

No. 684,792.

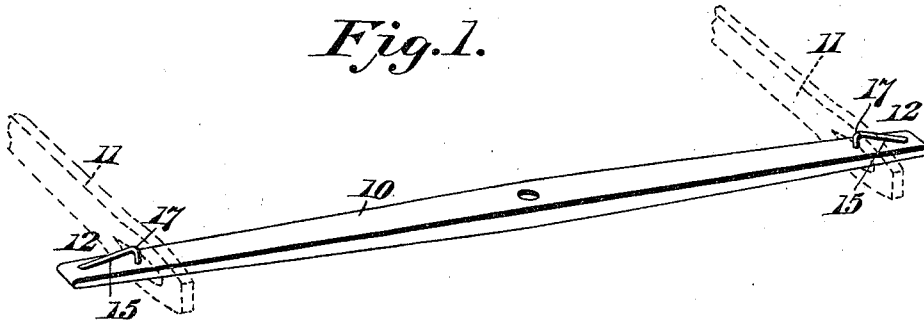
Patented Oct. 22, 1901.

H. P. CHILDRESS.  
TRACE FASTENER.

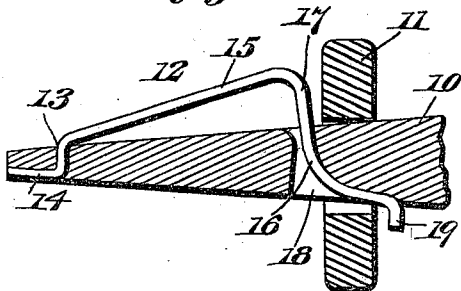
(Application filed Nov. 28, 1900.)

(No Model.)

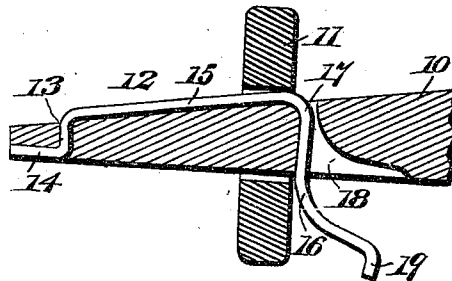
*Fig. 1.*



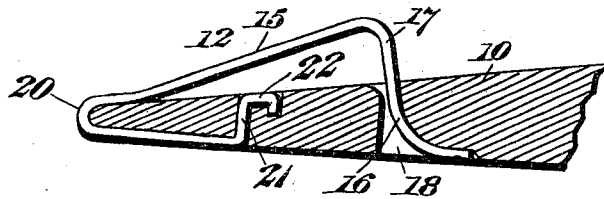
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

HENDERSON PIRCE CHILDRESS, OF MEMPHIS, TENNESSEE.

## TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 684,792, dated October 22, 1901.

Application filed November 28, 1900. Serial No. 38,043. (No model.)

*To all whom it may concern:*

Be it known that I, HENDERSON PIRCE CHILDRESS, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Trace-Fastener, of which the following is a specification.

The present invention relates to an improved means for fastening traces to whiffletrees; and the object thereof is to provide a fastener of this character that will permit of the ready application of the end of the trace to the whiffletree and will hold the same securely against accidental displacement.

A further and important object of the invention is to construct the fastener so that when it is operated to unlock the trace it will engage the latter in such a manner as to move it to a point where it is in released position and can be readily removed from the whiffletree.

A still further object is to provide a fastener that will lock the trace against movement in either direction upon the whiffletree.

These and other objects that will appear hereinafter are accomplished by the construction described in the following specification and illustrated in the drawings which accompany and form a part of the same; but it will be understood that this construction may be changed and modified within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of a whiffletree, showing the improved fastener applied thereto. Fig. 2 is a sectional view, on an enlarged scale, of one end of the whiffletree with the trace secured in place thereon by the fastener. Fig. 3 is a view similar to Fig. 2, but showing the trace released and in position to be readily removed. Fig. 4 is a sectional view of a slightly-different form of construction.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

In the embodiment of the present invention the numeral 10 designates the whiffletree, which may be of any well-known or preferred construction and preferably has its ends tapered to permit of the more ready application of the trace 11. To these ends are secured

the trace-fasteners, designated as a whole by the numeral 12.

Each of the trace-fasteners 12 is preferably made of a single piece of spring metal, as wire or sheet spring-brass, secured at one end to the end of the whiffletree. This is accomplished by passing the end of the fastener through a suitable opening 13 in the whiffletree and then bending it outwardly, as at 14, so that it will lie flush with the surface of the whiffletree. From this end a spring-shank 15 extends longitudinally of the whiffletree and is provided at its inner end with an offset arm 16, which thus provides a retaining-shoulder 17 for the trace 11. The offset arm 16 curves outwardly from the spring-shank for the purpose hereinafter set forth and passes through an opening 18 in the whiffletree, which opening is of suitable shape to permit the play of said arm and at the same time form a stop to prevent its end being pulled from the whiffletree. The end of this arm is preferably bent to form an outstanding stop-stud 19, although this may be omitted, if so desired, as shown in Fig. 4. It will thus be seen that the arm passes through the whiffletree-receiving opening of the trace, and the stud 19 engages the side of the same opposite to the shoulder, and thus movement of the trace is prevented in either direction.

In applying the trace it is slipped over the end of the whiffletree and over the spring-shank 15 and the retaining-shoulder 17. This is readily accomplished, as the shoulder will seat itself in the opening 18, as clearly shown in Fig. 3. After the trace has passed the shoulder the latter will spring back to place. The trace will thus be in a position between the retaining-shoulder 17 and the stop-stud 19 and will be securely locked against accidental displacement.

When it is desired to release the trace, it is only necessary to press downwardly upon the spring-shank. This will depress the offset arm 16, and the curved portion bearing against the edge of the trace will force the trace outwardly and over the retaining-shoulder 17 onto the spring-shank 15 or in a position substantially similar to that shown in Fig. 3. From this position it may be readily removed from the whiffletree.

In Fig. 4 a slightly-different manner of securing the spring-shank 15 to the whiffletree is shown. This means is fully set forth in a former patent, No. 659,209. It consists, substantially, in bending the shank around the end of the whiffletree, as at 20, passing the end 21 thereof transversely through the whiffletree, and bending or deflecting the extremity 22, so that it will lie flush upon said whiffletree. The other features, however, are preserved in this construction with the exception of the stop-shoulder 19. By this construction it will be seen that an exceedingly simple device is provided which requires no screws, nails, or similar fastenings and that will securely hold the trace against accidental displacement. At the same time it will force the trace to an unlocked position and out of the locking plane of the retaining-shoulder when said shoulder is thrown to an inoperative position.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination with a whiffletree, of a spring-shank having an offset arm forming a retaining-shoulder and passing through the whiffletree, said arm being provided with an outwardly-extending portion arranged at an obtuse angle to the spring-shank, and passing through the whiffletree-opening in the trace when said trace is in place on the whiffletree.

2. In a device of the class described, the combination with a whiffletree, of a spring-shank having an offset arm forming a retaining-shoulder and curved outwardly from the shank, said arm being movably mounted in an opening in the whiffletree, and passing

through the whiffletree-opening in the trace when said trace is in place upon the whiffletree.

3. In a device of the class described, the combination with a whiffletree, of a spring-shank having an offset arm forming a retaining-shoulder and curved outwardly from the shank, said arm passing through the whiffletree and also arranged to pass through the whiffletree-opening in the trace when said trace is in place upon the whiffletree and an outstanding stop-stud arranged on the end of said arm.

4. In a device of the class described, the combination with a whiffletree, of a trace-fastener comprising a spring-shank, one end of which is secured to the end of the whiffletree by being passed through the same, and having its terminal portion extended outwardly from the spring-shank, and disposed longitudinally upon the side of the whiffletree which is opposite to said spring-shank, the other end of the shank having an offset arm movably mounted in an opening in the whiffletree and provided with a portion arranged to engage said whiffletree to retain the arm in the opening.

5. In a device of the class described, the combination with a whiffletree, of a spring-shank arranged longitudinally of and having its outer end secured to the end of the whiffletree, said shank also having at its inner end an outwardly-curved offset arm forming a retaining-shoulder and passing through the whiffletree, said offset arm being arranged to pass through the whiffletree-opening in the trace when said trace is in place on the whiffletree, and an outstanding stop-stud arranged upon the end of the offset arm and projecting from the side of the whiffletree opposite to the retaining-shoulder.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENDERSON PIRCE CHILDRESS.

Witnesses:

E. WOLFF,  
H. C. POLK.