No. 661,901. Patented Nov. 13, 1900.

H. ALAMAN.

ROD OR RIVET CLUTCH.

(Application filed Aug. 25, 1900.)

(No Model.)

Fig. 1.

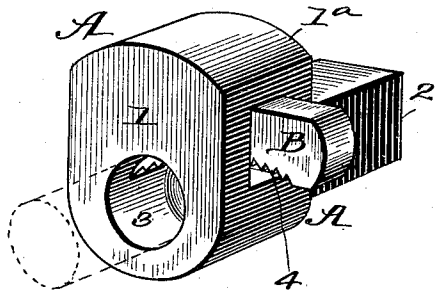


Fig. 2.

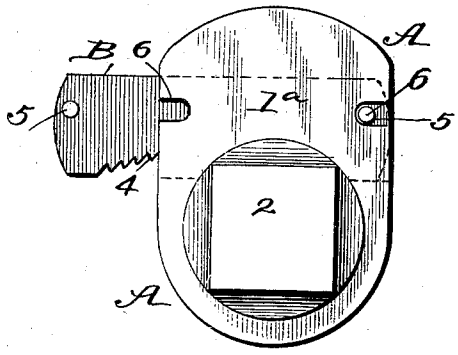


Fig. 3.

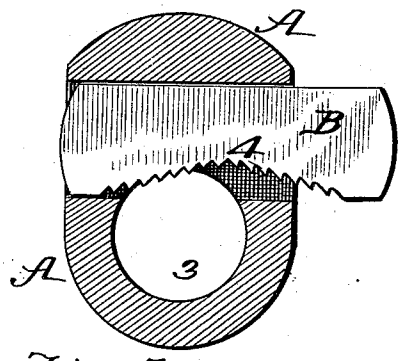


Fig. 5.

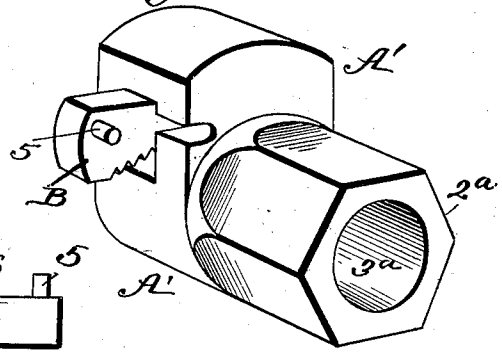


Fig. 4.

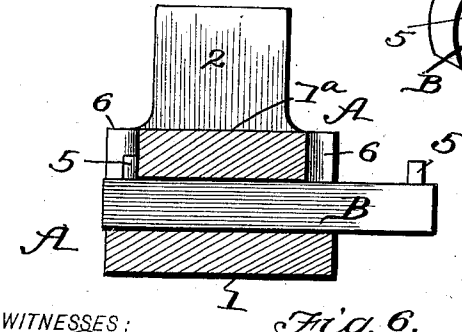


Fig. 6.

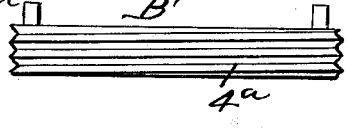
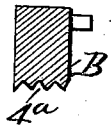


Fig. 7.



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HARRY ALAMAN, OF TERRE HAUTE, INDIANA, ASSIGNOR OF ONE-HALF TO W. C. ARP, OF SAME PLACE.

ROD OR RIVET CLUTCH.

SPECIFICATION forming part of Letters Patent No. 661,901, dated November 13, 1900.

Application filed August 25, 1900. Serial No. 27,986. (No model.)

To all whom it may concern:

Be it known that I, HARRY ALAMAN, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have made certain new and useful Improvements in Rod or Rivet Clutches, of which the following is a specification.

My invention is a tool adapted for application to a rod for rotating it for any purpose or to a short screw-threaded rivet for the purpose of screwing it into place. It is particularly useful for inserting threaded rivets for securing boiler-plates together.

The tool comprises a body having a bore or socket for the rod or rivet, a slidable double-wedge key for temporarily clutching the rod or rivet, and a polygonal shank for application of a wrench for rotating the tool and with it the rod or rivet to which it is applied.

The details of construction are as follows:

In the accompanying drawings, Figure 1 is a front perspective view of one form of my invention. Fig. 2 is a face view of the same. Fig. 3 is a transverse vertical section through the body of the tool. Fig. 4 is a transverse horizontal section of the same. Fig. 5 is a rear perspective view of a modified form of the invention. Fig. 6 is an inner face view of a modified form of locking key or dog, and Fig. 7 is a cross-section of the same.

The body A of the tool (shown in Figs. 1 to 4) has a flat face 1, a rearwardly-extended polygonal shank 2, and a cylindrical bore or socket 3, which is formed in the lower portion of the face 1 and in alinement with the said shank 2.

A toothed locking key or dog B is arranged and adapted to slide freely in a transverse slot which is formed in the upper portion of the body A parallel to its face 1 and intersecting the upper segment of the bore or socket 3. The said key B has a straight back and flat parallel sides, while its under edge is toothed and inclined upward from each end of the key to the center of the length of the latter. The toothed edge 4 thus forms an obtuse reëntrant angle, so that the key has practically two wedge-like end portions or sections.

I provide stops 5 to limit the sliding movement of the key B either way, the same being in the form of pins projecting laterally from the end portions of the key and adapted to enter sockets or notches 6, formed in the rear side of the body A.

In using the described tool a short screw-threaded rivet (see dotted lines, Fig. 1) is inserted in the socket 3 and the key B is slid endwise, so that one of its toothed sections projects down through the slot and engages and thus locks the rivet. Then by applying a wrench to the shank 2 of the tool the said rivet may be easily screwed into place. It will be noted that the key B is adjusted to the right, as shown in Fig. 1, in case the rivet has a right thread and is hence to be rotated to the right and that in the alternative case the key is to be adjusted to the left. The teeth 4 of the opposite inclines or wedge portions of the key B are preferably inclined outward (see Figs. 2 and 3) in order to enable them to take a firm grip on the rivet.

The modified form A′ of tool shown in Fig. 5 differs from the one A above described solely in the provision of a bore 3^a, that extends entirely through the shank 2^a, and in the corresponding extension and enlargement of the latter. This tool is thus adapted for application not only to short rivets, but also to rods of any length and to be secured to the latter at any point in their length. An important feature is the adaptation of the tool for automatic reversal of the key or clutch member B when it is desired to rotate the rod or rivet in the opposite direction. Thus to screw out a rod or rivet while the tool is still applied thereto it is only necessary to reverse rotation of the latter, whereupon the key B will be unlocked or released and slide over so that its opposite wedge-section will lock or engage with the rod or rivet, thereby enabling the latter to be rotated backward.

When the teeth of the key or dog B are arranged transversely, as shown in Figs. 1 to 5, they cut into and thus upset or deform the thread of the rod or rivet more or less. To avoid this result, I may arrange the teeth 4^a lengthwise of a key B′, as shown in Figs. 6 and 7, so that they will enter and bite between the threads of the rod or rivet.

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

1. An improved rod or rivet clutch, comprising a body portion adapted for application of a wrench, and having a bore for reception of the rod or rivet, also a transverse slot intersecting such bore, and a double-wedge key arranged in said slot, and adapted to slide lengthwise therein, substantially as shown and described.

2. An improved rod or rivet clutch, comprising a body portion adapted for application of a wrench, and having a bore for reception of the rod or rivet, also a transverse slot intersecting such bore, a locking-key having its under side inclined inward from the ends to the center and provided with teeth, the said key being easily slidable lengthwise in the slot, and stops for limiting the movement of the key in either direction, substantially as shown and described.

3. An improved rod or rivet clutch, comprising a body portion adapted for application of a wrench, and having a bore for reception of the rod or rivet, also a transverse slot intersecting such bore, a slidable double-wedge key having its opposite inclines constructed with teeth pointing in opposite directions, or at an angle to the incline on which they are formed, and provided with lateral projections to serve as stops, substantially as shown and described.

4. The improved rod and rivet clutch comprising a body having a bore and polygonal shank in alinement, a transverse slot intersecting such bore tangentially, and a key which is slidable in said slot, and has its under side formed as an obtuse reëntrant angle, and toothed, and provided with stops, as shown and described.

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