C. G. TAYLOR.

QUICK DETACHING WHIFFLETREE.

APPLICATION FILED AUG. 27, 1909

977,484.

Patented Dec. 6, 1910.

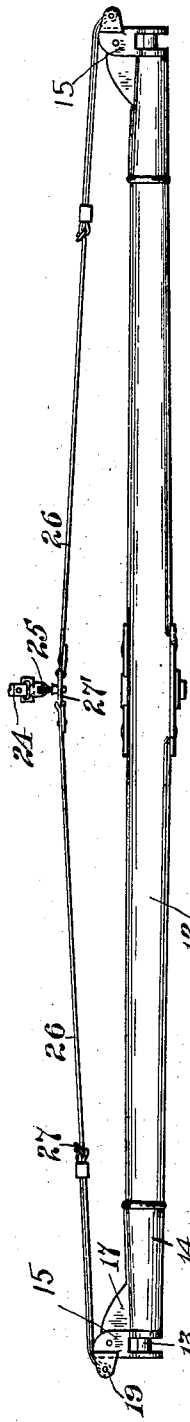

Fig. 1.

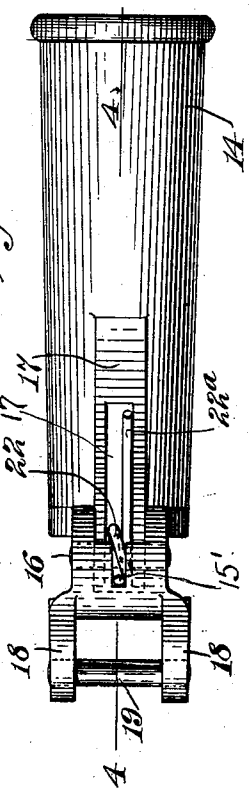

Fig. 3.

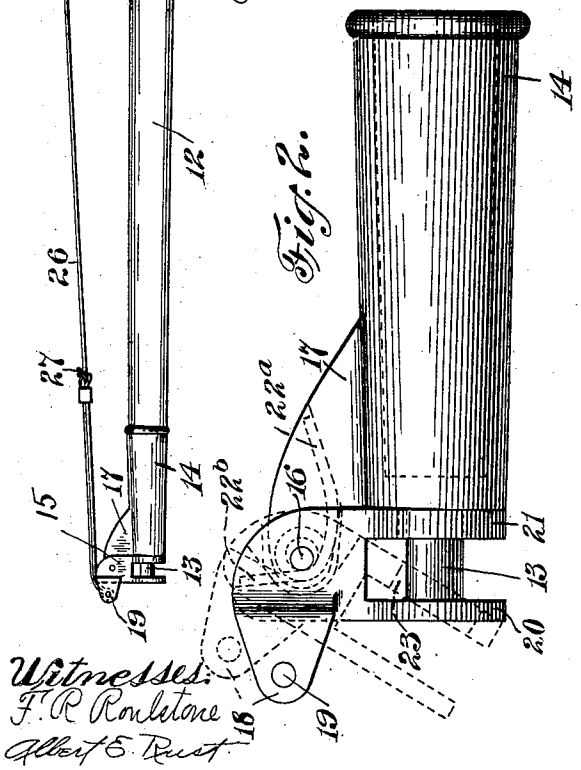

Fig. 2.

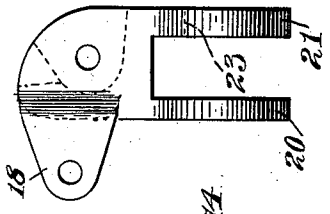

Fig. 6.

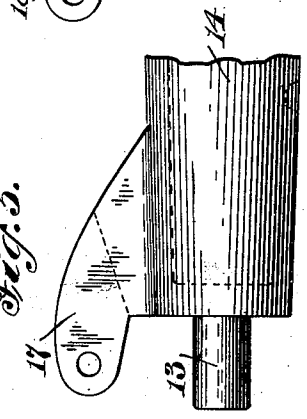

Fig. 5.

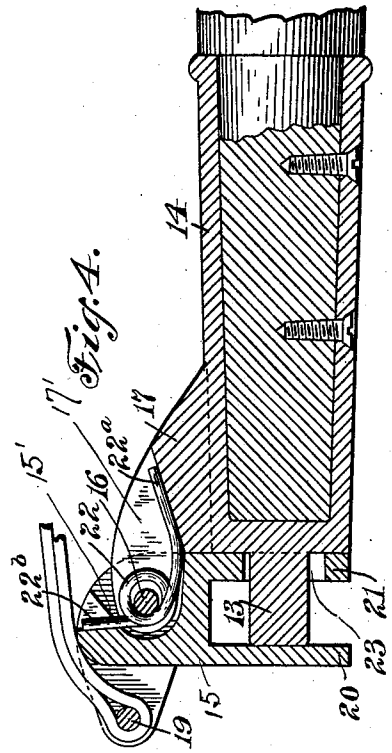

Fig. 4.

Witnesses:
F. R. Roulstone
Albert E. Rust

Inventor:
Charles G. Taylor;
By his attorneys.
Wright Brown Quinby & May

UNITED STATES PATENT OFFICE.

CHARLES G. TAYLOR, OF HARTFORD, CONNECTICUT, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO AMMON P. RICHARDSON, OF ANDOVER, MASSACHUSETTS.

QUICK-DETACHING WHIFFLETREE.

977,484. Specification of Letters Patent. Patented Dec. 6, 1910.

Application filed August 27, 1909. Serial No. 514,881.

To all whom it may concern:

Be it known that I, CHARLES G. TAYLOR, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Quick-Detaching Whiffletrees, of which the following is a specification.

This invention relates to a whiffletree having means for simultaneously detaching both traces from the whiffletree, said means being intended to be used in case of an emergency, and adapted to be operated by the driver of the vehicle.

The invention has for its object to provide simple durable and effective emergency devices for the purpose stated, and it consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a side view of a whiffletree embodying my invention. Fig. 2 represents a side view of one end portion of the whiffletree on a larger scale. Fig. 3 represents a plan view of the portion shown in Fig. 2. Fig. 4 represents a section on line 4—4 of Fig. 3. Figs. 5 and 6 represent side views of detached parts.

The same reference characters indicate the same parts in all the figures.

In the drawings,—12 represents the body of a whiffletree, which may be of wood or other suitable material, and provided with suitable means for pivotal connection with the portion of the vehicle which supports the whiffletree.

13, 13 represent trace-engaging studs which project in opposite directions from the ends of the whiffletree, and are adapted to enter the usual eyes formed in the ends of the harness traces. The studs 13 are preferably formed on socketed thimbles 14 which receive and are secured to the end portions of the body 12.

Pivoted to the whiffletree at points adjacent to the studs 13, are two levers 15, each being provided with ears embracing an ear 17 formed on the thimble 14, and overhanging the stud 13, the parts being united by pivot bolt 16. The ear has a spring-receiving cavity 17′ through which the pivot bolt 16 passes. Each lever has an outer arm composed of two parallel ears 18 connected by a cross bar 19, and an inner arm which includes a trace keeper 20 and a trace cast-off 21. A helical spring 22 is provided which normally holds the lever in the position shown by full lines in the drawings, the central portion of said spring being coiled around the pivot bolt 16, while the end portions 22^a and 22^b constitute arms which project in different angular directions, one of said arms bearing on the bottom of the cavity 17′, while the other arm bears on the bottom of a recess 15′ in the outer arm of the lever.

The trace keeper 20 is formed to bear upon the outer end of the stud 13, while the trace cast-off 21 has an aperture 23 through which the stud 13 normally projects, the spring 22 normally holding the keeper 20 against the outer end of the stud, and the cast-off 21 against the outer end of the thimble 14.

A displacing device, operable by an occupant of the vehicle, is provided, whereby the levers 15 may be simultaneously moved to the position indicated by dotted lines in Fig. 2, thus removing the keeper 20 from the stud and moving the cast-off 21 outwardly far enough to cause it to force the trace from the stud. Said displacing device, as here shown, includes a pull strap 24 adapted to extend over the dasher of the vehicle, so that one end may be grasped and pulled by an occupant of the vehicle, said strap having a snap hook 25 at its lower end, and straps 26, 26 engaged by the snap hook 25, said straps extending in opposite directions to the outer ends of the whiffletree, and having looped outer ends which are engaged with the cross bars 19 between the ears 18.

The arrangement of the described parts is such that an upward pull exerted on the strap 24, will displace the levers against the stress of the spring 22, thus causing the cast-off members of the levers to force the traces simultaneously from the studs 13. When the pull on the strap 24 ceases, the springs force the levers back to their normal trace-confining positions.

It will be seen that the levers may be swung outwardly by hand far enough to permit the insertion of a trace end between the keeper 20 and cast-off 21, when the traces are being engaged with the whiffletree.

The straps 26 are preferably provided

with buckles 27 by which their length may be adjusted.

I am aware that it has been proposed heretofore to construct a whiffletree with two-armed levers pivoted at its end portions, one arm of each lever including a trace-keeper and a trace-cast-off, both coöperating with a stud projecting from the end of the whiffletree, while the other arm of the lever is connected with a pull-strap, the lever being normally held in its trace-confining position by a spring. I am the first, however, so far as I am aware, to mount a helical spring on the pivot bolt which connects the lever with the whiffletree, so that the spring is held in place by the bolt, and to provide the ends of said spring with arms, one of which bears on a portion of the whiffletree, and the other on one of the arms of the lever. A spring thus constructed and arranged has a uniform torque, and therefore the maximum degree of efficiency, is securely confined, and is not liable to become set, or in other words, lose its resilience. Moreover, the spring is guarded against contact with external objects by the walls of the cavity 17′ and recess 15′, and is securely retained in position by the said walls, and by the pivot bolt 16.

I claim:

A whiffletree having fixed longitudinally projecting studs at its ends adapted to engage trace eyes, a fixed ear being located adjacent each stud and projecting beyond the end approximately parallel with said studs, each ear being provided with a slot, a pivot bolt in each ear, a member pivotally mounted on each bolt and provided with a chamber to receive the adjacent ear, said members each having a slot leading from said chamber, and also having trace removing arms coöperating with said studs, a spring encircling each bolt and having one end engaging the bottom of the slot in the adjacent ear the other end of said spring engaging the slot in the corresponding pivoted member, the chamber in the latter coöperating with the slot in the ear to form a housing for said spring, and means for moving said pivoted members against the tension of said spring.

In testimony whereof I have affixed my signature, in presence of two witnesses.

CHARLES G. TAYLOR.

Witnesses:
FRIEDA M. SWEITZER,
ANNA L. SULLIVAN.