

K. WÜRZNER.
 RIVETING MACHINE.
 APPLICATION FILED OCT. 8, 1910.

989,100.

Patented Apr. 11, 1911.

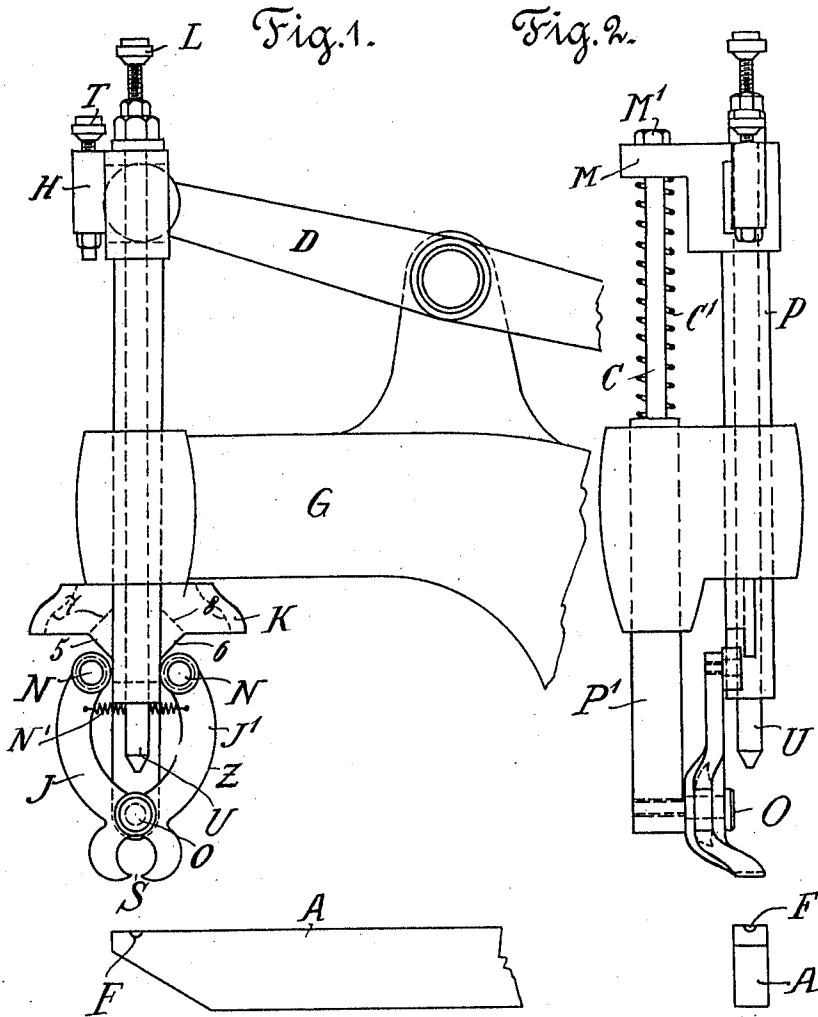
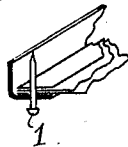


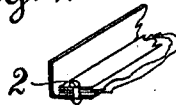
Fig. 3.



Witnesses:

Joh. Trüggen
Conf. factory

Fig. 4.



Inventor:

Karl Würzner

UNITED STATES PATENT OFFICE.

KURT WÜRZNER, OF DRESDEN, GERMANY.

RIVETING-MACHINE.

989,100.

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To all whom it may concern:

Be it known that I, KURT WÜRZNER, a subject of the Emperor of Germany, and a resident of Dresden, in the Kingdom of Saxony, Germany, have invented a new and useful Riveting-Machine, of which the following is a specification.

The present invention relates to a machine for riveting the metal mountings such as mouth-frames, stiffeners and garnitures to purses and the like.

According to the invention, the machine consists of a ram which is slidably fitted in a bracket over an anvil and adapted to be reciprocated therein by suitable means. A pair of cutting nippers, pivoted to a holder which is slidable in the same bracket, is adapted to be pressed by the ram against the materials to be riveted and thus to serve as a riveting-set. Finally, a cross-head, fitted on the ram, is provided with cam surfaces which engage rollers on the actuating arms of the nippers so as first to close the jaws for cutting off the rivet-shank and then to open the jaws to allow a punch, fitted in the ram, to complete the riveting. The cutting and the heading of the shank is thus performed in one operation.

The invention is illustrated in the accompanying drawings.

Figure 1 representing a side view of the arrangement, Fig. 2, a front view of the same, Fig. 3, a view of the assembled materials ready to be inserted in the machine, and Fig. 4, the same view after the riveting has been effected.

A ram P is slidably mounted in a bracket G in the machine frame and connected to a double-armed lever D which is operated by any suitable mechanism for reciprocating the ram in the bracket. A pair of cutting nippers Z is pivotally connected at O to a holder P¹ which is also slidably fitted in the bracket G. Said holder is prolonged by a rod C which is encircled by a helical spring C¹ and passed through an aperture in a lug M connected to the ram P. The latter is adapted, when lowered, to press the nippers Z down by means of the spring C¹. A nut M¹ on the rod C holds the same connected to the lug M.

The actuating arms J and J¹ of the nippers are fitted with rollers N which are disposed in the path of a cross-head K mounted on the ram P. This cross-head has cam surfaces 5, 6, 7 and 8 which engage the roll-

ers N so as first to open and then to close the arms J and J¹, a contrary movement being thereby imparted to the cutting jaws S. A spiral spring N¹, connected to the arms J and J¹, tends to hold the jaws S open.

A riveting punch U is slidably fitted in the ram P together with a spring-actuated piston for acting on the punch by percussion. The piston is retained and tensioned in known manner, when the ram descends, by a slidable bolt contained in the head of the bracket G. At the end of the stroke the retaining bolt is withdrawn owing to its contact with a pin T fitted in a socket H in the ram holder. When the piston is thus released it reacts with high velocity on the punch and effects the riveting.

L is a set-screw for adjusting the pressure of the piston spring.

A is an anvil against which the riveting is done, and F is a recess in said anvil for the reception of the rivet head 1.

The *modus operandi* is as follows: The materials to be riveted together are assembled and connected by means of the rivet pin as shown in Fig. 3, whereupon they are placed on the anvil with the head 1 in the recess F. As the ram P is lowered the lug M presses, by means of the spring C¹, the jaws S against the parts of the material for compressing the same around the rivet, the jaws thus acting as a riveting-set. At a further lowering of the ram, the rollers N are engaged by the cam surfaces 5 and 6 of the cross-head K which forces the arms J and J¹ apart and closes the jaws S for cutting off the rivet shank. The cutting edges of the jaws are set so as to leave a sufficiently long end on said shank for the formation of a rivet head. After the rollers have passed the surfaces 5, 6 they are engaged by the surfaces 7 and 8 which open the jaws S sufficiently to admit the end of the punch U. At the end of the stroke the punch is acted upon by the released spring piston, a head 2 being formed on the rivet pin by the percussion.

Speedy and neat work can be effected by the arrangement.

I claim:

The herein described machine for riveting metal mountings to purses and the like, comprising a bracket held over an anvil on which the assembled materials are arranged with the rivet pin inserted in position, a ram reciprocatingly mounted in said bracket, a punch fitted in the ram for effecting the

riveting against the anvil, a pair of cutting
nippers, a holder for said nippers slidably
fitted in the bracket, connection between the
ram and the holder enabling the former,
5 when lowered, to press the jaws of the nip-
pers resiliently against the materials on the
anvil, rollers on the actuating arms of the
nippers, and a cross-head on the ram hav-
ing cam surfaces to engage such rollers at
10 the further lowering of the ram, the cam

surfaces being shaped so as first to close the
jaws of the nippers to cut off the projecting
rivet pins and then to open the same to ad-
mit the punch for the completion of the
riveting, substantially as set forth.

Signed at Dresden.

KURT WÜRZNER.

Witnesses:

PAUL ARRAS,
CLARE SIMON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
