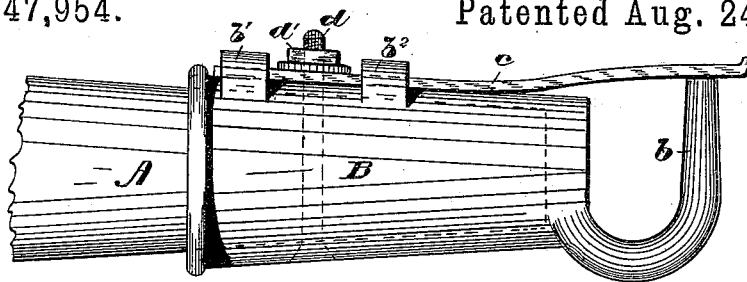


(No Model.)

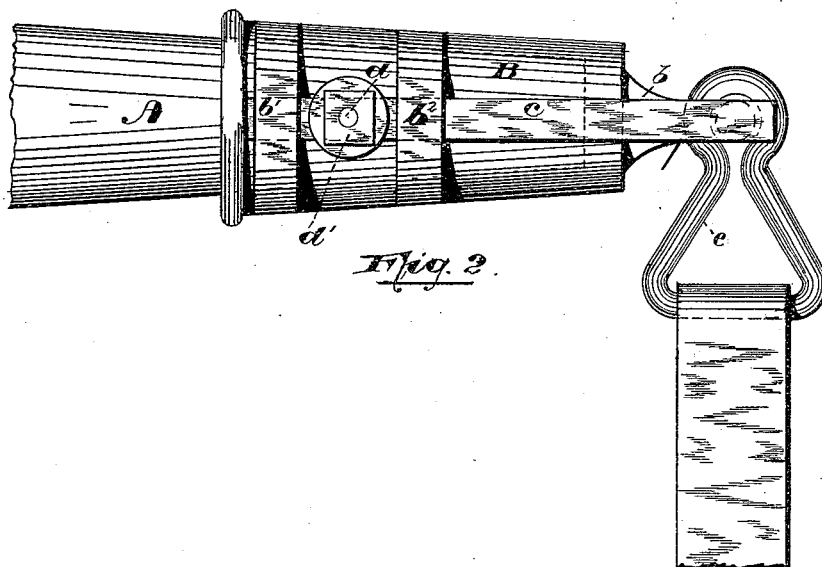
H. M. OLIVER.  
WHIFFLETREE HOOK.

No. 347,954.

Patented Aug. 24, 1886.



*Fig. 1.*



*Fig. 2.*

WITNESSES:

INVENTOR:

*Fred. C. Haentzel.*  
*Frank F. Campbell.*

*Henry M. Oliver,*

BY *Drake & Co.,* ATTYS.

# UNITED STATES PATENT OFFICE.

HENRY M. OLIVER, OF NEWARK, NEW JERSEY.

## WHIFFLETREE-HOOK.

SPECIFICATION forming part of Letters Patent No. 347,954, dated August 24, 1886.

Application filed June 12, 1886. Serial No. 204,930. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. OLIVER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in trace-hooks, and is designed to provide a trace-hook that may be easily and cheaply constructed, that is very simple in its operation, and holds the traces securely to the whiffletrees, and which may be applied to either end of said whiffletrees without necessitating the use of hooks, which can only be used on one end of the trees, but not on both ends.

In the accompanying drawings, in which similar reference-letters are employed to indicate corresponding parts, Figure 1 is a side elevation of one of the improved trace-hooks and a portion of the whiffletree, and Fig. 2 is a top view of the same and a trace-loop and a portion of the trace.

A in said views indicates the whiffletree, upon the opposite ends of which are secured the improved trace-hooks, which consist of a tubular body, B, upon the end of which is formed a hook, *b*, as indicated in Fig. 1. Loops *b' b'* are formed upon the top of said body, and extending through said loops along the body, and across the end of the hook *b* is a spring, *c*, substantially as shown in the drawings. A bolt, *d*, extends through the body B and end of the whiffletree, as shown in Fig. 1 by the dotted lines, and also through the spring, thereby holding all of these several parts firmly together.

Should the spring be broken off, the part remaining attached to the body by the bolt may be readily removed simply by unscrewing the nut *d'* and pushing in the bolt, when

the remaining portion of the spring may be drawn through the loops *b' b'* and a new one inserted in its place.

The trace-loop *e* is attached to the hook simply by raising the end of the spring and drawing the loop down on the hook.

One manifest advantage of the improved construction is, that the same trace-hook may be used on either end of the whiffletree, avoiding the expense caused by the use of rights and lefts, which must be bought in pairs, while my improved hook may be bought singly.

Having thus described my invention, I desire to claim the following:

1. As an improved article of manufacture, a trace-hook consisting of a tubular or hollow body having a hook formed thereon, and provided with loops thereon adapted to receive a spring, for the purposes set forth.

2. In a trace-hook, the combination, with a tubular body portion adapted to receive the end of a whiffletree, and provided with a hook formed thereon, and loops *b' b'*, of a spring extending through said loops and along said body portion out over the end of the hook, and means for securing said spring to said body portion, substantially as and for the purposes set forth.

3. The combination, with a whiffletree, of a trace-hook consisting of a tubular body portion, B, in which said whiffletree is inserted, said portion B being provided with a hook, *b*, and loops *b' b'*, formed integrally thereon, a spring, *c*, extending through said loops along said body portion and out over the end of the hook *b*, and a bolt, *d*, extending through said body portion, the whiffletree, and the spring, whereby said parts are firmly attached together, substantially as and for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of June, 1886.

HENRY M. OLIVER.

Witnesses:

FREDK. F. CAMPBELL,  
CHARLES H. PELL.