

J. W. SINGLETON.

Improvement in Trace-Fasteners.

No. 131,470.

Patented Sep. 17, 1872.

Fig. 1.

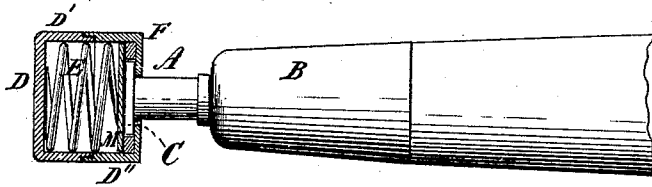


Fig. 2.

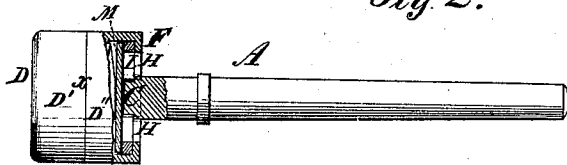


Fig. 3.

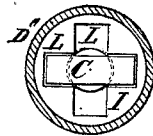
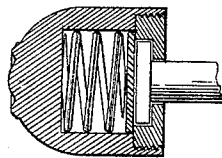


Fig. 4.



Witnesses.

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Cox and Cox.

UNITED STATES PATENT OFFICE.

JAMES W. SINGLETON, OF QUINCY, ILLINOIS.

IMPROVEMENT IN TRACE-FASTENERS.

Specification forming part of Letters Patent No. 131,470, dated September 17, 1872.

To all whom it may concern:

Be it known that I, JAMES W. SINGLETON, of Quincy, in the county of Adams and State of Illinois, have invented certain new and useful Improvements in Trace-Fasteners, of which the following is a specification, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to that class of devices known as trace-fasteners. The principle of its operation is to secure a movable cap upon the end of the trace-rod, so that it may be securely locked thereon or removed with facility. The object of the invention is to furnish a means whereby the traces may be secured readily and safely, or released with dispatch.

Description of the Accompanying Drawing.

Figure 1 is a sectional view of my invention; Fig. 2, a view of the same partly in section; Fig. 3, a vertical, and Fig. 4 a lateral, section, showing certain parts.

General Description.

A in the accompanying drawing is a rod or bar of metal or suitable material, provided with the collar B, situated at a proper distance from the extremity of the rod, and intended to assist in retaining the trace in a proper position. The outer end of the rod is provided with the ears C, situated on opposite sides, and slightly less in width than the diameter of the bar A, their outer surfaces being flush with the end of said bar. Thus a segment of the periphery of the bar A projects beyond the planes of the upper and lower edges of the ears C. That portion of the rod A opposite the ears C is properly secured in the end of the swivel-tree or other device to which the trace is to be attached. The cap D consists of two cylinders, D' and D'', of similar size, which are united by a screw and thread, or by welding on the line *x*. The cylinder D' is closed at one end and open at the other. In it is placed a coiled spring, E, of suitable size and power. The cylinder D'' is provided with the top or cover F, in which is formed the slot H of such dimensions as to correspond with, but slightly exceed the periphery of the outer end of the bar A. Im-

mediately below and in contact with the under side of the cover F is secured the plate I, which is provided with a cruciform slot, L, the width of the arms of which slightly exceed the width of the ears C. The slots H and L have a common center, which is the axis of revolution of the cap D, and stand at right angles to each other. A disk of metal, M, the diameter of which is nearly equal to the bore of the cylinder D'', is placed therein in such a manner that when the cylinders D' and D'' are united, the spring E forces the disk M against the lower side of the plate I. It is perhaps better that the cylinders D' and D'' be united by a screw and thread, in order that if the spring E be broken, they may be readily separated and a new spring substituted.

Operation.

The rod A being firmly secured in the end of a swivel-tree, pass the trace over the ears C and force it upon the rod A until it comes in contact with the collar B; place the end of the bar A in the slot H; press the cap D against the end of the rod A, thus contracting the spring E; continue this pressure until the disk M is forced below the plate I a distance equal to the thickness of the ears C; then turn the cap D half a revolution, thus bringing the ears C directly below the ends of the aperture L, into which the ears C are forced and held by the action of the spring E; and thus the cap D is securely locked upon the bar A. To release the trace, force the cap D against the rod A until the ears C shall have passed from the ends of the slot L; turn the cap half a revolution until the end of the bar is opposite the slot H, when the cap may be removed. It is obvious that the device may be operated without the plate I being employed.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The cap D, consisting of the cylinders D' and D'', spring E, disk M, plate I, and cover F, substantially as shown and described.
2. The combination of the spring E, disk M, plate I, and cover F, substantially as shown and described.
3. The combination of the plate I and cover

F, provided with the slots H and L, for the uses and purposes substantially as shown and described.

4. The combination of the cap D with the bar A provided with the ears C, substantially as shown and described.

In testimony that I claim the foregoing im-

provements in trace-fasteners, as above described, I have hereunto set my hand this 15th day of June, 1872.

JAS. W. SINGLETON.

Witnesses:

GEO. J. RICHARDSON,
THOS. T. WOODRUFF.