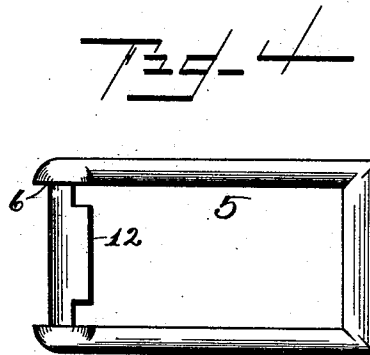
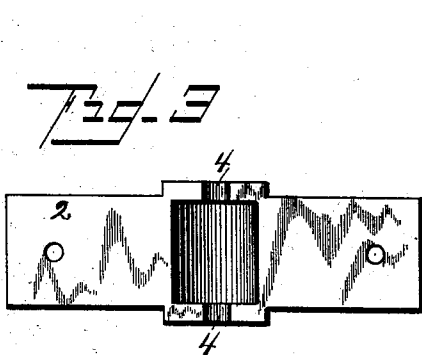
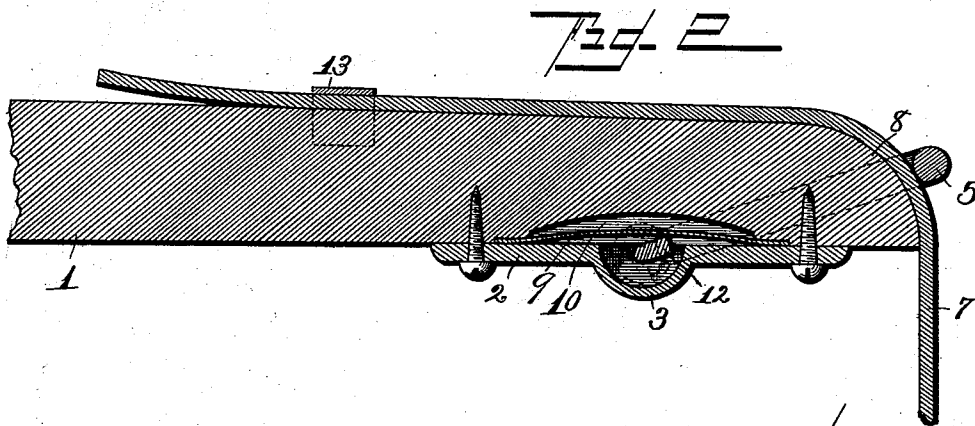
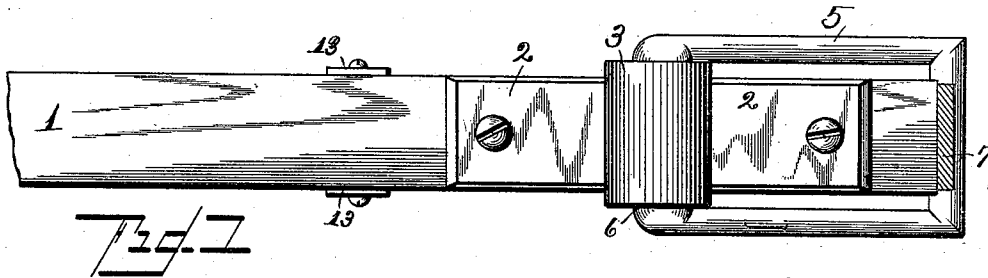


(No Model.)

E. S. ANDRUS.
TRACE FASTENER.

No. 507,977.

Patented Nov. 7, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

ELLIOT S. ANDRUS, OF WILLARD, NEW YORK.

TRACE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 507,977, dated November 7, 1893.

Application filed February 9, 1893. Serial No. 461,610. (No model.)

To all whom it may concern:

Be it known that I, ELLIOT S. ANDRUS, of Willard, county of Seneca, and State of New York, have invented certain new and useful Improvements in Trace-Fasteners for Whiffle-tree Ends, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce an improved fastener for whiffle-tree ends, whereby the end of a tug may be more securely held than by the means now in ordinary use; and by which the weakening of the trace end by perforating or cutting may be avoided.

In the accompanying drawings, Figure 1 is a side elevation of an end of a whiffle-tree, equipped with my fastener. Fig. 2 is a central horizontal section of the same. Fig. 3 is a bottom plan view of the box plate, detached. Fig. 4 is a side elevation of the fastening link, detached.

Referring to the figures on the drawings, 1 indicates the end of a whiffle-tree, which may be of any ordinary and suitable construction, shape, or size.

2 indicates a plate adapted to be secured to the whiffle-tree, preferably near its end, and provided with a box 3, in the opposite sides of which there are bearings 4.

5 indicates a fastening link, which is preferably rectangular in shape, and of a sufficient length to reach from its bearing to the end of the whiffle-tree, which preferably it is barely able to pass when oscillated within its bearings.

6 indicates shoulders formed in the link for preventing lateral movement of the journal in its bearings.

7 indicates the end of a trace, which is adapted to be secured between the curved end 8 of

the whiffle-tree and the fastening link. For convenience in fastening and unfastening; and also for insuring a tendency of the link to bite against the trace in position, and thereby to prevent accidental unfastening, I prefer to make the link spring-balanced. For this purpose I prefer to employ a spring 9, seated underneath the plate, and secured thereby within a recess 10. The spring is formed preferably of a piece of flat metal, bowed as illustrated, and which in practice presses against a tongue 12 that extends in the same direction as the sides of the link. By this device, when the link is parallel with the whiffle-tree, the tongue rests easily against the top of the spring and relieves it of all tension. In fastening the trace, the link is pressed back of the whiffle-tree, so that a free open space is left between it and the end of the link. The trace is then inserted in place, and the link being released springs against the side of the trace, and securely fastens it in place. A housing 13 is preferably provided upon the back of the whiffle-tree to neatly confine the loose end of the trace.

What I claim is—

The combination with a whiffle-tree having a recess, of a spring located in the recess, a plate provided with box and bearings secured to the whiffle-tree above the spring, and a fastening link having a tongued journal carried in the bearings of the plate, and located in proximity to the end of the whiffle-tree, substantially as and for the purposes specified.

In testimony of all which I have hereunto subscribed my name.

ELLIOT S. ANDRUS.

Witnesses:

BENJAMIN FRANKLIN,
JOHN FRANKLIN.