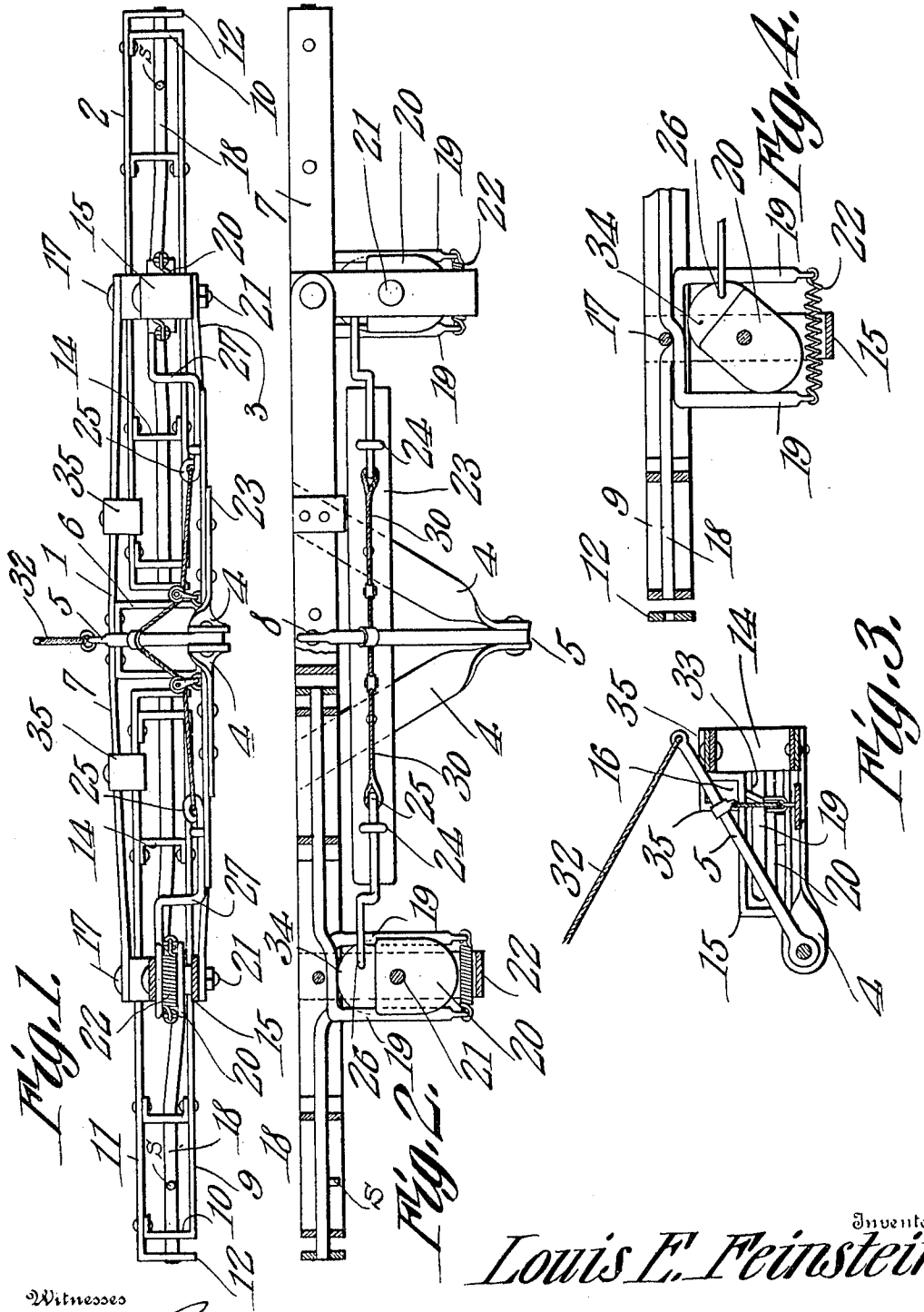


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WHIFFLETREE.
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949,174.

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UNITED STATES PATENT OFFICE.

LOUIS E. FEINSTEIN, OF ZEELAND, NORTH DAKOTA.

WHIFFLETREE.

949,174.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS E. FEINSTEIN, a citizen of the United States, residing at Zeeland, in the county of McIntosh and State of North Dakota, have invented a new and useful Whiffletree, of which the following is a specification.

The objects of the invention are, generally, the provision in a merchantable form, of a device of the class above mentioned, which shall be inexpensive to manufacture, facile in operation, and devoid of complicated parts; specifically, the provision of a double-tree of novel and improved construction; of swingle-trees adapted to be assembled with the double-tree; of latch bars adapted to engage the traces wherewith the swingle-trees are assembled; and of manually operable means of novel and improved construction, whereby the latch bars may be operated from a vehicle, to free the traces from the swingle-tree; other and further objects being made manifest hereinafter as the description of the invention progresses.

The invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood, that, within the scope of what hereinafter thus is claimed, divers changes in the form, proportions, size, and minor details of the structure may be made, without departing from the spirit or sacrificing any of the advantages of the invention.

Similar characters of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings, Figure 1 is a rear elevation; Fig. 2 is a top plan, parts being broken away; Fig. 3 is a transverse section, parts being in elevation; Fig. 4 is a sectional top plan of a portion of the swingle tree.

The improved device forming the subject matter of this application for Letters Patent, is adapted to be used upon vehicles, drawn, either by one, or by more than one animal. In the accompanying drawings I have shown the device in a form adapted to

be used with two horses, but, I do not wish to be limited to the two-horse construction, saving as I may be so limited by my claims.

In carrying out my invention, I provide, primarily, a double-tree 1, with the extremities of which, are pivotally assembled swingle-trees 2. Referring particularly to the construction of the double-tree 1, it will be seen that the same comprises a base strip 3 and rearwardly extending, converging braces 4, between the rear ends of which is pivoted an upright lever 5. Rising from the intermediate portion of the base strip 3 is a support 6, in the present instance shown in the form of an open loop of metal, upon which is superposed a top strip 7, substantially co-extensive in length with the base strip 3, the top strip 7, the support 6, and the base strip 3 being united to form a rigid structure, the three elements last above mentioned being apertured as denoted by the numeral 8, to receive the member upon which the double-tree is pivotally mounted.

Disposed between the base strip 3 and the top strip 7 of the double-tree 1, are the swingle-trees 2, each of which comprises a base strip 9, having its ends up-turned as denoted by the numeral 10, and inwardly extended toward each other. Mounted upon the ends 10 of the base strip 9, is a top-strip 11, which is somewhat longer than the base strip 9, the ends 12 of the top strip being down-bent beyond the ends 10 of the base strip, and spaced therefrom. The base-strip 9 is assembled with the top strip 11 by means of braces 14, these braces 14 and the elements 12 and 10 being apertured to receive slidably, latch bars 18, having their adjacent ends overlapped and rearwardly bent, to form spaced fingers 19. A clip 15 is provided, which, broadly speaking, is U-shaped in form, the ends of the clip being arranged to inclose the base strip 9 and the top strip 11 intermediate their ends, the upper arm of the clip being bent to form a shoulder 16 adapted to contact with the rear edge of the top strip 11, whereby the clip 15 may be made to extend rearwardly of the swingle-tree, in normal relation thereto. A pivot bolt 17 is passed downwardly through the top strips 7 and 11, through the arms of the clip 15 and through the base strips 3 and 9, the said pivot bolt, serving at once as a means whereby the swingle-tree 2 may be as-

sembled with the double-tree 1, and as a means whereby the clip 15 may be assembled with the swingle-tree 2.

A pivot bolt 21 is passed through the arms of the clip 15, and upon this bolt 21 is mounted, intermediate its ends, a cam block 20. This cam block 20 is provided in its edge, with a circumscribing groove 33 into which the fingers 19 are adapted to fit, the fingers being normally held in contact with the cam block by means of a retractile element 22, which unites the extremities of the fingers 19, intermediate the rear end of the cam block 20 and the clip 15.

Mounted transversely upon the braces 4 of the double-tree 1, is a cross-piece 23, provided with bearings 24, in which are slidably mounted, oppositely extending rods. The adjacent ends of the rods terminate in eyes 25 connected by a flexible element 30, the intermediate portions 27 of the rods being upbent, to bring the remote ends of the rods into the plane of the upper faces of the cam blocks 20, the remote extremities 26 of the rods being down-turned to register in apertures in the upper faces of the cam blocks, located adjacent the forward ends of said cam blocks, the upper faces of the cam blocks being cut-away adjacent their forward ends as denoted by the numeral 34, in order that space may be provided between the clips 15 and the cam blocks, for the movement of the rods.

The lever 5 is adapted to engage the flexible element 30 intermediate its ends, being securely united therewith in any suitable manner. With the upper extremity of the lever 5 may be connected a pull-cord 32, whereby the lever may be operated from a remote point, such, for example, as the seat of the vehicle. The adjacent ends of the swingle-trees 2 are limited in their movement upon the double-tree by means of stops 35, which may be of any form, these stops 35, permitting the swingle-tree 2 to have the slight pivotal movement necessary, but, at the same time, being adapted to limit the adjacent ends of the swingle-trees 2 from moving rearwardly into contact with the flexible element 30, or with the slidably mounted rods which are assembled therewith.

As shown in Figs. 1 and 2 of the drawings, the latch bars 18 may be provided, adjacent their remote ends, with rearwardly extending lugs S, adapted to serve as a means whereby the latch bars may be slid manually.

The operation of the device will probably be understood from the foregoing description, but it may be said, at this place, that when the pull-cord 32 is drawn upon, the lever 5, moving rearwardly at its free, upper end, will engage the flexible member 30 intermediate its ends, causing the adjacent ends of the rods which are mounted in the bearings 24, to move toward each other.

This movement of the rods will tilt the cam blocks 20, horizontally, causing the fingers 19 to be spaced apart, withdrawing the remote ends of the latch bars 18 from the elements 10 and 12, thereby freeing the traces. When the pull-cord 32 is released, the retractile element 22 will cause the fingers 19 to move toward each other, causing the remote extremities of the latch bars 18 to move outwardly, the cam blocks 20, being engaged by the fingers 19, and being moved into a position with their longer dimensions parallel with the fingers 19, the upper extremity of the lever 5 moving forwardly in the operation.

The hereinbefore described construction, although simple, and of few parts, results in a structure easily operable to set free, by a single movement, one or more draft animals, from the vehicle to which they are attached.

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

1. The combination with a swingle-tree, of longitudinally disposed latch bars slidably mounted thereon and having their adjacent ends overlapped and provided with spaced fingers; a cam block pivotally supported between the fingers and arranged to engage the same frictionally; means for operating the cam block; and resilient means uniting the fingers to hold the same in contact with the cam block.

2. The combination with a swingle-tree, of longitudinally disposed latch bars slidably mounted thereon and having their adjacent ends overlapped and provided with spaced fingers disposed substantially at right angles to the bars; a cam block pivotally supported between the fingers and arranged to engage the fingers to space the same apart transversely; means for operating the cam block; and resilient means for holding the fingers in contact with the cam block.

3. The combination with a swingle-tree, of longitudinally disposed latch bars slidably mounted thereon and having their adjacent ends overlapped and provided with rearwardly extending fingers, spaced apart; a clip rearwardly extending from the intermediate portion of the swingle-tree; a horizontally movable cam block pivoted intermediate its ends, between the arms of the clip and arranged to engage the fingers simultaneously; means for operating the cam block; and means for normally holding the fingers in contact with the cam block.

4. A swingle-tree including a base strip having its ends upturned; a top piece mounted upon the upturned ends of the base strip and having its ends down-turned and spaced from the ends of the base strip; braces uniting the base strip and the top

piece intermediate their ends; a clip rearwardly extending from the intermediate portion of the swingle-tree and having its arms in engagement with the base strip and with the top-piece; longitudinally disposed latch bars slidably mounted in the braces and in the ends of the base strip and the cross piece, the bars having their adjacent ends overlapped and bent to form rearwardly extending fingers; a cam block pivoted for horizontal movement between the arms of the clip and arranged to engage the fingers to space the same apart; means for operating the cam block; and means for normally holding the fingers in contact with the cam block.

5. In a device of the class described, a double-tree; swingle-trees pivotally assembled with the double-tree; longitudinally disposed latch bars slidably mounted upon the swingle-trees and having their adjacent ends overlapped and bent to form spaced fingers; cam blocks pivotally supported by the swingle-trees, between the fingers and arranged to space the fingers apart transversely; transverse rods slidably mounted upon the double-trees and having their remote ends pivotally assembled with the cam

blocks; and means located upon the double-tree for simultaneously operating the rods. 30

6. In a device of the class described, a double-tree; swingle-trees pivotally assembled with the double-tree; longitudinally disposed latch bars slidably mounted upon the swingle-trees and having their adjacent ends overlapped and provided, in their overlapped portions with rearwardly extending, spaced fingers; cam blocks pivotally supported between the fingers for horizontal movement; bars slidably mounted upon the double-tree and having their remote ends pivotally assembled with the cam blocks; a flexible element uniting the adjacent ends of the rods; means carried by the double-tree for engaging the intermediate portion of the flexible element to slide the rods; and means for holding the fingers in contact with opposite faces of the cam blocks. 35 40 45

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses. 50

LOUIS E. FEINSTEIN.

Witnesses:

W. M. QUINN,
JOHN BISCHOF.