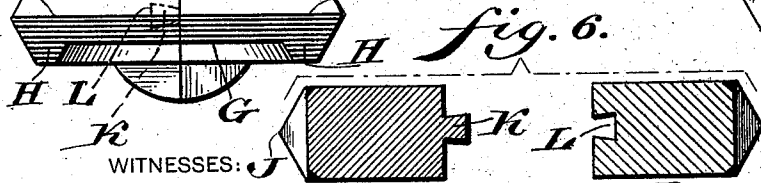
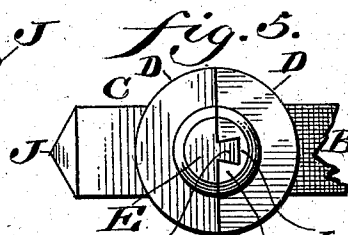
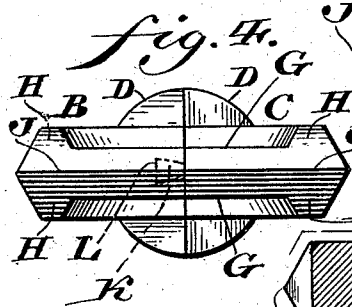
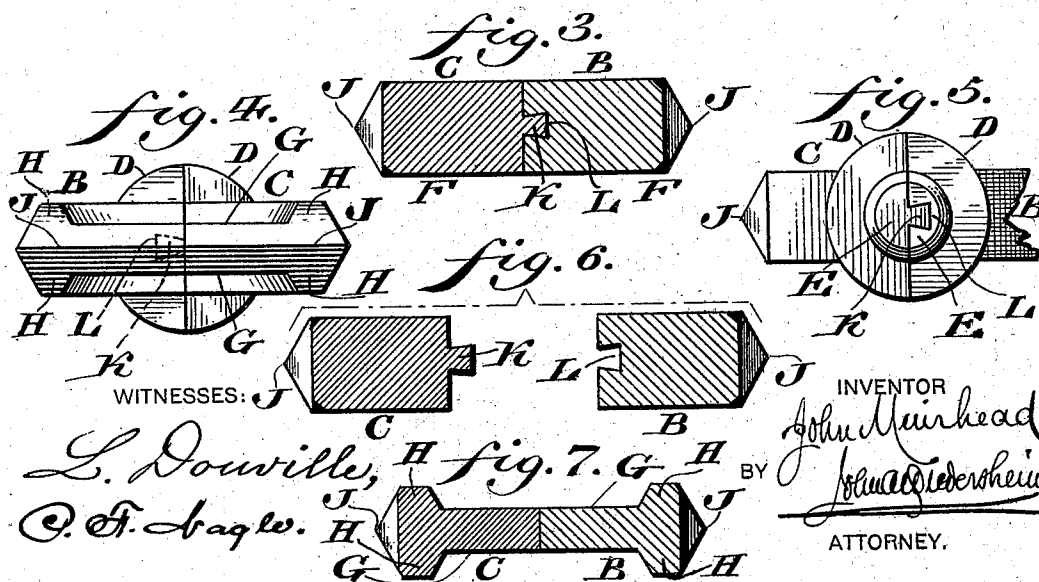
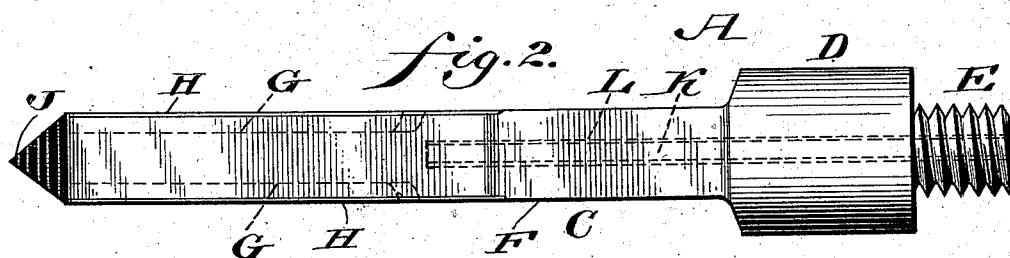
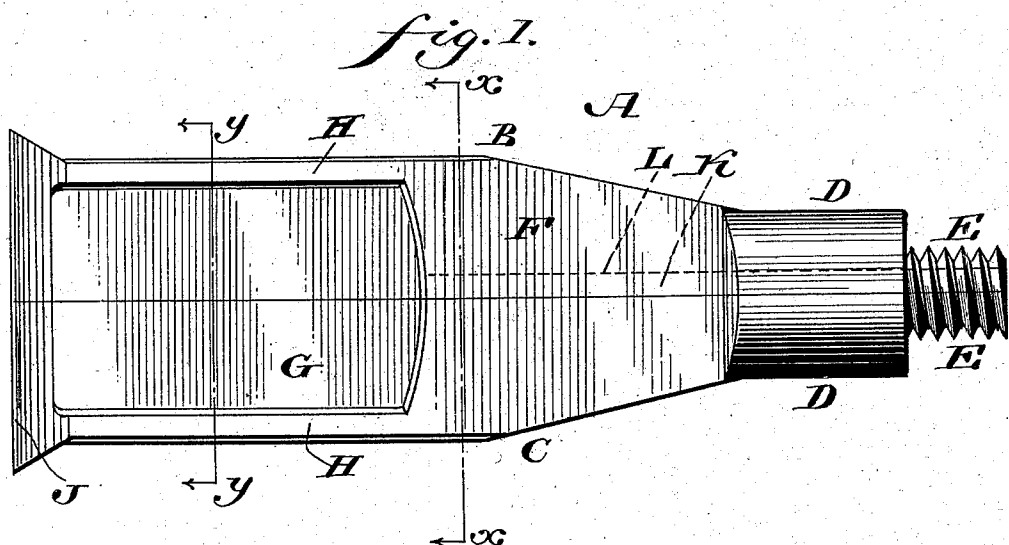


(No Model.)

J. MUIRHEAD.
BIT.

No. 562,479.

Patented June 23, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN MUIRHEAD, OF PITTSBURGH, PENNSYLVANIA.

BIT.

SPECIFICATION forming part of Letters Patent No. 562,479, dated June 23, 1896.

Application filed March 7, 1896. Serial No. 582,194. (No model.)

To all whom it may concern:

Be it known that I, JOHN MUIRHEAD, a citizen of the United States, residing at Pittston, in the county of Luzerne, State of Pennsylvania, have invented a new and useful Improvement in Bits or Drills, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of a bit for drilling, the same being made in sections which are locked together by a tongue and groove extending longitudinally of the abutting edges for a portion of their length, whereby provision is made for enabling a bit of large size to be readily manufactured and assembled, and in case of breakage or injury to one section of the same, the damaged member can be readily removed and replaced without necessitating the loss of the entire bit.

It further consists of novel details of construction, all as will be hereinafter set forth, and specifically pointed out in the claim.

Figure 1 represents a plan view of a bit embodying my invention. Fig. 2 represents a side view of the same. Fig. 3 represents a section on line *xx*, Fig. 1, viewed in the direction of the arrows. Fig. 4 represents an end view of the bit viewed from the cutting edge. Fig. 5 represents an end view of the bit viewed from the opposite or shank end. Fig. 6 represents a view similar to Fig. 3, showing the sections of the bit in detached position. Fig. 7 represents a section on line *yy*, Fig. 1, viewed in the direction of the arrows.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a bit, the same being composed of the sections B and C, of equal length, which are each provided with a head D, a shank E, the body portion F, and the tongue and groove K and L, common to the abutting faces of each section, it being noted that said tongue and groove extend longitudinally from the shank to about half-way the length of the bit, as indicated in dotted lines in Fig. 1.

The body portion F of the bit is provided with recesses G on either side, which extend from about midway the length of the bit to its cutting edge J, as will be understood from Figs. 1 and 2, the said recesses terminating a short distance from the edges of the bit,

thereby producing the raised portions or ribs H, which serve to greatly increase the strength of the bit, as will be understood from Figs. 4 and 7.

The manner of assembling the parts is as follows: The sections B and C are formed separately and provided with the tongue and groove K and L, respectively, the extent of which will be readily understood from Figs. 1 and 2, the same extending from the shank E to near the beginning of the recess G, it being noted that the abutting faces from the termination of the tongue and groove to the cutting edge J are devoid of locking devices, although of course it will be evident that said tongue and groove may extend throughout the length of the bit, if desired. The said sections B and C having been assembled, as indicated in Fig. 3, and locked in position by means of the tongue and groove, are then finished up, the head D being turned to the requisite diameter and the shank E provided with threads thereon for the purpose of engagement with a suitable socket.

It will thus be seen from the foregoing that an exceedingly strong, durable, and effective bit is produced, and one which is not liable to break or become damaged under any conditions, it being furthermore apparent that when one section becomes broken or damaged in any way the same can be removed and a new one substituted in place thereof at comparatively slight expense, as compared with the loss of the whole bit, as would be the case if the same were made solid or integral as heretofore.

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

A bit consisting of the sections B and C, the same having a head D thereon, the shank E, the body portion F, the recessed opposite faces G, the strengthening-ribs H, and the cutting edge J, the abutting faces of said sections being provided with a locking device composed of a tongue and groove K and L extending from said shank end to near the center of the body thereof, substantially as described.

JOHN MUIRHEAD.

Witnesses:

F. H. KYTE,
P. A. GIBBONS.