

(No Model.)

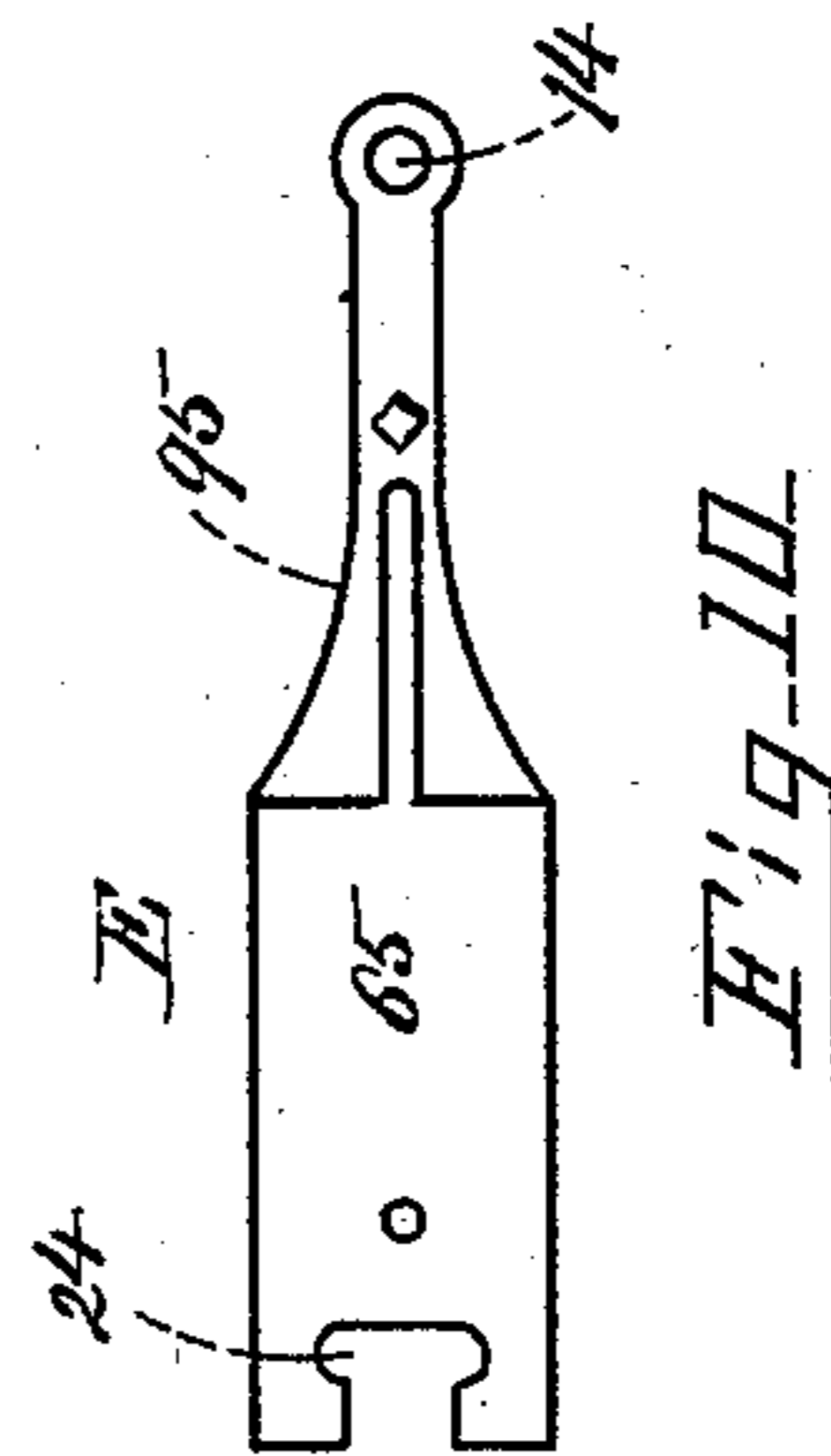
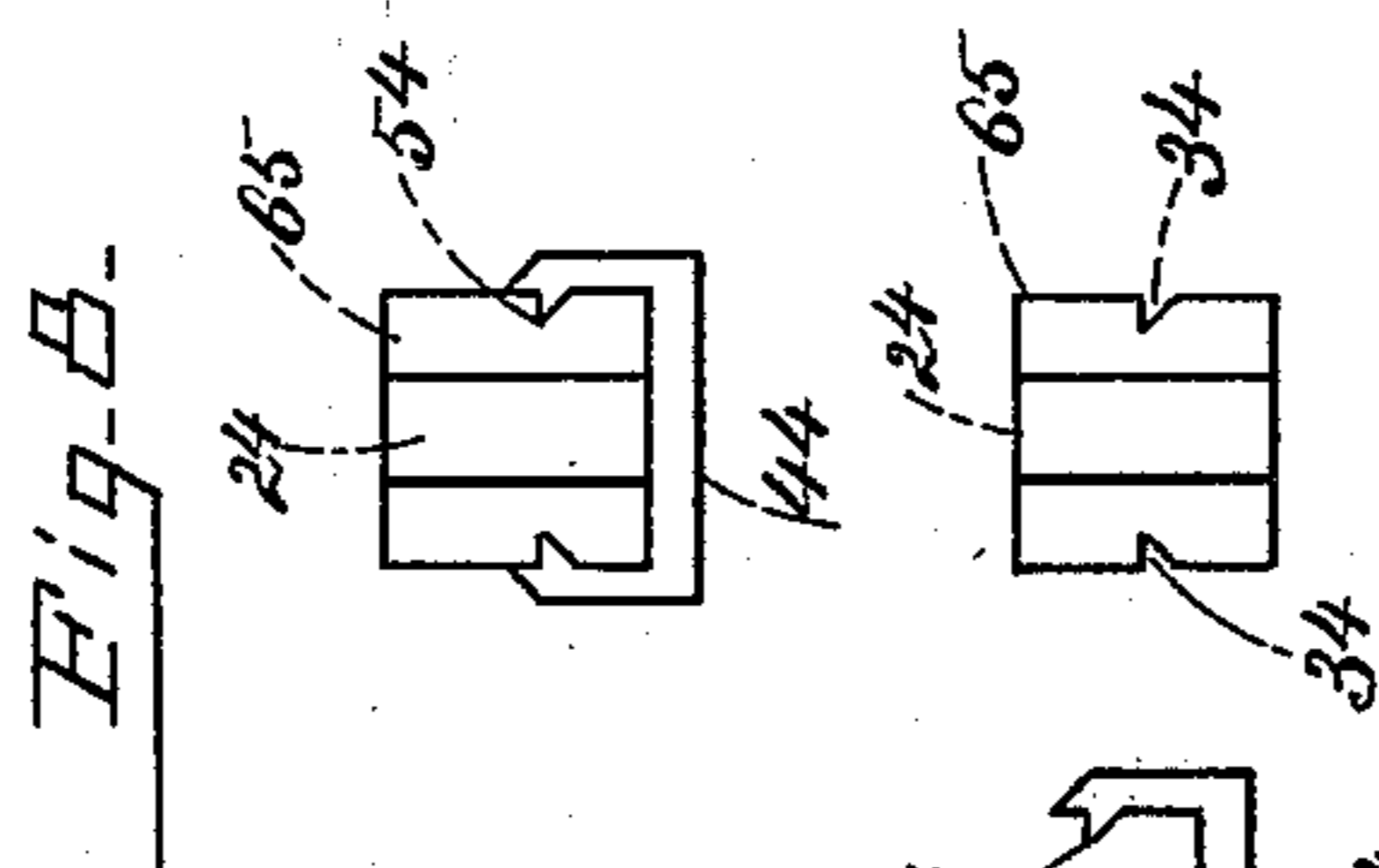
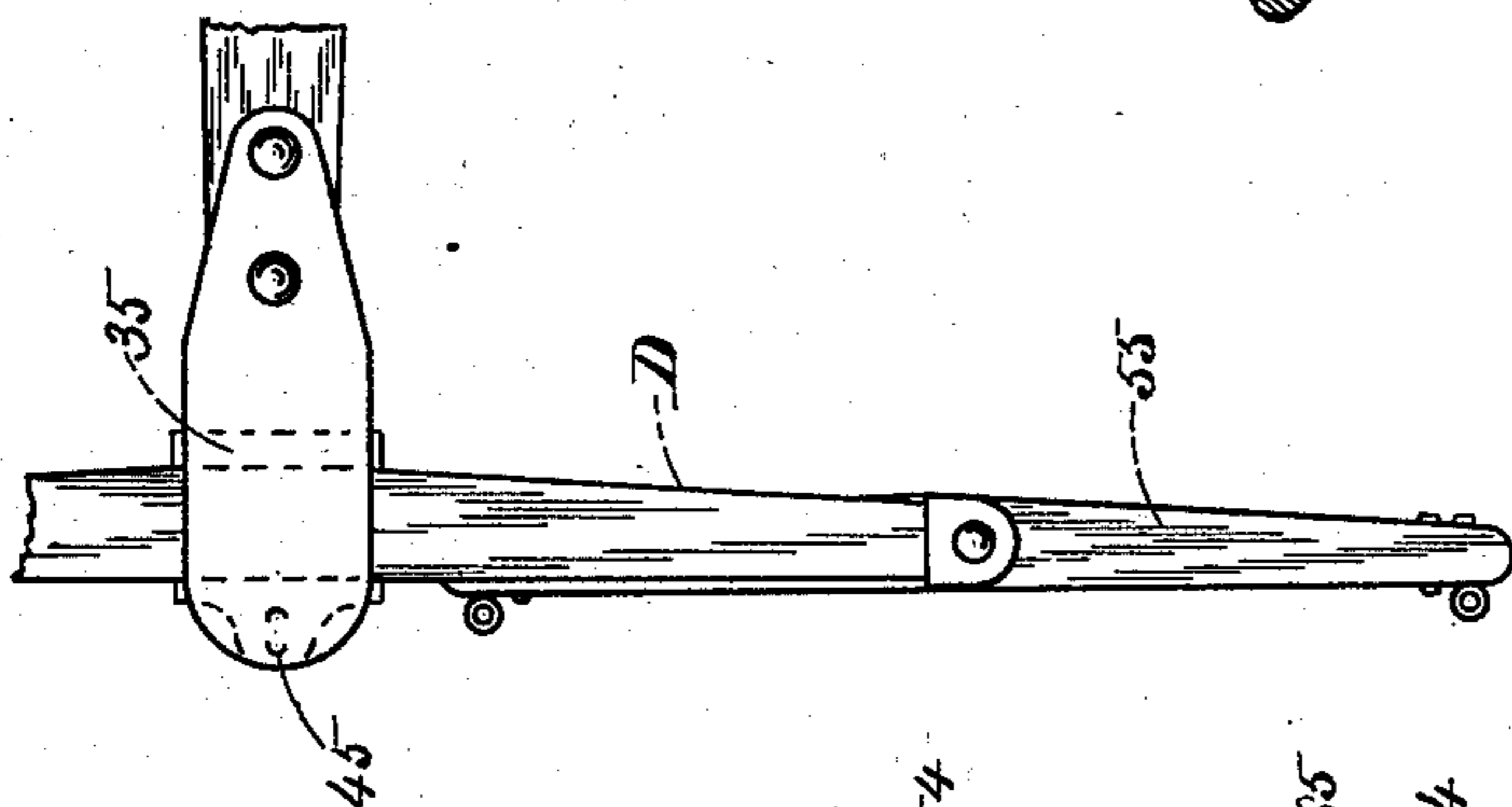
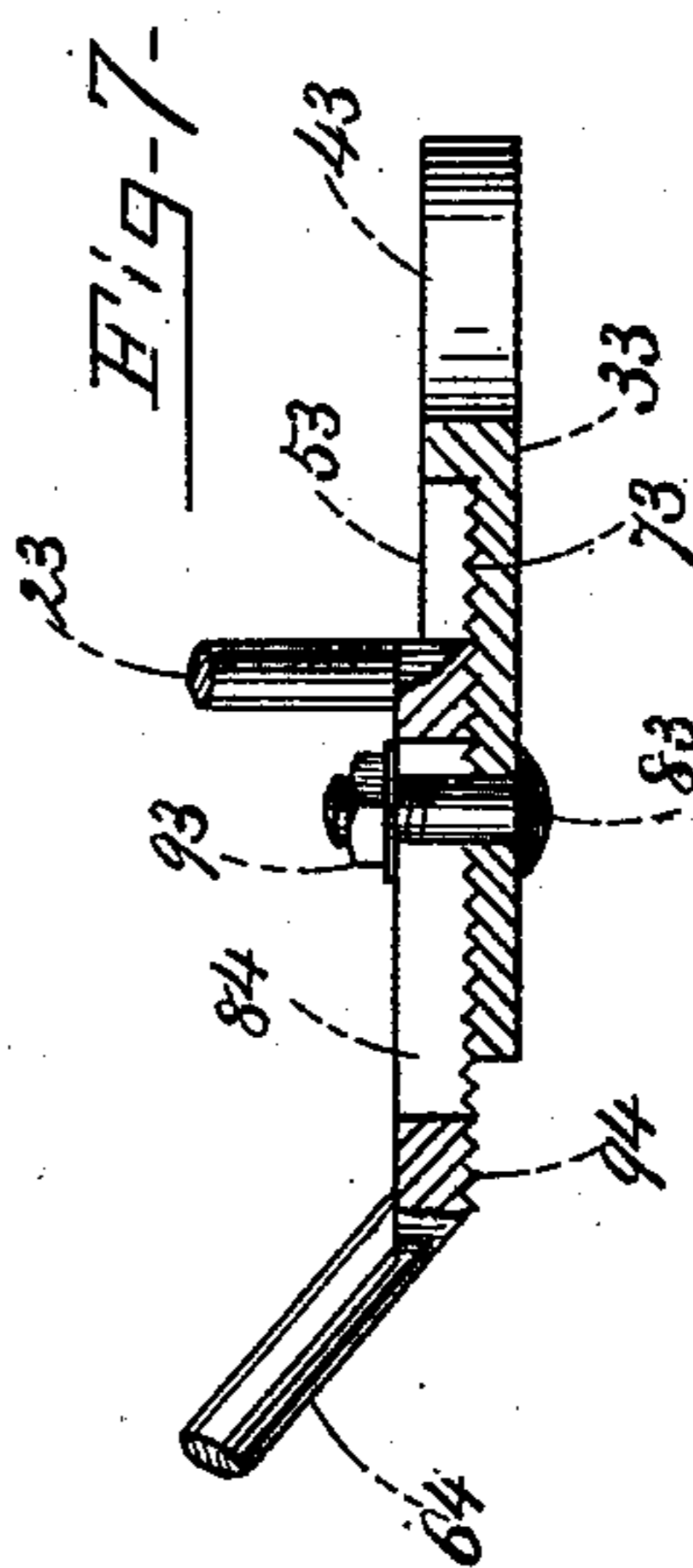
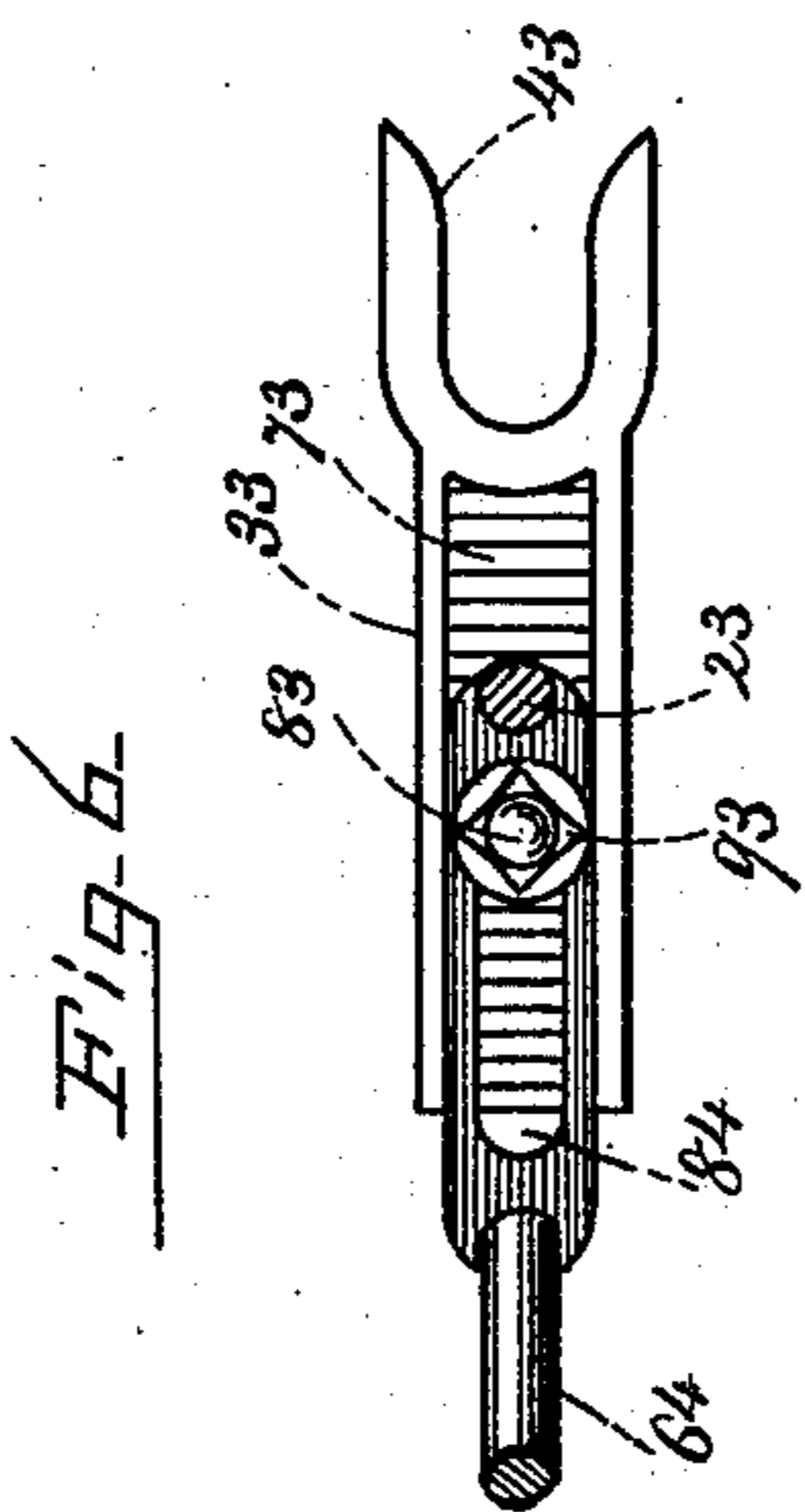
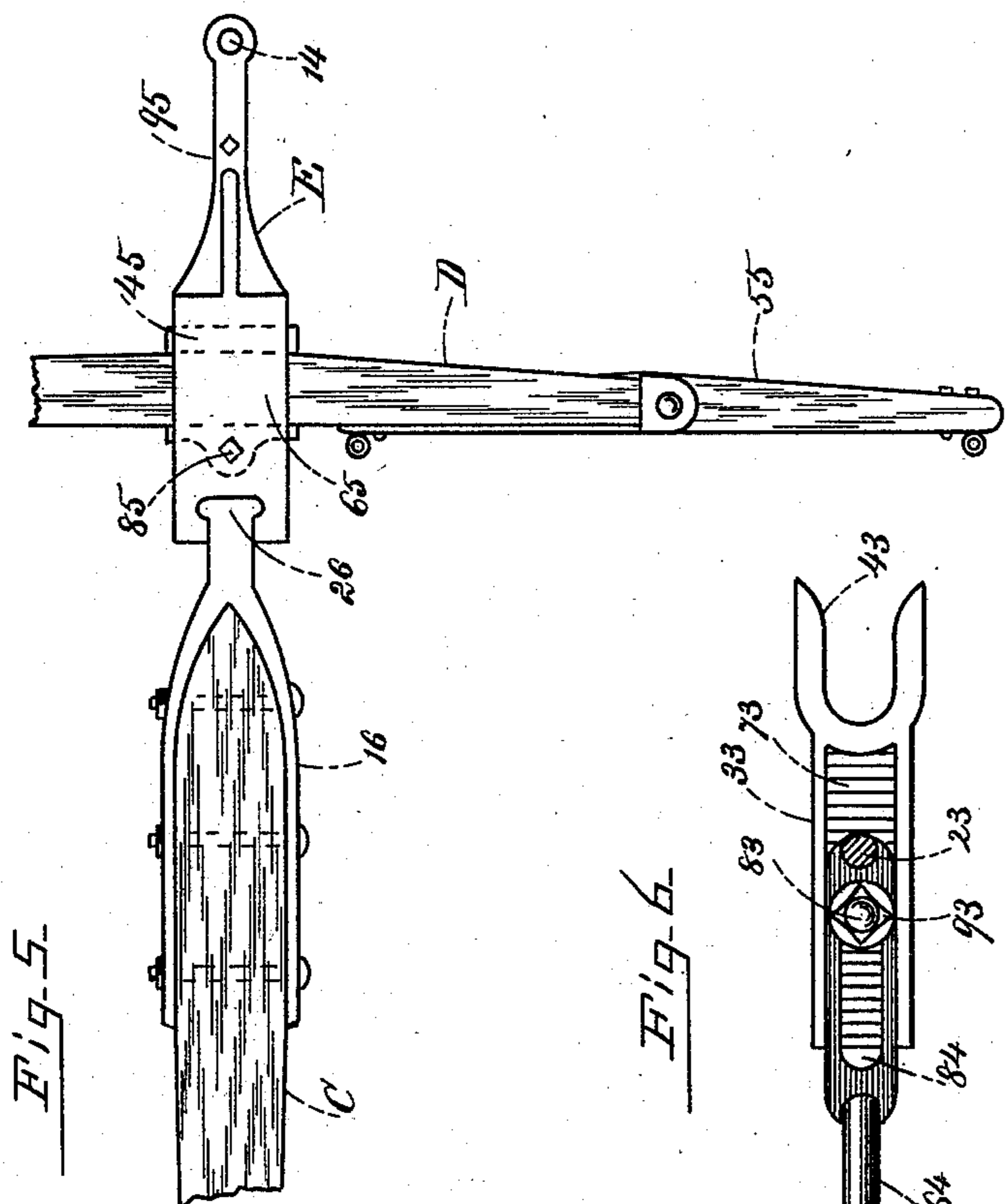
2 Sheets—Sheet 2.

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WHIFFLETREE ATTACHMENT FOR HORSE CARS.

No. 393,922.

Patented Dec. 4, 1888.



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WHIFFLETREE ATTACHMENT FOR HORSE-CARS.

SPECIFICATION forming part of Letters Patent No. 393,922, dated December 4, 1888.

Application filed August 18, 1888. Serial No. 283,129. (No model.)

To all whom it may concern:

Be it known that I, LOUIS PFINGST, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Whiffletrees and Whiffletree Attachments, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an isometrical perspective view of a doubletree and bracket now in ordinary use; Fig. 2, a like view showing a pole in ordinary use provided with a doubletree and bracket; Fig. 3, an elevation of my improved doubletree detached and enlarged; Fig. 4, a side elevation of a pole provided with my improvement in position for use on a car, the doubletree being shown in vertical section and the pole as broken away; Fig. 5, a top plan view of the pole, the doubletrees being shown as broken off; Fig. 6, a top plan view of the adjustable bracket-arm detached and enlarged; Fig. 7, a vertical longitudinal section of the same; and Figs. 8, 9, and 10, sectional views showing certain details of construction.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of whiffletrees and whiffletree attachments which are particularly adapted for use on horse-cars; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a cheaper and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the car, B the coupling, C the pole, D the doubletree, and E the bracket.

As ordinarily constructed for use with two horses, the bracket E (see Fig. 1) consists of an arm, *b*, having an eye, *d*, on its rear end adapted to receive the coupling-pin G, and a downwardly-projecting arm, *f*, having a slot, *g*, in its end adapted to receive and bear

against the ordinary brace-rod, *h*, of the coupling B, said arms being connected by a vertical brace, *i*, and designed to support the whiffletree.

The doubletree D is centrally pivoted on top of the front end of the arm *b* by means of a pin, *k*, which passes through an arm, *l*, secured to the arm *b*. A singletree, *m*, is pivoted on the upper side of the doubletree D at each end thereof.

When it becomes necessary to use four horses, as during the winter months, a pole, C, (see Fig. 2,) is employed, the bracket E being secured to the rear end thereof, and a segment, H, provided with teeth *p*, pivoted to the vertical brace *i* in such manner that said teeth will engage the brace-rod *h* and assist in preventing the pole from moving or "slatting" laterally.

The doubletree D is pivoted on the upper side of the pole in an arm, *l*, and is provided with singletrees *m* at its ends. The pole has a leader-hook, K, on its forward end to receive the doubletree of the lead horses.

When constructed as above described, there is an unnecessary wear on the slot *g* of the arm *f*, thereby increasing the depth of said slot and allowing the forward end of the pole to fall too far downward, thus necessitating frequently replacing the arm *f*. Moreover, by pivoting the whiffletrees in the manner described, as a strain is exerted upon them by the horses the constant tendency is to pull downward, which greatly increases the expenditure of power necessary to draw the load.

My invention is designed to obviate these and other objections, and to that end I make use of means which will be readily understood by all conversant with such matters from the following:

In my improvement the doubletree D is constructed of two parallel arms, 15 and 25, centrally secured in a metallic casting, 35, provided in its forward end with a vertical bolt-hole, 45, and having its rear end extended upward and downward (see Fig. 4) to form a wearing-surface and protect the body of said doubletree. Singletrees 55 are pivoted between the ends of the arms 15 and 25 of the doubletree.

The bracket E consists of a body portion, 65, provided with an opening, 75, (see Fig. 4,) through which the doubletree passes and in

which it is pivoted by means of a bolt, 85, passing through said body and the bolt-hole 45 in the casting 35. Projecting rearwardly from the body portion 65, and formed integral therewith, is an arm, 95, (see Figs. 5 and 10,) provided in its end with a hole, 14, adapted to receive the coupling-pin G. In the forward end of the body portion 65 is formed a vertical dovetail groove, 24, (see Fig. 10,) adapted to receive an end of the pole C, as hereinafter described. The forward portion of the body 65 is slotted horizontally at 34 (see Figs. 8 and 9) on each side of the groove 24 to adapt it to receive a wear-plate, 44, provided interiorly with flanges 54, fitted to enter said slots and detachably secure said plate thereto. A downwardly and rearwardly projecting arm, 64, (see Fig. 4,) is bolted at 74 to the under side of the body portion 65, the rear end of said arm being flattened (see Figs. 6 and 7) and provided with a longitudinal slot, 84, the under side of said flattened portion being provided with serrations 94. The arms 95 and 64 are connected by a vertically-arranged brace, 23. A plate, 33, (see Figs. 6 and 7,) is provided on one end with a fork, 43, adapted to receive the brace-bar $\frac{1}{2}$ of the coupling B, said plate having a longitudinal groove, 53, to receive the flattened end of the arm 64, and with laterally-arranged serrations 73, within said groove, adapted to engage the teeth 94 on said arm. A bolt, 83, passes upward through the plate 33 and through the slot 84 in the arm 64, a lock-nut, 93, disposed on the upper end of said bolt, securing said plate in position on said arm.

The pole C is provided on its rear end with a metallic plate, 16, having a vertically-arranged dovetail, 26, (see Fig. 5,) adapted to enter the dovetail groove 24 in the bracket E, whereby said pole is sustained in a horizontal position. The forward end of the pole is provided with a forked plate, 36, in which the doubletree D may be pivoted, as shown in Fig. 4.

In the use of my improvement, when a single pair of horses is employed, the doubletree D is pivoted in the body portion 65 of the bracket E by the bolt 85 and the bracket adjusted on the car in the usual manner. It will readily be seen that the draft by this arrangement of the doubletree and singletrees is central on the load, and that all tendency to pull downward and wear on the arm 64 is obviated. By adjusting the bolt 83 in the slot 84 the flattened portion of the arm 64 can be readily moved forward or backward in the groove 53 of the plate 33, and thereby vertically adjust the body portion 65 of the bracket E, as desired, the serrations 94 and 73 preventing said arm from slipping when strain is exerted on said body in a manner that will be readily understood without a more explicit description. When it becomes necessary to employ four horses, the pole C can be quickly adjusted in the bracket by means of its dovetail 26 and a doubletree pivoted in its for-

ward end, as described. It will readily be seen that this obviates the necessity of employing two sets of brackets, as by the old method, when it becomes essential to use a pole, and as the fork 43 wears away the bracket E may be adjusted by means of the plate 33, as above described.

Having thus explained my invention, what I claim is—

1. In a device of the character described, a bracket provided with an arm adapted to receive a coupling-pin and having an opening in its body portion for receiving a doubletree and a rearwardly-projecting serrated arm, in combination with a forked plate adapted to bear against the brace-bar of a coupler and provided with a serrated groove in which said serrated arm may be adjusted, substantially as and for the purpose described.

2. In a device of the character described, an adjustable bracket provided with an opening in its body portion for receiving a doubletree and with a vertical dovetail groove in its forward end, in combination with a pole provided with a dovetail plate adapted to enter said groove and support said pole in a horizontal position, substantially as set forth.

3. In a device of the character described, the bracket E, provided with the opening for receiving a doubletree, the arm 95, having the hole 14 for receiving a coupling-pin, and the arm 64, provided with the slot 84 and serrations 94, in combination with the plate 33, having the fork 43, and groove 53, provided with the serrations 73, and the bolt 83, disposed in said plate and slot, whereby said bracket may be vertically adjusted, substantially as set forth.

4. In a device of the character described, the pole C, provided with the forked plate 36, and plate 16, having the vertical dovetail 26, in combination with the doubletree D, and bracket E, provided with the dovetail groove 24, substantially as described.

5. In a device of the character described, the wear-plate 44, provided with the flanges 54, in combination with the bracket E, having the horizontal grooves 34, and vertical dovetail groove 24, adapted to receive the dovetail end of the pole C, substantially as set forth.

6. In a device of the character described, the doubletree D, disposed in the casting 35, provided with the bolt-hole 45, and the singletrees 55, pivoted between the arms of said doubletree, in combination with the bracket E, having the opening 75, for receiving said doubletree, and provided with the arm 95, having the hole 14, the arm 64, having the slot 84 and serrations 94, the plate 33, provided with the fork 43, groove 53, and serrations 73, the bolt 83, and the car A, provided with the coupling B, substantially as set forth.

LOUIS PFINGST.

Witnesses:

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O. M. SHAW.