

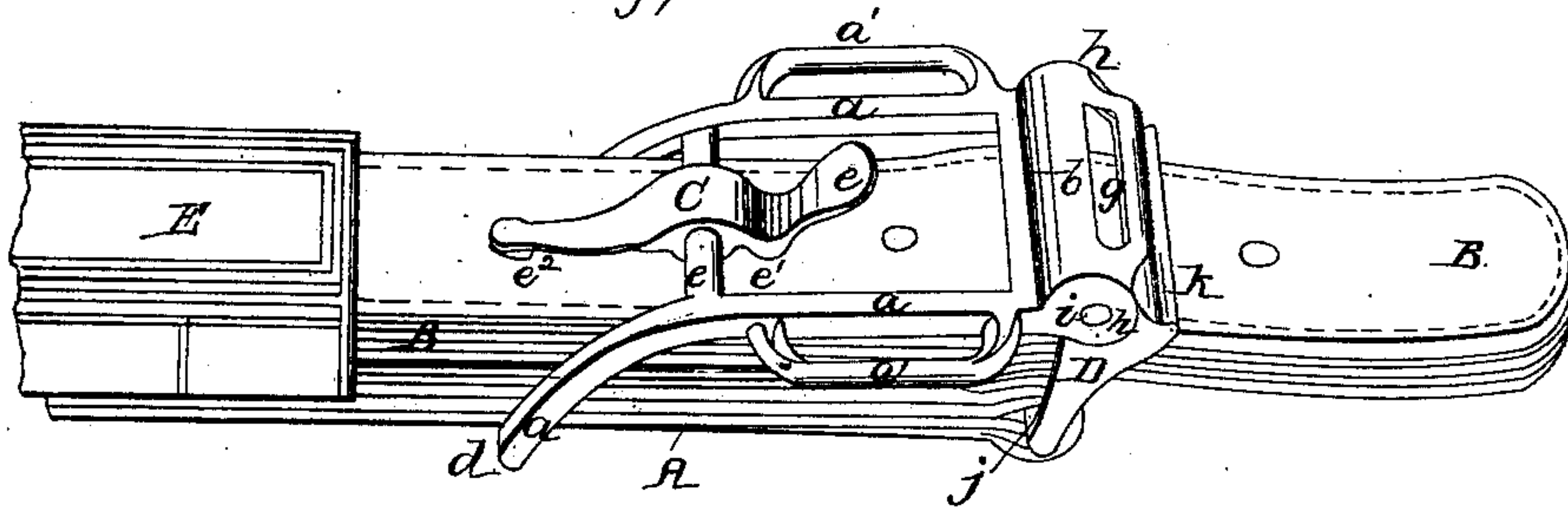
W.B. Hayden,

Trace Buckle,

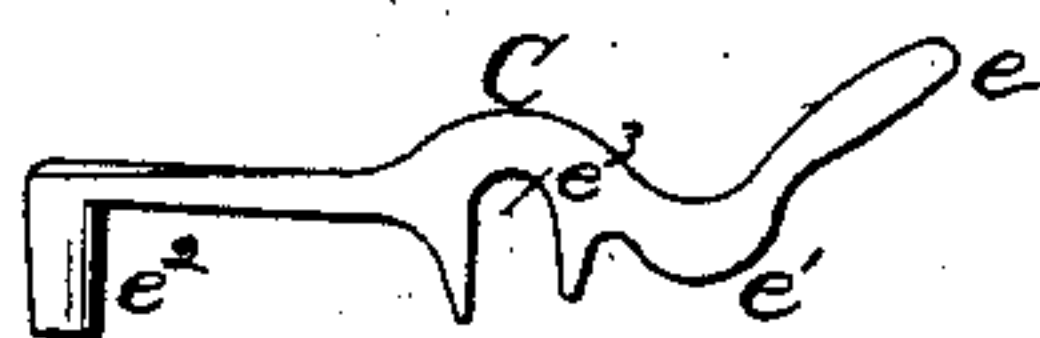
No 69,562,

Patented Oct. 8, 1867.

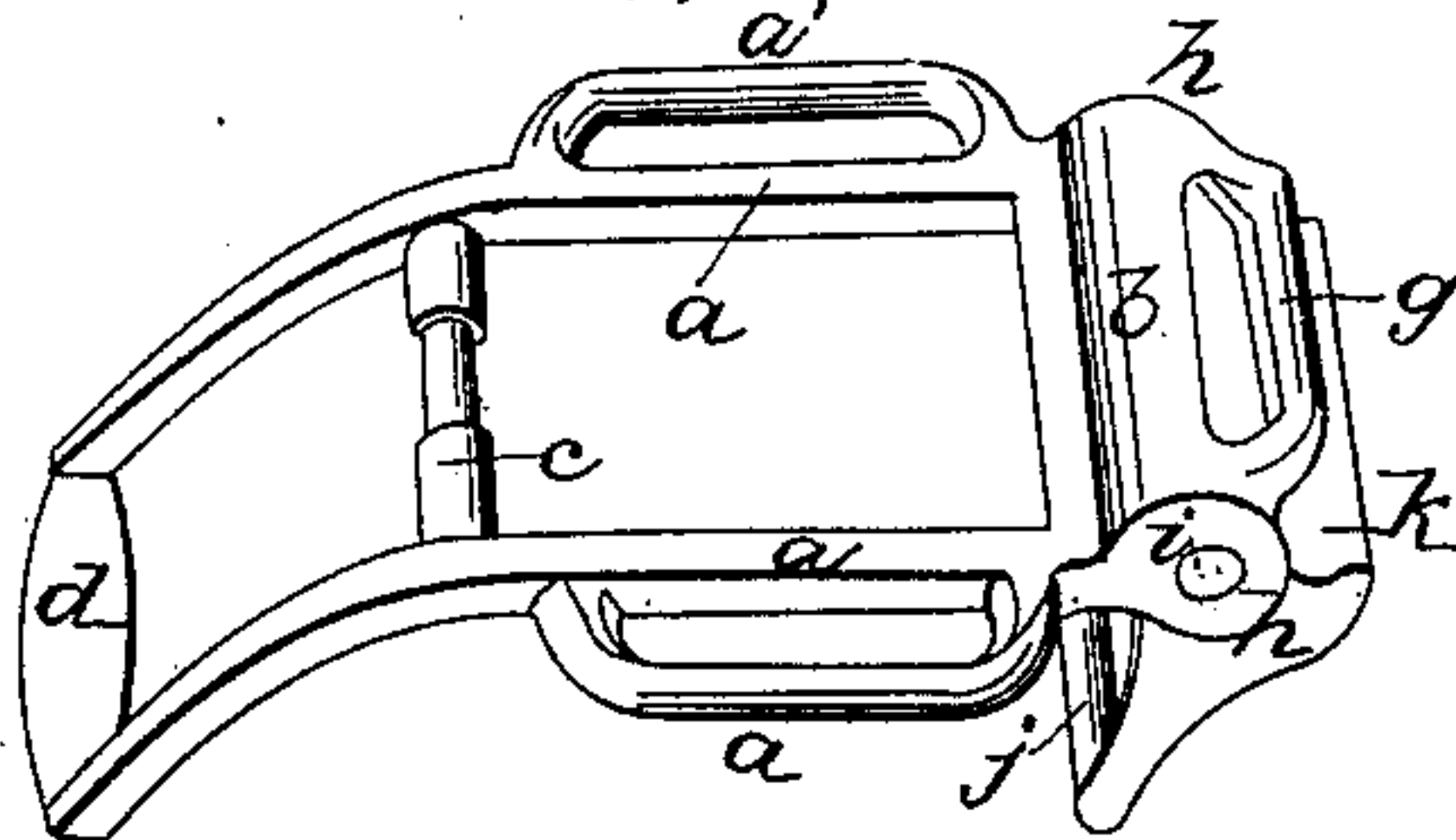
Fig; 1.



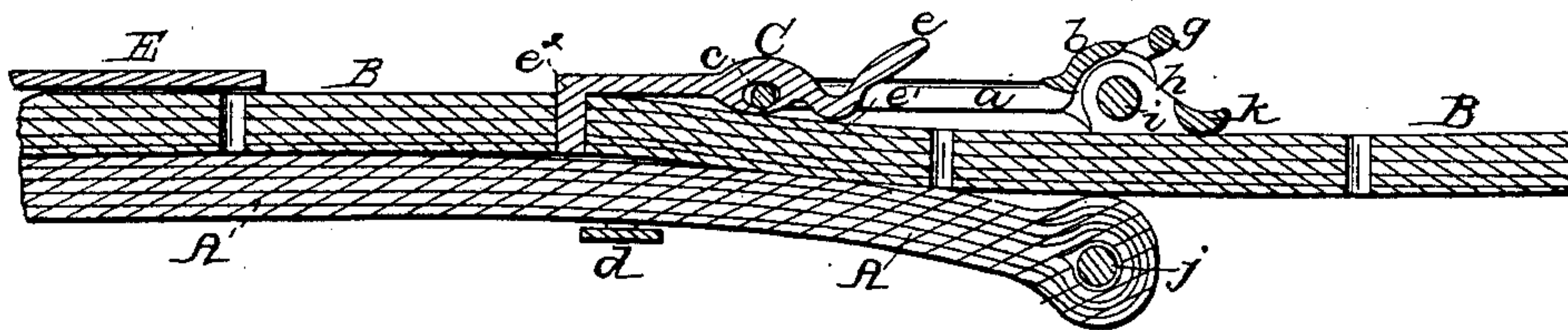
Fig; 3.



Fig; 4.



Fig; 5.



Witnesses;

R. J. Campbell
Edw. Schaefer

Inventor;

William B. Hayden
by his agents
Horn. Fenwick Lamme

WILLIAM B. HAYDEN, OF COLUMBUS, OHIO.

Letters Patent No. 69,562, dated October 8, 1867.

IMPROVED TRACE-BUCKLE.

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

TO WHOM IT MAY CONCERN:

Be it known that I, WILLIAM B. HAYDEN, of Columbus, in the county of Franklin, and State of Ohio, have invented an Improved Trace-Buckle; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view, showing the improved buckle applied to a trace and hame-tug.

Figure 2 is a view of the buckle detached from the trace and tug.

Figure 3 shows the tongue detached from the buckle.

Figure 4 is a sectional view of the buckle, showing it in the act of clamping and holding the trace sections.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and useful improvement on the construction of buckles which are designed especially for use in harness for attaching the traces to the tug-straps.

The nature of my invention consists in an open-skeleton buckle, which is provided with a self-adjusting tongue, and which is so constructed that in the act of pulling upon the traces and tug both will be clamped firmly in such manner as to relieve the tongue from considerable strain, and to prevent liability of tearing the trace at the holes or eyes, which are made for receiving said tongue; said buckle being also so constructed that a trace can be shortened or lengthened, to suit the requirements of the case, without removing its end from the box-loop, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

The open-skeleton frame of the buckle consists of parallel side bars, *a a*, which are constructed with elongated eyes, *a' a'*, and connected together by means of transverse bars *b*, *c*, and *d*. Those portions of the bars *a a* beyond the intermediate cross-bar *c* are curved, so that the hame-tug A and trace B both pass between the bars *c* and *d*, as shown in figs. 1 and 4. The transverse bar *c* is somewhat reduced in diameter at the middle of its length for having pivoted to it the lever-tongue C, and keeping this tongue in place against lateral strain. The tongue C consists of a thumb-piece, *e*, a curved shoulder, *e'*, and a stud, *e''*. It is constructed, as represented in fig. 3, with an open eye, *e''*, the projections of which are closed around the pivot-bar *c*, thus attaching this tongue to this bar, as represented in fig. 4. Nearly opposite the stud *e''* is the bar *d*, which is flattened, as shown, so as to serve, in conjunction with the tongue C, for clamping the trace and hame-tug between them during the act of pulling. The transverse bar *b* is constructed with an elongated eye, *g*, and also with ears *h h*, through which latter eyes are made for receiving the transverse pivot-pin *i* of a double-clamping or clamping lever, D. This lever is clearly shown in figs. 1, 2, and 4. It is constructed with a transverse bar, *j*, to which the hame-tug is fastened, and also with a rounded transverse bar, *k*, which presses upon one side of the trace B, and serves, in conjunction with the bar *j*, as a means of gripping and holding this trace firmly between them during the act of pulling upon the straps, as indicated in the sectional view, fig. 4. This result is brought about by having the bar *j*, to which the hame-tug is attached, formed on the longest arms of the lever or jointed section D, thus causing this portion to move forward and draw the bar *k* forcibly against the strap. The lever-tongue C is curved in such manner that when its stud *e''* is withdrawn from one of its holes through the trace B, the shoulder *e'* will press the straps intermediate between bars *j* and *d* inward, so that when the straps A and B are drawn tight, as in the act of pulling, the stud *e''* will be forcibly held in place in one of its holes. This outward pressure of the straps upon the shoulder *e'* will operate somewhat like a spring upon the tongue C for rendering it self-adjusting and keeping its stud *e''* firmly in place.

By the action of the clamping lever D upon the trace B very little strain will be received upon the pin or stud *e''* and its tongue C. The trace is adjusted by pressing upon the finger-piece *e* of the tongue C until the stud *e''* is withdrawn from its hole in the trace, which latter is then adjusted without removing its end from the box-loop E on the hame-tug. When there is no pulling strain upon the trace and hame-tug there will be no clamping action of the lever D, and in proportion as the strain upon said straps is increased, so will this lever increase its clamping action.

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

1. The construction of the tongue C with the bulge *e'*, for the purpose described.
2. The combination of the bar *d* and the bulge *e'* of the tongue C, for the purpose described.
3. Construction of the lever D with the bar *k*, as and for the purpose described.
4. The buckle, constructed and operating in the manner herein described.

WM. B. HAYDEN.

Witnesses:

J. H. MARTIN,
JOSEPH MOSH.