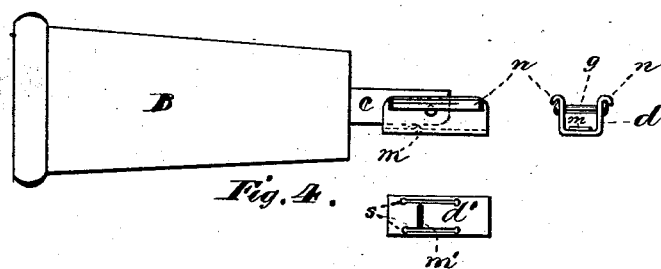
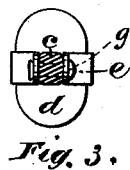
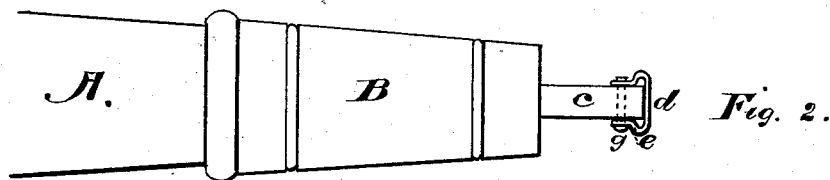
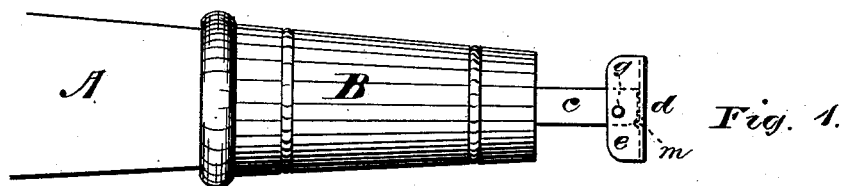


(No Model.)

G. J. CAVE.
TRACE FASTENER.

No. 264,439.

Patented Sept. 19, 1882.



Attest:

Charles H. Bee
J. A. Henrich.

Inventor:

George J. Cave,
by
O. Drake, Atty.

UNITED STATES PATENT OFFICE.

GEORGE J. CAVE, OF ELIZABETH, NEW JERSEY.

TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 264,439, dated September 19, 1882.

Application filed June 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. CAVE, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Trace-Fasteners; 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.

The object of this invention is to impart increased strength and durability to the trace-fastener, to render the same less liable to get out of order, and to lessen the cost of construction as compared with trace-fasteners of this description heretofore in use.

This invention will be understood by reference to the accompanying drawings and description hereinafter contained, and will be finally pointed out in the claims.

In the drawings, in which similar letters of reference indicate corresponding parts in each of the several figures, Figure 1 is an elevation illustrating my improved trace-fastener, together with the tip or ferrule and whiffletree with which the same is connected. Fig. 2 is a plan view of the same. Fig. 3 is a detached view, showing the fastening from the inside, and Fig. 4 shows the device in position to receive the trace, and certain modifications in detached views.

Heretofore trace-fastenings of this class have been composed of a shank provided with a screw-thread on one end adapted to screw into the end of the wooden whiffletree and at the other with a pivoted button somewhat similar in form to that herein shown, but arranged to operate in connection with a flat spring separate therefrom, but interposed between the inner surface of the button and the end of the aforesaid shank; but in such cases the spring is liable to break and get out of place and the shank to work loose in the wood, which disadvantages are overcome by my improvements, which in the present case are carried into practical effect as follows.

The ferrule or tip B and shank c, I prefer to form in one casting, the ferrule being snugly

fitted and secured by screws or rivets upon the end of the whiffletree, as plainly indicated in the drawings.

The button d, which from a front view may be round, oval, or angular, I prefer to construct of spring metal, the form in cross-section being indicated in Fig. 2. The button is firmly secured upon the end of the shank by means of a rivet, g, as indicated in Figs. 1 and 2, with the inner surface thereof lying snugly against the flat end of the shank without any separate intervening spring, as also shown in same figures. As thus constructed and arranged, it will be seen at a glance that there will be sufficient elasticity in the metal itself to allow the button to be turned from a position in line with the shank indicated in Fig. 4, in which position the trace is adjusted or removed, to that shown in Fig. 1, which fastens the trace, and vice versa, and be held in the said positions automatically by its own energy, as will be readily understood.

The operation of the button may be further facilitated by forming a lug, m, upon the inner surface of the button, to bear against the corner of the shank, which is slightly rounded, as indicated in Figs. 1 and 4, the tendency of which is to hold it more steady in the position shown in Fig. 1. This lug may be formed in an instant by means of suitable dies, leaving a slight corresponding indentation, m', on the outside, as shown in detail in Fig. 4, and as will be understood. The spring action may be further promoted by cutting slots s in the button, thereby forming a bar, d', as indicated in detached view in Fig. 4.

I am aware that ferrules and shanks have heretofore been cast integral with one another in trace-fastenings, and that pivotal buttons of various kinds have been heretofore employed in other branches of manufacture—such as in sleeve-buttons—and therefore these features, individually and broadly, I hereby disclaim; but

What I do claim as embodying my invention is—

1. The combination, with the shank, of a button provided with a lug, as m, adapted to engage with the corner of said shank, and operating substantially as and for the purpose set forth.

2. As an improved article of manufacture, a trace-fastener adapted to be arranged over and secured upon the end of a wagon or carriage whiffletree to receive the trace, the same consisting of a ferrule, a shank having an angular extremity, a button pivotally secured near
5 in line with or at right angles to the shank by its own energy, all said parts being arranged,

combined, and operating substantially as here- 10
in set forth and shown.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of June, 1882.

GEORGE J. CAVE.

Witnesses:

OLIVER DRAKE,
J. A. HENRICH.