

No. 641,812.

Patented Jan. 23, 1900.

H. VALIANT.  
DRAFT EQUALIZER.

(Application filed June 23, 1899.)

(No Model.)

Fig. 1.

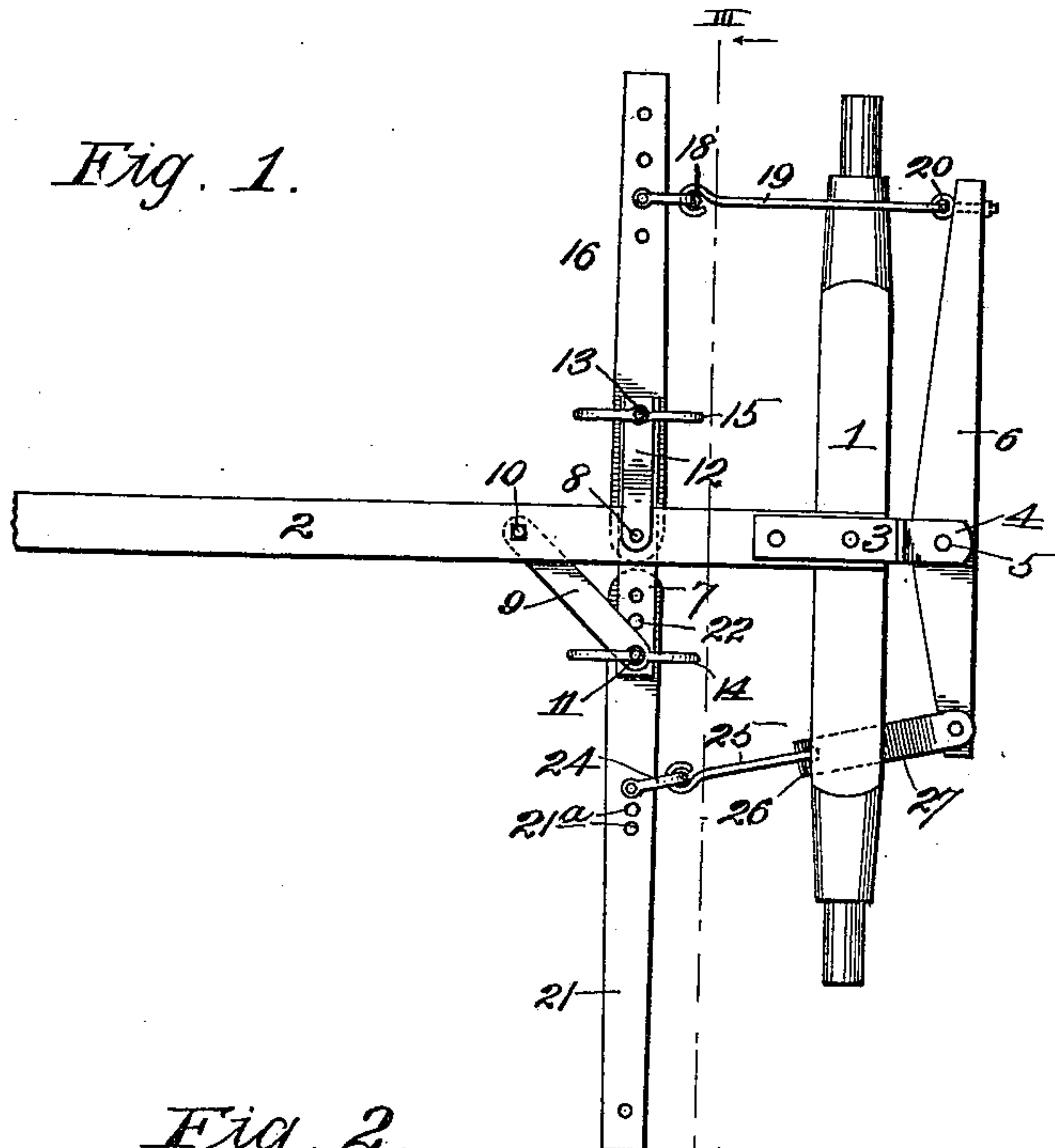


Fig. 2.

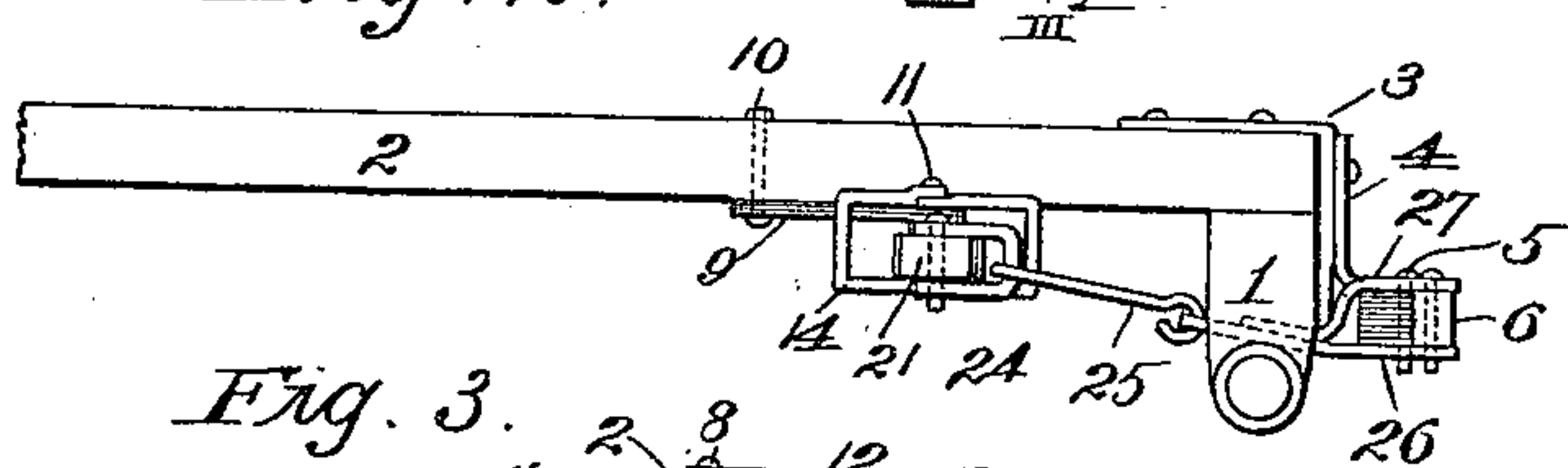


Fig. 3.

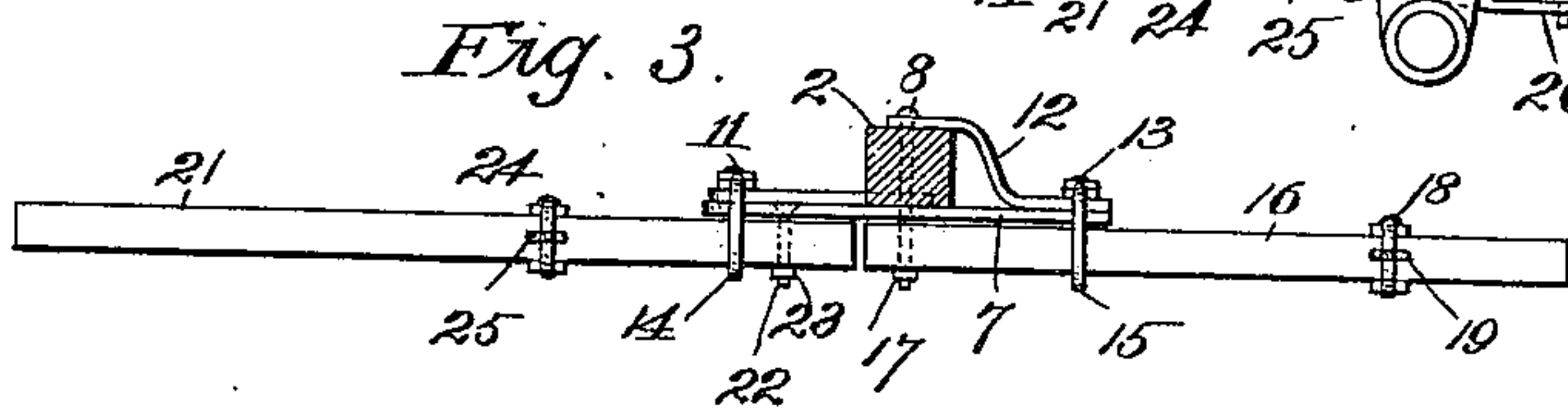
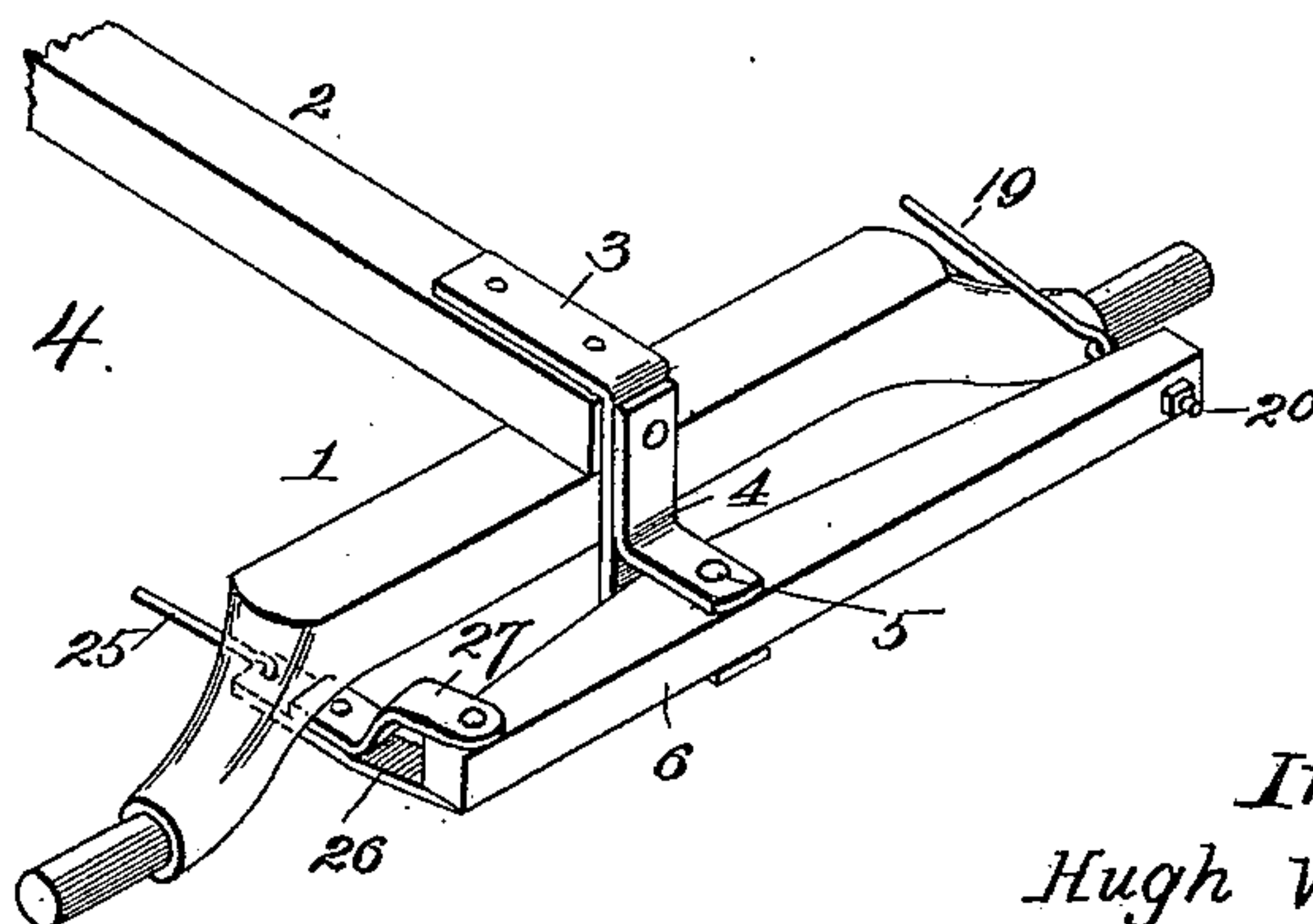


Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

HUGH VALIANT, OF KELLY, KANSAS.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 641,812, dated January 23, 1900.

Application filed June 23, 1899. Serial No. 721,610. (No model.)

*To all whom it may concern:*

Be it known that I, HUGH VALIANT, of Kelly, Nemaha county, Kansas, have invented certain new and useful Improvements in Draft-Equalizers, of which the following is a specification.

My invention relates to draft-equalizers, and more especially to what is known as a "three-horse evener;" and my object is to produce a device of this character by which the weight of the tongue when the attached machine is being drawn across the field shall be naturally removed from the necks of the animals and by which a "center draft" upon the plow is obtained.

The invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed, and in order that it may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 is a top plan view of a draft-equalizer constructed in accordance with my invention. Fig. 2 is a side view of the same. Fig. 3 is a cross-section taken on the line III III of Fig. 1. Fig. 4 is a perspective view of the tongue, the axle, and the lever supported below and rearward of the axle.

In the said drawings, 1 designates the axle of a plow, cultivator, or other vehicle, and 2 the tongue, secured to and projecting from the axle.

3 designates an approximately Z-shaped bracket having its upper arm bolted or riveted to the rear end of the tongue, its vertical arm bearing against the rear end of the tongue and the corresponding side of the axle and depending below the latter and its lower arm projecting rearward from the lower end of the vertical portion.

4 designates a right-angled bracket having its vertical arm bolted or riveted to the upright portion of the bracket 3 and the horizontal arm projecting rearward above and parallel with the lower arm of bracket 3 and connected to its lower arm by a pivot-bolt 5. 6 designates a lever arranged between said parallel arms and pivoted nearer one end than the other upon said bolt.

7 designates a cross-plate which is secured upon a bolt 8 at the under side of the tongue a suitable distance in advance of the axle, and

9 designates an oblique brace which is bolted at its front end, as at 10, to the under side of the tongue and at its rear end, as at 11, to one of the ends of the plate 7. The opposite end of plate 7 is braced by means of the approximately Z-shaped plate 12, secured at its upper end by bolt 8 upon the tongue and bolted at its outer end to plate 7, as shown at 13, and secured upon bolts 11 and 13, transversely of the plate 7, are the guide loops or clips 14 and 15, respectively.

16 designates a lever extending through the guide-loop 15 and pivotally secured upon the bolt 8 by means of the retaining-nut 17, and said lever near its outer end is provided with a pivoted clip 18, connected by the link 19 and eyebolt 20 to the long end of lever 6.

21 designates a lever extending through the guide-loop 14 and secured by the retaining-nut 23 upon the pivot-bolt 22, depending from the plate 7 to one side of the tongue, and this lever 21 is provided with the pivoted and laterally-adjustable clip 24, said clip being rendered adjustable by having its pivot-bolt extending through one or another of the apertures 21<sup>a</sup> of said lever 21. Said clip is connected by the link 25 to a clip pivoted to the short end of lever 6, said clip preferably comprising the flat lower plate 26 and the approximately Z-shaped top plate 27, the latter at one end being riveted or bolted to plate 26, with the lever pivoted between its opposite end and said lower plate, as shown clearly in Fig. 4. This type of clip permits the lever 6 to be connected to lever 21 in the same plane as the connection between the lever 6 and the bar or lever 16, as will be readily understood by reference to Figs. 2 and 4 particularly.

In practice a singletree is attached in the customary manner to the outer end of lever 16 and a doubletree to the outer end of lever 21, and owing to the fact that the latter is pivoted to one side of the tongue and is connected to the short end of lever 6 it is obvious that the stronger pull or strain imposed by the two horses will tend to swing the front end of the tongue toward the side where such strain is imposed, thereby assisting the single horse at the opposite side of the tongue in equalizing the strain and applying the power centrally upon the cultivating appli-



ances. It will also be noticed in this connection that the application of power comes squarely upon the pivot of the lever 6. After hitching up the horses to the machine and  
5 noting the effect produced the driver by adjusting the clip 24 inward or outward upon the lever 21 can balance the power of the animals upon the machine to a nicety and thereby insure a perfect center draft.

10 From the above description it will be apparent that I have produced a draft-equalizer which possesses the features of advantage enumerated as desirable in the statement of invention, and it is to be understood that various  
15 changes in the detail construction, form, proportion, or arrangement of parts may be made without departing from the spirit and scope or sacrificing any of the advantages of the invention.

20 Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a draft-equalizer, a transverse plate secured rigidly to the tongue of the machine,  
25 clips secured to said plate, a pair of levers 16 and 21 extending through said clips and secured to said plate, and projecting laterally

from opposite sides of the tongue, one being pivoted to the plate about centrally thereof, and the other between such point and the  
30 end of the plate, a lever supported rearward of said plate, and links pivotally connecting said lever with the first-named levers, substantially as described.

2. In a draft-equalizer, a transverse plate  
35 secured to the tongue of the machine, an oblique brace-plate connecting one end of the transverse plate with the tongue, a pair of clips secured to the ends of said transverse plate, a pair of levers extending through said  
40 clips, one of the levers being pivoted to the transverse plate to one side of the tongue and the other lever to said plate vertically below the tongue, a bracket secured to and depending from the rear end of the tongue, a lever  
45 pivoted thereto, and links connecting said lever with the first-named lever, substantially as described.

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

HUGH VALIANT.

Witnesses:

W. J. B. WALTER,

M. L. BEST.