(No Model.)

J. S. MILLER.

TRACE FASTENER.

No. 275,245. Patented Apr. 3, 1883.

Fig. 1.

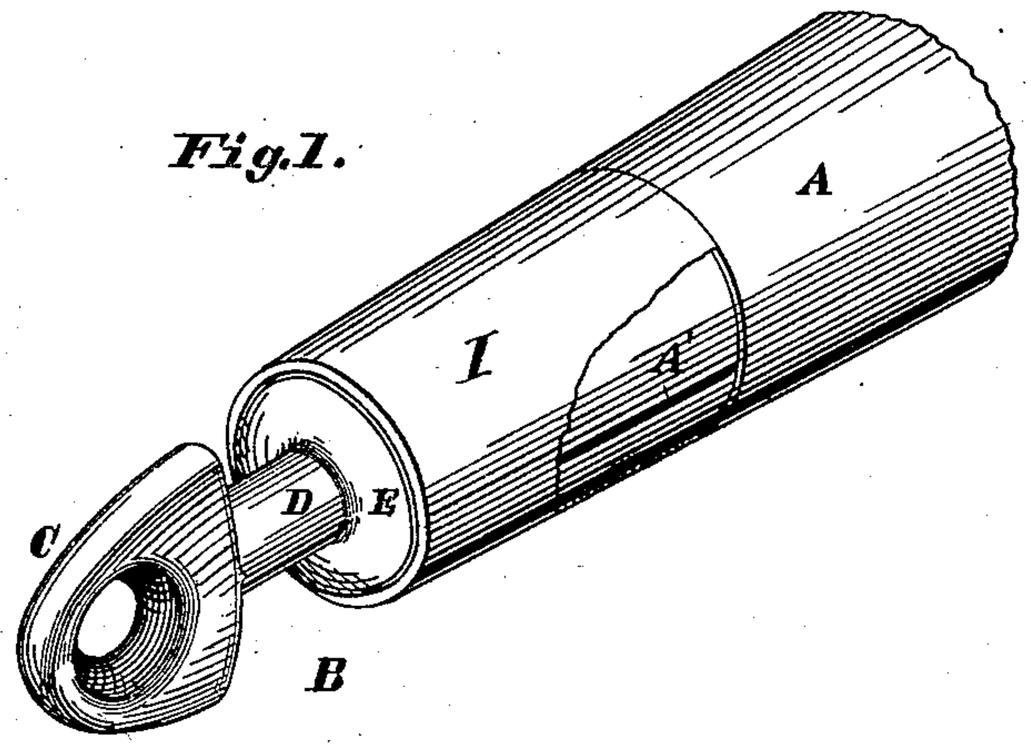


Fig. 2.

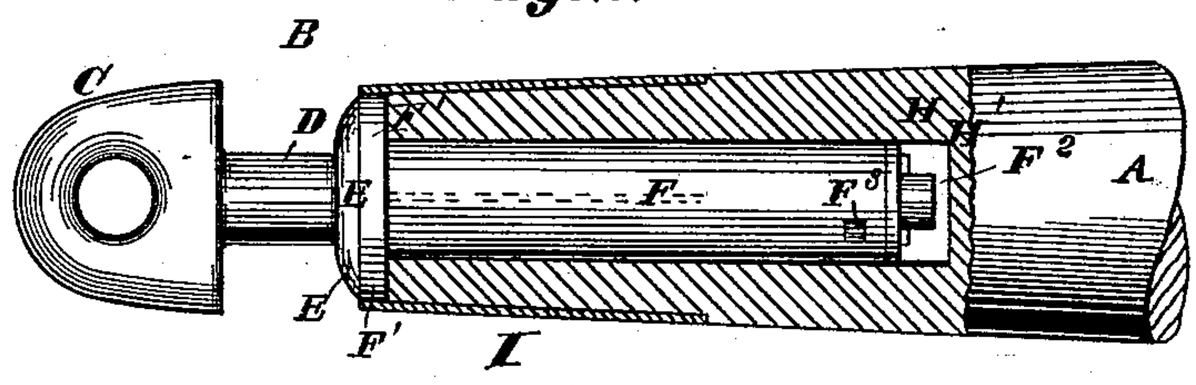


Fig. 3.

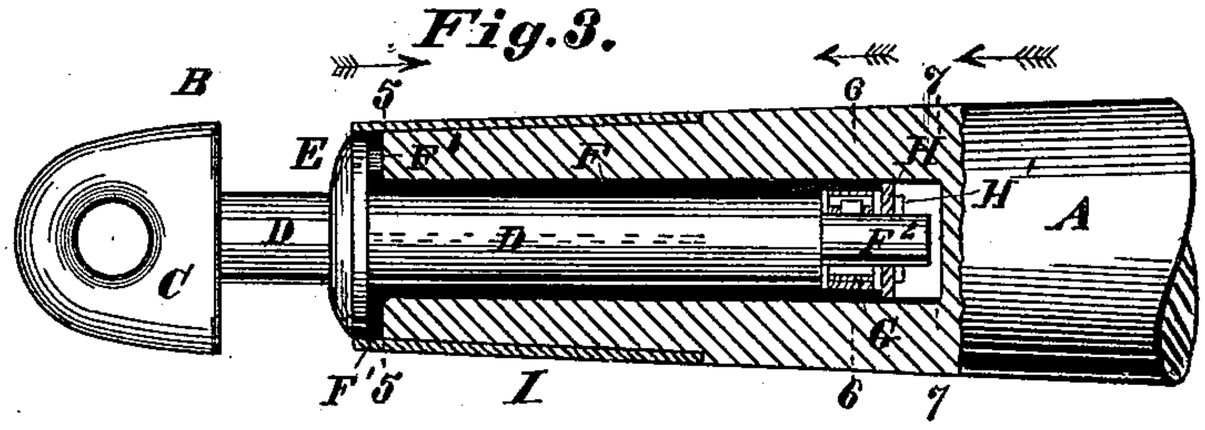


Fig. 4

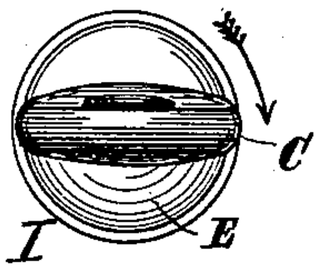


Fig. 5.

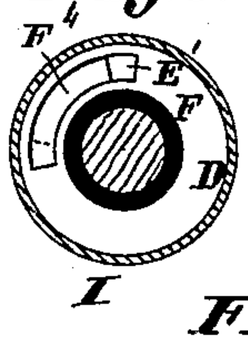


Fig. 6.

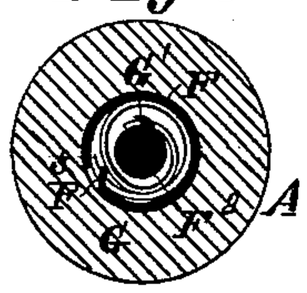


Fig. 7.

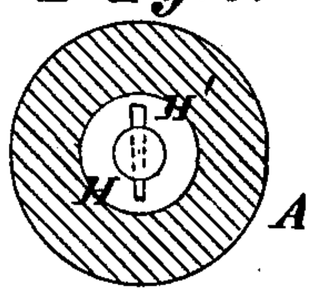
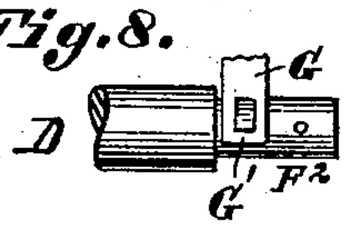


Fig. 8.



Attest:

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By Knight Bros

Attys.

UNITED STATES PATENT OFFICE.

JOHN S. MILLER, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO GUSTAV FREY, OF SAME PLACE.

TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 275,245, dated April 3, 1883.

Application filed May 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. MILLER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Automatic Trace-Fasteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a perspective view. Fig. 2 is a side view with the end of the whiffletree in section. Fig. 3 is a horizontal section. Fig. 4 is an end view. Figs. 5, 6, and 7 are cross-sections taken respectively on lines 5, 6, and 7, Fig. 3, looking in the direction of the arrows. Fig. 8 is a detail view.

A represents one end of a whiffletree. B is the clip, having a head, C, and spindle D. On the spindle D, a short distance from the head, is an annular collar or flange, E, which bears against an annular flange, F′, on the end of a sleeve, F, which surrounds the inner portion of the spindle, as shown. The inner end of the spindle has a reduced portion, F^2, which is surrounded by a coiled or other spring, G. One end of this spring is secured to the spindle and the other end to the sleeve by means of hooks or lugs F^3 G′, as shown in Fig. 6, or otherwise. The spindle is held from endwise movement in the sleeve by means of a washer, H, and pin H′, or by other suitable means. On the inner face of the collar E is a lug or pin, E′, which works in a slot, F^4, in the flange F′ of the sleeve. It will now be seen that the normal position of the head of the clip is at right angles to the slot in the trace, and that it can be turned a one-quarter revolution for its easy insertion through the slot.

To prevent danger of the clip being pulled out of its socket, I make the sleeve F of larger diameter at its inner end, and make a saw-cut, A′, in the end of the whiffletree. Then when the ferrule I is driven on, the outer end of the whiffletree will be tightened upon the smaller part of the sleeve, which prevents its withdrawal.

I claim—

1. The combination of whiffletree A, collar E, spindle D, sleeve F, within which the spindle turns, and coiled spring G, secured by its ends to the spindle and sleeve, respectively, the spindle D forming a part of the clip, and located, with the sleeve F, in the end of the whiffletree, as set forth.

2. The combination of whiffletree A, clip B, with collar E and lug E′, sleeve F, with collar F′ and slot F^4, spring G, and washer and pin H H′, all made substantially as and for the purpose set forth.

JNO. S. MILLER.

Witnesses:
GEO. H. KNIGHT,
AUGUST WEBER.