

F. B. SPRAGUE.
WEEDER.

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1,010,084.

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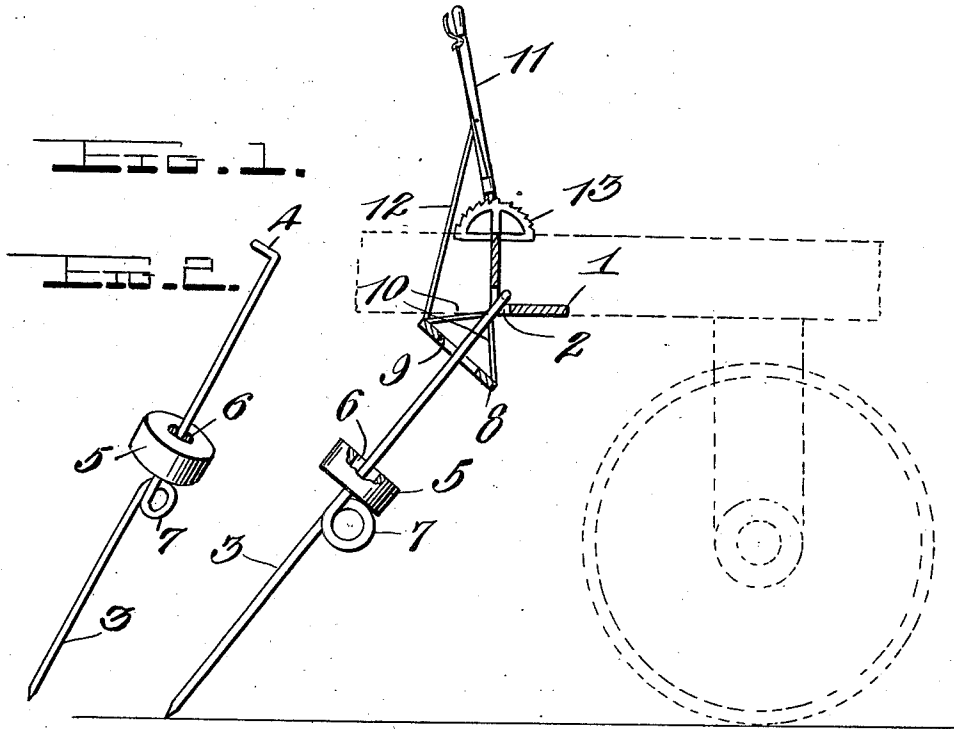
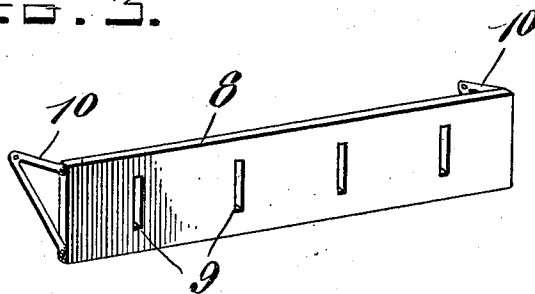


Fig. 3.



Witnesses

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WEEDER.

1,010,084.

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To all whom it may concern:

Be it known that I, FREDERICK B. SPRAGUE, a citizen of the United States, residing at Smyrna, in the county of Chenango and State of New York, have invented certain new and useful Improvements in Weeders, of which the following is a specification, reference being had to the accompanying drawings.

1) My invention relates to new and useful improvements in agricultural implements and more particularly to a weeder, and my object is to provide an improved form of tooth for a machine of this character.

15 A further object is to provide teeth having pivotal connection with the bars of the device and a still further object is to provide means for the normal engagement of the teeth with the ground.

20 A further object of the invention resides in providing a guide member for the teeth and a still further object resides in providing a weight means for normally retaining the point of the tooth in engagement with the ground.

25 With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

30 In the accompanying drawings forming a part of this application, Figure 1 is a section through an angle bar of the machine showing my improved form of teeth applied to use and showing in dotted lines a portion of the cultivator to which the same is attached. Fig. 2 is a detail perspective of a tooth and weight thereon removed from the angle bar, and, Fig. 3 is a similar view of the guide bar.

35 In carrying out my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which 1 indicates an angle bar of a weeder frame supported on wheels (not shown), said angle bar being provided with a plurality of L-shaped slots 2 through which are adapted to extend my improved form of teeth 3. These teeth 3 have the upper ends thereof bent at right angles, as shown at 4, which right angular bent portions are adapted to rest between the sides of the angle bars and be secured thereto so as to allow a pivotal movement of the teeth

through the slots 2. In order to provide for the normal engagement of the points of said teeth with the ground, I provide each tooth with a weight 5 or plurality of same which is slotted, as at 6, to receive therethrough the body portion of the tooth, and each tooth is provided with a shoulder or the like formed by looping the body of the tooth, as shown at 7, to retain the weight thereon. In this manner, the teeth being hinged at their upper ends and weighted in their body portions, have their points normally in engagement with the ground, but as said points come in contact with obstructions, the same will readily ride thereover without disturbing the same. I have also provided for the guiding of the teeth as the same are raised and lowered, and to this extent, I provide a plate 8 provided with a plurality of slots 9, said plate being hingedly secured to the angle bar 1 by means of the linking members 10 at the ends of said plate. When properly positioned, the slots 9 of the plate 8 will be disposed in alinement with the slots 2 of the angle bar so that the teeth 3 may readily extend therethrough, and it will be seen that with this guide plate 8, the teeth will be prevented from lateral movement and will also be limited in their upward movement. The angle bar 1 or other part of frame has also pivotally mounted thereon a lever 11 which is connected to the guide plate 8 by means of the rod 12, whereby when it is desired, the guide plate 8 may be raised, thereby raising the teeth 3 completely off the ground, and a detent carried by the lever may be engaged with the segmental rack 13 to retain the teeth in any adjusted position.

40 It is well known that in most weeders of the present day, the teeth thereof are fastened rigidly to the main frame so that in order to clear an obstruction, a tooth must either bend, slide around the obstruction or the whole frame must be moved or the obstruction removed. In my improved device, however, each tooth is individually hinged to the angle bar of the machine so that each may clear an obstruction independently of the other, and as each is also provided with a weight, the tendency of said teeth will be to normally engage the ground. In this manner, a device equipped with teeth such as I have disclosed, can be operated so as to remove all small weeds and yet not remove stones of any appreciable size, thereby

differentiating greatly from the weeder of the present day in which the rigidly mounted teeth rake stones and trash and cover small plants therewith as the same is operated.

From the foregoing, it will be seen that I have provided an improved form of tooth for the weeder in which each is individually hinged to the angle bar of the implement and each provided with means to normally engage the ground, and it will further be seen that by providing each tooth with a shoulder formed by looping the body portion thereof, the weight applied to each of said teeth will be retained thereon. It will still further be seen that by providing a guide plate having slots therein through which said teeth extend, the lateral movement of said teeth will be prevented as well as the upward movement limited, and it will still further be seen that by providing a lever connection with the guide plate, said teeth may be completely raised off the ground when desired. It will further be seen that my improved form of teeth is of extremely simple construction and thereby inexpensive to manufacture and one which is extremely effective in operation. Furthermore, by means of the lever and guide member, the teeth may be effectively held in rigid engagement with the ground or allowed to act independently, and when acting independently, the same will follow all inequalities and unevenness of the ground's surface.

What I claim is:—

1. In an implement of the class described, the combination with a bar; of a plurality of teeth individually hinged thereto, means to normally retain said teeth in engagement with the ground, a slotted guide plate pivoted on said bar and through which said teeth extend, and means to raise said guide plate to correspondingly raise said teeth from the ground conjunctively.

2. In an implement of the class described, the combination with a bar; of a plurality of teeth having individual hinged connection therewith, a weight slidably mounted on each of said teeth to normally position the same in engagement with the ground, means

to retain the weights on the teeth, and guiding means for said teeth.

3. In an implement of the class described, the combination with a bar; of a plurality of teeth having individual hinged connection therewith, weight members slidably mounted on said teeth to normally position the same in engagement with the ground, said teeth being looped in their lengths to retain the weights thereon, a slotted guide plate through which said teeth extend, and means to raise and lower said plate and correspondingly the teeth.

4. In an implement of the class described, the combination with an angle bar having a plurality of slots therein; of a plurality of teeth extending through said slots, the upper ends of said teeth being bent at right angles and engaged with said bar to provide individual hinged connections for the teeth therewith, weight means to normally dispose said teeth in engagement with the ground, a slotted guide plate through which said teeth extend, and means to raise and lower said plate and correspondingly the teeth.

5. In an implement of the class described, the combination with a bar; of a plurality of teeth, the upper ends of which are bent at right angles and engaged with said bar for individual pivotal connection therewith, and weight members slidably mounted on said teeth to normally dispose the same in engagement with the ground, said teeth being looped in their lengths to retain said weight members thereon.

6. In an implement of the class described, the combination with a cross bar and a plurality of teeth individually hinged thereto; of weights on said teeth to normally dispose the same in engagement with the ground and allow independent movement thereof, and means to collectively raise said teeth above the ground and also collectively force the same into engagement therewith.

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

FREDERICK B. SPRAGUE.

Witnesses:

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E. S. BILLINGS.