No. 736,839. PATENTED AUG. 18. 1903.

J. B. GATHRIGHT.

HAME AND TRACE HOOK.

APPLICATION FILED FEB. 6, 1902.

NO MODEL.

Fig. 1.

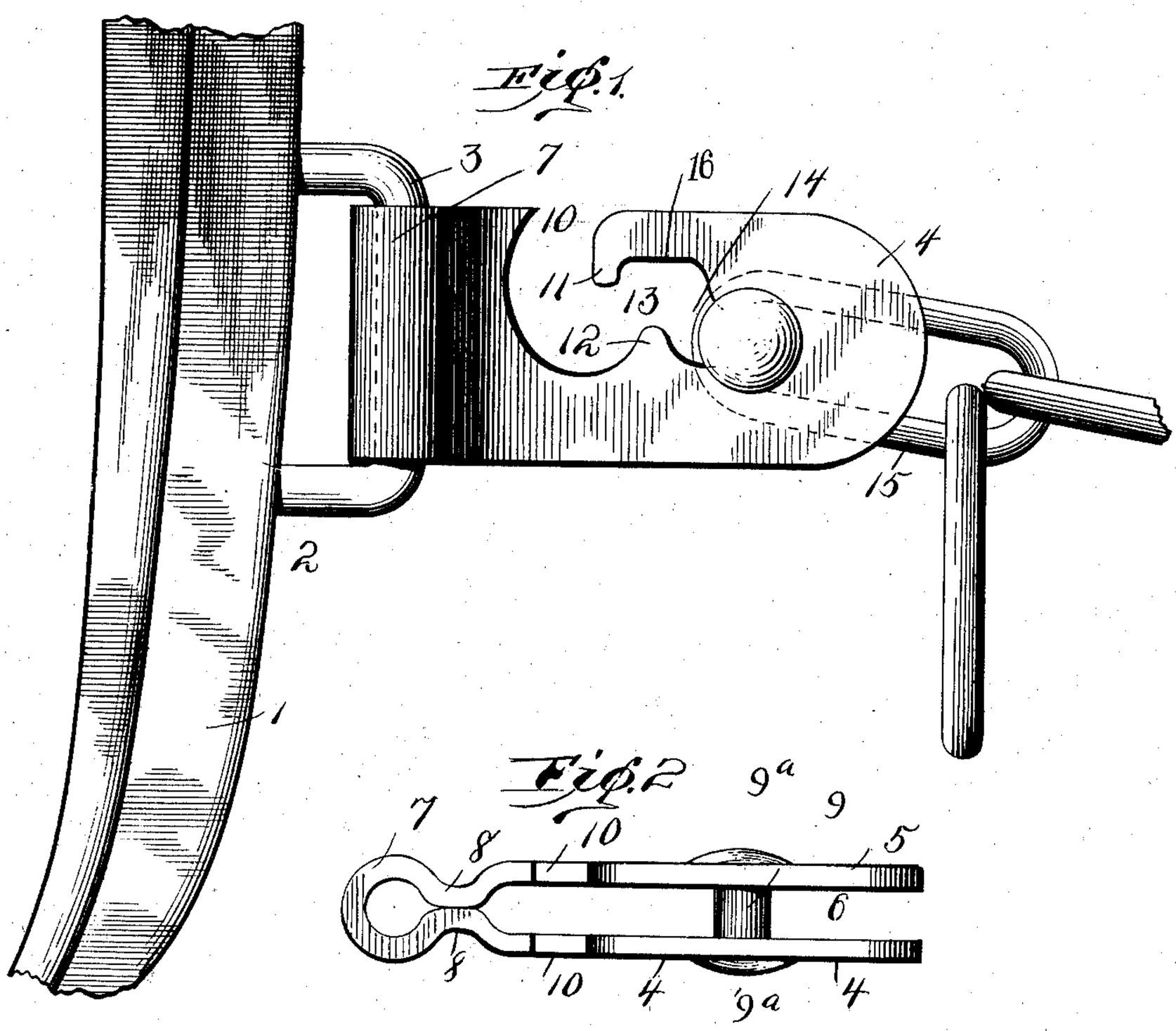


Fig. 2

Fig. 3.

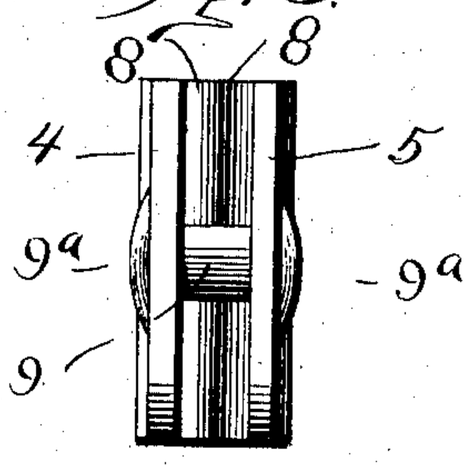
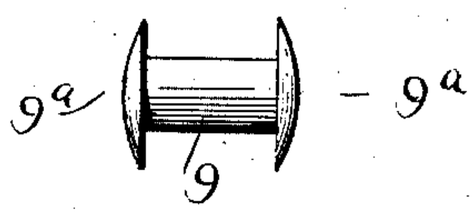


Fig. 4.



Witnesses
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No. 736,839. Patented August 18, 1903.

UNITED STATES PATENT OFFICE.

JOSIAH B. GATHRIGHT, OF LOUISVILLE, KENTUCKY.

HAME AND TRACE HOOK.

SPECIFICATION forming part of Letters Patent No. 736,839, dated August 18, 1903.

Application filed February 6, 1902. Serial No. 92,901. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH B. GATHRIGHT, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Hame and Trace Hooks; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in hame and trace hooks; and it consists in the novel features of construction thereof and in certain novel combinations of elements substantially as hereinafter described and particularly pointed out in the subjoined claims.

The particular object of the present invention is to provide a hame and trace hook of simple construction the use of which in combination with a detachable element will prevent frictional contact of the chain with the bulge of the collar and permit ready attachment and detachment of the chain-link and in which the wear of the trace-chain will be imposed, primarily, upon this detachable element, which may be rotatable in its bearings and of contour corresponding to the bearing-surface of the chain-link, and thereby reduce to a minimum the friction upon all parts. This object of the invention is well accomplished by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side view of part of a hame provided with my improved hook, showing a link of the trace-chain engaged with the latter. Fig. 2 is a top view of the hame-hook detached. Fig. 3 is a front end view of the same; and Fig. 4 is a detail view of the bolt by which the trace-chain is connected with the hook.

The same numerals of reference designate the same parts in the several views.

1 designates a portion of a hame of the conventional or any suitable construction, and 2 the usual staple thereon, upon which the hame-hook is pivoted as usual.

In the present construction of hame-hooks of the type to which the present invention relates the end of the hook next to the hame is bent into tube form and incloses the front member 3 of the staple, (or a bolt which is connected with the hame and constitutes a well-known equivalent of the staple,) and the body of said hame-hook frequently comprises two side wings, which wings in the actual use of the device are, however, invariably clamped together (in contact or approximately in contact with each other) throughout their lengths, thus forming to all intents and purposes a single hook of double thickness, and over the hook end thereof the link of the trace-chain is inserted in horizontal position and directly bears thereupon, and said link when the hame is attached to the harness-collar also bears upon the bulge of said collar. Said construction has two disadvantages, namely: First, the chain-link in its movement upon the hame-hook imposes friction on the bulge of the collar, which soon wears the latter, thereby necessitating frequent repair; second, the movement of the horizontal trace-chain link upon the non-conformable surface of the hame-hook soon wears both the link and the hook to an extent which destroys usefulness, thus requiring frequent renewal of the hame-hook and link. To overcome these disadvantages, I have devised a construction of hame-hook which prevents the chain-link from coming in contact with the harness-collar during its movements and in which the chain-link is indirectly connected with the hook by a separately-formed element which is well adapted to sustain the strain, may be constructed to reduce friction to a minimum, so that no replacement of parts is liable to become necessary, and is readily removable from the hook.

The hook comprises a body having a sleeve 7 for the hame-staple and two wings 4 and 5, which are of hook form and are located in (or approximately in) parallelism with each other and are permanently separated by an intervening space 6 to receive and retain the link 15 of the trace-chain in vertical position. Between the said sleeve and separated wings of the hook there is preferably a closed neck formed by bending opposite sides of the hook-body inward in the process of forming the blank, as shown at 8 8, which are so arranged that in the application of the hook to said staple they will also prevent the two wings from being brought too close to each other to

admit the link. Spanning the space 6 between said wings and having its ends properly supported by the hooks thereof is a horizontal bolt 9, which extends through the link 15, and thus constitutes the indirect connecting means above mentioned of said link with the hook.

It will be seen that with the construction thus far described the chain-link has the required freedom of movement upon the bolt 9, and its movement is prevented from wearing the harness-collar by being disposed vertically, with no part of the link between the hook and the collar, and it will also be seen that the friction between the link and the hook is imposed upon the bolt instead of directly upon the hook proper, and as said link and bolt have conforming (preferably rounded) surfaces which engage each other and the bolt may be rotatable in its bearings it will be apparent that said friction is reduced to a minimum. Said wings are of hook form, as hereinabove stated, each being formed with a longitudinal slot 13, having an open mouth 10 in an edge of the wing. Said slots in the wings coincide with each other, and in practice the bolt is inserted through the mouths of said slots and thence drawn into the rear ends 14 of the same, together with the chain-link, which previously has been placed over said bolt. This construction permits the bolt and trace-chain to be readily attached to and removed from the hame-hook whenever desired.

Preferably each wing of the hook is formed with projections 11 and 12, which extend toward each other from the top and bottom, respectively, and are arranged in staggered relation with each other, so as, together with the corresponding recess 16, arranged at one side of the hook and opposite the inner projection 12 at the other side thereof, to form a devious passage 13, leading to the space 14, which more or less loosely contains said bolt, thereby preventing the bolt and link from accidentally escaping from the hook.

Having thus described the invention, what I believe to be new and desire to secure by Letters Patent, and what I therefore claim, is—

1. A hame and trace hook having a part by which it is pivotally connected with a hame, and comprising two wings separated by a space for the insertion of a vertically-disposed trace-link between them, each of said wings having hook-shaped rear ends and formed with an opening in its edge leading to the interior of its hook end, and a bolt removably supported by said hook ends and spanning the space between the same, said bolt being adapted to pass loosely through said link.

2. The combination with a hame having a staple, and a trace-chain, of a hook, comprising a body bent to form a sleeve which receives said staple, said body also having two separate wings between which a link of the trace-chain is inserted in vertical position and each of said wings having a hook-shaped end and formed with an opening in its edge leading to the interior of its hook end, and a double-headed bolt removably mounted in said hook ends and spanning the space between the same and passing loosely through said link.

3. The combination with a hame having a staple, and a trace-link, of a hame-hook, comprising a body having one end formed to engage said staple and pivotally mounted thereon and its other end comprising separated wings between which the trace-link is disposed in vertical position, and a bolt formed separately from said wings and link and detachably secured to said wings and spanning the space between the same and extending loosely through said link.

4. A combined hame and trace-hook having two hooked wings permanently disposed apart to admit the bearing-link of the trace-chain in vertical position between them, and a double-headed detachable bolt to engage and connect the hook and chain.

5. A hame and trace-hook, having two wings each of which is formed with a longitudinal slot, said hook having projecting means arranged between said wings and contiguous to the hame-engaging portion thereof and operating to prevent engagement of the slotted portions of the wings with each other so as to assure that the same will be held permanently apart sufficiently to admit the bearing-link of a trace-chain in vertical position between them, and a bolt adapted to extend through said bearing-link and spanning the space between said wings, said bolt having its ends supported in the slots of said wings.

6. A combined hame and trace-hook having two wings of hook form arranged to admit the bearing-link of the trace-chain in vertical position between them to protect the collar against wear by said link, and a detachable and rotatable bolt supported by said wings and spanning the space between them, said bolt connecting said link detachably with said hook and receiving the wear of the link and being formed separately from said hook and link.

7. A combined hame and trace-hook, constructed to provide two hooked wings and having its opposite sides formed with inward bends arranged to engage each other in the application of the device to a staple to thereby form a closed neck to receive said staple, said bends also serving to hold said wings permanently apart to admit the bearing-link of a trace-chain in vertical position between them, and a bolt supported by said wings and spanning the space between the same.

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

JOSIAH B. GATHRIGHT.

Witnesses:
J. J. HARBISEN,
E. S. FOOTE.