

(No Model.)

W. J. BUTLER.

TRACE BUCKLE.

No. 304,499.

Patented Sept. 2, 1884.

FIG. 2.

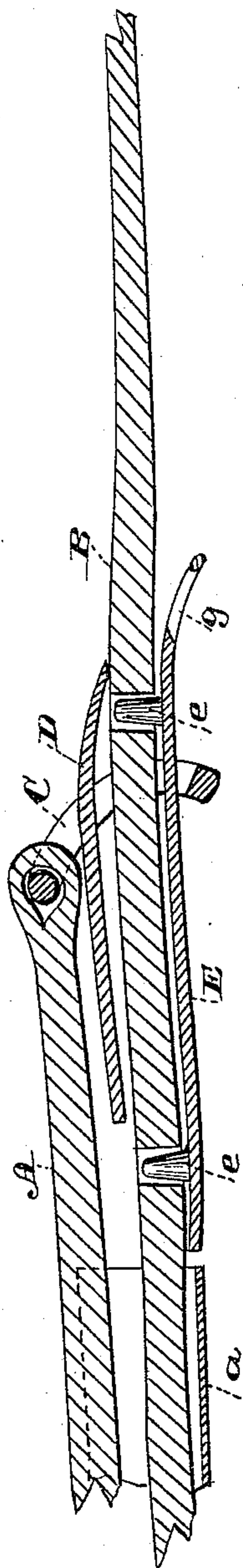
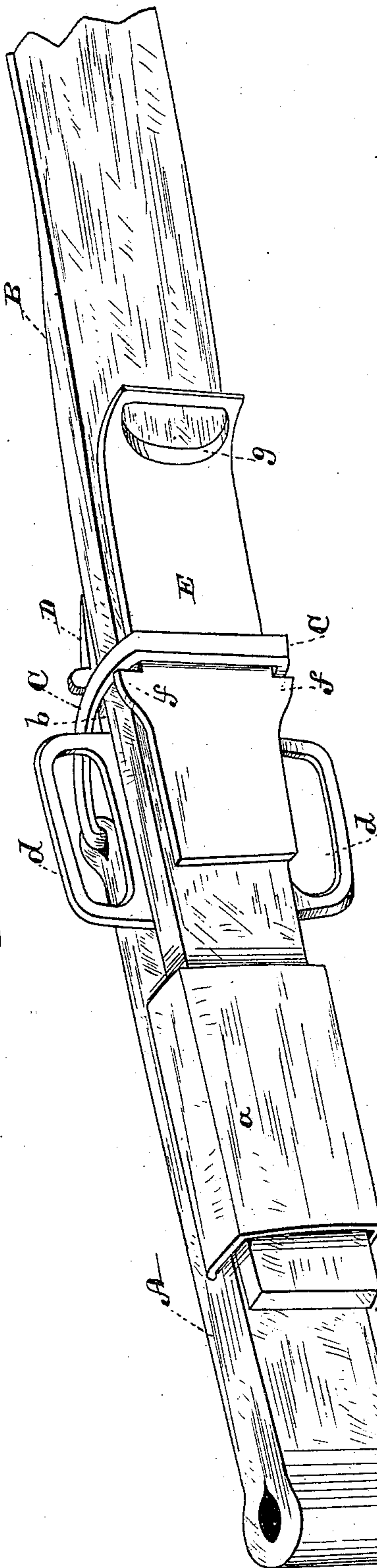


FIG. 1.



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# UNITED STATES PATENT OFFICE.

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## TRACE-BUCKLE.

SPECIFICATION forming part of Letters Patent No. 304,499, dated September 2, 1884.

Application filed March 1, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. BUTLER, of Salinas city, county of Monterey and State of California, have invented an Improvement in Trace-Buckles; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful trace-buckle of that class in which a bail or loop in the end of the hame-tug is employed to secure the buckle devices engaging with the trace; and my invention consists in the two independent plates, one of which is provided with two tongues adapted to engage with the trace, said plates being constructed and adapted to engage with the swinging bail attached to the hame-tug in the manner I shall hereinafter fully explain.

The object of my invention is to construct a simple and strong buckle which will permit the ready adjustment of the trace and relieve the strain on the tongues and the holes in the trace, holding said trace straight to prevent kinking, and in which any thickness of trace may be used.

Referring to the accompanying drawings, Figure 1 is a perspective view of my buckle, showing its application. Fig. 2 is a longitudinal vertical section of same.

A is the hame-tug, having keeper *a*, and B is the trace.

C is the bail or loop in the end of the hame-tug and embracing the trace. The sides of this loop are curved, as shown.

D is a plate, the forward portion of which has the usual side loops, *d d*, for the back and belly bands. Its rear portion is notched at *b*, and its end is narrowed down to about the width of the trace. This plate lies with its forward portion between the end of the hame-tug and the trace, while its rear end lies flat against the inner side of the trace. The curved sides of the bail or loop C play in the notches *b* of the plate.

E is the outer or tongue plate. This is provided with two tongues, *e*, at such a distance apart as to engage simultaneously with holes in the trace, whereby a better hold is effected. The forward portion of the plate is widened out to side shoulders, *f*, which bear against the forward side of the bail C. Its rear portion is narrowed to pass through the bail and extends along the outer side of the trace, which is con-

finied between it and the rear end of the inner-plate. The rear end of the tongue-plate has a loop, *g*, for the breeching-strap, which extends to a ring in the breeching and holds the tug tight to get a direct draft from the hames, so that there may be no chance for the tug to become displaced in going down hill.

The operation of my buckle is as follows: Being adjusted in the position shown, the strain on the trace moves the tongue-plate back, because of the engagement of the tongues with the holes in the trace. This movement of the tongue-plate forces with its shoulders the bail C back, which movement of the bail presses the inner plate, D, outward by reason of its curved sides playing in the notches *b* of said plate. In other words, the separating strain on the hame-tug and trace causes the bail to force together the plates D E, so that their rear ends clamp the trace tightly between them, and the greater the strain the greater the pressure of the clamp. This clamping force has the effect, first, of relieving the strain on the holes in the trace; and, second, of keeping the trace straight, whereby a straight draft is effected. The trace is guided between the two plates, and what is known as "kinking"—that is, bending out of line—or the embedding of the buckle in the trace, whereby it is weakened, is entirely avoided. The two tongues afford a better bearing than one, and relieve the strain. They also serve to form a better connection for the tongue-plate.

For light harness the inner plate, D, may be dispensed with, and the bail made smaller to hold the tongue-plate firmly.

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

In a trace-buckle, and in combination with a swinging bail or loop, C, the independent inner flat plate, D, having shoulders *b* on its edges, with which the bail engages, and the independent outer flat plate, E, having shoulders *f* for engaging with the bail, and two tongues, *e*—one on each side of the bail—for engaging with the trace, substantially as herein described.

In witness whereof I have hereunto set my hand.

Witnesses: WILLIAM J. BUTLER.  
I. J. HARVEY,  
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