

No. 837,166.

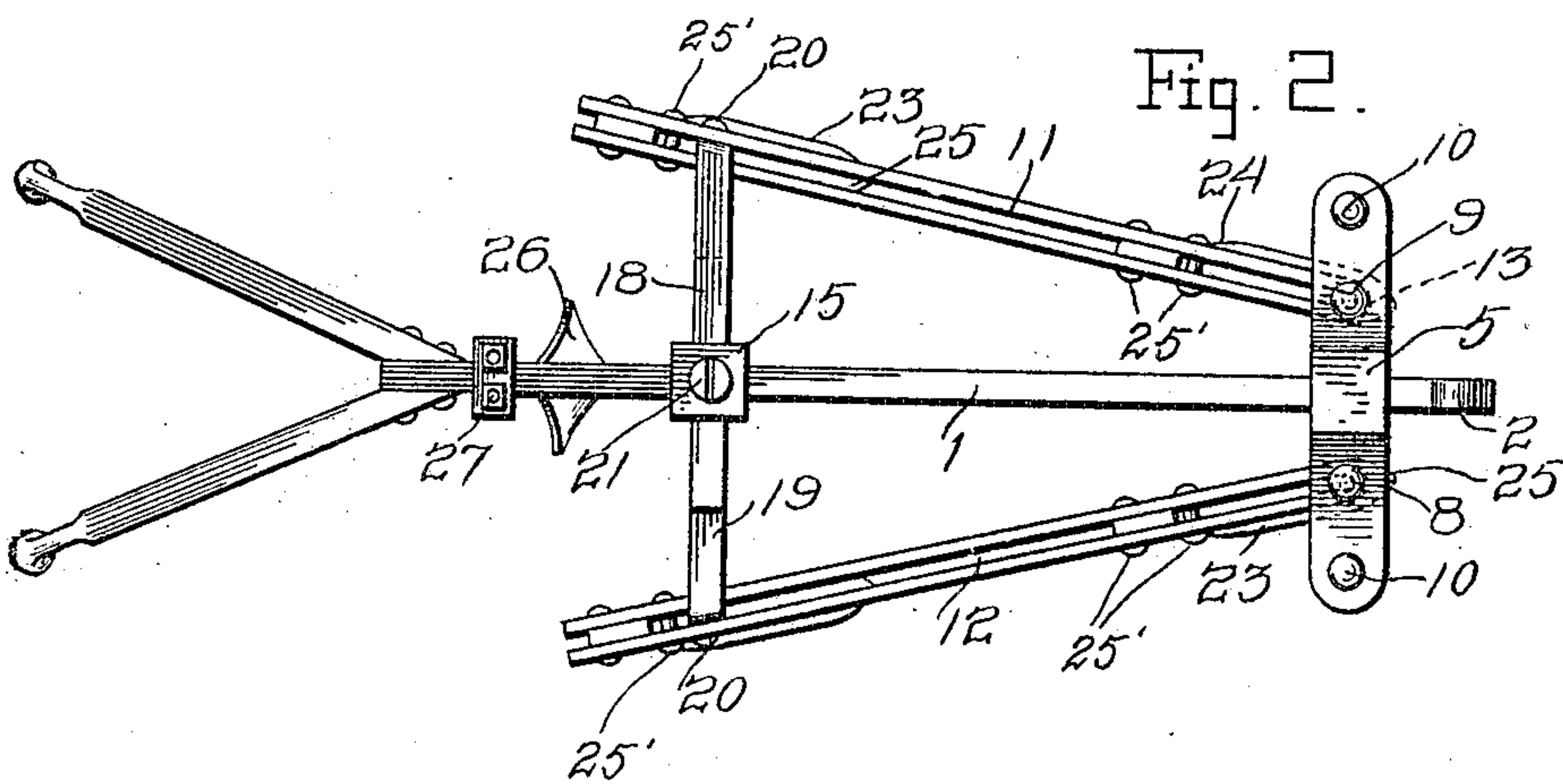
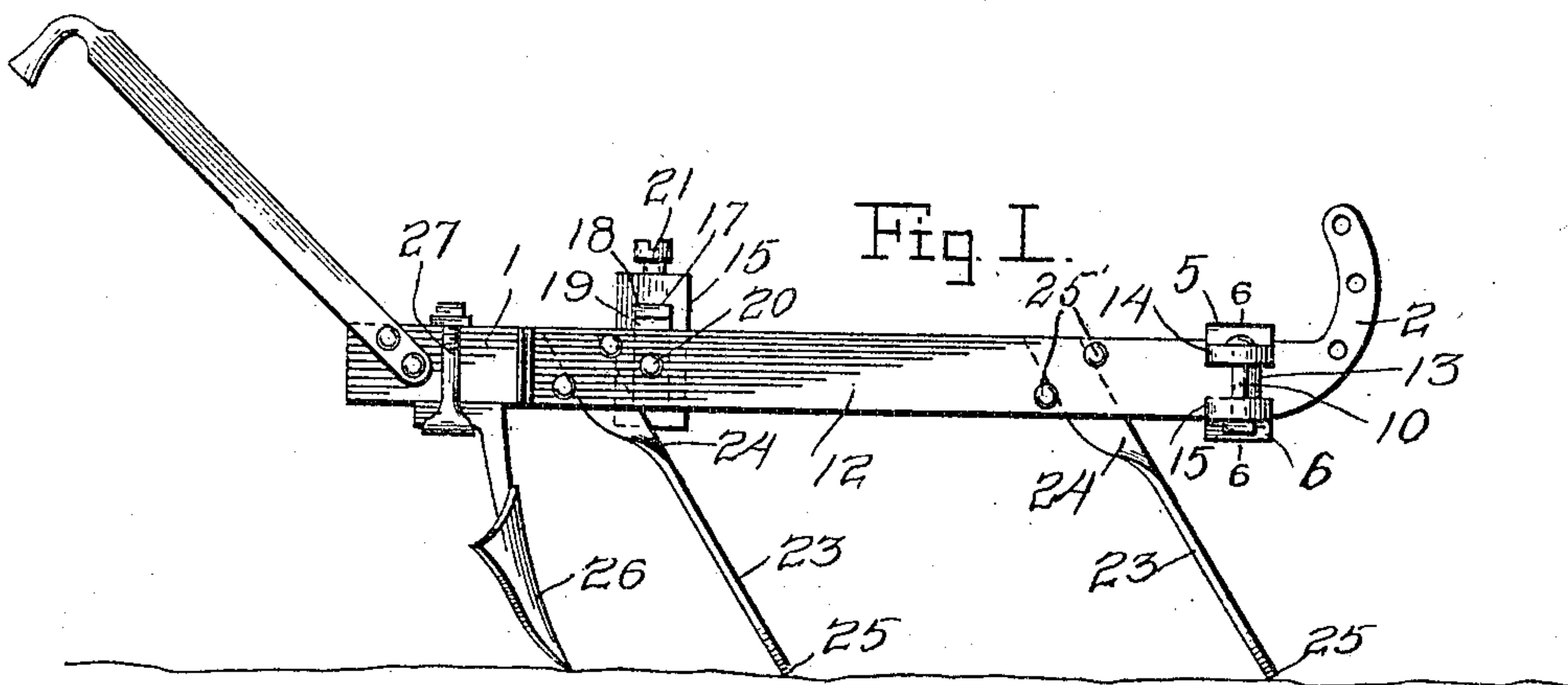
PATENTED NOV. 27, 1906.

J. W. WILLCUTT.

HARROW.

APPLICATION FILED SEPT. 19, 1905.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

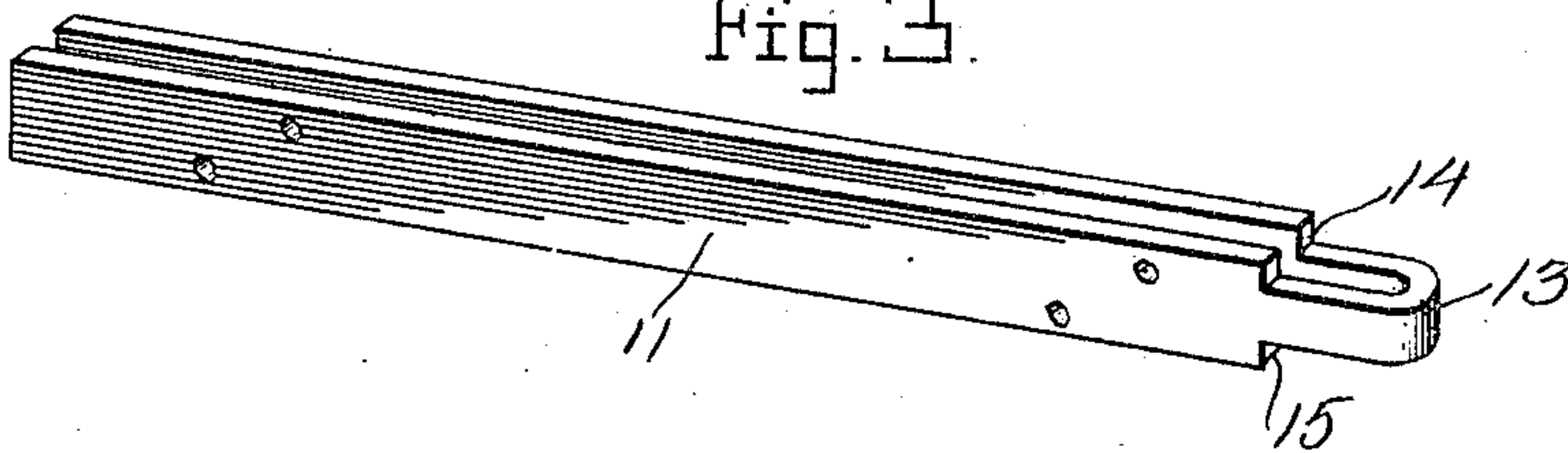


Fig. 4.

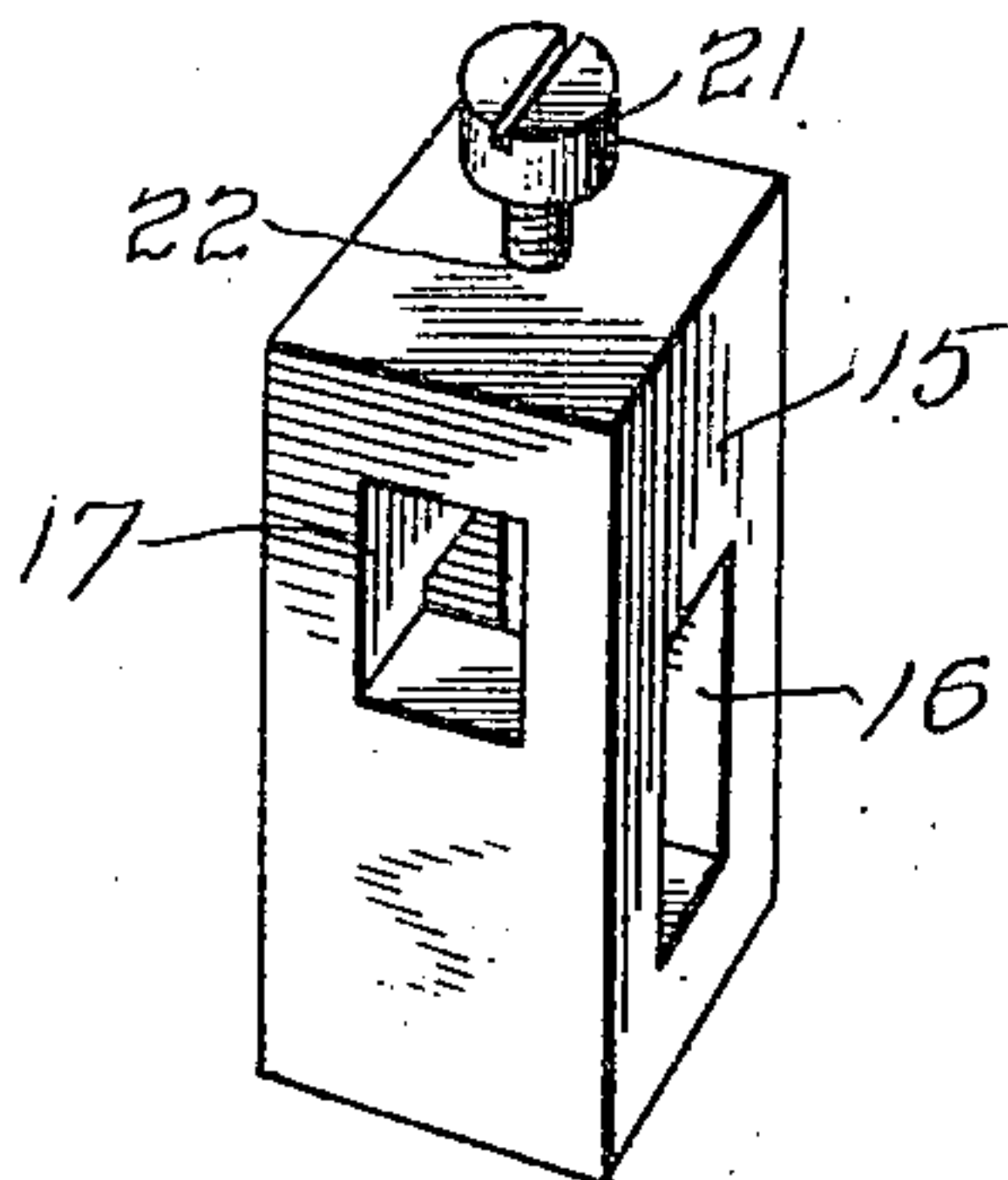


Fig. 5.

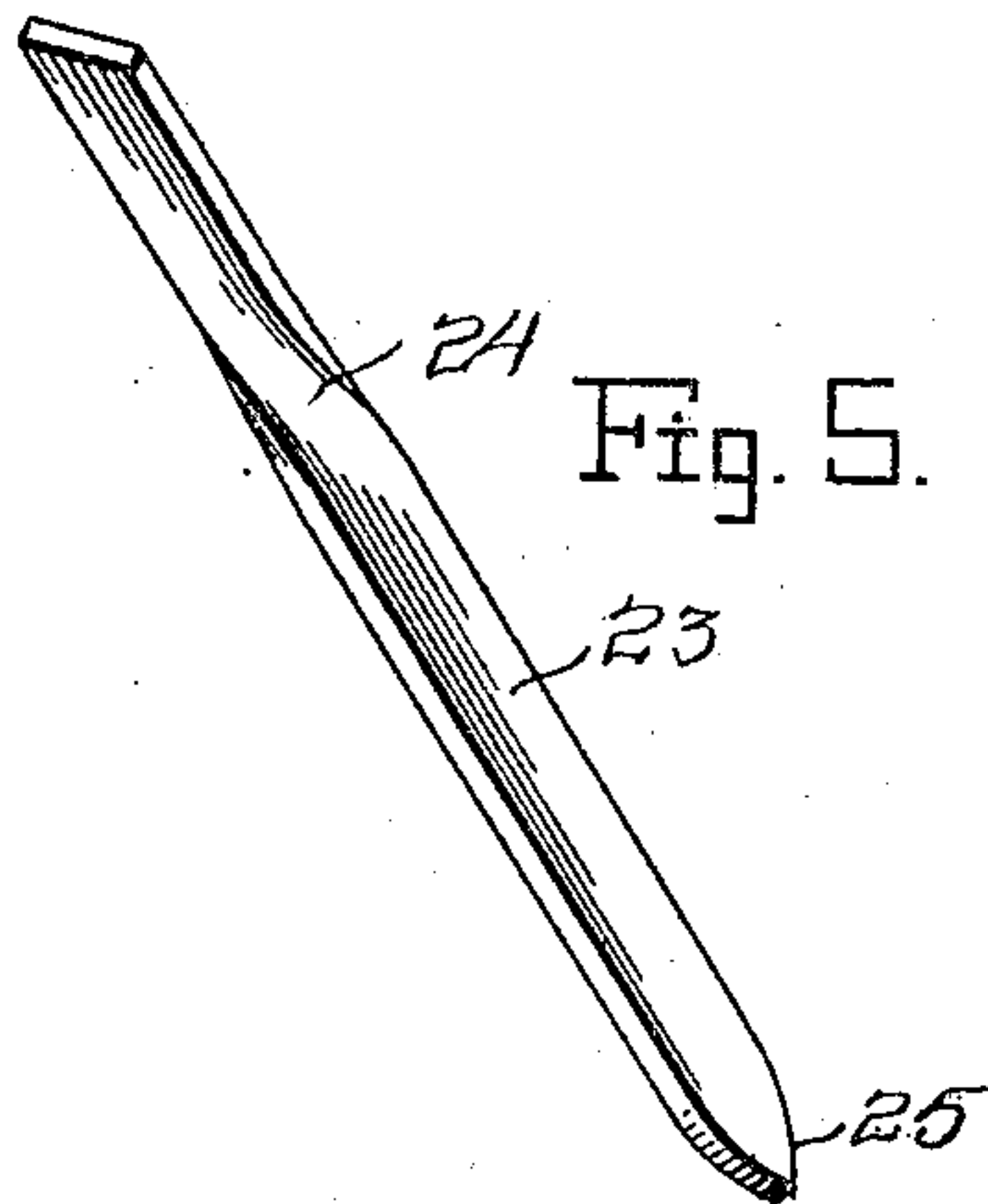
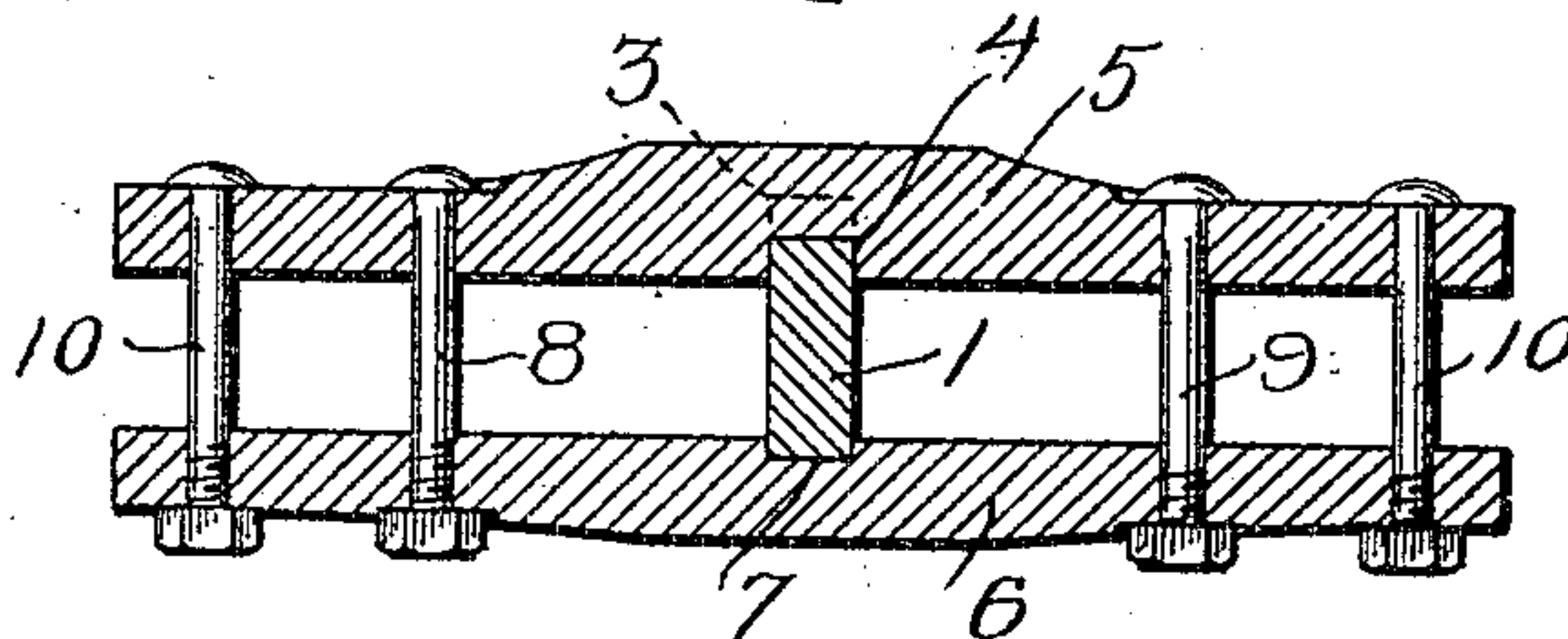


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOEL W. WILLCUTT, OF STERLING, ALABAMA.

HARROW.

No. 837,166.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed September 19, 1905. Serial No. 279,108.

To all whom it may concern:

Be it known that I, JOEL W. WILLCUTT, a citizen of the United States, residing at Sterling, in the county of Tuscaloosa, State of Alabama, have invented certain new and useful Improvements in Harrows; 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.

This invention relates to harrows.

One object of the invention is to provide an exceedingly simple, inexpensive, durable, and efficient harrowing device.

Another object of the invention resides in the provision of a harrow embodying such characteristics that the side or auxiliary beams may be adjusted toward and away from each other and each so arranged as to provide for the proper reception and clamping of the harrowing-teeth therebetween.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a top plan view. Fig. 3 is a detail view of one of the auxiliary beams. Fig. 4 is a detail view of the connecting-block between the main and auxiliary beams. Fig. 5 is a detail view of one of the harrow-teeth. Fig. 6 is a transverse sectional view taken on the line 6 6 of Fig. 1.

Referring now more particularly to the accompanying drawings, the reference character 1 designates a main beam having its forward end directed upwardly, as at 2, and perforated for the engagement therewith of suitable draft appliances and also provided in its upper edge, immediately in the rear of the upwardly-turned end 2, with a notch 3 for cooperation with the notch 4, formed intermediate the ends of an upper plate 5, there being a lower plate 6, provided with a notch 7 intermediate its ends for engagement with the lower edge of the main beam 1.

Arranged between the upper and lower plates 5 and 6 and adjacent opposite sides of the main beam 1 are bolts 8 and 9, there being other bolts 10 piercing the extremities of the upper and lower plates 5 and 6 for the clamping of the plates upon the main beam 1.

The side beams 11 and 12 are of peculiar formation in that each side or auxiliary beam is composed of a single piece of spring material having its bight portion 13 reduced, resulting in the formation of upper and lower shoulders 14 and 15 for engagement with the inner edges of the upper and lower plates 5 and 6 when the said bight portion 13 is engaged with the corresponding bolts 8 and 9.

A block 15 has a longitudinal slot 16 formed therein, whereby it may be slidably mounted upon the main beam 1. Formed transversely through this block 15 is a perforation 17, which communicates with the aforesaid slot 16. This perforation 17 is designed to receive the overlapping cross-pieces 18 and 19, the upper cross-piece 18 being secured at its outer end between the spring members forming the side or auxiliary beam 11 by means of a suitable bolt 20, while the outer end of the under cross-piece 19 is secured in the same manner with respect to the opposite side or auxiliary beam 12. By reason of the overlapping arrangement of these cross-pieces 18 and 19 and their connection with the side or auxiliary beams the latter may be moved toward and away from the main beam 1 to adjust the auxiliary beams at different inclinations with respect to the latter. In order to hold the auxiliary beams in their adjusted positions with respect to the main beam, I provide a suitable set-screw 21, which passes through a perforation 22 in the top of the block 15 for engagement with the upper cross-piece 18. It will therefore be understood that by tightly screwing the set-screw in the screw-threaded perforation 22 in the top of the block the said cross-pieces 18 and 19 will be tightly bound together, as will also the main beam with respect to the longitudinal slot 16 of the said block.

The teeth 23 of the side or auxiliary beams 11 and 12 are of peculiar formation in that each is twisted upon itself, as indicated by the reference character 24. It will be observed that the twist 24 is at one end of each tooth 23 and that the twisted end has a tooth somewhat flat as compared with the pointed opposite end 25. These teeth are adapted to

be reversed with respect to the harrow, so that either end of each tooth may be presented to the groove. Each tooth is held between the corresponding side members of each side or auxiliary beam by means of a pair of clamping-bolts 25', which pierce the members of each side or auxiliary beam.

Secured in any suitable manner to the main beam 1 is an ordinary plow-point 26, which is held on the beam by means of a suitable clamping-band 27, by reason of which the said point may be adjusted longitudinally of the beam 1.

What is claimed is—

1. A harrow comprising a main beam; upper and lower plates secured to said beam at the front end thereof; auxiliary beams secured to the ends of said plates and disposed upon opposite sides of said main beam, each auxiliary beam comprising a single piece of resilient material bent upon itself to form spaced members; a block slidably mounted upon said main beam toward the rear end thereof and provided with a perforation formed transversely therethrough; cross-beams having their inner ends disposed in overlapping engagement in said perforation, and their outer ends adjustably secured between the spaced members comprising said auxiliary beams; means for retaining the inner ends of said cross-beams in adjusted position within said perforation; and harrow-

teeth clamped between the spaced members of each of said auxiliary beams.

2. A harrow comprising a main beam; upper and lower plates secured to said beam at the front end thereof; auxiliary beams secured to the ends of said plates and disposed upon opposite sides of said main beam, each auxiliary beam comprising a single piece of resilient material bent upon itself to form spaced members; a block slidably mounted upon said main beam toward the rear end thereof; and provided with a perforation formed transversely therethrough; cross-beams having their inner ends disposed in overlapping engagement in said perforation, and their outer ends adjustably secured between the spaced members comprising said auxiliary beams; means for retaining the inner ends of said cross-beams in adjusted position within said perforation; reversible harrow-teeth disposed between the spaced members of each auxiliary beam, the opposite ends of each tooth being in different vertical planes; and means for securing each tooth in place between said spaced members.

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

JOEL W. WILLCUTT.

Witnesses:

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G. W. SIMPSON.