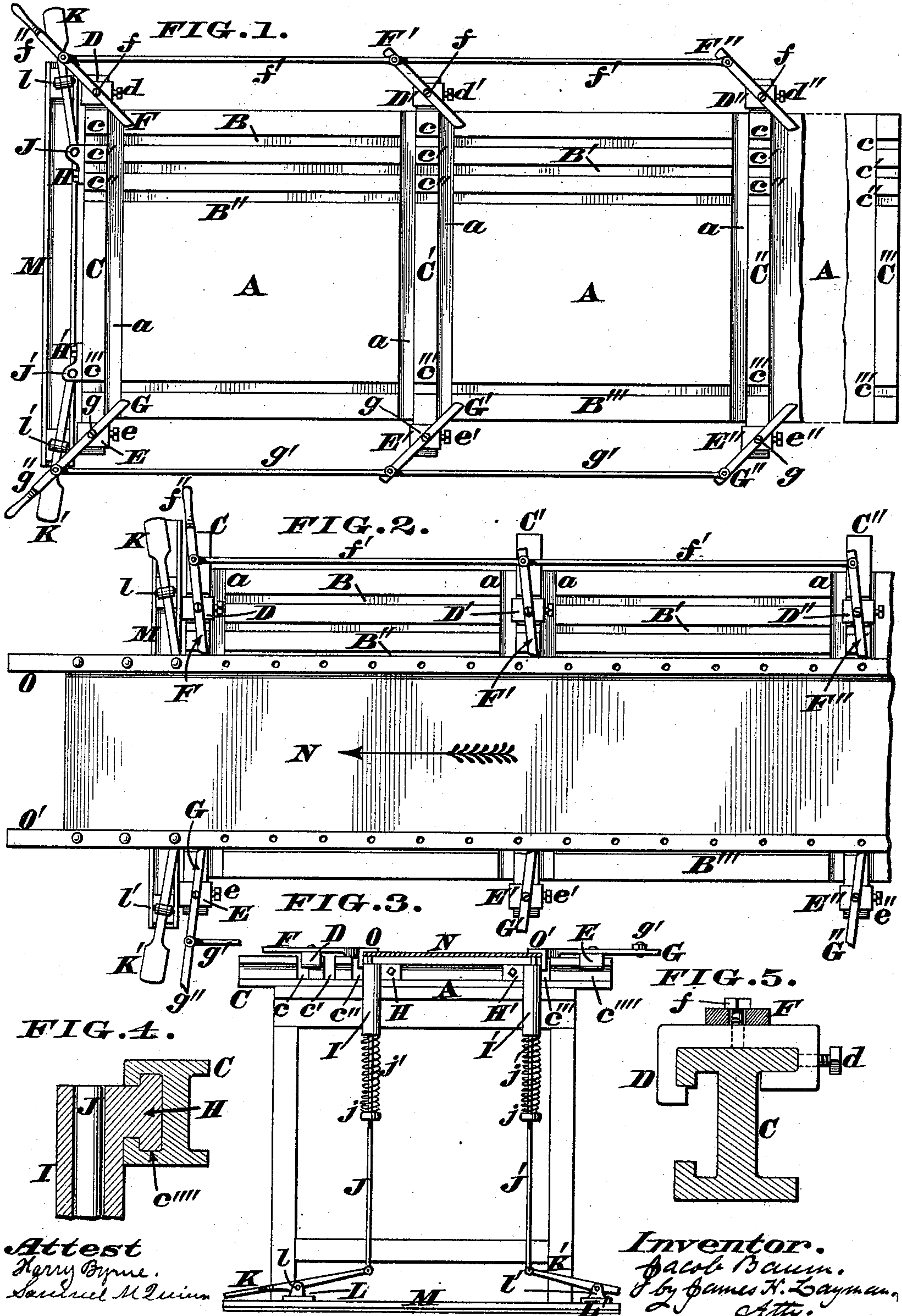


(No Model.)

J. BAUM.  
RIVETING MACHINE.

No. 486,071.

Patented Nov. 15, 1892.



Attest  
Harry Byrne,  
Notary Public

Inventor.  
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By James H. Layman,  
Att'y.



# UNITED STATES PATENT OFFICE.

JACOB BAUM, OF CINCINNATI, OHIO, ASSIGNOR TO THE VICTOR SAFE AND LOCK COMPANY, OF SAME PLACE.

## RIVETING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 486,071, dated November 15, 1892.

Application filed June 10, 1892. Serial No. 436,222. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB BAUM, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Riveting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

My invention comprises a table having certain attachments wherewith the act of riveting angle-irons to the margins of metal plates or sheets is greatly facilitated. This table is provided with any suitable number of parallel longitudinal grooves to admit plates of different widths and has a series of laterally-adjustable clamp-levers for holding the angle-irons firmly against said plates, a pair of vertically-acting and laterally-shiftable angle-bars being applied to one end of said table. These anvil-bars support the rivets while they are being "headed up," the plate being so advanced by the operator as to bring the proper holes in line with said bars, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a plan of my riveting-table, a portion of the same being broken away and the clamp-levers being seen in their open position. Fig. 2 is another plan of a portion of said table, a narrow plate and a pair of angle-irons being placed thereon and the clamp-levers being closed against these angle-irons. Fig. 3 is an end elevation of the table, the anvil-bars being elevated. Figs. 4 and 5 are enlarged sections of certain details.

A represents a table of any convenient length and width, and B B' B'' B''' are parallel longitudinal grooves in the upper surface of the same, which grooves are of such a capacity as to admit those angle-irons ordinarily used in the manufacture of safes and similar metallic structures. Secured across this table are guides C C' C'' C''', each of which has grooves c c' c'' c''' in line with the grooves B B' B'' B'''. a are transverse grooves on the sides of these guides, which grooves permit a ready adjustment of the laterally-shiftable slides D D' D'', which are applied to said guides in the manner shown in Fig. 5,

screws d d' d'' serving to hold said slides to any specific adjustment.

E E' E'' are similar slides applied to the opposite ends of said guides, and e e' e'' are the set-screws of said slides.

f f f are pivots wherewith clamp-levers F F' F'' are pivoted to the slides D D' D'', and f' is a rod connecting the outer ends of said levers, the inner ends thereof being rounded, so as to have somewhat of a cam action when brought into service. Lever F is prolonged at f'' to serve as a handle.

G G' G'' g g' g'' represent a similar arrangement of pivots, levers, rods, and handle applied to the other set of slides E E' E''.

Guide C has an undercut groove c''', as represented in Fig. 4, for the engagement of another pair of slides H H', (seen in Fig. 3,) which slides are held in place by set-screws. Furthermore, these slides are provided with tubular housings I I', within which reciprocate anvil-bars J J', the lower ends of the latter being coupled to treadles K K', collars j and springs j' serving to retain said bars in their normal or depressed positions. Treadles K K' are hung on bearings l l', that may be swiveled to blocks L L', capable of traversing a track M, secured to the floor.

N is a plate or sheet of metal, and O O' are angle-irons to be riveted to its opposite margins. Normally the clamp-levers F F' F'' G G' G'' are swung around to the position seen in Fig. 1 and the anvil-bars J J' of the machine are forced down by the springs j' j', so as to leave the top of the table in a proper condition to receive the work, which is assumed to be a plate N, to whose opposite margins angle-irons O O' are to be secured. This plate is here shown of the right width to extend from the groove B'' to the groove B''', and after being placed upon the table, with its left end near the guide C, the angle-irons are then applied to the edges of said plate, the vertical webs of said irons fitting within said grooves. The slides D D' D'' are then properly advanced to render their levers F F' F'' the most effective and are secured in place by tightening their set-screws d d' d'', after which act the plate and angle-irons are advanced by hand until the first set of holes are in line with the anvil-bars J J'. A rivet being then



set upon each of the bars and treadles K K' depressed, said rivets are forced up through the coincident holes in the plate and angle-irons. Handles  $f'' g''$  are now swung around to the position seen in Fig. 2, the result being to bring the inner ends of levers F F' F'' and G G' G'' in contact with the angle-irons, and thus clamp them firmly against the edge of the plate. Two attendants of the machine then "head up" the rivets, the anvil-bars affording a firm support for this operation, and as soon as the riveting is finished pressure is removed from said treadles and the bars drop. The clamp-levers are again thrown open, the plate and angle-irons drawn forward by hand until the second set of holes are in line with the anvil-bars, and then the above-described operations are repeated, and so on until each of said angle-irons is riveted to the sheet. Fig. 2 shows three rivets secured to each angle-iron. If the plate is comparatively short, four levers will suffice to hold the angle-irons in place, while a longer plate can be better managed with six levers. The guide C''' (seen at the right end of the table in Fig. 1) is used only when unusually-long plates are to be riveted, the grooves in said guides serving, like the grooves B B' B'' B''', to confine the angle-irons to a proper path. In the drawings only four of these grooves are shown; but the invention is not limited to any special number nor to having them parallel with each other, as the machine will operate with plates that taper from one end to the other. Neither is the invention restricted to the number of clamp-levers nor to the special devices for raising and lowering the anvil-bars, as they may be operated by cams, &c., if desired.

I claim as my invention--

1. The combination, in a riveting-machine, of a table provided with a series of grooves, a vertically-acting anvil-bar, and a set of guides, which latter carry shiftable slides furnished with clamp-levers, for the purpose described.

2. The combination, in a riveting-machine, of a table provided with a series of longitudinal grooves and transverse guides, which latter carry shiftable slides furnished with clamp-levers, a pair of vertically-acting anvil-bars being applied to said table and operated by treadle connections, for the purpose described.

3. The combination, in a riveting-machine, of a table provided with longitudinal grooves and fixed transverse guides, which latter carry shiftable slides furnished with clamp-levers, a pair of vertically-reciprocating and laterally-adjustable anvil-bars being applied to said table, for the purpose described.

4. The combination, in a riveting-machine, of the table A, provided with longitudinal grooves B B' B'' B''', transverse guides C C' C'' C''', grooved at  $c c' c'' c'''$ , shiftable slides D D' D'' E E' E'', applied to said guides, coupled clamp-levers F F' F'' G G' G'', pivoted to said slides, laterally-shiftable slides H H', fitted to the guide C, tubular housings I I', carried by these slides H H', anvil-bars J J', traversing said housings, springs  $j' j'$  for depressing said anvil-bars, and treadles K K' for elevating them, all as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB BAUM.

Witnesses:

JAMES H. LAYMAN,  
CHAS. T. HAIGHT.

It is hereby certified that in Letters Patent No. 486,071, granted November 15, 1892, upon the application of Jacob Baum, of Cincinnati, Ohio, for an improvement in "Riveting-Machines," an error appears in the printed specification requiring correction, as follows: In line 20, page 1, the word "angle" should read *anvil*; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 22d day of November, A. D. 1892.

[SEAL.]

CYRUS BUSSEY,  
*Assistant Secretary of the Interior.*

Countersigned:

W. E. SIMONDS,  
*Commissioner of Patents.*