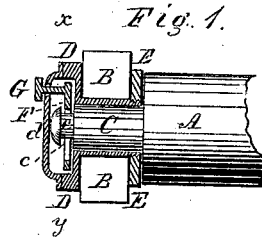


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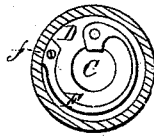
TRACE-COUPLING.

No. 169,888.

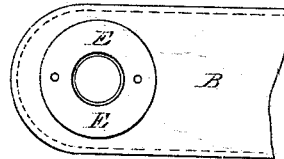
Patented Nov. 16, 1875.



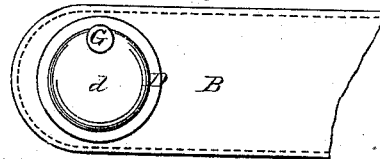
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses.

Marshall Burnett.  
John J. Peters

Inventor.

Horace G. Brown  
by Theo. S. Ellis, Attorney

# UNITED STATES PATENT OFFICE.

HORACE G. BROWN, OF COLLINSVILLE, CONNECTICUT.

## IMPROVEMENT IN TRACE-COUPPLINGS.

Specification forming part of Letters Patent No. **169,888**, dated November 16, 1875; application filed June 23, 1875.

*To all whom it may concern:*

Be it known that I, HORACE G. BROWN, of Collinsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Trace-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention consists in new attachments applied to the ends of the trace and whiffletree for the purpose of coupling them together easily and securely, and disconnecting them readily when desired.

In the accompanying drawing, Figure 1 is a section through the trace, whiffletree, and coupling. Figure 2 is a section on *xy* of Fig. 1, showing the interior spring. Fig. 3 is an inside view of the trace disconnected from the whiffletree. Fig. 4 is an outside view of the same.

A is the whiffletree, the end only of which is shown in Figure 1. B is the end of the trace. C is a spindle extending out from the end of the whiffletree A. It has near the end a groove, *c*, in which a spring rests to hold on the trace. This spindle may be attached to the end of the whiffletree in any usual manner. D is a hollow socket passing through the leather of the trace. It is secured in its place

by means of the plate E screwed onto its inner end after it has been passed through the leather. The outer end of D forms a hollow box, in which is placed a spring, F, which locks into the groove *c* and secures the trace upon the spindle. This spring is secured to the socket D by a screw or rivet, *f*, and has a handle or knob, G, passing through the cover *d* of the socket D for the purpose of pushing it back, so as to release it from the groove *c* when it is desired to disconnect the trace. The cover *d* is soldered or otherwise attached to D after the spring F is secured in its place.

The operation of my invention is as follows: The trace is connected by merely pushing it onto the spindle C, the inclined end of which pushes aside the spring. To disconnect the trace the knob G is pressed laterally, which lifts it out of the groove *c*, and the trace can then be pulled off the spindle.

What I claim as my invention, is—

The hollow socket or stud D passing through the trace-leather, provided at its outer end with the curved catch-spring F and cover *d*, and at its inner end with a screw-plate, E, for securing it in its place and embracing the trace-leather between itself and the box containing the spring F, in combination with a spindle, C, having a groove, *c*, upon the end of a whiffletree, substantially as described.

HORACE G. BROWN.

Witnesses:

FRED. R. TIFFANY,  
ISAAC BARNES.