H. H. PATTEE.

CULTIVATOR.

No. 187,899. Patented Feb. 27, 1877.

Fig. 1.

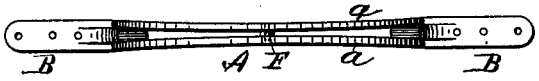


Fig. 2.

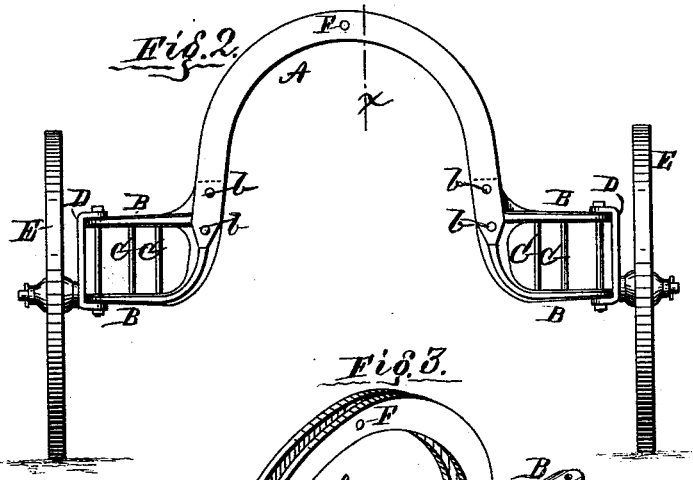


Fig. 3.

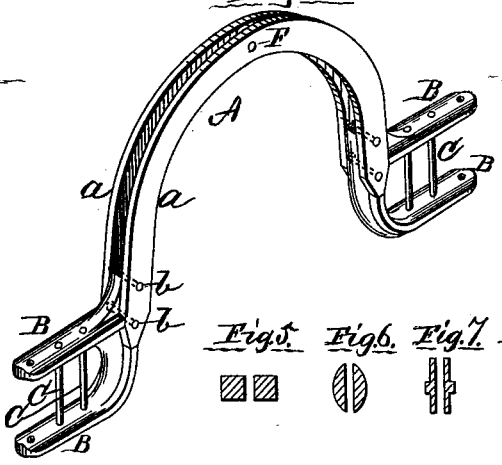


Fig. 4.

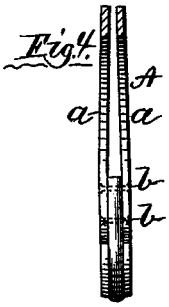
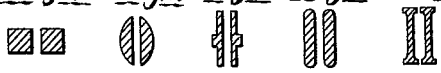


Fig. 5. Fig. 6. Fig. 7. Fig. 8. Fig. 9.



Witnesses:

M. M. Baringer

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By P. R. Richards,

Atty.

UNITED STATES PATENT OFFICE.

HENRY H. PATTEE, OF MONMOUTH, ILLINOIS, ASSIGNOR OF TWO-THIRDS OF HIS RIGHT TO JAMES H. PATTEE AND ITHAMAR P. PILLSBURY, OF SAME PLACE.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **187,899**, dated February 27, 1877; application filed December 5, 1876.

To all whom it may concern:

Be it known that I, HENRY H. PATTEE, of Monmouth, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

The nature of my invention relates to a new and improved mode of constructing the arch or central and main part of "straddle-row" cultivator-beam yokes or axles, and of connecting the side parts thereto; and the invention consists in constructing said arch of curved adjacent bars of iron or steel, to the ends of which may be attached, by riveting, the cast-iron parts for securing thereto the plows and wheels, and which may be strengthened by the use of stiffening-bolts, all as hereinafter more fully described.

The accompanying drawing represents, by different views, a cultivator beam yoke or axle embodying my improvements, Figure 1 being a top view of the axle; Fig. 2, an elevation showing the axle mounted on wheels; Fig. 3, a perspective view; Fig. 4, a sectional view in the line *x x*, Fig. 2. Figs. 5, 6, 7, 8, and 9 are detail sectional views of modifications, hereinafter referred to.

Referring to the parts by letters, the same part being represented by the same letter in the different views, A represents the arched central portion of a cultivator axle or beam yoke, formed of two similar bars, *a a*, of wrought-iron or (preferably) Bessemer steel, each bar of oblong rectangular form, or some similar form, in its cross-section, and each bar bent or curved edgewise, as plainly shown in the drawings, to form the arch A, when the two are placed adjacent to each other. B B represent the plates which carry the journals C C, to which the plows are attached; and D represents the plate carrying the wheel E, and by which said wheel is pivoted to the plate D in a common and well-known class of cultivators.

The plates B are so formed that they may be placed between the ends of the bars *a a*, and be securely riveted or bolted therein by bolts *b b*.

It will be plainly seen that the foregoing described construction of the arch A, especially when made of Bessemer steel, will produce a stiff, strong, rigid arch without the weight required to produce an arch of a single bar having the necessary rigidity and strength to resist the various strains, and especially the torsional strain to which it is subjected in use.

As a further means of stiffening the arch A a bolt, F, may be used for connecting the bars *a a* at their upper midlength portions, and other bolts F may be used at other points of the arch, if deemed necessary.

Figs. 5, 6, 7, 8, and 9 are modifications of the form which the bars *a* may have in their cross-sections.

In wheel-cultivator axles, the necessary rise of the arch and width of span give considerable length to the bars of which the arch is formed, and necessitate great strength in the arch to resist the various strains, and especially the torsional strain hereinbefore referred to. The construction of elevated wide arch or axle of two nearly parallel bars, as herein described, it is found, offers great resistance to torsional strain, and especially adapts the construction to this use in tongueless cultivators.

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

The arched axle or beam yoke A of a straddle-row cultivator, constructed, as described, of similarly-curved bars *a a* of iron or steel, arranged side by side in close proximity, and parallel, or nearly so, and having the side plates B B secured to and between the curved bars *a a*, in manner substantially as and for the purpose specified.

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

HENRY H. PATTEE.

Witnesses:
G. F. DAVIDSON,
W. A. DRYDEN.