

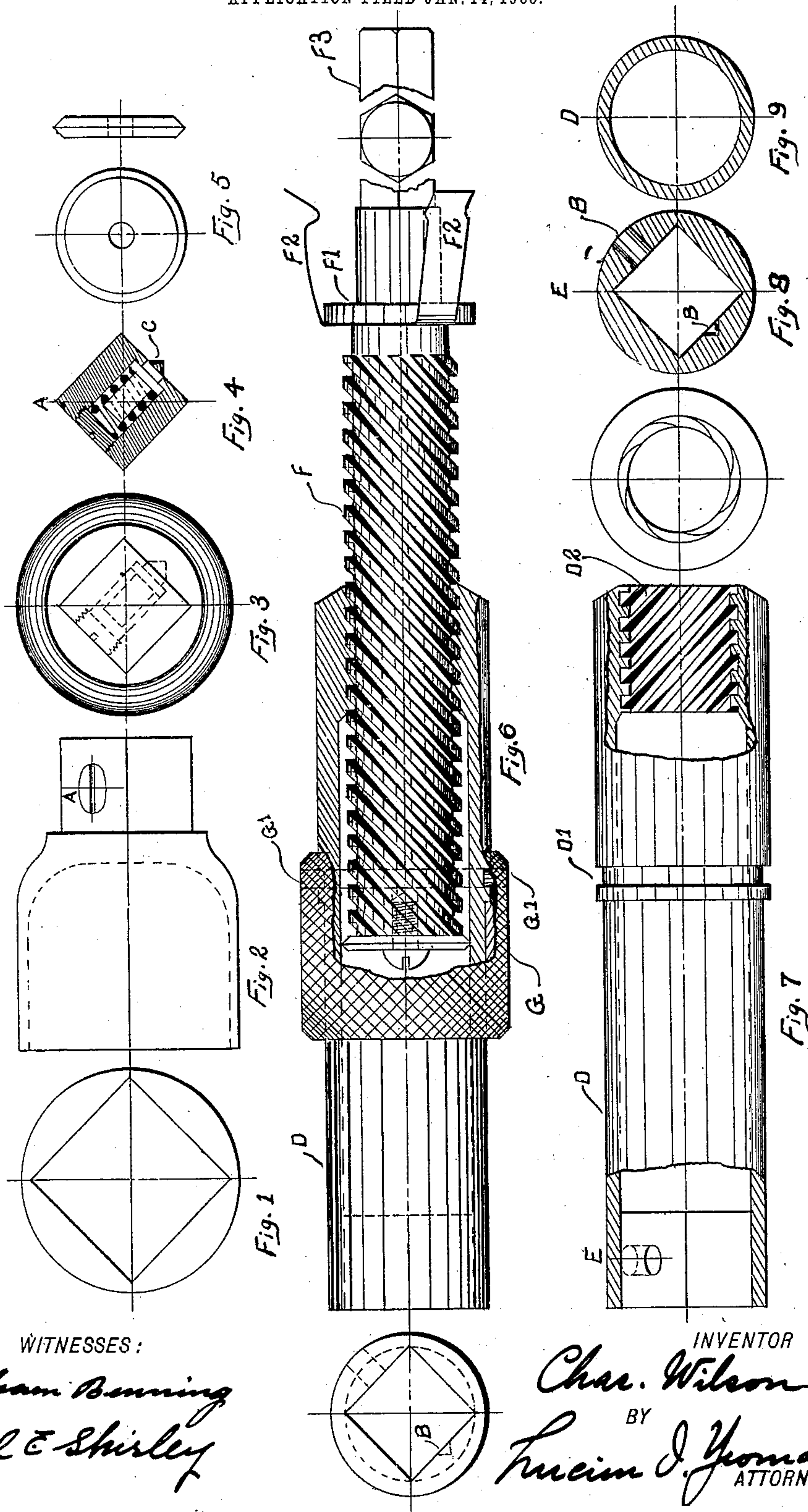
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PATENTED SEPT. 10, 1907.

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NUT AND BOLT TURNING ATTACHMENT FOR PNEUMATIC HAMMERS.

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No. 865,622.

Specification of Letters Patent.

Patented Sept. 10, 1907.

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To all whom it may concern:

Be it known that I, CHARLES WILSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented
5 certain new and useful Improvements in Nut or Bolt Turning Attachments for Pneumatic Hammers, of which the following is a specification.

The purpose of this invention is to provide a tool for use in turning screw threaded nuts or bolts, under
10 stress, and which may be operated by the action of any reciprocating stroke pneumatic hammer of usual construction.

In illustrating and describing this invention I have shown the tool as made for tightening right hand
15 threaded nuts and bolts and loosening left hand threads, but I do not limit myself to this peculiar adaptation, since it is obvious that, with a reversely inclined spiral driver, its purpose would be to loosen right hand, and tighten left hand threaded nuts and
20 bolts.

Figures 1, 2, and 3 show one of the interchangeable sockets which I provide, having its recessed end shaped to receive a nut or bolt head, and its shank adapted to be held in the socket forming the end of
25 the driven barrel. Fig. 4 is a section of the shank on the line A, showing the removable spring plug C which retains the shank in place in the driven barrel. Fig. 5 shows a retaining washer which prevents disengagement of the spiral driver and the driven barrel, later
30 referred to as H in Fig. 6. Fig. 6 is a general assembly of all the component parts of the device, with the exception of the tool holding socket. Fig. 7 is a detailed view of the driven barrel, both ends broken away, in section. Fig. 8 is a transverse sectional view through
35 the end portion of the barrel, and Fig. 9 is a transverse sectional view through the intermediate portion of the barrel.

Referring to Fig. 6, F³ is a shank which may be fitted to a pneumatic hammer.

40 F¹ is a retaining collar secured to the shank and furnishing support for the triple fingers F² which latch over the end of the hammer and secure the entire device in position.

F is an enlarged continuation of the shank, having
45 spiral grooves upon its periphery, adapted to engage and turn in the nut D².

D is a driving barrel having a nut D² at one end in engagement with the spiral grooves of the enlarged shank, and adapted to be rotated by the downward
50 movement of the shank. The opposite end of this driving barrel is recessed and squared to drive the interchangeable sockets, and has a recessed portion B

adapted to receive the spring plug C of the socket, thereby retaining it in place. The outer portion of the driving barrel is grooved as shown at D¹ in Fig. 7, and
55 the knurled collar G, shown in Fig. 6, is loosely mounted upon it, held in place against endwise movement by pins, G¹, fast in the collar and entering the groove D¹, free rotation of the driving barrel within the collar is possible. The retaining washer, shown in detail in
60 Fig. 5, is rigidly attached to the inclosed end of the driving shank, within the driving barrel, as shown in Fig. 6, and acts as a stop in either direction for the endwise movement of the spirally grooved driving shank, through the nut. 65

In operation, the tool is attached with the shank F³ within the socket of a pneumatic hammer, the proper socket for the nut or bolt to be turned is inserted in the opposite end of the driving barrel and the tool, held and guided by the hand of the operator, upon the
70 knurled collar, is applied to the work. Successive strokes of the pneumatic hammer upon the shank cause the driving barrel to revolve in the desired direction. Whenever the spirally grooved driving shank nears the limit of its inward movement, the tool
75 may be removed from the work and the barrel drawn out by means of the knurled collar, or the tool holding socket may be provided with a releasing ratchet which will permit the constant engagement of the work when returning the spiral driving shank to its
80 previous place.

I am aware that various devices using such spiral driving means are in use as drill driving tools and screw drivers, but I am not aware that any such application of a compressed air operated hammer to a spiral
85 surface, or inclined plane, as and for the purposes set forth, has been attempted.

Having fully described my invention, as illustrated, what I claim as new, and desire to secure by Letters
90 Patent is:

In a device of the character described, a barrel having at one end a screw threaded bore, an intermediate larger bore and at the other end a rectangular opening whose diagonal cross section approximates that of the cross
95 section of the bore, a screw-threaded shank fitting the screw-threaded part of the opening, a washer larger in diameter than the said screw-threaded part of the bore, detachably secured to the end of the shank and removable or replaceable when detached through the rectangular opening by being turned to the plane of a diagonal of
100 said opening.

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

CHARLES WILSON.

Witnesses:

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ROBT. OBERG.