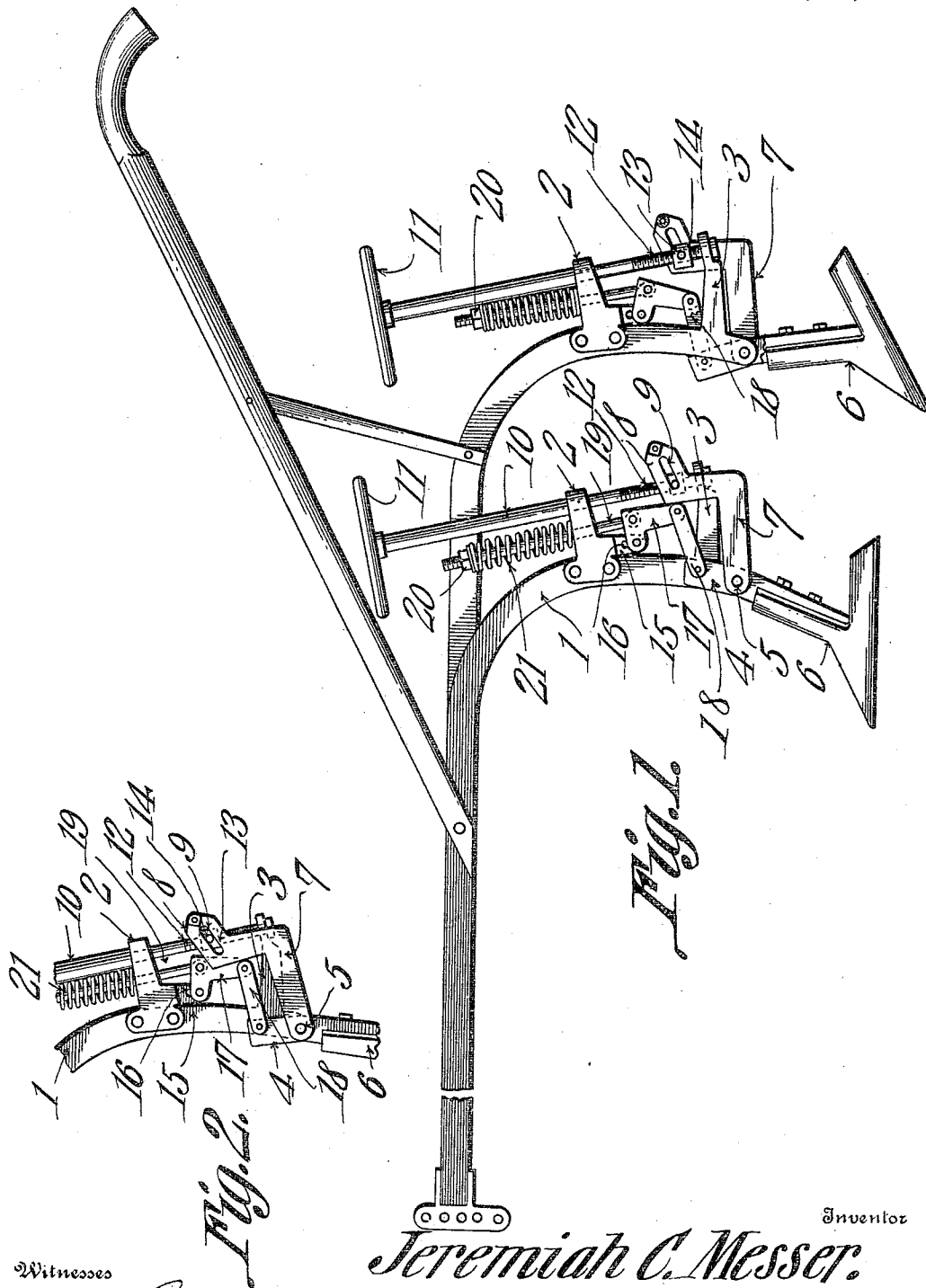


J. C. MESSER.
 SPRING TRIP MECHANISM.
 APPLICATION FILED JAN. 11, 1910.

957,432.

Patented May 10, 1910.



Witnesses
E. J. [Signature]
J. J. Lawson

Inventor
Jeremiah C. Messer.
 By *Cash & Co.*
 Attorneys

UNITED STATES PATENT OFFICE.

JEREMIAH CLARK MESSER, OF AUSTIN, TEXAS, ASSIGNOR OF TWO-THIRDS TO
WILLIAM G. BELL, OF AUSTIN, TEXAS.

SPRING TRIP MECHANISM.

957,432.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JEREMIAH C. MESSER, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented a new and useful Spring Trip Mechanism, of which the following is a specification.

This invention has relation to spring trip mechanism for plows, cultivators and the like and it consists in the novel construction and arrangement of its parts hereinafter shown and described.

The object of the invention is to provide a spring trip connection between a beam and a standard whereby the standard may be permitted to swing in a rearward direction with relation to the beam when the earth-engaging member carried by the standard comes in contact with an obstruction in the soil of such dimensions as to damage or break the plow or cultivator unless the movement indicated is permitted.

A further object of the present invention is to provide in combination with a means as stated a device or mechanism whereby the standard may be pitched at different angles to the beam so that the earth-engaging member may be pitched at a desired angle with relation to a horizontal.

In the accompanying drawings, Figure 1 is a side elevation of a cultivator, showing the trip mechanism applied to two beams but in different positions and one of the said mechanisms having parts removed; Fig. 2 is a detailed side elevation of intermediate parts of the spring trip mechanism indicating how the said parts may be adjusted to cause a variation in angle between the standard and the beam.

The beam 1 is provided with rearwardly disposed lugs 2 and 3 which are spaced apart. A standard 4 is pivoted at the point 5 to the end of the beam 1 and carries at its lower end an earth-engaging member 6. Angle arms 7 are pivoted at their forward ends upon the pivot 5 and extend rearwardly along the sides of the lug 3. The arms 7 terminate in extremities 8 which are provided with elongated slots 9. A shaft 10 passes through the lug 2 and bears at its lower end upon the lug 3. The said shaft 10 is provided at its upper end with a hand wheel 11. The shaft 10 at a point between the rear ends of the arms 7 is screw-threaded as at 12 and a nut 13 en-

gages the thread 12. The said nut 13 is provided with laterally disposed lugs or a pin 14 which lie in the elongated slots 9 of the extremities 8 of the arms 7. The lug 2 at a point behind the beam 1 is provided with a downwardly disposed tongue 15 which is provided with a series of perforations 16. A rocker lever 17 is fulcrumed to the tongue 15 and the lower end of the said lever 17 is pivotally connected by means of links 18 with the upper end of the standard 4 at a point above the pivot 5. A bolt 19 is pivotally connected at its lower end with the intermediate portion of the lever 17 and passes loosely through a perforation in the lug 2. A nut 20 is screw-threaded upon the upper end of the bolt 19 and a compression spring 21 is interposed between the said nut 20 and the upper side of the lug 2.

The operation of the spring trip mechanism is as follows: The nut 20 is first screwed upon the bolt 19 so that the spring 21 has the desired tension. As the earth-engaging member is drawn through the soil and when it encounters an obstruction of sufficient weight or resistance the standard 4 will swing upon the pivot 5 whereby the upper end of the said standard is swung in a forward direction as indicated in the rear part of Fig. 1 thus the links 18 are moved longitudinally and the lever 17 is swung upon its fulcrum which in turn will move the bolt 19 longitudinally against the tension of the spring 21. As soon as the obstruction has been passed the tension of the spring 21 comes into play and moves the bolt 19 longitudinally which in turn will swing the lever 17 upon its fulcrum and the said lever in turn will move the links 18 longitudinally so that their rear ends will engage the upwardly extending portions of the arms 7 in the manner as illustrated in the forward part of Fig. 1. When this is done the upper end of the standard 4 is drawn rearwardly and the earth-engaging member 6 assumes its normal position and the said standard 4 assumes its normal angle with relation to the beam 1. When it is desired to vary the angle between the standard 4 and the beam 1 the shaft 10 is rotated and as the nut 14 is held against rotation by reason of the fact that the pins 13 carried thereby are located in the elongated slots 9 of the extremities 8 of the arms 7 the said nuts will be raised or lowered according to the direc-

tion in which the shaft 10 is located and thus the arms 7 will be swung upon the pivot 5 and as the forward edges of the upwardly projecting portions of the said arms lie in the paths of movement of the rear ends of the links 18 and the said edges are not concentric with the pivot 5 as a center the movement of the links 18 may be increased or diminished and consequently the angle of the normal position of the standard 4 upon the beam 1 may be adjusted.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In combination with a beam and a standard pivoted thereto at a point intermediate its ends, a spring trip mechanism comprising a lug carried by the beam, a lever fulcrumed to the lug, a spring-actuated bolt passing through the lug and pivotally connected with the lever, a link pivotally connected with the lever at one end and pivotally connected at its other end with the standard at a point above its pivotal connection with the beam and a stop located in the path of movement of the said link.

2. In combination with a beam and a standard pivoted thereto at a point intermediate its ends, a spring trip mechanism comprising a lug carried by the beam, a lever fulcrumed to the lug, a bolt pivotally connected to the lever and passing through the lug and subjected to spring tension, a link pivotally connected at its rear end with the

lever and pivotally connected at its forward end with the standard at a point above its pivotal connection with the beam, an arm forming a stop pivotally connected with the beam and having an edge portion lying in the path of movement of the link which edge portion is eccentric with relation to the pivotal support of the arm and means for adjusting the said arm upon its pivot.

3. In combination with a beam and a standard pivoted thereto at a point intermediate its ends, a spring trip mechanism comprising a lug carried by the beam, a lever fulcrumed to the lug, a spring actuated bolt passing through the lug and pivoted to the lever, a link pivoted at its rear end to the lever and pivoted at its forward end to the standard at a point above its pivotal connection with the beam, an angle arm pivoted to the beam and having an edge portion lying in the path of movement of the link, a shaft journaled in the lug, a nut threaded on the shaft, said nut having slot and pin connection with the arm, therefore the upper portions of the arms 7 serve as stops for the links 18.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JEREMIAH CLARK MESSER.

Witnesses:

JNO. GRANGER,
JAY C. MESSER.