Dec. 25, 1934. J. L. F. BAUER 1,985,674

WEEDER

Filed Aug. 21, 1933

Fig. 1.

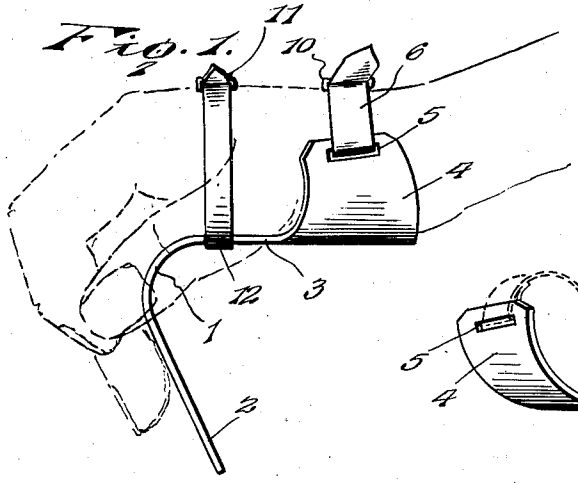


Fig. 3.

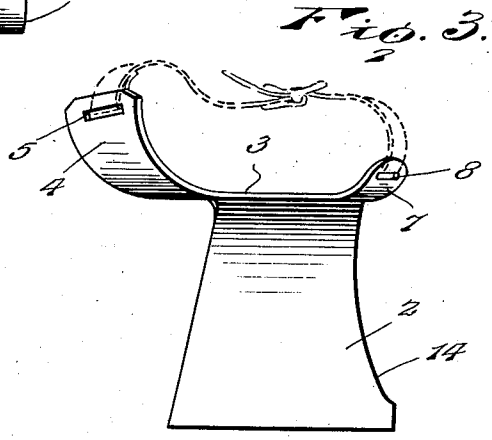


Fig. 2.

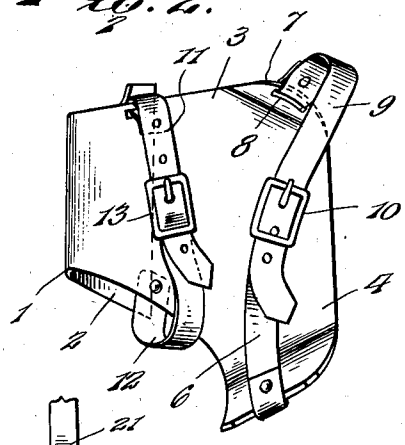


Fig. 4.

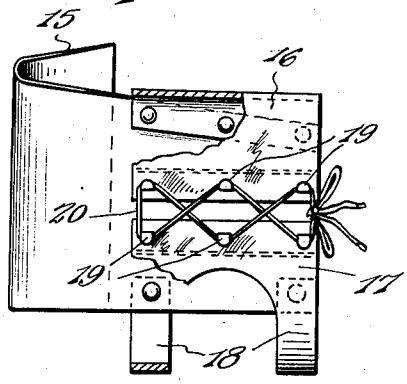
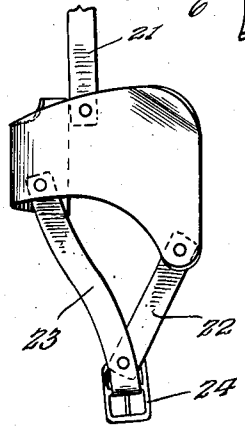


Fig. 5.



Inventor

John L. F. Bauer.

By Lacey & Lacey Attorneys

Patented Dec. 25, 1934 1,985,674

UNITED STATES PATENT OFFICE

1,985,674

WEEDER

John L. F. Bauer, Crookston, Minn.

Application August 21, 1933, Serial No. 686,144

3 Claims. (Cl. 97—63)

This invention is a hand weeder or hoe. In cultivating some crops, such as sugar beets, onions, and other tubers, it is necessary to work close to the plants and thinning must be done with the fingers. It is the purpose of the present invention to provide a very simple and inexpensive tool which may be fitted to the hand of the operator and applied directly to a growth to remove the same. The invention is illustrated in the accompanying drawing and consists in certain novel features which will be hereinafter first fully described and then particularly defined in the appended claims.

In the drawing, Figure 1 is an edge elevation of a tool embodying the invention and showing the tool as it appears when in use.

Fig. 2 is a top plan view of the same,

Fig. 3 is a rear elevation,

Fig. 4 is a plan view showing a variation in the form of the tool,

Fig. 5 is a plan view showing another modification.

In carrying out the present invention there is provided a plate of metal which is bent or folded between its ends, as shown at 1, whereby to produce a blade or cutting portion 2 and a hand portion 3 which are disposed at an acute angle to each other. The blade portion, as shown most clearly in Fig. 3, has its side edges diverging somewhat downwardly so as to provide a cutting edge at the lower end which will be of sufficient length to make a cut of appreciable width. The hand portion 3 is to be fitted against the palm of the user's hand and at one rear corner it is formed with a lateral extension 4 which is curved upwardly so as to fit comfortably about the base of the thumb, as will be understood upon reference to Fig. 1. The tongue or extension 4 is provided with an opening 5 near its end through which is passed a securing strap 6 and at the opposite corner of the device a smaller tongue 7 is turned upwardly and provided with an opening 8 to receive a cooperating strap 9 which is to be fastened to the strap 6 by a buckle 10 in a well-known manner, the straps passing across the back of the user's hand so that the tool will be held firmly but comfortably in position. In advance of the tongues 4 and 7, cooperating straps 11 and 12 are secured to the side edges of the palm portion of the tool and are connected by a buckle 13 at the back of the user's fingers. When the device is in use, the user places his hand over the palm portion of the tool with his fingers bending readily around the bend 1 of the tool and the ends of his fingers bearing against the front face of the blade 2, as clearly shown in Fig. 1. The base of the thumb will rest on the concave surface of the tongue 4 and the thumb will extend in advance of said tongue at the outer side of the strap 12. The straps 6 and 9 will be fastened across the back of the user's hand adjacent the wrist while the straps 11 and 12 may be fastened across the hand immediately back of the knuckles or may be passed under the index and second fingers and over the ring and little fingers so that the tool will be firmly held upon the hand without causing any discomfort to the user, and leaving the thumb and first and second fingers free to grasp and pull plants. The tool is then operated by pressing the edge of the blade 2 into the ground, a slight pressure on the top of the tool causing the blade to penetrate the soil, whereupon a slight pulling or drawing motion will clean the row to the width of the blade. In the same operation, the thumb and fingers may grasp and remove the surplus plants.

The device is exceedingly simple and inexpensive and is very light so that the user of the tool will not be subjected to any inconvenience or discomfort and will be enabled to very rapidly eradicate the undesirable growths. The tongues 4 and 7 are curved so as to provide comfortable seats for the thumb and the edge of the hand and the bend in the tool between the hand and blade portions thereof is such that the fingers will be relieved of strain while at the same time they will be enabled to apply the desired pressure to the blade. The device may, of course, be made for either right-handed or left-handed operators, and it will be found particularly useful in sugar beet fields which have been blocked by a cultivator and in which the worker has been heretofore obliged to work with his fingers alone.

The blade portion of the tool may be given various forms and in Figs. 2 and 3 one edge of the tool is shown with a slight curve at 14 while in Fig. 4 the edges of the tool are straight but diverging, as shown at 15. Various means may be employed for securing the tool upon the user's hand and while I, at present, prefer to employ the spaced straps shown in Figs. 1, 2 and 3, other fastening devices may be used such as a wide strap 16, shown in Fig. 4, permanently secured to the tool at one edge of the same and a mating strap 17 provided with spaced tongues 18 which are secured at their ends to the opposite edge of the tool. At the meeting edges of the straps 16 and 17 series of hooks 19 are provided and a lacing cord 20 is engaged with the hooks

and carried back and forth across the edges of the straps, as clearly shown in Fig. 4.

In Fig. 5 a single strap 21 is secured to one side edge of the tool, while at the opposite side a strap 22 is secured at the corner which accommodates the base of the thumb and a strap 23 is secured at a point nearer the bend of the tool. The straps 22 and 23 meet at and are secured to a buckle 24 which receives the strap 21 at the back of the hand.

Having thus described the invention, I claim:

1. A weeder comprising a plate having its end portions disposed at an acute angle to fit into the hand of a user, one of said end portions constituting a blade with which the fingers of the hand are engaged, said blade being of substantially the aggregate width of the fingers of said hand and having a hoeing edge disposed transversely thereof, the other of said end portions being of such shape and width as to be engaged by the palm of the hand, including the base of the thumb, with the thumb disposed at one side of the medial portion of said plate and means for securing the plate upon the user's hand.

2. A weeder comprisng a plate having its ends disposed at an acute angle and having its medial portion formed into a curved bend whereby said plate will fit the hand of a user with the fingers crooked around the bend and bearing against one end portion thereof, said last mentioned end portion extending downwardly from the hand and constituting a blade, said blade terminating in a transverse hoeing edge, the other end portion of said plate being of such shape and width as to underlie the palm of the hand and means for securing said palm-engaging portion to the back of said hand.

3. A weeder comprising a thin plate curved at its medial portion to dispose its ends at an acute angle, one of said ends constituting a depending blade and the other of said ends constituting a palm-engaging portion whereby said plate will fit the hand of a user with the fingers crooked around the curved portion thereof and bearing against the upper portion of said blade end, said blade portion having a width at least equal to the aggregate width of the fingers of the hand with the exception of the thumb, said palm-engaging end having a widened outer portion shaped to snugly fit the palm, including the base of the thumb, means connected with said palm-engaging end for securing said plate to the back of the hand, said blade having a substantially straight hoeing edge disposed transversely thereof.

JOHN L. F. BAUER. [L. S.]