

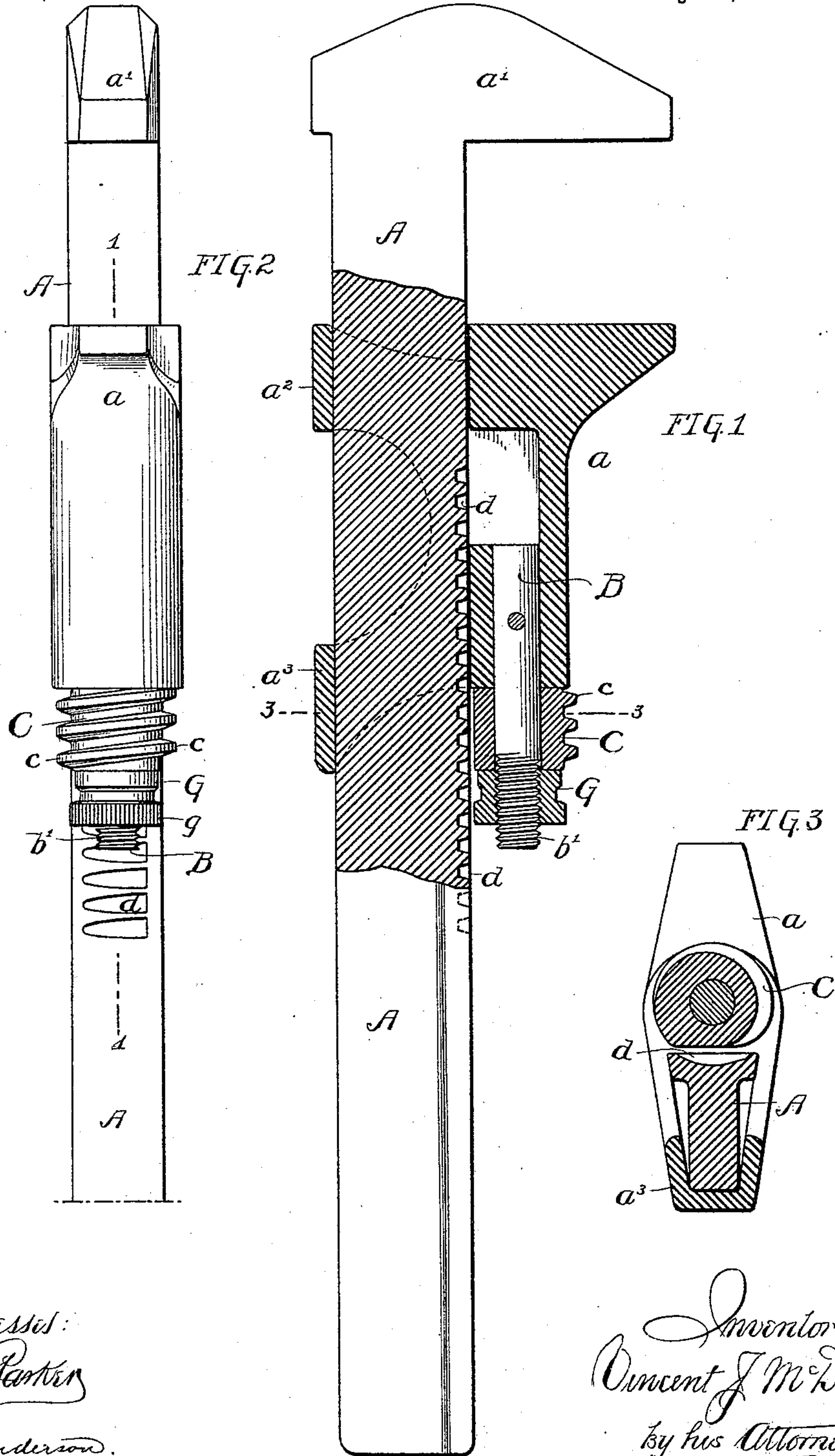
(No Model.)

2 Sheets—Sheet 1.

V. J. McDONNELL.
MONKEY WRENCH.

No. 538,841.

Patented May 7, 1895.



Witnesses:
Jno E. Parker
J. Henderson.

Inventor
Vincent J. McDonnell
by his Attorney,
Homer Pettit.

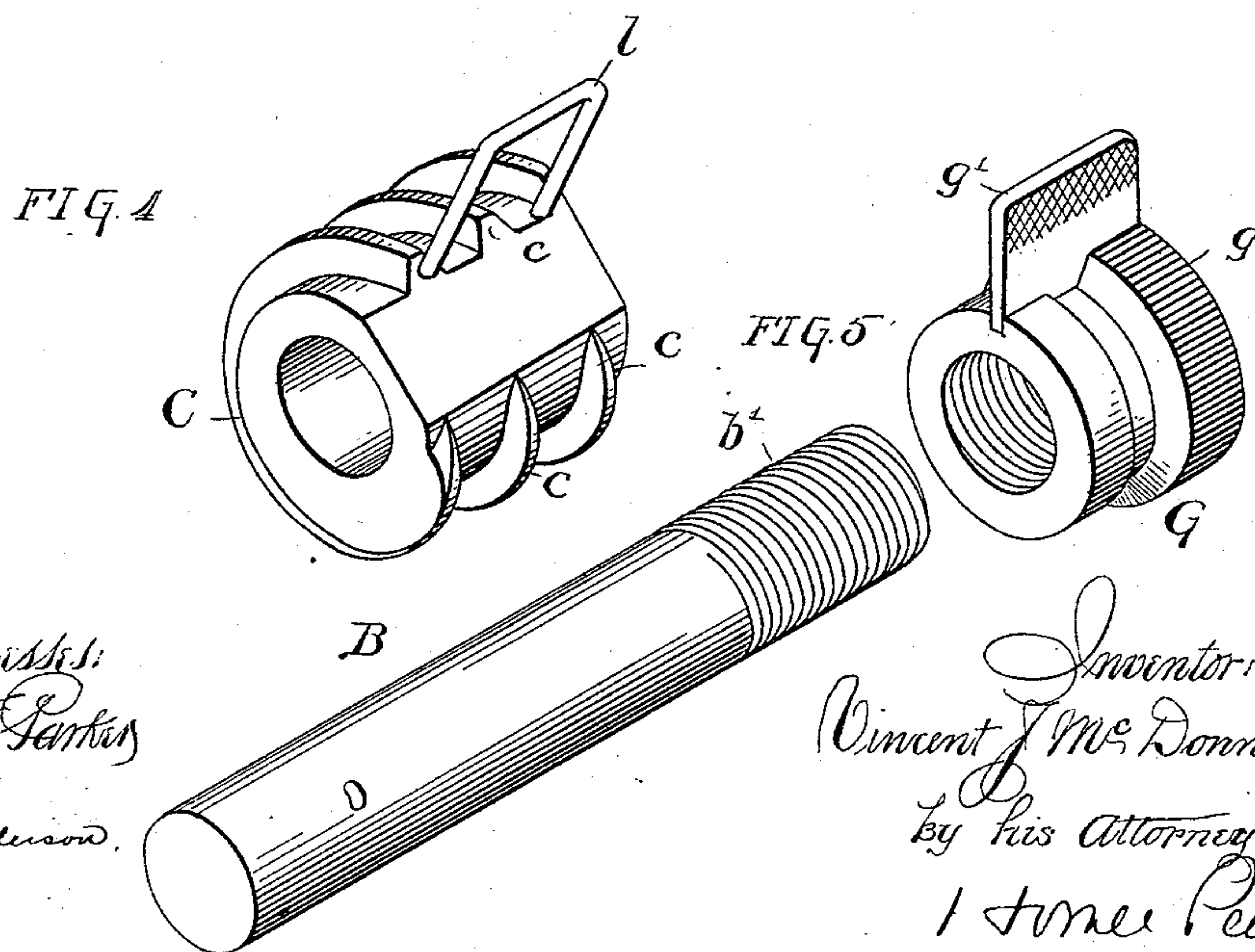
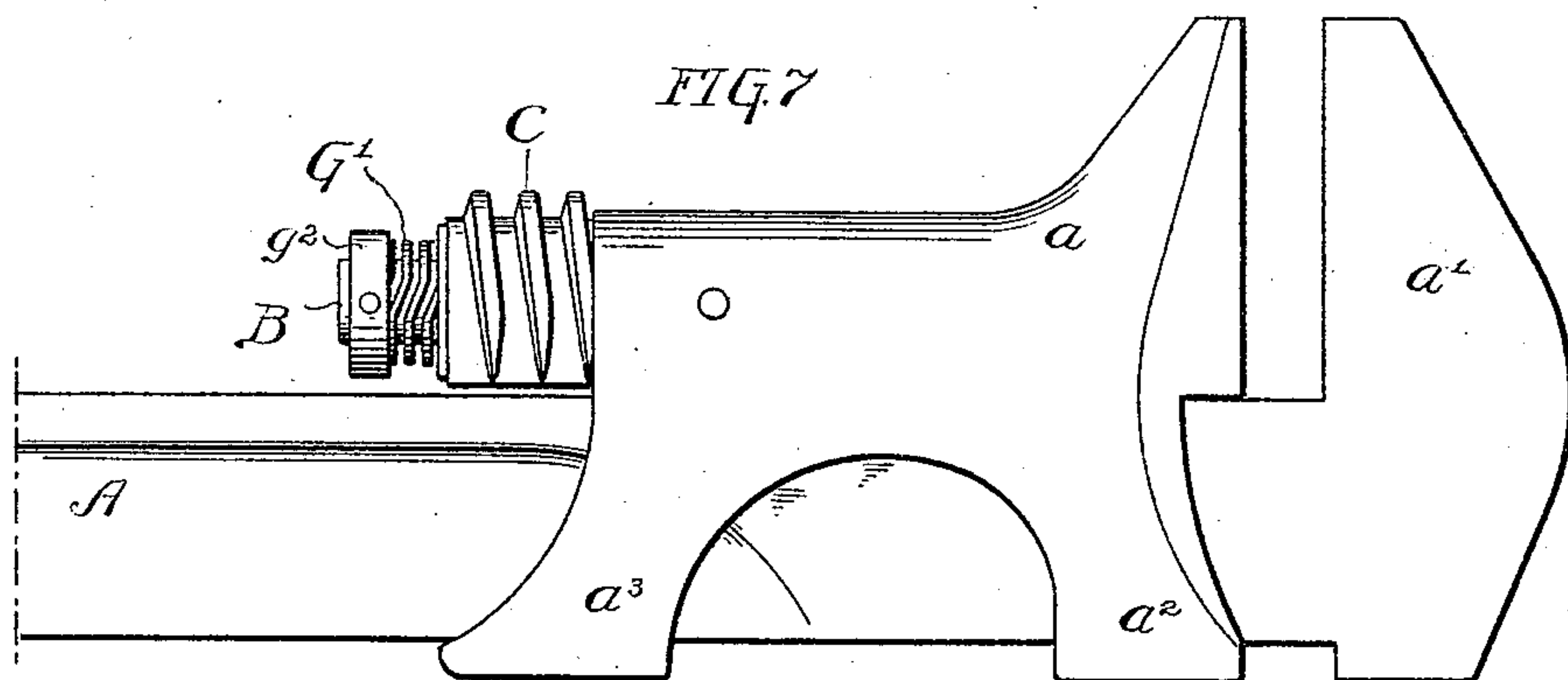
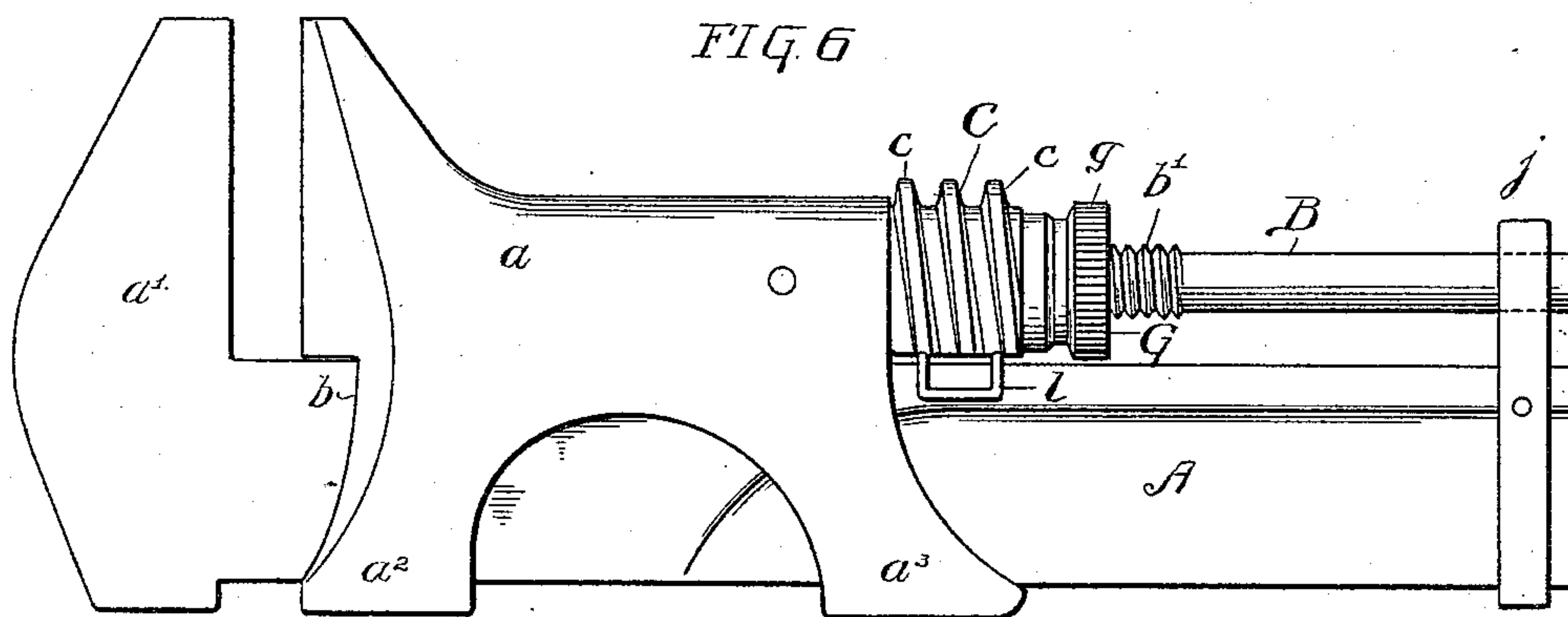
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J. Homer Pettie

UNITED STATES PATENT OFFICE.

VINCENT J. McDONNELL, OF PHILADELPHIA, PENNSYLVANIA.

MONKEY-WRENCH.

SPECIFICATION forming part of Letters Patent No. 538,841, dated May 7, 1895.

Application filed February 13, 1895. Serial No. 538,259. (No model.)

To all whom it may concern:

Be it known that I, VINCENT J. McDONNELL, a citizen of the United States, and a resident of the city of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Monkey-Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in that class of wrenches in which the movable jaw slides freely on the main shank of the wrench and when adjusted to the desired position is locked by a partial turn of a mutilated screw engaging in threads provided in the main shank.

The principal object of my invention is to provide for the positive locking of the mutilated screw in the threads of the shank, so as to prevent movement of the sliding jaw when it has been adjusted to the desired position, and a further object is to improve, simplify and cheapen the construction of such wrenches.

In the accompanying drawings, Figure 1 is a sectional elevation on the line 1 1, Fig. 2, of a wrench constructed in accordance with my invention. Fig. 2 is a plan view of the same. Fig. 3 is a transverse sectional view on the line 3 3, Fig. 1. Fig. 4 is a detached perspective view of the mutilated screw and its spindle. Fig. 5 is a similar view of the locking-nut for holding the mutilated screw in position. Fig. 6 is an elevation of the wrench, illustrating a slight modification; and Fig. 7 is a similar view of the opposite side of the wrench, illustrating a further modification.

Referring to the drawings, A represents the main shank of the wrench, provided at one end with a fixed jaw, a' , the shank being of T-shape in cross section, as shown more clearly in Fig. 3, to secure the requisite strength. Upon the main shank, A, is the movable jaw a , adapted to slide freely thereon and to be locked to the main shank in any position to which it may be adjusted. The jaw, a , is held in place upon the shank by front and rear guiding loops a^2 , a^3 , the nose of the sliding jaw being immediately over the

bearing of the front loop which latter is partially cut away at b , to permit of the closer adjustment of the two jaws of the wrench to the nut. In the rear face of the movable jaw is rigidly secured a spindle, B, threaded at b' , for a portion only of its length. The rear end of the spindle may be supported in a fixed guide, j , in which it may freely slide as the jaw, a , is moved to and fro, as shown in Fig. 6, or it may be supported at the jaw end alone as shown in Fig. 1.

Mounted loosely on the fixed spindle, B, is a mutilated screw, C, the threads, c , of which are adapted to engage with threads, d , formed in one face of the shank, A, the screw being provided with a radially projecting tongue or lever, l , by which the screw may be readily turned and tightened in position, the tongue or lever, l , being removable, if desired. The threads, c , of the mutilated screw are tapered down at the point where they first engage the threads d , in the shank, A, and the threads, d , or the spaces between them are correspondingly shaped so that there will be no danger of the threads of the screw coming into direct contact with the threads of the shank, the spaces between the latter being so wide and the entering points of the threads, c , being so sharp or thin as to insure the entering of the threads of the screw in the spaces between the teeth, d , of the shank. To prevent any disengagement of the threads of the screw and shank and to prevent any rocking or loose play at the rear of the sliding jaw the loop, a^3 , is projected for a sufficient distance to form a bearing on the rear of the shank at a point immediately opposite the mutilated screw.

On the threaded portion of the spindle, B, is a jam nut, G, having a milled or roughened periphery, g , so that it may be readily turned and, if necessary, being provided with a radially projecting tongue or lever, g' , as shown in Fig. 5, which may be readily removed when necessary.

In operation the flat face of the mutilated screw, C, is normally facing the shank, A, and the jaw, a , may be readily and rapidly moved on the shank to any desired position to engage with a nut or other object. After the movable jaw has been adjusted the screw, C, is

turned by means of the lever, *l*, or by hand, and the jaws tightened. The jam nut *G*, is then turned until its forward face engages with the rear face of the mutilated screw and
 5 binding thereon holds the screw firmly in position and prevents any movement of the jaw, *a*, in either direction. This feature is especially valuable where the wrench is to be used in removing and holding a nut for any length
 10 of time, or where the wrench is to be used on a large number of nuts of the same size, as the jaws, once adjusted, may be firmly locked and held in the desired position.

In Fig. 7 I have illustrated a modification
 15 in which a spring, *G'* is employed in lieu of the jam nut, *G*, the spring being compressed between the rear face of the mutilated screw, *C*, and a fixed collar or ring, *g*², on the rear end of the spindle, *B*, so that while the screw
 20 may be turned by the application of some little force the friction produced by the bearing of the spring upon its rear face will prevent any accidental turning, and the screw will remain in its adjusted position.

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

1. The combination of the threaded shank having a fixed jaw, a movable jaw guided on
 30 the shank, a fixed spindle provided with screw threads for a portion of its length carried by said movable jaw, a mutilated screw free to turn on said spindle and adapted to engage in the screw threads of the shank, and a jam
 35 nut adapted to the threaded portion of the said spindle, substantially as specified.

2. The combination of the shank, *A*, having screw threads, *d* and carrying the fixed jaw, *a'*, a sliding jaw, *a*, a spindle, *B*, rigidly secured
 40 to said sliding jaw, screw threads, *b*, provided on said spindle for a portion only of its length, a mutilated screw *C*, mounted on said spindle and adapted to engage the screw threads *d*,

and a jam nut, *G*, on the thread's portion of said spindle, substantially as specified. 45

3. The combination of the threaded shank of T-shape in cross section, a fixed jaw, *a'*, secured to or formed integral with said shank, a movable jaw *a*, having loops, *a*² and *a*³, surrounding and embracing the shank, a fixed
 50 spindle, *B*, carried by the jaw, *a*, a mutilated screw, *C*, mounted on said spindle at a point opposite the loop, *a*³, screw threads, *b'*, provided on said spindle and a jam nut adapted to the threaded portion of said spindle, substantially as specified. 55

4. The combination of the threaded or toothed shank having a fixed jaw at its outer end, a movable jaw guided on the shank, a fixed rearwardly extending spindle carried
 60 by said movable jaw, a mutilated screw free to turn on said spindle and adapted to engage in the teeth of the shank to effect the movement of the movable jaw and means for jamming the mutilated screw against the end of
 65 the movable jaw, substantially as described.

5. The combination of the shank, *A*, having on its upper face a series of grooves forming threads, *d*, a fixed jaw, *a'*, secured to or formed integral with the shank, *A*, a sliding jaw, *a*, a
 70 spindle, *B*, rigidly secured to the sliding jaw, screw threads, *b'*, provided on said spindle for a portion only of its length, a mutilated screw, *C*, having a series of threads, *c*, adapted to engage in the threads, *d*, said threads, *c*, being
 75 tapered down at the point where they first engage the threads, *d*, and a jam nut, *G*, on the threaded portion of said spindle, substantially as specified.

In witness whereof I have hereunto set my
 hand this 5th day of February, A. D. 1895. 80

VINCENT J. McDONNELL.

Witnesses:

HORACE PETTIT,
 JNO. E. PARKER.