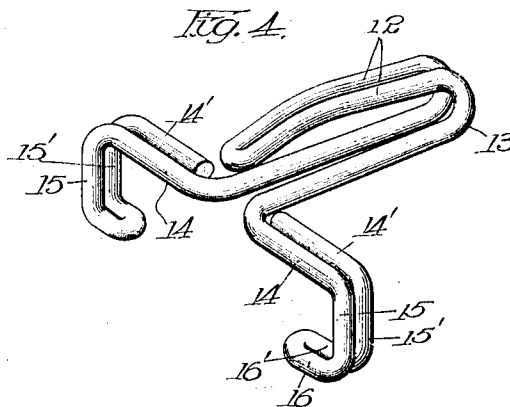
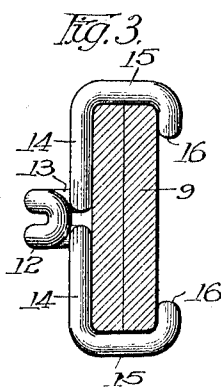
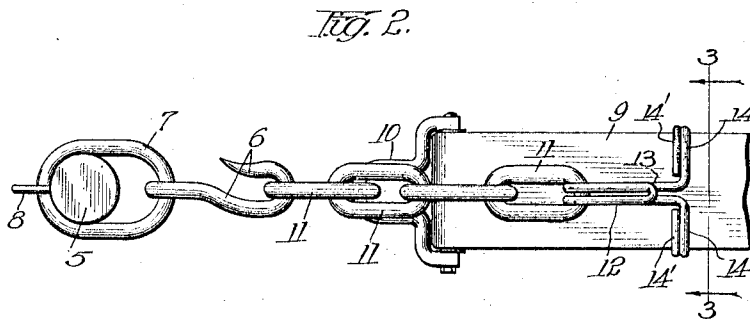
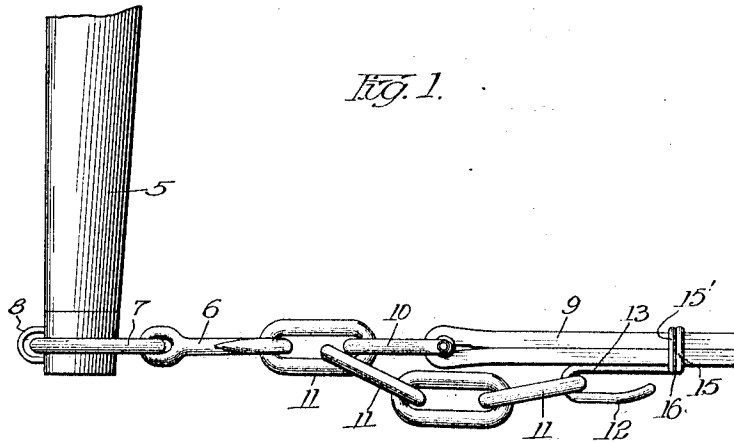


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TRACE ATTACHMENT.
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1,054,432.

Patented Feb. 25, 1913.



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UNITED STATES PATENT OFFICE.

GEORGE MARSH, OF LAPORTE, INDIANA.

TRACE ATTACHMENT.

1,054,432.

Specification of Letters Patent.

Patented Feb. 25, 1913.

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To all whom it may concern:

Be it known that I, GEORGE MARSH, a citizen of the United States, residing at Laporte, in the county of Laporte and State of Indiana, have invented certain new and useful Improvements in Trace Attachments, of which the following is a specification.

My invention relates to improvements to trace attachments and more particularly to a clip having means for engagement with the trace and means to engage the trace chain to support the free end thereof so that the unused portion of the chain will not hang loose.

One of the object of my invention is to provide a device of the character described which may be easily shifted to different positions along the trace to support any desired number of idle links.

Another object of my invention is to provide such a device which shall be of cheap and simple construction, and which shall be easy of application and efficient in operation.

In the drawings, Figure 1 is a plan view showing the swingle-tree, trace, and trace chain, with a clip device constructed according to my invention applied thereto; Fig. 2 is a side elevation thereof; Fig. 3 is a section on line 3—3 of Fig. 2; and Fig. 4 is a perspective view of the clip.

It is obvious that various means may be employed for supporting the idle links of the tug chain, but I have found the herein shown construction to be cheap and efficient. In such construction 5 indicates a part of the swingle-tree having a trace hook 6 attached thereto in any ordinary fashion, as by means of the ring 7 secured upon the end of the swingle-tree by staple 8.

9 indicates the trace or tug having attached to the end thereof a shackle 10 to which is secured the trace chain consisting of a plurality of links 11—11.

In the use of the trace and trace chain shown, a link 11 is engaged over the hook 6, leaving the links beyond the engaged link hanging loose or idle so that they often knock against the horse, besides rattling on account of their vibration incident to movement of the wagon on which they are used. To obviate this I provide a clip which shall engage the extreme link of the chain and support it against the active portion of the

trace. Specifically when a leather tug strap or trace is used with the chain, I prefer to form the clip with a hook to engage a link of the chain and two yieldable arms to engage the leather strap. This construction may advantageously be made of a single piece of wire bent back upon itself as at 12, to form the tongue of the hook and again bent at 13 to form the base of the hook. From the base the wire is bent outwardly in opposite directions as at 14—14 for contact with the outer face of the trace, and then bent at right angles as at 15—15 for contact with the edge of the trace, and again as at 16—16 for contact with the inner face of the trace. For greater strength and the provision of greater contacting surface, the wire may be turned back to lie parallel with the portions 16, 15, and 14, as at 16', 15', and 14'. Preferably also, the tongue of the hook is turned in so that the link may not accidentally become unhooked.

In the use of the device above described it will be apparent that the opposite trace-engaging arms may be sprung apart so that the portions 16 and 16' may be brought over the edge of the trace to contact with the inner surface thereof, when resiliency of the base portions of the hook will draw them together into firm frictional engagement with the trace portions 14—14', 15—15', 16—16' and the base of the hook all contacting with the trace. The terminal link 11 of the trace chain may be slipped over the hook and the clip may then be slid along the trace until the chain is taut, when the friction between the clip and the trace will maintain the parts in their positions, so that the disadvantages which arise from allowing the chain to hang loose are avoided.

The particular construction of the clip may, of course, be varied to adapt it to particular trace and chain constructions.

What I claim is:—

1. A clip formed of a single piece of wire bent to form a central link-engaging hook and bent outwardly in opposite directions at right angles to the base of said hook, thence bent downwardly at right angles to the plane which includes the base of the hook and said two outwardly bent portions, and thence bent inwardly parallel to said outwardly bent portion, each said inwardly bent portion being of length less than the length of

the overlying outwardly bent portion, said several bent portions constituting opposite arms for frictional and removable engagement of a trace to permit longitudinal adjustment of the clip along said trace.

2. A clip formed of a single piece of wire bent to form a central link-engaging hook and opposite arms bent for coaction respectively over the front surface, edges, and back surface of a trace, for purposes described, the wire being returned upon itself whereby said hook and two arms, constituting said wire clip, are double for presentation toward the engaged trace of wide bearing surfaces.

3. A clip formed of a single piece of wire bent to form a central link-engaging hook and bent angularly outwardly in opposite directions from the base of said hook and, suitably contorted to form trace-engaging arms, the extremities of said wire being bent back into the plane of said base of the hook and said outwardly bent portion of the wire

and terminating at the angular bend between each arm and the base of the hook.

4. A clip formed of a single piece of wire bent to form a central link-engaging hook and bent outwardly in opposite directions at right angles to the base of said hook, thence bent downwardly at right angles to the plane which includes the base of the hook and said two outwardly bent portions, and thence bent inwardly parallel to said outwardly bent portion, each said inwardly bent portion being of substantially half the length of the overlying outwardly bent portion, said several bent portions constituting opposite arms for frictional and removable engagement of a trace to permit longitudinal adjustment of the clip along said trace.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

GEORGE MARSH.

In the presence of—

W. LINN ALLEN,

MARY F. ALLEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."