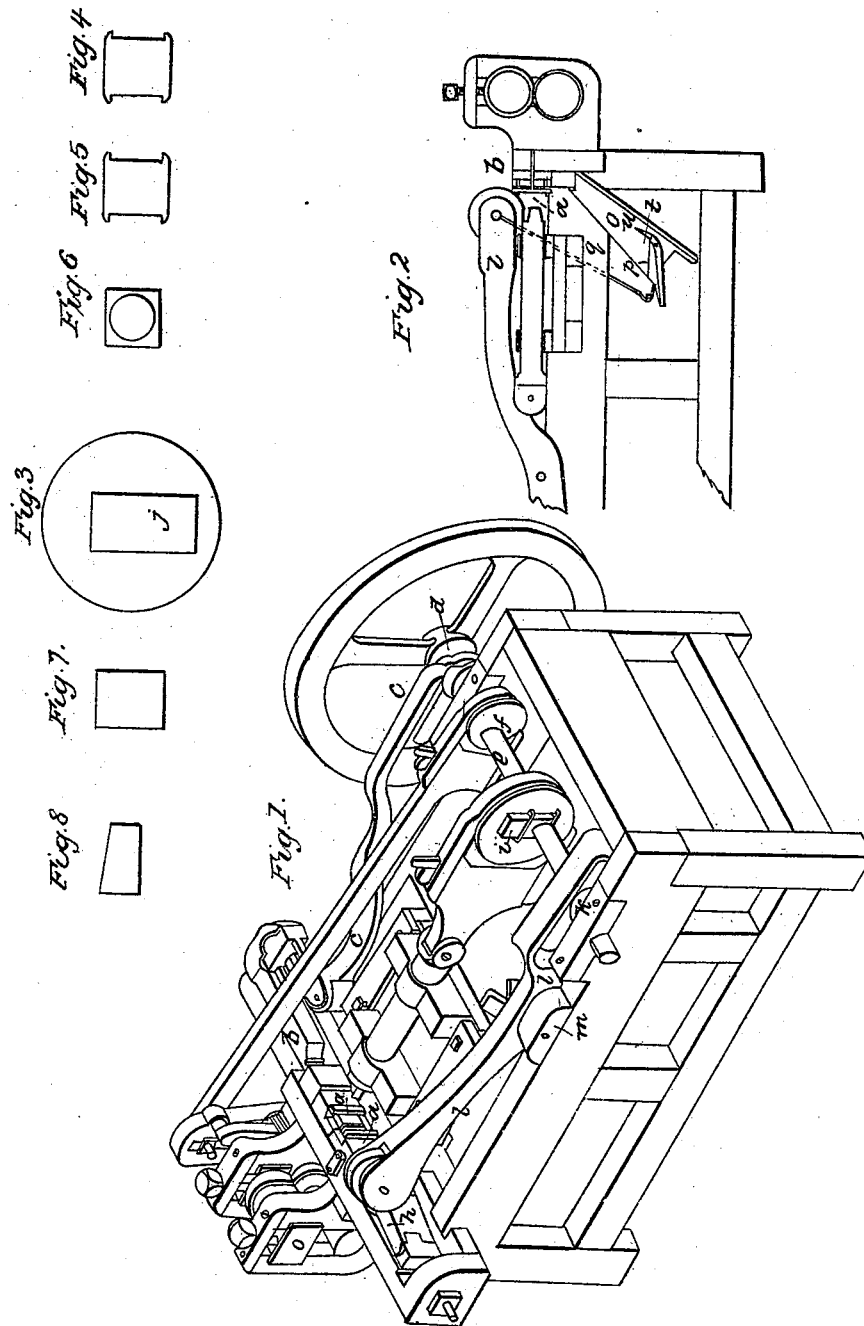


W. VAN ANDEN.  
Machine for Making Rivets.

No. 5,542.

Patented May 2, 1848.



# UNITED STATES PATENT OFFICE.

WILLIAM VAN ANDEN, OF TRENTON, NEW JERSEY.

## RIVET-MACHINE.

Specification of Letters Patent No. 5,542, dated May 2, 1848.

*To all whom it may concern:*

Be it known that I, WILLIAM VAN ANDEN, of Trenton, in the county of Mercer and State of New Jersey, have invented a new and Improved Machine for Making Rivets; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the machine. Fig. 2, is the sorting apparatus. Fig. 3 shows an eccentric to have an adjustable shaft bearing. Figs. 4, 5, 6, 7, 8, are the adjustable parts.

Like references are to represent the same parts in all the drawings.

I provide a machine for the purpose of making rivets, bolts, blanks, for screws, spikes, etc. For this purpose, in any of the well known plans I make dies for the purpose of holding the rod while it is being cut off, and until the rivet is headed. These dies with their holders are known, as (*a*) in the drawings. Near, and behind this I place a die for cutting off the rod, this die being held in the slide (*b*) by which it is operated, and receives its motion from (*c*), which is actuated by the cam (*d*) upon the main shaft (*e*). Also on the main shaft, is the eccentric (*f*) for giving motion to the feeding rollers of usual construction and arrangement. A toggle for opening and closing the dies is applied, as may be found desirable, and actuated by an eccentric to close, and a spring to open the toggle, which gives a corresponding motion to the dies; that is, causes them to open and close, in proper time; the toggle is (*h*) in drawings.

Having named their several parts which embrace no novelty in themselves, I add thereto an adjustable bearing eccentric; that is, an eccentric or cam, that may vary its position on the shaft, by adjustable means; by which the throw of the part, is made shorter or longer at pleasure, by varying its relative position of face to the shaft, on which it is placed. A set of gibs and keys, Figs. 4, 5, 6, 7, 8, arranged as seen at (*i*), may, by means of the slot (*j*) in the cam, be placed on either side of the bearings of the shaft, so as to vary the position, or throw; as follows; withdraw all but the bearing box, from the end of the slot toward the center, and the piece will be equal on all sides; in short, will be a plain wheel, on

the contrary, remove the packing from the opposite end of the slot, and insert in the first named end of the slot, and the wheel is an eccentric, to precisely the extent of throw that its center has been varied; thus from no eccentric motion at all, any amount of throw, within the bounds of the circle may be varied at pleasure; for the purpose of making a large or small head upon the rivet, as occasion may require. I have also arranged a method of closing the toggle, for more permanently holding the dies. A cam (*k*), is on the main shaft, and this works in a slot, in the lever (*l*); acting upon the fulcrum (*m*), and has at its extreme end, a friction roller (*n*). The cam being on the horizontal shaft, causes the lever (*l*) to rise and fall; when it falls it presses against and closes the toggle, and when it rises, it relieves, and the spring throws the toggle open.

I have also provided a new method of assorting the rivets, by the machine itself. At the beginning and ends of the rods, when the machine is in operation, there is always liable to be some part of a rivet imperfect; most generally the head, and to separate these headless pieces from the good rivets; this part of my invention is made. Immediately below the place of discharge, is a trough (*o*) placed in an angular position, with a slot or opening in the bottom of it, through this opening the headless or short pieces of iron, will drop, while an apron (*p*) having horns upon it, at the top, as (*u*) receives the good rivets, or those with heads that are perfect, and discharges them into a proper place. This apron operates by a reciprocating motion, which is produced by a connection, through a connecting rod (*q*), with the other end (*l*); so as to cause the extreme or outer point of the apron to rise and fall, while the other end is confined to a set fulcrum. This will be better understood perhaps, if it be called a rocking motion, produced by the arm (*l*), which being connected at or near the outward end of the apron by the rod (*q*), carries the point or outer end up and down with the said arm, when it rises and falls, to perform its other duty of closing the toggle, which rocks the apron upon its fulcrum (*t*), so as to bring the points or horns (*u*), back to the upper part of the groove; at the time the descending rivet is sliding down, which allows the horns (*u*), to receive the rivet on the under-

side of the head, while the shank is below, or hanging in the groove. The head of the rivet thus resting on the horns, where it has been allowed to slide, is discharged by the downward motion of the front of the apron, when the lever (*l*), carries it down. This is repeated each rivet, as the lever (*l*) rises, it carries the horns back to receive the rivet, and as it falls, discharges the rivet over its top; if the piece of iron does not get any head at all upon it, it drops through, instead of sliding down the groove to the horns, and if it has part only of a head, so as to be passed by the horns (*u*) it slides on, and drops from the end of the groove. Thus it will be seen that by this apparatus the imperfect pieces from the ends of the rods, will be completely separated from the good rivets, and each be placed in separate places.

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

1. The adjustable eccentric or cam for the purpose of increasing or decreasing the throw of the same, by means of a center that may be varied, and this in combination with the header, so as to make rivets with large or small heads, by such variations of throw of the eccentric.

2. I claim the method of assorting the headed rivets from the unheaded pieces of metal, by means of an inclined trough and vibrating apron constructed and operating in manner herein described and set forth.

WM. VAN ANDEN.

Witnesses:

J. L. KINGSLEY,  
J. P. POISSON.