

(No Model.)

2 Sheets—Sheet 1.

O. J. SNYDER.  
TONGUE ATTACHMENT.

No. 446,237.

Patented Feb. 10, 1891.

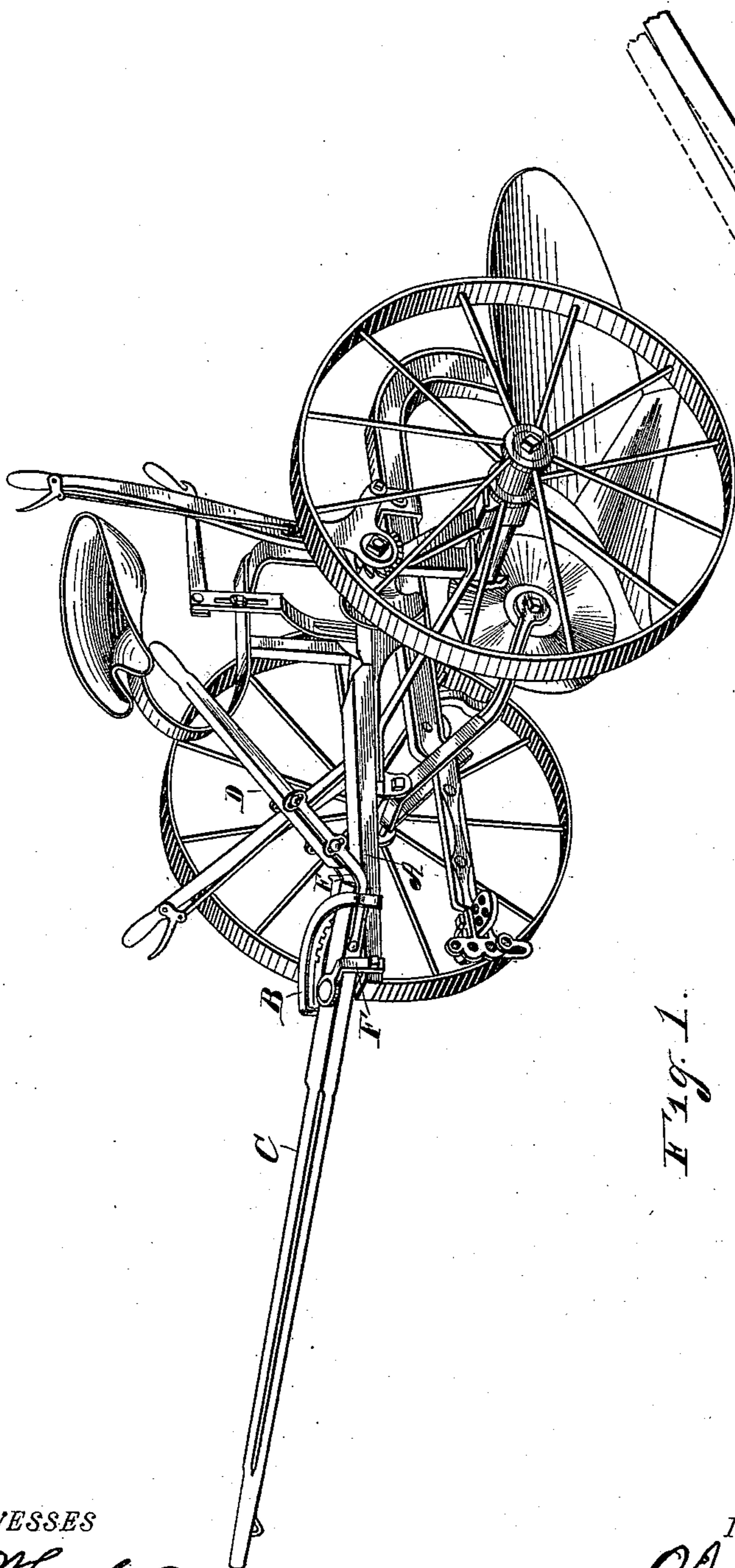


Fig. 1.

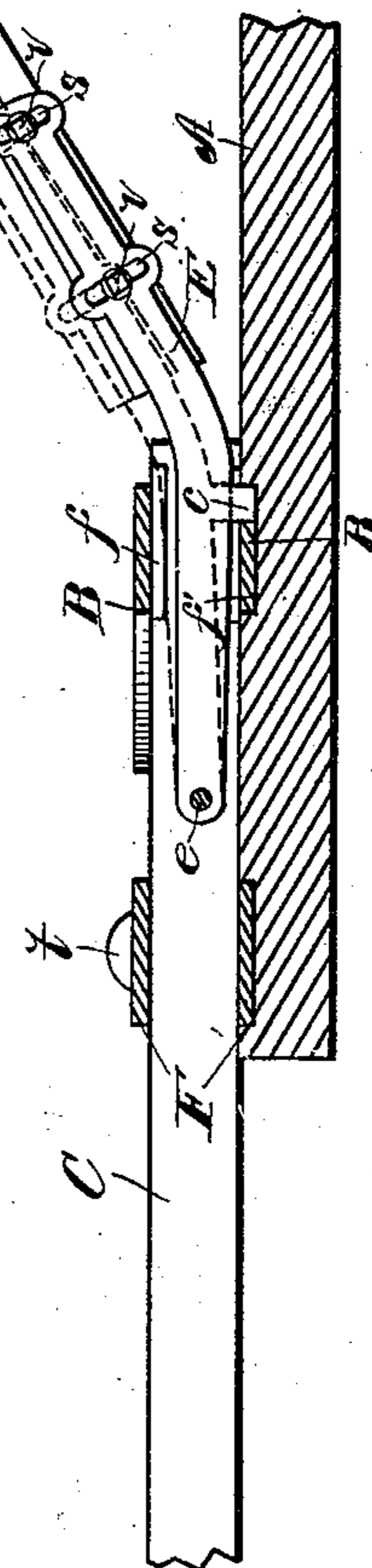


Fig. 2.

WITNESSES

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INVENTOR

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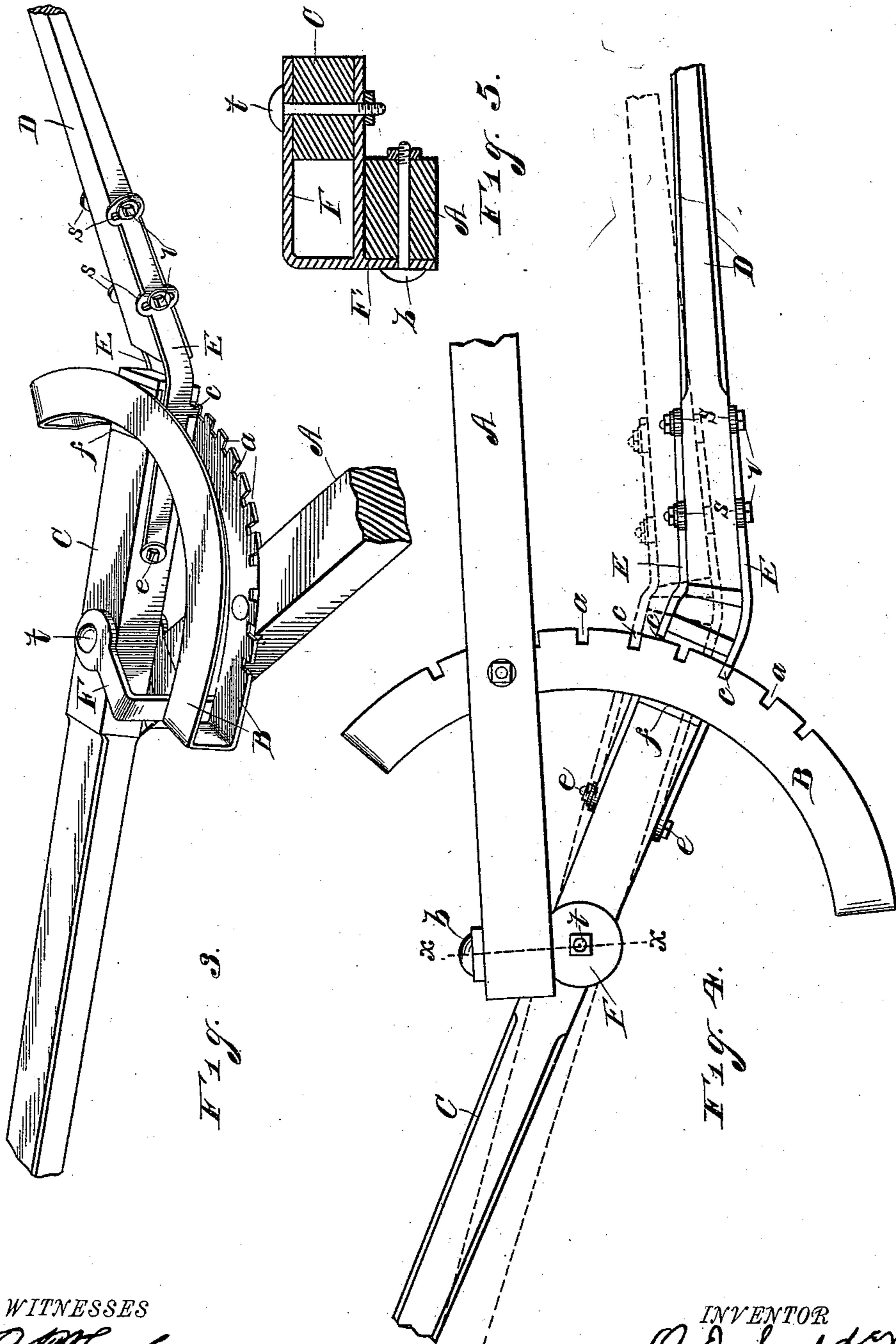
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WITNESSES  
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# UNITED STATES PATENT OFFICE.

OSCAR J. SNYDER, OF SHOUP, MICHIGAN.

## TONGUE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 446,237, dated February 10, 1891.

Application filed July 19, 1890. Serial No. 359,328. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR J. SNYDER, a citizen of the United States, residing at Shoup, in the county of Oakland and State of Michigan, have invented certain new and useful Improvements in Tongue Attachments; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in tongue attachments for sulky-plows; and it consists in providing such plow with a jointed tongue and actuating-lever, by means of which said tongue may be adjusted horizontally to any desired angle, and a segment-rack for securing said tongue when adjusted, the object being to provide a tongue that may be made to swing when desired, so that when turning at the end of a furrow the tongue will swing around, thus relieving said tongue and the neck of the horses of the side strain incident to turning with the rigid tongue in common use and throwing the force necessary to turn the plow directly upon the traces. Said construction also permits of plowing very close to a stump or any obstruction in the field, and enables keeping the plow in a direct line when plowing on a side hill or sloping ground, all of which will be hereinafter more fully set forth, and the essential features of the device pointed out particularly in the claims.

In the accompanying drawings, forming a part of the specification, Figure 1 is a general perspective view of a sulky-plow provided with my improved tongue attachment. Fig. 2 is a vertical longitudinal section through the stationary portion of the tongue and showing the swinging section of the tongue and its actuating-lever in elevation, the segment-rack mounted on the stationary section of the tongue, and the clip or clevis by means of which the swinging section of the tongue is pivoted to the stationary section thereof, showing in cross-section. Fig. 3 is a perspective view of my improved attachment. Fig. 4 is an inverted plan of Fig. 3. Fig. 5 is

a transverse section on dotted line  $x x$  of Fig. 4.

Referring to the letters of reference, A indicates the rigid portion of the tongue, the rear end of which is secured to the frame of the plow, as shown in Fig. 1.

B indicates a segment-rack secured to the upper face of the section A of the tongue near its outer end, said rack being formed of two circular parallel plates secured together at their ends, as clearly shown in Fig. 3.

C indicates the swinging section of the tongue, which extends outward and between the horses drawing the plow. Said section C of the tongue is pivotally coupled to the outer end of the section A thereof by means of the clevis F and the bolt  $t$ , that passes through the adjacent ends of said clevis and through the section C of the tongue, the clevis F being bolted through its depending vertical portion F' to the rigid section A of the tongue, as clearly shown at  $b$  in Fig. 5.

The rear end of the swinging section C of the tongue extends between the adjacent plates of the rack B, and is provided with the bearing-plates  $f f'$  on its upper and under face, respectively, as shown in Figs. 3 and 4.

D indicates the actuating-lever by means of which the section C of the tongue may be swung, said lever being connected to the section C by means of the arms E E, that are pivoted at their forward ends to the opposite vertical faces of said section, as shown at  $e$ . Said arms extend rearward between the plates of the rack B, their rear ends being bent slightly upward, and are secured to the opposite vertical faces of the lever D by means of the bolts  $v v$ , as shown in Figs. 3 and 4, the under edge of said arms E E being provided with a depending tooth  $c$ , adapted to engage in the notches  $a$  in the under plate of the rack B to lock the swinging section C of the tongue in any desired position. Each of the arms E are made to adjust vertically by means of the elongated eyes  $s s$  in the rear ends thereof, through which the bolts  $v$  pass, and which permits of the arms being adjusted independent of each other. It is designed that the tooth of but one arm shall engage with the rack B at a time, the arrangement of parts being such that when the tooth of one arm is engaged with one of the notches

of the rack the disengaged tooth of the opposite arm will stand directly between two of said notches, as shown by solid lines in Fig. 4, so that, if the tongue when set by the arm E on one side is not exactly straight, said arm may be raised by loosening the nut of the bolt *v*, so as to draw its tooth from contact with the notches of the rack, and the opposite arm let down so that its tooth will engage with the rack, as shown by dotted lines in Fig. 4, which arrangement of parts permits of a very fine adjustment of the swinging section of the tongue.

When plowing a straight furrow with a plow provided with my improved tongue attachment, the swinging section C of the tongue is set perfectly straight; but when turning a corner at the end of a furrow the lever D is raised, which carries the arm E upward and disengages the tooth *c* of said arm from the notches *a* in the rack, as clearly shown by dotted lines in Fig. 2. This permits the forward end of the tongue-section C to swing around with the horses, its rear end traveling freely between the plates of the rack B, the plow being turned by a direct pull on the traces attached to the end of the plow-beam and not by the tongue, as is the common practice where the tongue is rigid. When the corner has been turned and the horses again pull ahead, the tongue-section C will straighten, in which position it may be secured by throwing the lever D down so as to cause the tooth *c* of the arm E to engage the notches of the rack. In plowing around a stump or any obstruction in the field the horses are driven up to the object, when the lever D is shifted so as to swing the outer end of the tongue-section C away from said object, permitting the horses to pass around it and the plow to run directly to it, when by shifting the lever D so as to swing the section C in the opposite direction the plow may be guided so as to plow closely around said obstruction, as will be readily understood.

When plowing on a side hill with this improved tongue attachment, the natural tendency of the plow to work down may be over-

come by shifting the tongue-section C so that the point of the plow will stand on a slight angle uphill. By this means the plow may be kept perfectly in line, and will plow a true and straight furrow.

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

1. In a tongue attachment, the combination of the rigid tongue-section, the swinging tongue-section pivotally coupled thereto, the rack mounted on said rigid section, and the actuating-lever pivoted to the rear end of said swinging section, swinging therewith and adapted to engage with the notches of the rack, substantially as specified.

2. In a tongue attachment, the combination of the tongue composed of a rigid section and a swinging section pivotally connected, the rack mounted on said rigid section, the actuating-lever, and the coupling-arms pivotally connecting said lever to the rear end of said swinging section, said arms having means of independent vertical adjustment on said lever and each arm having a tooth adapted to engage with said rack, substantially as specified.

3. In a tongue attachment, the combination of the tongue composed of a rigid section and a swinging section, the clevis secured to the rigid section and pivotally coupling the swinging section thereto, the segment-rack mounted on said rigid section, said rack composed of two parallel plates standing in a vertical line with each other and secured together at their ends, the rear end of said swinging section lying between the plates of the rack and adapted to travel between the adjacent faces thereof, and the actuating-lever pivotally connected to the rear end of the swinging section and having means of engagement with the rack, substantially as specified.

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

OSCAR J. SNYDER.

Witnesses:

E. S. WHEELER,  
R. B. WHEELER.