

(No Model.)

W. C. BRAY.  
RIVET SETTING MACHINE.

No. 382,350.

Patented May 8, 1888.

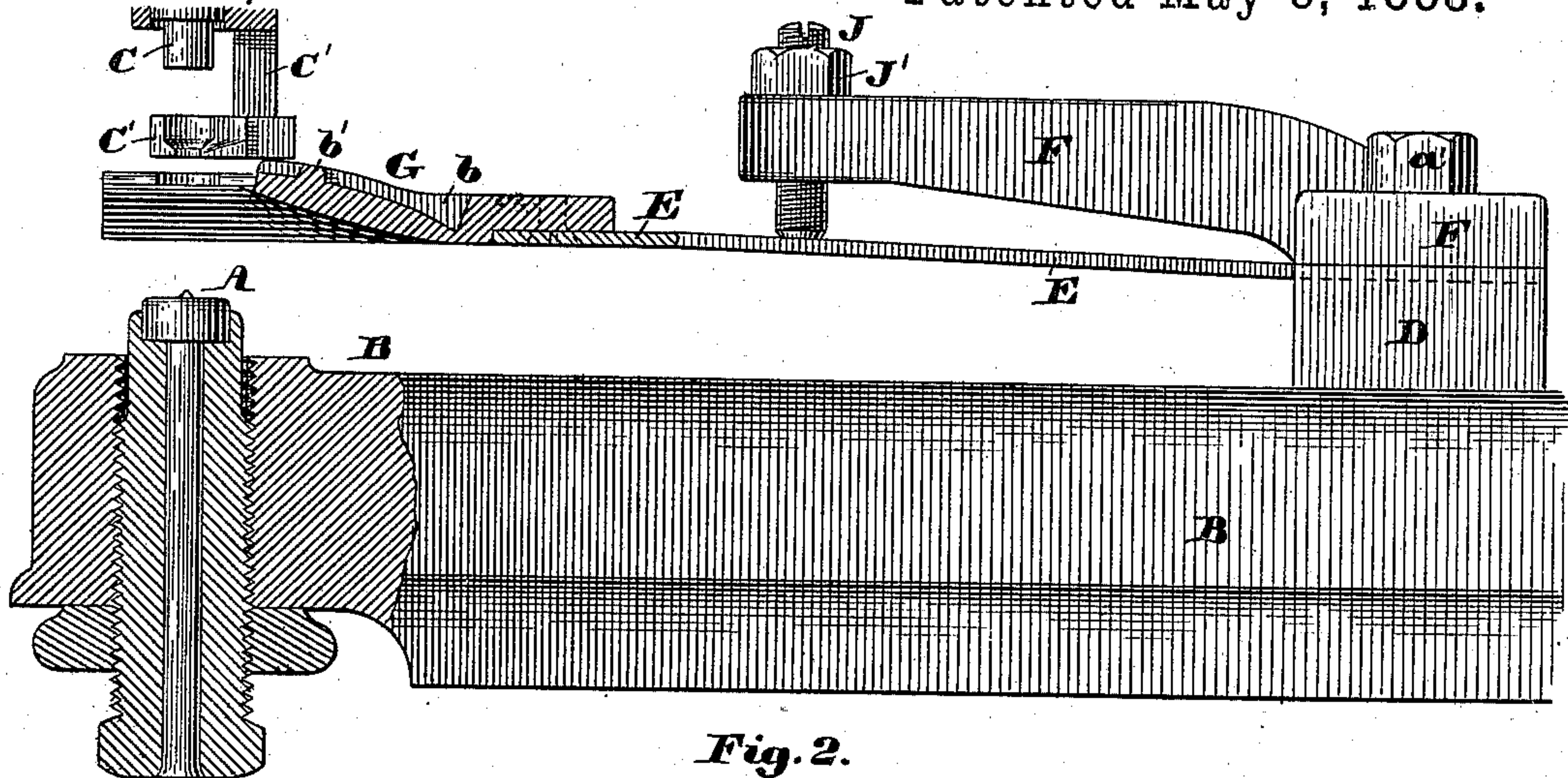


Fig. 2.

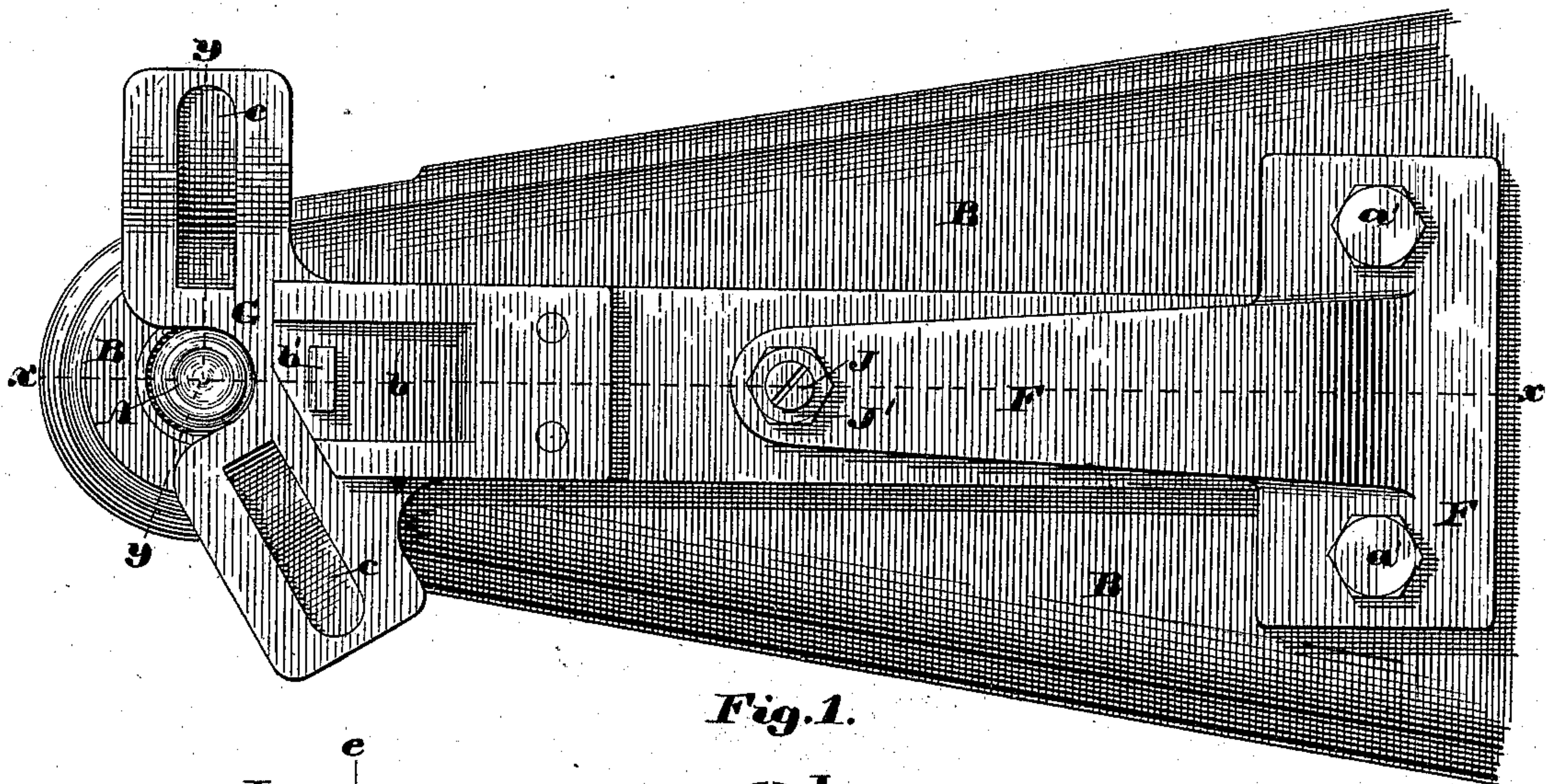


Fig. 1.

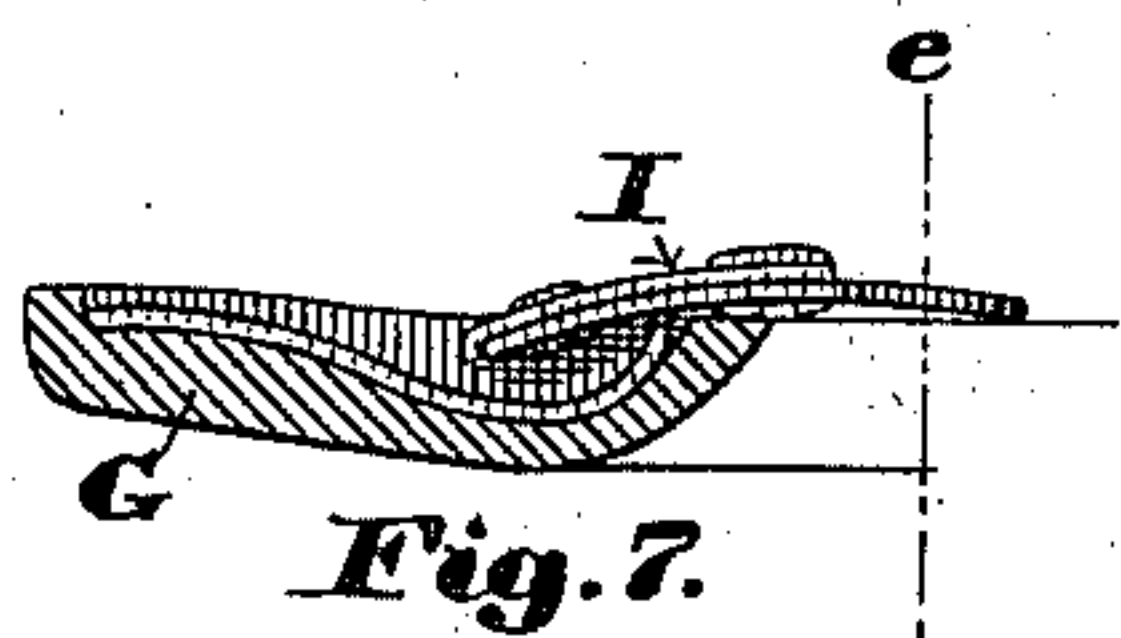


Fig. 7.

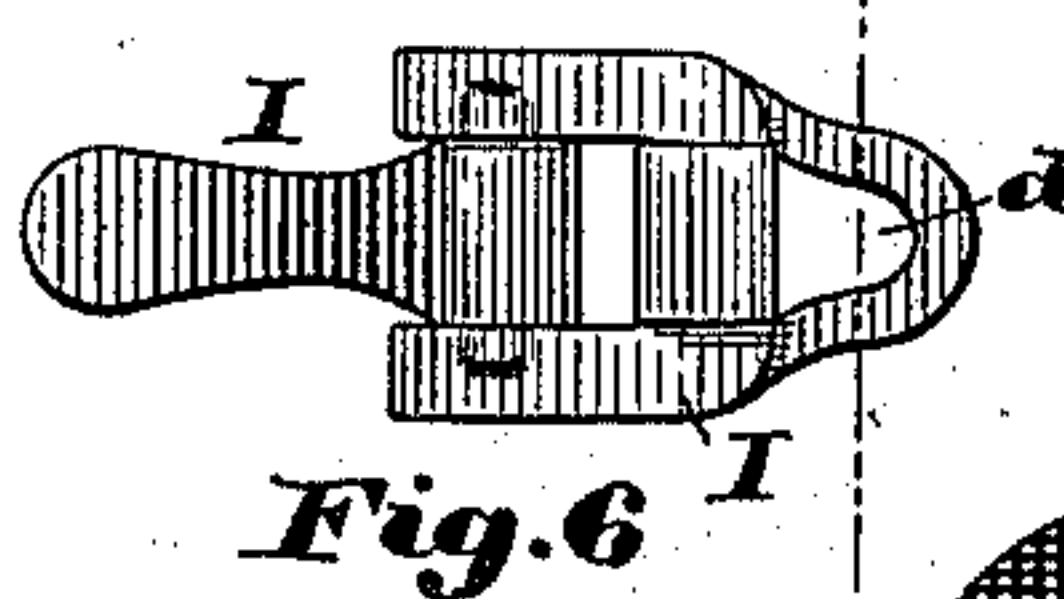


Fig. 6.

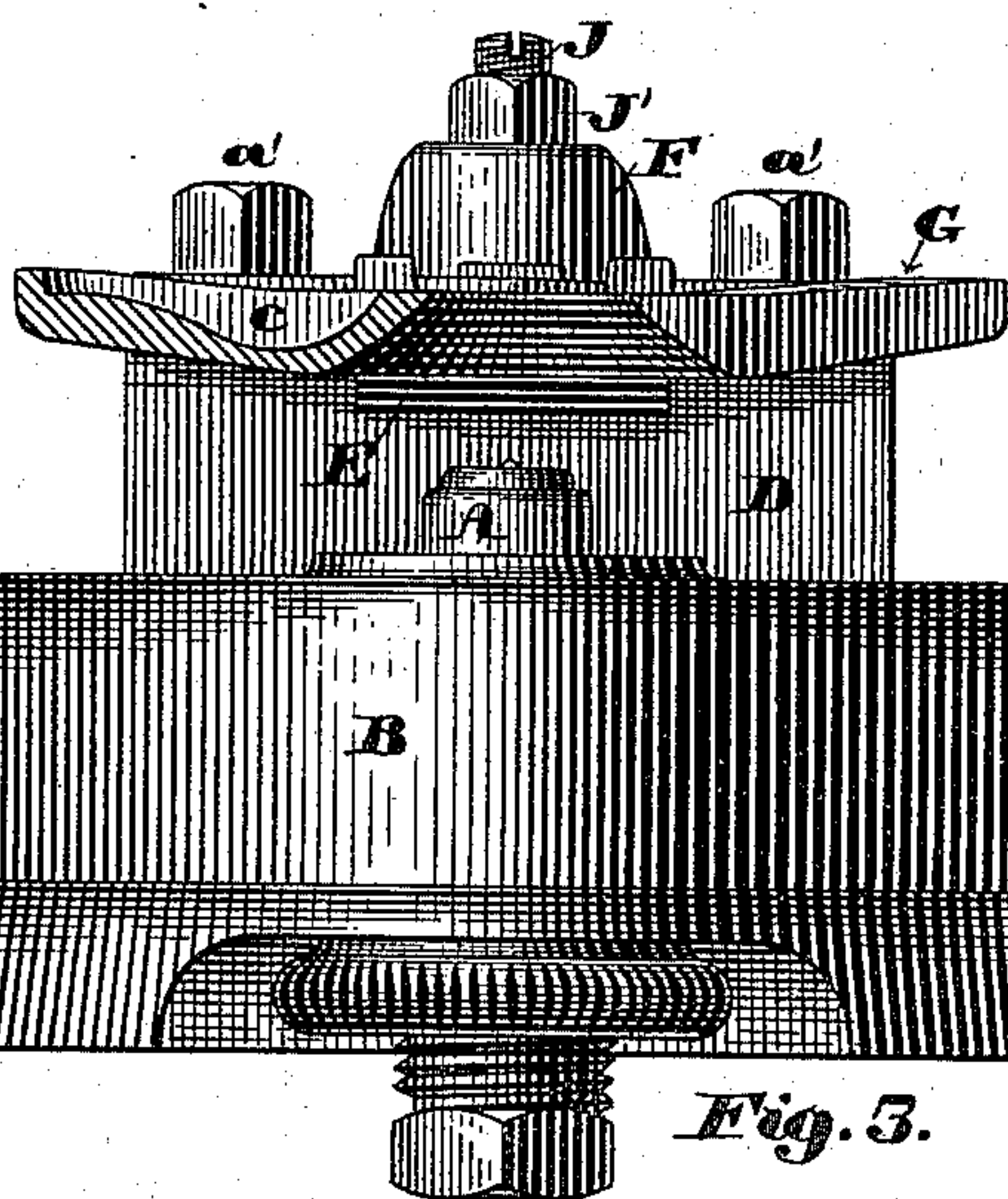


Fig. 3.

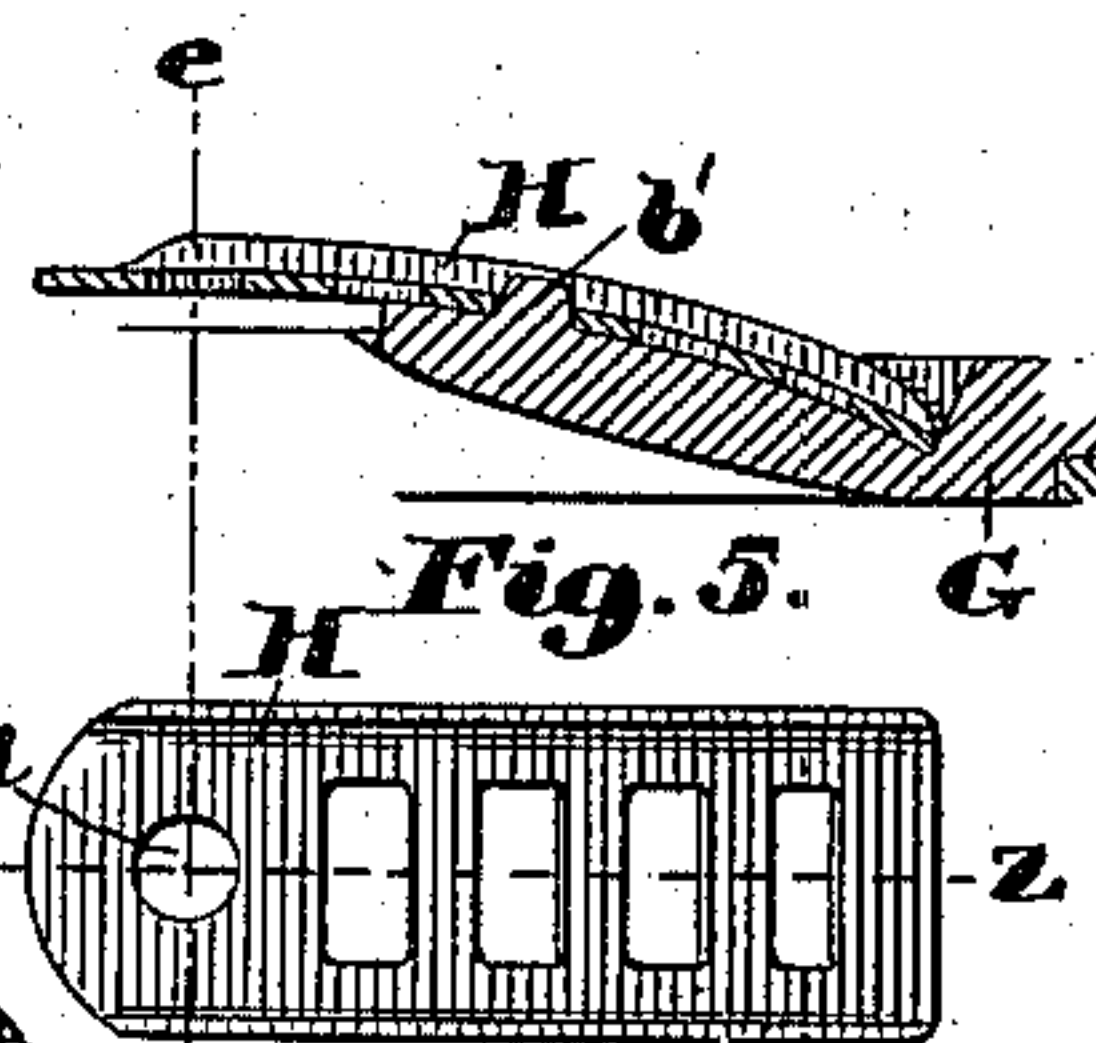


Fig. 5.

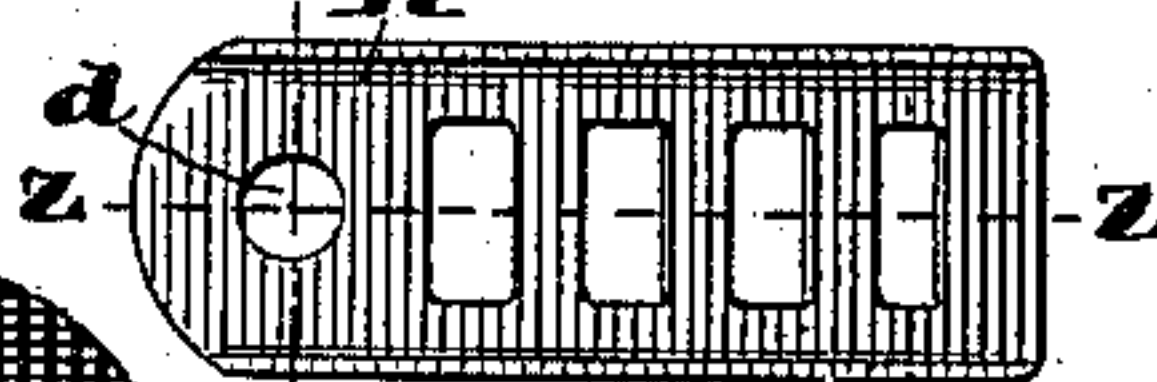


Fig. 4.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

WILLIAM CLAXTON BRAY, OF NEWTON, MASSACHUSETTS.

## RIVET-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,350, dated May 8, 1888.

Application filed December 19, 1887. Serial No. 258,258. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM CLAXTON BRAY, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Attachment to Rivet-Setting Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to rivet-setting machines, and has for its object the adaptation of the ordinary rivet-setting machine, whether provided with an automatic rivet-feeding mechanism or not, or driven by hand, foot, or otherwise, to the riveting of buckles or other articles to various articles of manufacture—such as boots, shoes, blankets, harness, &c.; and it consists in the use, in combination with an anvil for supporting the material to which the buckle or other article is to be secured, and a setting-plunger for driving the rivet, of a yielding plate for supporting the buckle or other article to be secured to said material, said plate, when in its normal position, being located in a plane above the upper surface of the anvil and adapted to be depressed by the descent of the setting-plunger, as will be more fully described.

Figure 1 of the drawings is a plan of a portion of the anvil-supporting arm of a rivet-setting machine having my supporting attachment applied thereto. Fig. 2 is a sectional elevation of the same, the cutting-plane of the section being on line  $x x$  in Fig. 1, and showing a portion of the lower end of the setting-plunger and the rivet-holding jaws in their proper relative position. Fig. 3 is a front end elevation of the same, with a portion of the supporting-plate in section, the cutting-plane of which is on line  $y y$  on Fig. 1. Fig. 4 is a plan of the female portion of the buckle, and Fig. 5 is a section of the same on line  $z z$ , with a portion of the supporting-plate also in section. Fig. 6 is a plan of the male or latch portion of the buckle, and Fig. 7 is an elevation of the same in position for being riveted, with a portion of the buckle-support cut in section.

In the drawings, A is the clinching-anvil mounted in the end of the arm B of the frame in any well-known manner, and C represents a small portion of the setting-plunger in its

proper relative position preparatory to being moved downward to set and clinch the rivet, and C' represents a portion of the rivet-holding jaws, constructed substantially as described in Letters Patent No. 222,568, dated December 16, 1879.

The upper portion of the frame and the mechanism for reciprocating the setting-plunger and feeding the rivets to the position to be acted upon by said plunger are not shown in the drawings, for the simple reason that they constitute no part of my present invention, as any well-known form of frame, any well-known means of operating the setting-plunger, and any well-known automatic mechanism for feeding the rivet may be used, or the rivet may be placed by hand in the pocket carried by the setting-plunger without in any way affecting the principles of my invention.

The arm B has secured to its upper side, in the rear of the anvil A, the block D, having formed in its upper side a shallow groove to receive the rear end of the spring E, which is firmly clamped therein by the foot of the stand F, which is firmly secured to said block D by the bolts  $a'$ . To the front end of the spring E is secured the plate G, for holding the upper article or piece of material to be riveted, which plate is shown in the drawings as adapted to hold the opposing parts of a shoe-buckle, and has formed in its upper surface a recess,  $b$ , provided with an upwardly-projecting gage-lug,  $b'$ , to receive and register the female section of the buckle, and preferably two recesses,  $c c$ , to receive and register the male or latch section of the buckle in proper position relative to the setting-tool to receive the rivet when the setting-plunger descends to drive and clinch the rivet.

It will be observed that the plate G has a curved notch cut in its front edge to permit it to be depressed below the level of the upper end of the anvil A when the setting-plunger descends to set the rivet, the lower end of the rivet-receiving pocket or jaws striking upon said plate G and depressing it until the end of the article supported thereby comes in contact with the upper of the shoe or the surface of any other article which rests upon the upper face of the anvil A, when the downward movement of the rivet-holding jaws ceases, and



the continued downward movement of the setting-plunger forces the rivet out of said jaws through the material and clinches it, the rivet passing also through the hole  $d$  or  $d'$  in the end of the buckle-section H or I, respectively.

In Figs. 4, 5, 6, and 7 the dotted lines  $e$  indicate the axial line of the anvil and setting-plunger.

H is the female section of the buckle, and is shown in Fig. 5 in the position it occupies when ready to be riveted to the shoe, and I represents the male or latch section of the buckle, which is shown in Fig. 7 in the position it occupies when ready to be riveted to the shoe.

The shape of the recesses  $b$  and  $c$  will be varied according to the design and shape of the buckle or other article to be secured in position upon a shoe or other article of manufacture, and in some cases the lug  $b'$  will be dispensed with as unnecessary.

The front end of the stand F is provided with a set-screw, J, and check-nut  $J'$ , by means of which the spring E may be adjusted and its upward movement limited.

The operation of my invention will be readily understood from the foregoing without further description here.

The plate G, instead of being attached to the end of the spring E, may be supported upon spiral springs in any well-known manner without affecting the principles of my invention.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a machine for uniting two articles or pieces of material by rivets, the combination herein described, with a fixed anvil for supporting one of the articles or pieces of material and upsetting a rivet when driven, and a vertically-reciprocating setting-plunger for driving the rivet, of a spring-arm, one end of which is firmly secured to the frame of the machine, while its other or free end is provided with a suitable receptacle for holding the other article or piece of material, and is located, when

in its normal position, above the upper surface of said anvil, and constructed and arranged to be depressed by the downward movement of the setting-plunger, to bring the article or piece of material supported thereby into contact with the material to which it is to be secured by the rivet when upset upon said fixed anvil.

2. In a machine for uniting two articles or pieces of material by rivets, the combination herein described, with a fixed anvil for supporting one of the articles or pieces of material, a vertically-reciprocating rivet-setting plunger, and a rivet-holding device, of a spring-arm, one end of which is secured to the frame of the machine, while its other or free end is provided with a suitable receptacle for holding the other article or piece of material, and is located, when in its normal position, between said rivet-holding device and the upper surface of the anvil, and constructed and arranged to be depressed to bring the article or piece of material supported thereby into contact with the material to which it is to be secured.

3. In a machine for uniting two articles or pieces of material by riveting, the combination herein described, with a fixed anvil for supporting one of said articles or pieces of material, and a vertically-reciprocating rivet-setting plunger, of a yielding support which, in its normal position, is located above the upper surface of said anvil, and which is provided with one or more receptacles of a suitable shape to receive a buckle or clasp and hold it in position while it is being depressed by the setting-plunger to bring it into contact with the material to which it is to be secured.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 16th day of December, A. D. 1887.

WM. CLAXTON BRAY.

Witnesses:

N. C. LOMBARD,  
SIMEON SNOW.