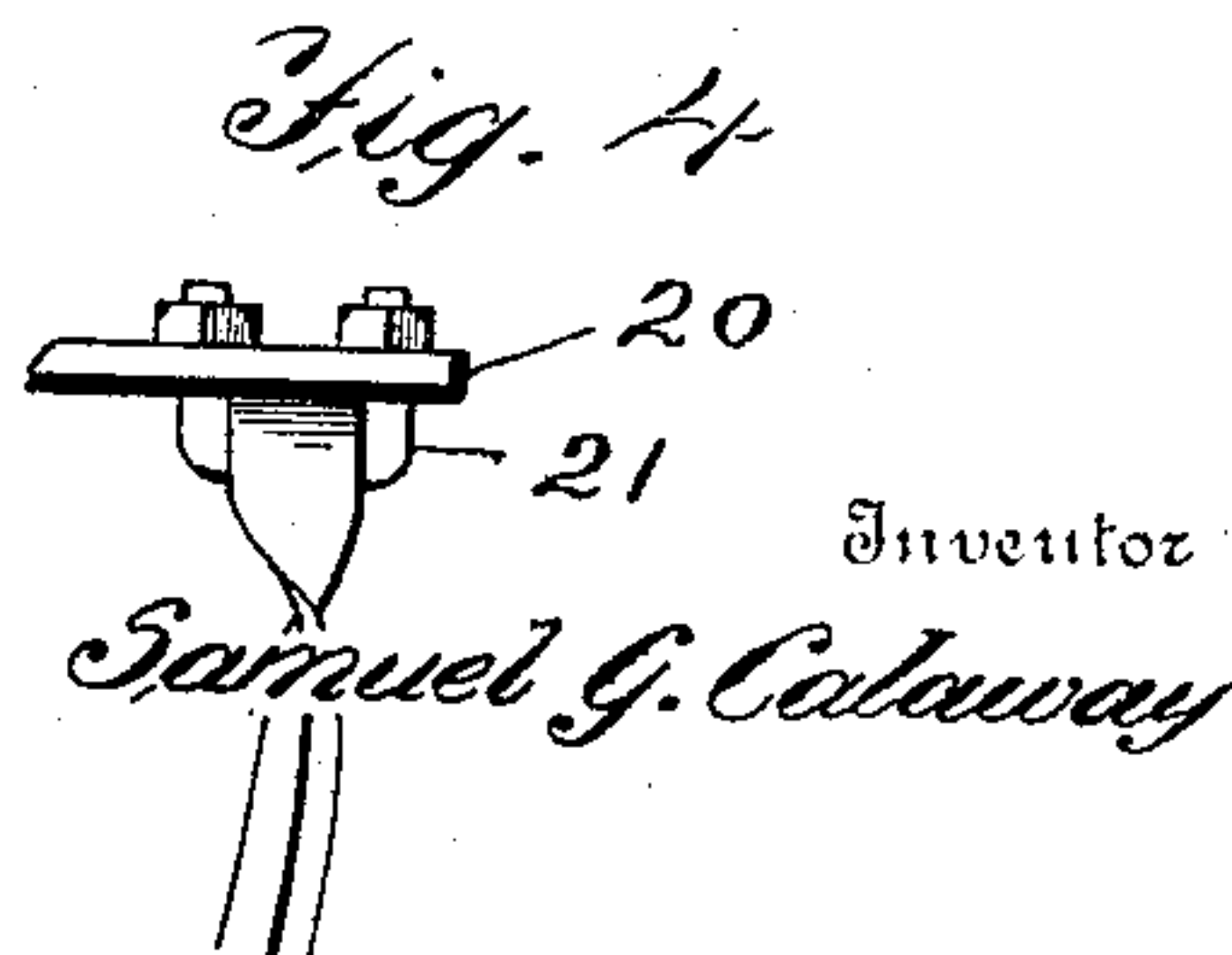
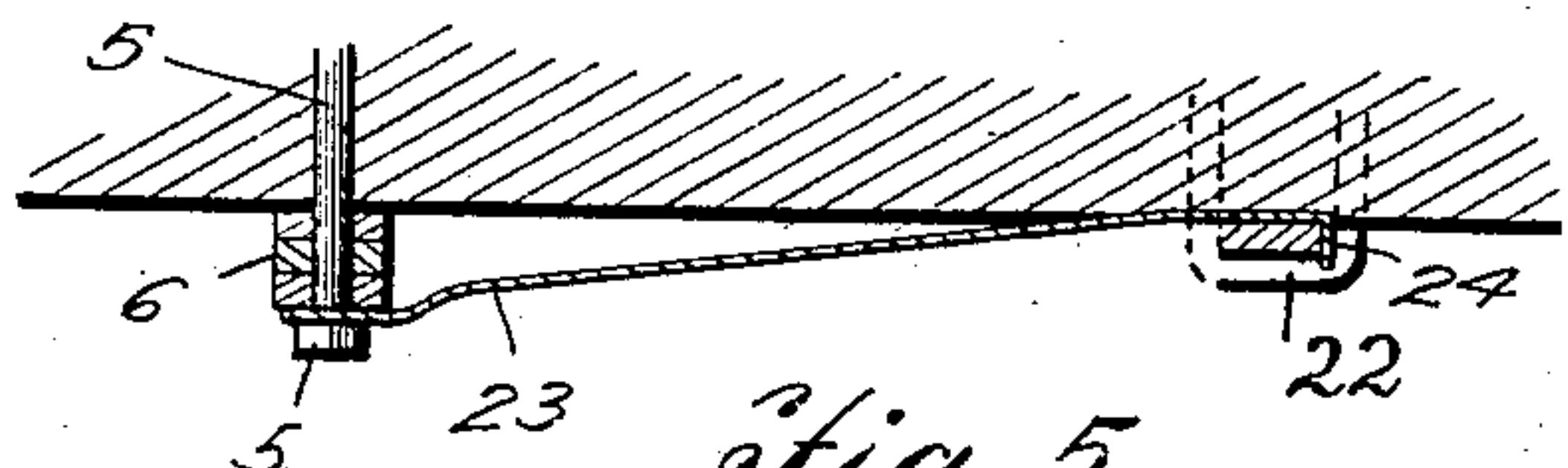
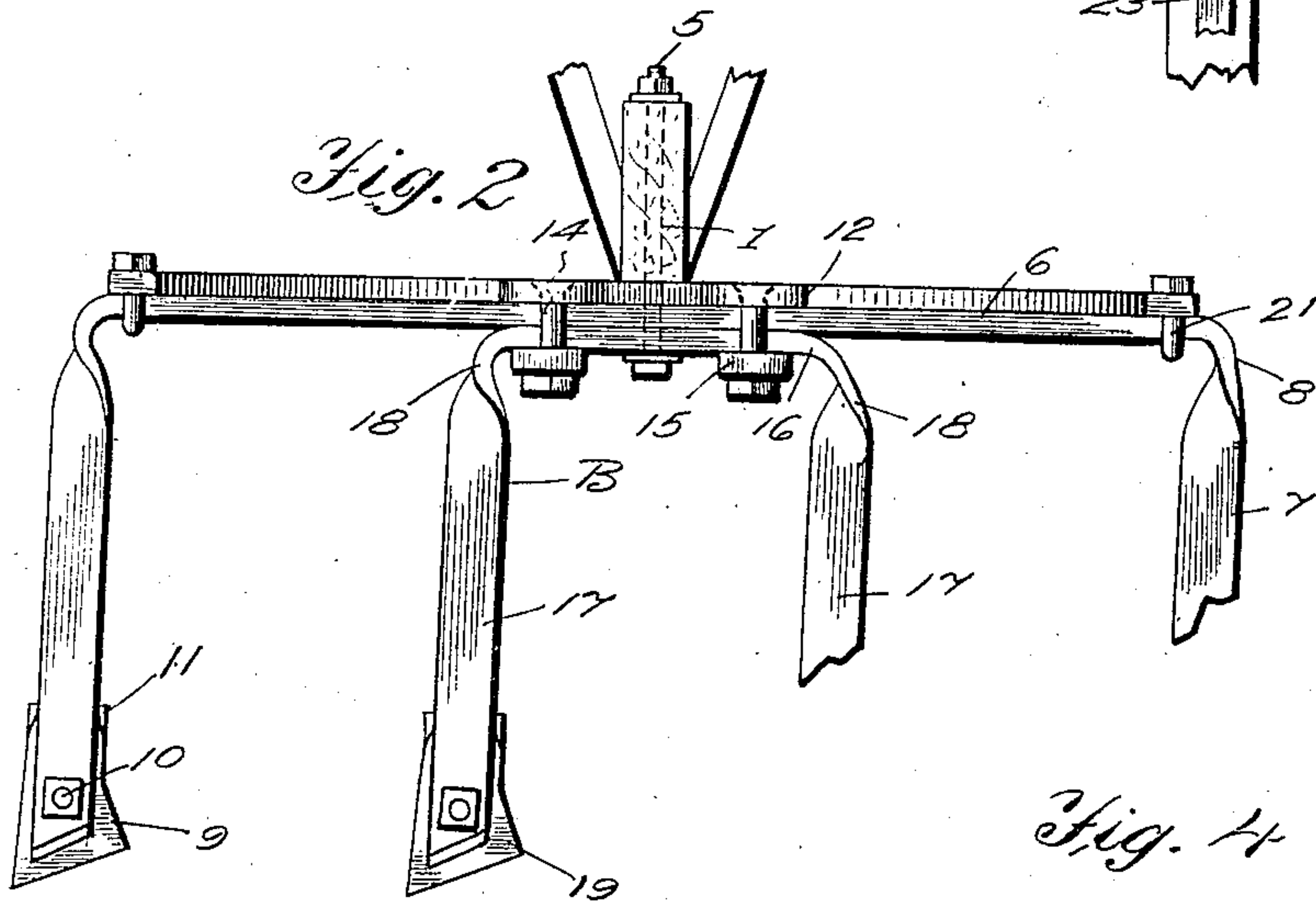
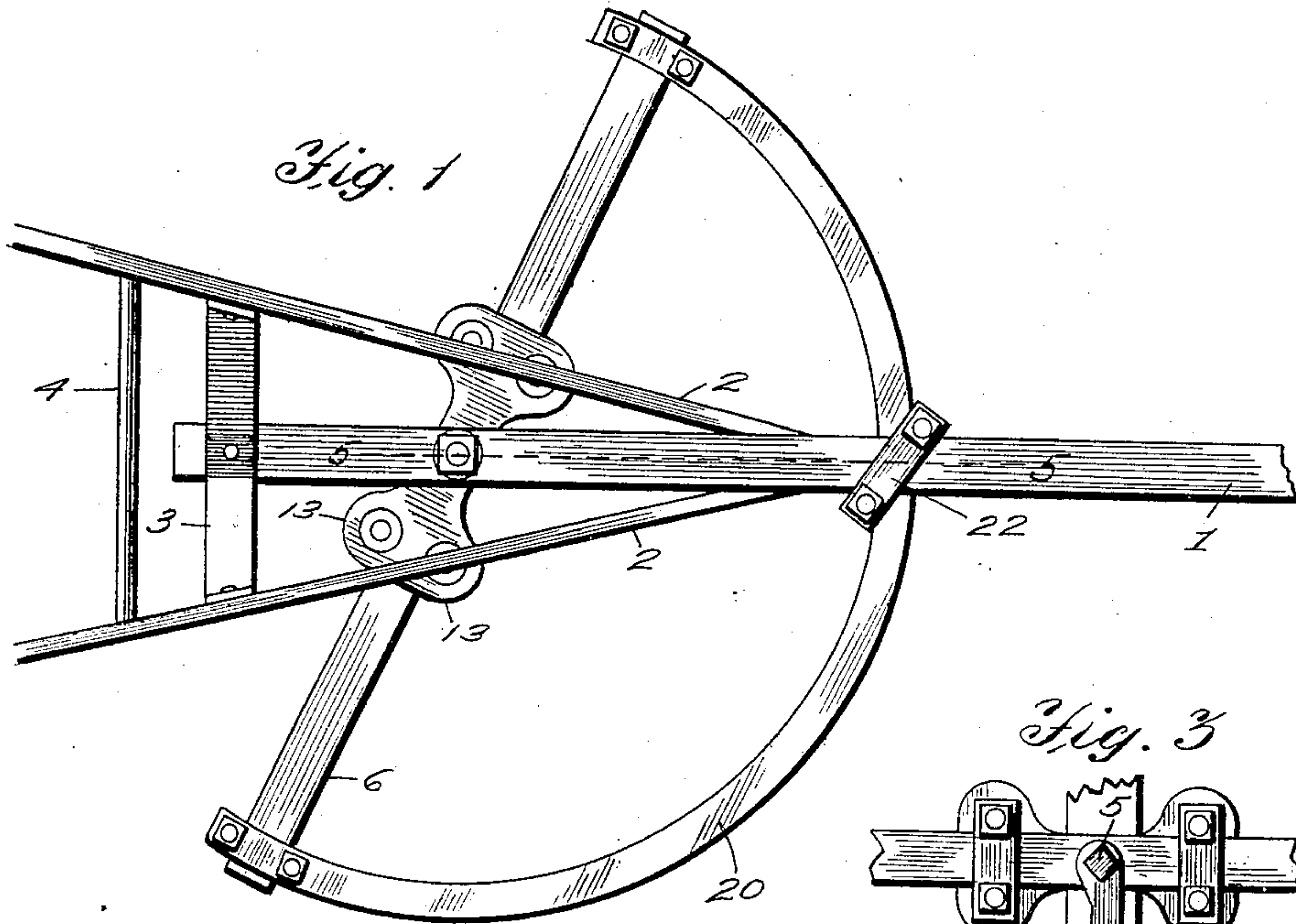


No. 856,028.

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S. G. CALAWAY.
HARROW AND CULTIVATOR.
APPLICATION FILED MAR 8, 1907.



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UNITED STATES PATENT OFFICE.

SAMUEL G. CALAWAY, OF CENTERVILLE, MISSISSIPPI.

HARROW AND CULTIVATOR.

No. 856,028.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed March 8, 1907. Serial No. 361,316.

To all whom it may concern:

Be it known that I, SAMUEL G. CALAWAY, a citizen of the United States, residing at Centerville, in the county of Wilkinson and State of Mississippi, have invented new and useful Improvements in Harrows and Cultivators, of which the following is a specification.

This invention relates to harrows and cultivating implements of that class in which a bar mounted pivotally upon a beam carries a plurality of standards each supporting a blade or plow point for engaging the soil; means being provided for securing the pivoted bar at various adjustments with relation to the beam for the purpose of regulating the pitch of the other engaging blades and the relative distance between the furrows formed in the soil.

The invention has for its object to simplify and improve the construction and operation of this class of devices, and with these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings, Figure 1 is a top plan view of a cultivating implement constructed in accordance with the invention. Fig. 2 is a rear elevation. Fig. 3 is a detail bottom plan view of a portion of the pivoted bar and related parts. Fig. 4 is a detail side view showing portions of the pivoted standard carrying bar and the arcuate adjusting bar. Fig. 5 is a vertical sectional detail view taken on the plane indicated by the line 5—5 in Fig. 1.

Corresponding parts in the several figures are denoted by like characters of reference.

In the construction of the improved cultivating implement a beam 1 which is provided in the usual manner with handles 2—2 supported by braces 3 and spaced apart by a rung or cross-bar 4. Pivottally mounted upon a bolt or pivotal member 5 which extends

vertically through the beam is a cross-bar 6, the ends of which are downturned to form standards 7 which are quarter twisted as shown at 8, so that the flat sides of the standard members will be presented in a direction of movement of the implement; said standards carrying at their lower ends blades 9 which may be of any suitable construction, each of said blades being secured in position by means of a single bolt 10. The blades 9 are provided at their upper corners with lugs 11 bearing against the sides of the standards as will be plainly seen in Fig. 2 of the drawings for the purpose of preventing the blades from rocking or wobbling upon the securing bolts.

Upon the bolt 5, between the beam 1 and the bar 6 is mounted a clip plate 12 provided at the ends thereof with laterally extending ears 13 for the passage of bolts 14, the heads of which are countersunk in the type of the clip plate so as not to obstruct the swinging movement of the latter beneath the beam; the bolts 14 are connected in pairs at their lower ends by clip bars 15 between which and the bar 6 is interposed the bridge piece 16 of an arched or inverted U-shaped member B, the downturned portions of which form standards 17 having quarter twisted portions 18 so that the flat sides of said standards will be presented in the direction of the movement of the implement; the standards 17 are provided with blades 19 constructed and mounted like the blades 9 upon the standards 7.

20 designates a semi-circular adjusting bar, the ends of which are secured by means of clips 21 upon the ends of the pivoted bar 6, said adjusting bar being also connected, intermediate of its ends, with the beam 1 by means of a clip 22. When the clip is loosened, the semi-circular adjusting bar may be moved therethrough, and the bar 6 may thus be adjusted at various angles with relation to the beam, as will be readily understood. A brace bar 23 the rear end of which is secured upon the bolt 5 is extended forwardly between the adjusting bar 20 and the beam 1 and is provided at its forward extremity with a downturned hook 24 engaging the front side of the adjusting bar 20; this form of brace bar will greatly reinforce the construction of the implement, its front end being rigidly connected with the beam without the use of bolts which would necessitate holes or apertures whereby the beam would be

greatly weakened; said brace serving to take up strain upon the bolt 5, thus relieving that portion of the beam which is apertured for said bolt 5 from undue strain.

5 From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains.

10 The construction is simple and economical, and the improved implement will be found to be thoroughly useful and efficient for the purposes for which it is provided.

Having thus fully described the invention, 15 what I claim as new is:—

1. A cultivating instrument of the class described comprising a beam and bolt extending therethrough, a bar pivoted upon the bolt and having downturned ends forming 20 blade carrying standards, an auxiliary bar pivotally engaging the bolt and having downturned ends forming blade carrying standards, a clip plate mounted upon the bolt intermediate the upper bar and the beam 25 and having bolts extending therethrough and connected in pairs by clip bars adjacent to the auxiliary bar, an arcuate adjusting

bar clipped upon the ends of the upper standard carrying bar and a clip adjustably connecting the adjusting bar with the beam. 30

2. A cultivating instrument of the class described comprising a beam and bolt extending therethrough, a bar pivoted upon the bolt and having downturned ends forming blade carrying standards, an auxiliary bar 35 pivotally engaging the bolt and having downturned ends forming blade carrying standards, a clip plate mounted upon the bolt intermediate the upper bar and the beam and having bolts extending therethrough and 40 connected in pairs by clip bars adjacent to the auxiliary bar, an arcuate adjusting bar clipped upon the ends of the upper standard carrying bar and a brace bar mounted upon the lower end of the pivotal bolt and pro- 45 vided at its forward end with a downturned hook engaging the front side of the arcuate adjusting bar.

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

SAMUEL G. CALAWAY.

Witnesses:

SILAS M. BALLING, Jr.,
EDO P. BALLANCE.