly. The lower ends of the said standards are turned outwardly in opposite directions, thereby forming arms *b'*, which are provided with slots *c*.

f represents scrapers, which are bolted to the lower ends of the standards X by means of clamping-bolts *g*, that pass through slots *c*. By this construction it will be understood that the scrapers may be adjusted laterally toward or from each other, and rigidly secured to the standards at any desired distance apart.

The operation of my cotton-chopper is as follows: The draft-animals are attached to the tongue and walk on opposite sides thereof and on opposite sides of the row of plants, the said plants passing between the scrapers *f*. As the machine is drawn along the ground the rotation of the wheels M is communicated through the gearing hereinbefore described to the shaft U, and the latter is rotated, thereby causing the chopping-hoes to thin out the cotton-plants, as will be very readily understood.

In Fig. 4 I illustrate my invention as adapted for use as a cotton-planter. *h* represents a hopper, which is provided with inclined sides and inclined front and rear walls, and the bottom of the hopper is also inclined, as shown, and is provided with a longitudinal opening, *i*. To the front side of the hopper, at the lower end thereof, is secured a spout, *k*, which is open on its rear side and communicates with the opening *i*. This spout depends from the hopper for a suitable distance.

l represents a pair of slats, which are secured on the inner side of the front inclined wall of the hopper by means of a T-shaped clamping-bolt, *m*, which extends through the said front wall of the hopper and engages the slats, and is provided at its front threaded end with a thumb-nut, *n*.

o represents a furrow-opener having the standards *p*, which is made from a single piece of bar metal bent in the center to form the arms *r*, which extend vertically parallel with each other for a suitable distance, and are then diverged. The upper ends of the arms *r* are adapted to bear on opposite sides of the rear portion of the tongue, and the said arms are provided with clamping-bolts *s*, one of which is adapted to bear upon the upper side of the tongue and the other upon the lower side thereof.

p' represents the furrow-opening shovel provided with a clamping-bolt, *t'*, that extends rearwardly between the lower portion of the arms *r*, and is adapted to clamp the shovel to the standard at any desired vertical adjustment.

u represents covering-plows, which are constructed similarly to the furrow-opener, and are adapted to be attached to the rear portion of the side bars, B.

v represents a shaft which is similar to the shaft L, and is provided at its center with a circular disk, *v'*, having saw-teeth.

When it is desired to employ the machine as a cotton-planter, the scraping-plows X, I remove from the tongue, the shaft L is removed from the bearing-blocks I, the wheels are detached from the said shaft, and the shaft U, the cross-bar P, and the bearing-block S are detached from the frame, thereby releasing the shaft U, with the chopping-hoes, therefrom. The supporting-wheels are then attached to the shaft *v*, and the latter is journaled in the bearing-blocks I in lieu of the shaft L, and the hopper is secured on the upper side of the frame, the upper edge of the circular disk extending through the opening *i* and entering the lower side of the hopper. The furrow-opener is then attached to the tongue in lieu of the scraping-plows, and the covering-plows are attached to the rear end of the side bars, B. The cotton-seeds to be planted are poured into the hopper. When the machine advances, the rotation of the supporting-wheels M is communicated to the disk *v'*, and the latter rotates in the lower side of the hopper, thereby forcing the cotton-seeds into the spout *k* in advance of the disk, from which spout the said seeds are dropped into the furrow made by the furrow-opener and are covered by the covering-plow.

The spout K has its sides curved or extended rearwardly, and between these curved sides of the spout the front portion of the toothed disk *v'* rotates.

A machine thus constructed is adapted to be used either as a cotton scraper and chopper or as a cotton-planter, is very light and cheap, is simple and durable, and is not likely to get out of order.

Having thus described my invention, I claim—

1. The combination, in a cotton-planter, of the hopper, the rotating toothed disk extending through a slot in the bottom of the hopper, and the adjustable slats attached to the front wall of the hopper and arranged on opposite sides of the front edge of the disk, substantially as described.

2. The combination, in a cotton-planter, of

the hopper having the slot in its bottom and the adjustable slats attached to its front wall, the clamp on the said slats, and the rotating toothed disk arranged in the hopper, substantially as described.

3. In combination with the bars B, the detachable shaft L, the bearing-boxes I, having open-ended slots K, and the turn-bolts H, fitted to the bars B and entering the slots K of the boxes I, and the arms H′ on the turn-bolts, for the purpose set forth.

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

LYCURGUS ALSUP.

Witnesses:

MIKE R. DILLINGHAM,

J. W. FRENCH.