No. 710,992. Patented Oct. 14, 1902.

C. NAGEL.

TRACE FASTENER.

(Application filed Feb. 24, 1902.)

(No Model.)

Fig. 1.

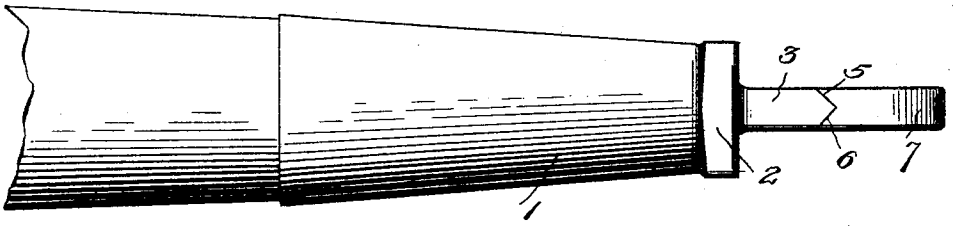


Fig. 2.

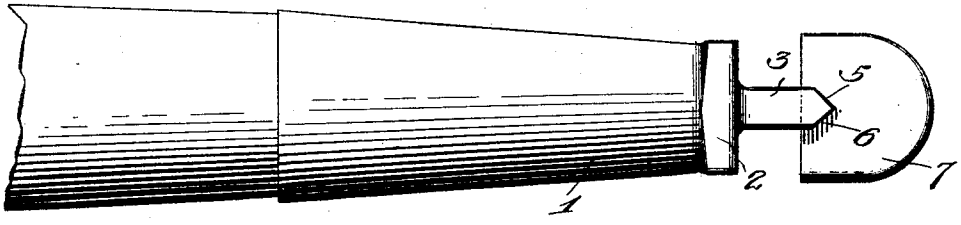


Fig. 3.

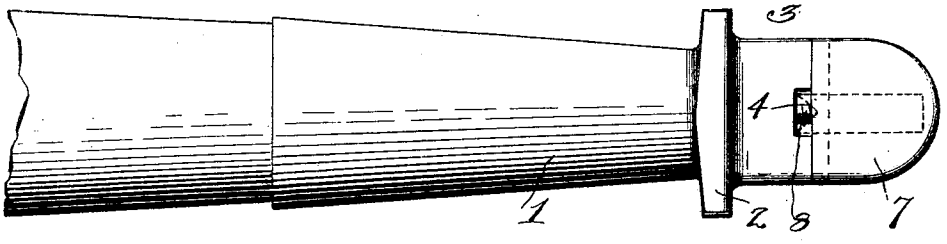
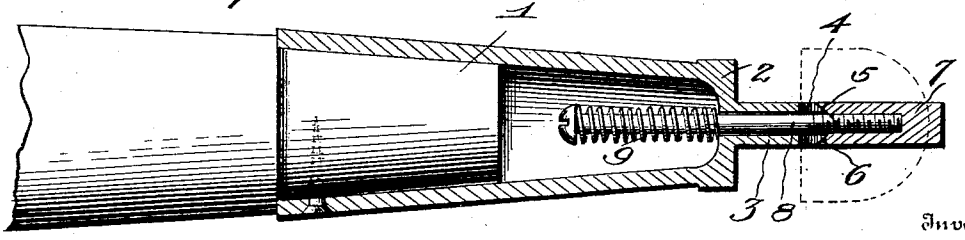


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 710,992, dated October 14, 1902.

Application filed February 24, 1902. Serial No. 95,219. (No model.)

To all whom it may concern:

Be it known that I, CHARLES NAGEL, a citizen of the United States, residing at Portsmouth, in the county of Scioto and State of Ohio, have invented certain new and useful Improvements in Trace-Fasteners; 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

The invention relates to trace-fasteners adapted for attaching harness-traces to the whiffletree of vehicles.

The object of the invention is to provide a device of this character which shall be simple of construction, durable in use, comparatively inexpensive of production, and which embodies in its structure a ferrule having a head formed at its outer end and terminating in a flat shank and a flat button pivotally connected to said shank and adapted to be turned at right angles to the shank to fasten the trace to the whiffletree, provision being made whereby when the button is in position to receive the eye of the trace it will be held in that position, and thereby allow of the trace being slipped over the button onto the flat shank, thus permitting of the expeditious connection of the trace with the whiffletree and preventing the button from being accidentally turned at right angles to the shank, which would retard or delay the connection and disconnection of the trace with the shank.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a side elevation of my improved trace-fastener, showing the parts in position to receive the eye of the trace. Fig. 2 is a similar view showing the button turned at right angles to the shank to hold the trace in position. Fig. 3 is a top plan view, and Fig. 4 is a longitudinal sectional view with the parts in the position shown in Fig. 3.

In the drawings, 1 denotes a ferrule provided at its outer end with a head 2 and with a flat shank 3. This shank is provided with a notch 4 and is beveled in opposite directions, as shown at 5 and 6.

7 denotes a flat button having a V-shaped groove in its inner end, and 8 denotes a screw extending through the head, shank, and into the button and having confined between its head and the outer end of the ferrule a coiled spring 9.

The operation is as follows: When the parts are in the position shown in Fig. 1, the upper and lower surfaces of the shank and of the button will be flush, and the parts will be held in this position by reason of the spring holding the beveled edge of the shank into the V-shaped groove of the button. In this position the trace may be slipped over the button and engaged with the shank, there being no danger of twisting the button at right angles to the shank, as the spring holds the button interlocked to the shank. When the button is turned in this position, the trace may also be easily and quickly disengaged from the shank. After the trace has been slipped over the button onto the shank the button is turned at right angles to the shank and the spring draws the inner end of the button into the notch of the shank, thus positively locking the button crosswise of the shank or at right angles thereto and securely retaining the trace in position. The tension of the spring may be adjusted by the screw.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of my invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a trace-fastener, the combination with a flat shank, of a flat button, the one formed with a rectangular notch to hold the other at right angles thereto, and the other formed

with a longitudinal V-shaped groove to receive the V-shaped end of the other, whereby the sides of the button and shank are retained in parallelism, and a spring-actuated bolt for connecting the button to the shank, substantially as set forth.

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

CHARLES NAGEL.

Witnesses:
MARTIN F. MICKLETHWART,
SCOTT BRAGG.