No. 607,000. Patented July 5, 1898.

E. L. PAINTER.

TRACE FASTENER.

(Application filed June 8, 1897.)

(No Model.)

Fig. 1.

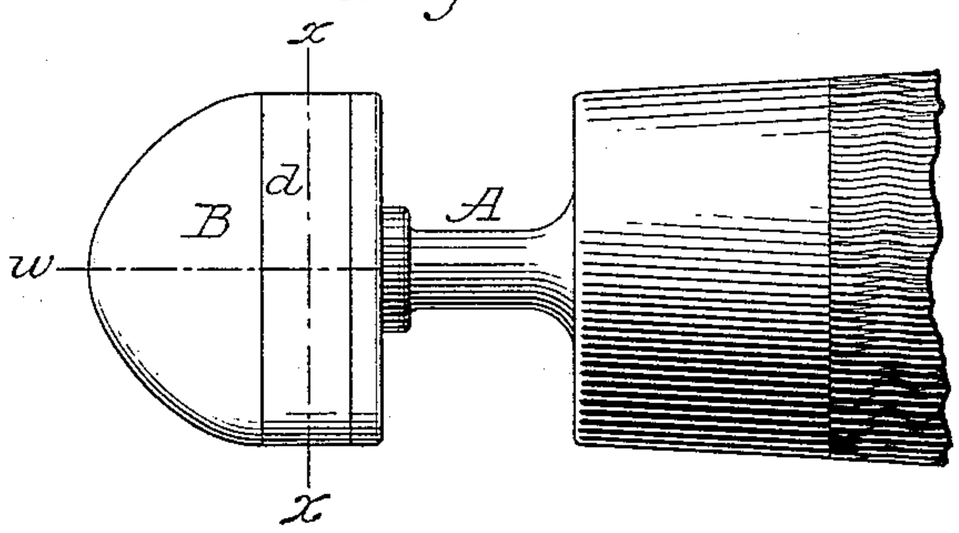


Fig. 2.

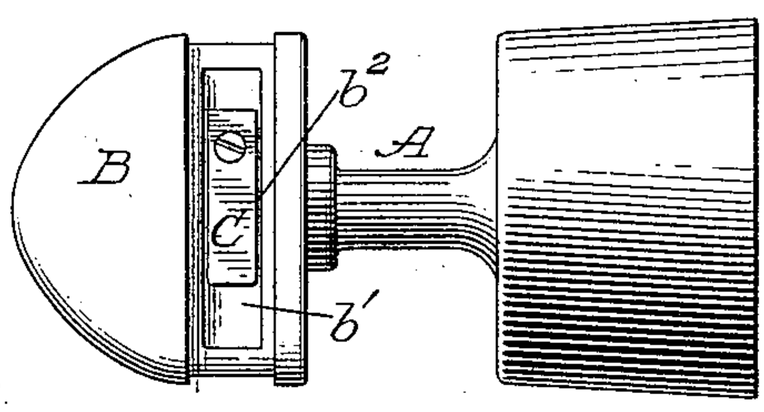


Fig. 3.

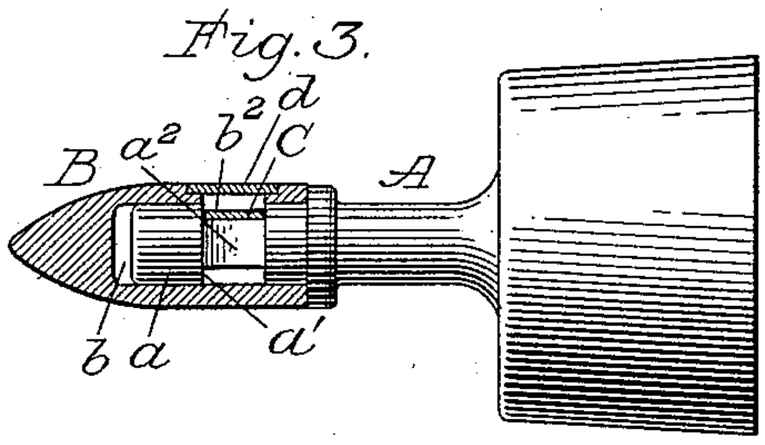


Fig. 5.

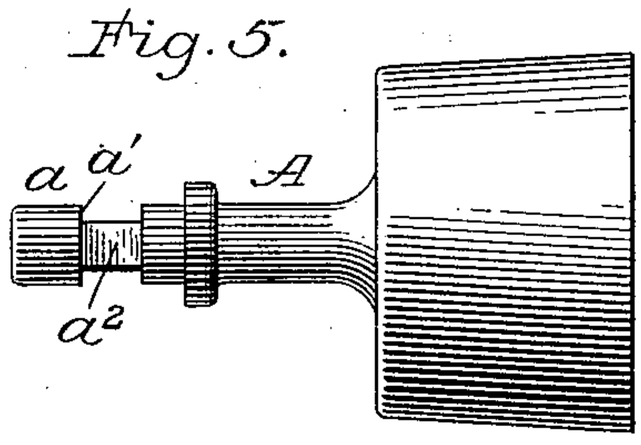


Fig. 4.

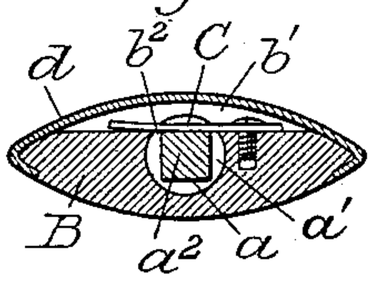


Fig. 6.

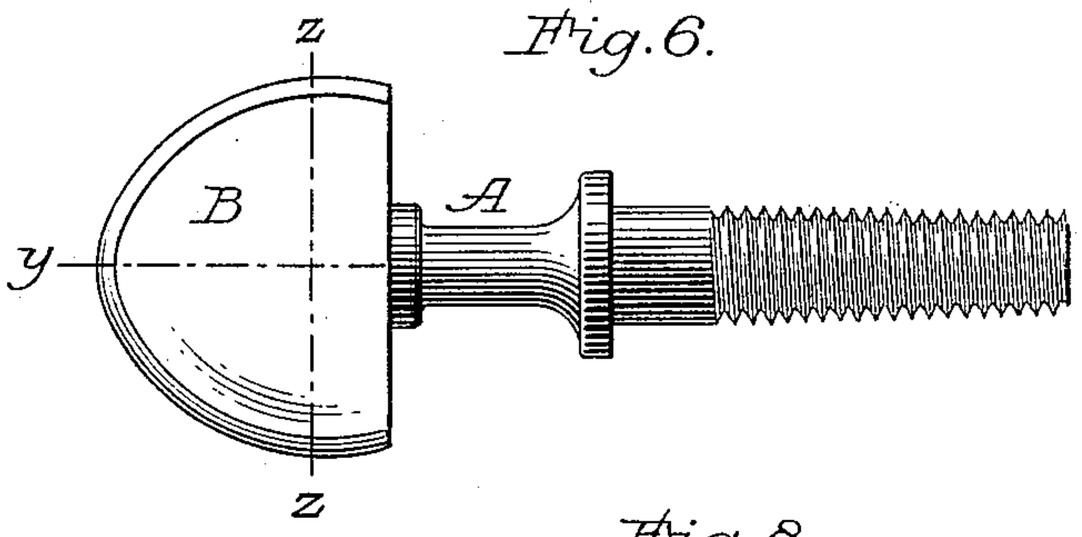


Fig. 7.

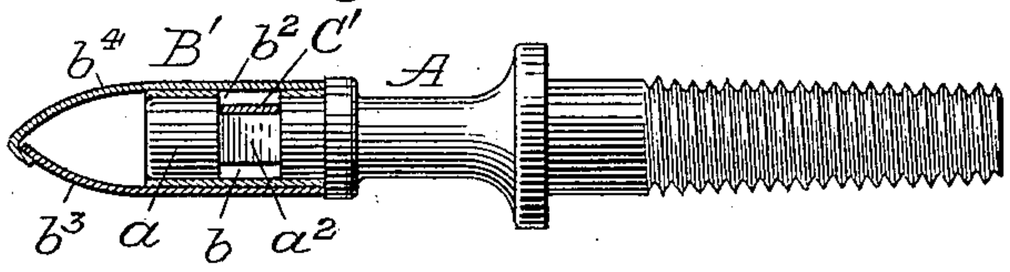
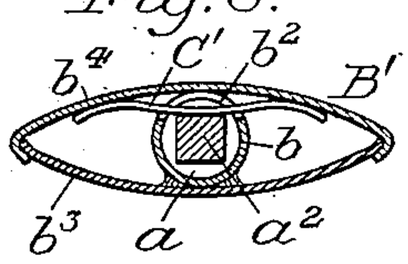


Fig. 8.



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UNITED STATES PATENT OFFICE.

EDWARD LYNNE PAINTER, OF OWEN'S MILLS, MARYLAND.

TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 607,000, dated July 5, 1898.

Application filed June 8, 1897. Serial No. 639,811. (No model.)

To all whom it may concern:

Be it known that I, EDWARD LYNNE PAINTER, of Owen's Mills, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Trace-Fasteners; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and complete description of my invention.

My said improvements relate to that class of trace-fasteners which are provided with a turn-button which admits of the ready application and removal of a trace when turned in one position and which securely confines a trace against displacement when the button is to a right-angle position, the turn-button being held in either of its two positions by the action of a spring; and my invention consists in so constructing the several parts that the spring not only serves the purpose of retaining the turn-button in either of its positions, but also serves as the means whereby the button is secured to the trace-carrying lug, thus securing simplicity in construction, effectiveness in operation, and economy in cost of manufacture.

To more particularly describe my invention, I will refer to the accompanying drawings, in which—

Figure 1 illustrates one of my improved trace-fasteners in side elevation. Fig. 2 is a similar view, but with the cover which closes the retaining and locking spring removed. Fig. 3 is a longitudinal section on line *w* of Fig. 1. Fig. 4 is a lateral cross-section on line *x* of Fig. 1. Fig. 5 is a view of the trace-carrying lug with the turn-button removed. Fig. 6, in side elevation, illustrates another form of trace-fastener embodying my invention. Fig. 7 is a sectional view on line *y* of Fig. 6. Fig. 8 is a cross-sectional view on line *z* of Fig. 6.

In the trace-fastener illustrated in Figs. 1 to 5, inclusive, the trace-carrying lug A is provided at its inner end with a socket or ferrule for receiving the end of a whiffletree to which it is to be attached; but it is to be distinctly understood that it is immaterial to the object of my present improvements in what manner the trace-carrying lug may be secured to a whiffletree and that any means may be employed without departure from my invention. The opposite or outer end of the trace-carrying lug A is provided with a shank *a*, upon which the turn-button B is rotatively mounted. The shank *a*, between its outer end and the trace-carrying lug A, is slightly reduced in diameter for a portion of its length for affording a shoulder *a'*, by means of which the turn-button is secured to the shank, and the reduced portion a^2 is made square or flat sided for coöperating with a flat spring C for retaining the button in either of its positions for removing and applying or confining a trace on the carrying-lug. The turn-button is in this instance made of cast metal and may be of any desired size and shape that will admit of the ready application to and removal of a trace from the carrying-lug A when turned in a position parallel to the opening in a trace, and which when turned in a right-angle position will confine a trace against accidental displacement. The button B has a socket *b* for the reception of the shank *a* and is provided at one side with a slot or channel *b'*, formed at right angles to and opening into the socket *b*, as at b^2, at a point registering with the squared portion a^2 of the shank *a*. Within the slot or channel *b'* is secured the flat spring C, which bears through the opening b^2 upon the flat-sided portion a^2 of the shank for retaining the button in its horizontal or vertical position, the spring at its outer edge also engaging with the shoulder *a'* on the shank, thus locking the two together. For excluding dust and dirt the channel *b'* is closed by a strip of sheet metal *d*, which is made flush with and bent over the edges of the button, as clearly shown.

In the trace-fastener illustrated in Figs. 6 to 8, inclusive, the trace-carrying lug A and its shank *a* is, as heretofore described in connection with Figs. 1 to 5, inclusive, except that it is provided at its inner end with a screw-threaded shank instead of a socket or ferrule for securing it to a whiffletree. The turn-button B' here shown is composed entirely of sheet metal and is made in two sections, the lower section b^3 having secured thereto a short piece of metal tubing forming the shank-receiving socket *b*, the two sections being secured together by the overlapping and bending of their edges, as clearly shown. The shank-

receiving socket b, as in the fastener before described, is cut away, as at b^2, at a point registering with the squared portion a^2 of the shank a to afford access for the controlling and retaining spring C′, which in this instance is bow-shaped and bears between the upper section b^4 of the button and the squared portion a^2 of the shank through the opening b^2 in the socket. This spring, as in the fastener before described, serves the double purpose of retaining the button in either its horizontal or vertical position and of locking the button in place on the shank.

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

1. In a trace-fastener the combination of a lug or projection adapted to be secured to the end of a whiffletree and having a shank for receiving a turn-button, the said shank being reduced in diameter and squared for a portion of its length between its outer end and the lug; a turn-button having a socket for the reception of the shank, the socket having an opening at one side registering with the squared portion of the shank, and a flat spring adapted to bear upon the squared portion of the shank through the opening in the socket of the turn-button, substantially as and for the purposes specified.

2. In a trace-fastener the combination of a lug or projection adapted to be secured to the end of a whiffletree and having a shank for receiving a turn-button, the said shank being squared for a portion of its length between its outer end and the lug and having a shoulder adjacent thereto; a turn-button having a socket for receiving the said shank, the socket having an opening at one side thereof registering with the squared portion of the shank, and a flat spring adapted to bear upon the squared portion of the shank through the opening in the socket and engage with the shoulder on the shank, substantially as and for the purposes described.

3. In a trace-fastener the combination of a lug or projection adapted to be secured to the end of a whiffletree and having a shank for receiving a turn-button, the said shank being squared for a portion of its length between its outer end and the lug and having a shoulder adjacent thereto, a turn-button having a socket for receiving the said shank, the socket having an opening at one side thereof registering with the squared portion of the shank, and a flat spring adapted to bear upon the squared portion of the shank through the opening in the socket and engage with the shoulder on the shank, the spring and the opening in the socket being covered by a suitable cover, substantially as described.

EDWARD LYNNE PAINTER.

Witnesses:
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