

No. 656,347.

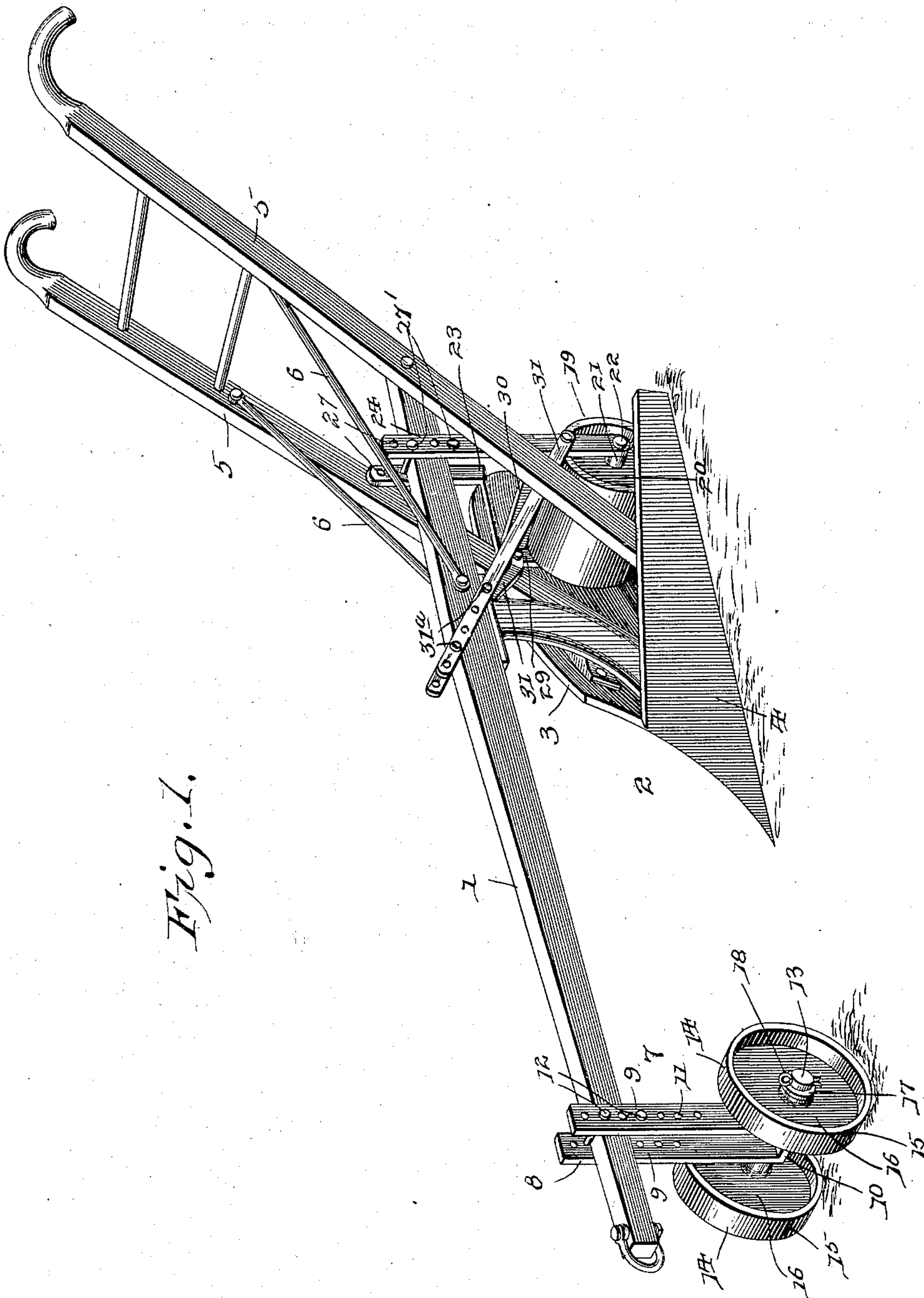
Patented Aug. 21, 1900.

G. A. FLANDERS.  
PLOW ATTACHMENT.

(Application filed Dec. 18, 1899.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

Howard D. Orr.

By his Attorneys,

Chas. S. Hoyer.

George H. Flanders, Inventor.

C. A. Snow & Co.

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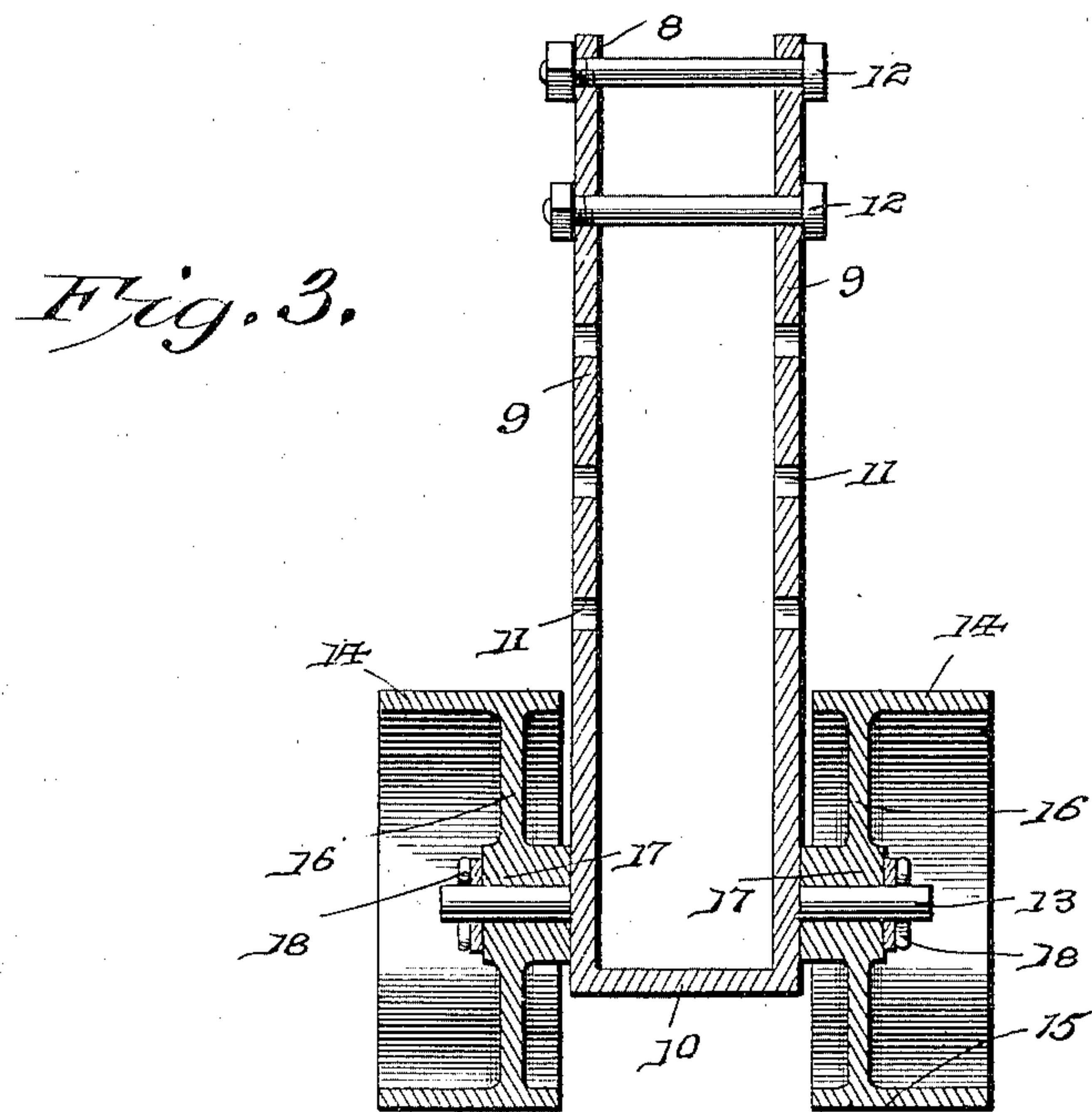
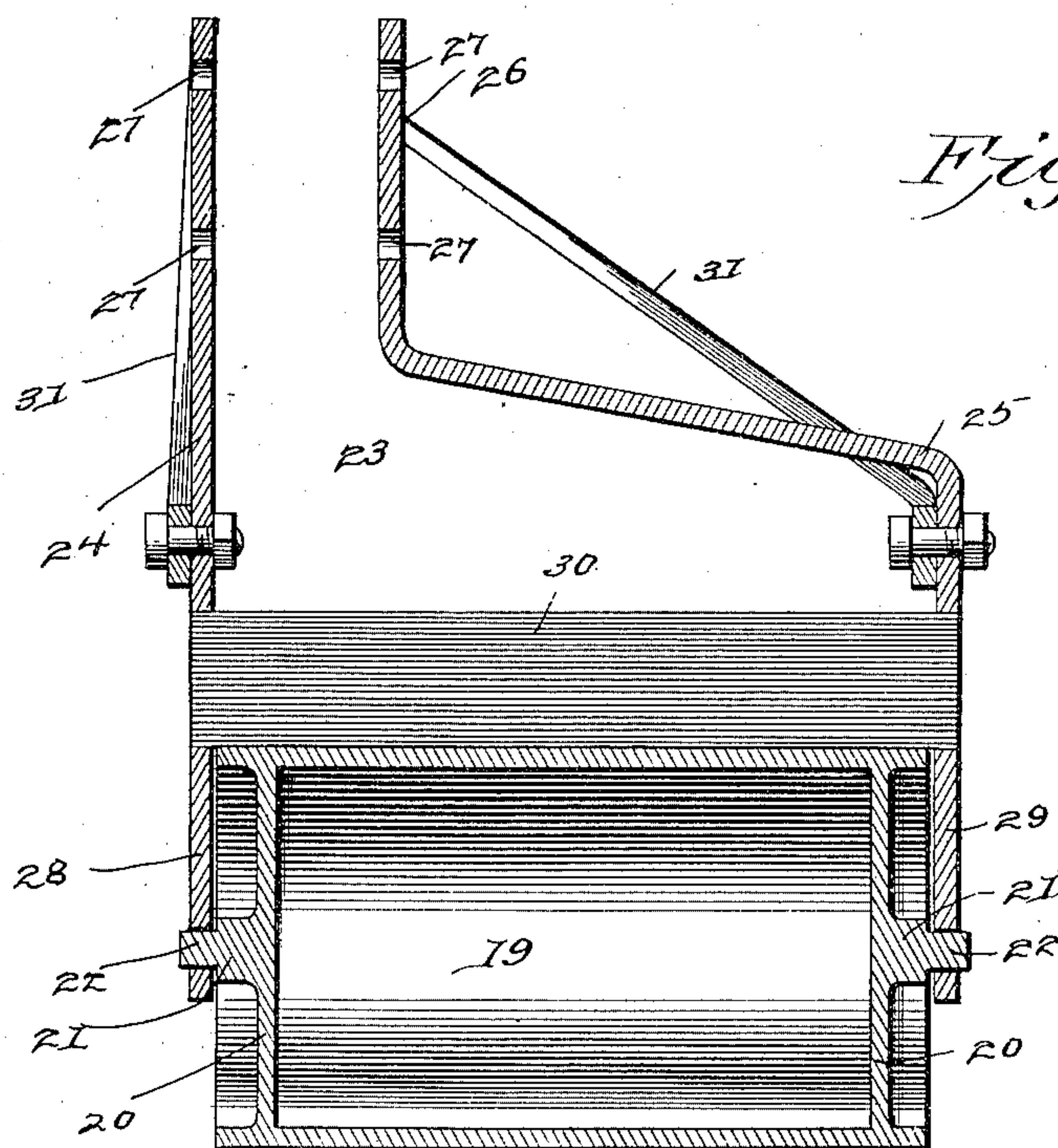
Patented Aug. 21, 1900.

**G. A. FLANDERS.**  
**PLOW ATTACHMENT.**

(Application filed Dec. 16, 1899.)

(No Model.)

**2 Sheets—Sheet 2.**



Witnesses

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# UNITED STATES PATENT OFFICE.

GEORGE A. FLANDERS, OF CHETEK, WISCONSIN.

## PLOW ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 656,347, dated August 21, 1900.

Application filed December 16, 1899. Serial No. 740,617. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. FLANDERS, a citizen of the United States, residing at Chetek, in the county of Barron and State of Wisconsin, have invented a new and useful Plow Attachment, of which the following is a specification.

This invention relates to plow attachments; and the object of the same is to provide simple and efficient means for regulating the depth of cut of the plow and also to maintain the plow properly within the furrow and reduce the friction thereon by the application of an easily-movable device in rear of the same.

The invention consists in the construction and arrangement of parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of a plow, showing the improved attachments applied thereto. Fig. 2 is a vertical section taken in a transverse direction through the rear roller attachment, as shown applied in Fig. 1. Fig. 3 is a transverse section through the front truck attachment.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a plow-beam, to which is suitably secured a plow 2, having the usual moldboard 3 and landside 4. To the beam and portions of the plow 3, as shown, handles 5 are fastened and reinforced in their attachment by braces 6.

One of the attachments to the plow consists in a front truck 7, comprising a U-shaped narrow frame 8, having the opposite side arms 9 adjustably secured to the forward extremity of the beam 1 and rising vertically from a lower connecting-web 10. Each of the arms 9 is provided with a vertically-alined series of openings 11, the openings in the opposite arms being also in transverse alinement and adapted to receive bolts 12, which bind on the upper and lower edges of the beam 2, and by this means the truck may be raised or lowered, the bolts 12 being readily removable for this purpose. The lower portions of the arms 9 have outwardly-extending stub-axes 13, on which are rotatably mounted wheels 14, having threads 15 of considerable breadth and webs 16 between the hubs 17 and the inner portions of the rims. The hubs 17 are re-

tained in proper connected relation to the stub-axe 13 by spring key-pins or other analogous devices 18. The webs 16 are closed completely from the hubs to the rims, and thereby the friction of the wheels is greatly reduced, particularly in moving over soft ground, in view of the fact that the soil cannot pass through the wheels and any tendency toward a drag is avoided. It will also be observed that the wheels 14 stand outwardly on opposite sides of the beam 1 in a transverse direction to a considerable extent, and in view of this arrangement the desired function of the truck attachment is more effectively carried out and the beam 1 held in regular position with material advantage in the plowing operation. Furthermore, the U-shaped frame 8 permits the truck to be readily applied to or removed from the beam or adjusted so as to allow the beam to be brought nearer to or elevated a greater distance above the surface of the ground, and thereby regulate the depth of furrow or freedom of the plow to work regularly proportionately to the adjustment of the said truck attachment.

Another attachment comprises a roller 19, having closing-webs 20 in the opposite end portions, with central outstanding enlargements 21, from which project bearing-studs 22. This roller is rotatably mounted in a frame 23, comprising a substantially-vertical hanger 24 and an offset-hanger 25 to thereby bring the roller into position relatively to the lateral projection of the plow 2 on the moldboard side, as will be readily understood. The offset-hanger 25 includes a vertical member 26, parallel to the upper extremity of the hanger 24, these hangers at the points set forth being apertured, as at 27, to receive bolts 27', bearing on the upper and lower edges of the beam and removably secure said hangers to the beam 1. The lower extremities 28 and 29 of the hangers 24 and 25 have the studs 22 rotatably mounted therein, and to the hangers, immediately above the roller, a scraper 30 is secured and has a lower reduced or sharpened edge, as will be understood, adjacent to the surface of the roller to remove the clinging soil therefrom and render its rotation much easier. To strengthen the hangers and hold the roller in steady adjustment or position when applied, brace-rods 31 are



employed, which are attached at opposite extremities respectively to the beam and to the hangers above the roller and have their free extremities apertured to receive bolts 31<sup>a</sup>,  
5 which also bear on the upper and lower edges of the beam. The roller is disposed in the rear of the plow, as shown by Fig. 1, and closely within the confines of the moldboard and landside, and thereby regularly holds the  
10 plow to the furrow and reduces the bottom friction, the said roller by reason of its mode of application following the plow in its penetration and serving to ease the resistance set up against the latter, particularly in plowing  
15 certain kinds of soil. This roller attachment, in conjunction with the truck attachment heretofore described, will greatly ease the plow operation and facilitate the movement of the plow and also aid in the formation of  
20 a straight furrow at a uniform depth.

Many other advantages will become apparent from time to time to those using the improved device and the two attachments can be very quickly applied to any plow now in use  
25 without material change of structure and, in fact, requiring only the provision of bolt holes or openings.

In making various applications of the invention it may be necessary to change the

form, proportions, and minor details, and 30 it will therefore be understood that such changes will be made without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described the invention, what 35 is claimed as new is—

1. The combination with a beam and plow, of a roller mounted closely within the rear portion of the plow and projecting laterally corresponding to the moldboard projection, 40 and hangers attached to the beam and the said roller and provided with a scraper.

2, The combination with a plow-beam and plow, of a truck adjustably mounted on the front extremity of the beam having a pair of 45 wheels disposed on opposite sides of the plane of the beam, and a roller hung from the beam within the rear portion of the plow and extending transversely of the latter, the said roller having a lateral projection nearly equal 50 to that of the moldboard.

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

GEORGE A. FLANDERS.

Witnesses:

WALTER SPEED,  
CARL F. MUSENS.