

No. 617,379.

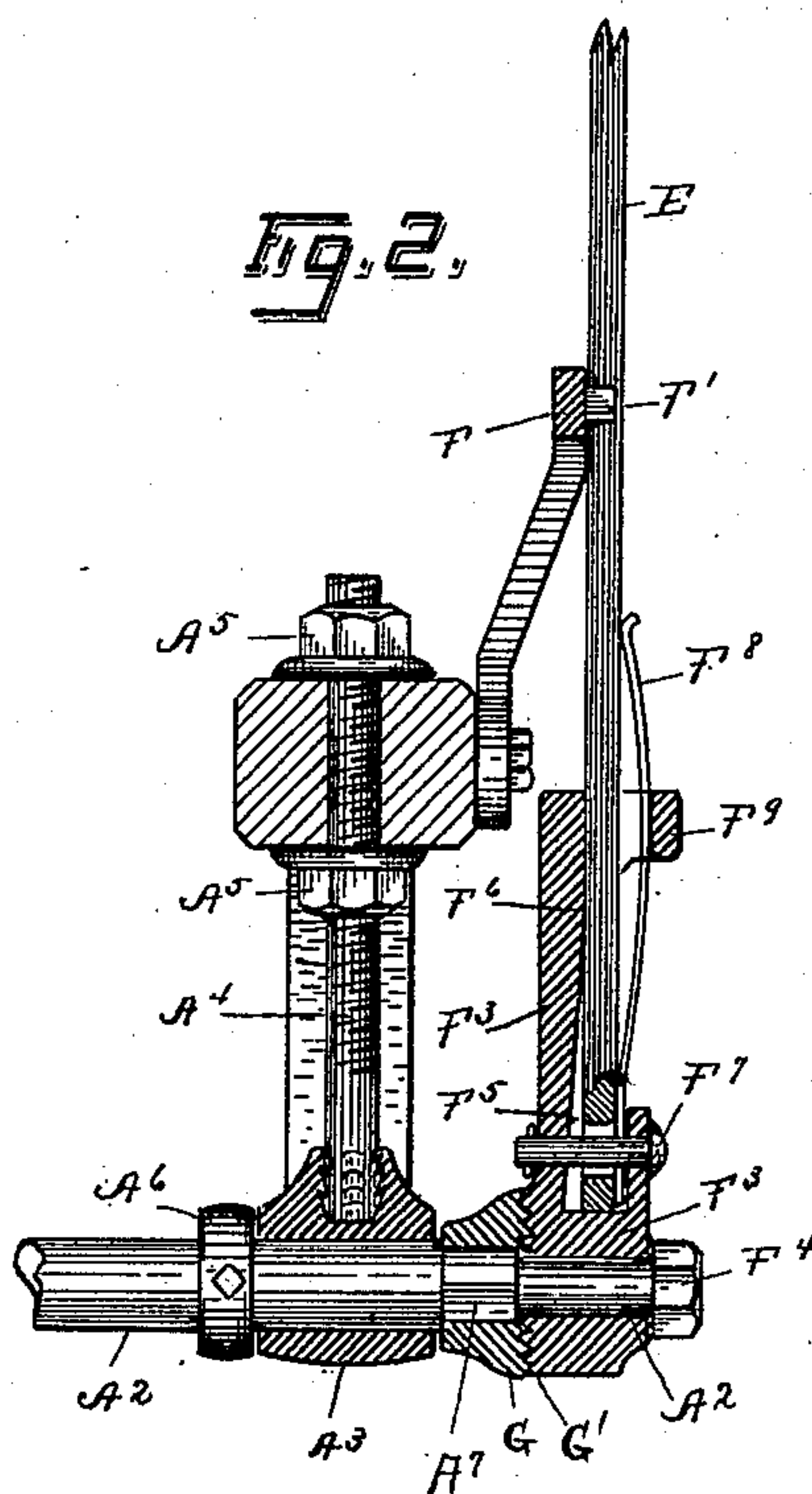
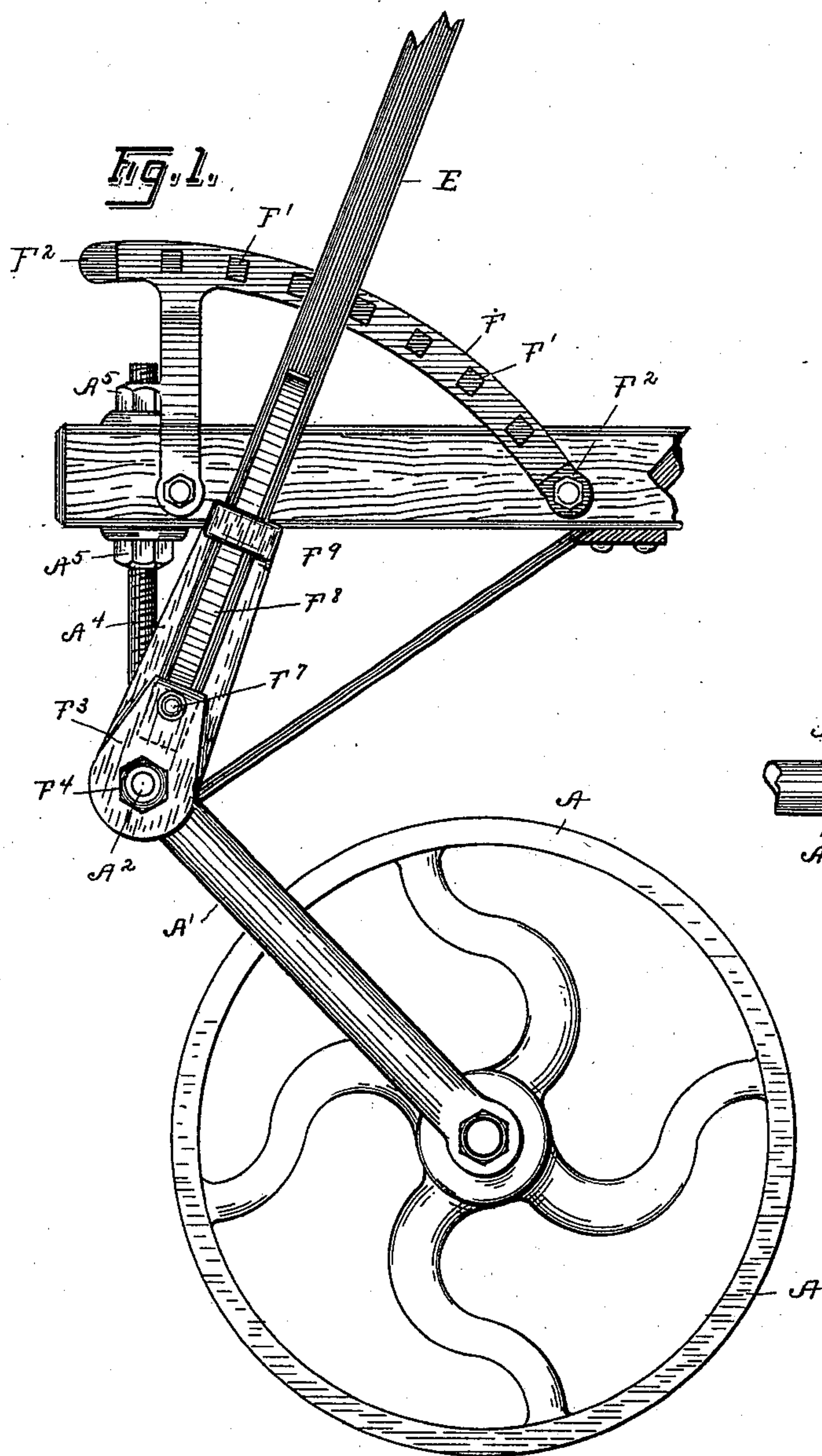
Patented Jan. 10, 1899.

A. V. WILBUR.

GANG PLOW.

(Application filed Feb. 18, 1898.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

ALPHONSO V. WILBUR, OF STOCKTON, CALIFORNIA, ASSIGNOR TO HENRY C. SHAW, OF SAME PLACE.

## GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 617,379, dated January 10, 1899.

Application filed February 18, 1898. Serial No. 670,853. (No model.)

*To all whom it may concern:*

Be it known that I, ALPHONSO V. WILBUR, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Gang-Plows; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in plows, and more particularly to the style of plows known as "gang-plows;" and it consists in the novel construction and arrangement of the parts whereby the draft-bar on the forward end of the plow-frame is raised and lowered to change the line of the collar-draft and whereby the draft-bar is rotated to raise and lower the plow-frame on a gage-wheel and whereby the parts of the construction are simplified and strengthened.

In the drawings, Figure 1 is a side elevation of the forward end of the plow-frame of the style named, the frame being cut away to show only that portion to which the present attachments are applied. Fig. 2 is a front elevation, partly in section, of the end of the draft-bar next to the landside and away from the gage-wheel.

Heretofore plows of this kind have been provided with a gage-wheel mounted upon a canted axle or arm the shifting of which has raised or lowered the plow-frame upon the wheel. By placing the canted axle or arm at different angles the wheel has been extended lower or higher with reference to the frame carrying the plow and this has gaged the depth at which the plow could sink. This canted axle or arm has been mounted in suitable bearings in the frame of the plow and has had an independent lever-and-link attachment for shifting it. Plows of this description have also been provided with draft-bars extending across the front end of the plow-frame. As a rule these draft-bars have been rigid, serving the purpose to steady the action of the draft link or hook to which the team has been hitched. There has been no

connection between the draft-bar and the canted axle or arm connecting with the gage-wheel.

In the present invention the gage-wheel A is mounted upon an axle extended from the end of the canted arm A', which in turn is rigidly connected to the draft-bar A<sup>2</sup>. The draft-bar A<sup>2</sup> is mounted in suitable bearings A<sup>3</sup>, which are rigidly secured to the end of set-bolts A<sup>4</sup>. The set-bolts A<sup>4</sup> are suitably threaded and provided with nuts A<sup>5</sup> and A<sup>5</sup>, mounted on the said bolts on the upper and lower side of the beams of the plow-frame. It is by means of these nuts that the bolts are taken up or let out from the beam and the draft-bar thereby raised or lowered. When in a suitable position, the nuts A<sup>5</sup> A<sup>5</sup> are screwed tight against the opposite sides of the plow-beam.

The draft-bar A<sup>2</sup> is provided with a set-collar A<sup>6</sup>, or a shoulder may be cast upon the draft-bar to serve the same purpose.

To rotate the draft-bar A<sup>2</sup>, and thereby change the angle of inclination of the arm A', I have provided a lever E. The lever E is adjustably mounted on the draft-bar and provided with a detent-quadrant F to lock it in various positions. The quadrant F is provided with crown-teeth F' to receive the lever E between the same and hold it. At the ends the bars F<sup>2</sup> are extended outward to form stops to limit the movement of the lever in either direction.

To adjust the gage-wheel A independently of the lever E, the latter is secured to the draft-bar A<sup>2</sup> by means of the collar G, the face of which is provided with serrations G'. The end of the draft-bar A<sup>2</sup> beyond the bearing A<sup>3</sup> is provided with the squared portion A<sup>7</sup> to receive the collar G. The inner face of the lever-socket F<sup>3</sup> is serrated to correspond with the serrations G' on the collar G. The lever-socket F<sup>3</sup> is held against the collar G by means of the nut F<sup>4</sup>, the end of the draft-bar A<sup>2</sup> being threaded to receive the same. When this nut F<sup>4</sup> is set up against the lever-socket tightly, the serrations in the same are held firmly and mesh with the serrations G' in the collar G; but when the nut is with-



drawn the serrations may be separated and the collar G and draft-bar A<sup>2</sup> may be rotated independently of the lever-socket and the lever and set in the angle of the canted arm A' in any desired position. When the canted arm is so set the lever-socket F<sup>3</sup> is caused to engage the collar and the nut F<sup>4</sup> set tightly in position. The device is then in position to be operated.

For the purpose of simplifying the construction the lever E is mounted in the lever-socket F<sup>3</sup>, as shown, the socket having cast therein the tapered portion F<sup>5</sup> to permit the lever E to be rotated about the point or shoulder F<sup>6</sup>. The lever is provided in the lower end with an enlarged perforation to receive the bolt F<sup>7</sup>, which is passed through the two walls of the tapered socket F<sup>5</sup>. This bolt holds the lever from riding out of the socket.

The upper portion of the socket F<sup>3</sup> is provided with an enlarged opening at the top to permit the necessary outward movement on the part of the lever E. To hold the lever in engagement with the teeth F' of the detent F, there is provided a flat spring F<sup>8</sup>, which extends into the bottom of the tapered socket F<sup>5</sup> and is provided at the lower end with the perforation through which the bolt F<sup>7</sup> extends. This spring may be extended under the bridge F<sup>9</sup> or outside the same, as desired. In either instance the action of the spring will be to press the lever E against the face of the detent F. All the parts hereinabove described are designed with regard to the simplicity of construction and with reference to the duplication of the parts.

In operation the lever (which is on the land-side of the plow-frame) may be grasped by the operator and when pulled toward him is moved outside the teeth F' of the detent F and may then be shifted forward or backward, as desired, rotating the draft-bar A<sup>2</sup> to change the angle or inclination of the canted arm A', changing the altitude of the gage-wheel. When moved to the desired position, the spring F<sup>8</sup> will force the lever E against the face of the detent F between the teeth F'. In this position the lever will be held firmly by the spring F<sup>8</sup> and by it maintained from rattling. One of the advantages of this construction also is that the center of rotation of the lever E or the center of the draft-bar A<sup>2</sup> may be lowered or raised without interfering with the operativeness of the lever E, this lever being capable of operation from any rotary center.

Having thus described this invention, it is claimed—

1. In a plow, in combination with a gage-wheel mounted on the end of a canted arm; of a draft-bar extending across the front of the frame of the plow and rotatably mounted in bearings thereon; a lever adjustably secured to that end of the draft-bar away from the gage-wheel; and a suitable locking de-

vice for securing the said lever in its adjusted position, substantially as described.

2. In a plow, in combination with a gage-wheel mounted on the end of a canted arm; of a draft-bar rigidly secured to the upper end of the said canted arm and rotatably mounted in bearings on the plow-frame to extend across the forward end of the same; a serrated collar rigidly set on the end of the draft-bar opposite the canted arm; a lever pivotally mounted on the said draft-bar and provided with a serrated face or collar to engage the serrated collar mounted rigidly on the draft-bar; a screw-nut to force the serrated faces of the collar and lever together; and a locking device adapted to secure the lever in its adjusted position, substantially as described.

3. In a plow in combination with a gage-wheel mounted on the end of a canted arm; a draft-bar rigidly secured to the upper end of the said canted arm and rotatably mounted on bearings in the plow-frame to extend across the forward end of the same; bearings for the said draft-bar provided with elongated threaded bolts extended upward through the frame of the plow and provided with screw-threaded nuts to bear against the upper and lower sides of the frame of the plow through which the said bolt is extended to lock the same in position in its various adjustments; a lever adjustably secured to the end of the draft-bar removed from the gage-wheel; and a suitable locking device for securing the said lever in its adjusted positions, substantially as described.

4. In a plow, in combination with a gage-wheel mounted on the end of a canted arm; of a draft-bar rigidly secured to the upper end of the said canted arm and rotatably mounted in bearings on the plow-frame to extend across the forward end of the same; a serrated collar rigidly set on the end of the draft-bar opposite the canted arm; a lever-socket pivotally mounted on the said draft-bar and provided with a serrated face to engage the serrated collar mounted rigidly on the draft-bar; a screw-nut to force the serrated faces of the lever-socket and collar together; a lever adapted to extend into the lever-socket and to be secured therein; a quadrant provided with teeth extended from the face thereof and secured to the plow-frame and adapted to hold the lever between the said teeth; and a spring securely mounted in the lever-socket and adapted to force the said lever between the said teeth in the quadrant, substantially as described.

In testimony whereof I have hereunto set my hand this 11th day of January, 1898.

ALPHONSO V. WILBUR.

Witnesses:

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