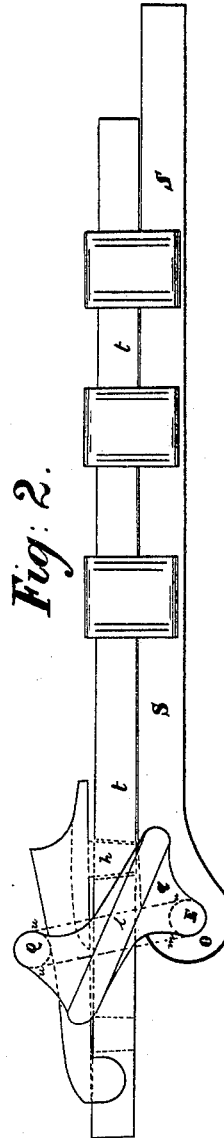
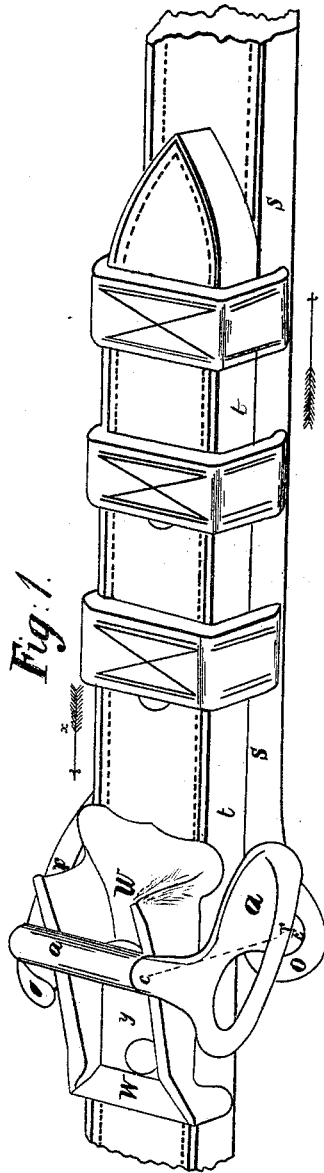


A. H. COLE.

Improvement in Trace-Buckles.

No. 114,530.

Patented May 9, 1871.



*Witnesses.*

*Eliza Kelly*  
*John Laycock*

*Inventor.*

*A. H. Cole*

# United States Patent Office.

AARON H. COLE, (DECEASED,) OF ADRIAN, MICHIGAN; LYDIA B. COLE AND MINER T. COLE, ADMINISTRATORS.

Letters Patent No. 114,530, dated May 9, 1871.

## IMPROVEMENT IN TRACE-BUCKLES.

The Schedule referred to in these Letters Patent and making part of the same.

### *To all whom it may concern:*

Be it known that AARON H. COLE, now deceased, did, in his lifetime, invent an Improved Trace-Buckle; and we, MINER T. COLE and LYDIA B. COLE, of Adrian, in the county of Lenawee and State of Michigan, administrators of the estate of the said AARON H. COLE, deceased, do hereby declare that the following is a full and exact description of the invention, reference being had to the accompanying drawings making part of this specification—

Figure 1 being a view, in perspective, of the improved buckle, together with a portion of the trace and hame-strap to which it is applied.

Figure 2, a side view of the same.

Like letters designate corresponding parts in both figures.

The special object of this improved buckle is to be applied to hame-straps of harnesses for attaching and adjusting the length of the traces or tugs, but the buckle may be applied in other connections.

The invention consists in a bow or rim, one end of which turns in the hame-strap as a pivot, while the other end swings like a bail over the trace, in combination with a loose-pressure plate with a tongue attached to it, the action of the bail or swinging end of the bow being to closely compress the tongue-plate upon the trace, and thereby relieve the strain upon the tongue and the buckle-holes, substantially as herein specified, whereby the buckling and unbuckling are greatly facilitated, and without bending the trace.

Let S represent a hame-strap, and t a trace to be buckled thereto.

The buckle, bow, rim, or frame a, has one end or cross-bar straight and rounded, and this part is inserted in a loop, c, at the end of the hame-strap S, in which it turns as a pivot.

The opposite end of the bow is also straight and preferably rounded, and it swings over the trace t, as indicated in the drawings, around the pivot end as a center. The motion of the bow is similar to that of the bail of a kettle or other vessel.

The sides of the buckle-bow may be of bent form, as shown, so as to properly embrace the parts included within it, and may be provided with loops r r to receive the back and belly-band of the harness.

In connection with this pivoted swinging bow or rim as above described, a pressure-plate, w, is used, projecting from the inner side of which is a tongue, h, that fits into any one of the buckle-holes of the

trace. This plate may be of skeleton form to render it light, and it may have inclined planes or a wedge surface for the bail of the buckle-rim to bear on. These inclined or wedge-acting surfaces are desirable, but not necessary to the proper action of the buckle. If they are not used there should be stops or shoulders near the tongue end of the plate for the bail to strike against.

The sides of the tongue-plate may turn down, as shown at the left hand in the drawings, so as to embrace the edges of the trace, and thereby be more securely kept in position.

The whole buckle may be made of malleable, cast-iron, or other suitable metal.

The operation of the buckle is easy and effective. The buckle-bow being of proper length so as to swing into an oblique position over the trace, when the bail or free cross-end is brought perpendicularly, or nearly so, over the trace, there is sufficient space between it and the tongue or pressure-plate w to allow the tongue to be freely drawn out of or inserted into one of the buckle-holes of the trace. Then, as the trace is drawn in the direction indicated by the arrow in fig. 1, the bail of the buckle is moved into an oblique position, as shown in the drawings, thereby pressing the tongue-plate down upon the trace and compressing the same between the said plate and the hame-strap; and this compression being proportional to the resistance of the load drawn, the tongue h is relieved almost entirely of strain; and when the trace is to be unbuckled, the bail is simply swung again into a perpendicular position, and then the pressure-plate is free to be moved and the tongue drawn from the buckle-hole without bending the trace at all.

What we claim as the invention of AARON H. COLE, and desire to secure by Letters Patent, is—

A trace-buckle, having a bow or rim, a, one end of which turns as a pivot in the hame or fixed strap, so that the other end swings as a bail over the trace, in combination with a tongue-pressure plate, w, wedge-shaped or otherwise, the whole arranged and operating substantially as and for the purpose herein specified.

MINER T. COLE.

LYDIA B. COLE.

*By their Attorney,*

J. A. BROWN.

Witnesses:

ELIZA KELLY,  
JOHN LAYCOCK.