

J. THORNTON.
TRACE-BUCKLES.

No. 174,593.

Patented March 7, 1876.

Fig. 1.

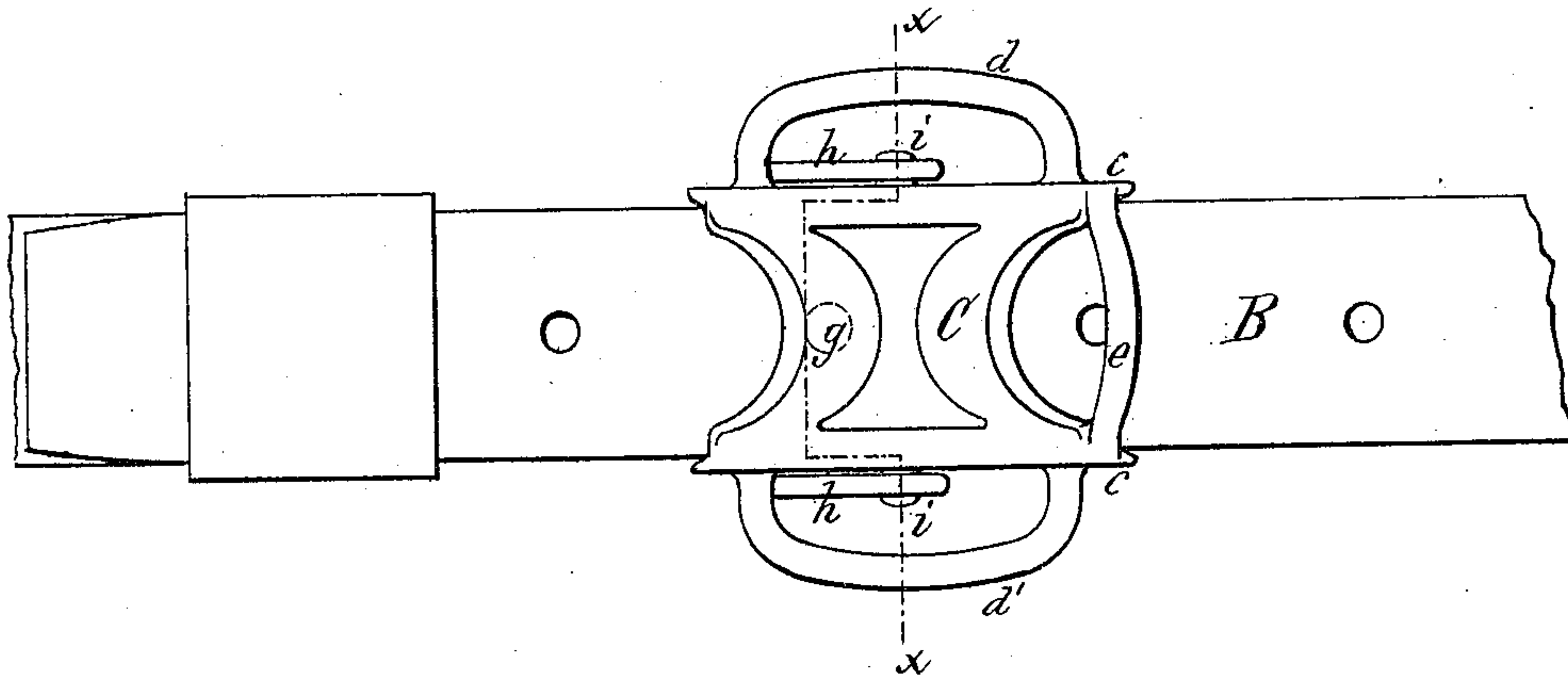


Fig. 2.

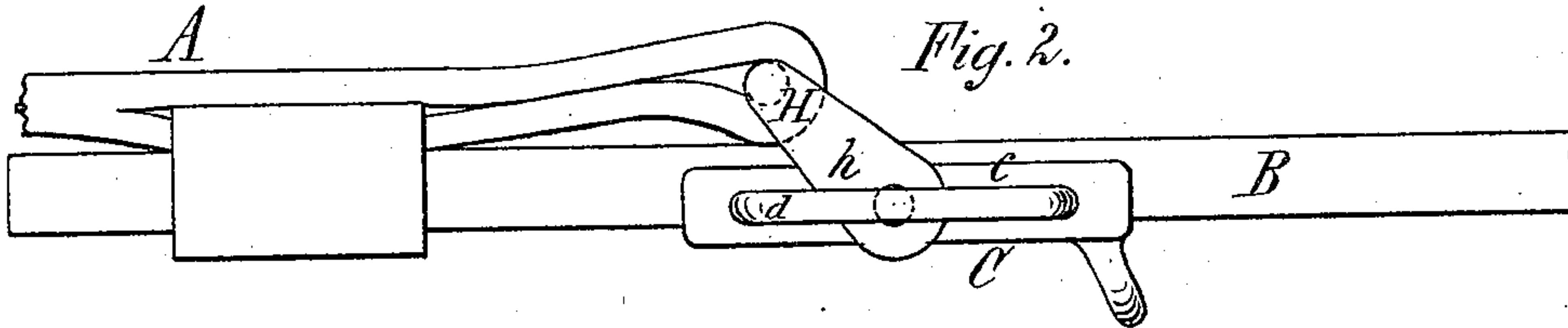


Fig. 3.

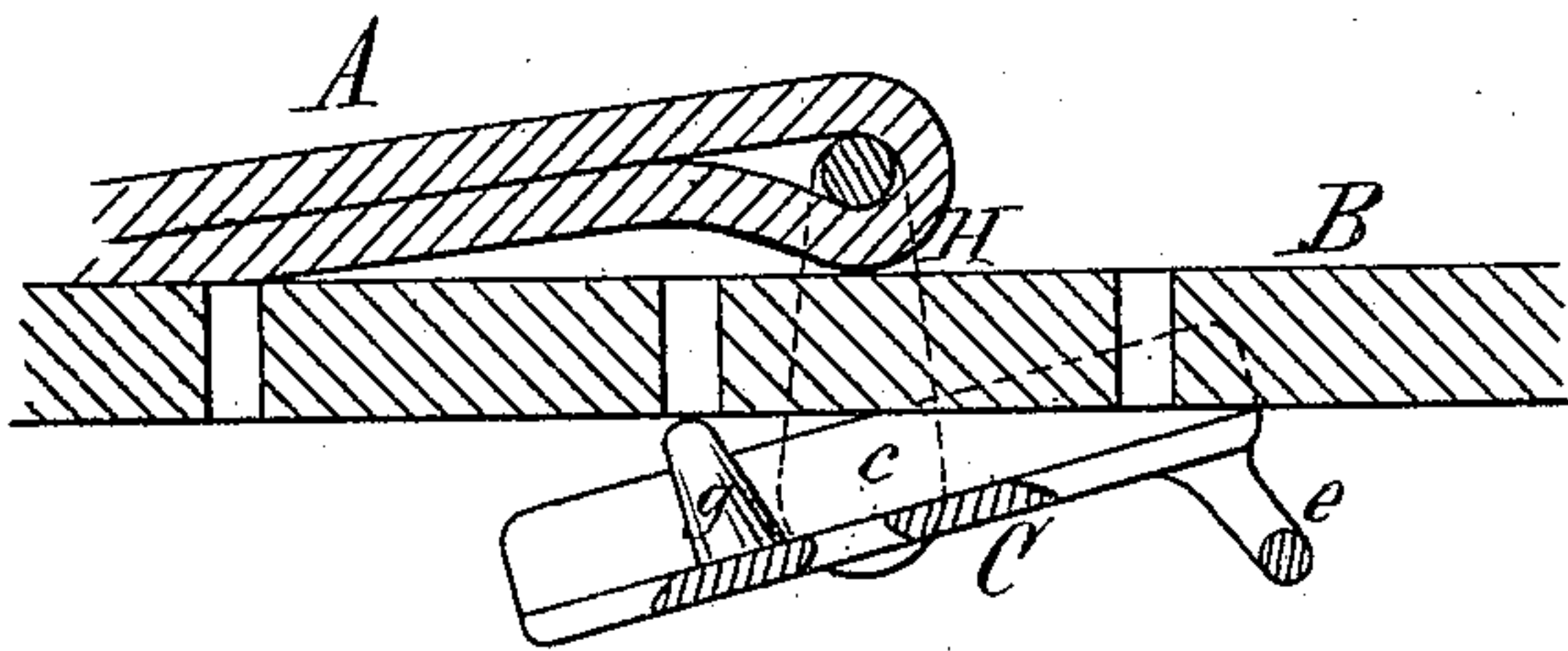


Fig. 4.

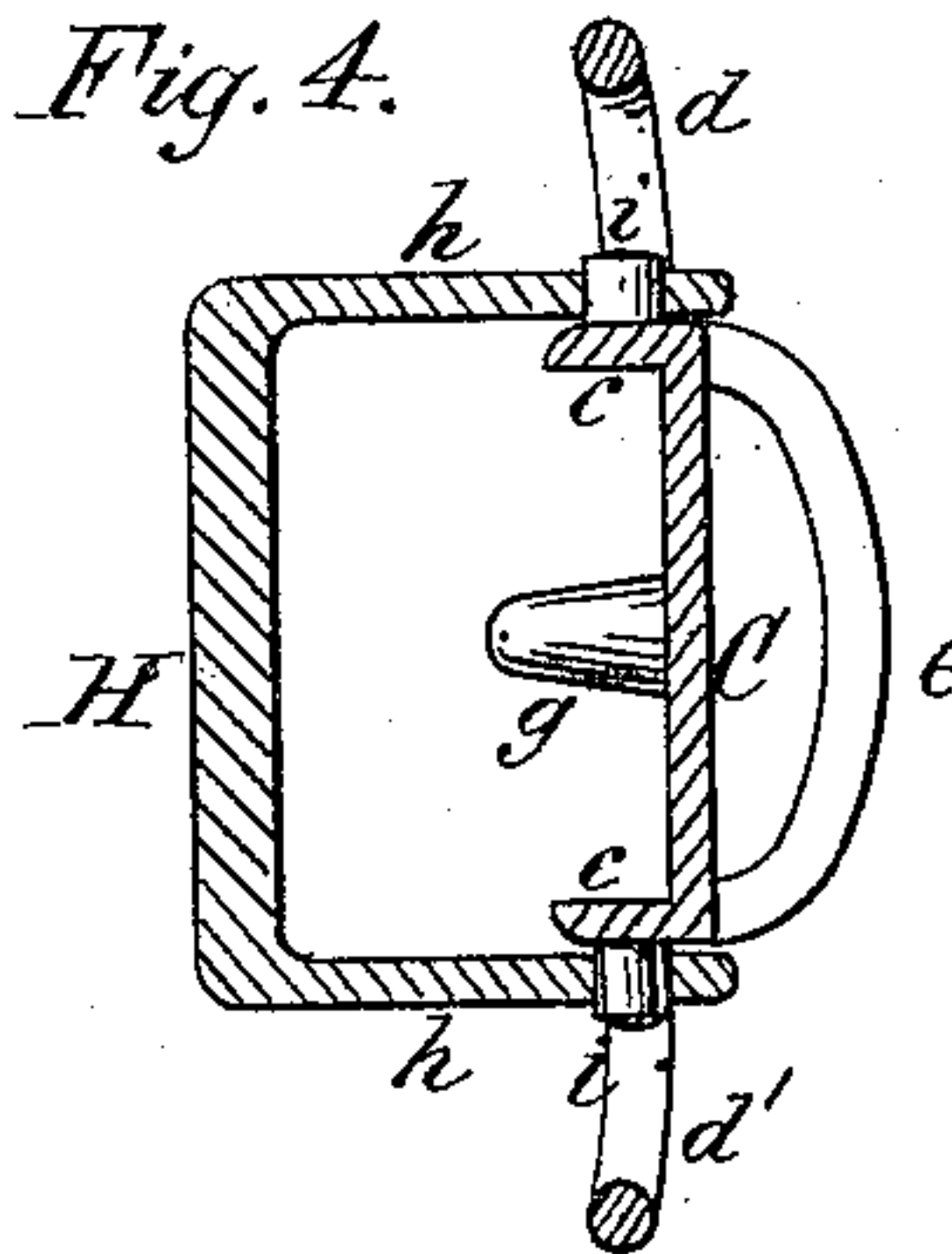
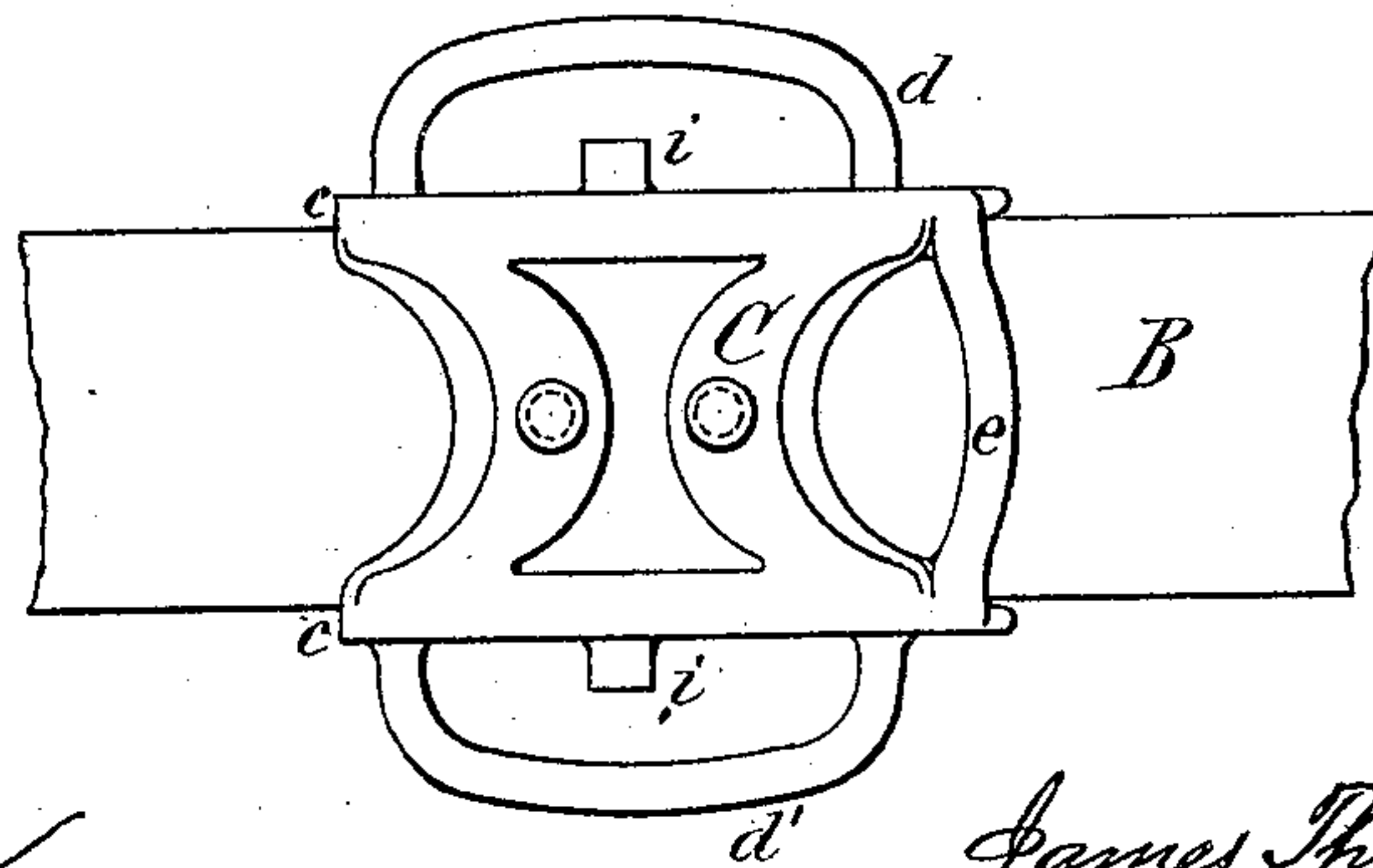


Fig. 5.



Edward Wilhelm
Charles J. Buchheit
Witnesses

James Thornton Inventor
By Jay Hyatt
att'y

UNITED STATES PATENT OFFICE.

JAMES THORNTON, OF WELLSVILLE, ASSIGNOR OF ONE-FOURTH HIS RIGHT
TO PRATT & LETCHWORTH, OF BUFFALO, NEW YORK.

IMPROVEMENT IN TRACE-BUCKLES.

Specification forming part of Letters Patent No. **174,593**, dated March 7, 1876; application filed
December 3, 1875.

To all whom it may concern:

Be it known that I, JAMES THORNTON, of Wellsville, in the county of Allegany and State of New York, have invented certain Improvements in Trace-Buckles, which improvements are fully set forth in the following specification, reference being had to the accompanying drawing.

My invention relates to a trace-buckle in which the frame or body of the buckle has a fixed tongue engaging with the trace, and is provided with two fixed pivots projecting from the sides of the buckle-frame, on which pivots swings a bail or loop, to which the hame-tug is attached, so that said bail or loop is permanently secured to the buckle-frame, the whole forming a buckle which can be more conveniently handled than buckles made in two detached parts, while at the same time permitting the ready disengagement of the buckle for adjusting the trace, and forming a most reliable connection when in engagement, as will be hereinafter more fully described.

In the accompanying drawing, Figure 1 is a side elevation of my improved trace-buckle. Fig. 2 is a plan view thereof. Fig. 3 is a sectional view, showing the buckle disengaged. Fig. 4 is a section in line *x x*, Fig. 1. Fig. 5 shows the main portion of the buckle applied to a heel-chain trace.

Like letters of reference refer to like parts in each of the figures.

A represents the hame-tug, and B the trace. C represents the frame or body of the buckle, consisting of a plate fitting against the side of the trace, and provided with two flanges, *c c*, overlapping the edges of the trace, so as to properly guide the same. *d* and *d'* are the two loops, formed with the frame C, for the attachment of the back-pad and belly-band billet, respectively; and *e*, the projecting loop, to which the side strap is connected. *g* represents the tongue formed on the inner side of the frame C, and engaging in suitable holes in the trace. H is the loop or bail, to which the hame-tug is secured. It is provided with two arms, *h h*, turning on two fixed pivots, *i i*, formed with the frame or

body C of the buckle, so as to project from the sides thereof, as clearly shown in Figs. 1 and 4. The bail H is constructed of malleable metal, and bent over its pivots in an obvious manner.

The tongue *g* of the buckle being engaged in one of the holes of the trace, and a strain or pull being applied to the same, the frame C is drawn backward, thereby swinging the bail H on its pivots into a more inclined position, so as to press it and the hame-tug against the trace, and holding the latter in close contact with the frame C and tongue *g*, as shown in Figs. 1 and 2, the pressure with which the parts are held together being proportionate to the strain on the trace.

Upon pushing the frame C forward, so as to bring the arms *h* of the bail H into a vertical position, or nearly so, with reference to the frame C, the latter can be swung outwardly on the pivots *i*, so as to disengage the tongue *g* from the trace, as shown in Fig. 3, when the trace is free to be adjusted forward or backward, as may be desired. The side flanges *c c* of the frame C serve to guide the trace as it is adjusted.

My improved trace-buckle forms a very reliable fastening, as an increased strain on the trace will only tend to lock the parts more securely together, while at the same time it does not destroy the traces by excessive compression, as trace-buckles do in which a detached sliding or wedging part is employed. Furthermore, in my improved trace-buckle the bail or loop H is permanently secured to the frame of the buckle, forming therewith a single article, which can be more cheaply produced, and is more conveniently handled, both in packing and selling, and when applied to harness, than a buckle composed of two or more detached parts.

The frame C of my improved trace-buckle, without the bail H, may be used instead of the so-called D-connection for heel-chain harness, when the frame is secured to the trace by rivets or screw-bolts, as shown in Fig. 5, thereby forming a connection for the different straps, which can be readily adjusted on the trace, as may be required for horses of

different sizes, and it is in this respect superior to the **D**-connection now in common use, which is permanently secured to the trace.

I claim as my invention—

The combination, with the buckle-frame **C**, provided with tongue *g* and fixed pivots *i i*, cast or otherwise formed on the sides thereof, of the swinging bail or loop **H**, hav-

ing arms *h h* turning on said pivots, and being permanently attached to the buckle-frame substantially as and for the purpose herein, before set forth.

JAMES THORNTON.

Witnesses:

LEWIS JONES,
WHEELER HAKE.