

C. GARDNER.
CULTIVATOR.
APPLICATION FILED MAR. 13, 1909.

935,488.

Patented Sept. 28, 1909.

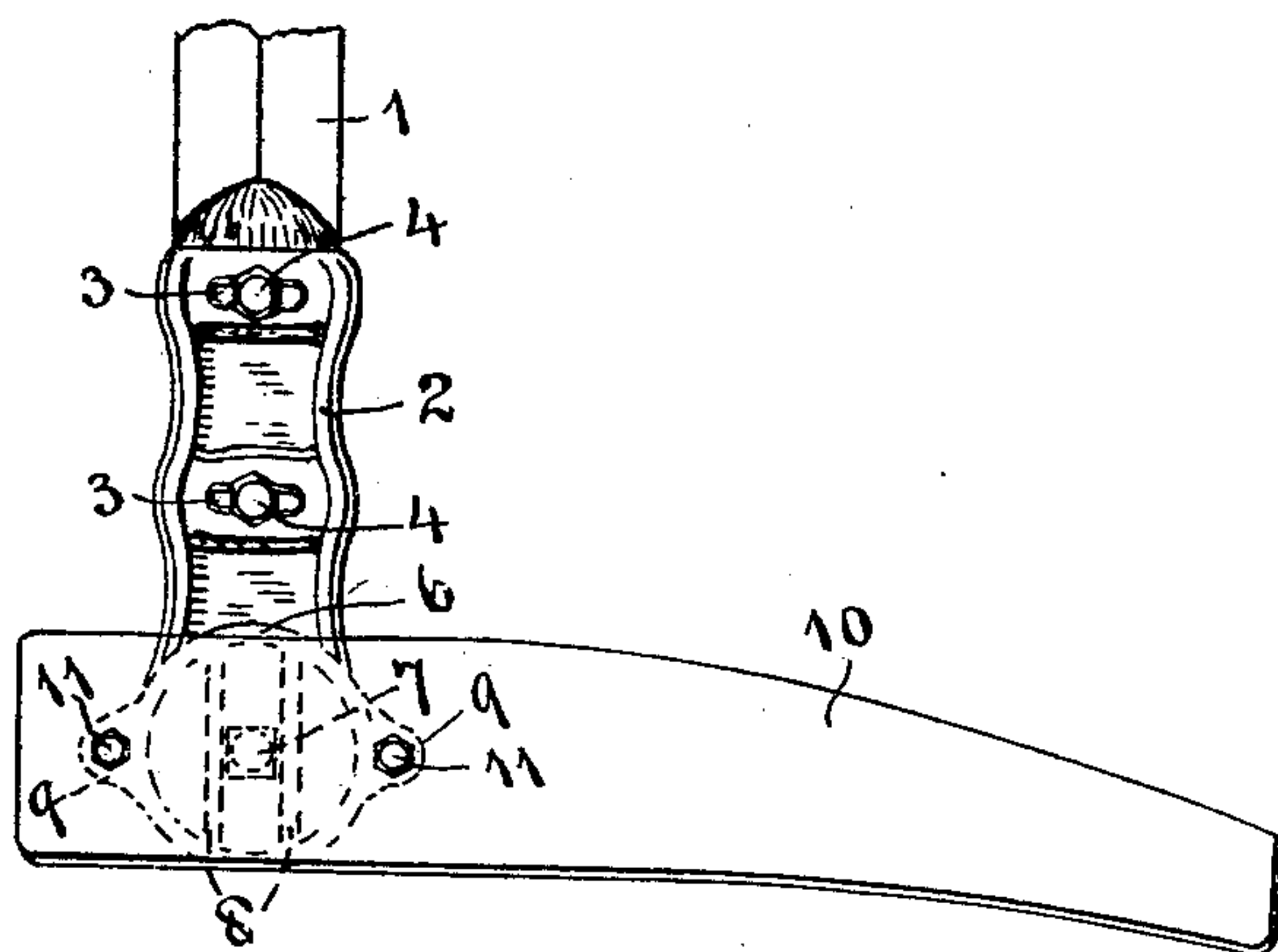


Fig. 1

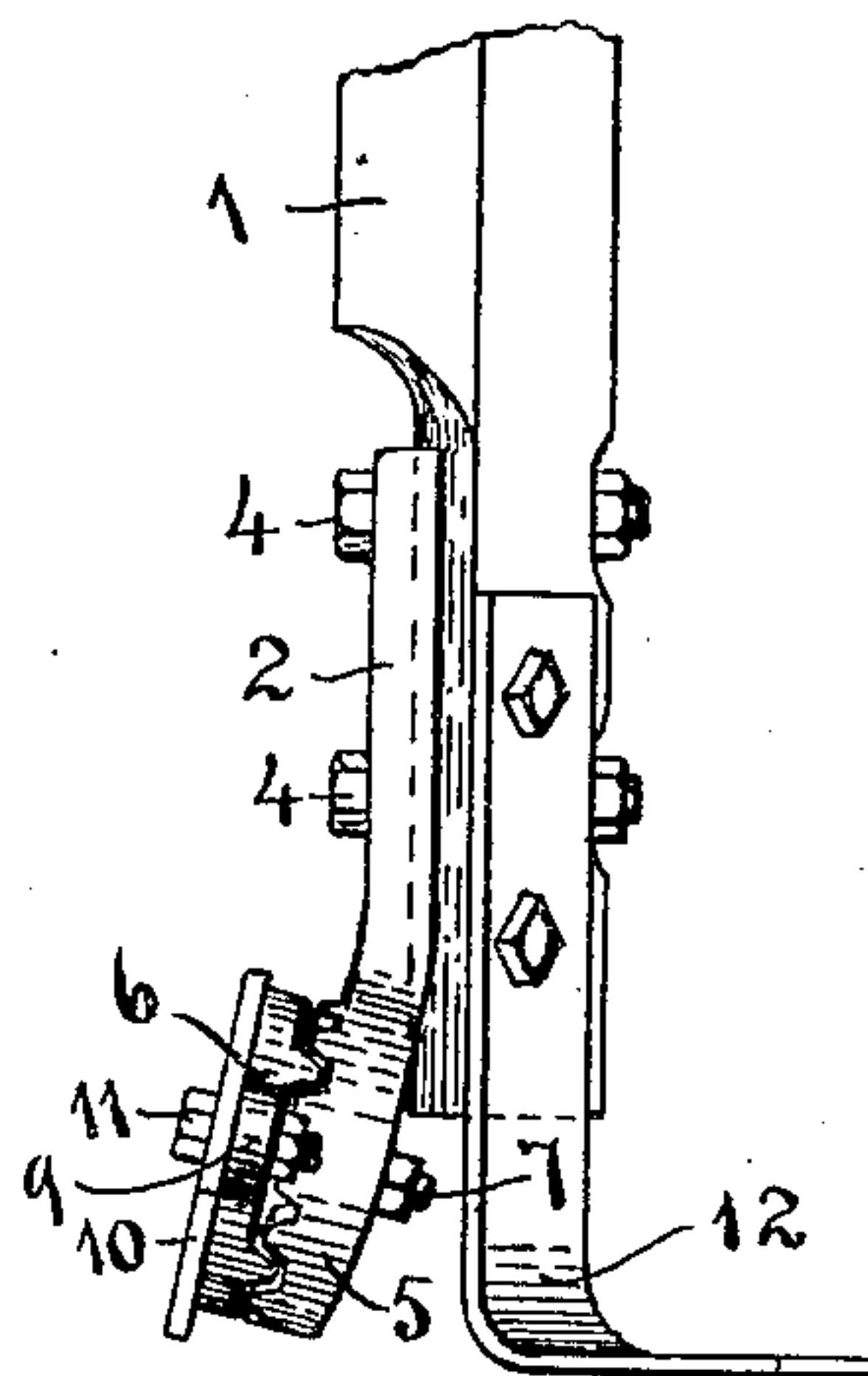


Fig. 2

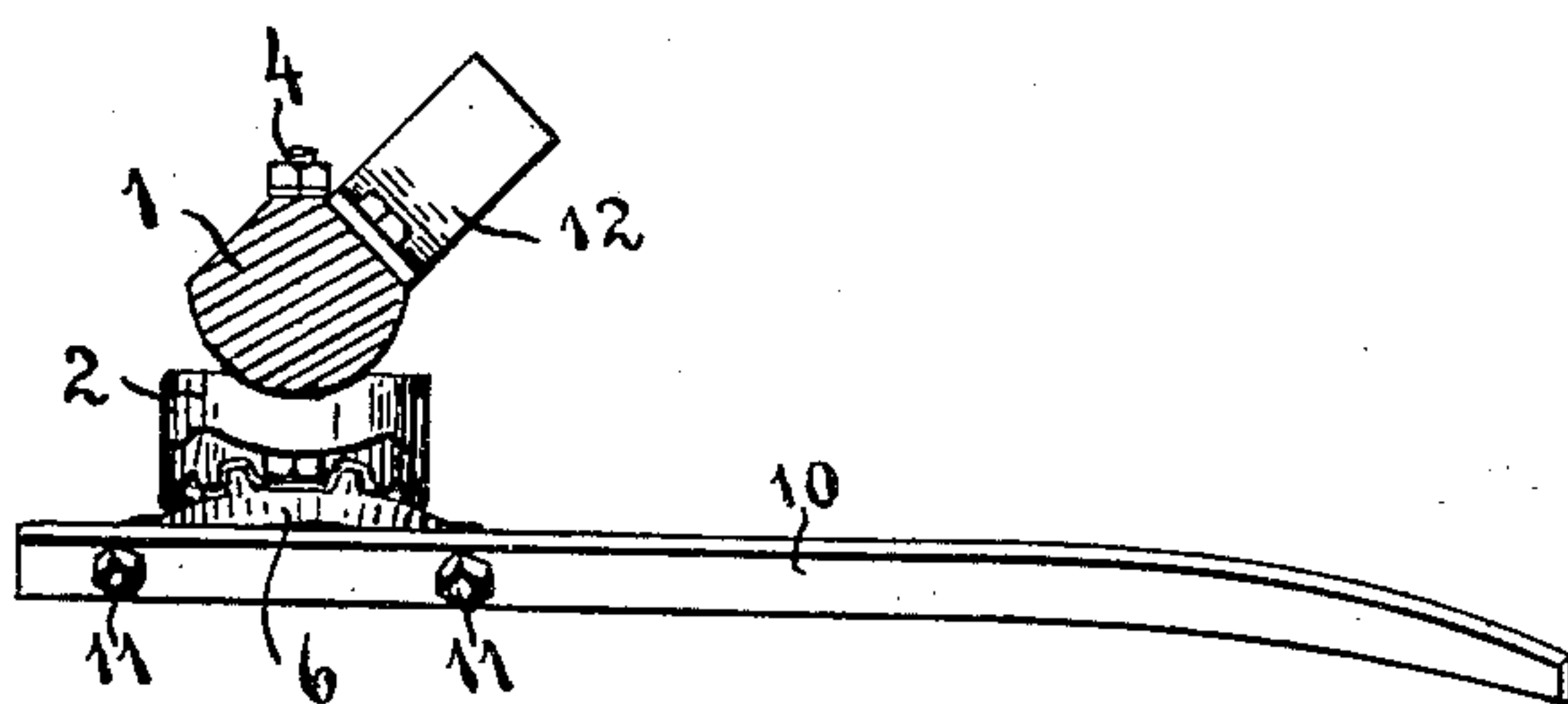


Fig. 3.

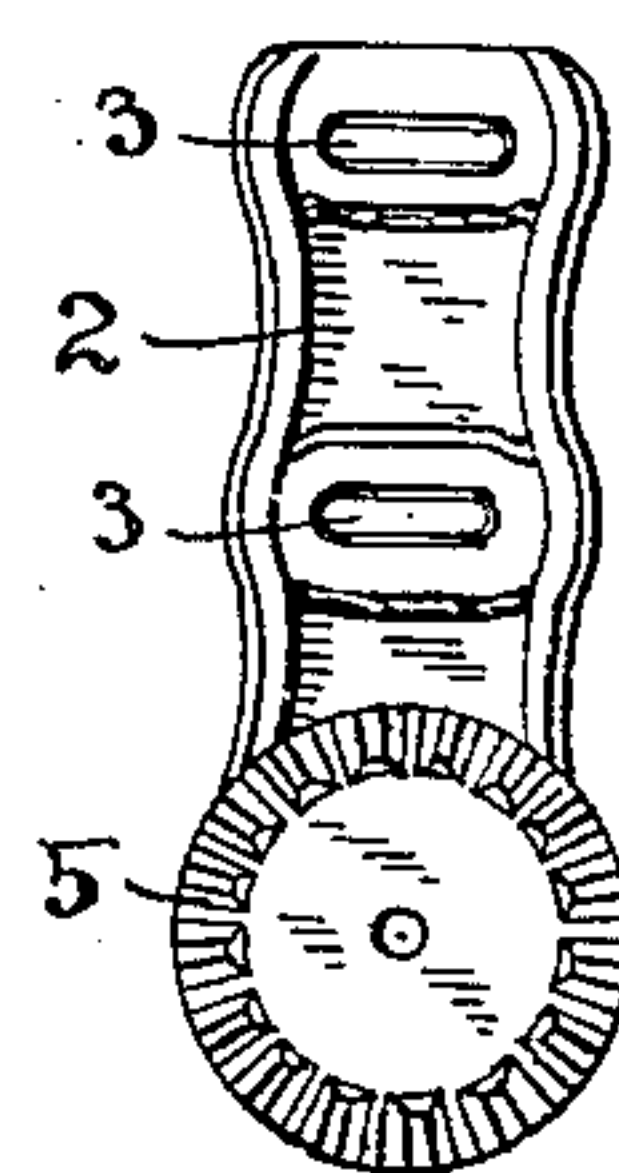


Fig. 4.

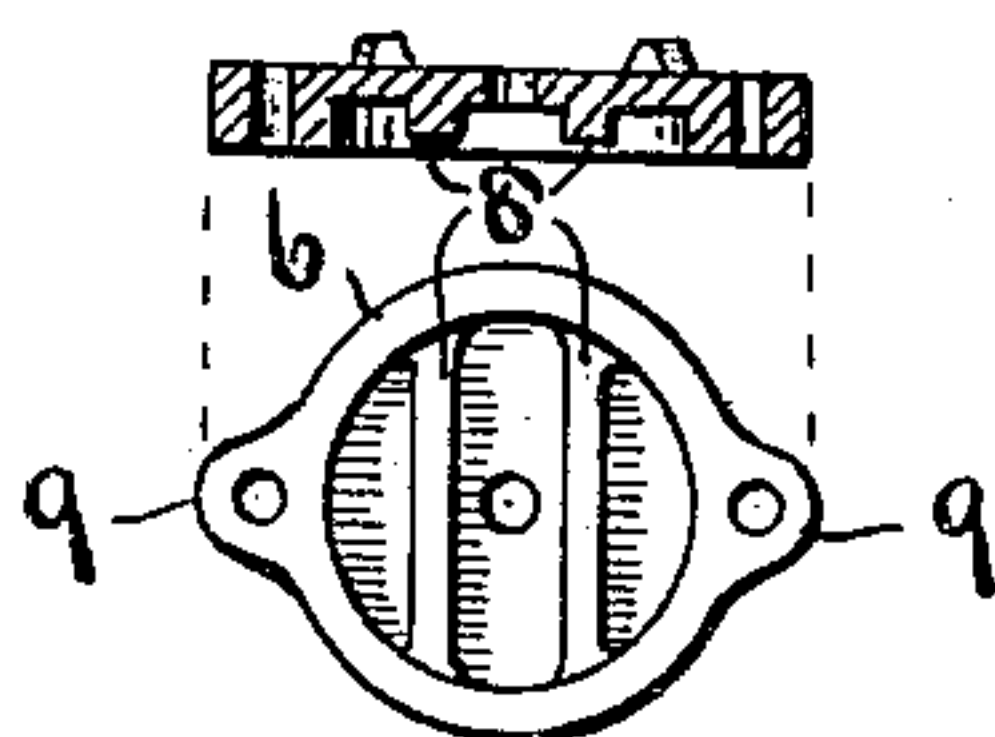


Fig. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES GARDNER, OF HORSEHEADS, NEW YORK.

CULTIVATOR.

935,488.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed March 13, 1909. Serial No. 483,130.

To all whom it may concern:

Be it known that I, CHARLES GARDNER, a citizen of the United States, residing at Horseheads, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

This invention relates to improvements in the means employed for fastening cultivator blades to the frame members, whereby said blades are rendered angularly adjustable in both vertical and horizontal planes; and the object of my improvement is to provide an attachment of this nature which will be readily adjustable, and which, when adjusted, will firmly hold the blade in position, when the cultivator is in operation.

This attachment is more particularly applicable to cultivator frames provided with vertical standards for carrying the blades, such a cultivator being described in my co-pending application Serial No. 389,122, filed August 19, 1907, of which this application constitutes a division.

I attain my object by constructing the attachment and applying it to the cultivator frame members in the manner illustrated in the accompanying drawings, in which—

Figure 1 represents a front elevation of the attachment; Fig. 2, a side elevation thereof; Fig. 3, a plan view; Fig. 4, a front elevation of the footpiece of the attachment; and Fig. 5, an elevation and transverse section of the pivot block which is attached to said footpiece to receive the cultivator blades.

Like numerals designate like parts in the several views.

The vertical standards of the cultivator frame, a portion of one of which is shown at 1 in the drawings, will have their lower forward edges rounded off to form vertical convex bearing surfaces to receive the correspondingly concaved surfaces of metal foot pieces 2, which support the cultivator blades. These foot pieces are provided at 3 with horizontal slots through which bolts 4 pass into and through the standards. When these bolts are loosened the foot pieces may be turned on the standards into any desired angular position around the center of the standards, to the limit of the slots 3; and when the bolts are set up tight the foot pieces will be held secure from turning in any direction, regardless of the strain put upon the cultivator

blades, as when dragged through or over the ground, in scraping or hoeing operations.

At 5 the foot pieces are provided with a disk shaped projection, preferably set at a forward incline to slightly tilt the blades, as shown in Figs. 2 and 3. The outward face of this projection is provided with a series of teeth, and a pivot block 6 is fastened in engagement with this projection, by means of a central bolt 7, the block 6 being provided with a sufficient number of teeth to fasten it against turning when set up against projection 5 by the bolt 7. On its outward face the block 6 is provided with a depression between ribs 8 to receive the head of the bolt 7 and prevent it from turning; and at diametrically opposite sides the block is provided with perforated ears 9, which receive bolts 11, by which the blade 10 is fastened to the block. The blades 10 may be of any shape, and by reason of their removable attachment to the pivot blocks they may be made double edged, and utilized either side up in cultivating operations. When once fastened to the pivot blocks they will not be loosened therefrom during any of the angular adjustments. When adjusting the blades vertically, the nut of bolt 7 back of projection 5, will be loosened sufficiently to release the teeth on block 6 from engagement with those on projection 5; after which the blade may be turned to any angular position desired, and the block 6 drawn back into locking engagement by setting up the nut on bolt 7. By means of the two bolts on the foot piece 2, and the interlocking connections between the pivot block and foot piece, an exceedingly strong and positive adjustment for the cultivator blade, and an adjustment which can be readily and quickly changed by simply loosening the nuts on the three bolts, is provided. When the upper edge of a blade is to be used, it may be brought into position by turning the block until the blade is swung over to the opposite side of the standard; or the blades and their blocks on opposite standards may be transposed with their upper edges turned downward, in which case the blades will project from the same sides of the standards as they did before.

To prevent the cultivator blades from being drawn into the ground to an undesirable depth, I provide the standards 1 with angle plates 12, which form in effect runners to

support the ends of the standards as they are drawn over the ground.

What I claim as my invention and desire to secure by Letters Patent is—

5 1. The combination with a standard having a vertical convex bearing surface, of a metal foot piece fitted to said surface, one or more bolts passing through the foot piece and standard, the bolt holes on the foot piece
10 being horizontally slotted to permit of the angular adjustment of the foot piece around the standard, a block pivotally mounted on the lower end of the foot piece to turn in a substantially vertical plane, a cultivator
15 blade fastened to the block in said plane, and means for fastening the block in pivotal adjustment.

20 2. The combination with a standard having a vertical convex bearing surface, of a metal foot piece fitted to said surface, one

or more bolts passing through the foot piece and standard, the bolt holes on the foot piece being horizontally slotted to permit of the angular adjustment of the foot piece on the standard, teeth in annular arrangement 25 on the forward face of the foot piece at its lower end, a block pivotally mounted on said lower end and provided with one or more teeth to engage said teeth, a pivot bolt for fastening the block in angular adjust- 30 ment on the foot piece, and a cultivator blade fastened to the block in a plane at right angles to the axis of the pivot bolt.

In testimony whereof I have affixed my signature, in presence of two witnesses.

CHARLES GARDNER.

Witnesses:

M. E. VERBECK,
EUGENE DIVEN.