No. 750,373. PATENTED JAN. 26, 1904.

B. T. KINNEAR.

TRACE HOOK.

APPLICATION FILED SEPT. 16, 1903.

NO MODEL.

Fig. 1.

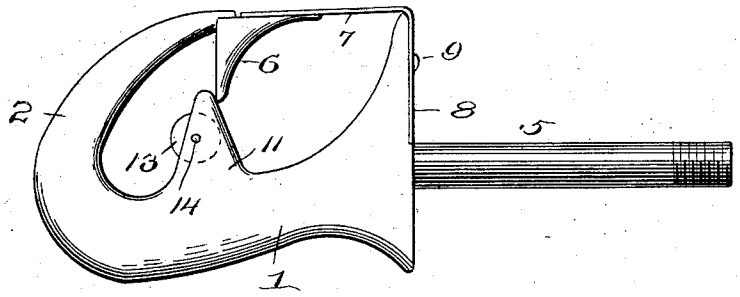


Fig. 2.

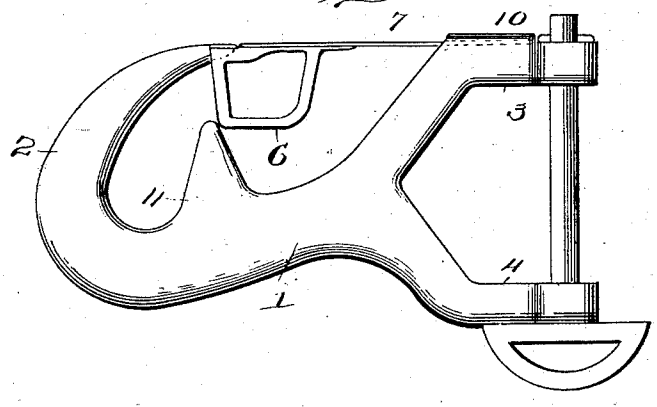


Fig. 3.

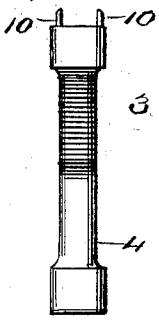


Fig. 4.

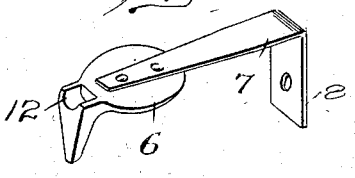
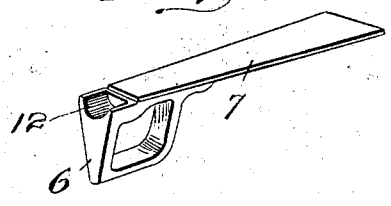


Fig. 5.



WITNESSES:

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No. 750,373. Patented January 26, 1904.

UNITED STATES PATENT OFFICE.

BLANCH T. KINNEAR, OF CLINTON, MASSACHUSETTS.

TRACE-HOOK.

SPECIFICATION forming part of Letters Patent No. 750,373, dated January 26, 1904.

Application filed September 16, 1903. Serial No. 173,435. (No model.)

To all whom it may concern:

Be it known that I, BLANCH T. KINNEAR, a citizen of the United States, residing at Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Trace-Hooks; 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.

My invention relates to hooks, and more particularly to that form of hook which is especially adapted to be used in connection with harness, trace-hooks, neck-yokes, whiffletrees, holdback-straps, &c.; and my invention consists of certain novel features of combination and construction of parts, as will be hereinafter clearly set forth in the following specification and pointed out in the claim.

The object of my invention is to provide a reliable form of hook adapted for the purposes specified, which will be of comparatively cheap construction and of great efficiency.

A further object of my invention, among others, is to provide a hook which will prevent casual displacement of the chain or link disposed in operative relation therewith.

Other objects and advantages will be hereinafter clearly set forth, reference being had to the accompanying drawings, which are made a part of this application, and in which—

Figure 1 shows a plan view of that class of hook designed to be used in connection with a whiffletree, neck-yoke, or the like. Fig. 2 shows an elevation of the form of hook designed to be used in connection with traces, holdback-straps, checkreins, and other parts of the harness. Fig. 3 is an end view thereof, showing the keeper and controlling-spring removed. Fig. 4 is a perspective view of the preferred form of keeper used in connection with the hook shown in Fig. 1, and Fig. 5 is a similar view of the form of keeper used in connection with the hook shown in Fig. 2.

In order to conveniently designate the various details of my invention and coöperating accessories, numerals will be employed, the same numeral applying to a similar part throughout the several views.

Referring to the numerals on the drawings, 1 indicates the body portion of my improved hook, which is provided with the curved terminal or hook proper, 2, while the opposite end is bifurcated, comprising the branches 3 and 4, each provided with an aperture disposed opposite to each other, whereby a bolt may be entered therein and the hook placed in connection with the trace or other parts of the harness.

In Fig. 1 I have shown the body portion 1 as having a bolt or rod-like extension 5, which takes the place of the branches 3 and 4 and is adapted to be used in connection with the whiffletrees, neck-yokes, and the like.

Designed to coöperate with the free end of the hook-terminal 2 is the keeper or member 6, which may be made solid or open, as indicated in Fig. 2, said member being connected in any preferred way to the controlling-spring 7, which latter may be connected to the end of the body portion 1 in any preferred way.

In Fig. 1 I have shown the spring 7 as being bent to form the right-angled extension or anchoring terminal 8, which is provided with an aperture to receive a rivet or screw 9 to be entered in the body portion 1.

In Fig. 2 the spring 7 consists of a straight piece of suitable sheet-steel, and the end thereof is anchored in position upon the branch 3 by so forming said branch that it will have the upwardly-extending integral ears 10, as more clearly shown in Fig. 3, said ears being adapted to be bent downward toward each other upon the end of the spring 7 and thereby securely holding the same in an anchored position and at the same time permitting a broken spring to be readily replaced by a new one.

Designed to coöperate with the hook-terminal 2 is the integral extension 11, which extends substantially parallel with the hook-terminal 2 and in connection with the member 6 provides a complete closure for the hook, so as to hold a ring, link, or the like securely in engagement with the body portion 1 until the member 6 shall have been moved inward or upward to release said ring.

The member 6, as will be seen by reference to Figs. 4 and 5, is provided with a recess 12 of proper size and position to receive the free end of the hook-terminal 2, as clearly shown in Figs. 1 and 2.

In some instances I mount in the member

11 an antifriction roller or wheel 13, held in place by a suitable rivet 14, whereby said antifriction-roller will be disposed to turn freely when engaged by the link or ring, and thus more reliably hold my trace-hook in engagement therewith.

It will be understood that my improved hook may be made of any preferred material, as malleable iron, and when the securing members or ears 10 are integrally formed they may be easily bent downward upon the spring 7, thereby securely holding the same in position.

It will at once be seen that it would be next to an impossibility for the member 6 to become accidentally opened and the ring or other object released or for any foreign objects to become caught in said hooks while in use. The seat of the hook or the position occupied by the link or ring of a chain or other object with which the hook is placed in coöperative relationship is so located that it will dispose the link or chain near the median line of the hook and will therefore more properly distribute the load and strain placed upon the hook and upon the branches 3 and 4 or connecting-rod 5, as the case may be.

I have described the hooks as being designed more particularly to be attached to harness, neck-yokes, &c.; but I desire it to be understood that said hooks may be used for any and all purposes wherein a hook of this class may be employed.

While I have described the preferred combination and construction of parts deemed necessary in carrying out my invention, I wish to comprehend in this application all possible substitutes and equivalents that may be considered as falling fairly within the scope of my invention.

Believing that the advantages and manner of employing my improved trace-hook have thus been made clearly apparent, further description is deemed unnecesary.

What I claim as new, and desire to secure by Letters Patent, is—

The herein-described hook comprising the body portion 1, having at one end a tapered hook-terminal 2, so formed that the seat of the hook will be disposed in a median line or line of draft, said body portion also having the extension 11 disposed substantially parallel with the hook-section; a spring having a closure member 6 upon the free end thereof; suitable means to secure said spring to the body portion whereby it may be readily removed for the purpose of replacement or repair, and suitable means to connect the body portion of the hook to the article for which it is designed, all combined substantially as specified and for the purpose set forth.

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

BLANCH T. KINNEAR.

Witnesses:

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