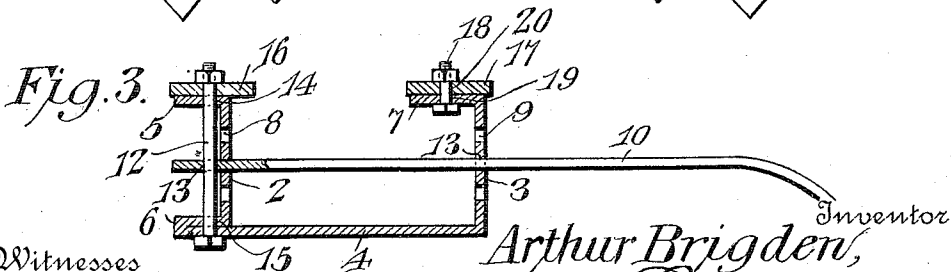
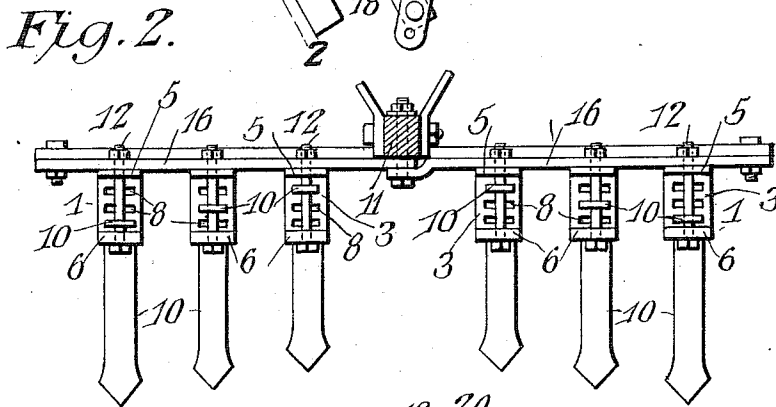
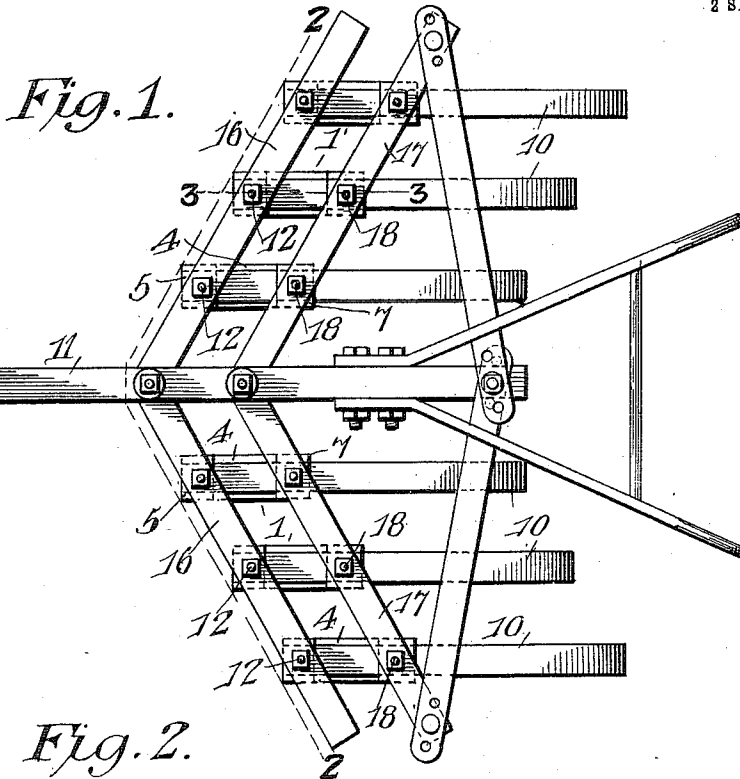


A. BRIGDEN.  
 SPRING TOOTH CULTIVATOR.  
 APPLICATION FILED MAR. 25, 1911.

995,319.

Patented June 13, 1911.

2 SHEETS—SHEET 1.



Witnesses  
*James McLaughlin*  
*H. T. Riley*

Inventor  
*Arthur Brigden*  
 By *E. J. Siggers*  
 Attorney

A. BRIGDEN.  
 SPRING TOOTH CULTIVATOR.  
 APPLICATION FILED MAR. 25, 1911.

995.319.

Patented June 13, 1911.

2 SHEETS—SHEET 2.

Fig. 4.

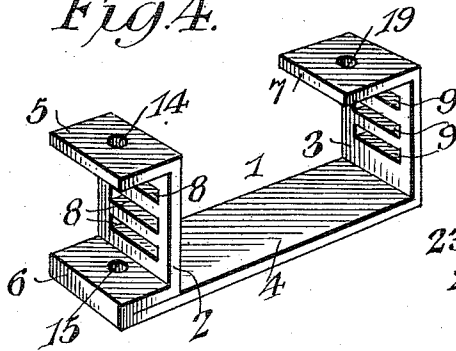


Fig. 5.

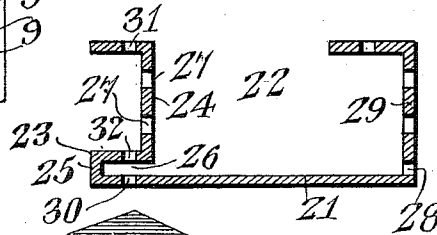


Fig. 6.

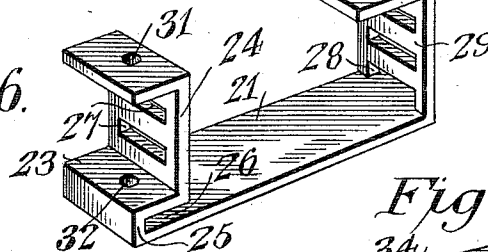


Fig. 7.

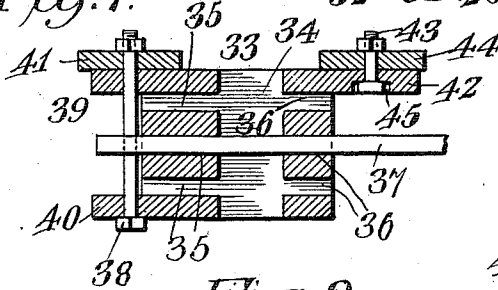


Fig. 8.

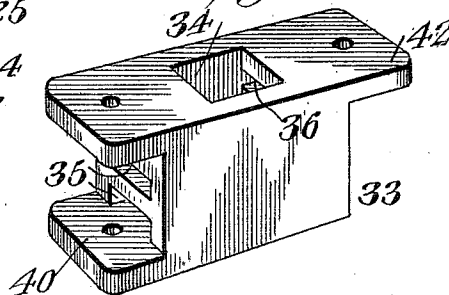


Fig. 9.

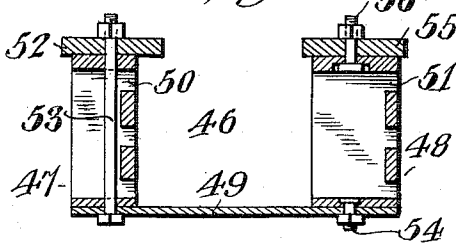


Fig. 10.

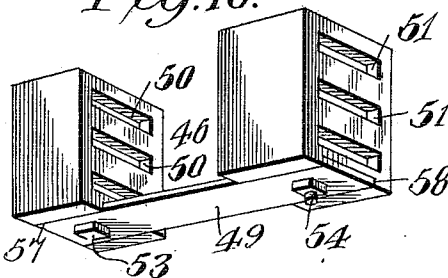
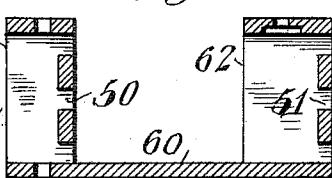


Fig. 11.



Witnesses  
*Jas. F. McLaughlin*  
*H. F. Rey.*

Arthur Brigden, Inventor

By *E. G. Siggers*  
 Attorney

# UNITED STATES PATENT OFFICE.

ARTHUR BRIGDEN, OF ALBERTVILLE, ALABAMA.

## SPRING-TOOTH CULTIVATOR.

995,319.

Specification of Letters Patent. Patented June 13, 1911.

Application filed March 25, 1911. Serial No. 616,819.

*To all whom it may concern:*

Be it known that I, ARTHUR BRIGDEN, a citizen of the United States, residing at Albertville, in the county of Marshall and State of Alabama, have invented a new and useful Spring-Tooth Cultivator, of which the following is a specification.

The invention relates to a spring tooth cultivator.

The object of the present invention is to improve the construction of cultivators, more especially the means for mounting the spring teeth, and to provide a simple, inexpensive and efficient device, adapted to be readily applied to a cultivator, and capable of permitting the spring teeth to be raised or lowered to adjust the teeth to fit the ground or to regulate the depth of the teeth next to the plants, so that the bed may be uniformly cultivated from one side to the other.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a plan view of a cultivator provided with tooth supporting brackets, constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the same, taken substantially on the line 2—2 of Fig. 1. Fig. 3 is a longitudinal sectional view on the line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of the tooth supporting bracket, shown in Figs. 1 to 3 inclusive. Fig. 5 is a longitudinal sectional view of a tooth supporting bracket, showing another form of the invention. Fig. 6 is a perspective view of the same. Fig. 7 is a longitudinal sectional view of a tooth supporting bracket, consisting of a casting and illustrating another form of the invention. Fig. 8 is a perspective view of the same. Fig. 9 is a longitudinal sectional view of a tooth supporting bracket having its front and rear portions formed by separate castings. Fig. 10 is a perspective view of the same. Fig. 11 is a longitudinal sectional view of the bracket

similar to that illustrated in Figs. 9 and 10, but having a solid integral base.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the accompanying drawings 1 designates a tooth supporting bracket, constructed of a single piece of spring steel, or other suitable material, stamped or otherwise shaped into the form shown and consisting of a front vertical bar or portion 2, a rear vertical bar or portion 3, and a horizontal bottom connecting bar or portion 4. The front vertical bar 2 is provided with forwardly extending upper and lower horizontally disposed arms 5 and 6, and the bottom bar 4 extends along the lower face of the bottom arm 6 and is connected with the front end of the same. The rear vertical bar is provided at the top with a forwardly extending horizontal attaching arm 7, arranged in the same horizontal plane as the front attaching arm 5. The front and rear vertical bars 2 and 3 are provided with aligned slots 8 and 9, preferably three in number, but the number of slots may be varied, as will be readily understood. The slots are adapted to receive the spring teeth 10, and they permit a vertical adjustment of the same to enable the teeth to be arranged at different elevations to fit the ground or the bed of the plants, so that the bed may be cultivated uniformly. In Fig. 2 of the drawings, the inner cultivator teeth, which are located at opposite sides of the beam 11, are arranged in the upper slots; the intermediate teeth are supported in the middle slots of the bracket, and the outer teeth are arranged in the bottom slots. When, however, it is desired to place the teeth in the same horizontal plane, they are arranged in the bottom slots. This serves to elevate the frame of the cultivator, and the brackets do not materially project below the teeth. The spring teeth are secured at their front ends to the bracket at the front portion thereof by means of vertical bolts 12, passing through perforations 13 in the front ends of the teeth and also through upper and lower perforations 14 and 15 of the bracket and piercing the front tooth carrying bar 16, the vertical bolt 12 performing the double function of securing the tooth to the bracket and of pivoting the bracket to the front tooth carrying bar 16. The bracket is pivoted to the rear tooth carrying bar 17 by means of

a short bolt 18, passing through registering perforations 19 and 20 of the said arm 7 and rear tooth carrying bar 17. By this construction the spring teeth are provided only at their front ends with bolt openings. The tooth carrying bars are pivotally connected at their inner ends to the beam, and are adjustable backwardly and forwardly in the usual manner, the pivoting of the tooth supporting bracket permitting such adjustment.

As the particular construction of the cultivator and the means for adjusting the tooth carrying bars do not form a portion of the present invention, illustration thereof is deemed unnecessary.

The vertical bolt 12 is arranged close to the front vertical bar 2, so that the least rearward bending or bowing of the bolt carries it into contact with the bracket, which supports the bolt and effectually prevents the same from being broken by the strain on the teeth.

The tooth supporting brackets are rigidly mounted on the laterally extending tooth carrying bars of an ordinary cotton or corn cultivator, and the inner bracket may be inverted and secured to the upper faces of the tooth carrying bars so as to extend beyond the same when increased pitch in the adjustment of the spring teeth is desired.

In Figs. 5 and 6 of the drawings is illustrated another form of the invention, the bottom bar 21 of the bracket 22 having its front end spaced from the lower arm 23 of the front vertical bar 24 and connected therewith by a short web or flange 25 to form a front recess 26 to receive the front ends of the tooth. In this form of invention, the front bar is provided above the arm 23 with a pair of slots 27, and the bottom slot 28 of the rear vertical bar 29 is arranged at the upper face of the bottom of the bracket. The front portion of the bottom 21 is provided with a perforation 30, which registers with the perforations 31 and 32 of the upper and lower forwardly extending arms of the front vertical portion or bar 24 to receive the front pivot bolt.

In Figs. 7 and 8, the bracket 33, which is in the form of a casting, is preferably constructed of malleable metal, and it is provided with a central vertical opening 34, adapted to lighten the construction. The front and rear portions of the bracket are provided with alined slots 35 and 36, located in advance and in rear of the vertical opening 34 and adapted to permit a vertical adjustment of the tooth 37, which is secured to the bracket by a front bolt 38. The front bolt 38 passes through registering perforations of forwardly projecting horizontal arms 39 and 40, and it pivots the bracket to a front tooth carrying bar 41. The bracket is also provided at the top with a rearwardly extending arm 42, pivoted by

a short bolt 43 to the rear tooth carrying bar 44 and provided in its lower face with a recess 45, receiving the head of the bolt and arranging the same beyond the upper slots 35 and 36.

In Figs. 9 and 10 of the drawings is illustrated a bracket 46 composed of front and rear castings 47 and 48, connected by a bottom bar or strap 49 and constituting the front and rear portions of the bracket. The castings 47 and 48 are provided with alined slots 50 and 51 to permit an adjustment of the teeth, and the front casting is secured to the bottom strap or bar 49 and is pivoted to the front carrying bar 52 by a front vertical bolt 53. The rear casting is secured to the bottom strap or bar by a short lower bolt 54, and it is pivoted to the rear tooth carrying bar 55 by a short upper bolt 56. The front and rear castings are provided in their lower faces with rectangular recesses 57 and 58, in which the ends of the strap or bar 49 are fitted, whereby the front and rear portions of the bracket 46 are held against rotary movement with respect to the bottom bar 49.

The bracket 59, shown in Fig. 11, is constructed substantially the same as that illustrated in Figs. 9 and 10 with the exception that it is provided with a solid bottom 60, which is formed integral with the front and rear portions 61 and 62 of the bracket 59.

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

1. In a cultivator, the combination with front and rear tooth carrying bars, and a cultivator tooth, of a bracket pivotally connected to the front and rear tooth carrying bars and provided with a plurality of slots arranged in a vertical series and adapted to receive the cultivator tooth to permit the same to be raised or lowered, whereby the teeth of a cultivator may be arranged in the same horizontal plane and adjusted to fit the ground.

2. In a cultivator, the combination with front and rear tooth carrying bars, and a cultivator tooth, of a bracket having front and rear pivots for connecting it to the tooth carrying bars, said bracket being also provided with a vertical series of slots adapted to permit an adjustment of the cultivator tooth, the latter being secured to the bracket by the front pivot thereof.

3. In a cultivator, the combination with front and rear tooth carrying bars, and a cultivator tooth, of a bracket having front and rear pivots for connecting it to the front and rear tooth carrying bars, said bracket being also provided with spaced front and rear portions having vertical series of alined slots adapted to permit an adjustment of the cultivator tooth.

4. In a cultivator, the combination with

front and rear tooth carrying bars, and a cultivator tooth, of a bracket composed of spaced front and rear portions provided with vertical series of alined slots adapted to permit a vertical adjustment of the tooth, and front and rear pivots connecting the bracket with the tooth carrying bars, the front pivot being extended and securing the tooth in the bracket.

5. In a cultivator, the combination with front and rear tooth carrying bars, and a cultivator tooth, of a bracket composed of spaced front and rear portions provided with vertical series of alined slots adapted to permit a vertical adjustment of the tooth, and front and rear pivots connecting the bracket with the tooth carrying bars, the front pivot extending from the top to the bottom of the bracket and securing the cultivator teeth therein, and the rear pivot terminating short of the tooth.

6. A tooth supporting bracket for cultivators provided with a vertical series of slots adapted to receive a cultivator tooth to permit a vertical adjustment thereof, and means for pivoting the bracket to the tooth carrying bars of a cultivator and for securing the cultivator teeth in the bracket.

7. A tooth supporting bracket for cultivators including spaced front and rear portions provided with alined slots arranged in a vertical series and adapted to permit an adjustment of the cultivator tooth, and means for pivoting the bracket to the tooth carrying bars of a cultivator and for securing a tooth in the bracket.

8. A tooth supporting bracket for cultivators including spaced front and rear portions provided with alined slots arranged in a vertical series and adapted to permit an adjustment of a cultivator tooth, said bracket being provided at the top with front and rear horizontal attaching arms.

9. A tooth supporting bracket for cultivators including spaced front and rear portions provided with alined slots arranged in a vertical series and adapted to permit an adjustment of a cultivator tooth, said bracket being provided at the top with front and rear perforated arms and having a front bottom arm provided with a perforation registering with the perforation of the front attaching arm.

10. A tooth supporting bracket for cultivators including spaced front and rear portions provided with alined slots arranged in a vertical series and adapted to permit an adjustment of a cultivator tooth, said bracket being provided at the top with front and rear perforated arms and having a front bottom arm provided with a perforation

registering with the perforation of the front attaching arm, the perforations of the front arms being arranged adjacent to the plane of the front face of the bracket to permit a bolt when sprung to fit against and be braced by the bracket.

11. A tooth supporting bracket for cultivators including spaced front and rear portions having alined slots arranged in a vertical series, said front and rear portions being provided with perforations, the front perforations being arranged to permit a bolt when sprung to fit against the front portion of the bracket so as to be braced thereby.

12. A tooth supporting bracket for cultivators including spaced front and rear portions, each provided with a plurality of tooth receiving slots, the front portion having upper and lower forwardly projecting arms and the rear portion being provided with an upper arm, and a bottom connecting the front and rear portions of the bracket.

13. A tooth supporting bracket for cultivators including spaced front and rear portions, each provided with a plurality of tooth receiving slots, the front portion having upper and lower forwardly projecting arms and the rear portion being provided with an upper arm, and a bottom connecting the front and rear portions of the bracket and spaced from the lower arm of the front portions to provide a tooth receiving recess.

14. A tooth supporting bracket for cultivators constructed of a single piece of metal bent to form vertical front and rear portions and a bottom connecting portion, the terminals of the metal being bent at an angle at the tops of the front and rear portions to form attaching arms, and the said front and rear portions being provided with tooth receiving slots.

15. A tooth supporting bracket for cultivators constructed of a single piece of metal and consisting of front and rear vertical portions having alined slots, the front portion being provided at the top and bottom with forwardly projecting arms, and the rear portion having an arm at the top, and a bottom extending forwardly from the rear vertical portion and spaced from the lower arm of the front vertical portion to provide a tooth receiving recess and provided at its front end with a web or flange connecting the bottom with the front arm.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ARTHUR BRIGDEN.

Witnesses:

JOHN H. SIGGERS,

JAS. K. McCATHRAN.