

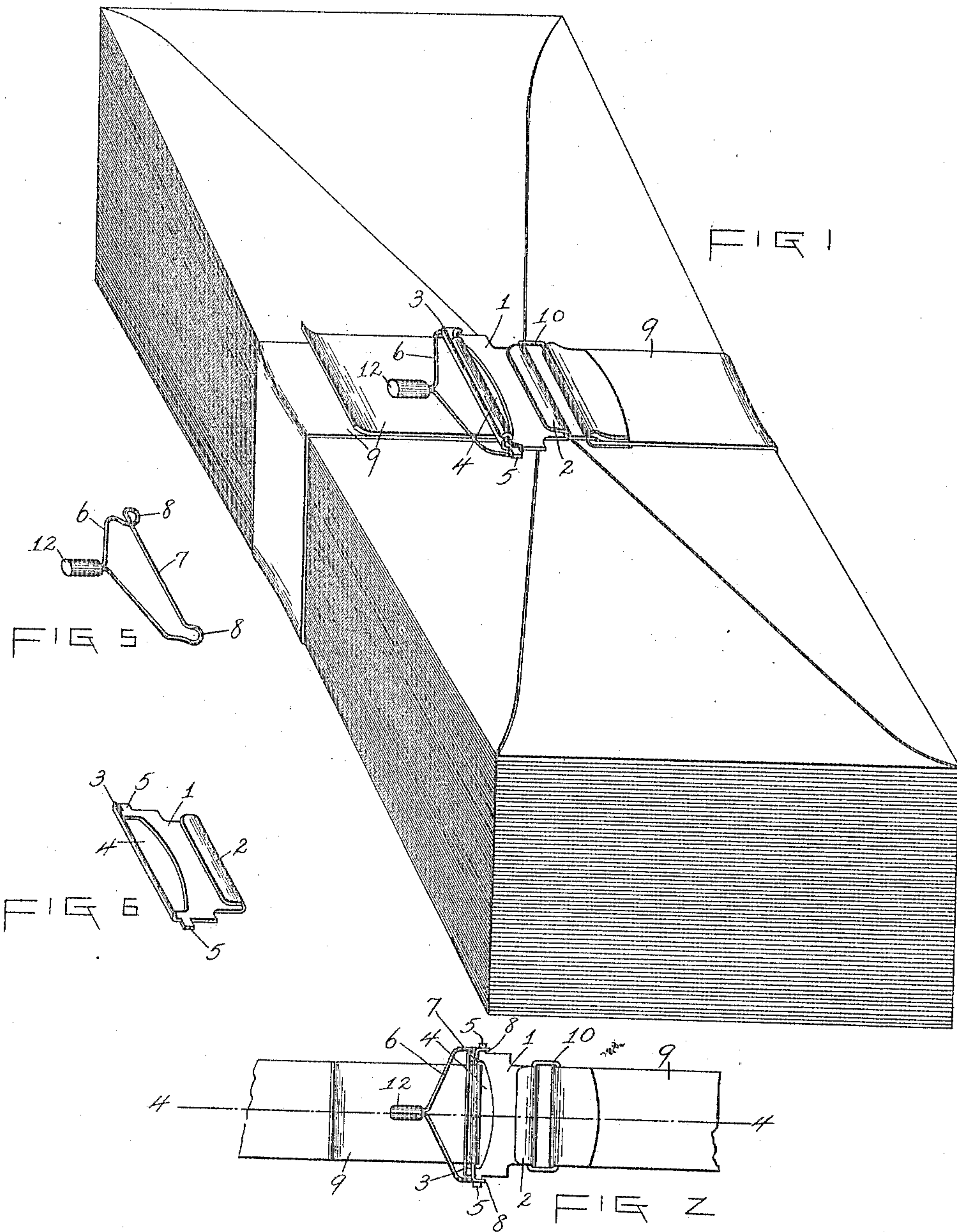
No. 817,184.

PATENTED APR. 10, 1906.

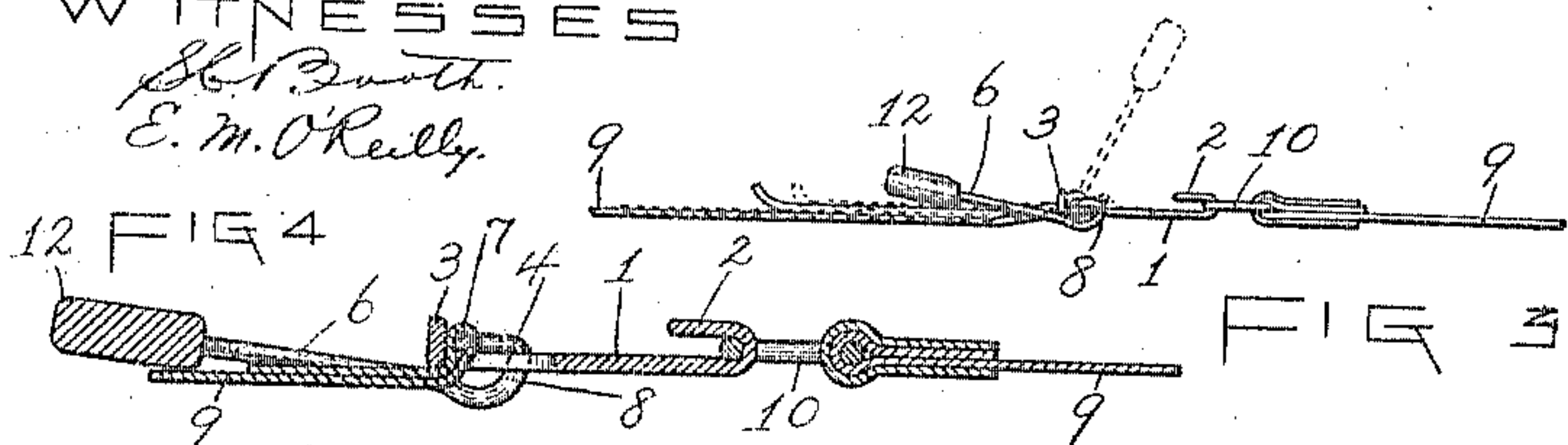
E. A. McMILLIN.

BUCKLE.

APPLICATION FILED MAY 3, 1905.



WITNESSES  
J. B. Smith.  
E. M. O'Reilly.



INVENTOR  
Edward A. McMillin,  
By Mosher & Curtis,  
Attys.



# UNITED STATES PATENT OFFICE.

EDWARD A. McMILLIN, OF NORTH ADAMS, MASSACHUSETTS.

## BUCKLE.

No. 817,184.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed May 3, 1905. Serial No. 258,620.

*To all whom it may concern:*

Be it known that I, EDWARD A. McMILLIN, a citizen of the United States, residing at North Adams, county of Berkshire, and State of Massachusetts, have invented certain new and useful Improvements in Buckles, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a view in perspective of a bunch of envelopes bound together by a strap provided with my improved buckle. Fig. 2 is a top plan view of the buckle and connected ends of the strap. Fig. 3 is a side view of the same. Fig. 4 is a cross-section of the same, taken on the broken line 4 4 in Fig. 2, on an enlarged scale. Fig. 5 is a view in perspective of the wire-clamping frame detached. Fig. 6 is a view in perspective of the base-plate detached.

This invention relates to that class of buckles wherein the strap is adjustable and secured in adjusted position by clamping the same between two relatively movable parts forced together by the tension of the strap itself as distinguished from buckles employing teeth, tongues, or similar devices to engage and penetrate the strap.

The principal object of the invention is to facilitate the construction and assembling of the parts of the buckle. Other objects of the invention will appear in connection with the following description.

Referring to the drawings, wherein the invention is shown in its preferred form, 1 represents the base-plate, which is made of sheet metal stamped out and struck up to the desired form. One of the side edges of this plate is outwardly retroverted to form a hook 2, and the opposite edge is bent outwardly to form a flange 3, approximately perpendicular to the plane of the plate, which flange serves as a resistance-bar. The body of the plate adjacent to said flange 3 is cut away at 4 to form a strap-aperture. The opposite ends of the plate are provided with outwardly-projecting lugs or journals 5.

The clamping-frame 6 is formed of wire

bent up to the desired form and consists, essentially, of a clamping-bar 7, approximately the length of the base-plate between said lugs or journals 5, and a pair of bearing-loops 8, formed at the opposite ends of the clamping-bar, adapted to loosely embrace and turn upon said lugs or journals 5 on the base-plate. One end of the strap 9 is provided with an eye 10, adapted to engage the hook 2 on the base-plate of the buckle. The other end of the strap is passed beneath the flanged edge 3 of the base-plate upwardly through the strap-aperture 4, around the clamping-bar 7 and back again through the strap-aperture 4 beneath the flange 3. By lifting handle 12 in Fig. 3 or Fig. 4 and pulling upon the end of the strap thus returned outside of the buckle the slack in the strap can be easily taken up to produce any desired degree of tension, and when the pull upon said end of the strap is relieved the tension of the strap will draw the clamping-bar toward the flanged edge of the base-plate to securely clamp the returned end of the strap between said bar and flange, and the greater the tension upon the strap the greater the clamping force exerted to prevent the strap from slipping through the buckle. As the clamping-bar is thus drawn into close proximity to the lower edge of the flange 3, which is a die-cut edge of sheet metal, around which edge it is necessary for the strap to slip in order to relieve the tension thereupon, it will readily be seen that such slipping of the strap is practically prevented by the frictional resistance due to the abrupt change of direction which the strap must necessarily take in passing said flange.

The clamping-frame may be provided with an operating-handle 12, whereby the frame may be rocked upon the journals 5 to swing the clamping-bar backwardly away from the flange 3 along a plane or planes approximately parallel with the base-plate, thereby relieving the clamping force upon the strap and permitting the strap to slip freely through the buckle.

By having the journals located on opposite sides of the strap-aperture and in close proximity to the ends of the resistance-bar the revoluble movement of the clamping-bar about the journals when the clamping-frame is operated causes the clamping-bar to move in approximately the same plane with the base-plate, so that it is drawn horizontally away from the resistance-bar, which instantly relieves the binding friction of the



tape or strap upon the bars, whereas if the journals were located a considerable distance from the resistance-bar the clamping-bar would be almost equidistant from the journals, and when the clamping-frame was operated to release the band the first movements of the clamping-bar would be almost at right angles to the plane of the base-plate, or nearly in a vertical direction.

The band would be forced by such movement to slide across the resistance-bar with comparatively great friction, thus not only making it difficult to release the band, but making it necessary to have a considerable movement of the clamping-frame to effect such release, whereas with the construction shown and described only a slight movement is necessary to fully release the band, which movement being away from the resistance-bar in a nearly horizontal direction is easily accomplished by very little frictional resistance of the band upon the resistance-bar.

The releasing movement of the clamping-frame is indicated by dotted lines in Fig. 3.

My improved construction enables me to construct a buckle essentially of two machine-made parts which are easily and quickly assembled without any structural changes whatever and when so assembled are capable of most efficient operation.

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

1. In a buckle, the combination with a base-plate having on one end a hook and on the opposite end a resistance-bar, and on its sides oppositely-disposed journals respectively adjacent to the ends of the resistance-bar and provided with a strap-aperture located intermediately of the journals and adjacent to the resistance-bar between such bar and the hook; of a clamping-frame formed of an integral piece of wire comprising a clamping-bar and a pair of loops at opposite ends of said bar adapted to loosely embrace and turn upon said journals on the base-plate, substantially as described.

2. The combination with a buckle base-plate having oppositely-disposed journals, a

strap-aperture located intermediately of the journals and a resistance-bar extending along one side of the plate from one journal to the other, adjacent to said strap-aperture, and a clamping-frame formed of an integral piece of wire comprising a clamping-bar, and a pair of loops at opposite ends of said clamping-bar adapted to loosely embrace and turn upon said trunnions; of a strap having one of its ends inserted beneath said resistance-bar through the strap-aperture in the base-plate around said clamping-bar and back through said aperture beneath said resistance-bar; and means for connecting the other end of said strap with said base-plate.

3. In a buckle, the combination with a base-plate formed of a single piece of sheet metal having on one end a hook and on the opposite end a resistance-bar and on its sides oppositely-disposed journals and provided with a strap-aperture located intermediately of and in line with the journals and between the resistance-bar and hook; of a clamping-frame comprising a clamping-bar and at opposite ends thereof a pair of loops adapted to loosely receive and turn upon said journals, substantially as described.

4. The combination with a buckle comprising a sheet-metal base-plate, 1, having the upturned edge flange, 3, journals, 5, 5, adjacent to such flange and hook, 2, and provided with a strap-aperture, 4, located intermediately of the journals, and the clamping-frame comprising the cross-bar, 7, loops, 8 8, loosely embracing the respective journals on the base-plate and an operating-handle 12; of a strap having one end provided with an eye adapted to engage said hook on the base-plate and having its other end passed beneath the base-plate and flange, 3, up through the strap-aperture around the clamping-bar, 7, and back through said aperture beneath said flange.

In testimony whereof I have hereunto set my hand this 2d day of February, 1905.

EDWARD A. McMILLIN.

Witnesses:

FRANK C. CURTIS,  
E. M. O'REILLY.