(No Model.)

A. AYER.

HORSE DETACHER.

No. 389,354. Patented Sept. 11, 1888.

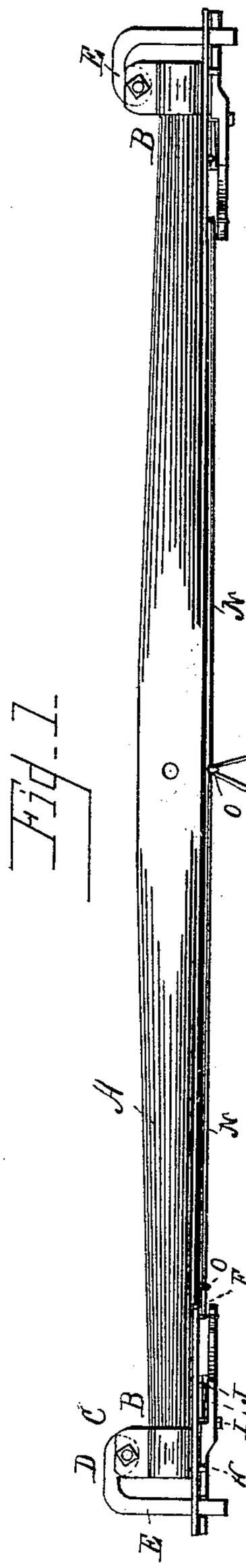

Fig. 1.

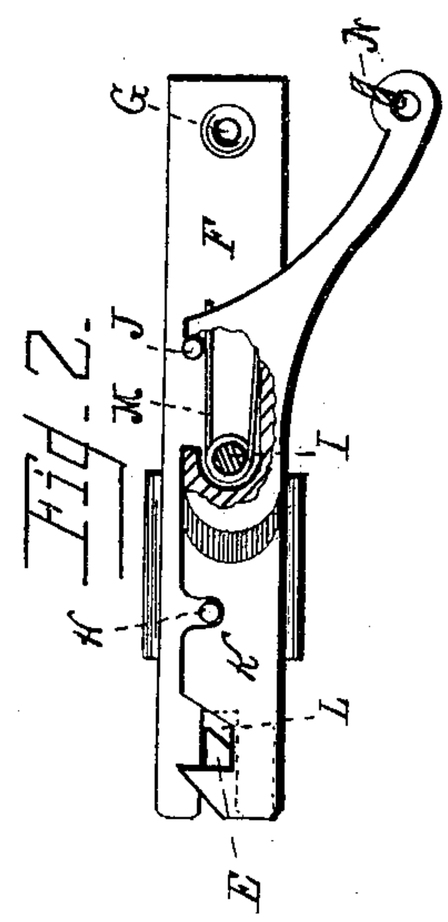

Fig. 2.

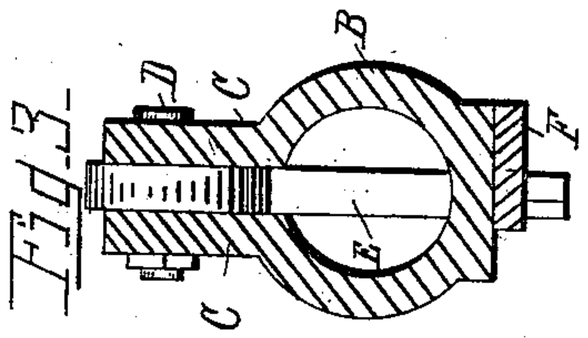

Fig. 3.

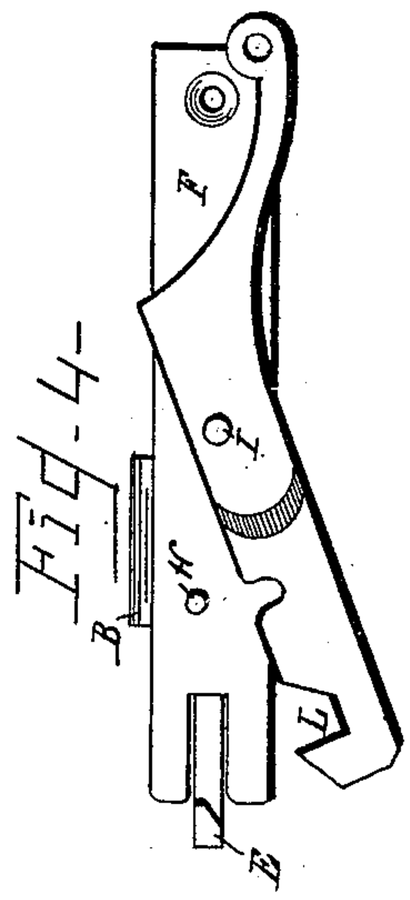

Fig. 4.

Witnesses,
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UNITED STATES PATENT OFFICE.

ALFRED AYER, OF LAKE WEIR, FLORIDA.

HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 389,354, dated September 11, 1888.

Application filed June 4, 1888. Serial No. 275,907. (No model.)

To all whom it may concern:

Be it known that I, ALFRED AYER, a resident of Lake Weir, in the State of Florida, have invented certain new and useful Improvements in Horse-Detachers; 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 the same.

My invention relates to improvements in horse-detachers of the class wherein the drawing of a cord or its equivalent frees the traces from the whiffletree.

In the drawings, Figure 1 is a view of the whiffletree provided with my attachments, seen from below. Fig. 2 is a rear view of one end of the whiffletree, a part being broken away to show a spring beneath. Fig. 3 is a section on the line *x y*, Fig. 1. Fig. 4 is a view similar to Fig. 2, the latch being open.

In the drawings, A is a whiffletree of ordinary form, and B represents ferrules, preferably of malleable iron, cast as a band, whose two ends, C C, are afterward closed about the end of the whiffletree and secured by a bolt, D. The latter also serves as a pivot for a trace-hook, E, mounted between the ends C C. A plate, F, formed integrally with the ferrule, extends inwardly along the rear side of the whiffletree, to which it is secured by a screw at G. Its other extremity projects beyond the whiffletree end and is slotted to receive the free end of the hook E. Upon the rear face of the plate are three studs, H I J. Upon the stud I is pivoted a latch, K, whose outer end is provided with a notch, L, to receive and retain the free end of the hook E. Between this notch and the pivot I is a second notch to pass over the stud H, which thus serves both to prevent too great upward movement of the latch when the hook E is not in position and to share with the pivot I any longitudinal strain that may come upon the latch.

The latch is provided with a recess upon its inner face, and in this recess a spring, M, is coiled about the stud I, with one of its ends pressing the lower side wall of the recess and the other reacting against the stud J. The latch terminates at the inner end in a lever-arm extending obliquely downward and having a cord, N, attached to its extremity. The cord passes upward through a guide, O, upon the whiffletree, and thence inward to the central line, where, with a corresponding cord from the like devices at the opposite end of the whiffletree, it passes through a second guide, and thence to any suitable point upon the vehicle.

The slot in the outer end of the plate F is widened, and both the outer end of the latch and the inner side of the free end of the hook are beveled, so that the latter may be carried into position by the most careless inward pressure.

In operation, when the cord N is drawn, the latch swings about the pivot I, compressing the spring M and releasing the hook E, whereupon the latter, acted upon by the trace, rotates about the pivot D and the trace slips from it.

It may be observed that these devices are applicable to an ordinary whiffletree without cutting or otherwise weakening it, the ordinary hooks being simply removed and replaced by these devices, which are secured by the clip-ferrules B and screws inserted at G, and that since detaching must be operated in attaching the trace they are always in working order and subject to constant inspection.

What I claim is—

1. The combination, with a whiffletree and a trace-hook pivotally mounted upon the end thereof, of a vertically-swinging latch directly engaging the free end of said hook and preventing the hook's rotation, a spring normally holding said latch in position for such engagement, and a latch-actuating cord passing from said latch through suitable guides upon the body of the whiffletree to a point convenient for grasping with the hand, substantially as set forth.

2. The whiffletree A, bearing the pivoted hook E, the plate F, having its projecting end slotted to receive the free end of said hook, the latch K, pivoted to said plate and retaining the hook in said slot, the spring M, holding the latch in position, and the cord N, connected to said latch and adapted to swing it to release the hook, all combined substantially as set forth.

3. The combination, with the whiffletree A and the open ferrule B, having the end of the

trace-hook E pivoted between its extremities, of the plate F, formed integrally with the ferrule and provided with the slotted projecting end, the latch K, pivoted upon said plate, the stud H, the spring M, and the latch-actuating cord N, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALFRED AYER.

Witnesses:
R. M. SCOTT,
M. E. SCOTT.