

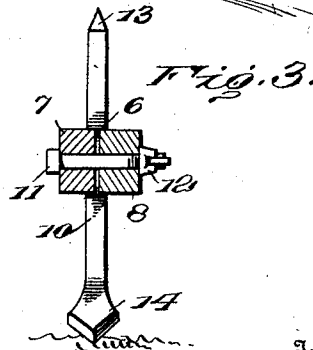
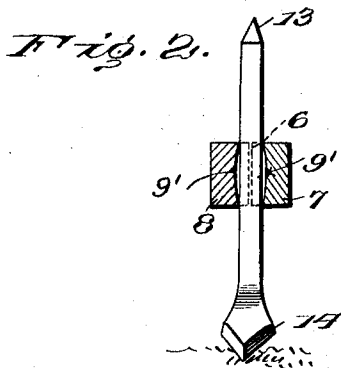
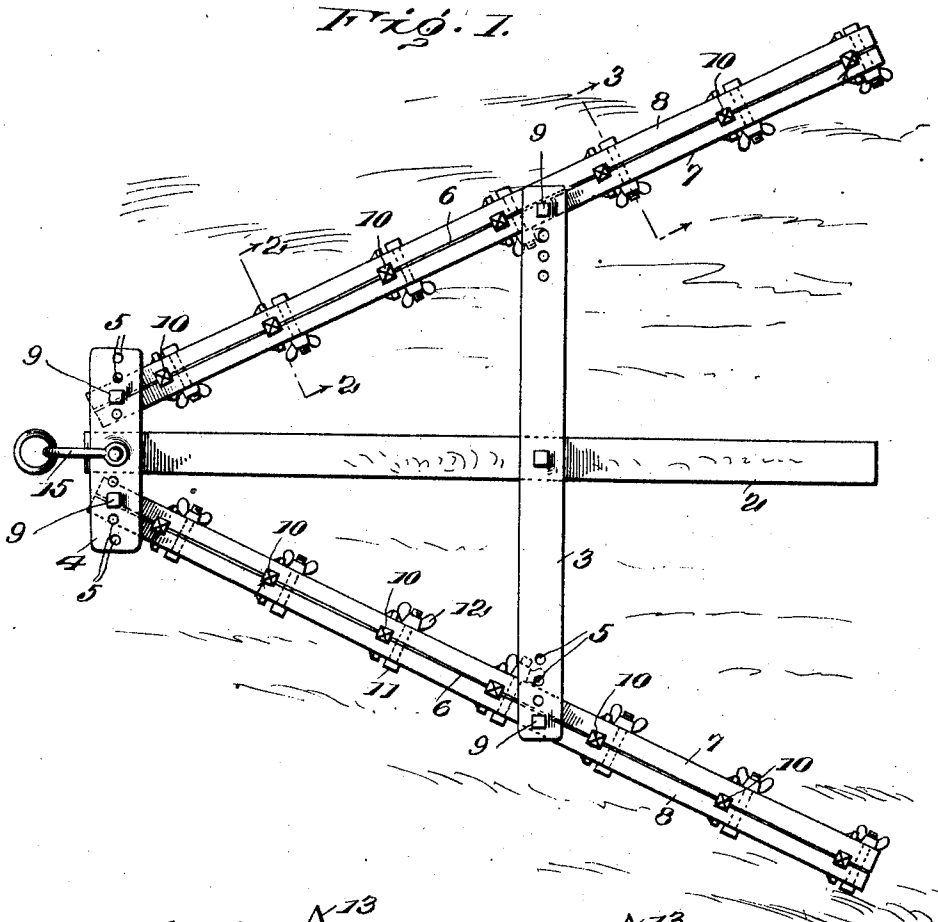
J. A. WOLFE.

HARROW.

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1,002,621.

Patented Sept. 5, 1911.



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JAMES A. WOLFE, OF JACKSBORO, TEXAS.

HARROW.

1,002,621.

Specification of Letters Patent.

Patented Sept. 5, 1911.

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To all whom it may concern:

Be it known that I, JAMES A. WOLFE, a citizen of the United States, residing at Jacksboro, in the county of Jack and State of Texas, have invented certain new and useful Improvements in Harrows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in harrows, and more particularly to that class adapted to be used in connection with a cultivator.

An object of this invention is the provision of a harrow of this character comprising a pair of opposite converging side beams, having means carried thereby for supporting a series of harrow teeth, which extend entirely through the side beams for the purpose of permitting the harrow to be reversed, or that either end of the teeth may be used as desired.

Another object of this invention is to improve and simplify devices of this character, rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use, and readily operated.

With the above and other objects in view, this invention resides in the novel features of construction, formations, combinations and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of my invention; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; and Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

Referring to the drawings by characters of reference, the numeral 1 designates generally my improved harrow, comprising a central longitudinal beam 2, to the substantially intermediate portion of which is bolted a transverse brace 3, and to the forward end of which are secured upon opposite sides thereof, a pair of transverse bars 4. The opposite ends of the bars 3 and 4 are

each provided with a series of apertures 5, through which a bolt may be extended for the purpose of securing thereto opposite converging side beams 6. Each of these side beams 6 comprises inner and outer compartment sections 7 and 8. The bolt 9 which passes through the before mentioned aperture 5 is secured preferably to the inner of the said compartment sections 7. The contacting faces of the sections 7 and 8 are vertically and aliningly curved as at 9' for the reception of the intermediate portions of the harrow teeth 10, which may be securely clamped therebetween by means of clamping bolts 11, upon the inner threaded ends of which are located winged locking nuts 12. The ends of the harrow teeth upon one side of the beams 6 are preferably sharpened at 13, while the ends of the said teeth upon the opposite sides of the beams are preferably flattened and pointed as at 14, it being understood however that my invention is not limited to such teeth alone, but the opposite ends may be made identical with each other, or may be made in any preferred shape. A clevis 15 is pivoted to the forward end of the harrow and affords a convenient means for attaching the same to the rear of a cultivator of any desired type.

From the foregoing disclosure taken in connection with the accompanying drawing, it will be readily apparent that a harrow of the character described is provided for which will fulfil all of the necessary requirements of such a device.

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

A harrow such as described, consisting of a central beam, transversely extending braces being secured thereto, the ends of the said braces being provided with a plurality of apertures, side beams being provided with apertures to register with the apertures formed in the said braces, bolts inserted in said apertures to secure the side beams to said braces, said side beams comprising a pair of counterpart sections, the contacting faces of the said sections being provided

with a plurality of vertically curved recesses, harrow teeth the intermediate portion thereof being set in said curved recesses and bolts extending through said sections
5 for clamping the said harrow teeth and counterpart sections together substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. WOLFE.

Witnesses:

KYLE SPILLER,
NANNIE NELMS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
