

No. 697,460.

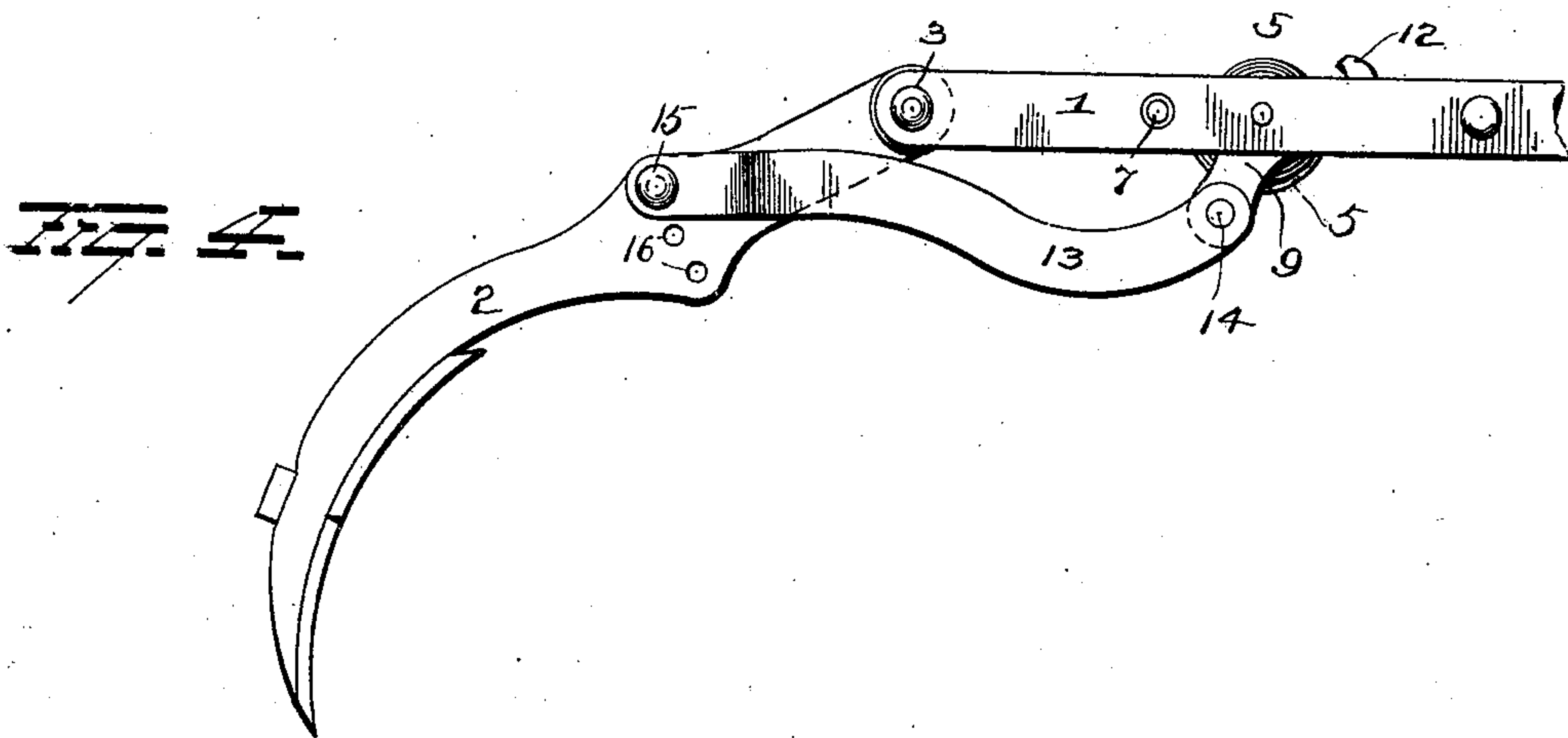
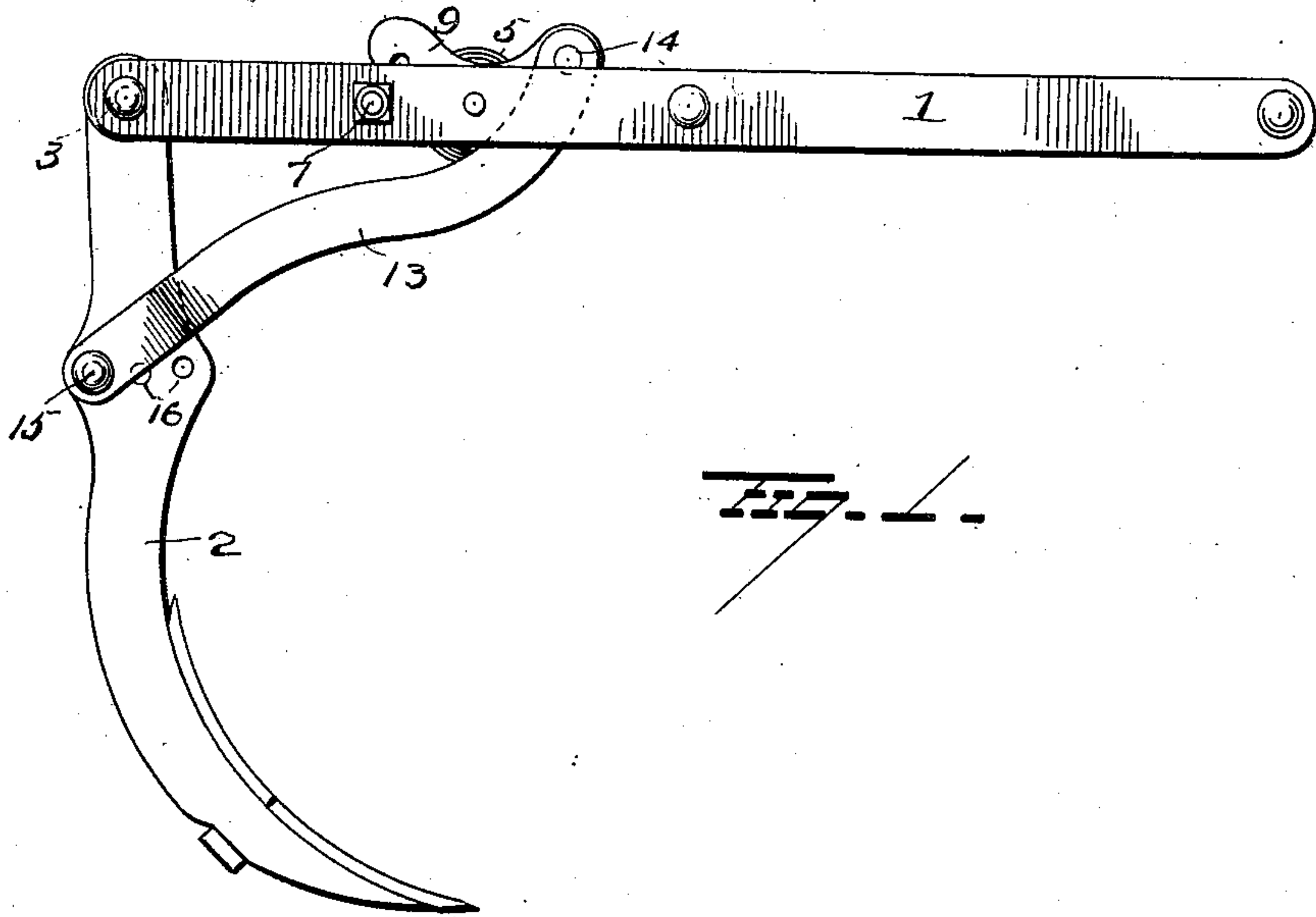
Patented Apr. 15, 1902.

E. O. EDWARDS.
TOOTH FOR SEEDERS AND CULTIVATORS.

(Application filed Oct. 19, 1901.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES
E. J. Nottingham
G. F. Downing

INVENTOR
E. O. Edwards
By H. A. Seymour
Attorney

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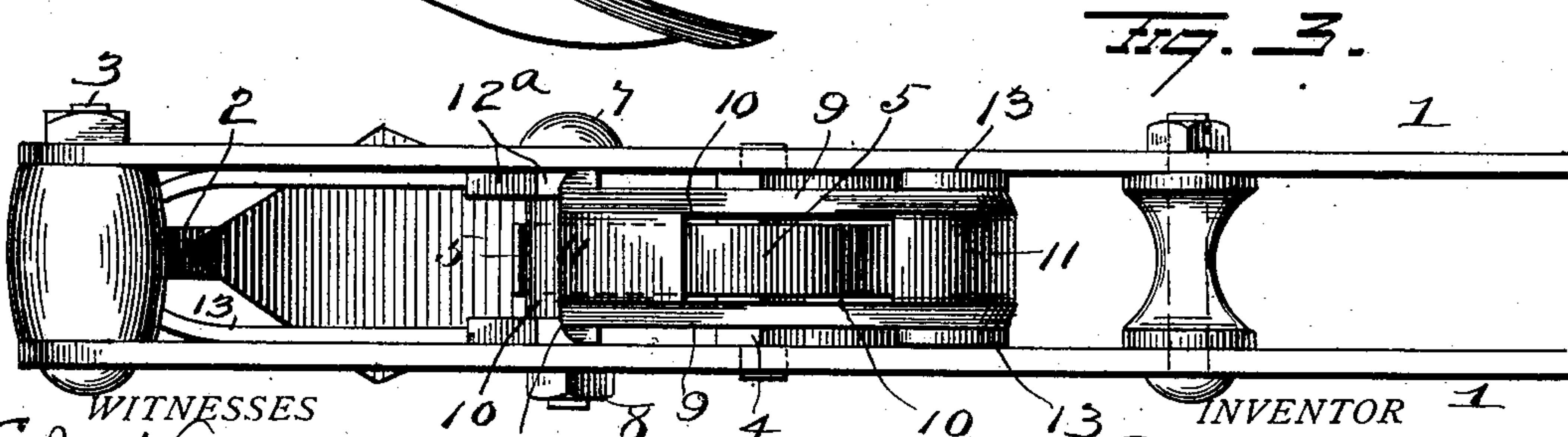
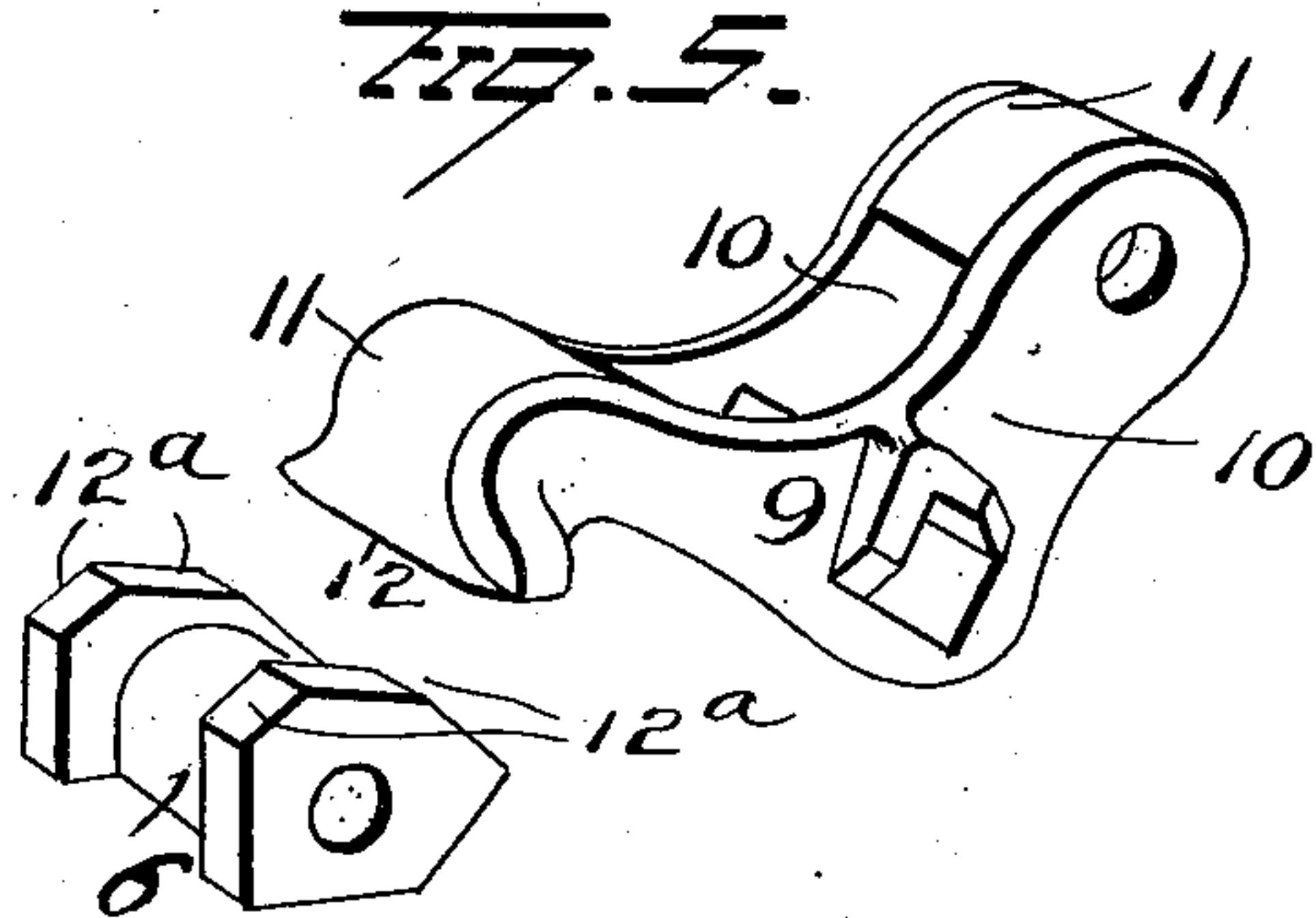
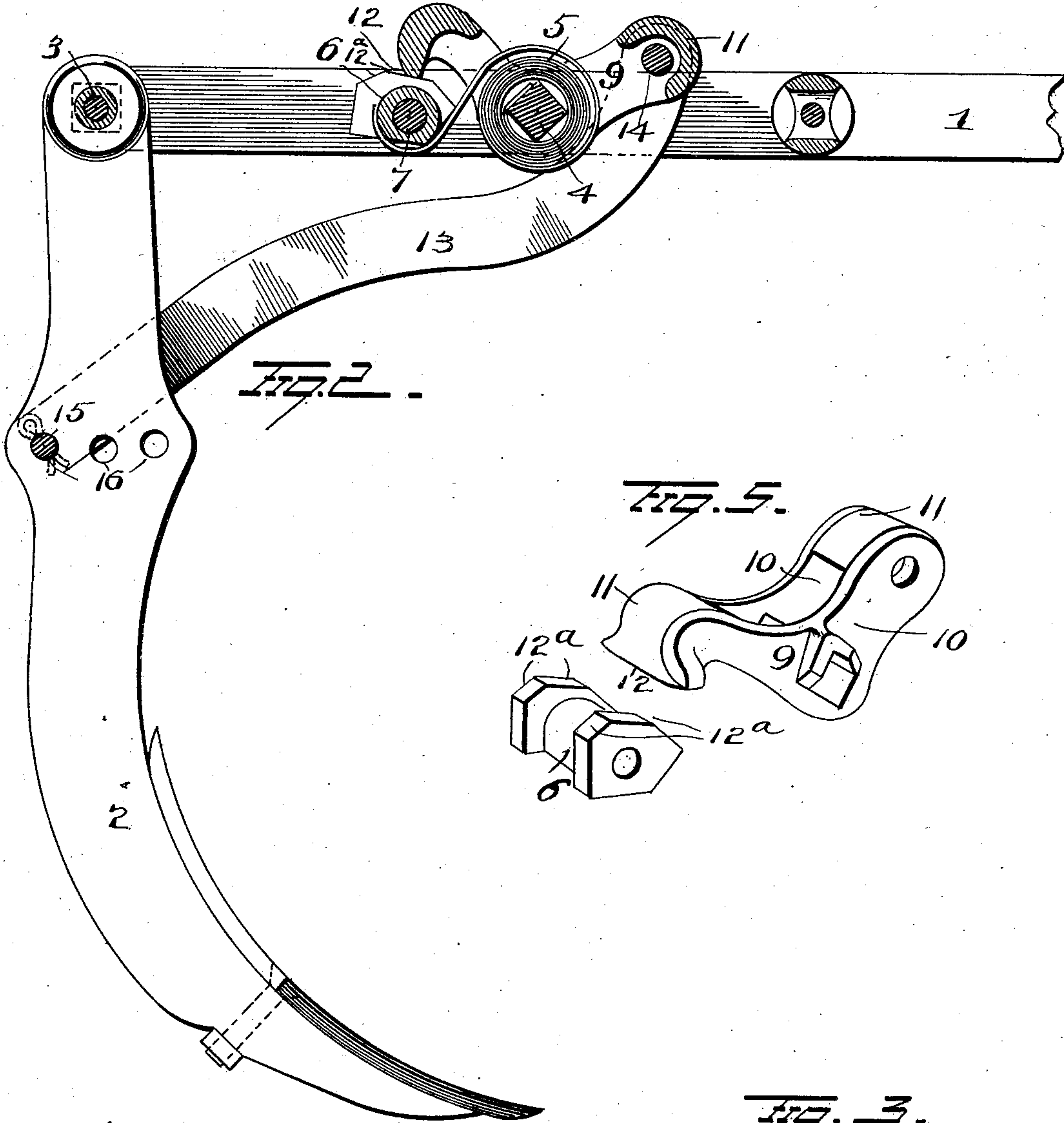
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WITNESSES

INVENTOR

E. J. Nottingham
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E. O. Edwards
By H. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

EUGENE OSBORNE EDWARDS, OF LA CROSSE, WISCONSIN, ASSIGNOR TO
FOUNTAIN CITY DRILL COMPANY, OF LA CROSSE, WISCONSIN.

TOOTH FOR SEEDERS AND CULTIVATORS.

SPECIFICATION forming part of Letters Patent No. 697,460, dated April 15, 1902.

Application filed October 19, 1901. Serial No. 79,275. (No model.)

To all whom it may concern:

Be it known that I, EUGENE OSBORNE EDWARDS, a resident of La Crosse, in the county of La Crosse and State of Wisconsin, have invented certain new and useful Improvements in Teeth for Seeders and Cultivators; 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 an improvement in teeth for seeding-machines and cultivators, and more particularly to an improved mounting for the teeth, the object of the invention being to provide an improvement of the above-mentioned character which will permit the teeth to yield or give and pass over obstructions without injury to the teeth.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation illustrating my improvements. Fig. 2 is a view in section of the same. Fig. 3 is a plan view. Fig. 4 is a view illustrating the position assumed when the tooth strikes an obstruction, and Fig. 5 is a view of the hub 9 detached.

11 represent the drag-bars of a seeding-machine, between the rear ends of which the upper end of a tooth 2 is pivotally secured by a bolt or pin 3, as shown.

An angular spindle 4 is journaled in the drag-bars 1, to which one end of a spring 5 is secured and coiled around the same, and the other end of said spring is bent and engages a stop-block 6. This stop-block 6 is secured between the drag-bars 1 between the spindle 4 and bolt 3 by a bolt 7 and nut 8 and is rounded between its ends, forming a stop against which the bent end of spring 5 is held by its own spring tension.

My improved spring yoke or frame 9 is mounted on spindle 4 and comprises parallel flat members 10, connected at their ends by integral bars 11, one end of the yoke or frame being made in the form of an extended tongue 12 to engage inclined flanged ends 12^a on the block 6. This yoke or frame 9 is in the gen-

eral form of a bell-crank lever and made between its ends with angular openings in the members 10 to receive and be keyed to the spindle 4, the spring 5 being located between said members. To the forward end of the yoke or frame, on opposite sides thereof, curved parallel links or bars 13 are pivotally connected by a pin or rivet 14, the rear ends of said links or bars being pivotally connected to the tooth 2 by a pin or bolt 15, passed through the links or bars and also through any one of a horizontal series of holes 16 in the tooth 2 to permit adjustment of the links or bars 13, and hence dispose the tooth at the desired angle.

It will be seen that when the tooth 2 is in its normal operative position, as shown in Fig. 1, the pins 14 and 15 will be almost in alignment with spindle 4, hence forming almost a dead-center, which serves to exert a strong hold on the tooth and prevent its being forced backward by obstructions which can be displaced without injury thereto; but when a strong obstruction is engaged the tooth will be moved backward and ride over the same and be returned to its normal position by spring 5. When the tooth is forced backward, the links or bars 13 will pull the forward end of the yoke or frame 9 downward and rearward, thus forcing the rear end of said yoke or frame upward and forward, as shown in Fig. 4, and when the obstruction is passed the yoke or frame will be moved back to its former position by the spring.

By providing a horizontal series of holes 16 in the tooth 2 pin 15 can be adjusted from one hole to another without changing the line of draft or "dead-center," but regulating the angle of the tooth, and consequently the degree of cultivation.

It will be seen that by providing the stop-block 6 with a series of cam-faces located at different distances from the axis of the block the desired regulation or adjustment may be obtained by simply turning the block. This may be accomplished by loosening the nut 8, then turning the block by hand or by a suitable tool, and then tightening the nut. For instance, if it is desired to so adjust the parts that great power or pressure will be required to shift the tooth 2 the block should be ad-

justed so as to bring the tongue nearest the axis, and by shifting the block so as to carry the tongue farther away from the axis of the block the power required to shift the tooth
5 will be decreased.

Various slight changes might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention,
10 and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my
15 invention.

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

1. The combination with drag-bars, of a
20 spindle having bearings in said drag-bars, a tooth pivoted at one end to the drag-bars, a spring yoke or frame keyed between its ends on said spindle, links connecting one end of the yoke or frame with the tooth, a block se-
25 cured to the drag-bars, and a spring normally holding the free end of said yoke or frame against said block.

2. The combination with drag-bars, of an
30 angular spindle having bearings in said drag-bars, a tooth pivoted at one end to the drag-

bars and having a horizontal series of holes therein, a spring yoke or frame keyed between its ends on said spindle, links connecting one end of the yoke or frame with any one of the
35 holes in the tooth, a stop-block adjustably secured between the drag-bars, a spring secured to the spindle, coiled around the same and holding its other end against the said block and adapted to normally hold the free
40 end of the yoke or frame against said block.

3. The combination with drag-bars, of an angular spindle having bearings in said drag-bars, a tooth pivoted at one end to the drag-bars, a spring yoke or frame keyed between its ends on said spindle, links connecting one
45 end of the yoke or frame with the tooth, a stop-block adjustably secured between the drag-bars, inclined flanges at the ends of said block for regulating the position of said yoke or frame, and a spring normally holding one
50 end of the yoke or frame against said inclined flanges.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EUGENE OSBORNE EDWARDS.

Witnesses:

P. H. ROBERTS,

O. C. STEENBERG.