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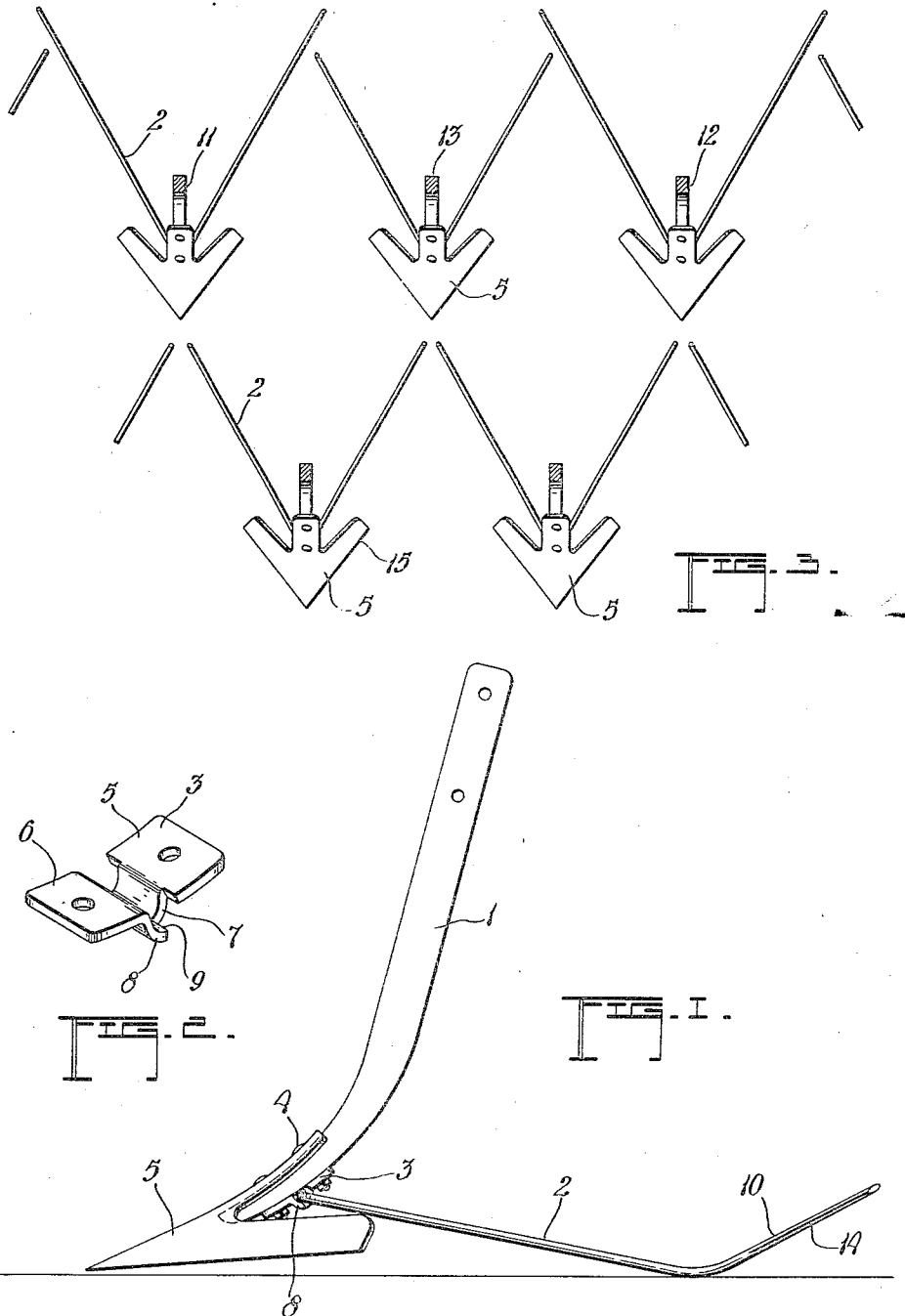
R. A. BURKE

2,178,469

ATTACHMENT TO CULTIVATORS

Filed Dec. 15, 1937

2 Sheets-Sheet 1



INVENTOR
R. A. BURKE
BY *Johnston & Co.*
ATTYS.

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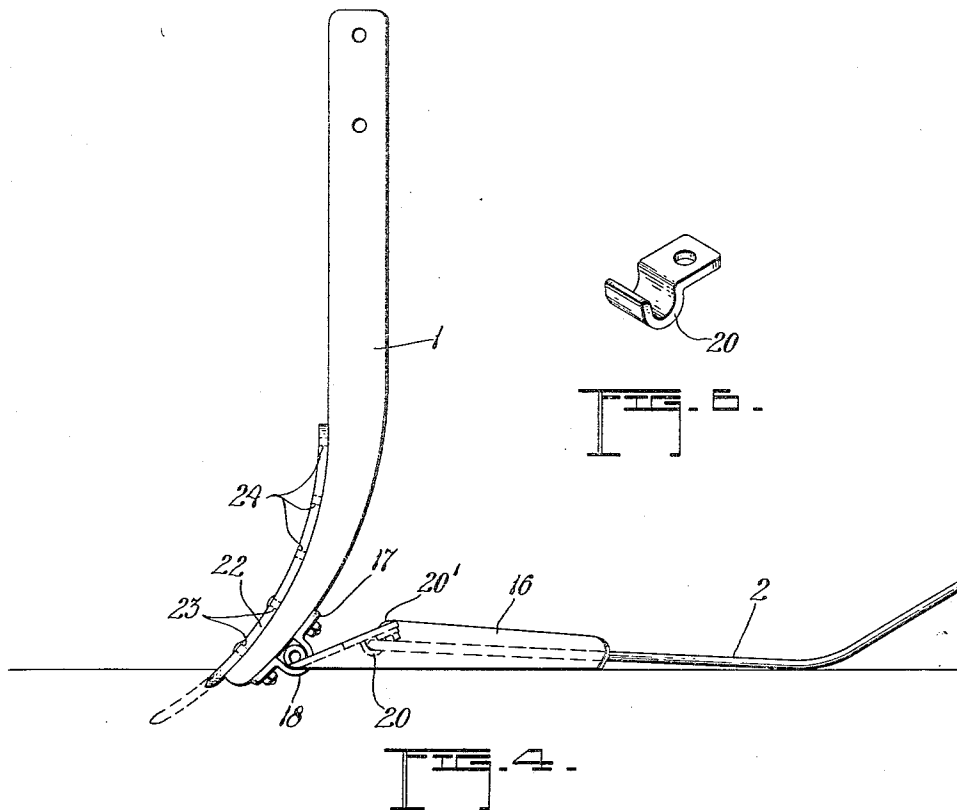
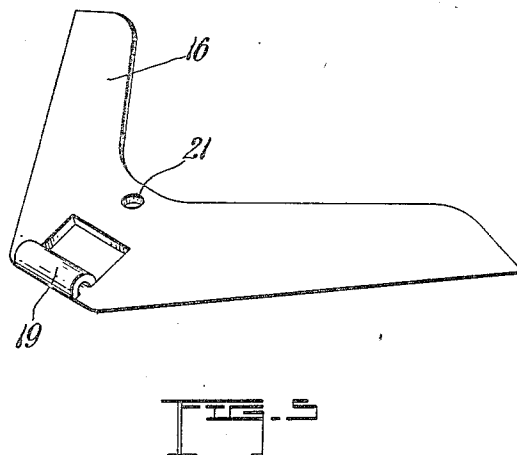
R. A. BURKE

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ATTACHMENT TO CULTIVATORS

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2 Sheets-Sheet 2



INVENTOR
R. A. BURKE
BY *Richard A. Burke* ATTYS.

UNITED STATES PATENT OFFICE

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ATTACHMENT TO CULTIVATORS

Robert A. Burke, Doonside, Saskatchewan,
Canada

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12 Claims. (Cl. 97—207)

My invention relates to improvements in cultivator attachments, an object of this invention being to provide scouring-rods hingedly secured to the standards of a duck-foot cultivator for the purpose of eradicating more completely all kinds of weeds and for raising the roots of the same to the surface so that they will lie thereupon and quickly die through inability to take root again.

A further object of my invention is to provide an improved form of hinged foot for attachment to the standards of cultivators, a hinged scouring-rod being also attached to my hinged foot.

A further object of this invention is to provide an improved form of point commonly known as a "quackgrass" point for attachment to the standards of cultivators this point being capable of adjustment into a plurality of positions as the point of the same wears through abrasion with the soil.

A further object of my invention is to provide for use with a scouring-rod of the character herein described, a particular form of bracket for limiting the rotative movement of the rod about its hinge.

A further object of my invention is to provide a specific form of arrangement of my scouring-rods upon the several standards of a cultivator.

With the above more important objects in view and such other minor objects as may appear as the specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawings, in which:

Fig. 1 is a side elevation showing a cultivator standard, a conventional duck-foot cultivator with my scouring-rod attached to the standard.

Fig. 2 is a perspective illustration of the bracket used in association with Fig. 1.

Fig. 3 is a plan view showing a number of duck feet in the position normally occupied when secured upon the several standards of a cultivator and showing the arrangement of my scouring-rods.

Fig. 4 is a side elevation of a cultivator standard showing my hinged cultivating foot with one of my scouring-rods hingedly secured thereto and also my improved cultivating point.

Fig. 5 is a perspective illustration of my hinged cultivating point.

Fig. 6 is a perspective view of the bracket or hinge by means of which my scouring-rods are attached to my hinged cultivating feet.

In the drawings like characters of reference

indicate corresponding parts in the different figures.

It is well known, especially by dry-belt farmers that the so-called duck-foot cultivator, while reasonably satisfactory, does not succeed by any means in bringing the roots of all the weeds encountered thereby to the surface, and in laying them upon the surface of the land so that they will quickly wither and die.

My invention therefore consists in attaching adjacent the lower end of the standard 1 of a cultivator the scouring-member 2 in the form of a rod, of the configuration clearly illustrated in the drawings accompanying this specification. This scouring-rod is attached to the standard 1 by means of a bracket 3, of the configuration clearly illustrated in Fig. 2 of the drawings accompanying this specification, the bracket being preferably secured to the standard 1 by means of the bolt 4, by means of which a cultivating foot or point 5, which may if desired consist of an ordinary duck-foot, is attached to the lower end of the standard.

By reference to Fig. 2 of the drawings accompanying this specification, it will be seen my bracket 3 is of a peculiar configuration, being provided with screw-plates 5 and 6 of greater breadth than the hinged portion 7, the inner ends of the portion 6 being downturned as at 8 to form a part of the hinged portion. This particular arrangement is resorted to for the purpose of preventing the scouring-rods 2 from being rotated by more than a few degrees in an anti-clockwise direction with respect to Fig. 1 and from becoming imbedded at their rear point in the soil when the implement is being backed up, whence it will be seen that the rods cannot rotate in a clockwise direction further than the point at which they will come into contact with the shoulder 9 upon each side of the several brackets 3.

My scouring rods 2 are preferably upturned at their rear ends as at 10, and by reference to Fig. 3 of the drawings accompanying this specification, it will be seen that the front row of rods are of equal length, while the rearmost row are alternated every other standard 11 and 12, for instance, being provided with longer scouring-rods than the adjacent standards 13.

It will be seen that the scouring-rods 2 each consist of a single angulated rod, each one being hingedly attached to the standard 1 at the point of angulation, and at this stage it should be mentioned that if desired, the upturned, rear end of each rod may be broadened, or in other words, 55

flattened, to provide a double edged blade 14 to cut roots and weeds where necessary.

From the foregoing it will be seen that as the various duck-feet 5, secured to the standard of a cultivating implement advance through the soil, weeds will not be merely thrown aside to the limit of the side edges 15 of each duck-foot but will be further disturbed and through disturbance be raised to the surface by the diverging arms of each of the scouring-rods and I have found that when weeds, even those possessing the longest roots, have been agitated by the full length of the trailing arms of my scouring-rods they are found invariably to be laid out and exposed on the surface of the ground where they quickly wither and die.

In Figs. 4 to 6, I have illustrated an alternative form of my invention which consists of the provision of a modified form of duck-foot which I will refer to as my hinged cultivating foot 16, this being of the configuration clearly illustrated in Fig. 5 of the drawings accompanying this specification.

It will be seen that in this embodiment, I make use of the ordinary cultivator standard 1 adjacent the base of which and upon the rear side is secured a bracket 17. The hinge 18, of this bracket surrounds the mating portion 19 of my cultivating foot which is thereby attached to the standard and is designed to trail therebehind as the same is moved along by the cultivating implement.

A bracket 20, of the configuration clearly illustrated in Fig. 6 of the drawings accompanying this specification, is secured upon the under surface of my cultivating foot 16 by means of the bolt 20' which extends through the orifice 21, the member 20 being designed for the attachment of my scouring rod 2, which is of exactly the same configuration as has already been described with reference to Figs. 1 and 3 of the drawings accompanying this specification.

In association with this form of cultivating foot I am able to make use of a novel form of cultivating point, commonly known as a "quack-grass" point 22, this element being designed for attachment to the lower end and upon the front face of the standards of cultivators. Its purpose is to shield the point of the standards from wear, but hitherto this element has only been capable of attachment to the standard at one point and when worn has had to be discarded. I have therefore made use of a point which is of a considerably greater length than has formerly been used, and instead of providing two apertures 23, I now provide a number of additional orifices 24, so that as the point wears it may be progressively lowered and secured to the standard through the additional orifices 24.

Since various modifications can be made in the above invention, and many apparently widely different embodiments of same, made within the scope of the claims without departing from the spirit and scope thereof, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense and I desire only such limitations placed thereon as are specifically expressed in the accompanying claims.

What I claim as my invention is:

1. An attachment for duck-foot cultivator standards, comprising, a scouring member attachable to each standard, said member being in the form of a pair of rearwardly directed and outwardly diverging rods in which the outer ends

thereof are flattened to present a pair of weed cutting or root cutting blades.

2. An attachment for duck-foot cultivator standards comprising, a scouring member hingedly secured adjacent the lower end of said standard to the rear of the usual duck-foot secured thereupon, said member consisting of a length of rod angulated at its centre to provide a pair of rearwardly inclining and outwardly diverging scouring elements designed to trail through or upon the soil.

3. The attachment as defined in claim 2, in which the rear end of each element is upwardly angulated.

4. In combination with a scouring member of the character herewithin described, a bracket, said bracket being secured adjacent the lower end of the standard of a cultivating implement, said bracket consisting of a pair of drilled attaching portions and a semicircular hinge portion between said attaching portions, said attaching portions being of greater width than said hinge portions, one of said attaching portions being provided with a pair of semi-circular portions upon its inner side, said semi-circular portion forming a part of said hinge portion, each of said semi-circular portions presenting a shoulder to limit the movement of a scouring member attached thereto.

5. An attachment for duck-foot cultivator standards presenting as a substitute for the usual duck-foot attachable to the lower end thereof, a cultivating foot hingedly secured adjacent the base of said standard and designed to trail therebehind.

6. In combination with the device as defined in claim 5, a scouring member, said scouring member being hingedly attached to said cultivating foot and consisting of a rod angulated at its centre to provide a pair of rearwardly and outwardly diverging scouring elements designed to trail behind said cultivating foot.

7. The hinged cultivating foot as defined in claim 5, which consists of a pair of flattened rearwardly diverging scouring wings, the surfaces of said wings being outwardly and downwardly bevelled with respect to the horizontal.

8. Improvements in attachments to the lower ends of cultivator standards, comprising in combination, a cultivating foot secured upon the forward edge of the lower portion of each standard and a scouring member hingedly attachable at its forward end to each standard, said scouring member diverging outwardly and rearwardly from the point of attachment.

9. An attachment for cultivator standards presenting as a substitute for the usual duck-foot attachable to the lower end thereof, a cultivating foot hingedly secured adjacent the base of said standard and designed to trail therebehind, said foot consisting of a pair of flattened and rearwardly diverging scouring wings provided at the forward end thereof with a portion designed for attachment to a hinge bracket secured adjacent the base of said standard, the surface of said wings being outwardly and downwardly bevelled with respect to the horizontal.

10. In combination with the device as defined in claim 9, a scouring member, said scouring member being hingedly attached to said cultivating foot and consisting of a rod angulated at its centre to provide a pair of rearwardly and outwardly diverging scouring elements designed to trail behind said cultivating foot.

11. In combination with the device as defined

in claim 9, a cultivating point designed for the protection of the lower end of said standard from wear, said point being provided with three or more equally spaced orifices along the length thereof, whereby it may be secured in a plurality of positions upon the front face of the lower end of said standard.

12. An attachment for duck-foot cultivator

standards comprising a scouring member attachable to each standard, said member being in the form of a pair of rearwardly directed and outwardly diverging portions formed out of a single angulated rod, said rod being hingedly secured to said standard adjacent the base thereof at the point of angulation.

ROBERT A. BURKE.