No. 739,039. PATENTED SEPT. 15, 1903.

A. WAGNER.

TRACE FASTENER.

APPLICATION FILED FEB. 25, 1903.

NO MODEL.

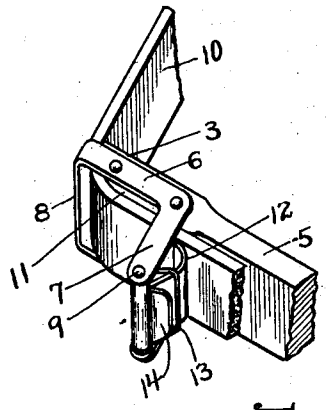


Fig. 1.

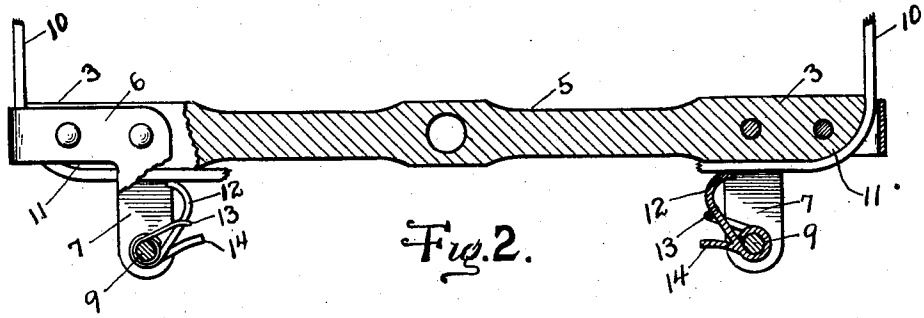


Fig. 2.

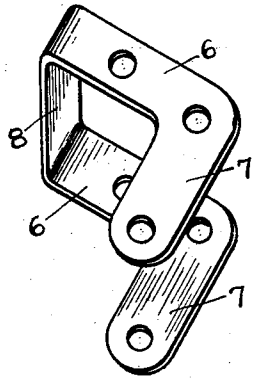


Fig. 3.

Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 739,039. Patented September 15, 1903.

UNITED STATES PATENT OFFICE.

ADAM WAGNER, OF ASHRIDGE, OHIO.

TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 739,039, dated September 15, 1903.

Application filed February 25, 1903. Serial No. 144,945. (No model.)

To all whom it may concern:

Be it known that I, ADAM WAGNER, a citizen of the United States, residing at Ashridge, in the county of Brown and State of Ohio, have invented certain new and useful Improvements in Trace-Fasteners; 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 trace-fasteners; and it has for its object to provide means for attachment to the ends of a swingletree for clamping the trace against the swingletree, so that the necessity for cutting holes in the traces and the consequent weakening of the traces will be avoided.

A further object of the invention is to provide a construction which will permit of adjustment of the traces with a greater degree of accuracy than is possible in the use of pins and holes.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing one end of a swingletree equipped with the present invention and illustrating its operation upon a trace. Fig. 2 is a section taken longitudinally through the swingletree and showing the fasteners at both ends thereof. Fig. 3 is a detail perspective view of the frame of the fastener.

Referring now to the drawings, there is shown a swingletree 5, the ends of which are rounded or curvingly beveled at their rear sides, while the front, top, and bottom sides are flat.

The fastening device consists of an angular frame including the side angular portions, each of which includes arms or members 6 and 7, the members 6 being connected by the web 8, while the members 7 are connected by the pin 9. This frame is disposed at the end of the finger 3, with the members 6 lying against the upper and lower spaces thereof, while the members 7 project rearwardly at right angles, both pairs of members projecting beyond the swingletree. The web portion 8 stands vertically beyond the extremity of the swingletree and spaced therefrom, while the pin 9 stands similarly in the rear of the swingletree and spaced therefrom, so that the trace 10 may be passed between the web 8 and the extremity of the swingletree, then around the curved face 11 of the swingletree, and then between the pin 9 and the rear face of the swingletree, the upper and lower sides of the frame holding the trace against vertical displacement.

In connection with the angular frame at each end of the swingletree is employed a spring-cam, consisting of an arc-shaped spring-metal plate 12, which is pivotally mounted at one end upon the pin 9, so that its opposite end may be swung toward the swingletree and between the arms 7 to engage against the trace and clamp the latter against the swingletree. This swinging movement of the spring-cam is in the direction of the adjacent free end of the swingletree, so that when the trace is subjected to strain it will act to draw or swing the spring-cam farther, and as it travels farther on its pivot or pin it will exert a greater gripping pressure against the swingletree.

To urge the spring-cam into gripping position and hold it yieldably in such position, a U-shaped spring-wire 13 is provided, the bight portion of the wire being disposed aganst the rear or convex face of the cam, while the side members are wrapped about the pin 9 in helical form and have their extremities secured to the members 7 of the frame. To swing the spring-cam out of its clamping position to permit of withdrawal of the trace, a finger-piece 14 is provided and extends from the pivoted end of the cam in the direction of the middle of the swingletree. By grasping this finger-piece the cam may be swung against the action of the spring-wire 13.

As illustrated in Fig. 2 of the drawings, a frame and a spring clamping-cam is provided at each end of the swingletree, so that both traces are held securely in their proper positions, and it will be understood that by forming the cam of a spring-metal arc-shaped plate it will effectively hold traces of different thicknesses, the increased thickness of the trace serving merely to bend the cam to a greater extent when the latter is swung between the sides of the frame in which it is mounted.

It will be understood that in practice modi-

fications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

1. The combination with a swingletree, of a frame at each end thereof, each of said frames including a portion projecting beyond the extremity of the swingletree and a portion projecting beyond the rear face of the latter, and a cam pivotally mounted in the rearwardly-projecting portion of the frame for movement toward and away from the swingletree to exert a gripping action thereagainst.

2. The combination with a swingletree, of a frame at each end thereof, each of said frames including a portion projecting beyond the extremity of the swingletree and a portion projecting rearwardly beyond the rear face of the latter, a cam pivotally mounted in the rearwardly-projecting portion of the frame for movement toward and away from the swingletree to exert a gripping action thereagainst, and means for holding the cam yieldably in gripping position.

3. The combination with a swingletree, of a frame at each end thereof, each of said frames including a portion projecting beyond the extremity of the swingletree and a portion projecting rearwardly beyond the rear face of the latter, and a cam pivotally mounted in the rearwardly-projecting portion of the frame for movement toward and away from the swingletree, said cam consisting of an arc-shaped spring-metal plate.

4. The combination with a swingletree, of a frame at each end thereof, each of said frames including a portion projecting beyond the extremity of the swingletree and a portion projecting rearwardly beyond the rear face of the latter, a cam consisting of an arc-shaped spring-metal plate pivotally mounted at one end in the rearwardly-projecting portion of the frame for movement of its opposite end toward and away from the swingletree, and means for holding the cam yieldably in the direction of the swingletree.

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

ADAM WAGNER.

Witnesses:

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A. R. WALKER.