No. 816,570.

PATENTED APR. 3, 1906.

J. D. EDMONDS.

TOOL FOR STRAIGHTENING BOLTS AND RETRACING THE THREADS THEREON.

APPLICATION FILED OCT. 28, 1904.

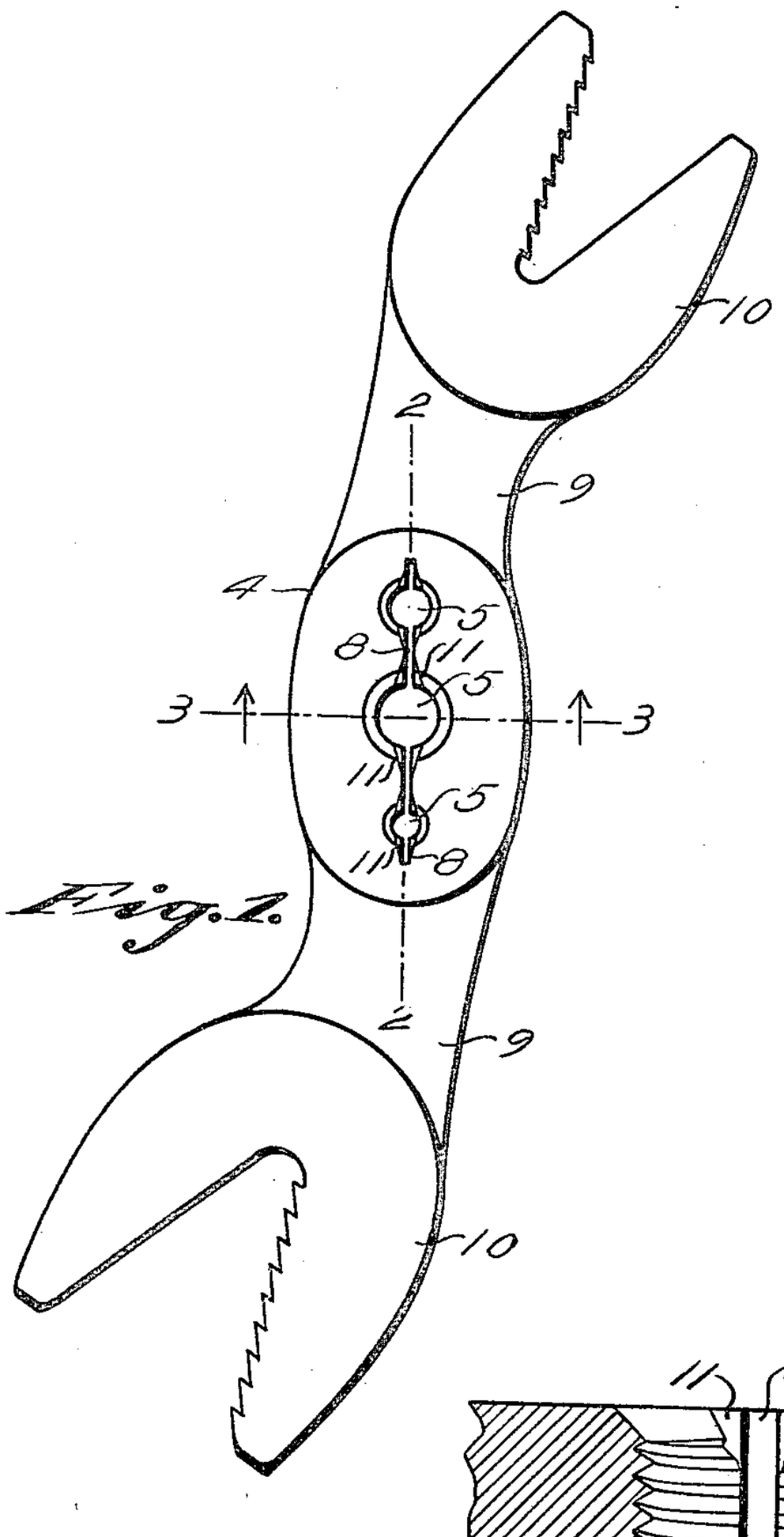

Fig. 1.

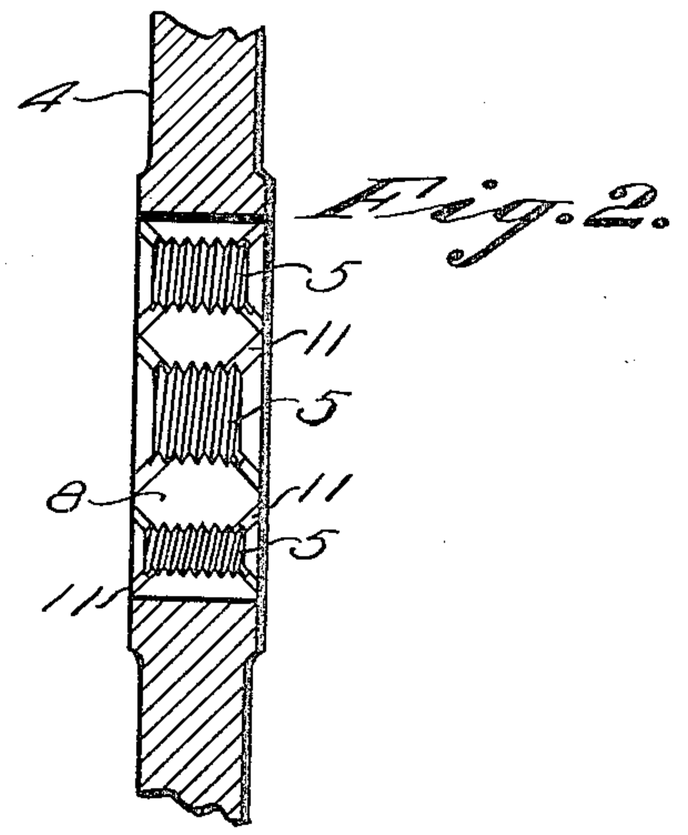

Fig. 2.

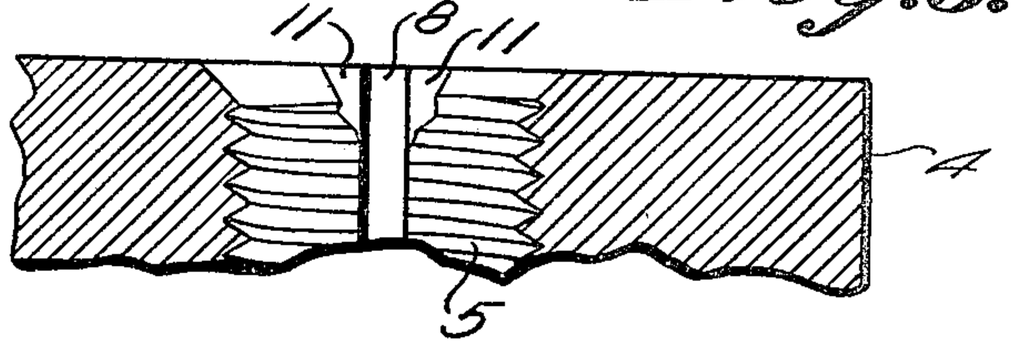

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

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TOOL FOR STRAIGHTENING BOLTS AND RETRACING THE THREADS THEREON.

No. 816,570. Specification of Letters Patent. Patented April 3, 1906.

Application filed October 28, 1904. Serial No. 230,336.

To all whom it may concern:

Be it known that I, JAY D. EDMONDS, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Tools for Straightening Bolts and Retracing the Threads Thereon, of which the following is a specification.

The main object of my invention is to provide an improved, simplified, and inexpensive form of thread-retracing die particularly useful for correcting the threads of bolts which have been bent or otherwise marred and distorted. I accomplish this object by the device shown in the accompanying drawings, in which—

Figure 1 is a plan view of a wrench provided with a thread correcting and retracing device constructed according to my invention. Fig. 2 is a section of the same on the line 2 2 of Fig. 1. Fig. 3 is an enlarged transverse section of the same on the line 3 3 of Fig. 1.

The device shown consists of a plate 4, of hardened steel, provided with transverse threaded apertures 5 and having a slit 8 extending through the same and intersecting each of the said apertures in a radial direction. The plate is provided with a pair of oppositely-disposed integral handles 9, which are preferably made in the form of wrench-heads 10, as shown. The apertures 5, together with the slot 8, form thread-cutting dies; but in order to make the insertion of a bolt into either end of the apertures easy and cause the die to follow accurately the old thread said apertures are countersunk at each end. The countersinking is of an angle considerably more acute than the angle between the faces of the threads and is of considerably greater diameter than the thread at the surface of the plate, so that the threads will be gradually cut away toward each face of the plate and disappear near such face. At the intersection of the slot 8 with the apertures 5 the corners of the first few threads near each surface of the plate are cut away or beveled back by a triangular cut 11, thus rendering the thread-cutting edges of the die somewhat blunt near the surface of the plate. This formation of the apertures and thread serves to compel the die to follow the old threads on the bolt and prevents any unnecessary cutting and consequent distortion of the threads. It will be readily understood that an ordinary screw-cutting die would cut a new thread sometimes only approximating the old thread and cutting away all parts which had been in any way displaced by the previous mutilation of the thread. By my form of tool the mutilated parts are forced back into their original position as nearly as possible, and a minimum amount of cutting is necessary to produce a serviceable thread.

In operation the device shown is run upon a mutilated bolt in the same manner as a nut or die and tends to follow the thread, first retracing the thread in exactly the same position as the thread was originally cut and forcing the bent threads to their normal position and then cutting away any remaining projecting parts of the distorted thread to form a more or less perfect thread.

Other features of the operation of the device shown will be readily understood from the foregoing description.

It will be seen that numerous details of the construction shown may be altered without departing from the spirit of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A tool of the class described, comprising a plate having a threaded aperture extending transversely through the same, the threads being of uniform height in the middle of the plate, and the plate being countersunk in one face so as to gradually reduce the height of the threads as they approach said face, said plate having therein a transverse slot intersecting said aperture, and the ends of said reduced threads being beveled at their intersection with said slot, at an angle both to the plane of said slot and to the axis of the aperture, substantially as described.

2. A tool of the class described comprising a plate having a threaded aperture extending transversely through the same, and having therein a transverse slot intersecting the

threads of said aperture, said plate being countersunk in one face so as to gradually reduce the height of the threads as they approach said face, and said plate being beveled at the intersection of said slot with the surface of the countersink, the bevel being at an angle to the surface of the countersink, being also at an angle to the plane of the slot and to the axis of the aperture, substantially as described.

Signed at Chicago this 25th day of October, 1904.

JAY D. EDMONDS.

Witnesses:
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