

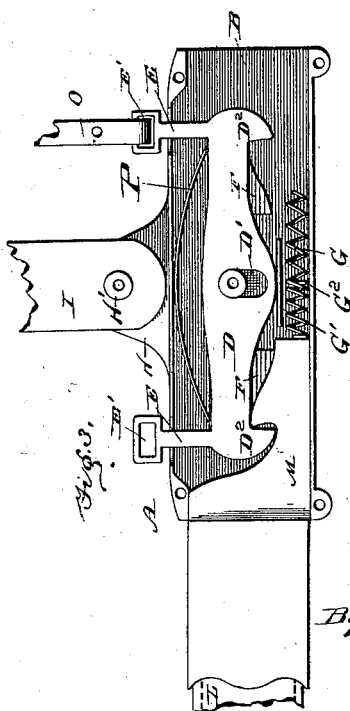
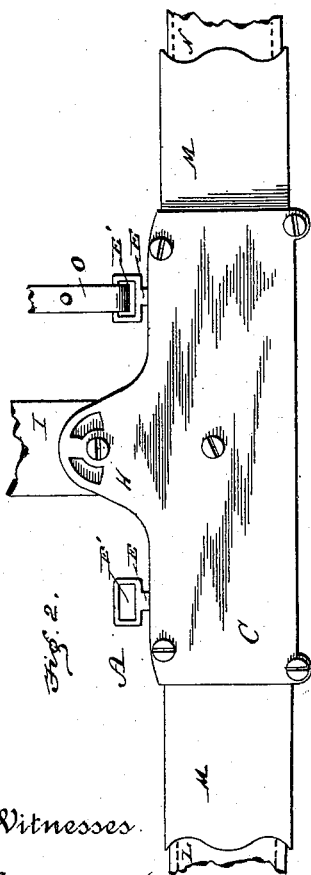
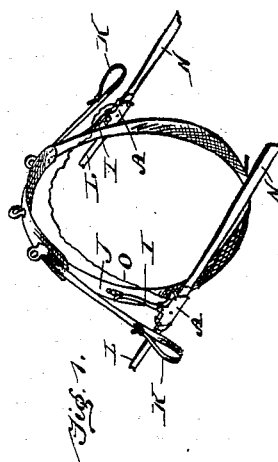
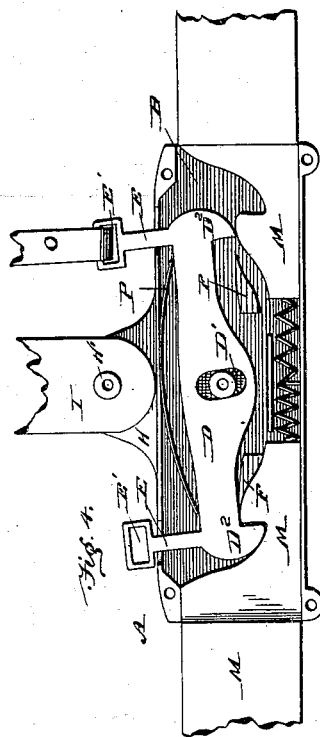
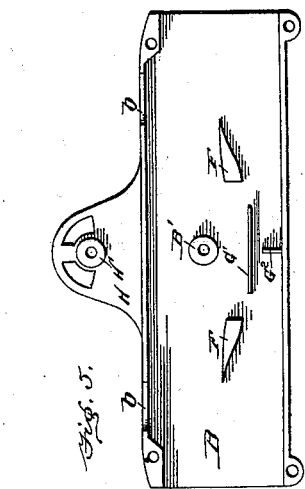
No. 648,416.

Patented May 1, 1900.

J. C. LAKE.
ATTACHING OR DETACHING DEVICE.

(Application filed Nov. 14, 1899.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN C. LAKE, OF BIG PRAIRIE, OHIO.

ATTACHING OR DETACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 648,416, dated May 1, 1900.

Application filed November 14, 1899. Serial No. 737,006. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. LAKE, a citizen of the United States, residing at Big Prairie, in the county of Wayne and State of Ohio, have invented certain new and useful Improvements in Harness; 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 appertains to make and use the same.

This invention relates to a new and useful improvement in harness, more particularly in detaching devices therefor; and its objects, among other things, are to provide a harness having a strong detaching device of simple and economical construction, neat in appearance, and effective in operation, and to provide a simple means for securing said detaching device to the harness.

To these ends the invention consists in the novel constructions and combinations of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a detail view showing the detaching device applied to a harness. Fig. 2 is an elevation thereof. Fig. 3 is a similar view with the face-plate removed and showing one of the hooks removed. Fig. 4 is a view similar to Fig. 3, showing a hook partially inserted therein. Fig. 5 is a view of the box with the parts removed.

Referring to said figures by letters of reference, A is the detacher, formed of a box-like portion B and a cover C, said box portion being open at the ends and provided at the top with recesses *b* for the purpose hereinafter described. In the center of the box, projecting from the inner surface thereof, is a stud B', upon which is mounted a lever D. This lever is provided at the center with a transversely-extending slot D', adapted to receive the stud B', upon which it moves. Near its ends the lever is provided with downwardly-extending toes D², and the ends of the lever are rounded, preferably, as shown. Arms or projections E are formed at the top of the lever near each end thereof, and these are adapted to project through the recesses *b* and are provided at their outer ends with eyes, as E'.

Within the box B, below the stud therein and to either side thereof, are stops F, adapted to limit the downward movement of lever D upon its pivot, and directly under the stud B' are longitudinally and transversely extending ridges or projections G' G², one of which, G², is adapted to project into the coils of a spring G, resting thereagainst. This spring is held between the side wall of the casing and the longitudinal ridge G' therein, and the projection G², engaging with the coils, prevents the spring from slipping longitudinally. It is obvious that the spring and lever will be retained within the box B by the cover C, which may be secured thereto by screws or in other suitable manner.

The box and cover are each provided with an upwardly-projecting portion H, upon one of which is formed a stud H', adapted to project through one end of a strap or I other suitable means, pivotally mounted thereon and also secured and pivoted at its opposite end to the shaft-tug carrier or back-band J of the harness. A strap I is hung to either side of the horse, and each is provided with a detacher A at the end thereof, said detachers hanging between said back-band and the shaft loops or tugs K.

The rear end of each of the trace-tugs L is provided with a metallic hook M, preferably of the construction shown and adapted to be inserted into the forward end of the detacher, while the forward ends of the traces N are provided with similar hooks to be inserted into the rear ends of the detachers A.

Small straps or cords O are secured to the eyes of arms E of the lever D, and these may, if desired, pass over the back of the horse.

In operation when it is desired to hitch the horse to the vehicle the trace-hooks are pressed into the rear ends of the detachers. This will cause the rear end of each of the levers to rise until the toe of the hook has passed the toe of the lever, when said lever will be forced down into engagement with the hook by means of a bow-spring P, bearing against the upper wall of the casing B and upon the upper edge of the lever near each end. When the hook has been inserted a sufficient distance, it will compress the coiled spring G, as is obvious. After the traces have been secured to the detachers, as above

described, the trace - tugs may be secured thereto in a similar manner at the forward ends thereof. When it is desired to detach the horse from the vehicle, it is merely necessary to draw up upon the cord O, secured to the rear arms of the detachers. This will cause the rear end of each of the levers to move upward within the casings, releasing the hooks of the traces, which hooks will be immediately expelled from the casings by the expansion of the coiled spring G. It is obvious that the trace-tugs may be detached in a similar manner by pulling up upon the forward arms of the levers D.

By pivoting the supporting-straps I the detachers are permitted to hang horizontally independent of the motions of the horse.

It will be seen that the lever D does not pivot upon its center when either of the arms thereof are raised, but pivots either upon the hook M or the stop F near the end farthest from the raised arm, the slot in the center thereof permitting it to slide upon the central stud B'.

While in the foregoing description I have shown the preferred form of my invention, I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit of my invention or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

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

1. In a detacher for harness the combination, with the casing of a centrally-pivoted lever mounted therein, a toe at each end of the lever and hooks adapted to be inserted into said casing into engagement with the toes, said lever adapted to have a limited vertical play upon its pivot, substantially as described.

2. In a detacher for harness, the combina-

tion, with the casing, of a stud therein, a spring-pressed lever mounted on the stud, and having a central transverse slot through which passes said stud or pivot, and hooks for engagement with toes of the lever, substantially as described.

3. In a detacher for harness the combination, with the casing, of a centrally-pivoted lever mounted therein, toes at the ends of the lever, arms projecting from the lever, a spring for normally depressing the lever, and hooks for engagement with the lever-toes, substantially as described.

4. In a detacher the combination, with the casing, of a stud therein, a lever having a slot in the center thereof adapted to receive said stud, toes on the lever at each end thereof, upwardly-projecting arms on said lever, a spring for normally depressing the lever, and means for raising said arms and their levers, substantially as described.

5. In a detacher the combination, with the casing, of a stud therein, a lever having a slot in the center thereof adapted to receive said stud, toes on the lever at each end thereof, upwardly-projecting arms on said lever, a spring for normally depressing the lever, a hook for engagement with a toe of said lever, means for releasing said lever from the hook and a spring for automatically ejecting the released hook, substantially as described.

6. The combination, with the saddle of a harness, of a strap connected thereto, a detacher pivoted to the lower end of said strap, a hook secured to the end of the trace, a casing for the hook, and means for detaching and automatically ejecting the hook from the casing, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. LAKE.

Witnesses:

MARY LEHR.

EMMA BETSON.