

No. 756,921.

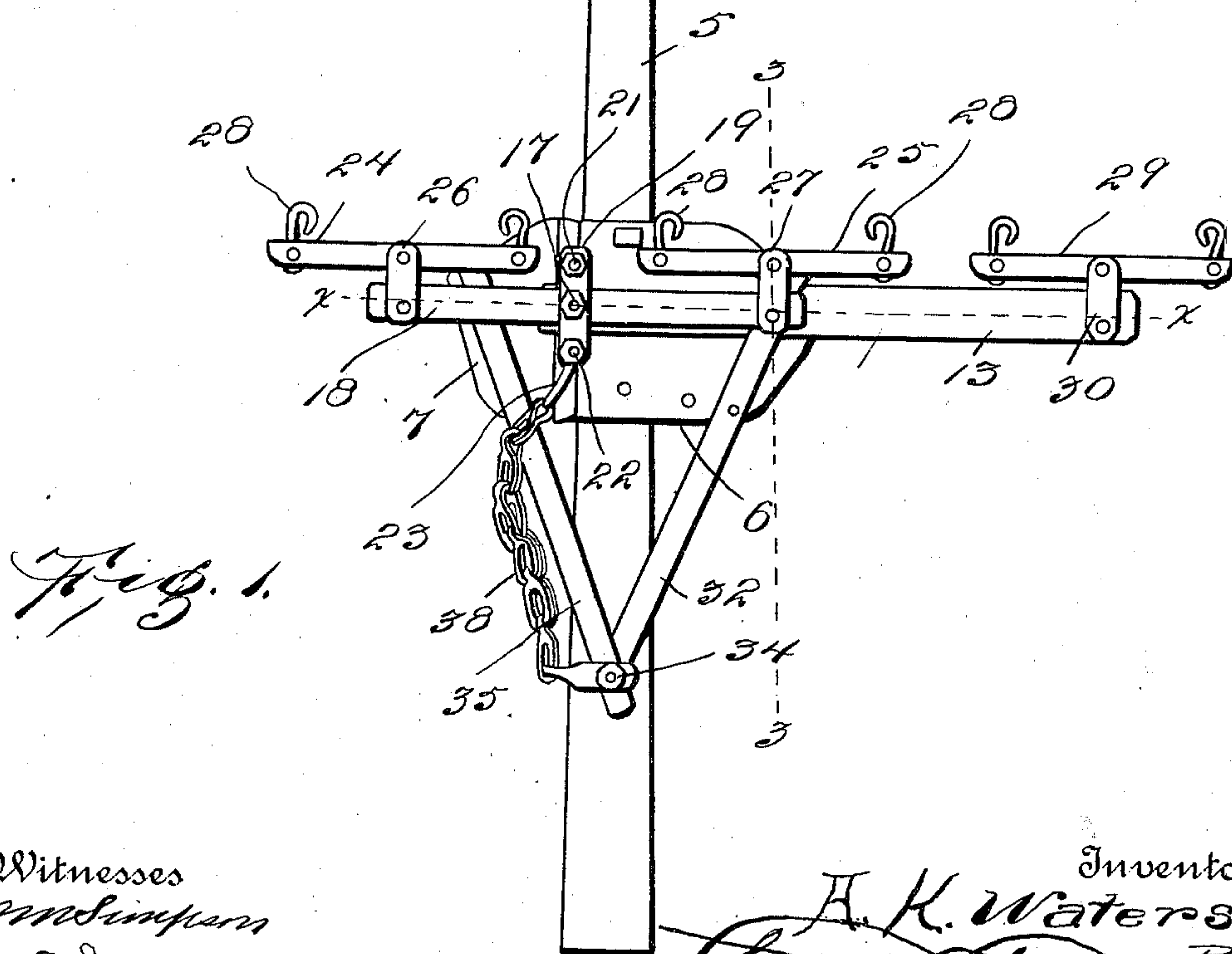
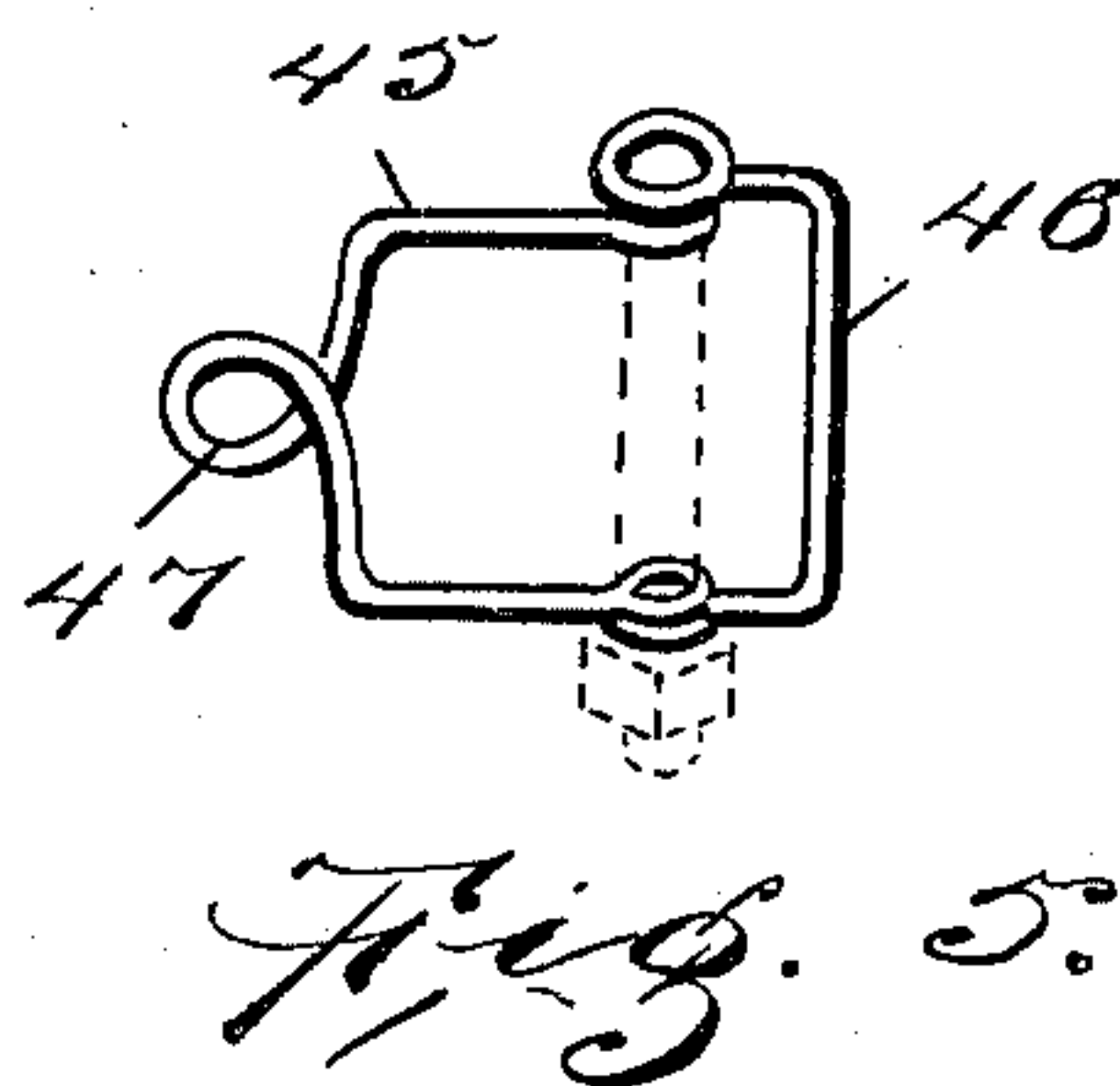
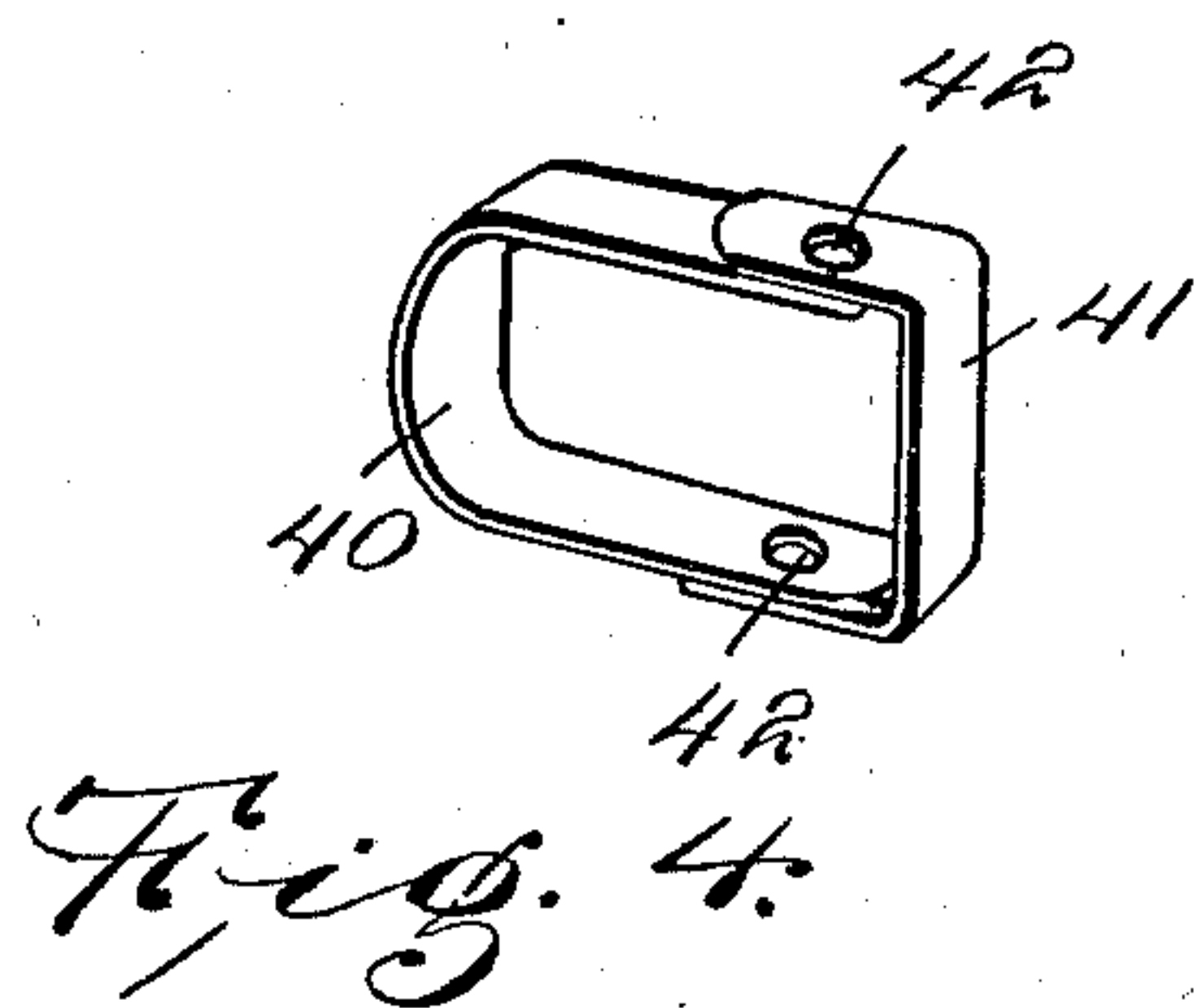
PATENTED APR. 12, 1904.

A. K. WATERS.  
DRAFT EQUALIZER.

APPLICATION FILED OCT. 23, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses  
C. M. Simpson  
F. C. Jones

Inventor  
A. K. Waters  
By  
Charles Chandler  
Attorneys

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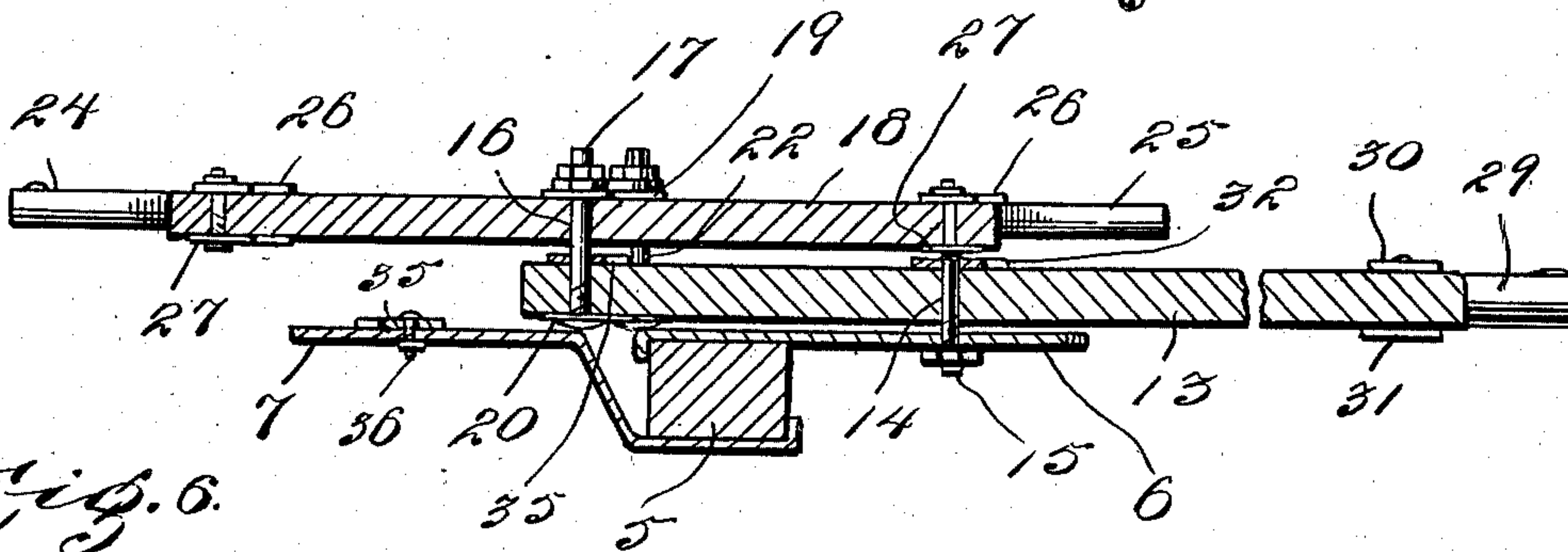
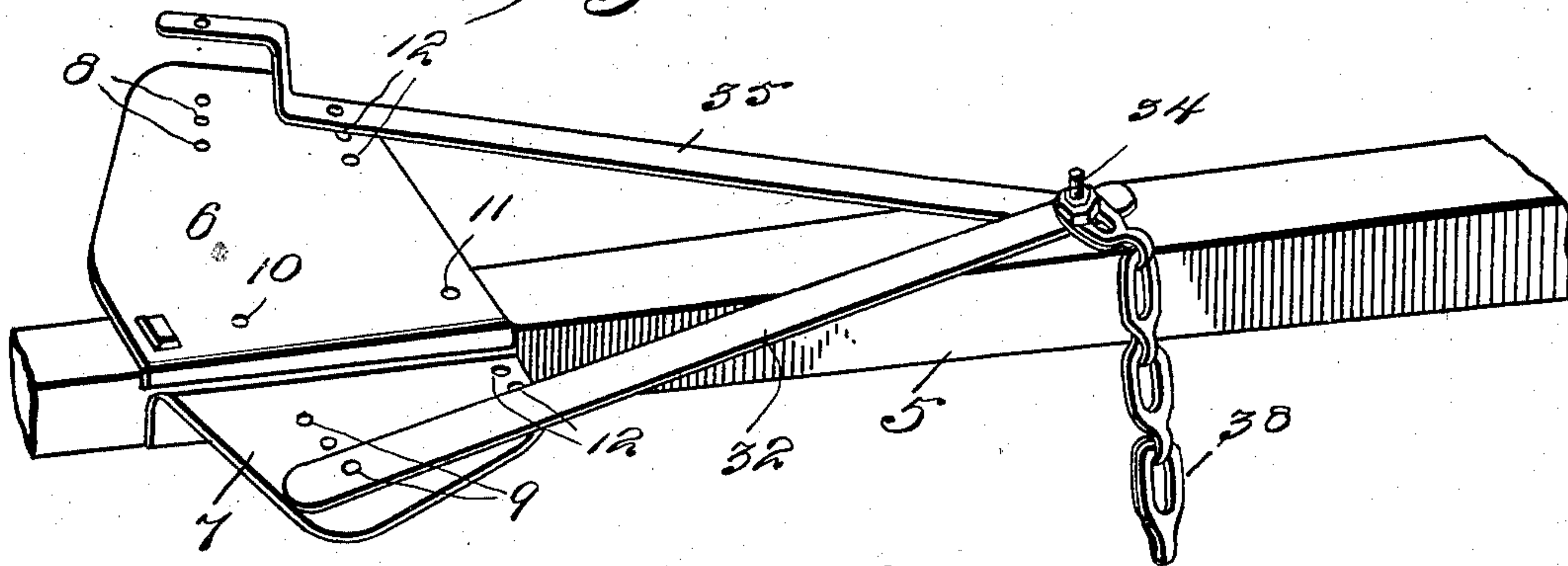
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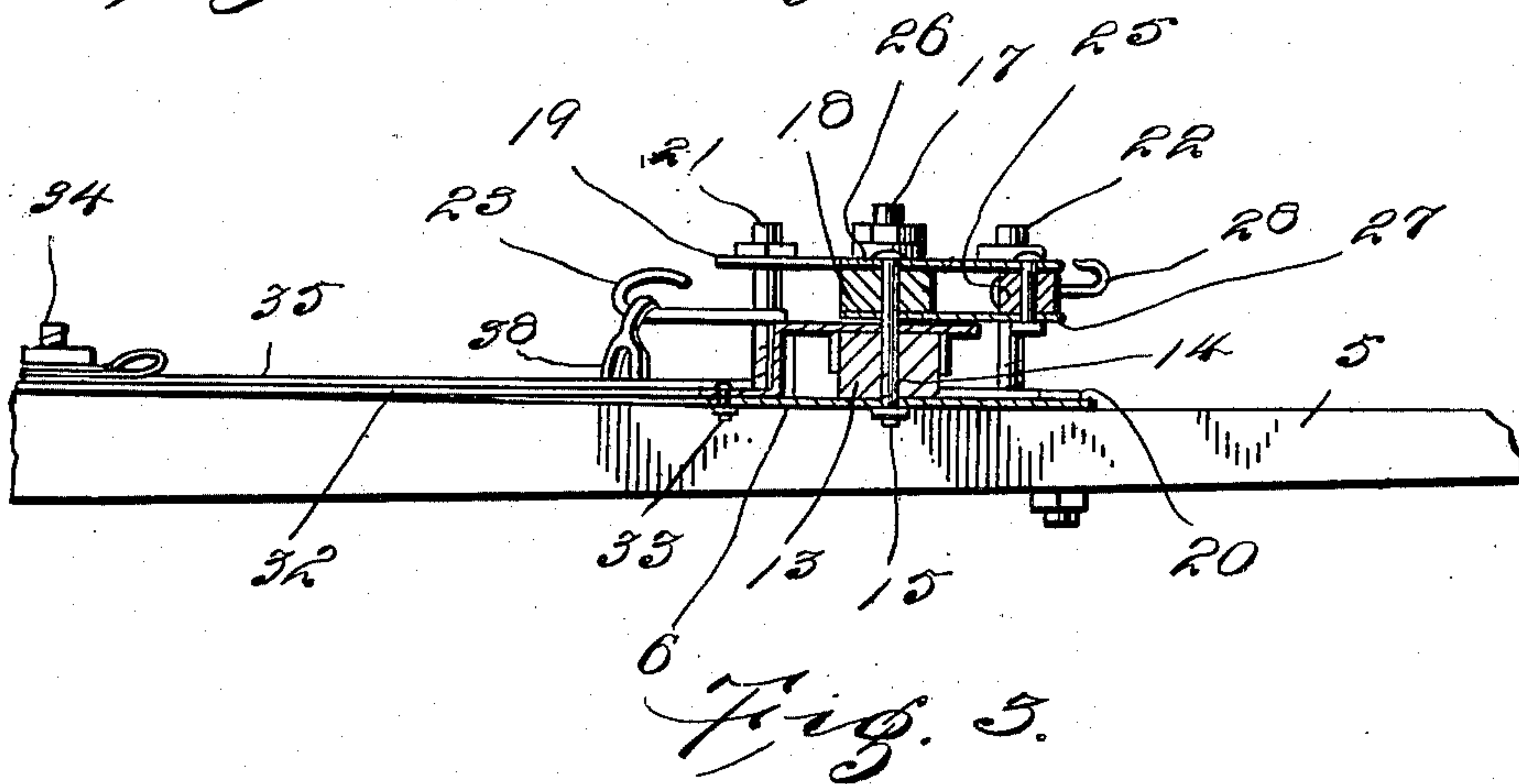
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2 SHEETS—SHEET 2.

*Fig. 2.*



*Fig. 6.*



*Fig. 5.*

Witnesses  
*W. C. Jones*  
*J. C. Jones*

Inventor  
*A. K. Waters*  
By *Charles H. Chandler*  
Attorneys



## UNITED STATES PATENT OFFICE.

AUSTIN K. WATERS, OF ALBION, PENNSYLVANIA.

## DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 756,921, dated April 12, 1904.

Application filed October 23, 1903. Serial No. 178,255. (No model.)

*To all whom it may concern:*

Be it known that I, AUSTIN K. WATERS, a citizen of the United States, residing at Albion, in the county of Erie, State of Pennsylvania, have invented certain new and useful Improvements in Draft-Equalizers; 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 draft-equalizers; and it has for its object to provide a construction which will be efficient in its operation, which may be adjusted to permit of hitching of the odd horse at either side of the pole or tongue, which may be easily and quickly adjusted for use without the evening action, as when a pair of draft-animals are to be hitched, and in which the several parts will be thoroughly braced.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the evener adjusted for operation. Fig. 2 is a perspective view showing a portion of a pole ready for application of the equalizing-beam with its trees. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a perspective view of a modified form of clevis. Fig. 5 is a perspective view showing a third form of clevis. Fig. 6 is a section on line X X of Fig. 1.

Referring now to the drawings, there is shown the pole or tongue 5 of a mower, harvester, or other implement to which it is desired to hitch three draft-animals abreast and out of the way of the knives, the present invention permitting of the hitching of two horses at the one side of the tongue and one horse at the other side and at the same time balancing the draft of the three horses upon the tongue. For this purpose and, further, to permit of hitching the single horse at either side of the tongue plates 6 and 7 are secured one against the upper face of the tongue and the other against the lower face of the tongue, the latter plate being bent upwardly at the side of the tongue and then outwardly or laterally away from the tongue in the plane of the plate 6. In the plate 6 is formed a trans-

verse series of perforations 8 adjacent to its front edge, and in the plate 7 is formed a transverse series of perforations 9 adjacent to its front edge, the use of these perforations being hereinafter explained. Through the plates and through the tongue are formed additional perforations 10 and 11, and adjacent to the rear edge of each of its plates is a series of perforations 12.

An equalizing-beam 13 is provided, and at a point one-third of the distance from one end thereof is formed a perforation 14, through which is passed a bolt 15, which is engaged in one of the perforations of the series 8 in the present instance and serves to pivotally connect the beam to the plate and with the tongue. In this position of the equalizing-beam one end thereof projects slightly beyond the opposite side of the tongue from the pivot-bolt and has a perforation 16 therethrough, in which is engaged a pivot-bolt 17, which is passed through a doubletree 18, disposed upon the beam, and through the plates 19 and 20, of which the former lies transversely of the upper face of the doubletree and the latter parallel therewith transversely of the lower face of the equalizing-beam. Through the plates 19 and 20 at opposite sides of the equalizing-beam are passed the bolts 21 and 22, the plates, with their bolts, forming a clevis in connection with a hook 23, which is engaged at the free end of its stem with the bolt 21, the hook projecting rearwardly from the equalizing-beam for a purpose to be presently explained.

At the ends of the doubletree 18 are pivotally connected swingletrees 24 and 25 through the medium of upper and lower plates 26 and 27, these swingletrees having hooks 28 for engagement with traces.

At the opposite end of the equalizing-beam is connected a swingletree 29 by means of the upper and lower plates 30 and 31, which are connected to the beam and swingletree by pins or bolts, as illustrated, these plates being so positioned and proportioned as to permit the swingletree to be swung around the end of the equalizing-beam from one side to the other thereof.

A hammer-strap 32 is pivotally connected



with the tongue in the rear of the plate 6 by means of a bolt 34 passed therethrough, this strap being connected to the plate 6 removably by means of a bolt 33 passed there-  
 5 through and through one of the series of perforations 12. The forward or free end of the hammer-strap is bent upwardly and then forwardly over the equalizing-beam, and through it is engaged the pivot-bolt of the equalizing-  
 10 beam, so that bending of the bolt is prevented. A second strap 35 has its rear end engaged with the bolt 34 and is perforated at its forward end to receive a bolt 36, which is engaged with one of the series of perforations 9.  
 15 When arranged as described, the swingletree is twice as far from the pivot of the equalizing-beam as is the doubletree, and having thus twice the leverage the single animal hitched to the swingletree balances the draft of the two  
 20 animals on the doubletree.

In order that the equalizing-beam may be rendered at times inoperative, a chain 38 is engaged at one end with the bolt 34, and this chain may have one of its links engaged with  
 25 the hook 23 to hold the equalizing-beam at right angles to the tongue. The draft-animal at the far end of the equalizing-beam may be then removed and the implement drawn by the animals connected to the swingletrees, that  
 30 are connected in turn to the doubletree. Normally the end link of the chain is engaged with the hook 23, with the chain slack, so that it does not interfere with pivotal movement of the equalizer-beam.

35 When it is desired to connect the apparatus so that the single animal will be at the opposite side of the tongue from that illustrated, it is only necessary to swing the swingletree that is connected to the beam to the opposite  
 40 side of the beam and after withdrawing the bolt 21 to swing the doubletree so that its swingletrees will project at the opposite side of the beam. The pivot-bolt of the equalizing-beam is then engaged with one of the series  
 45 of perforations 9 of a plate 7, and the straps are correspondingly shifted.

50 In Fig. 4 of the drawings there is shown a clevis for connecting the doubletree with the equalizing-beam in which there are employed two U-shaped plates 40 and 41, the free ends of one of which are received between those of the other, the overlapping portions having alining perforations 42 to receive the bolt

that connects the doubletree with the beam. A hook may be engaged with the bight portion of one of the plates for connection of the neutralizing-chain. 55

In Fig. 5 there is shown a construction wherein in the place of U-shaped plates there are employed U-shaped wires 45 and 46, having eyes 47 formed at their ends by bending the wires, these eyes being alined to receive the pivot-bolt and the bight portion of one of the wires being twisted to form a hook-receiving eye 47. 60 65

What is claimed is—

1. In a draft-equalizer, the combination with a tongue having a plate secured thereto and projecting laterally therefrom, of an equalizing-beam pivotally mounted upon the  
 70 plate at one side of the tongue, a swingletree and a doubletree connected to opposite ends of the beam, the point of pivotal mounting of the beam being nearer to the swingletree than to the doubletree, and means connected with  
 75 the tongue in the rear of the beam and adapted for connection with the beam adjacent to the tongue to hold the end of the beam with the doubletree against forward movement.

2. In a draft-equalizer, the combination 80 with a tongue having plates secured thereto and projecting at opposite sides thereof and having each perforations therethrough, of an equalizer-beam having a pivot-bolt engaged therethrough at a point nearer to one end than  
 85 to the other and adapted for engagement with a perforation of either plate, a hammer-strap engaged with the pivot-bolt and connected to the tongue in the rear of the plate, a doubletree pivotally connected to the end of the  
 90 beam nearest to its pivot-bolt and adapted to project at both sides of the tongue, swingletrees attached to the doubletree, a swingletree connected to the opposite end of the beam, said doubletree and swingletree being movable  
 95 to lie at either side of the beam, and means for holding the doubletree and the connected end of the beam against forward pivotal movement.

In testimony whereof I affix my signature in  
 presence of two witnesses. 100

AUSTIN K. WATERS.

Witnesses:

GEORGE TAYLOR,  
 J. W. CHERRY.