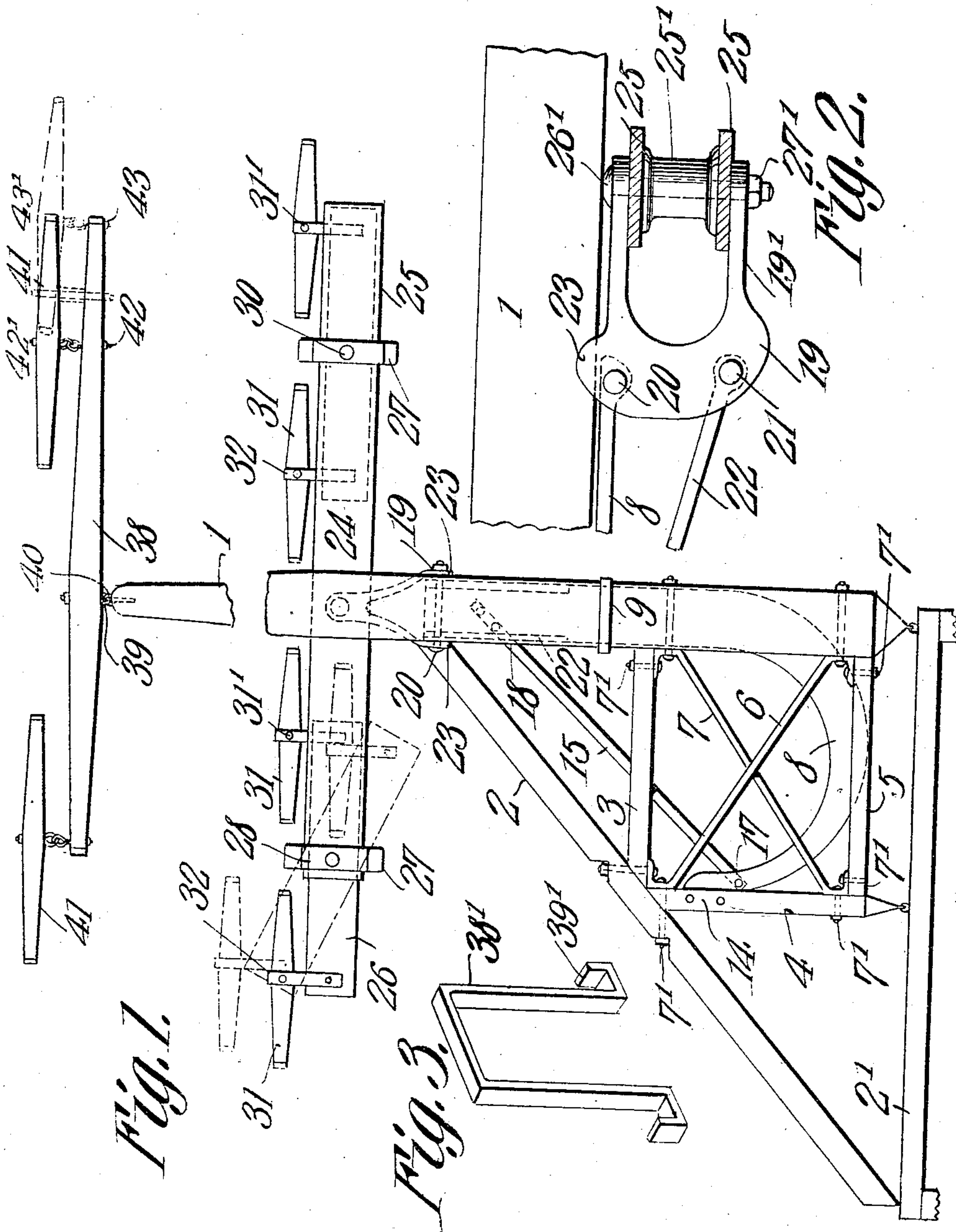


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H. C. HUFF.
DRAFT APPLIANCE.
APPLICATION FILED APR. 3, 1908.

Patented Aug. 30, 1910.

2 SHEETS—SHEET 1.



Witnesses
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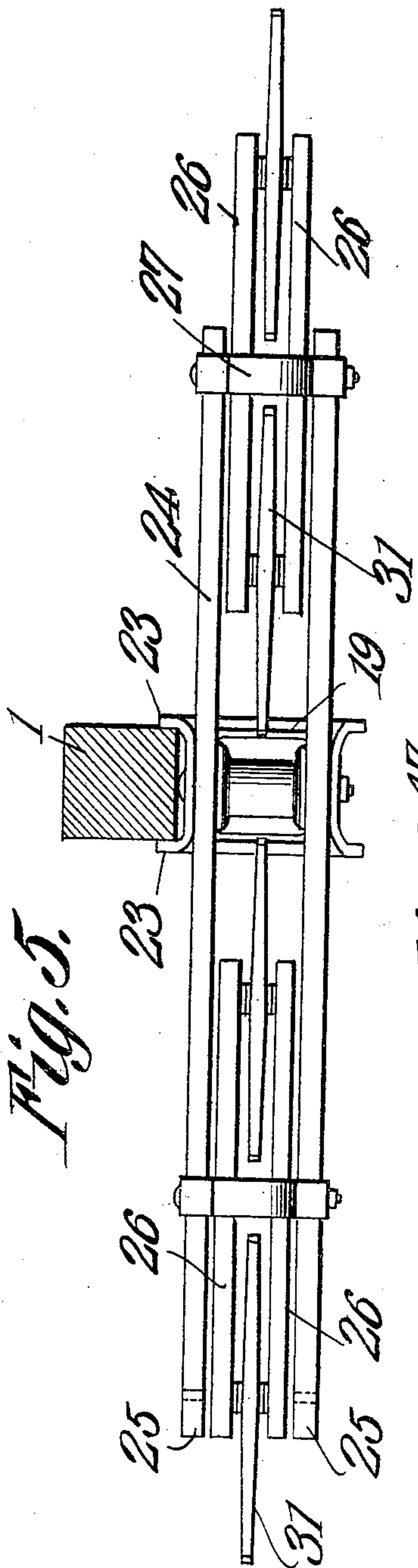


Fig. 5.

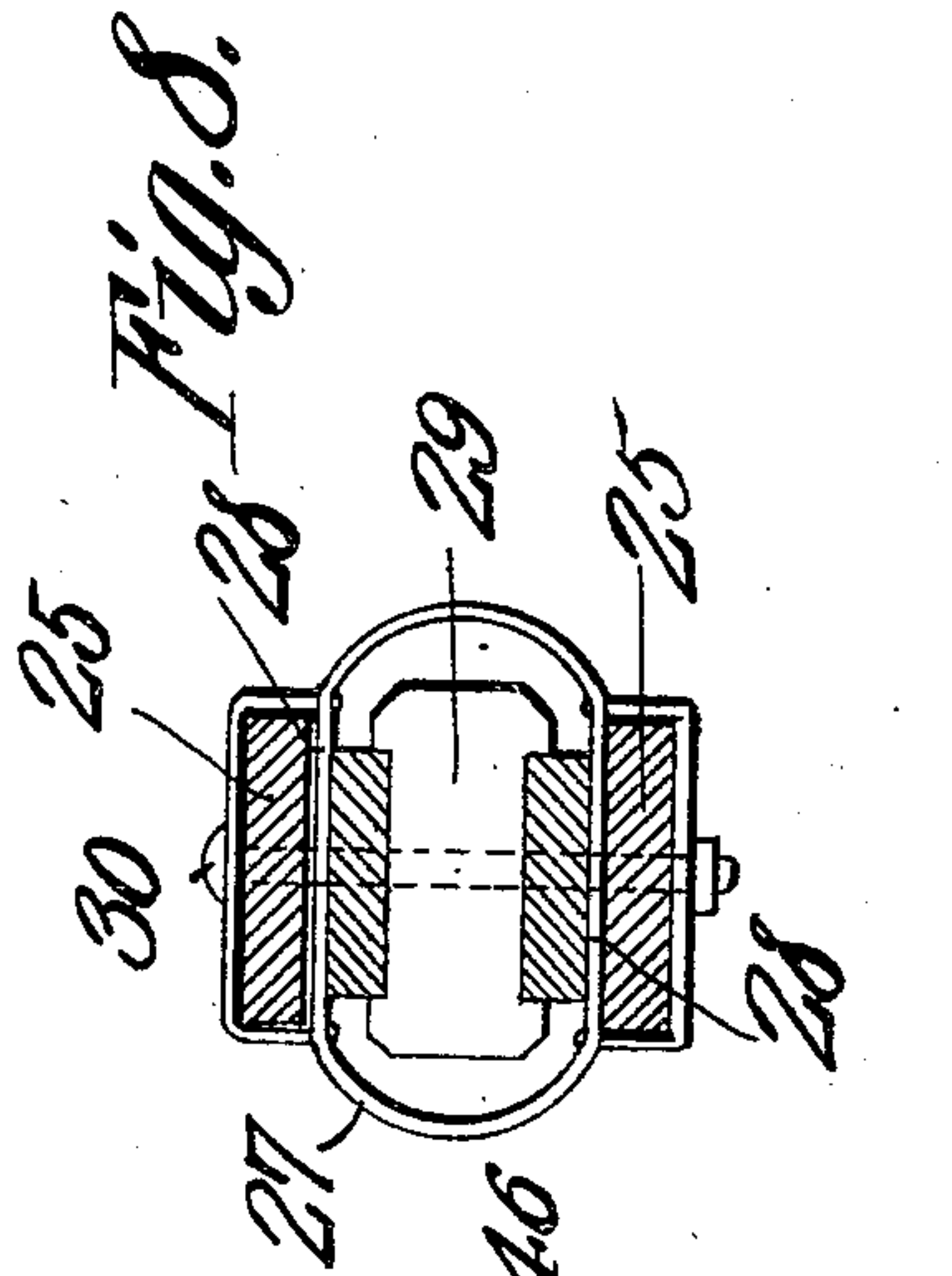


Fig. 8.

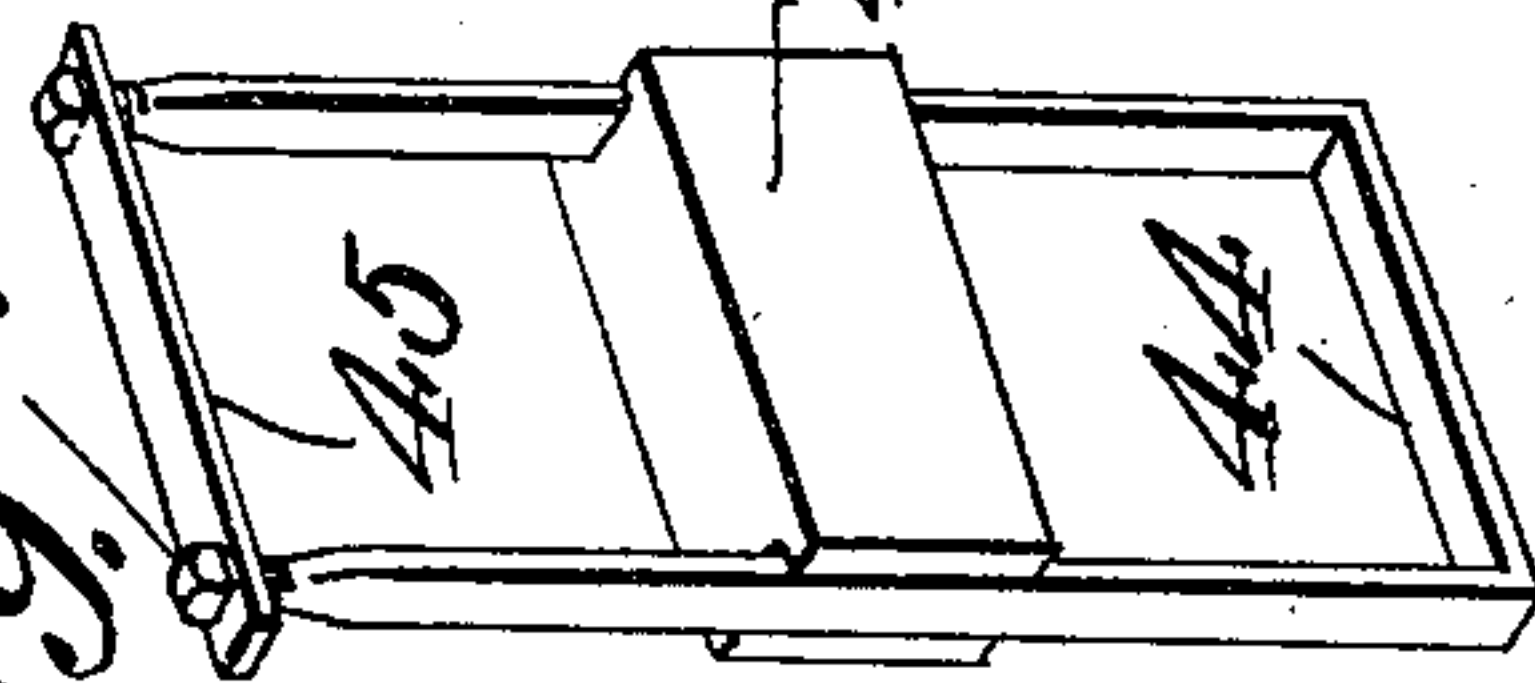


Fig. 9.

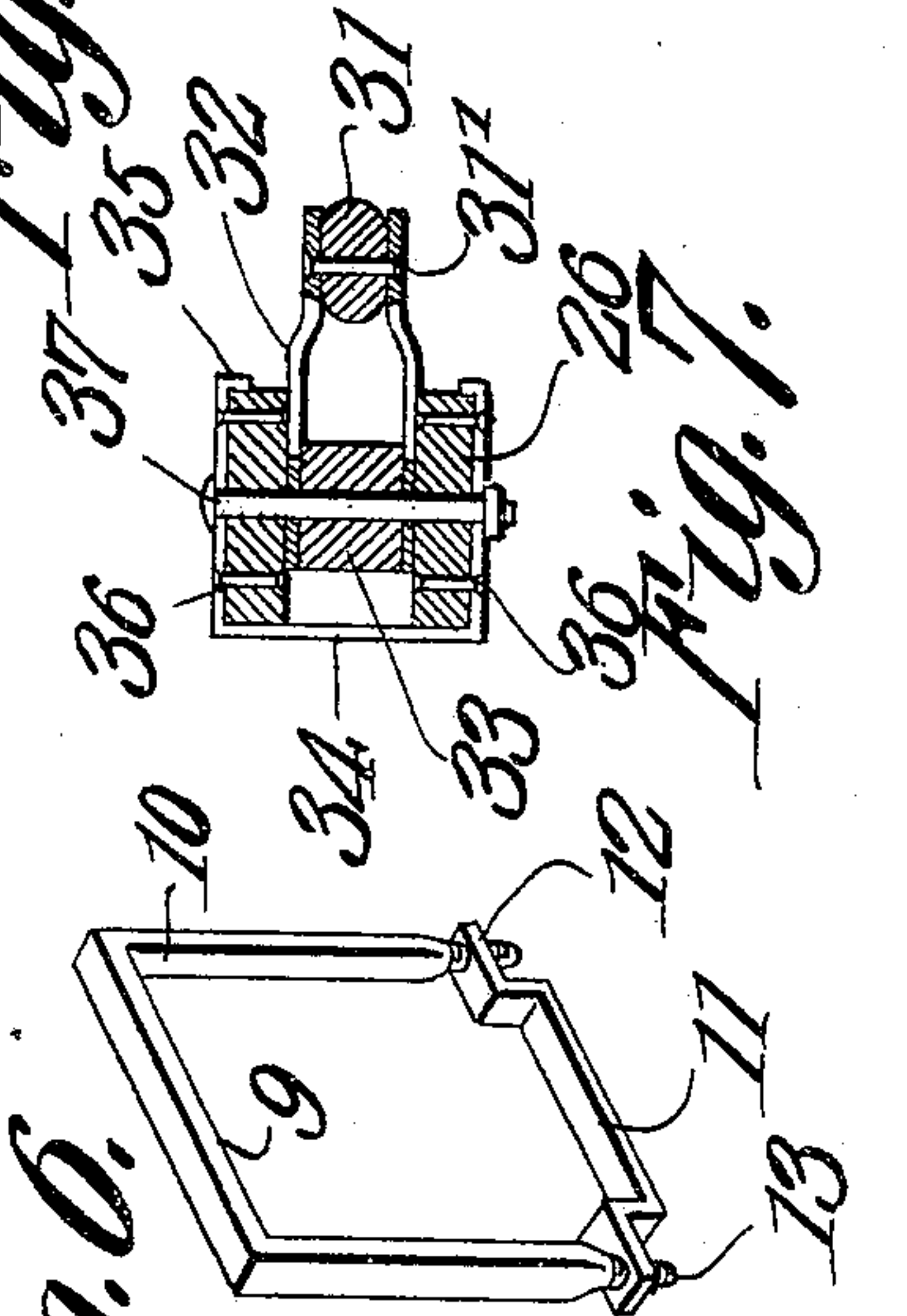


Fig. 7.

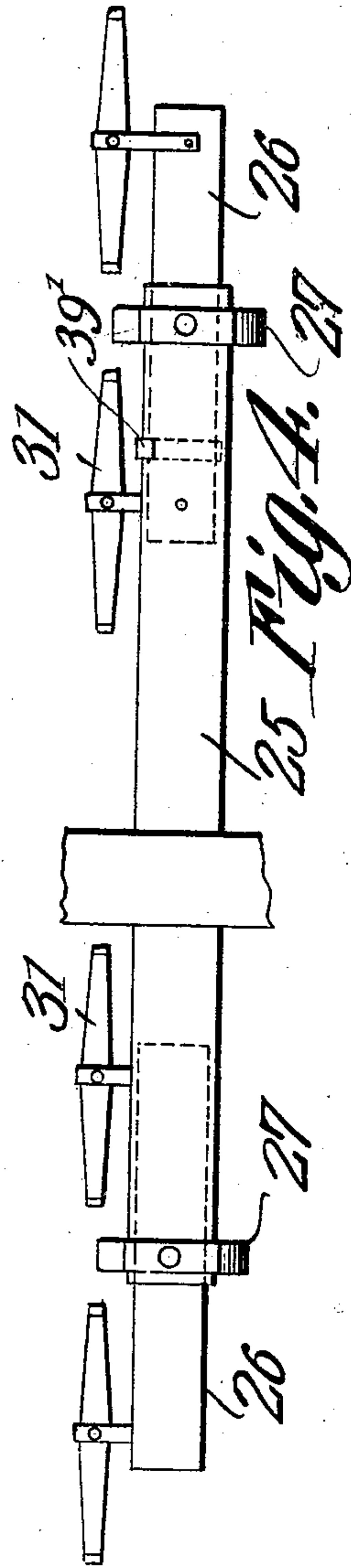


Fig. 4.

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Fig. 6.

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UNITED STATES PATENT OFFICE.

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DRAFT APPLIANCE.

968,662.

Specification of Letters Patent.

Patented Aug. 30, 1910.

Application filed April 3, 1908. Serial No. 425,036.

To all whom it may concern:

Be it known that I, HIRAM C. HUFF, a citizen of the United States, residing at Vegreville, in the Province of Alberta and Dominion of Canada, have invented a new and useful Draft Appliance, of which the following is a specification.

This invention has relation to draft appliances for harvesting machines and the like, and it has for its object to provide a draft means in which the side draft may be practically avoided and to provide room on the side of the tongue next to the grain for a number of horses.

The invention also has for its object certain details of construction whereby the parts thereof will be durably and firmly held in place, as hereinafter set forth and claimed.

Referring to the accompanying drawings, in which similar parts are indicated by like reference characters:—Figure 1 is a plan view of the draft appliance constructed in accordance with this invention, showing the tongue broken away and the neck yoke mounted on the outer end of the tongue. Fig. 2 is a side view of a portion of the tongue and its attachments. Fig. 3 is a detail view of a retaining flange used in the structure. Fig. 4 is a plan view of a long double-tree and shorter swingle trees used in the structure. Fig. 5 is an end view of the double and swingle trees. Fig. 6 is a detail view of a clamp used in the structure. Fig. 7 is a detail view in vertical section of the connections of the swingle trees, and the short double tree. Fig. 8 is an enlarged detail view, in vertical cross section, of the connection between the double tree and swingle tree. Fig. 9 is a perspective view of another clamp used in the structure.

1 is the tongue held in position by means of a diagonal frame 2 secured at one end to the tongue, and at the other end to the frame 2', and by an arm 3 connecting the brace 2 with the tongue, by an arm 4 connecting the brace 2 with the frame 2' by an arm 5 connecting the arm 4 with the tongue, and by 2 iron rods 6 and 7 crossing each other and connected to the tongue and arms 3, 4 and 5, the several supports 2, 3, 4 and 5 of wood, and together with the rods 6 and 7, being bolted at their respective points referred to by means of the bolt 7'.

8 represents a falciform member which is loosely fastened to the tongue on its under

side by means of a clamp 9, formed with U-shaped portion 10, and a cross-bar 11, having inturned annular portions 12 secured to the U-shaped portion 10 by means of nuts 13 screwing on the ends of the U-shaped portions. The point of the member 8 is attached to the wooden arm 4 at the point 14. The member 8 is further secured by means of a brace rod 15, having one end secured at the point 18 to the member 8 and its other end secured to the member 8 at the point 17 adjacent to the point 14. To the forward end of the member 8 is secured a clevis 19 by a bolt 20 and the clevis 19 is connected by means of the bolt 21 to the forward ends of the brace rods 22, which are secured at their rear ends to the member 8. The clevis 19 is provided with projections or lips 23, which project up on either side of the tongue 1 to hold the member 8 in line with the tongue.

24 indicates a long double-tree constructed with upper and lower bars 25, between which are mounted short double-trees 26, connected with the long double tree 24 by means of metallic strips 27 having square metallic straps 28 riveted at their ends. The upper and lower portions 25 extend through the long double-tree and by means of a wooden block 29 located between the short double-tree 26, the several parts being secured together by a bolt 30 passing through the long and short double-trees and the block 29.

31 indicates the swingle-trees which are secured by a pin 31' to the metallic straps 32 projecting between the short double-tree 26 and the block 33, and by means of a metallic arm 34 extending around the short double-tree 26 provided with hooked ends 35, said clamps 34 being secured by rivets 36 to the short double tree 26. The several parts are clamped and secured together by means of a bolt 37 extending through the short double-tree 26 and the plate 32 and the block 33.

38 is a long neck yoke detachably secured to the outer end of the tongue 1 by an eye-bolt 39 which passes through the yoke 38 and is engaged by means of a bolt 40, slipped in a perforation in the end of the tongue 1. This bolt 40 may be readily passed into and pulled out of place, whereby the tongue may be lowered from the neck yoke 38 without removing the bolt from the said yoke.

41 are short neck yokes which are secured

to the long neck yoke 38 by means of eye bolts 42 which are detachable therefrom, so that the short neck yokes may be removed or moved to the outer end 43 of the yoke 38.

- 5 44 is a U-shaped clamp provided with a block 46 adapted to slide upon the clamp 44, and having a cross-bar 45 at one end secured to the end of a U-shaped portion by means of the nut 47.
- 10 The long double tree 24 is mounted between the arms 19' of the clevis 19 and engages the block 25' located between the portions 25 of the long double-tree 24 held in place by a bolt 26' and a nut 27'. By means
- 15 of this construction the draft from the animals comes on the pointed ends of the member 8 at the point 14. It will be noted that the long double-tree is longer on the right of the tongue 1 than on the left, as shown
- 20 in Fig. 1. By means of this arrangement one short double tree may be used when three horses are employed, the short yoke 41 being detachable from the point 42' of the long end of the long neck-yoke, and
- 25 moved over to the outer end thereof at the point 43'. By means of this arrangement on the long end of the long double-tree, the draft of a single horse will be equalized by that of two horses on the short end por-
- 30 tion of the long double-tree. When it is desired to have a two-horse team, the swingle-trees on either side of the tongue are employed, and, in order to hold them in place, the clamp 38' is employed, and in
- 35 putting this in place, the inner ends of the shorter trees 26 are swung back of the long double-tree, and the clamps 38' are pushed through the long double-tree until their ends 39' engage the latter. The short double-
- 40 trees then swung into place, are held from moving forward by the clamp 38'.
- When a three-horse team is used, the outer short double-tree 26 is swung and the clamp 38' is inserted through the long double tree
- 45 until the hooked ends 39' engage the long double-tree, when the short double-tree is swung back to normal position, thereby enabling the short double-tree to be used with a single horse attached to the outer swingle-
- 50 tree.

In the case of a three-horse team, the short neck yoke 41 is moved to the outer end of the long neck-yoke 38 by means of a side

bolt 42 and the clamp 44 is secured over 55 the inner end of the short neck yoke 41 and the long neck yoke 38 with the block 46 between the two. This enables one horse to be used on the long arm of the yoke 38 and equalizes the draft and relieves the strain 60 on the neck of that horse against the two horses on the shorter end of the long neck yoke.

In the case of a two-horse team, the clamp 44 and a block 46 is used with each neck 65 yoke 41 on its inner end, as shown. The hooks on the swingle-trees may be turned up or down, so that when one horse moves in advance of the other, or in turning around, the traces will come through be- 70 tween the upper and lower portions of the double-tree with the flat side up, and thus avoid rubbing. By means of this construction of the long and short double-trees, and the swingle-trees, the ends of the swingle 75 trees will not engage or interfere with the ends of the short double-trees.

By means of the arrangement of the mem- 80 ber 8 and tongue 1, as hereinbefore set forth, the latter is set over twice as far from the grain side as in the usual way, and with the construction and interchangeable arrange- 85 ment described of the long double-tree and short double-trees not only provides room for two horses, instead of one, on the grain side of the tongue, but adapts the equalizer to be used with two, three or four horses.

Having described my invention, what I claim as new, and desire to secure, by Letters 90 Patent, is:—

A draft appliance comprising a tongue, a laterally disposed frame located at the rear end portion of the tongue, a falciform member pivotally connected at one end with the said frame and having its opposite end 95 portion lying under the tongue, a clevis attached to the last said end of the said member and having lugs which lie against the opposite sides of the tongue, and a draft means carried by the said clevis.

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

HIRAM C. HUFF.

Witnesses:

ERNEST H. TURNER,
ROBERT ALLAN.