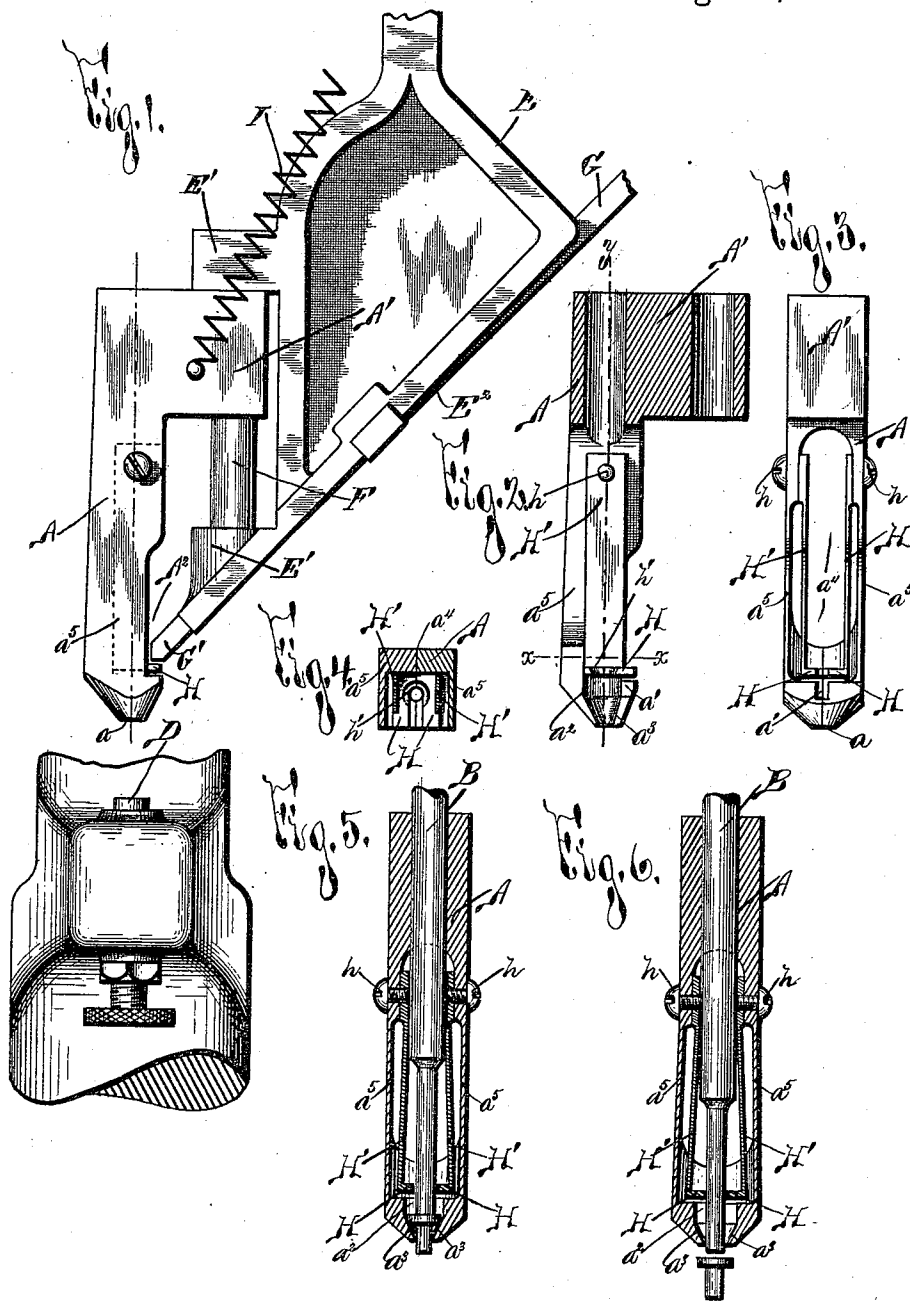


(No Model.)

J. J. UNBEHEND.
RIVET SETTING MACHINE.

No. 434,215.

Patented Aug. 12, 1890.



WITNESSES:

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JACOB J. UNBEHEND, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE
JUDSON L. THOMSON MANUFACTURING COMPANY OF SAME PLACE.

RIVET-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 434,215, dated August 12, 1890.

Application filed February 27, 1889. Serial No. 301,307. (No model.)

To all whom it may concern:

Be it known that I, JACOB J. UNBEHEND, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Receivers for Rivet-Setting Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to an improvement in a receiver or pocket for rivet-inserting machines of the particular class set forth in my pending application, Serial No. 295,027, and has for its object the production of a simple and effective device, through which the plunger is operated, and to which a rivet is conducted by a suitable conveyer, and then held thereby in the desired position shank downward, in the path of the plunger or other inserting mechanism; and to this end it consists, essentially, in a receiver or pocket, through which the plunger is operated, and which is provided with yielding shoulders or rivet-holders adjacent to the discharge of the conveyer yieldingly holding the rivet and adapted to be disengaged therefrom when the inserting mechanism forces the rivet downward through the receiver into the desired position.

It furthermore consists in the detail construction and arrangement of the parts, all as hereinafter more fully described, and pointed out in the claims.

In describing my invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is an elevation of my improved rivet receiver or pocket in operative position upon a supporting-bracket, the die beneath the receiver and a detached portion of the conveyer being also illustrated. Fig. 2 is a vertical section through the center of the detached pocket, illustrating the construction thereof. Fig. 3 is an end view of the detached pocket, illustrating the relative arrangement of the yielding shoulders to yieldingly grasp the rivet. Fig. 4 is a horizontal section of Fig. 2, taken on line *x x*. Fig. 5 is a vertical section taken on line *y y*, Fig. 2, the plunger being shown as having disengaged the yielding jaws from the rivet and

having forced the rivet to the discharge of the pocket; and Fig. 6 is a like vertical section, the rivet being shown as discharged from the pocket.

A represents the frame of my improved receiver or pocket, through which is actuated a plunger B or other suitable inserting mechanism for forcing the rivet through the said receiver or pocket into any desirable article placed beneath the discharge *a* of the same and interposed between said discharge and any suitable die or stop D beneath said discharge.

The receiver or pocket A is supported in any desirable position upon a suitable bracket E, and has a to-and-fro movement upon said bracket in the same line as that of the rivet when being inserted.

When inserting rivets into any article, it is desirable that the same shall be fed directly to the said article in the desired position for the purpose of obviating any liability of the rivet being turned over when discharged from the receiver. It will be seen that this movement of the receiver or feeding-tube allows articles of various thickness to be interposed between the discharge *a* of the receiver and the stop or die D, since if the article is thin the receiver is actuated to contact with the same or if it is thick the movement of the receiver is stopped by contact of the rivet with the article to be riveted. To allow of this movement of the receiver A, I provide thereon the extension A', mounted upon the rod F, secured in lugs E' of the receiver-supporting bracket E. The conveyer G is mounted in any desirable manner, preferably in a bearing-face E' of the bracket E, and is provided with its discharge G', mounted in a cut-out A² of the receiver. The receiver is also provided with the cut-out *a'*, registering with the feeding-slot of the conveyer G and allowing the passage of the rivet-shanks into the receiver. In line with and directly beneath the discharge of the conveyer G, I provide the shoulders H on either side of the cut-out *a'*, which shoulders are formed or provided upon the spring bars or shanks H', secured by screws or clamps *h* within a chamber in the rivet-receiver.

By reference to the drawings it will be seen that considerable space intervenes between

the sides or walls of the receiver or pocket and the adjacent surfaces of the spring-shanks H', allowing said shanks to yield outwardly.

When a rivet is fed down the conveyer G, the shank thereof enters the cut-out a' and the head thereof is engaged by the shoulders H, retaining the rivet shank downward in the receiver in position to be discharged therefrom. Immediately upon the feeding of the rivet into the desired position in the receiver the plunger D is actuated downward to insert the rivet. The shoulders H readily yield outward and are disengaged from the rivet-head by reason of the spring-shanks H', and to allow of this ready springing apart I preferably form the top face of the shoulders with a bevel h' .

Directly beneath the shoulders H is the guideway a^2 of less diameter than the chamber above the same and of sufficient size to allow the head of the rivet to be easily forced therethrough by the plunger after it is disengaged from the yielding shoulders, and at the discharge of the rivet-receiver I provide the jaws or shoulders a^3 , which catch the head of the rivet and again arrest its progress. Upon the abutment of the rivet-head with the jaws or shoulders a^3 of the receiver-discharge the receiver is forced downward upon the rod F, approximating the rivet to the article to be riveted, and the jaws a^3 are so formed as to closely press the rivet-shank during this movement of the receiver. Extending upwardly from the discharge-openings a of the receiver is the slit or slot a^4 , dividing the receiver into two halves, adapted to be sprung apart when the rivet is forced through said discharge.

The rivet-shank is preferably of sufficient size to slightly spring apart the spring-halves a^5 of the receiver, in order that the rivet may be firmly grasped thereby during the movement of the receiver, and the shoulders a^3 are preferably beveled, so that after the approximation of the rivet to the article to be riveted the rivet may be readily discharged therefrom, springing apart the halves a^5 .

It will be noted upon reference to the foregoing that the rivet-receiver frame or stock is composed of separable sections having spring-jaws, and that mounted within the same are additional jaws or holders H. My aforesaid application, Serial No. 295,027, illustrates a similar construction of rivet-receiver; but it will be noted that the holders project through slots in the separable sections. In order to effect the operation of these sections, they must be composed of spring metal, and experience has demonstrated in the operation of the rivet-receiver set forth in my aforesaid application that the slot formed in the separable sections severs the fiber of the metal, and so weakens the same as to greatly limit its life and after a time prevent perfect retraction of the spring-jaws to their normal position.

When the rivet has been inserted and the plunger withdrawn, the receiver, which is

formed of spring metal, readily springs back to its normal position, and the springs H' spring the retaining-jaws to their normal position. After the discharge of the rivet from the jaws a^3 the receiver is retracted to its normal position by means of a spring I or other means secured thereto.

The operation of my pocket is as follows: A rivet is fed by the conveyer G to the receiver A and its head is engaged by the shoulders H. The plunger is then brought down upon the head of the rivet, forcing apart the shoulders, forcing the rivet down the guideway a^2 , and engaging the head thereof with the jaws or shoulders a^3 . The receiver is forced to the desired position and the spring-halves thereof are forced apart, allowing the discharge of the rivet, whereupon the parts are retracted to their normal position.

It will be understood that when articles of the same thickness are to be provided with rivets it is usually unnecessary to allow of a movement to the receiver, and in such cases the shoulders a^3 may be dispensed with and the rivet forced directly through the guideway without springing apart the receiver; also, other changes may be made in the detail, construction, and arrangement of the receiver without departing from the spirit of my invention, which is the production of yielding shoulders secured on the inside of the receiver for engaging the rivet by its head and yielding to allow its discharge therefrom shank downward.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a rivet-receiver frame, a guideway for the rivets, an enlarged chamber above said guideway, springs secured to the inner wall of said receiver-chamber and having their lower extremities movable within said chamber, and shoulders H, provided upon said lower extremities and adapted to engage the rivet, substantially as and for the purpose set forth.

2. The combination of the split receiver-frame, separable jaws a^3 , provided in said frame, a guideway above said jaws, an enlarged cavity above said guideway, springs secured to the inner wall of said receiver-chamber and having their lower extremities movable within said chamber, and shoulders H, provided upon said lower extremities and adapted to engage the rivet, substantially as and for the purpose specified.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 25th day of February, 1889.

JACOB J. UNBEHEND.

Witnesses:

CLARK H. NORTON,
ARTHUR E. PARSONS.