

(No Model.)

H. C. HAM.
CULTIVATOR.

No. 556,746.

Patented Mar. 24, 1896.

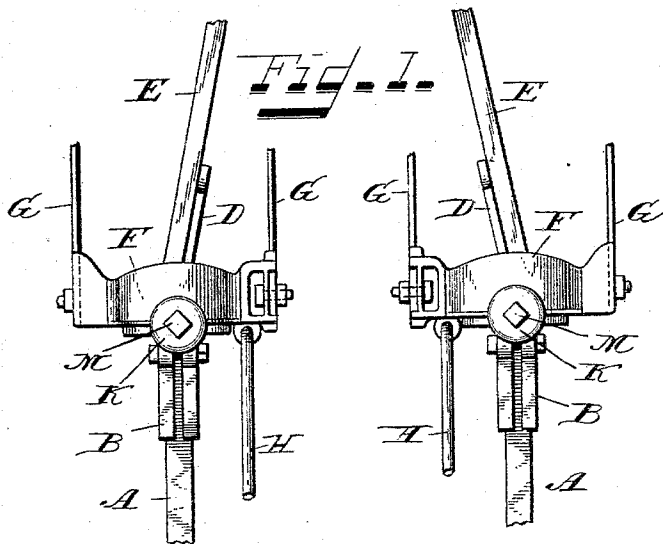


Fig. 2.

Fig. 3.

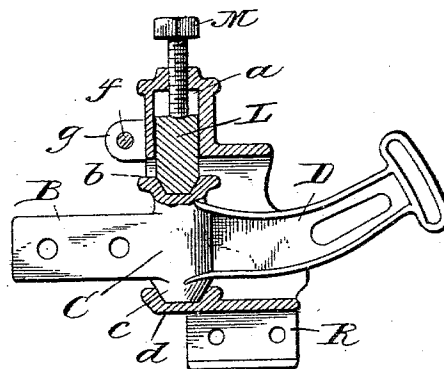
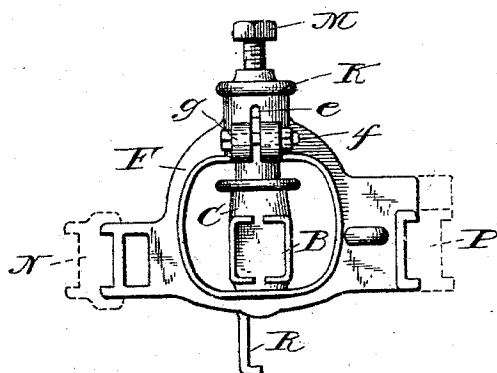


Fig. 4.

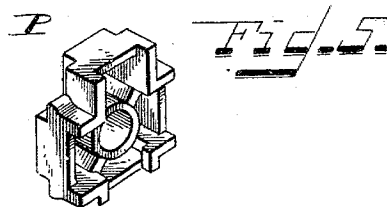


Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY C. HAM, OF LIBERTY, INDIANA, ASSIGNOR TO THE RUDE BROTHERS
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CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 556,746, dated March 24, 1896.

Application filed November 25, 1895. Serial No. 570,024. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. HAM, a citizen of the United States, and a resident of Liberty, in the county of Union and State of Indiana, have invented certain new and useful Improvements in Cultivators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in what are known as "straddle-row" cultivators; and it consists of a certain novel construction of the cross-heads and their connections, whereby a simple, cheap and effective coupling may be had in which the wear can be readily taken up and the tendency to rattle and work loose will be entirely done away with.

In the drawings, Figure 1 is a top plan view of the cross-heads of a straddle-row cultivator and their connections. Fig. 2 is a front elevation of one of the cross-heads and the beam-bracket. Fig. 3 is a side elevation of same, the cross-head being in section. Figs. 4 and 5 are perspective views of the blocks for extending the ends of the cross-heads.

A A are the rear ends of the plow-beams, which are coupled to the front axle in the usual way.

B B are the beam-brackets bolted to the ends of the beams, provided with a central hub, C, and a rearwardly-extending arm D, to which the plow-handles E E are secured.

F F are the cross-heads suitably grooved at the outer ends for the bolting thereto of the shanks G G, to which the shovels or plows are secured.

H H are the alignment-rods coupled to eyes on the cross-heads in the usual way to keep the plows in proper alignment. A boss K is formed on the central upper portion of the cross-heads, which is recessed underneath at *a* for the reception of a wedge or pin L. The lower end of this wedge is cone-shaped, as shown in Fig. 3, and takes into a cone-shaped recess *b* in the hub portion C of the beam-bracket B. The lower side of this hub portion C is also cone-shaped, as shown at *c*, and takes into the cone-shaped recess *d* in the base of the cross-head.

M is a set-screw extending down through

the boss K and bearing upon the conical bolt or wedge L, by means of which a perfect pivotal joint may be made between the beam-bracket and the cross-head. To keep the conical bolt in the adjusted position and prevent the wear acting on the set-screw M, the boss K is split, as shown at *e*, Fig. 2, and tight pressure brought to bear on the wedge L by tightening the nut and bolt *f*, which passes through the lugs *g* on the boss. A jam-nut can also be used on the set-screw to prevent same from working loose. The conical recesses in the hub C and cross-head form receptacles for the lubrication of the joint, so that all the parts may be kept tight and yet permit a perfect pivotal connection.

In straddle-row cultivators it is found desirable to provide three shovels for each plow-beam, and in order that these shovels may be adjusted the proper distance apart it is usually necessary to provide separate shanks curved outwardly, so as to give the desired spacing. Instead of doing this, I provide blocks N P, Figs. 4 and 5, to be secured to the outer end of the cross-head and held in place by the same bolt which secures the shank, these blocks giving the necessary space between the outer shovels of each beam, so that the ordinary shanks G can be used without the necessity of providing separate shanks. The central shovel is secured to the cross-head on the bracket R in the usual way.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cultivator, the combination of a beam-bracket having a central hub-like portion recessed above and cone-shaped at the base and a cross-head with recessed bearing-surface for the base of said hub and cone-shaped wedge adjustable in the cross-head engaging said recess in the hub with set-screw to keep said parts in pivotal connection, substantially as shown and described.

2. In a cultivator, the combination of a beam-bracket having a central hub-like portion, recessed above and cone-shaped at the base and a cross-head with recessed bearing-surface for the base of said hub, central boss on said cross-head recessed underneath and split at the front, with cone-shaped wedge

adjustable in said recess, set-screw for adjusting same and bolt for tightening said boss when the wedge is adjusted substantially as shown and described.

- 5 3. In a cultivator, the combination with a beam-bracket and cross-head with pivotal connection for the parts of end blocks to in-

crease the length of the cross-head and shanks for the shovels secured thereto, substantially as shown and described.

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Witnesses:

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