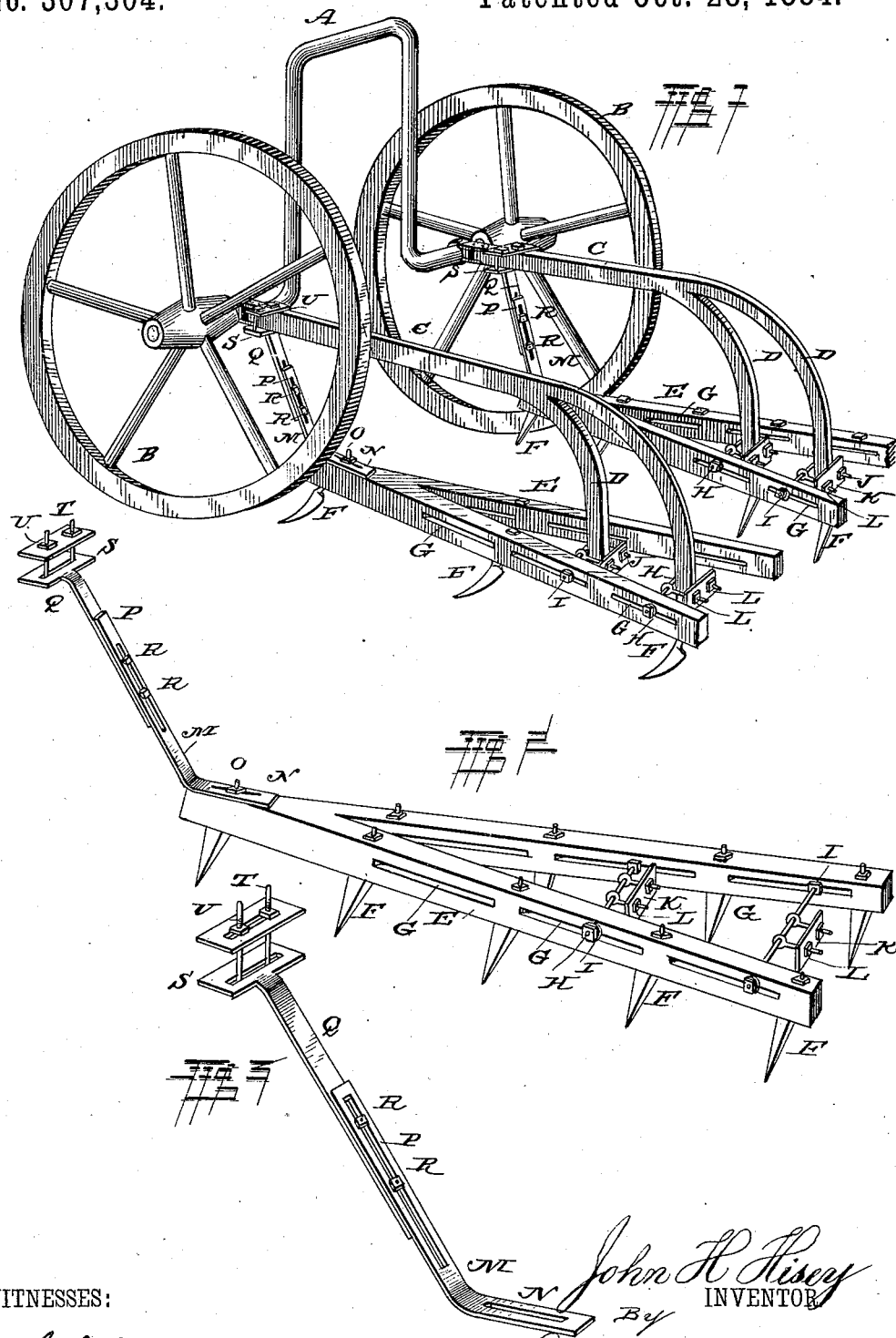


(No Model.)

J. H. HISEY.
HARROW.

No. 307,304.

Patented Oct. 28, 1884.



WITNESSES:

Ad. S. Dieterich
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UNITED STATES PATENT OFFICE.

JOHN HENRY HISEY, OF EMPORIA, KANSAS.

HARROW.

SPECIFICATION forming part of Letters Patent No. 307,304, dated October 28, 1884.

Application filed January 19, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. HISEY, a citizen of the United States, residing at Emporia, in the county of Lyon and State of Kansas, have invented certain new and useful Improvements in Harrow Attachments for Wheel-Cultivators; and I hereby declare the following to be a full, clear, and exact description of the same, 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 my improved harrow attachment, showing it attached to the frame of a straddle-row cultivator of the usual construction. Fig. 2 is a similar view of one of the harrows detached, and Fig. 3 is a view of the extensible arm securing the forward end of the harrow to the cultivator-beam.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to harrow attachments for wheel-cultivators; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the axle of a common straddle-row cultivator, mounted upon the wheels B B, and having the cultivator-beams C C, provided with the usual standards, D D, hinged or otherwise movably attached to it. The V-shaped harrow-frames consist of two beams, E E, provided with teeth F, of any desired construction, and having horizontal longitudinal slots G, and the ends of transverse rods H, provided with nuts I at the said ends, slide in the said slots, being capable of adjustment in the slots. A pair of eyed screw-bolts, J, slide with their eyes upon each of the transverse rods, and are provided at their outer ends with a perforated or slotted shackle-plate, K, and with nuts L, thus forming clamps adapted to be secured upon the lower ends of the cultivator-standards, and to clamp the same between the portions of the rods between the eyed bolts and the shackle-plates, thus enabling the harrows to be guided in the same manner as the cultivators, the cultivator-

shovels being removed from the standards when the harrows are secured upon them. A flat bar, M, slides adjustably with its longitudinally-slotted inner end, N, upon a screw-bolt, O, at the forward end of each of the V-shaped harrow-frames, and has its outer end, P, slotted longitudinally and bent upward in an inclined position, and the lower portion of a flat bar, Q, slides adjustably upon the under side of the upturned end of the former bar, having screw-bolts R sliding in the slot of the said bar, while its upper end forms a slotted T-head, S, bent at an angle to the bar, in the slot of which head two nutted bolts, T, slide with their lower ends, the upper ends of the bolts sliding in a slotted shackle-plate, U, and the forward end of the cultivator-beam is clamped between the T-head and the shackle-plate, securing the forward end of the harrow-frame to the cultivator-beam. In this manner it will be seen that the harrows may be guided in the same manner as the cultivators, and that by means of the adjustable inclined coupling-bars at the forward ends of the harrows, and by the shackles at the rear portions of the harrows, the said harrows may be adjusted to the cultivator-beams in any desired manner, and that the harrows may be attached to cultivator-beams and standards of any size by adjusting the inclined coupling-bar and the transverse bars in the slots of the harrow-beams.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a harrow attachment for cultivators, the combination of the longitudinally-slotted harrow-beams connected at their forward ends to form a V-shaped frame, the transverse rods with their ends arranged in the slots of the beams, and each provided with two pairs of clamping-nuts at their ends, and having nutted eyebolts fitted loosely upon the transverse rods and the shackle-plates, and the adjustable coupling-rods consisting of the upwardly-bent slotted bar adapted to slide upon a bolt at the forward end of the harrow-frame, the bar having the screw-bolts arranged in the slot of the upwardly-bent bar, and provided with the slotted T-head at its upper end, the nutted bolts, and the shackle-

plate, as and for the purpose shown and set forth.

2. The combination of the cultivator-beam and standards, the V-shaped slotted harrow-
5 frames, the cross-bars having the standard-clamping shackles, as described, and the adjustable coupling - bar, constructed as de-

scribed, and provided with the beam-clamping shackle, as and for the purpose shown and set forth.

JOHN HENRY HISEY.

Witnesses:

WILLIAM H. KERR,
JAS. B. BARNES.