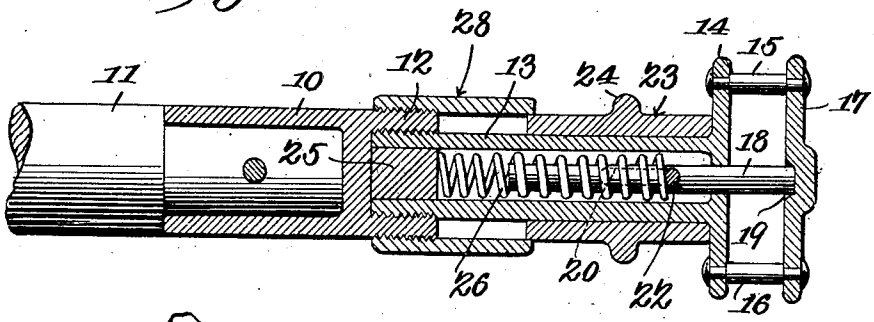
No. 830,712. PATENTED SEPT. 11, 1906.

J. F. HARRIS.

TRACE FASTENER.

APPLICATION FILED FEB. 10, 1906.

Fig. 1



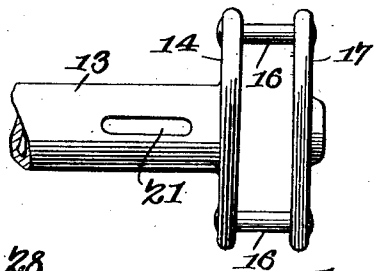
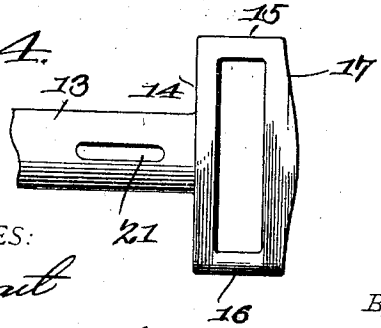


Fig. 2.

Fig. 3.

Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN FOSTER HARRIS, OF RICHMOND, CALIFORNIA.

TRACE-FASTENER.

No. 830,712. Specification of Letters Patent. Patented Sept. 11, 1906.

Application filed February 10, 1906. Serial No. 300,469.

To all whom it may concern:

Be it known that I, JOHN FOSTER HARRIS, a citizen of the United States, residing at Richmond, in the county of Contra Costa and State of California, have invented a new and useful Trace-Fastener, of which the following is a specification.

This invention relates to trace-fastener attachments to swingletrees, and has for its object to simplify and improve the construction and increase the efficiency and utility of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation.

In the drawings, Figure 1 is a longitudinal sectional elevation. Fig. 2 is a detail of a portion of the head member of the device. Fig. 3 is a perspective view of the device applied. Fig. 4 is a view similar to Fig. 2, illustrating a modification in the construction of the head member of the device.

One of the improved devices is attached to each end of the whiffletree; but as they are exactly alike one only is shown. The improved device comprises a ferrule 10, adapted to be attached to the whiffletree at the ends, a portion of the latter being shown at 11. The outer end of the ferrule 10 is provided with a socket 12, preferably threaded, in which a tubular stock 13 is detachably secured, as by being threaded therein, the outer end of the stock having a transverse recess or socket for receiving the trace to be held, the recess or socket formed by an inner or base plate 14 upon the stock 13, ends 15 16 extending from the plate 14, and an outer plate 17, attached to the ends 15 16 and spaced from the plate 14 and corresponding thereto. The ends 15 16 may be in the form of studs riveted into the members 14 17, as in Figs. 1, 2, and 3, or integral with the plates, as in Fig. 4, as may be preferred.

Slidably disposed in the stock 13 is a bolt or pin 18, extending through the plate 14 and seated at the outer end in a socket 19 in the plate 17. The stock 13 is provided with longitudinal slots 20 21, through which a pin 22 extends and also through the bolt 18. Slidably disposed upon the stock 13 is a sleeve 23, in which the ends of the pin 22 are secured. The sleeve 23 is provided with a flange 24 to assist the fingers of the operator in actuating the collar 23. The rear or inner end of the tubular stock 13 is provided with a plug 25, and bearing between this plug and the pin 22 is a spring 26, the force of the spring thus maintaining the pin yieldably in its outward position and in engagement with the socket 19 in the plate 17. The socket 19, it will be noted, is formed with inclined side walls, so that the certainty of the seating of the pin is assured.

The trace (represented at 27) is inserted between the plates 14 17 and also between the ends 15 16, with the pin passing through an aperture therein. When the trace is to be released, the sleeve 23 is forced inwardly or toward the body of the whiffletree, carrying the pins 18 and 22 with it against the spring 26 and withdrawing the bolt 18 into the plate 14, and the trace is coupled to the fastener in the same manner. Attached to the ferrule 10, preferably by threading thereon, is a guard member 28, extending over the inner end of the sleeve 23 and forming a dust and mud guard thereto.

The device is simple in construction, strong and durable, can be readily applied to any of the various forms and sizes of whiffletrees, and without weakening the same.

The plates 14 17 and the ends 15 16, it is obvious, can be readily adapted to receive any size or form of trace or to traces having any of the various terminal appliances.

Having thus described the invention, what is claimed is—

1. In a whiffletree-fastener, a ferrule adapted to be attached at one end to a whiffletree and with a socket at the other end, a tubular stock detachably connected in said socket and leaving a recess at the outer end disposed transversely thereof, a spring-pressed bolt operating in said stock and extending transversely of said recess and adapted to support the trace therein, and means for withdrawing said bolt.

2. In a whiffletree-fastener, a tubular stock having means at one end for attachment to a whiffletree and with a trace-receiving recess at the other end and intermediate longitudinal slots, a spring-pressed bolt disposed within said tubular member and provided with a

transverse pin extending through said slots, and a sleeve slidable upon said stock and connected to said pin and provided with an intermediate flange.

3. In a whiffletree-fastener, a ferrule adapted to be attached at one end to a whiffletree and with a socket at the other end, a tubular stock detachably connected in said socket and having a base-plate disposed transversely of the outer end, spaced studs extending from the base-plate, an outer plate connected to the free ends of the studs and spaced from the base-plate and provided with an intermediate socket, a bolt spring pressed and operating in said stock and extending into the socket in said outer plate and means for withdrawing said bolt.

4. In a whiffletree-fastener, a ferrule adapted to be attached at one end to a whiffletree and with a socket at the other end, a tubular stock detachably connected in said socket and with intermediate transverse slots and a base-plate disposed transversely of the outer end, spaced studs extending from the base-plate, an outer plate connected to the free end of the studs and spaced from the base-plate and provided with an intermediate socket, a spring-pressed bolt operating in said stock and seating in the socket in said outer plate when projected, a pin in said bolt and extending through said slots, and a sleeve slidable upon said stock and connected to said pin.

5. In a whiffletree-fastener, a ferrule adapted to be attached at one end to a whiffletree and with a socket at the other end, a tubular stock detachably connected in said socket and having intermediate transverse slots and a recess at the outer end disposed transversely thereof, a spring-pressed bolt operating in said stock and extending transversely of said recess and supporting the trace therein, a pin in said bolt and extending through said slots, a sleeve slidable upon said stock and connected to said pin, and a guard-sleeve attached to said ferrule and extending over said slidable sleeve.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN FOSTER HARRIS.

Witnesses:

EDMUND W. MCCUTCHEN,

ALFEUS ODELL.