

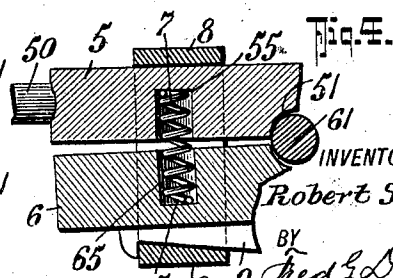
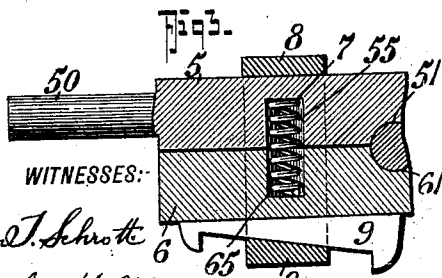
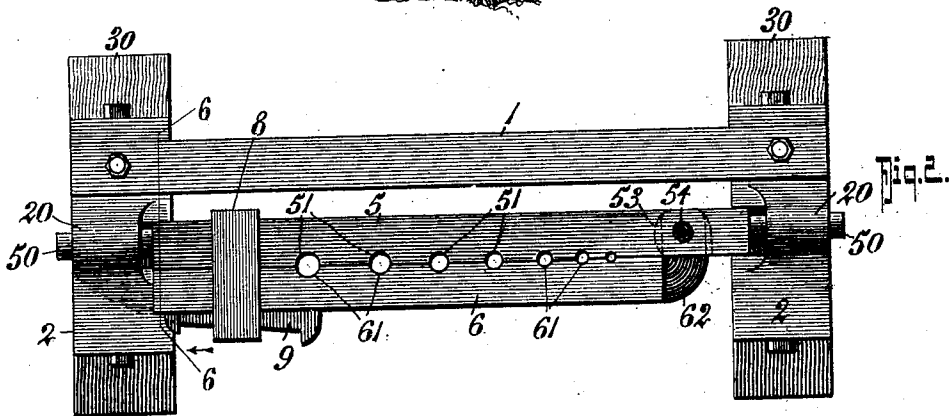
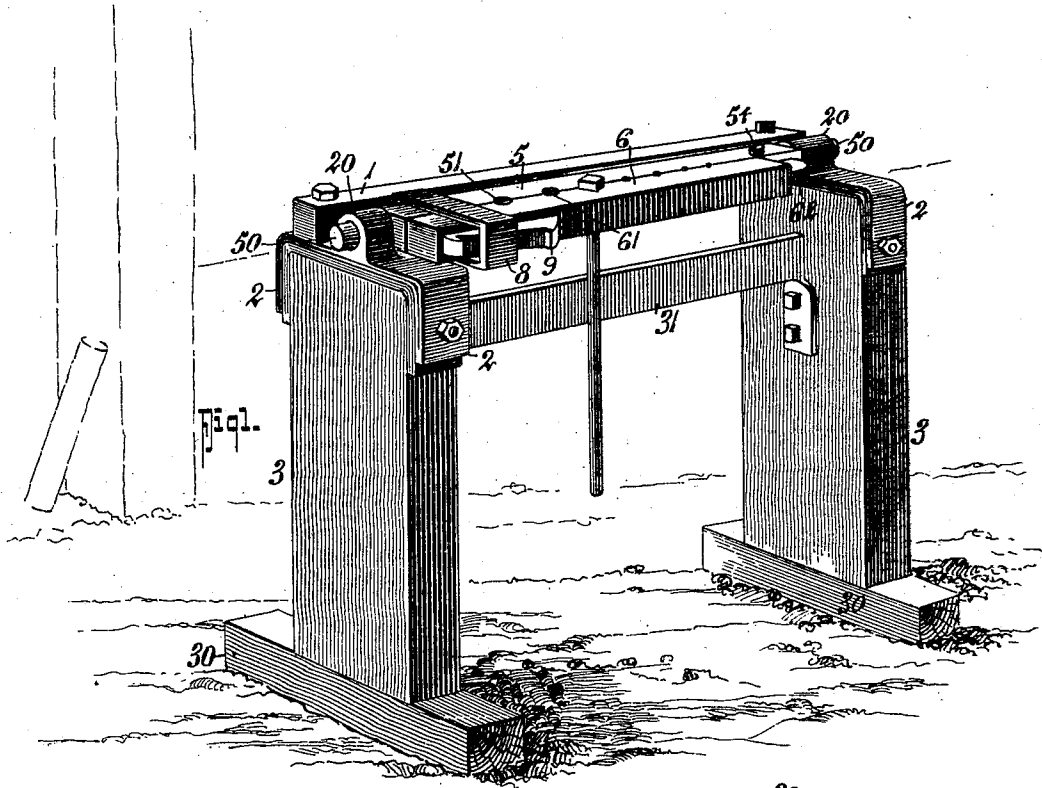
R. SCHUEBEL.
SWAGING TOOL.

APPLICATION FILED OCT. 12, 1908.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.

933,588.



WITNESSES:

John T. Schmitt
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INVENTOR

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BY

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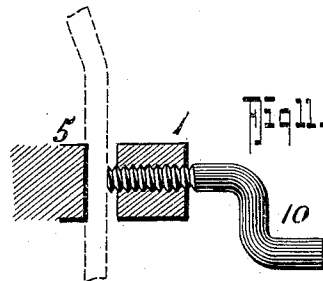
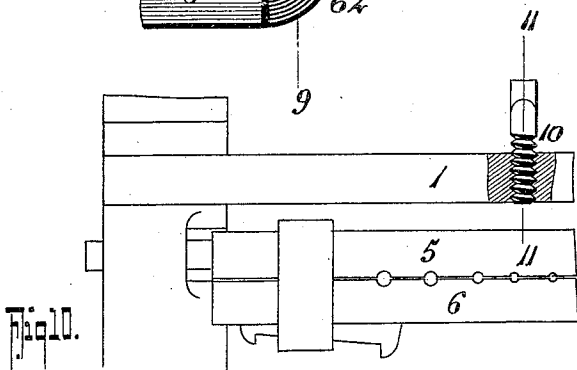
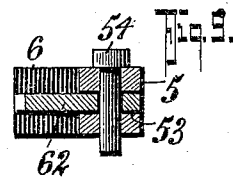
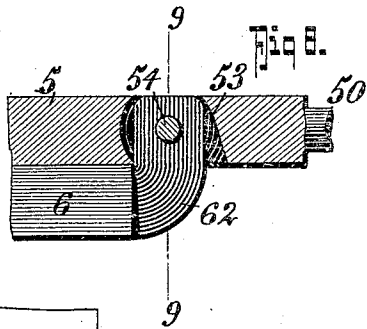
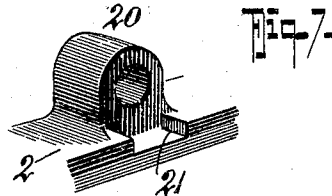
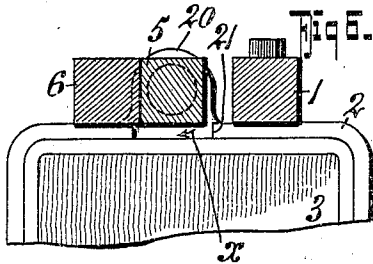
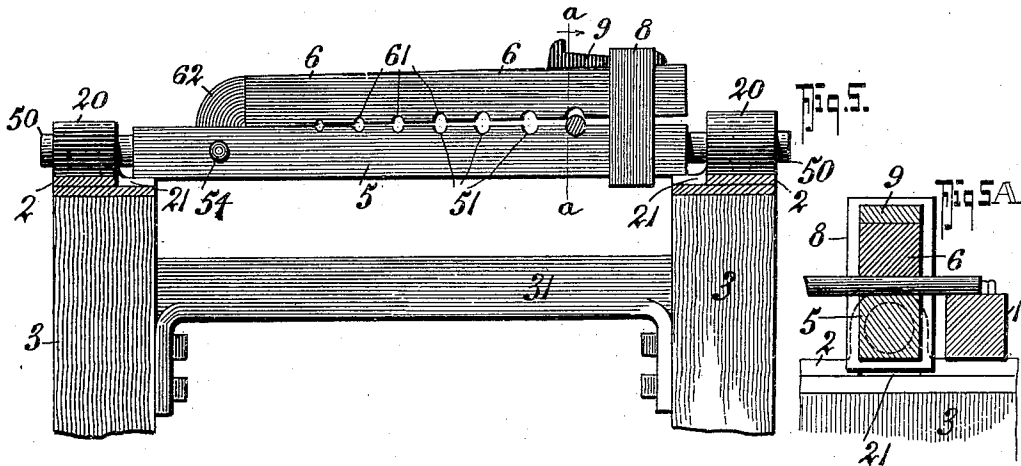
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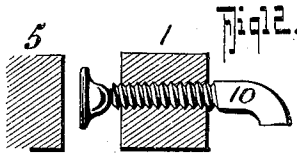
Patented Sept. 7, 1909.

2 SHEETS—SHEET 2.



WITNESSES:

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SWAGING-TOOL.

933,588.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed October 12, 1908. Serial No. 457,416.

To all whom it may concern:

Be it known that I, ROBERT SCHUEBEL, residing at Littell, in the county of Lewis and State of Washington, have invented a new and Improved Swaging-Tool, of which the following is a specification.

This invention has for its object to provide an improved tool or implement by which the swaging or upsetting operation may be readily performed on bolt rod members in one heat without removing said bolt rod from the machine until finished and my said invention in its generic nature, comprehends an improved construction of tool or implement of the character stated, embodying a suitable support, an anvil bar fixedly mounted on the support and a bolt rod clamping means, adjustably mounted on the frame, in such manner that under one adjustment or setting to project the head end vertically to provide for swaging or flattening the end and under another adjustment or setting to present the edge of the flattened head end of the bolt uppermost and to rest upon the base or anvil member.

In its more subordinate features my invention consists in certain details of construction and peculiar combination of parts, all of which will be hereinafter fully described and specifically pointed out in the appended claims, reference being had to the accompanying drawing, in which:

Figure 1, is a perspective view of my invention, showing the same adjusted for upsetting or swaging the upper end of the bolt rod. Fig. 2, is a plan view thereof. Fig. 3, is a detail horizontal section of one end of the clamping jaws or members, said members being shown as clamped or locked together. Fig. 4, is a similar view, the jaw members being shown as released and spread by the spring device that coöperates therewith. Fig. 5, is a detail side elevation, the clamp or bolt holding device being shown as set to its vertical position on the frame. Fig. 5^a, is a detail cross section taken on the line *a-a* on Fig. 5. Fig. 6, is a similar view on the line 6-6 on Fig. 2, looking in the direction of the arrow. Fig. 7, is a detail view of one of the pivotal bearing members. Fig. 8, is a detail view that illustrates the hinged connection of the movable clamping member. Fig. 9, is a cross section on the line 9-9 on Fig. 8. Fig. 10, is a diagrammatical plan view of a modified construction hereinafter explained. Fig. 11, is a cross section on the

line 11-11 on Fig. 10. Fig. 12, is a view of a modification of the clamp screw shown in Figs. 10 and 11.

In carrying out my invention, I provide a stout frame or support of a height suitable for supporting an anvil bar 1, which, as shown in the drawings, is bolted on one end of saddle plates 2-2 in turn bolted to the end standards 3-3, preferably of wood, and that have base or foot members 30-30 and are strengthened by a metal brace bar 31 bolted at the ends to the said standards as best shown in Fig. 5.

Rockably mounted on the support adjacent to and parallel with the anvil 1 is the clamping means, which is adjustable with respect to clamping the bolt irons and for holding the irons in either the vertical or horizontal plane. The clamping means consists of a stout metal bar 5, the opposite ends of which are formed with trunnions 50-50 for engaging the portions 20-20 formed on the plates 2-2 and which form solid bearings for the ends of the bar 5.

To permit of turning the bar 5 freely from a horizontal position as shown in Figs. 1, 2 and 6 to the vertical position shown in Figs. 5 and 5^a, the saddle plates 2-2 inside the bearings 20-20 are recessed as at 21 to give clearance for the bar 5 when turned in the direction indicated by the arrow *x* on Fig. 6. The bar 5 which also forms an anvil or hammering base, coacts with another clamping member 6, the adjacent faces of the two bars 5 and 6 having semi-circular seats 51 and 61 of progressively increasing sizes for receiving the bolt irons of different diameters when the member 6 is closed against member 5, see Fig. 1. Clamping member 6 is hingedly connected at one end to the bar 5 by having the said end formed with a right-angled reduced extension 62 that fits the horizontal slot 53 in the bar 5, in which it is held by the hinge pin 54, see Figs. 8 and 9. The other end of bar 6 extends to the corresponding outer end of the bar 5 so as to rest on the saddle plate 2 at that end, which forms a rest for the bar 6. The bar 6 is normally forced to its open position, see Fig. 4, by a coil spring 7 that is held in the sockets 55 and 65 on the opposing faces of the bars 5 and 6, and the bar 6 is readily clamped and held locked to the bar 5 by means of a yoke 8 that is slidably mounted on the two bars 5 and 6, and a wedge key 9 that coacts with the yoke in a

manner well understood by referring to Figs. 3 and 4 of the drawing, from which it is apparent that shoving the key to the position shown in Fig. 3 securely clamps and holds the jaw 6 locked against jaw 5 and moving the key in the other direction frees the jaw 6.

From the foregoing taken in connection with the accompanying drawings the manner in which my invention is used and its advantages will be readily apparent.

When it is desired to upset or form a head in a rod, the same after being properly heated is clamped between the members 5 and 6, which members are then adjusted to the position shown in Figs. 1, 2 and 3. The operator then hammers the upper end to form the flattened or head portion. This being done and while the rod is still hot, the members 5 and 6 are turned to the vertical position, which now brings the rod to the horizontal plane with one edge of the head against the anvil 1, see Fig. 5^a. This leaves the opposite edge positioned for being properly hammered, it being understood that the head being now on the rod it need not be tightly clamped and is left to be turned freely to bring the several edges in position for hammering, which operation, by

reason of the ease and rapidity in which the bolt can be handled is done before the rod cools.

If desired, the anvil 1 may carry a clamp screw 10 for coacting with the anvil 1 to clamp the iron against the edge of the anvil to hold it for being formed as desired, and to facilitate the clamping action of the screw 10 it may be provided with a swivel bearing head 10^x, as indicated in Fig. 12, which bearing head 10^x may be of the ordinary type such as is used in ordinary clamps.

Having thus described my invention, what I claim is:

The combination with a suitable support, an anvil bar fixedly mounted thereon; of a bolt rod clamping means, rockably mounted on the support parallel with the anvil, said clamping means under one adjustment being adapted for sustaining the bolt rod in a vertical position and when rocked in a position at right angles to the first position adapted for bringing the projecting bolt rod end over onto the anvil plate.

ROBERT SCHUEBEL.

Witnesses:

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