

C. H. STEVENS,

Trace Buckle.

No. 105,509.

Patented July 19, 1870.

Fig. 1.

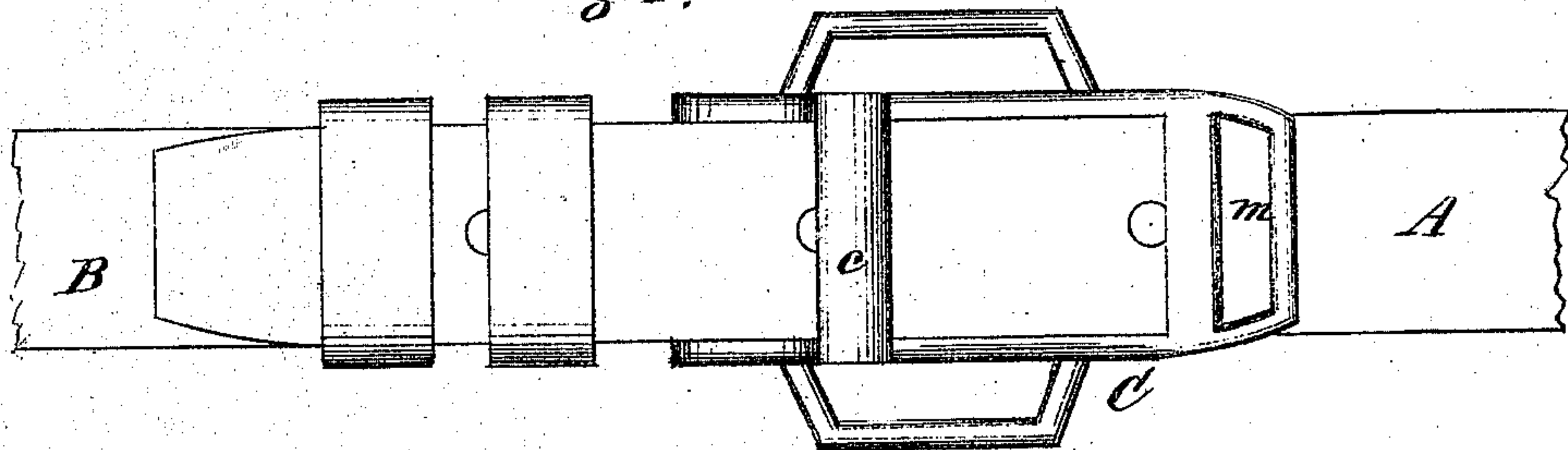


Fig. 2.

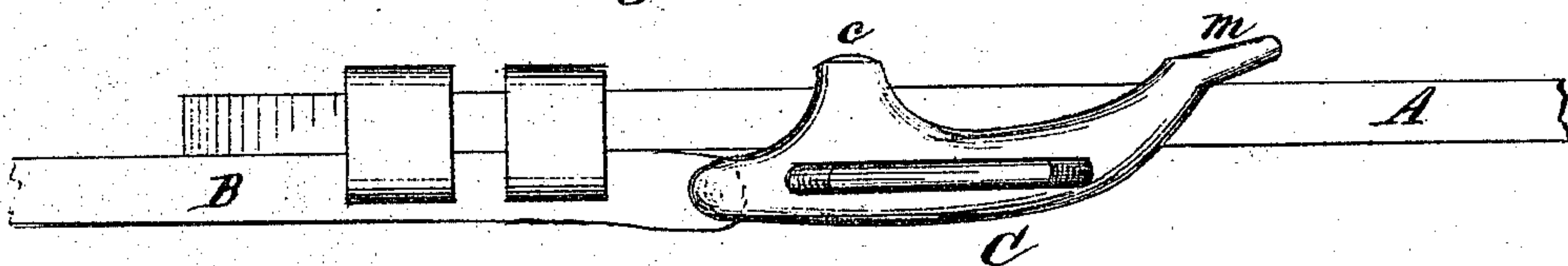


Fig. 3.

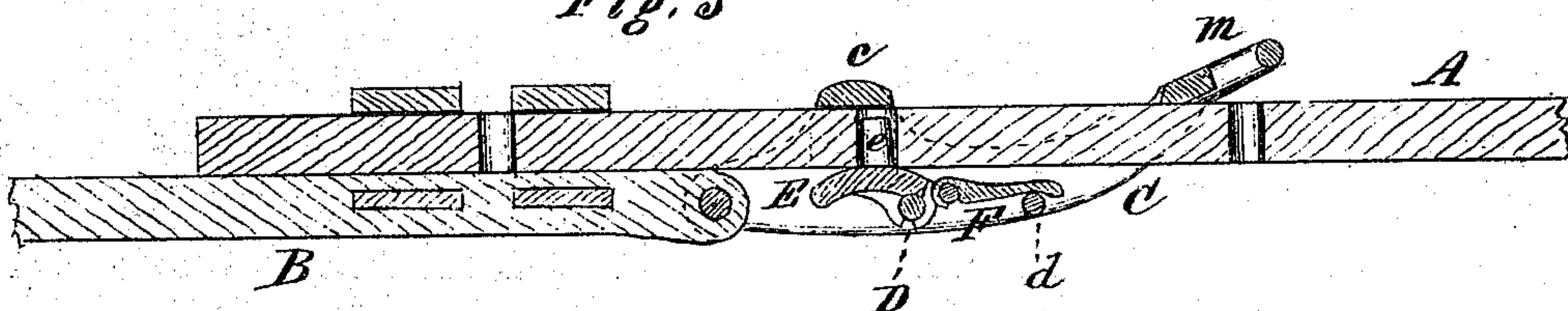


Fig. 4.

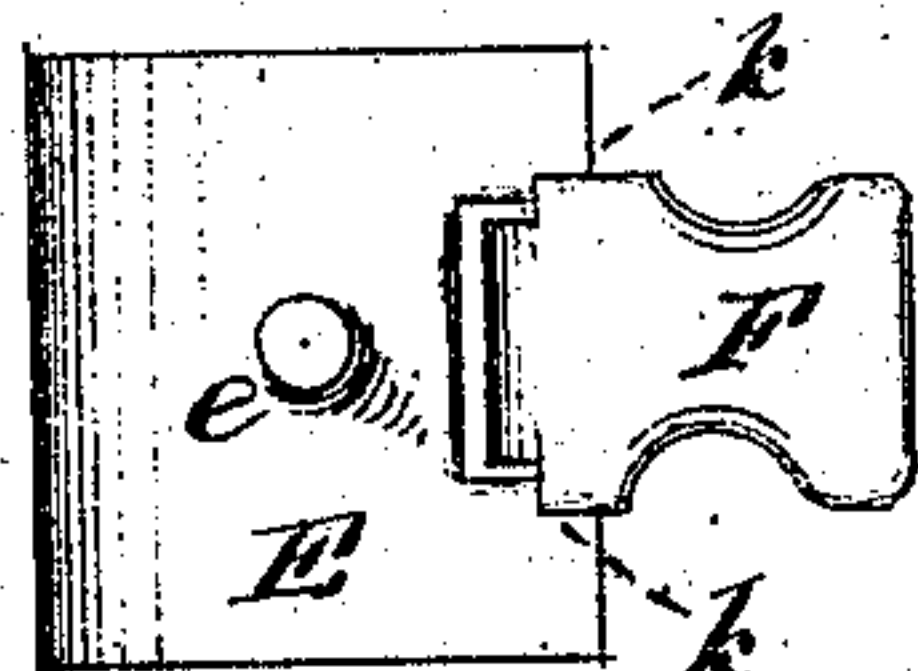
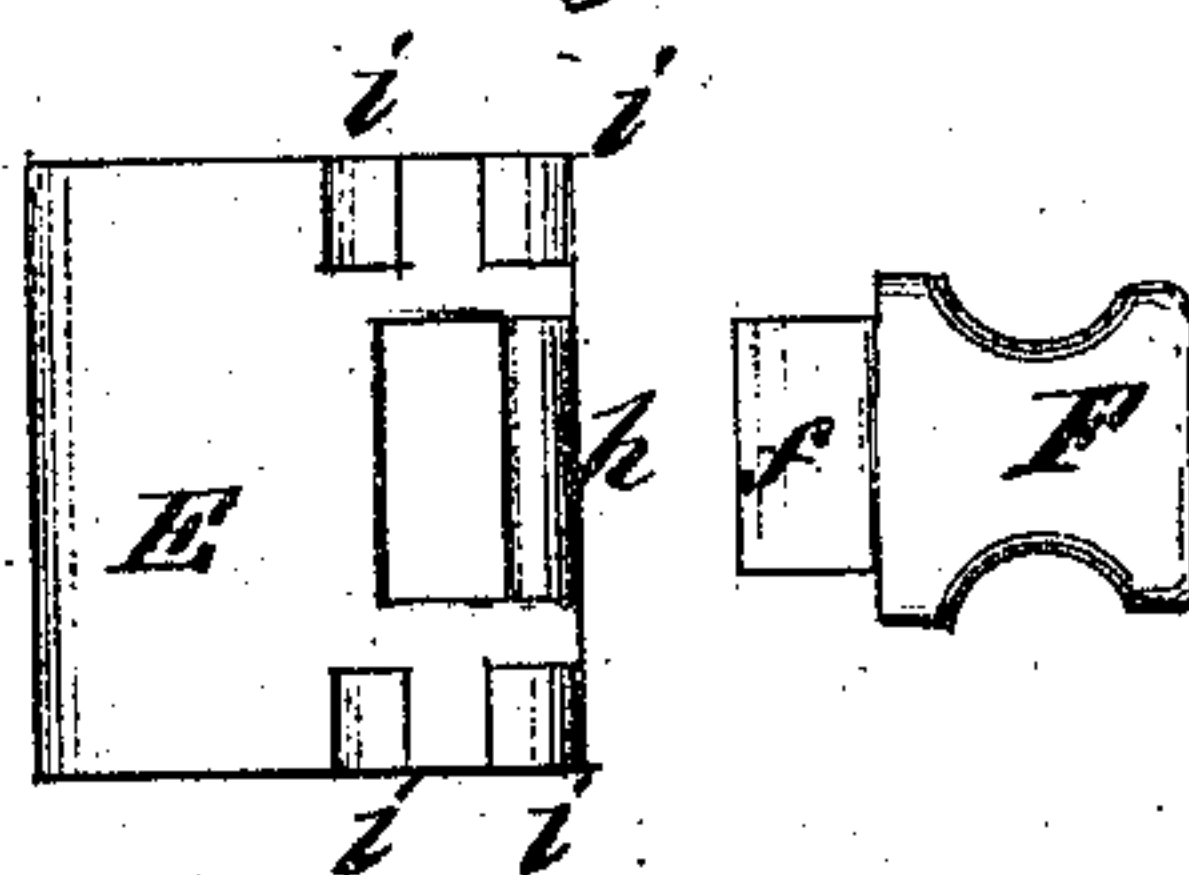


Fig. 5.



Witnesses.

C. E. Warner  
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# United States Patent Office.

CHARLES H. STEVENS, OF FAYETTEVILLE, NEW YORK.

Letters Patent No. 105,509, dated July 19, 1870.

## 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 I, CHARLES H. STEVENS, of Fayetteville, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Trace-Buckles; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a face view of my improved buckle.

Figure 2 is a side view; and

Figure 3 is a central longitudinal section.

Figures 4 and 5 are detail views.

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

In the accompanying drawing—

A is the tug.

B is the harness-tug; and

C is the buckle-frame.

The buckle-frame is made with the ordinary bridge or loop, *c*, and has, on its rear or inner side, two cross-bars, *D d*, fig. 3, which are connected with the operation of the tongue.

The tongue, *e*, is mounted on a cam-shaped plate, *E*, which is hung on the cross-bar *D*, in such manner as to swing freely thereon, and the said cam plate *E* has a swinging tail-piece, *F*, which is hinged to its rear end.

The object of this tail-piece is to prevent the tongue *e* *E* from swinging away from the tug when the tongue is withdrawn, and to cause the tongue to be self-acting in engaging with the holes in the tug, and one of the requirements of a good trace-buckle is thereby obtained.

By drawing the trace or tug *A* forward through the buckle the cam *E* revolves or swings, and the tongue *e* is thrown out of the tug, without any direct attention from the operator; but this withdrawal is resisted sufficiently by the swinging tail-piece, so that the tongue *e* readily engages with the first hole that it meets, when the strap is drawn backward.

When the tongue *e* is withdrawn the tail-piece *F* is pressed against the tug, midway between the bridge *c* and loop *m*, where the tug is unsupported on the outside, and this pressure bends the tug slightly outward, so that an elastic pressure is obtained for closing the buckle, or causing the tongue to engage automatically.

When a strain is brought upon the tug, the clamping action of the cam-plate binds the tug against the bridge *c*, and the tongue *e* is thus relieved of much strain, and all liability of the tug being overstrained or torn by the tongue *e* is obviated.

The parts are made and put together with but little labor, the cam-plate being cast with four projections or legs, *i i*, fig. 5, which are bent around the cross-bar *D* of the buckle-frame, by three or four blows with a hammer, and the tail-piece *F* is also hinged to the cam-plate in like manner, by bending its thin, flat projection *f*, fig. 5, around a bar, *h*, cast on the rear end of the cam-plate. The tail-piece *F* is allowed a certain degree of play, so that the tongue *e* can be withdrawn, and the said tail not project inward, and be in the way when the buckle is closed; but this play is limited in one direction by the cross-bar *d*, fig. 3, and in the other direction by the shoulders *k k*, fig. 4.

By these means I obtain a buckle with a self-acting tongue, and which also holds the tug in a secure manner, and without liability of injury, as ordinarily.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The swinging cam-plate *E e*, having a rear projection or tail-piece *F* hinged or jointed thereto, in connection with the buckle-frame *C c*, substantially as and for the purpose herein specified.

The above specification of my invention signed by me this 27th day of September, 1869.

CHARLES H. STEVENS

Witnesses:

C. E. WARNER,

F. A. MORLEY.