(No Model.)

# W. G. CUMMINS.

## TRACE DETACHING DEVICE.

No. 250,348. Patented Dec. 6, 1881.

Fig. 1.

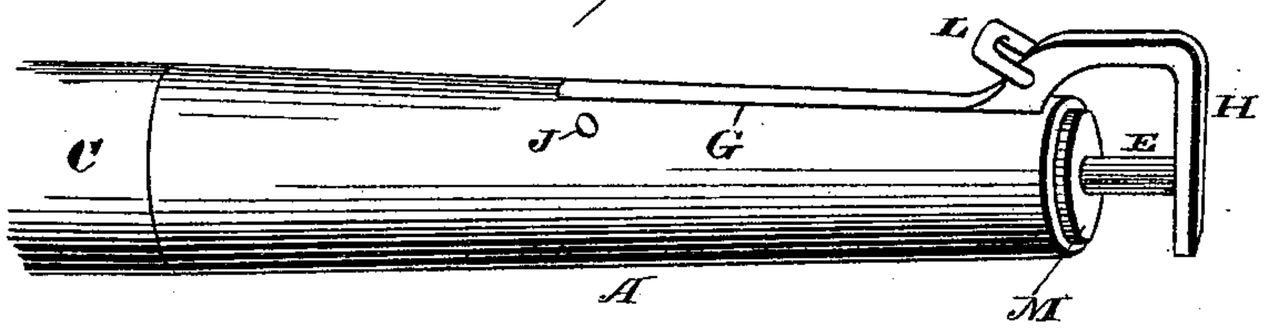
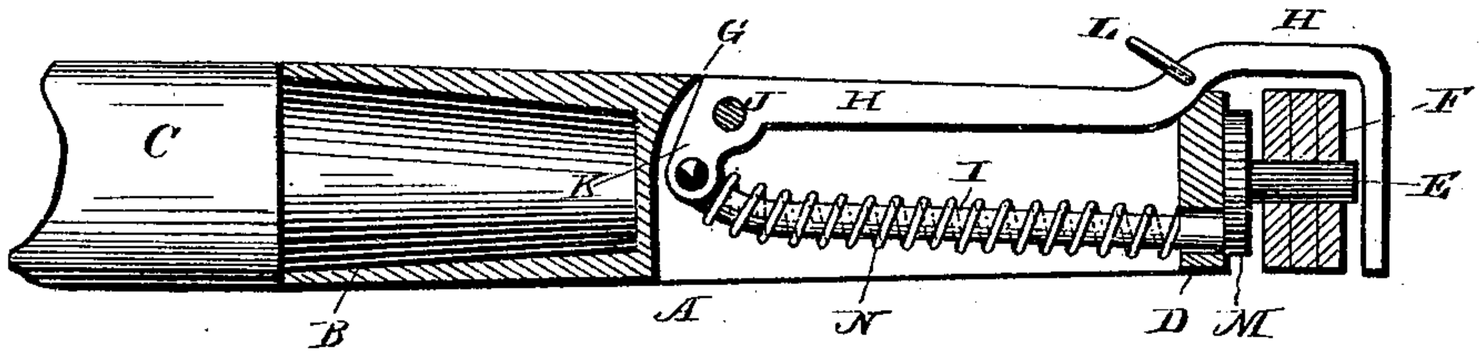



Fig. 2.




WITNESSES

Geo. D. Seymour.

Herman Moran.

INVENTOR

Wm G. Cummins.

By Geo. D. Seymour.

ATTORNEY

# UNITED STATES PATENT OFFICE.

WILLIAM G. CUMMINS, OF McMINNVILLE, TENNESSEE.

## TRACE-DETACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 250,348, dated December 6, 1881.

Application filed May 5, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, WM. G. CUMMINS, of McMinnville, in the county of Warren and State of Tennessee, have invented certain new and useful Improvements in Trace-Detaching Devices; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in trace-detaching devices, the object being to provide an article of this character which will combine simplicity of construction and cheapness with an unfailing surety in the performance of its ascribed functions.

With this end in view, my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view, in perspective, of a whiffletree provided with my improvement; and Fig. 2 is a view in longitudinal vertical section thereof.

A represents a metallic whiffletree-tip having a socket, B, formed in its inner end to receive the tenoned end of the whiffletree C. The extreme outer end of the said tip is provided with a trace-pin, E, with which the trace F is adapted to be engaged. A deep mortise, G, in the tip aforesaid is adapted to receive the trace-guard H and the detaching-rod I. The said trace-guard H, which is secured in the slot G of the whiffletree-tip A by a pin, J, is provided at its inner end with a lever-arm, K, to which the detaching-rod I, adapted to have reciprocatory movement in the end D of the tip, is secured. The outer end of the trace-guard A is bent so that it may engage at right angles, when the device is normally closed, with the end of the trace-pin E. A loop or ring, L, secured to the said trace-guard, is provided for the attachment of the cord, chain, or strap, by means of which the occupant of the vehicle to which the device is attached may actuate the guard to throw the trace out of engagement with the pin E.

The detaching-rod I, pivoted, as aforesaid, to the lever K of the trace-guard H, has a perforated plate or disk, M, attached to its outer end and adapted to reciprocate on the trace-pin E; or, if desired, the outer end of the rod itself may be bent to perform the same function as the plate or disk described. The rod I is further encircled by a spring, N, interposed between the lever-arm K and the inner face of the end D of the whiffletree-tip, and which, by exerting a constant pressure against the lever-arm K of the trace-guard H, serves to keep it normally closed to retain the trace F on the trace-pin E. When, however, it is desired or may become necessary to throw the trace F off the said pin E, it is done by exerting a force on the trace-guard through the attachments of the rings L sufficiently powerful to overcome the spring N and to throw the detaching-rod I, together with the plate, disk, or other device at its outer end, forward, and then force the trace F from the pin E with which it is engaged.

The fulcrum or pin J, upon which the trace-guard H has pivotal movement, and the point at which the power is applied, which is in fact the point of pivotal union between the lever-arm K and the inner end of the detaching-rod I, are so near together that the action of the device in forcing the trace from the pin is almost instantaneous, and requires but little force.

A greater part of the device being inclosed within the mortise of the whiffletree tip, it is protected and hidden, and does not show a construction more elaborate than that generally resorted to for permanently securing the traces to the whiffletree.

If desired, the metallic whiffletree-tip A may be dispensed with, and the whiffletree itself be mortised and otherwise adapted to receive the detaching devices.

I would have it understood that I do not limit myself to the exact construction shown and described, but hold myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. The combination, with a whiffletree having a mortise and perforation in each end, of a trace-guard journaled in said mortise having its outer end bent to retain when closed the trace

on the trace-pin, and having its inner end provided with a depending arm or lever, and a detaching-rod located in the whiffletree-mortise, and having its outer end arranged to reciprocate in the end of the whiffletree, said rod being adapted to be actuated by engagement with the depending arm of the trace-guard, substantially as set forth.

2. The combination, with a whiffletree having a mortise and perforation in each end, of a trace-guard the outer end of which is bent to retain the trace on the trace-pin, the inner end being provided with a depending arm, a detaching-rod, the outer end of which is provided with a disk, plate, or equivalent device, arranged to be reciprocated on the trace-pin, said rod being adapted to be actuated by the depending arm of the trace-guard, and a spring encircling the detaching-rod and adapted by pressing against the trace-guard arm to keep it normally closed, substantially as set forth.

3. The combination, with a whiffletree having a mortise and perforation in each end, of a trace-guard bent to retain when closed the trace on the trace-pin, and having an arm or lever depending from its inner end and a detaching-rod arranged to be reciprocated by the arm of the trace-guard in the end of the whiffletree and adapted when the trace-guard is raised to disengage the trace and trace-pin, substantially as set forth.

4. The combination, with a whiffletree having a mortise and perforation in each end, of a trace-guard bent to retain when closed the trace on the trace-pin, and having an arm depending from its inner end, a detaching-rod having its inner end pivoted to the lever-arm aforesaid, and its outer end adapted to reciprocate in the end of the whiffletree and to push the trace from the trace-pin when the trace-guard is raised, and a spring encircling the detaching-rod and adapted to keep the trace-guard normally closed, substantially as set forth.

5. The combination, with a whiffletree provided with metallic tips mortised and perforated at each end, of a trace-guard, bent to retain when closed the trace on the trace-pin, and having an arm depending from its inner end, a detaching-rod the inner end of which is engaged with the lever-arm, its outer end being arranged to reciprocate in the end of the whiffletree-tips, and a spring encircling the detaching-rod and adapted by impinging against the lever-arm of the trace-guard to keep it normally closed, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of May, 1881.

WM. G. CUMMINS.

Witnesses:

JNO. A. COPELAND,

JOSHUA M. BURGEN.