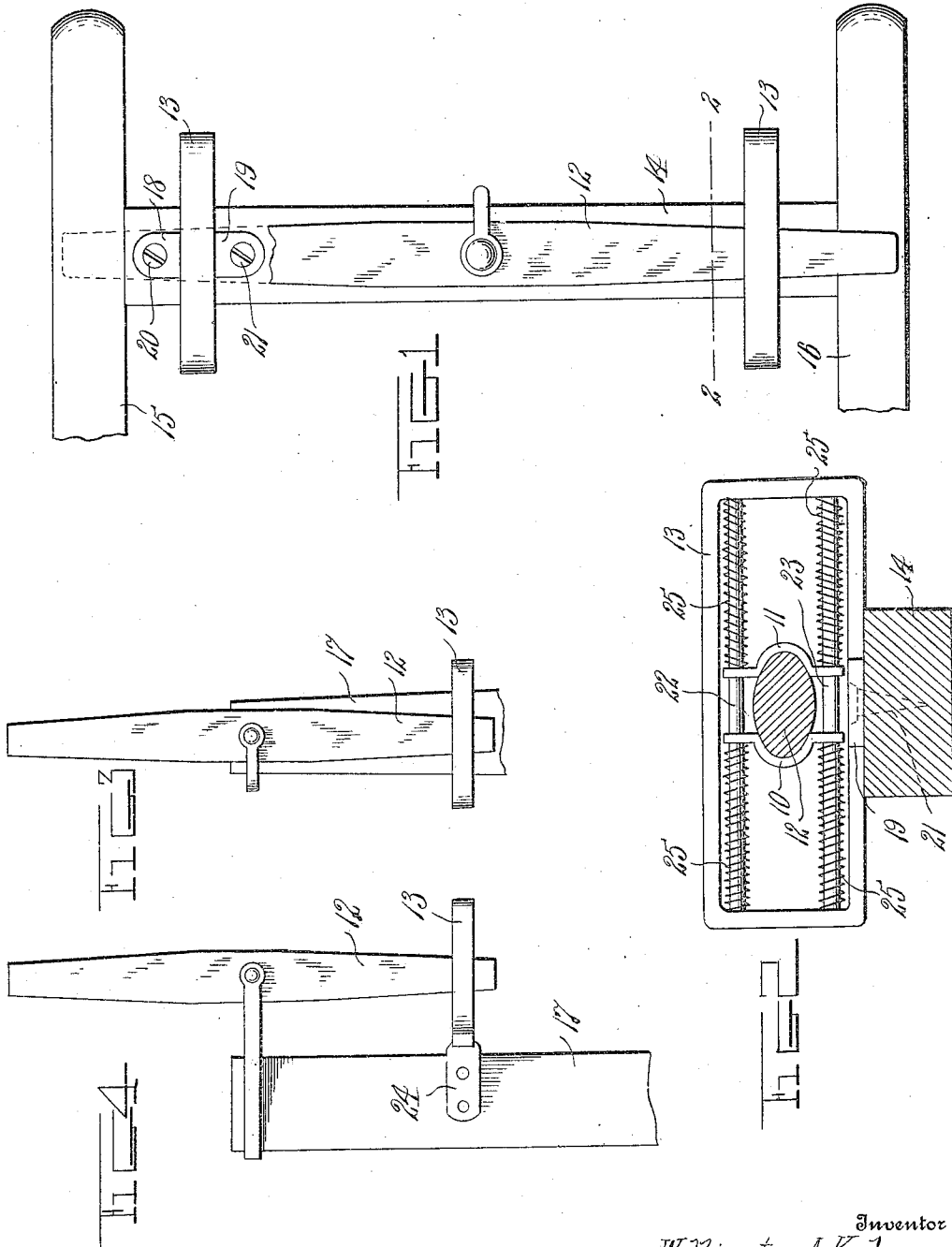


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 SWINGLETREE ATTACHMENT.
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UNITED STATES PATENT OFFICE.

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To all whom it may concern:

Be it known that I, WELLINGTON A. KOCH, a citizen of the United States, residing at Ringtown, in the county of Schuylkill, State of Pennsylvania, have invented certain new and useful Improvements in Swingletree Attachments; 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 attachments for swingletrees, and is designed to maintain the traces or tugs constantly and yieldably under strain to prevent the collar or breast strap portions of the harness from chafing the neck of the horse, and has for one of its objects to provide a simply constructed attachment whereby the above noted action is produced.

With this and other objects in view the invention consists generally in two plates bearing upon opposite sides of a swingletree near one end, and springs operating against opposite sides of the plates to maintain the swingletree yieldably in its central position, while at the same time permitting the usual swinging movement thereof.

The invention further consists in certain novel features of construction as hereafter shown and described and then specifically pointed out in the claims.

The improved device may be applied without material structural changes to a swingletree used in connection with a pair of thills or in connection with a swingletree employed upon a doubletree, and is readily applicable to doubletrees and swingletrees of the various forms in common use, and for the purpose of illustration the improved device is shown applied to several forms of swingletrees, but it will be understood that the invention is not necessarily limited to any specific form of swingletree.

In the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a plan view of the rear portion of a pair of thills with a swingletree pivotally mounted thereon and with the improvement applied. Fig. 2 is a section enlarged, on the line 2—2 of Fig. 1. Fig. 3 is a plan view of the improved device applied to a swingletree employed in connection with a conventional doubletree. Fig. 4 is a view similar to Fig. 3 illustrating the manner of arranging

the attachment when another form of doubletree is employed.

The ordinary swingletree as usually constructed and arranged permits the collar or breast strap to "work" or rub upon the neck of the horse, and to prevent this motion, and to retain the collar or breast strap constantly and yieldably in contact with the shoulders of the horse is the object of the present invention, and to accomplish these results an attachment is provided which maintains the swingletree yieldably in its central position, so that the movement of the swingletree caused by the "horse motion" is permitted, while at the same time a constant strain is applied to the traces or tugs and thus effectually prevents any looseness between the collar or breast strap and the neck or shoulders of the horse.

The improved device comprises two plates 10—11 bearing upon opposite sides of the swingletree represented at 12, near one end and springs arranged to bear against the plates from opposite sides, and thus maintain the swingletree yieldably in its central position, while at the same time permitting the necessary swinging movement. The springs are preferably supported within a yoke frame 13 attached in any suitable manner to the cross bar 14 of the thills 15—16, when the improved device is applied to a single horse vehicle, or attached to the doubletree represented at 17, when the attachment is applied to a two horse vehicle. A preferable means for attaching the yoke frame consists in oppositely extending ears or lugs 18—19, and secured to the support 14 or 17 by screws or rivets 20—21 or other suitable fastening means.

The plates 10—11 are preferably bent to partly inclose the side edges of the swingletree as shown in Fig. 2, and disposed within the yoke frame 13 and with rods 22—23 extending through the plates above and below the swingletree, the terminals of the rods being secured rigidly in the yoke frame. The supporting springs above noted are preferably arranged around the rods as shown at 25, and thus bear between the plates and the yoke frame and exert their force constantly to yieldably maintain the plates in engagement with the opposite sides of the swingletree.

The yoke frame 13 will be of sufficient

length to permit the usual swinging movement of the swingletree, and will not interfere therefore with the necessary "horse motion" when the horse is moving forward, while at the same time the springs, as above stated, exert a constant pulling strain upon the traces or tugs, and thus hold the collar or breast strap constantly against the neck or shoulders of the horse, and effectually prevent rubbing or friction, as will be obvious.

In Fig. 3 the yoke frame 13 is applied to a conventional form of doubletree 17 and is of substantially the same structure as that shown in Figs. 1 and 2, while in Fig. 4 the attachment is shown arranged to be applied to a doubletree having the swingletree mounted in front of the doubletree, and when thus arranged the frame 13 will be provided with an ear or lug 24 extending from one end and riveted or otherwise attached to the doubletree, so that the frame can be supported in front of the doubletree instead of upon its upper face, as shown in Fig. 3. It will be obvious, however, that these slight modifications do not constitute a departure from the principle of the invention, as they do not change or modify the construction of the attachment, and do not affect or change the results produced.

The frame 13 and the plates 10—11 may be of any required size and of any suitable material, and will be japanned, plated, or

otherwise coated or treated, and do not detract from the appearance of the vehicle to which they are attached.

What is claimed, is:—

1. The combination with a swingletree of a yoke frame having closed ends and through which the swingletree extends at one end, plates within the yoke frame and bearing upon opposite sides of the swingletree, and springs bearing against the closed ends of the frame and against the bearing plates from opposite sides.

2. The combination with a swingletree of plates bearing upon opposite sides of the swingletree at one end, and springs engaging said plates at opposite sides thereof and maintaining the swingletree yieldably in a central position.

3. The combination with a swingletree of a yoke frame having closed ends through which the swingletree extends at one end, plates within the yoke frame and bearing upon opposite sides of the swingletree, rods connected at their ends in said yoke frame and extending through said bearing plates, and springs upon said rods between the plates and yoke frame.

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

WELLINGTON A. KOCH.

Witnesses:

ROBERT E. MERWINE,
A. H. KOCH.