

(No. Model.)

J. D. SCHOFIELD.
ADJUSTABLE CULTIVATOR TOOTH SEAT.

No. 605,140.

Patented June 7, 1898.

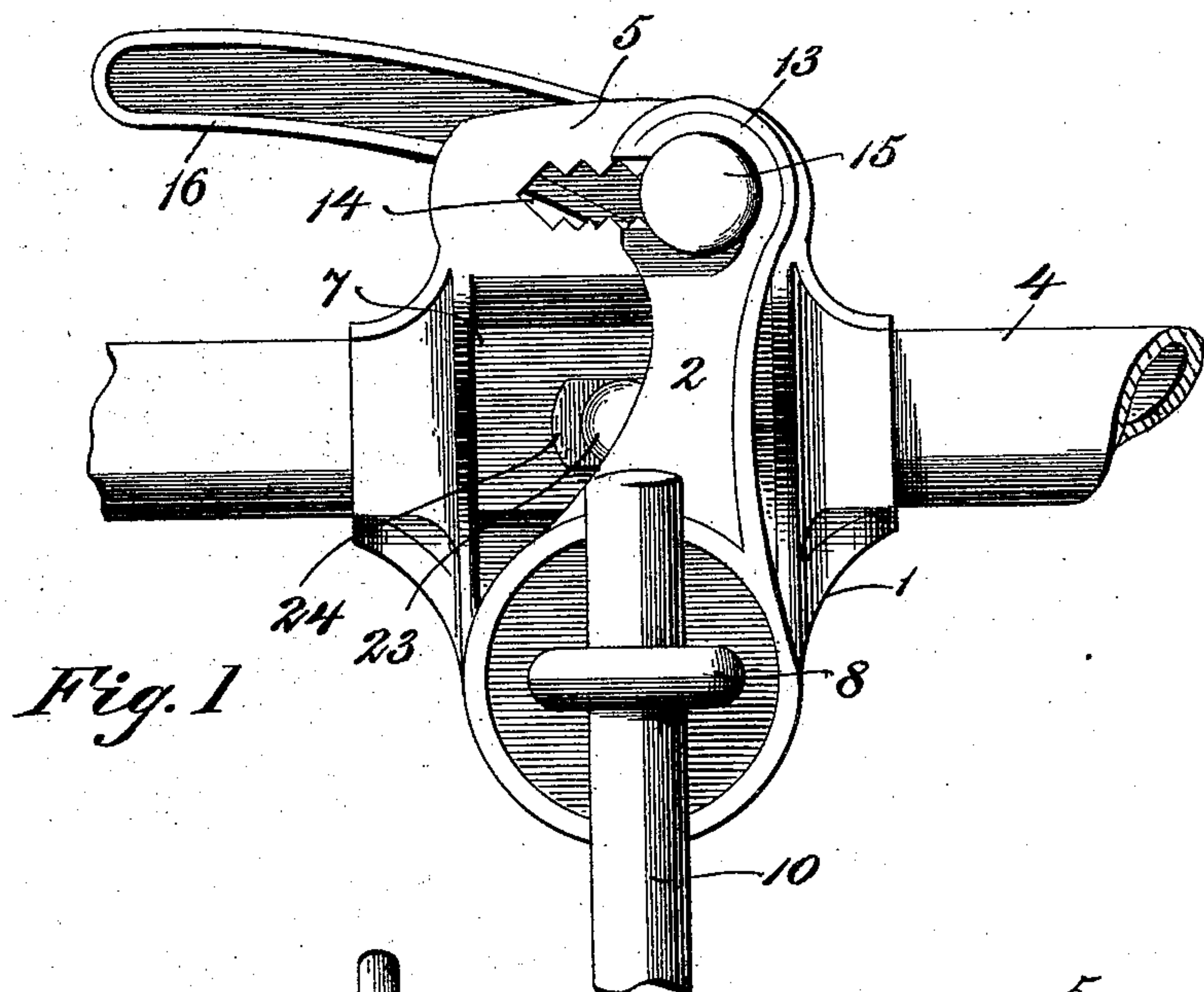


Fig. 1

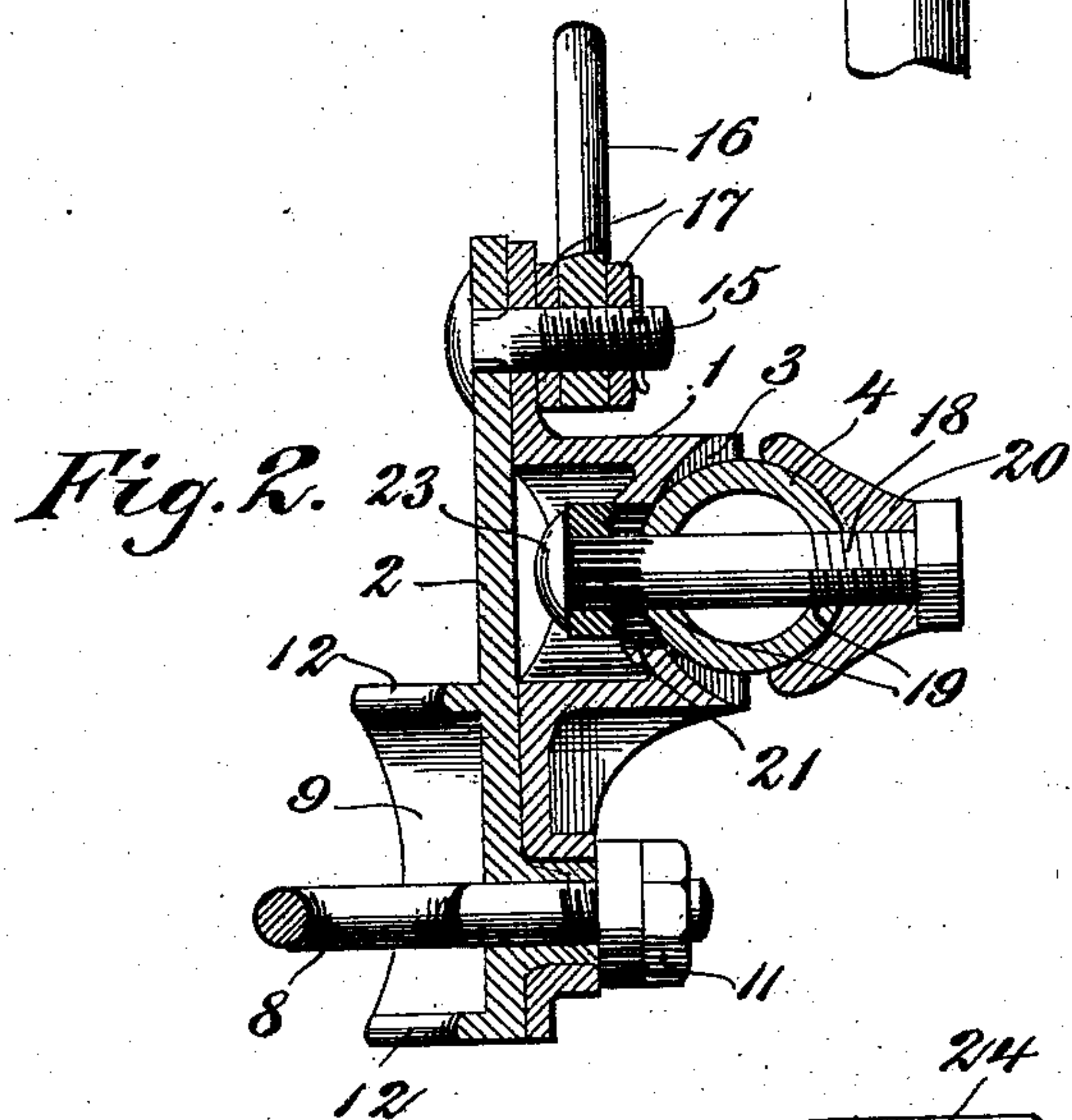


Fig. 2.

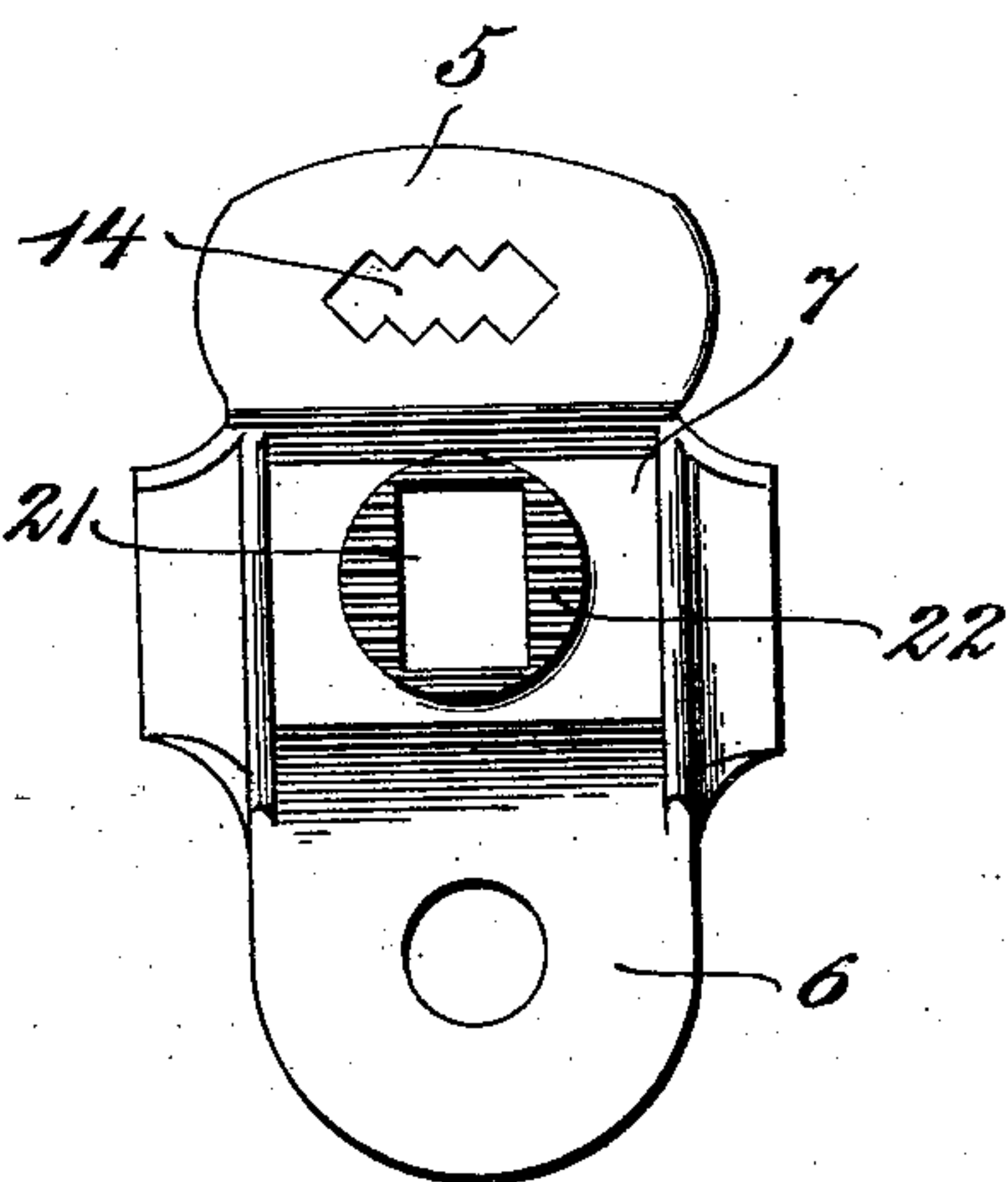


Fig. 3.

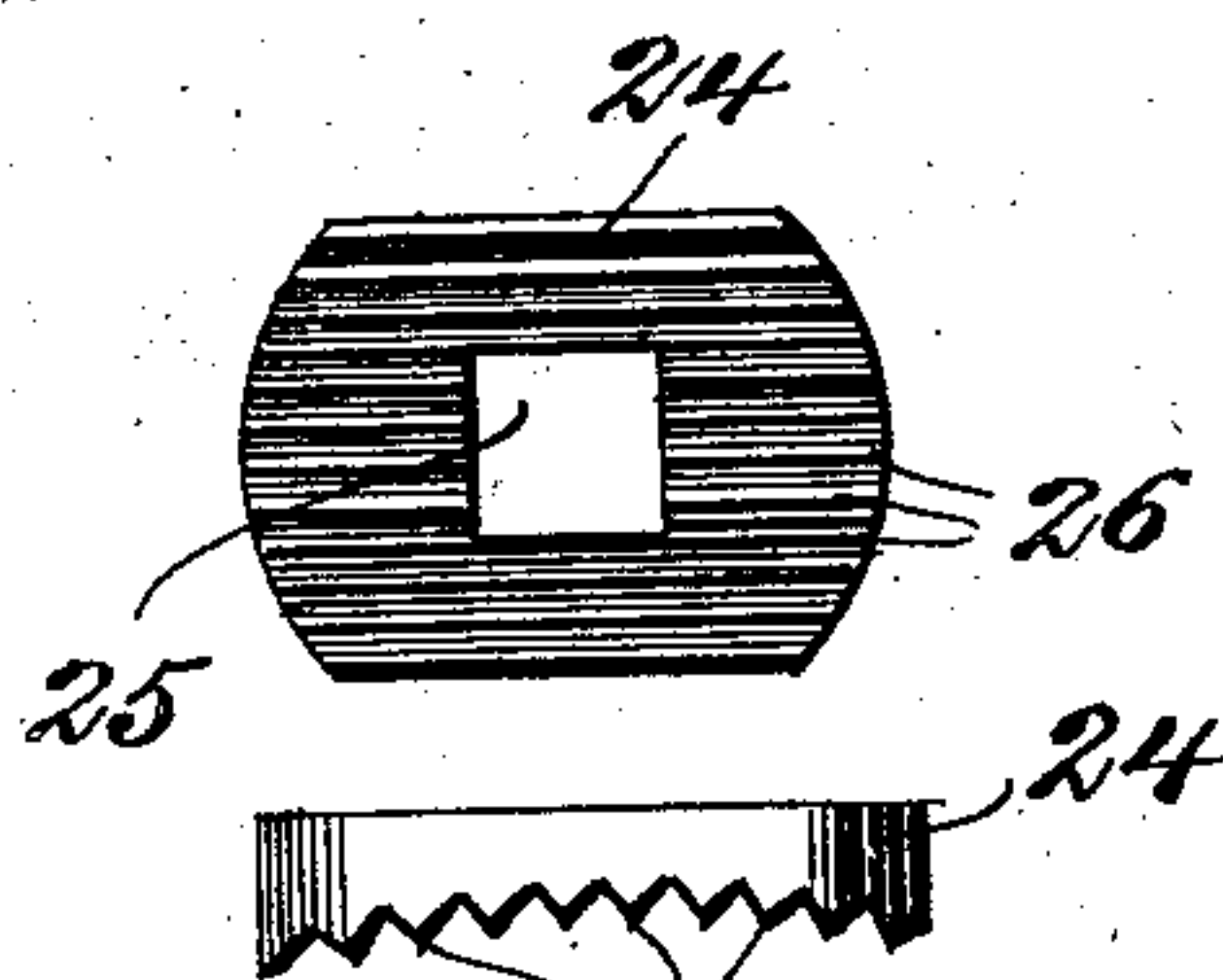


Fig. 4.

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UNITED STATES PATENT OFFICE.

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ADJUSTABLE CULTIVATOR-TOOTH SEAT.

SPECIFICATION forming part of Letters Patent No. 605,140, dated June 7, 1898.

Application filed October 28, 1897. Serial No. 656,696. (No model.)

To all whom it may concern:

Be it known that I, JAMES DRUMMOND SCHOFIELD, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Adjustable Cultivator-Tooth Seats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in cultivator-tooth fastenings, the object in view being to so construct the ordinary clutch cultivator-tooth-fastener as to permit of a radial adjustment of the same upon the cultivator-beam, whereby said fastener is adapted to receive and support in a vertical manner the shanks of various styles of cultivator-teeth.

With this main object in view my invention consists in providing the yoke-casting of the tooth-fastening with a vertically-elongated bolt-opening, whereby said casting may be moved to a degree and in a circumferential line about the cultivator-beam, and, furthermore, in providing a convenient means of locking the said casting upon the cultivator-beam at any point of its circumferential adjustment, so as to adapt the fastening as a whole to the disposition of the shank of the cultivator-tooth.

Referring to the drawings, Figure 1 is a side elevation of a cultivator-tooth fastening constructed in accordance with my invention and arranged in operative position upon a cultivator-beam. Fig. 2 is a vertical transverse sectional view through the same, the cultivator-tooth shank being removed. Fig. 3 is an elevation of the yoke-casting comprised in the fastening. Fig. 4 comprises details in rear view and side elevation of the locking-washer.

Like numerals of reference indicate like parts in all the figures of the drawings.

As the cultivator-tooth fastening in connection with which my invention is illustrated is but one of the many forms of well-known devices for this purpose and forms no part of my invention, a brief description of the same will be sufficient, it being understood that the invention hereinafter referred

to may as well be applied to any of the ordinary styles of cultivator-tooth fastenings in general use as to the one which I have selected and which is herein illustrated and described.

The tooth-fastening herein shown is what is known as the "friction-clutch" fastener, and it comprises an inner yoke-casting 1 (illustrated in detail in Fig. 3) and an outer pivotal tooth-supporting casting 2.

The yoke-casting 1 comprises a semicylindrical or concaved seat 3, designed to embrace in the present instance a cylindrical cultivator-beam 4, and upper and lower vertically-aligning plates or wings 5 and 6, respectively. These wings are offset from the concaved seat of the yoke-casting, so that between the two wings 5 and 6 there is formed a cavity 7. Pivoted on the lower wing 6 by means of an eyebolt 8 is the tooth-supporting casting 2 hereinbefore mentioned, the same having formed at its lower end the flanged tooth-seat 9 for the reception of the shank 10 of the cultivator-tooth. It will be obvious that by passing the shank 10 of the tooth through the eyebolt 8 the nut 11 of said bolt may be run down upon the same, and thus cause the said shank to be drawn snugly into the concaved seats 12, formed in the seat-flange 9. The upper end of the tooth-seat support 2 is formed with a hook 13, which aligns with a slot 14, the edges of which are toothed. A bolt 15 passes through the hook 13 and the slot 14 and may be adjusted at any point in the slot, thus giving the proper rake or slant to the tooth-shank. A handle 16 is threaded on the bolt 15 between washers 17, and it will be seen that by moving the handle to the rear it will loosen the bolt and by moving it to the front it will tighten said bolt, whereby it may be secured at any point of its adjustment in the slot 14.

The only essential feature contained in the foregoing description is the concaved seat 3, that embraces the beam 4. Any other tooth-fastening having this feature may be provided with the improvements to be described.

It is usual to provide the yoke-casting 1 at its seat 3 with a circular or square bolt-hole, the same being of such size as to fit the bolt 18, which is passed through corresponding bolt-holes 19, formed in the beam 4 and in a

rear clamping-plate 20. In the present instance, however, in lieu of such bolt-hole being formed in the seat 3 I form a vertically-elongated oblong opening 21, which exceeds
 5 in length the diameter of the bolt, and hence will permit of a limited circumferential movement of the tooth-fastening as a whole. The front surface of the seat 3, or what may be more properly termed the "bottom" of the
 10 cavity 7, is, immediately surrounding the opening 21, provided with a raised annular toothed portion or surface 22, which is curved concentrically with the seat 3. Interposed
 15 said toothed surface 22 is the locking-washer 24. This washer is provided with a square opening 25, has its inner side concaved to conform with the toothed surface 22, and, like said surface, is provided with transverse
 20 teeth 26, designed to interlock therewith at any point of its annular adjustment thereon.

By loosening the nut 20 of the bolt 18 it will be observed that the teeth of the washer 24 will but loosely engage with the toothed surface 23 of the yoke-casting, and it will be seen
 25 that this will permit of a rotary movement upon the part of the tooth-fastener, whereby the cultivator-tooth may be brought to a vertical position, and by a subsequent tightening of the nut 20 the bolt-head 23 will serve
 30 to draw or force the washer 24 into locking engagement with the teeth 22, and thereby resecure the tooth-fastener as a whole upon the beam.

35 From the foregoing it will be seen that I have produced a very simple and inexpensive improvement to be applied to the usual tooth-fastener, whereby cultivator-teeth having differently-disposed shanks may be properly ad-
 40 justed in position and secured.

Having described my invention, what I claim is—

1. The combination with a cylindrical cultivator-beam, of a tooth-fastening having a concaved seat fitting said beam, the seat of
 45 said fastening being provided with an elongated opening, a bolt passed through the beam and the opening and of less diameter than the length of the opening, and a clamping-washer interposed between the head of the
 50 bolt and that portion of the tooth-fastener surrounding the elongated opening.

2. The combination with a cylindrical cultivator-beam, of a cultivator-tooth seat mounted and adapted for circumferential adjustment thereon, and means for securing the
 55 said tooth-seat at any point of its said circumferential adjustment.

3. The combination with a cultivator-beam cylindrical in cross-section, of a tooth-fastener having a concaved seat fitting the beam and provided with a vertically - elongated opening having a raised toothed surrounding surface and alining with smaller, transverse
 60 openings formed in the beam, a bolt passing through the openings in the beam and fastener and having a diameter less than the length of the opening in the latter, a nut on the rear end of the bolt and a concaved, toothed
 65 washer having an opening fitting the bolt and designed to interlock with the teeth surrounding the opening in the fastener and interposed between the head of the bolt and the fastener.
 70

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

JAMES DRUMMOND SCHOFIELD.

Witnesses:

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