(No Model.)

M. CHANDLER.

WHEEL HARROW.

No. 313,654. Patented Mar. 10, 1885.

Fig. 6.

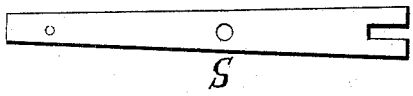


Fig. 2.

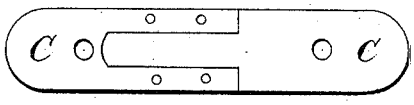


Fig. 1.

Fig. 4.

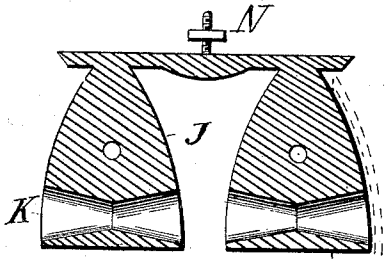


Fig. 5.

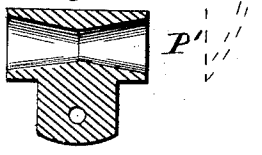
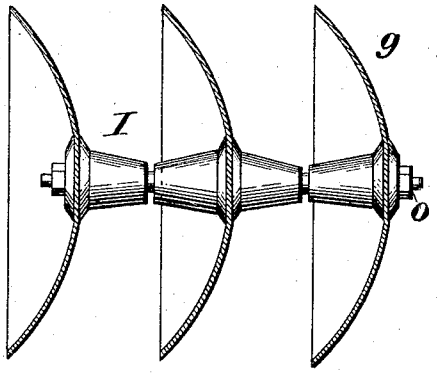


Fig. 3.



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UNITED STATES PATENT OFFICE.

MOSES CHANDLER, OF EAST CORINTH, MAINE.

WHEEL-HARROW.

SPECIFICATION forming part of Letters Patent No. 313,654, dated March 10, 1885.

Application filed September 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, MOSES CHANDLER, of East Corinth, in the county of Penobscot and State of Maine, have invented a new and useful Improvement in Wheel-Harrows, of which the following is a specification.

Heretofore wheel-harrows have been constructed for field-work mostly. In changing from field-work to row-cultivating it has been with difficulty and loss of time. Another trouble has been with wheel-harrows, the wearing of axle and boxes, also the clogging in wet weather of the disks.

My invention relates mostly to those points, of which I shall hereinafter give a full description, in connection with accompanying drawings, of which—

Figure 1 is a plan view of my wheel-harrow. Fig. 2 is an enlarged detail view of spliced cap C C. Figs. 3, 4, and 5 are enlarged sectional views showing how the sections are made ready to be put together and for the purpose of explaining my improvements in the wearing parts. Fig. 6 shows the pole-splice.

In returning to Fig. 1 it will be seen that the frame-work is constructed with a pole, A, slotted cross-bar B, spliced caps C C, stay-rods F F, metal stay-plates H, combined with seat-holder R, spliced-pole socket P, and stay-rods F F, seat D, plow-handles E.

In describing the working of this implement the improvement will be readily seen. The harrow is constructed in four separate gangs or sections, like the one shown in Figs. 3, 4, and 5, they being attached to the spliced cap C C, (shown by bolt N,) which passes through the holes in cap C C. The bolt in the inner end of spliced cap C C passes through the slot in cross-bar B, for the purpose of securing the inner end of the main double gang or section. The bolt N in the outer section passes through the outer end of spliced cap C C, and through stay-rods F F to secure the outer end of the gang. The operation as a wheel-harrow is to set the disks at any angle desired by changing the hooks in the stay-rods F F back or forward in the metal stay-plate H.

When it is desired to change from a wheel-harrow to a straddle-row cultivator, it is only necessary to unhook stay-rods F F from metal stay-plate H and pull the spliced cap C C apart, detaching the outer section of spliced cap C C, leaving the inner section of spliced cap C C attached to the main cross-bar B, which may be shifted to any position for cultivating rows by means of the slot in cross-bar B. The disks G may be set to throw the dirt to or from vegetation.

The seat D, which is attached to riser or standard R, cast upon metal stay-plate H, may be removed or remain on while in use as a straddle-row cultivator, the implement being guided by plow-handles E E.

Fig. 6 shows the pole-splice, which is slotted at the rear end, the manner of attaching the pole-splice to the pole A by passing the slotted end of splice into socket P cast on metal stay-plate H, and by sliding bolt S, (shown in pole-splice, Fig. 6,) into slot in pole A, holding it rigidly by nut.

It will be seen that the gangs are set in drawings, Fig. 1, farther apart than they should be at field-work, showing the construction of the cap C C. They may be easily set any distance apart by sliding bolt N in the slotted cross-bar B out or in.

In again returning to Figs. 3, 4, and 5, the double tapering hubs or axles I are constructed in this manner for the purpose of casting them into a cylinder-mold, thereby chilling them and making them smooth. The hub or axles I serve to hold the disks G the right distance apart. The hubs I are cast hollow, corresponding with holes in disks G, all fastened rigidly together by stay-bolt O. The double standard J and boxes K are cast whole, and are constructed in cone shape, corresponding with the concaved sides of disk G, thereby forming a series of clearers for the disks G. By thus shaping the standards they may all set fronting the same way, while the disks may be attached to them with the concave sides facing to the right or left, clearers being equally efficient either way, thus saving the trouble of right and left standards.

It will be seen that cap P′ in Fig. 5 is designed to fit box K and standard J.

Thus, having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a wheel or disk harrow, the combination, with pole A and slotted cross-bar B, of

the spliced separable caps C C, perforated stay-plate H, and rods F, all constructed and adapted to operate substantially as described.

2. In combination with pole A, slotted cross-bar B, rods F, and plate H, the spliced separable caps C C, each carrying two separate gangs of disks, one of which may be removed with the detached portion of the cap to convert the harrow into a straddle-row cultivator, substantially as described.

3. The double standard J, cast integral with boxes K, and having convexed edges adapted to operate as scrapers for the disks in turning the soil either to the right or left, in combination with the tapering double hub I, for the purpose fully described and set forth.

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