

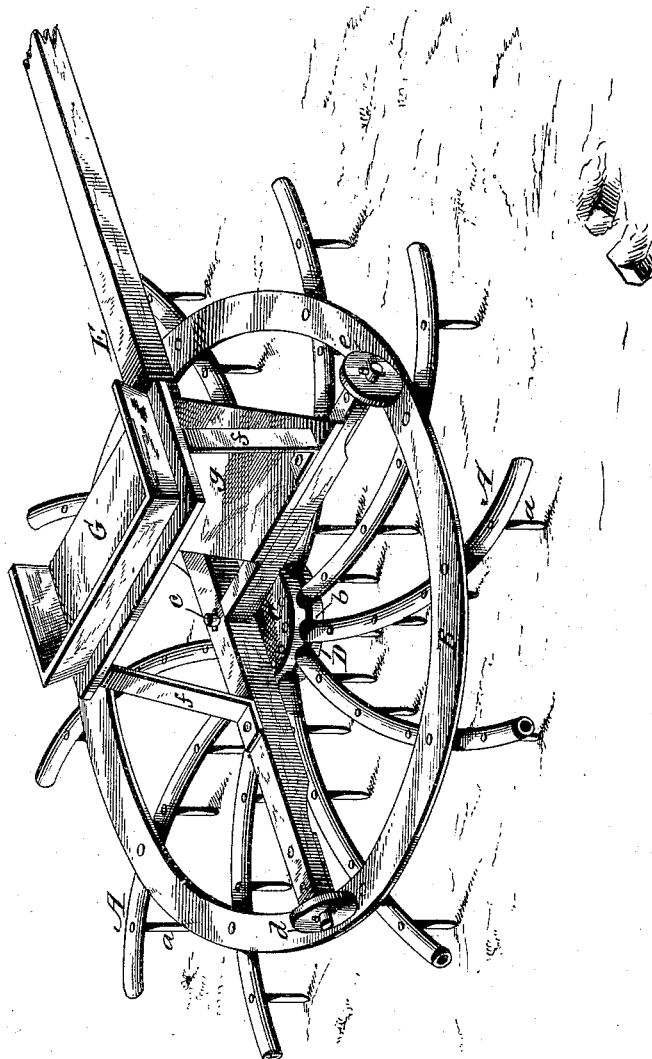
(No Model.)

W. E. McCANN.

HARROW.

No. 344,665.

Patented June 29, 1886.



Witnesses:
Chas. Williamson.
L. L. Miller

Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM E. McCANN, OF MCGREGOR, TEXAS.

HARROW.

SPECIFICATION forming part of Letters Patent No. 344,665, dated June 29, 1886.

Application filed March 12, 1886. Serial No. 194,965. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. McCANN, a citizen of the United States, residing at McGregor, in the county of McLennan and State of Texas, have invented certain new and useful Improvements in Harrows; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

The present invention has relation to that class of rotary harrows having arms provided with and extending radially from a common center, a track-ring, connected to the upper side of the harrow-arms, upon which work friction-rollers connected to the seat-support.

It is the object of the invention to improve the construction of the harrow-arms which carry the teeth, and the manner of connecting them to a common center, whereby the above class of harrows are materially increased in efficiency, much stronger, and more durable. These objects I attain by the construction, substantially as shown in the drawing, and hereinafter described and claimed.

In the accompanying drawing, which represents a perspective view of my invention, A designates the harrow-arms provided with the usual teeth, *a*, and metal track-ring B, connected to the arms near their outer ends. The arms A are cylindrical or round and formed hollow, and are of metal, each arm being curved, as shown, and connected at their inner ends by heads CD, between which the ends of the arms are clamped and held, each head upon its inner side having semicircular seats *b* for the ends of the arms, the heads being held together against them by suitable screw-bolts and nuts. The arms A being curved, as shown, instead of straight add efficiency to the harrow, as the resistance to the teeth is not in the line of draft but at an angle or tangentially, thereby insuring it more readily ro-

tating when used on soft and marshy soil. The round or cylindrical form of the harrow-arms renders them less liable to clog between the teeth, and constructing them hollow insures lightness with strength. The draft-beam E is connected to the clamping-heads CD by a king-bolt, *c*, which loosely passes through the beam and heads, so as to allow the harrow to freely turn upon its axis. The beam E is provided with the usual whiffletree, and its rear end extends over the track-ring B, and has journaled thereto a friction-roller, *d*.

F is an extension which is removably connected to the beam E by means of the pivot-bolt *e*, and extends outward at right angles thereto and overlies the track-ring B, and is provided with a roller, *e*, similar to that on the rear end of the beam E to bear on the track-ring. A suitable seat, G, is suspended over the beams by braces *f*, and a foot-board, *g*, is connected to the beams for convenience of the driver.

I wish it to be understood the pin *c* not only performs the function of pivoting the plates C D to the beam E, but also performs the function of removably securing the extension F to said beam.

What I claim is—

In a rotary harrow, the combination, with the beam E and extension F, having rollers *d* *e*, the seat G, mounted on said beam and extension, of the ring or track B, secured to the curved hollow arms A, the plates C D, and the pivot-pin *c*, connecting the beam E, extension F, and plates C D together, as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM E. McCANN.

Witnesses:

R. A. HENDERSON,
J. B. RANDY.