J. J. SOUDER.

HEADLESS AND THREADLESS BOLT.

APPLICATION FILED FEB. 11, 1908.

911,624. Patented Feb. 9, 1909.

Fig. 1

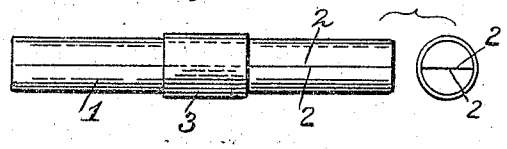


Fig. 2

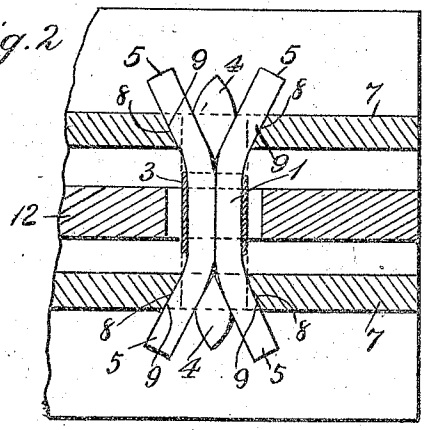


Fig. 3.

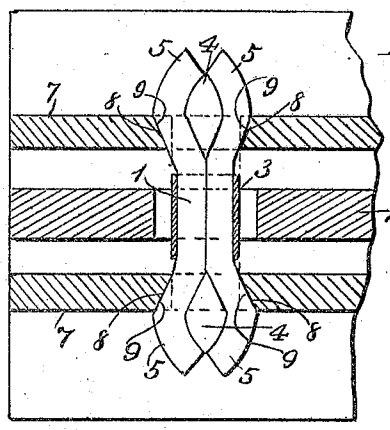


Fig. 4.

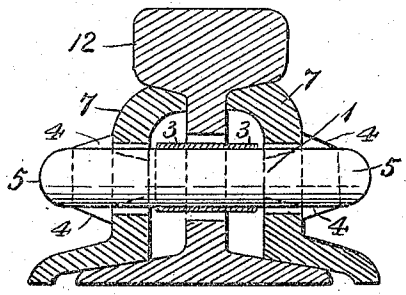


Fig. 6.

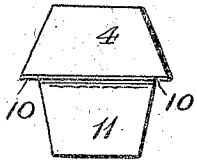


Fig. 7.

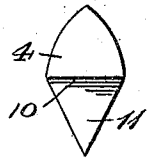
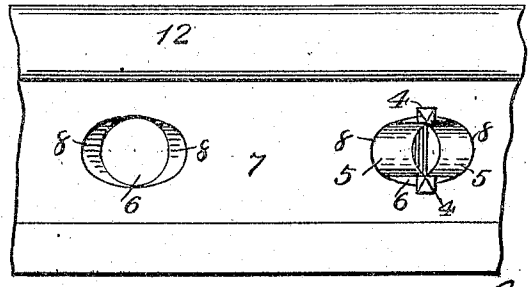


Fig 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JACOB J. SOUDER, OF WASHINGTON, DISTRICT OF COLUMBIA.

HEADLESS AND THREADLESS BOLT.

No. 911,624. Specification of Letters Patent. Patented Feb. 9, 1909.

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To all whom it may concern:

Be it known that I, JACOB J. SOUDER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Headless and Threadless Bolts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates primarily to bolts, has special reference to that class of bolts which are devoid of screw-threads for connection with a like threadless member.

The invention has for its object a bolt which is headless and threadless, and which is secured in position without the use of screw-threads in the wall of the retaining member, as shown in Letters-Patent of the United States, granted to me November 27th, 1906, No. 836,786, and November 27th, 1907, No. 871,830, and is designed with special reference to use on railroad joints and other like structures; in which both ends of the bolt are separated, and a key or wedge inserted between the separated ends in the bolt-opening in the fish-plates on both sides of the web of the rail.

A further object of the invention is, economy in the manufacture of bolts, by dispensing with skilled labor for welding and screw-threading the bolts, and in the time required in applying the bolts.

The invention consists in certain improvements in construction, which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification:—Figure 1 represents a side and an end view of my improved bolt. Fig. 2 a horizontal section of a railroad rail-joint, showing a bolt in the openings of the joint and a key inserted between the separated members of the bolt at both ends thereof before the ends of said members have been bent inward over the keys. Fig. 3 a like view showing the ends of the bolt bent over and inclosing or covering the outer ends of the keys. Fig. 4 a vertical transverse section of a rail-joint showing a bolt in position. Fig. 5 a side elevation of part of a rail-joint showing one of the holes or openings filled by a bolt and key and the other hole open. Fig. 6 a side view of a key on a enlarged scale, and Fig. 7 an end view of the same.

Reference being had to the drawings and the designating characters thereon, the numeral 1 indicates a bolt, made in two parts, of merchantable rolled iron, preferably half round in transverse section, cut to proper length of the bolt required, assembled by placing one piece upon another with their flat sides 2, 2, adjacent and normally in engagement throughout their length and secured together between the ends of the bolt to prevent lateral displacement by a band 3, of metal, such as a piece of tubing, or by any other suitable means, such as a section of coiled wire or the like, which will engage the two parts of the bolt. The bolt thus constructed, presents two unwelded members in parallel planes normally in engagement with each other, and in which the longitudinal fibers of the metal are separated in the transverse center of the bolt from one end to the other, and the members of the bolt are separable at both ends thereof.

4 indicates a key or wedge, preferably made of malleable cast iron. The parts to be secured together, having been properly assembled, the bolt is inserted through the holes provided for the purpose, when the ends of the bolt are separated, the key 4 inserted between the members 5, 5, the key driven in and properly seated, and the members 5, 5, bent inward over and upon the key, by the use of a suitable swaging tool or implement for the purpose, applied simultaneously to both ends of the bolt.

The parts 5, 5, of the members 1, 1, of the bolt are separated or spread by the key 4, so that they bear against the inclined walls 8, 8 of the openings 6 in the fish-plates 7, and the walls form seats or bearings for that portion 9, 9 of the members 1, 1, which engage said walls, and afford resistance to the pressure exerted by the swaging-tool in bending and swaging the members 5, 5, at the extremities of the bolt. This fish plate 7 requires no change, and one is a duplicate of the other.

The key 4 is preferably provided with a head extending beyond the edges of the wedge and forming shoulders 10, 10, which rest upon the plates 7, while the body 11 of the key is of a width equal to the diameter of the openings 6 taken at a right angle to the elongation of the opening, or the in-

clined walls 8, 8. The shoulders 10, 10 resting on the plates 7, and the body of the key filling the opening 6 as described, assist in preventing the bolt turning in the joint.

The fish plates 7, 7, and the rail 12 are of standard construction, and the diameter and length of the bolts is regulated by the weight of rails to be secured.

Having thus fully described my invention, what I claim is—

1. An improved article of manufacture, a bolt composed of two parallel members normally in engagement with each other and secured together between the separable ends thereof.

2. An improved article of manufacture, a bolt composed of two parallel separate members, and separate means holding them together between their separable ends.

3. An improved article of manufacture, a bolt composed of two parallel separate members having flat adjacent sides, and a band between their ends for securing them together.

In testimony whereof I affix my signature, in presence of two witnesses.

JACOB J. SOUDER.

Witnesses:

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