

(No Model.)

F. BENFIELD.
CULTIVATOR.

No. 586,655.

Patented July 20, 1897.

Fig. 1.

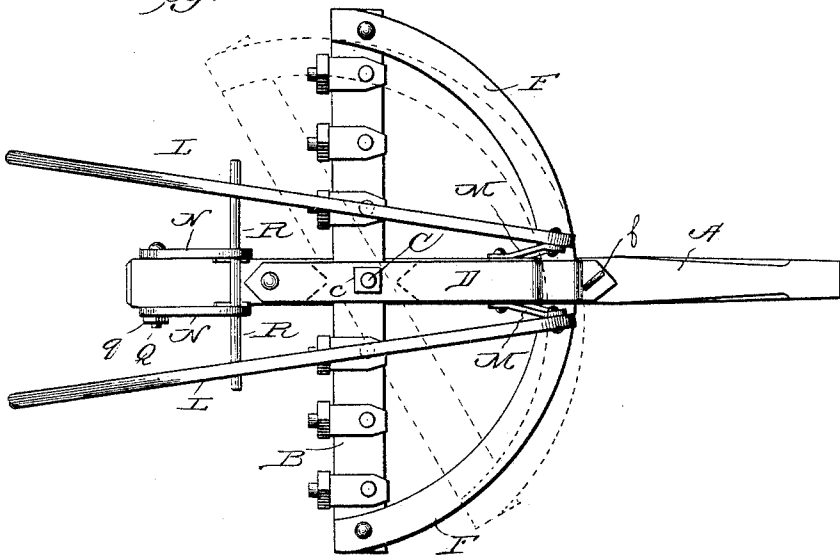
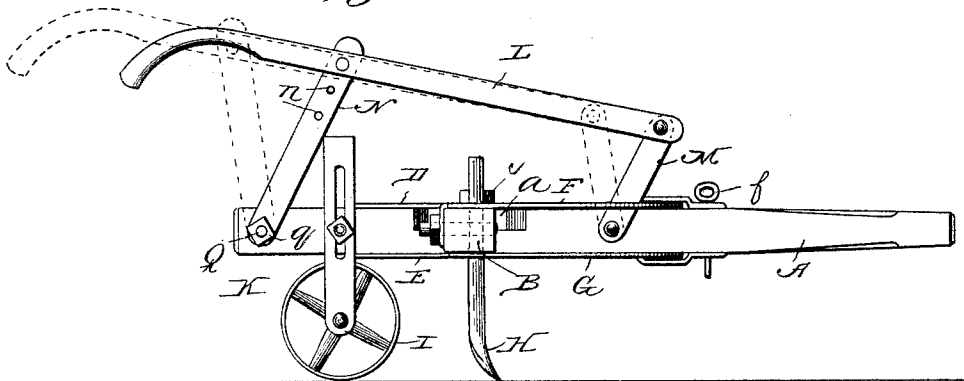


Fig. 2.



WITNESSES:

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CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 586,655, dated July 20, 1897.

Application filed February 24, 1897. Serial No. 624,824. (No model.)

To all whom it may concern:

Be it known that I, FRANK BENFIELD, a citizen of the United States, residing at Burke, in the county of Angelina and State of Texas, have invented certain new and useful Improvements in Cultivators; 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.

My invention relates to cultivators, and more especially to that class of cultivators having a transverse tooth-bar pivoted midway of its length to the beam. Heretofore in this class of cultivators it has been found difficult to obtain perfect control of the same, especially where the tooth-bar is arranged diagonally to the beam, as in this instance the line of draft is at an obtuse angle to the line of the tooth-bar, making it difficult to guide the cultivator, and places the operator too close to the rearmost end of the tooth-bar. To partially remedy this defect, extra long handles were required, which when the tooth-bar is at right angles to the beam places the operator so far back that he has difficulty in guiding the cultivator and controlling his team.

Now the object of my invention is to provide adjustable means by which the handles of the cultivator may be readily adjusted lengthwise relatively to the position of the tooth-bar, and thus give the operator more perfect control of the cultivator, regardless of the position of such bar.

It is also my object to remove the operator from possible contact with the dirt thrown by the rearmost teeth of the tooth-bar when it is arranged diagonally to the beam.

It is also my object to provide novel means for connecting and bracing the tooth-bar to the beam.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of my cultivator, and Fig. 2 a side elevation of the same.

Referring more particularly to the drawings, A denotes the cultivator-beam, having a recess *a*, formed on the upper side near the rear end thereof, provided with beveled corners.

B denotes a tooth-bar having a recess

formed on its under side midway of its length and provided with beveled corners. By means of said recess the tooth-bar is seated in flush with the beam and is pivoted thereto by a pivot-bolt C, provided with a jam-nut *c*, by which the tooth-bar may be set at any angle to the beam.

D denotes an iron strap, secured to the upper side of the beam, and passes over the tooth-bar and is perforated to receive the bolt C. E denotes a similar strap, extending along the under side of the beam. Both of said straps extend forwardly and pass above and under two arc-shaped braces, hereinafter described.

F and G denote flat arc-shaped metal braces, which extend in an arc of a circle from one end of the tooth-bar to the other, passing above and under the beam forward of the tooth-bar and loosely mounted to the beam by the straps D and E, which pass, respectively, above and under said braces, their forward ends being secured to the beam and allowing the braces to turn freely in the space between the straps and beam. *f* denotes a thumb-screw for jamming the strap D down upon the brace F. This arrangement of the flat metal braces embracing the beam and the ends of the tooth-bar and means for clamping said braces to the beam add greatly to the strength of the cultivator without increasing its weight.

H denotes cultivator-teeth secured to the tooth-bar.

I denotes a wheel mounted in vertically-adjustable bearings K.

L denotes the cultivator-handles.

M denotes two upright arms pivoted by their lower ends to each side of the beam, forward of the tooth-bar. The upper ends of said arms are pivoted to the inner ends of the cultivator-handles.

N denotes two upright arms pivoted at their lower ends to opposite sides of the beam at its rear end by a bolt Q, having a jam-nut *q*. The upper ends of said arms are journaled to a round R, and said round is journaled in the cultivator-handles.

n n denote perforations in the arms N for the insertion of said round and afford means for adjusting the height of the cultivator-handles. Thus it will be seen that said han-

dles are arranged to be adjustable either inward or outward to or from the beam and in line therewith, or said handles may be raised or lowered relatively to the beam. This construction and arrangement of the handles is of especial value in the first instance where a pivoted tooth-bar is used, as it enables the operator to lengthen the handles when the tooth-bar is arranged diagonally to the beam, as shown in dotted lines in Fig. 1, and thus place himself at a greater distance from the after end of said bar, whereby he obtains better control of the cultivator. In the latter instance the handles may be raised or lowered to suit the height of the operator.

To lengthen the handles relatively to the beam, it is only necessary to loosen the jam-nut *g*. The handles may then be swung backwardly the required distance when the jam-nut is tightened to hold them in position. To raise or lower the handles, the round *R* is adjusted up or down on the arms *N*.

The tooth-bar turns upon its pivot-bolt *C*, and is set in the required position by turn-

ing down the jam-nut *c*. The thumb-screw *f* serves to jam down the strap *D* upon the brace *F* and aid in holding said tooth-bar in its set position.

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

In a cultivator having a transverse tooth-bar pivoted midway of its length to the beam, the combination of the handles, the uprights *M* pivoted thereto and also to the beam forward of said tooth-bar, the uprights *N*, pivoted to the beam in rear of said tooth-bar and also to a round *R* journaled to said handles, whereby said handles may be adjusted lengthwise relatively to the position of said tooth-bar.

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

FRANK BENFIELD.

Witnesses:

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C. ROE HALL.