

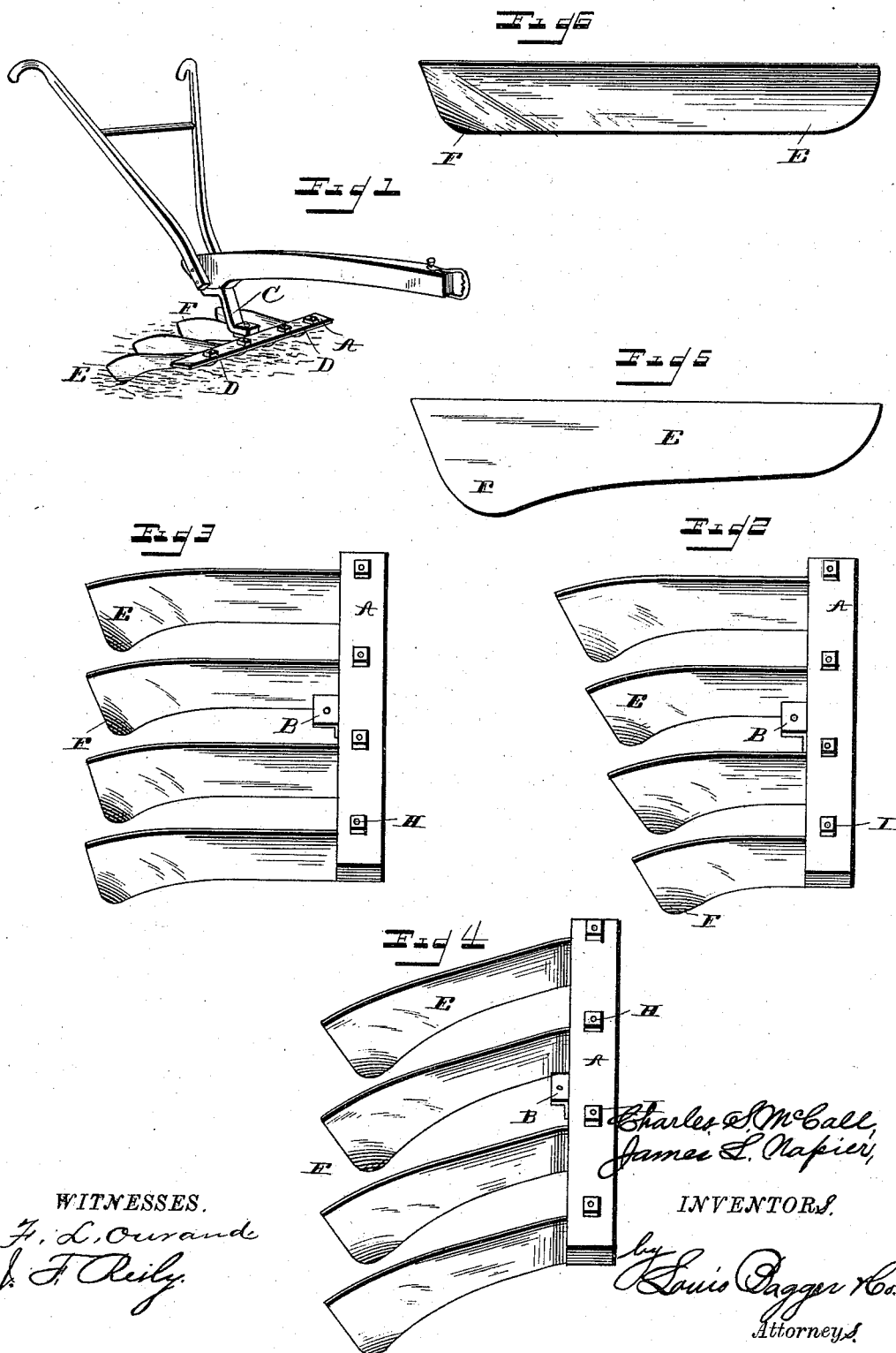
(No Model.)

C. S. McCALL & J. L. NAPIER.

COTTON CULTIVATOR.

No. 383,743.

Patented May 29, 1888.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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COTTON-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 383,743, dated May 29, 1888.

Application filed March 15, 1888. Serial No. 267,246. (No model.)

To all whom it may concern:

Be it known that we, CHARLES S. McCALL and JAMES L. NAPIER, both residents of Bennettsville, in the county of Marlborough and State of South Carolina, have invented certain new and useful Improvements in Cotton-Cultivators; and we 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 perspective view of our new and improved cotton-cultivator, showing the same attached in operative position to a plow-stock. Fig. 2 is a perspective top view of our cultivator, showing the same constructed with blades of different lengths and with the blades arranged at right angles to the bar. Fig. 3 is a similar view showing the blades all of the same length. Fig. 4 is a perspective top view showing the blades all of the same length and arranged at an obtuse angle to the bar. Fig. 5 is a detail view, on an enlarged scale, of one of the blanks out of which the blade is formed; and Fig. 6 is a detail view, on an enlarged scale, showing the blank bent and finished to form the blade.

The same letters of reference indicate corresponding parts in all the figures.

Our invention consists in a new and improved cotton-cultivator, which is designed to be secured to a plow-stock for use, and which will be hereinafter fully described and claimed.

Referring to the several parts by letter, A indicates the front bar, to which the several blades of the cultivator are secured. To the central part of this beam or bar A is secured a piece or bracket, B, by means of which the cultivator is bolted or otherwise firmly secured to a suitable plow-stock, C, as shown in Fig. 1 of the drawings. The bar A is formed across its under side with a series of transverse grooves or recesses, D, at equal distances apart, in which fit the front upper ends of the blades E. These blades E are formed of a flat blank, which is cut of the form shown in Fig. 5 of the drawings, the lower edge of the rear third of the blade in the flat blank curving down below the level of the lower edge of the front

two-thirds of the blade, as shown. The forward two-thirds of the length of the blade is left perfectly straight, while its rear broad part, F, is curved around in a concave and its straight upper edge is curved either to the right or left, the curvature of the lower main part of the blade being in the same general direction as that of its upper edge—that is, on the same side, right or left. The forward end of the blade is rounded or curved up so as to pass readily into the ground, as the cultivator is drawn forward, with little friction, and to the front end of each blade is secured a bolt, H, having a threaded upper end. The blades are placed in position and secured at their forward ends to the cross-bar A by passing the upper ends of the bolts H up through vertical holes G, formed in the bar A at the several recesses D, and nuts I are then screwed upon the threaded projecting upper ends of the bolts. These nuts, when screwed tight down upon the upper side of the bar A, will draw the bolts H up and hold the upper edges of the front ends of the blades tightly within the grooves D, thus, through the bolts H, holding the blades firmly in their operative positions.

The front or first two-thirds of each blade is to run perfectly straight on its lower edge, which is beveled and sharpened. This is to act as a guide to the wing or rear third of the blade and to penetrate the ground to the desired depth. The last third of the blade is so shaped or curved that while in the flat blank the lower edge of this third extends down below the lower edge of the front two-thirds of the blade, yet when the wing is curved and finished the lower edge of this wider rear third will be in exactly the same horizontal plane as the lower edge of the front two-thirds, as shown in the drawings. The top edge of the wing of the blade is slightly curved; but its bottom or cutting edge, which is also sharpened, is at an obtuse angle with the straight part of the blade, the wing being given a compound curve, as shown. Not only is the wing bent so as to have a curved concave front operative surface, but the blade in front of the wing is also finished with a concave surface, so that it will "roll" the dirt.

The blades may be arranged either at right angles with the bar A, as shown in Figs. 1, 2,

and 3, or at an obtuse angle to the bar, as shown in Fig. 4; and in either case the blades may be either all of the same length or of different lengths, as shown in Fig. 2 of the drawings. The blades can be constructed either of the precise form above described in detail, or may be made of slightly-different size and curvature, as shown at J and K in Fig. 3 of the drawings, without departing from the spirit of my invention.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation, and advantages of our new and improved cotton-cultivator will be readily understood. It will be seen that our cultivator is simple, strong, and cheap in construction, and exceedingly effective and satisfactory in its operation.

Having thus described our invention, what we claim, and desire to secure by Letters Patent of the United States, is—

The combination, in a cotton-cultivator, of a cross-bar and a series of blades secured thereto, each of said blades being straight upon its lower edge for two thirds of its length, and having its rear one-third or wing portion broader than the front two-thirds, and having its broader portion curved around into a concave until its lower edge is in the same horizontal plane with the lower edge of the front two-thirds of the blade, and said blade having its upper edge straight horizontally, but curved to one side, whereby the rear or wing portion of the blade is given a compound curve.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

CHARLES S. McCALL.
JAMES L. NAPIER.

Witnesses:

ROBERT CHAFFIN,
SAMUEL C. TURNER.