

P. FISCHER.
TRACE RETAINER.
APPLICATION FILED MAY 7, 1912.

1,057,630.

Patented Apr. 1, 1913.

Fig. 1.

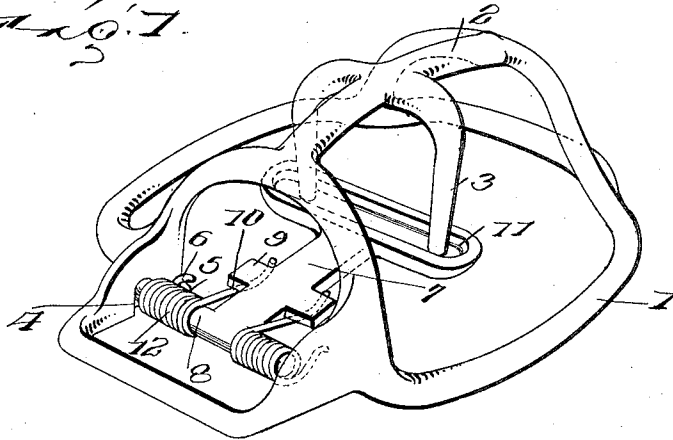


Fig. 3.

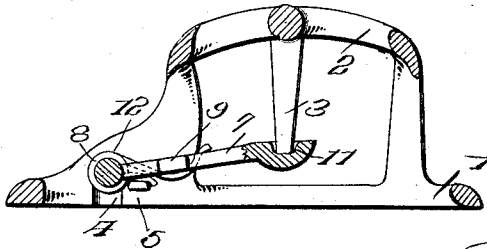


Fig. 2.

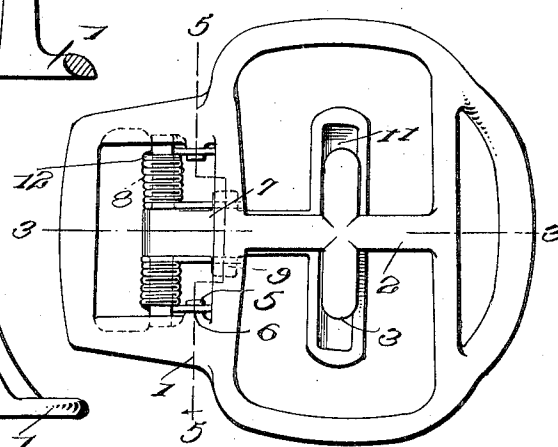


Fig. 4.

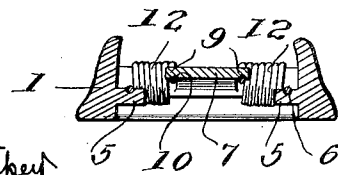
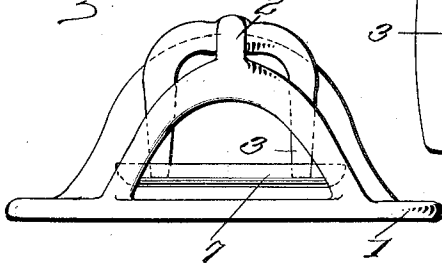


Fig. 5. Inventor
P. Fischer

Witnesses
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UNITED STATES PATENT OFFICE.

PHILIP FISCHER, OF TRENTON, ILLINOIS.

TRACE-RETAINER.

1,057,630.

Specification of Letters Patent.

Patented Apr. 1, 1913.

Application filed May 7, 1912. Serial No. 695,734.

To all whom it may concern:

Be it known that I, PHILIP FISCHER, citizen of the United States, residing at Trenton, in the county of Clinton and State of Illinois, have invented certain new and useful Improvements in Trace-Retainers, of which the following is a specification.

This invention has relation to trace end retainers adapted to be applied to the back strap and breeching strap of harness, and is adapted to hold the ends of the traces when they are disconnected from the tree of the vehicle. This prevents the trace ends from hanging down and dangling about the legs of the animal.

With this object in view, the retainer consists of a frame of peculiar pattern having an intermediate arched portion with side and end parts to which the straps of the harness are connected. The intermediate portion is provided with downwardly disposed, approximately parallel prongs. The frame is provided in its under side and in the vicinity of its rear edge with recesses located opposite each other and which open at the lower side of the frame but are closed at their upper ends by the material of which the frame is composed. Inwardly disposed lugs are located at the sides of the frame just in advance of the said recesses. The retainer is provided with gudgeons which are received within the recesses, and the retainer is provided at its opposite sides with outwardly disposed lugs. Coil springs are wound about the gudgeons of the retainer, and at their outer ends bear upon the lugs carried by the frame, and at their inner ends bear against the under sides of the lugs carried by the retainer therein. The free end portion of the retainer is provided with a groove within which are received the pointed end portions of the said prongs when the retainer is in closed position against the same. The tension on the said springs is such as to have a tendency to hold the retainer in closed position against the said prongs.

In the drawings: Figure 1 is a perspective view of the trace end retainer; Fig. 2 is a top plan view of the same; Fig. 3 is a longitudinal sectional view of the same; Fig. 4 is an edge view of the same. Fig. 5 is a fragmentary sectional view, showing the grooves in which the ends of the springs seat.

Corresponding and like parts are referred

to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The trace end retainer comprises a frame 1 having an intermediate arched portion 2. Approximately parallel tapered prongs 3 extend in a downward direction from the highest point of the arched portion. The straps of the harness are adapted to be connected with the edge portions of the frame 1. The frame 1 is provided at its rear part and in its opposite sides with recesses 4 which open at their lower ends at the lower side of the frame. Inwardly disposed lugs 5 are mounted at the sides of the frame just in advance of the recesses 4. These lugs are grooved at their upper surfaces as at 6.

In conjunction with the frame as above described, a retainer 7 is used. This retainer is provided at its rear end with outwardly disposed alining gudgeons 8. The ends of these gudgeons are received within the recesses 4. The retainer 7 is provided in advance of the gudgeons 8 with outwardly disposed lugs 9, the under sides of which are grooved as at 10. The retainer 7 is of general T-shaped configuration in plan and the branches of the T extend transversely of the frame 1 and lie under the pointed ends of the prongs 3. A groove 11 extends along the upper sides of the branches of the retainer and is adapted to receive the lower ends of the said prongs when the retainer is in closed position against the prongs. Springs 12 are coiled about the inner portions of the gudgeons 8, and at their outer ends are received in the grooves 6 of the lugs 5. The inner ends of the said springs are received in the grooves 10 of the lugs 9. These springs are under tension with a tendency to hold the branches at the free end of the retainer in contact with the prongs.

By such an arrangement, it will be seen that a trace end retainer is provided which consists of two parts only and two springs, and that the springs not only serve as means for holding the parts in normal but movable positions with relation to each other, but they also serve as means for holding the parts together or in a predetermined relation to each other. Therefore the frame and the retainer maintain their proper relation to each other without the use of bolts or rivets, and without necessitating the drilling or puncturing of any of the parts

for the reception of such bolts or rivets. Therefore, an exceedingly strong and durable structure is effected and the parts may be easily and quickly assembled, thereby rendering the device cheap to manufacture.

When the trace ends of the harness have been disconnected from the tree, the eyes of the traces are pressed down upon the branches of the retainer and are carried under and up along the prongs 3. Thus the trace ends are secured. When the animal is being hitched to the vehicle and it is desired to quickly disconnect the trace ends from the device, it is necessary only to press down the free end of the retainer when the eyes of both traces are simultaneously liberated. This is accomplished by gravity, and by reason of the fact that the traces are in position to be quickly disconnected from the tree. In other words, but a single movement on the part of an attendant is necessary to liberate both traces from the device.

What I claim is:

A trace end retainer comprising a frame having an intermediate arched portion with downwardly disposed, approximately verti-

cal prongs connected to the said arched portion, said frame being provided at its inner opposite sides with recesses which open at their lower ends at the lower side of the frame, said frame being provided at its opposite sides and just in advance of the recesses with grooved lugs, a retainer of general T-shaped configuration having at its end gudgeons which are received within the said recesses and being provided in advance of the gudgeons with grooved lugs, said retainer having in the upper sides of the branches at its free end a groove adapted to receive the lower ends of the prongs, and springs coiled about the inner portions of the gudgeons and having their outer ends received in the grooves of the lugs upon the frame and their inner ends received in the grooves upon the retainer.

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

PHILIP FISCHER. [L. s.]

Witnesses:

OSCAR GINZEL,
GEORGE HARTLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."