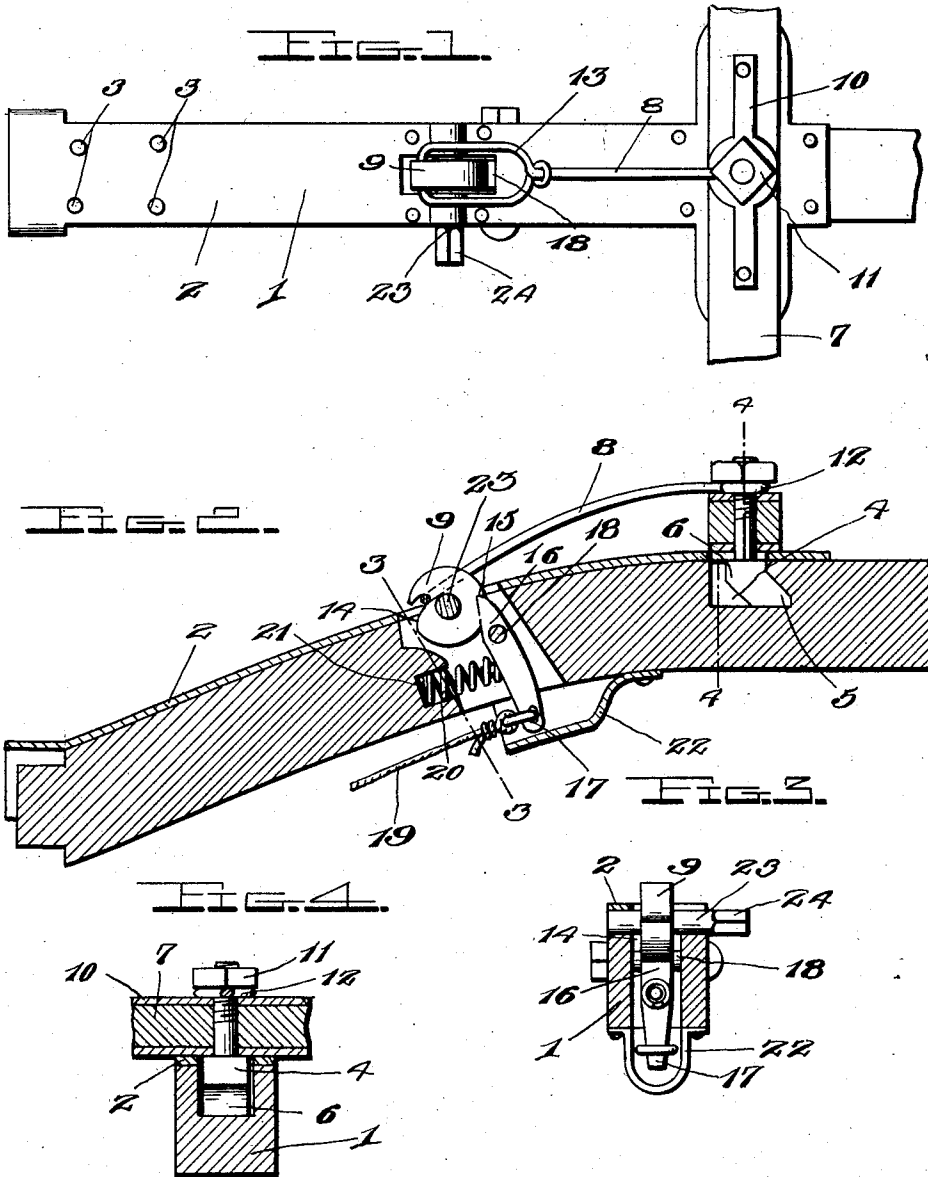


R. E. DAVIS.
SAFETY WHIFFLETREE DETACHER.
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1,048,050.

Patented Dec. 24, 1912.



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ROBERT E. DAVIS, OF BAYARD, NEBRASKA.

SAFETY WHIFFLETREE-DETACHER.

1,048,050.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT E. DAVIS, a citizen of the United States, residing at Bayard, in the county of Morrill and State of Nebraska, have invented certain new and useful Improvements in Safety Whiffletree-Detachers, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to a device for detaching horses from vehicles in cases of emergency.

The main object of this invention is to provide a device of this class which may be readily applied to a draw bar of a vehicle, and arranged so that it will permit the means retaining the horses or other animals that draw the vehicle in question to be readily and quickly detached therefrom.

20 Other objects of this invention will become apparent as it is more fully set forth.

This invention consists in general of a mechanism which quickly releases a link, that serves as a retaining means for the members or member to which the horses drawing the vehicle in question are attached. The mechanism is adapted to be released or permitted to act, by means of a string or chain which is extended to a point convenient to the driver or other person in charge of the vehicle.

30 In the drawing which illustrates by way of example an embodiment of this invention, Figure 1 represents a plan view of an embodiment of this invention. Fig. 2 is a longitudinal section of the device. Fig. 3 is a transverse section on the line 3—3 of Fig. 2; and Fig. 4 is a transverse section on the line 4—4 of Fig. 2.

40 Similar reference characters refer to similar parts throughout the drawing.

1 represents a separable member, or a portion of the main shaft or draw bar of the vehicle, that is usually used where a double horse team is employed for drawing the vehicle in question. 2 is a suitable protecting plate thereon, and 3 are nails or other fastening means for securing the plate 2 to the shaft 1. A slot 4 is formed in the more forward portion of the shaft, and is preferably of the form indicated in Fig. 2, that is the front portion 5 is beveled downwardly and inwardly, in order that the head 6 of a suitable bolt may readily fit therein when normally secured to the shaft. The type of head used on this bolt enables the tree 7

which it secures to the shaft to readily detach itself, under the pulling action of the horses, when a link 8 that is connected thereto, is released from the holding member 9. A suitable wearing plate 10 is provided on the upper portion of the tree 7 so as to suitably protect the same, and 11 is a suitable nut mounted on the bolt for the purpose of holding the ring end portion of the link 8 securely thereto. The other end portion 13 of the link is preferably of the shape shown in Fig. 1, and is adapted to engage in the recess 14 in the holding member 9.

70 The holding member 9 is preferably of a circular shape, and is provided with a recess or notch 15 therein so as to provide means in which a pawl 16 may engage and securely hold the same in locked position. The pawl is formed with an arm 17, is pivotally mounted on the bolt 18, and is adapted to be actuated by a string or chain 19. The string or chain 19 is of any suitable length, and is within convenient reach of the driver of the vehicle. A coil spring 20 which is securely held to the shaft 1, by the provision of the socket 21 therein, serves as a means for resiliently actuating the arm 17, and for keeping the pawl pressed against the holding member 9, so that the pawl 16 will readily slip into the notch 15 provided therefor, when the same comes in registry therewith. A protecting casing 22 is secured to the lower portion of the shaft for the purpose of protecting the mechanism for actuating the holder, from dirt or moisture, and also for preventing injury to the arm 17.

85 The whiffletrees to which the horses or other animals are secured, are attached to the tree 7 in the usual manner, the tree being suitably arranged for the purpose.

In case of a run-away or other emergency arising, the driver pulls on the string or cable 19 and thereby removes the pawl 16 from the notch 15. The stress acting on the tree 7, by reason of the pulling action of the horses, causes the link 8 to pull the holder 9, and tends to rotate the same, so that when the pawl is removed, the holder will rotate and permit the link 13 to disengage from the recess 14, and thereby permit the tree 7 to move forward sufficiently to rock the head 6 of the bolt and disengage it from the slot 4, which will free the tree entirely from the shaft and so disengage the horses entirely from the vehicle. It is of course

understood that ordinarily the main pulling action of the horses is transmitted to the shaft by means of the peculiar shape of the bolt head, which is undercut at its forward end to engage the correspondingly formed wall of the slot, and that while the link 8 bears a certain proportion of the stress, this amount is not very great. However, the stress on the holding member 9 is sufficient to cause the same to rotate in the manner described. The holding member 9 is mounted on the shaft 23, which is held in place by the plate 2, and which has one end 24 thereof outwardly extended and squared, so as to receive a wrench or the like, for actuating the same. This type of head enables the holding member to be actuated against the resilient action of the link 8, which is made so as to tightly hold on the holder 9 so that there will be no liability of the link 8 disengaging from the slot in the holder, when in its normal position.

Having thus described this invention, what is claimed is:—

1. The combination with a shaft and a tree adapted to be carried thereby, of a bolt carried by the tree and designed for detachable engagement with the shaft, a revoluble holding member carried by the shaft, a longitudinally disposed link connected to the tree, the holding member being formed with a recess designed for detachable engagement by the rear end of said link, a spring-pressed pawl carried by the shaft and designed for locking engagement with the revoluble holding member, and means for disengaging the pawl from said member.

2. The combination with a shaft and a tree supported thereby, the tree being provided with a head and the shaft being formed with a socket for the reception of said head, of a longitudinally extending link connected to the tree, the shaft being formed with a slot in the rear of the tree, a revoluble holding member journaled in said slot and formed with a recess designed for detachable engagement by the rear end of said link, the revoluble member being also formed with a notch, a spring-pressed pawl

mounted in the slot and engageable with said notch, for the purpose specified, and means connected to said pawl for disengaging it from the notch.

3. The combination with a shaft and a tree supported thereby, the tree being provided with a head and the shaft being formed with a socket for the reception of said head, of a longitudinally extending link connected to the tree, the shaft being formed with a slot in the rear of the tree, a revoluble holding member journaled in said slot and formed with a recess designed for detachable engagement by the rear end of said link, the revoluble member being also formed with a notch, a pawl mounted in said slot and designed for engagement with said notch, a spring housed within the slot and engaging said pawl and having a tendency to move the latter in a direction to engage the notch, and a cable operatively connected to said pawl.

4. The combination with a shaft and a tree adapted to be supported thereon and provided with a head designed for detachable engagement with the shaft, the shaft being formed in the rear of the tree with a slot, of a shaft journaled in said slot and extending transversely thereof and having one end extended and designed for engagement by a tool to turn said shaft, a holding member secured to the second named shaft and formed in its edge with a recess and a notch spaced from each other, a link connected at its forward end to the tree and arranged at its rear end for detachable engagement in said recess, a spring pressed pawl mounted in the slot of the first named shaft and adapted to engage the notch of said holding member, and means connected to said pawl for disengaging it from said notch.

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

ROBERT E. DAVIS.

Witnesses:

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