No. 887,685. PATENTED MAY 12, 1908.

T. MORCOM.

TRACE SECURING MEANS FOR SWINGLETREES.

APPLICATION FILED OCT. 18, 1907.

Fig. 1.

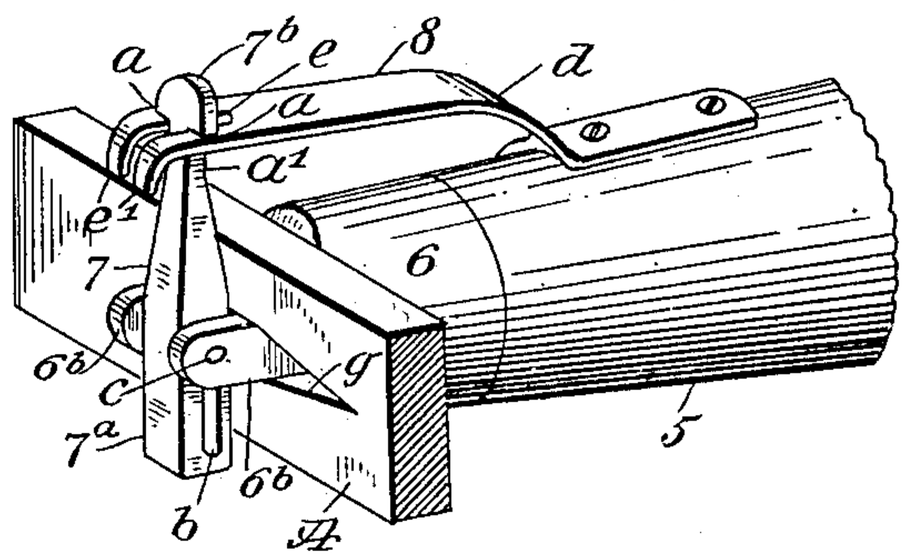


Fig. 3.

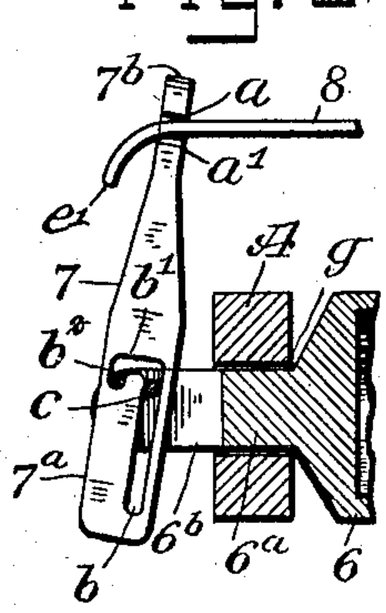


Fig. 2.

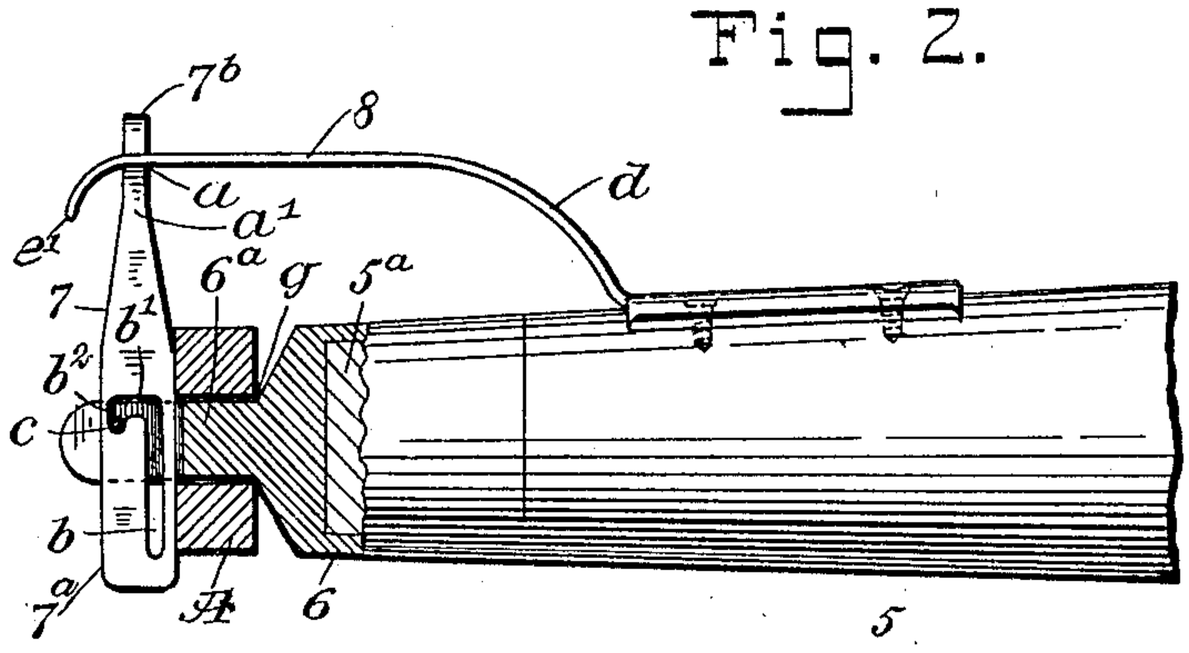
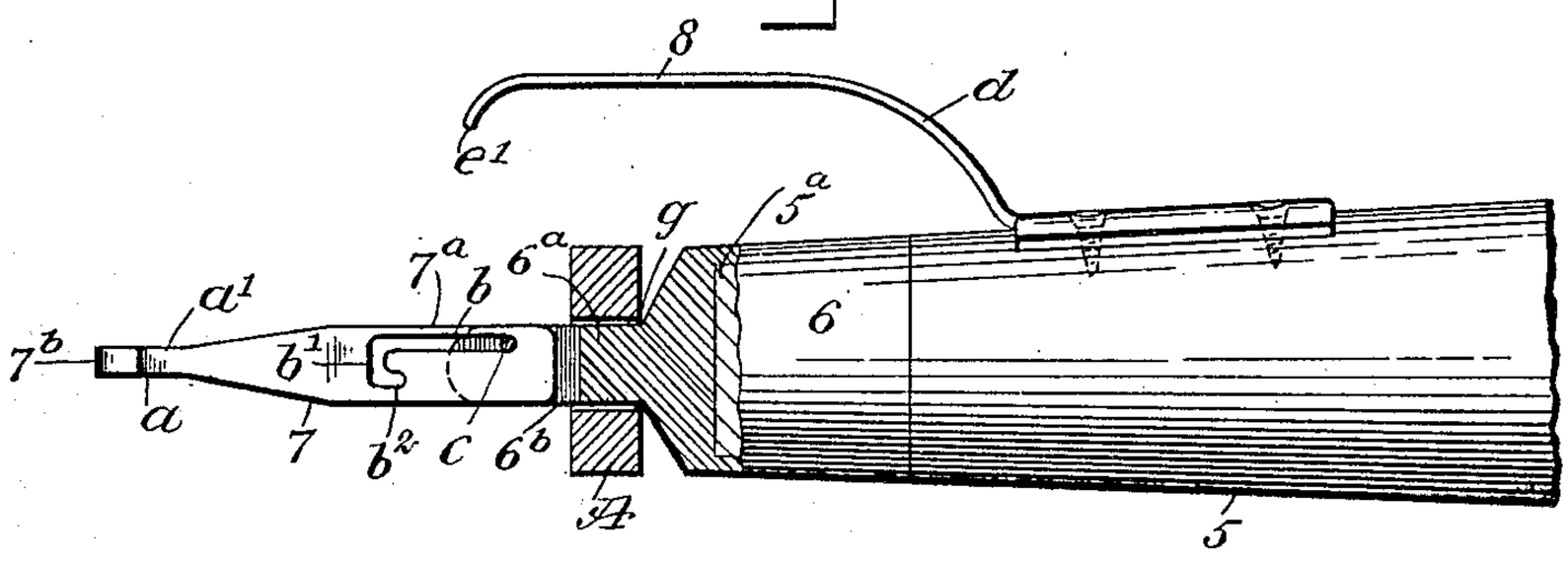


Fig. 4.



WITNESSES

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TRACE-SECURING MEANS FOR SWINGLETREES.

No. 887,685. Specification of Letters Patent. Patented May 12, 1908.

Application filed October 18, 1907. Serial No. 397,957.

To all whom it may concern:

Be it known that I, THOMAS MORCOM, a citizen of the United States, and a resident of Graham, in the county of Alamance and State of North Carolina, have invented a new and Improved Means for Securing Traces on Swingletrees, of which the following is a full, clear, and exact description.

Ordinary means for detachably securing the ends of traces upon the ends of a swingletree for a vehicle, frequently fail to retain the traces thereon, and a serious accident is liable to occur on account of an improper release of the trace or traces while the vehicle is in rapid motion.

The object of my invention is to provide novel details of construction for a device of the character indicated, which will in a convenient manner secure traces on the ends of a swingletree, and permit a release of the traces quickly, their accidental displacement being impossible unless the parts are broken.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view, showing the improvement mounted on a swingletree, and a trace thereon secured from displacement by the trace holder; Fig. 2 is a partly sectional side view of the improvement, a transverse section of a trace mounted thereon, and a swingletree in part, having the device thereon and adjusted for holding the trace from accidental displacement; Fig. 3 is a sectional side view of the trace holder, partly adjusted for release of a trace shown engaged therewith, and Fig. 4 is a view similar to Fig. 2, but showing the improved trace holder adjusted for a convenient removal of the trace.

The swingletree 5 may have any preferred form, that shown partly being tapered and rounded, having an end portion 5^a thereof reduced in diameter for reception of the improved trace holder that is constructed as shown, comprising the following details: Upon a socket 6, that is closely fitted and secured upon the reduced end 5^a of the swingletree, a shank 6^a is centrally formed, which has parallel upper and lower sides. Integral with the shank 6^a two similar jaws 6^b are formed thereon, the walls of which are vertical, parallel with each other and spaced apart a distance equal to the thickness of a keeper arm 7, that is an important detail of the invention. It will be seen that the upper and lower edges of the jaws 6^b are flush with corresponding sides of the shank 6^a.

The keeper arm 7 consists of a metal billet of suitable length, rectangular in the body, and parallel on its sides from the lower end 7^a for about one half the length thereof, the upper portion being tapered somewhat to afford a latch head 7^b, that is completed by forming shoulders *a*, *a* oppositely below the upper extremity of the arm, affording a neck of reduced thickness beneath said shoulders as appears at *a'*, in Fig. 1. The lower portion of the keeper arm 7 is fitted loosely between the jaws 6^b, and through said portion between the jaws a longitudinal slot *b* is formed.

The slot *b* at its upper end extends laterally as at *b'*, and this lateral continuation of the slot at its end is turned downward, affording a short depending slot b^2 that is parallel with the longitudinal slot *b*. A pin *c* is affixed by its ends in opposite perforations formed in the jaws 6^b, after it has been inserted through the slot *b*, it being understood that the keeper arm 7 has been inserted between said jaws before the pin is placed therein.

Upon the upper surface of the swingletree 5 a latch spring 8, in plate form, is secured by one end thereof, and at *d* is bent so that the free portion thereof will be spaced from the swingletree and extend toward the upper end of the keeper arm 7. The end portion of the latch spring 8, which is extended toward the keeper arm, is longitudinally slotted, as shown at *e* in Fig. 1, and the terminations of the fingers *e'* produced by said slot are bent downward.

The trace A, shown to illustrate the operation of the improvement, may be of leather, and at the end which is to be connected with the swingletree 5 a longitudinal slot *g* is formed, through which may be inserted the keeper arm 7, as will be explained. As shown in Fig. 4 the keeper arm 7 may be extended outwardly in the same plane with the shank 6^a, by turning it so as to permit such a movement, which will cause the pin *c* to traverse the slot *b* and have contact with

the normally lower end of said slot. When the keeper arm is disposed as represented in Fig. 4, it will be apparent that the small end of the arm may be readily inserted through the slot *g* in the trace and the latter slid upon the shank 6ª, whereupon the keeper arm may be rocked upward on the pin *c* and then depressed.

The downward sliding movement of the keeper arm 7 will be checked upon impingement of the pin *c* upon the upper end of the slot *b*, and the locking of the arm in its upright position may now be effected by pressing the arm 7 laterally or toward the trace A, which will cause the pin *c* to pass through the short horizontal slot extension *b'*, and finally lift the keeper arm so as to locate the pin at the bottom of the vertical extension b^2 of the slot, as shown in Fig. 2. The keeper arm is now engaged with the latch spring 8, by insertion of the neck *a'* thereof into the slot *e*. The resilience of the spring pressing the fingers *e'* against the shoulders *a*, *a*, adapts the latch spring for holding the keeper arm 7 in position to retain the trace engaged with the end of the swingletree. For a release of the trace, the operation is reversed; that is to say, the latch spring 8 is disengaged from the head of the keeper arm 7, that is with one motion lifted, moved laterally, and then raised until the pin *c* is at the bottom of the slot *b*. The keeper arm is now rocked outward until it is level with the shank 6ª, which will permit the free outward movement of the trace and its removal from the swingletree 5. The keeper arm serves when in locked condition to prevent a trace engaged thereby from turning or twisting sidewise, as said arm has contact with the trace above and below the shank 6ª, as shown in Figs. 1 and 2.

It will be obvious from the illustration and foregoing description of my improved trace holding device, that it is simple, durable, easily operated, and will positively prevent an accidental detachment of traces from a swingletree.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. The combination with an end of a swingletree, of a trace securing device, comprising a shank having a socket on one end that is secured on the end of the swingletree, two spaced jaws on the other end of said shank, a keeper arm having a rectangular lower portion which is embraced by the jaws, and is slotted longitudinally, laterally and downwardly, a pin in the jaws that passes loosely through the slot, and a latch spring on the swingletree adapted for engagement with the upper end of the keeper arm when said arm is rocked into an upright position.

2. The combination with an end of a swingletree, of a trace securing device, comprising a shank having a socket on one end that is secured on the end of the swingletree, two spaced jaws on the other end of the shank, a keeper arm having a rectangular lower portion and a tapered upper portion, opposite shoulders being formed on said upper portion producing a latch head thereon, the lower portion of the keeper arm that is embraced by the jaws having a transverse slot therein that is disposed longitudinally, laterally at the upper end, and downwardly, a pin in the jaws that passes loosely through the slot, and a latch spring secured by one end upon the swingletree, and extended toward the keeper arm, said spring having a slot in its end providing two fingers that are bent downward at their extremities and receive between them the head of the keeper arm, whereby the stress of said spring is adapted for holding the keeper arm upright by its lifting engagement with the shoulders thereon.

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

THOMAS MORCOM.

Witnesses:
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W. F. Blackman.