R. McC. WATSON.

TRACE FASTENER.

APPLICATION FILED DEC. 24, 1909.

970,769.

Patented Sept. 20, 1910.

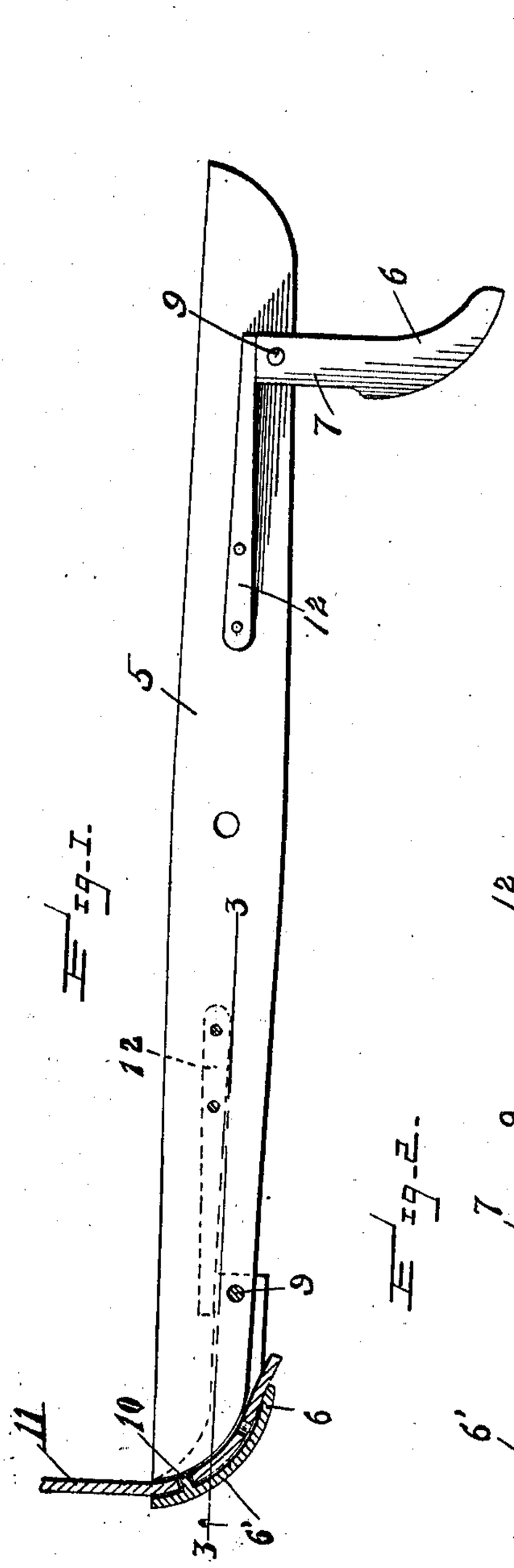

Fig. 1.

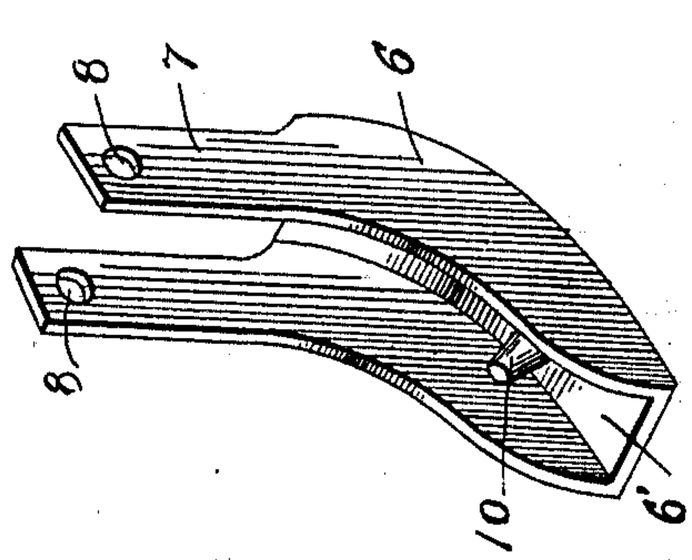

Fig. 4.

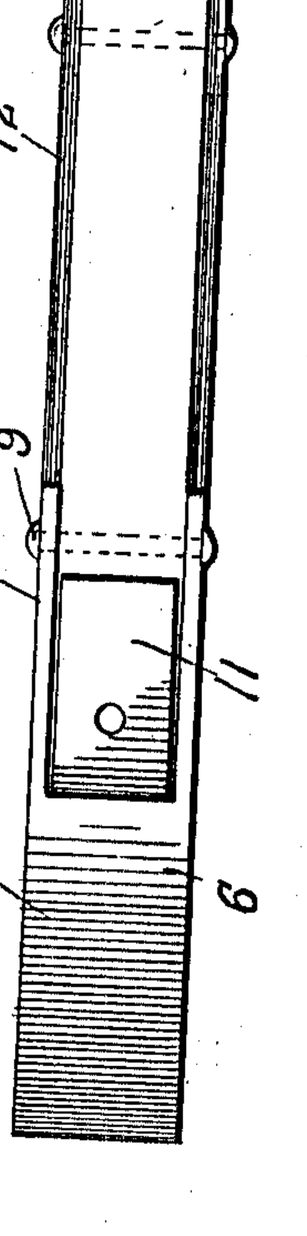

Fig. 2.

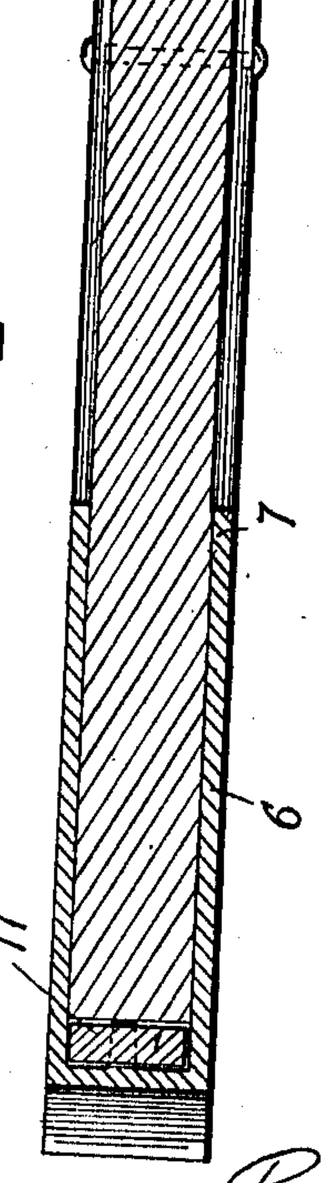

Fig. 3.

Witnesses

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TRACE-FASTENER.

970,769. Specification of Letters Patent. **Patented Sept. 20, 1910.**

Application filed December 24, 1909. Serial No. 534,848.

To all whom it may concern:

Be it known that I, ROBERT M. WATSON, a citizen of the United States, residing at Nickleville, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Trace-Fasteners, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain new and useful improvements in trace fasteners and has for its object to provide a very simple device of this character which will securely hold the trace to the end of the swingletree and prevent its release therefrom.

Another object is to provide a trace fastener which is of such construction and is so arranged upon the swingletree that the pull or strain upon the traces will serve to more effectually secure the same to the swingletree.

With these and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a swingletree, and having my improved fasteners attached thereto one of the same being shown in section; Fig. 2 is a side elevation of one of the fasteners in operative position; Fig. 3 is a section taken on the line 3—3 of Fig. 1; and Fig. 4 is a detail perspective view of the fastening member detached.

Referring to the drawings 5 indicates a swingletree upon each end of which one of my improved trace fasteners is secured. The fastener comprises the channeled member 6 formed from a single piece of sheet metal which is curved longitudinally for engagement upon the curved end of the swingletree. The sides of this channeled member are extended beyond the body portion to provide the spaced parallel arms 7. These arms are each provided with a perforation 8 through which the pivot pin 9 is adapted to extend, said pin being disposed vertically through the swingletree. A laterally extending stud 10 is integrally formed with the curved connecting portion 6′ which connects the sides of the channeled member and spaces the same. This stud extends inwardly between the spaced side flanges and is adapted to be positioned through one of a plurality of openings provided in the end of the trace 11, said stud engaging the swingletree and spacing the body portion 6′ of the channel member therefrom. The extremity of the trace is adapted to be disposed between the connecting portion 6′ of the channeled member and the end of the swingletree and extends beyond the inner end thereof. A heavy leaf spring 12 is secured at one end to the swingletree 5. One of these springs is provided upon each side of the swingletree and the outer end thereof bears against the inner pivoted ends of the parallel arms 7 and is adapted to retain the channeled member in its operative or inoperative positions.

In Fig. 1 of the drawings upon one end of the swingletree the fastener is shown engaged upon the trace 11 while on the other end thereof it is illustrated in the position it assumes when moved to its releasing position. It will thus be noted that as the outer ends of the springs 12 are engaged with the ends of the arms immediately opposite to the pivot pin 9, considerable pressure must be exerted against the outer end of the holding member to swing the same upon its pivot pin to release the trace. When the fastener has been thus moved, the springs will engage upon the square ends thereof and as effectually prevent their return to the holding position after being released.

From the foregoing it will be seen that I have provided a trace holder which is of very simple construction and may be easily and quickly operated to secure or release the traces from the ends of the swingletree. The greater the strain or pull upon the traces, the more effectual will be the locking engagement of the trace fasteners therewith, binding the same between the curved body plate of the fastener and the end of the swingletree.

The device may be inexpensively produced, and is of such form that it will not detract from the neat appearance of the swingletree, there being no protruding parts to catch upon the clothing of the operator.

While I have above set forth the preferred embodiment of the invention, it will be understood that numerous minor modifications may be resorted to without departing from the spirit or sacrificing any of the advantages thereof.

One of the principal advantages obtained by a fastener constructed as above set forth resides in the fact that the liability of tear-

ing of the traces at the point of attachment to the ends of the whiffletrees is obviated. In the common form of trace fastener where the ends of the traces are provided with elongated openings through which the whiffletrees extend, it is a common occurrence for the leather to tear at the openings owing to the great amount of strain placed upon the traces. By the use of my invention this objection is entirely overcome and a device is provided which will securely hold the traces in their proper position without danger of injury thereto, thus materially lengthening their period of usefulness.

Having thus described the invention what is claimed is:

The herein described trace fastener comprising a channeled member formed from a single piece of sheet metal bent to provide the channel flanges, the sides of said member extending beyond the body portion thereof, the free ends of said flanges having openings therein and adapted to be positioned upon opposite sides of a swingletree, said openings receiving a pivot pin extending through the swingletree, a conical stud integrally formed centrally upon the body of the channeled member projecting inwardly between the flanges thereof and adapted to space the body portion of said member from the swingletree and to be positioned in an aperture in a trace arranged between the channeled member and the swingletree, and a leaf spring secured to each side of the swingletree at one end and having its free end engaged with the pivoted ends of the channel arms to yieldingly hold said member in its operative or inoperative positions.

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

ROBERT McCAY WATSON.

Witnesses:

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