

No. 725,103.

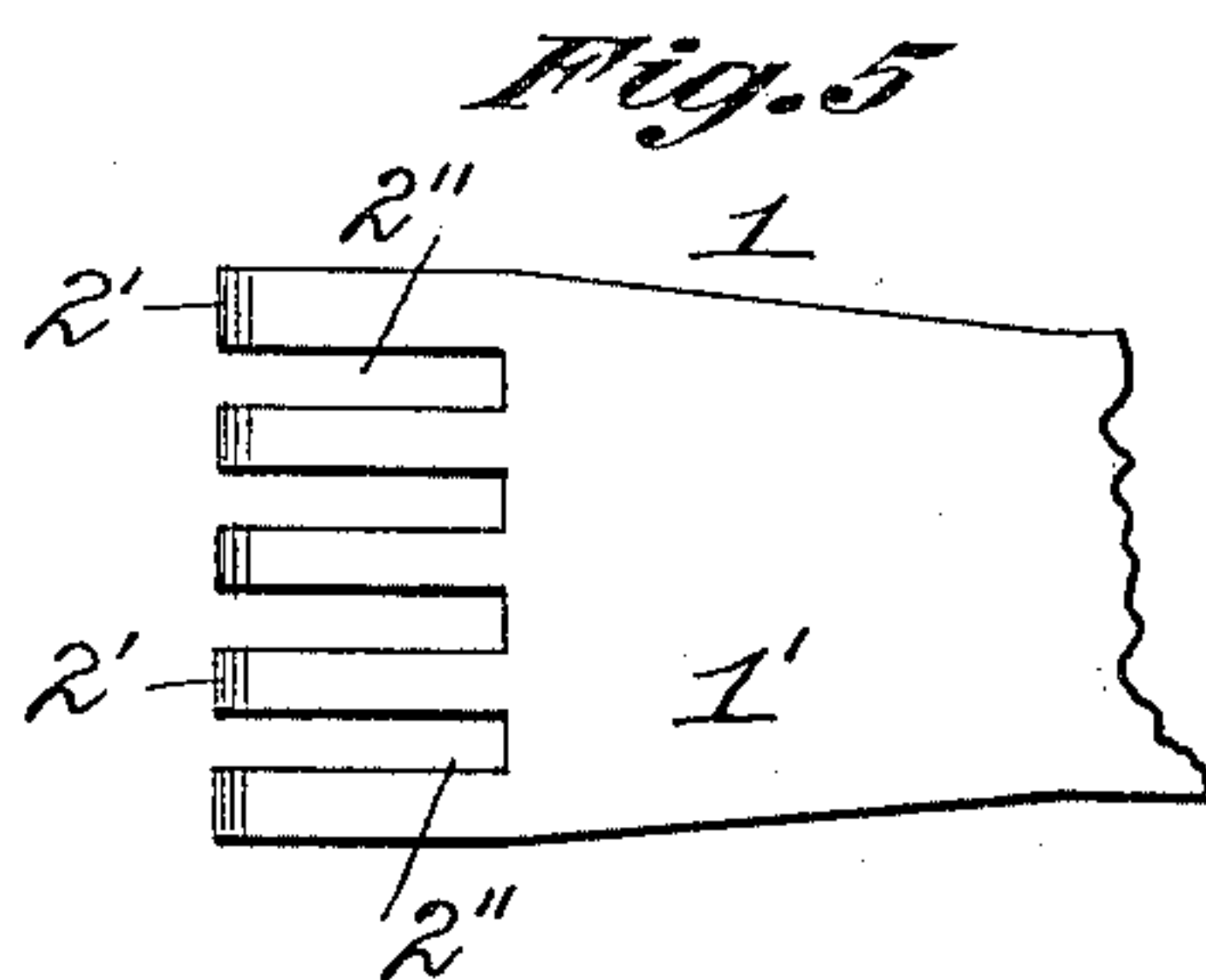
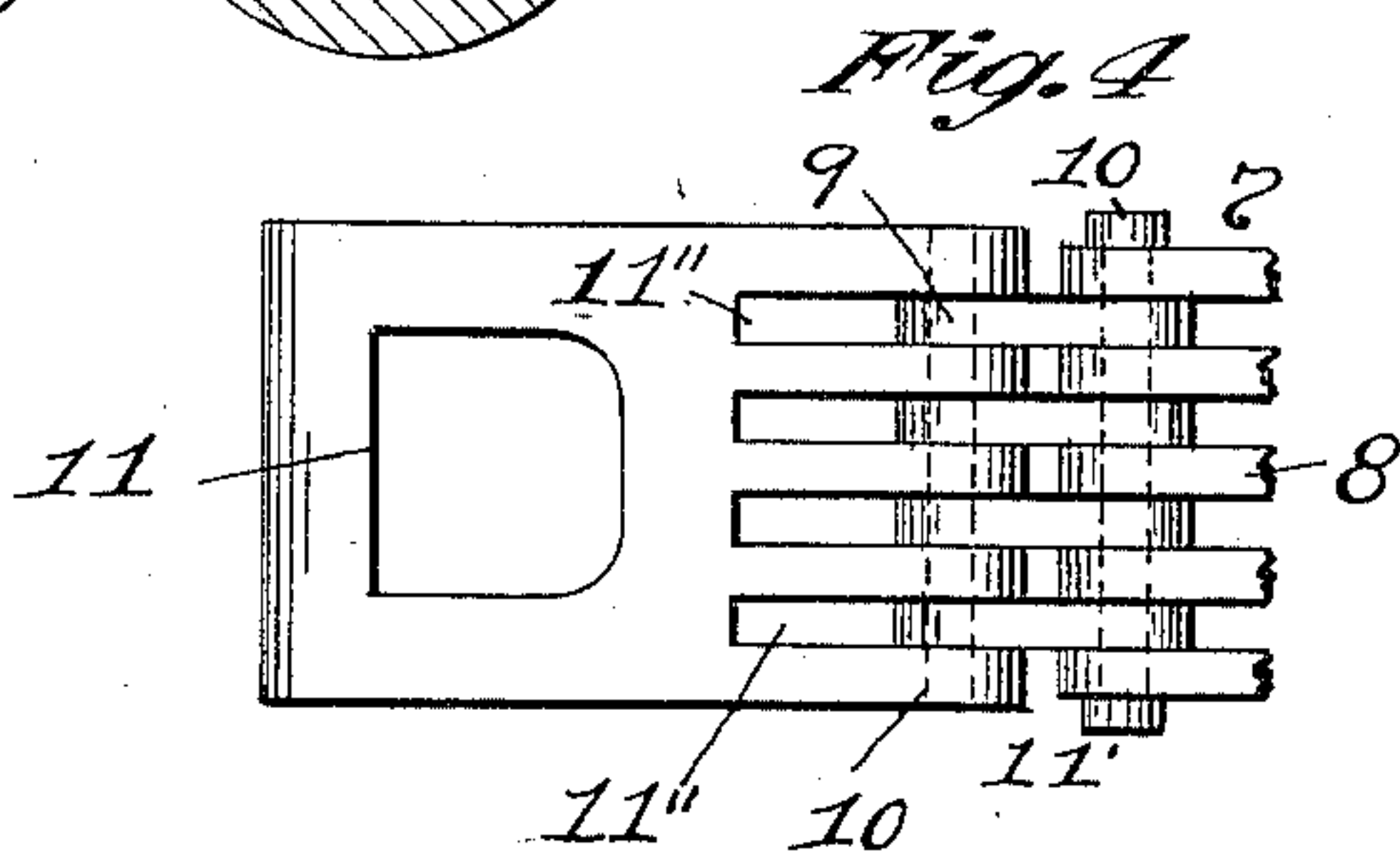
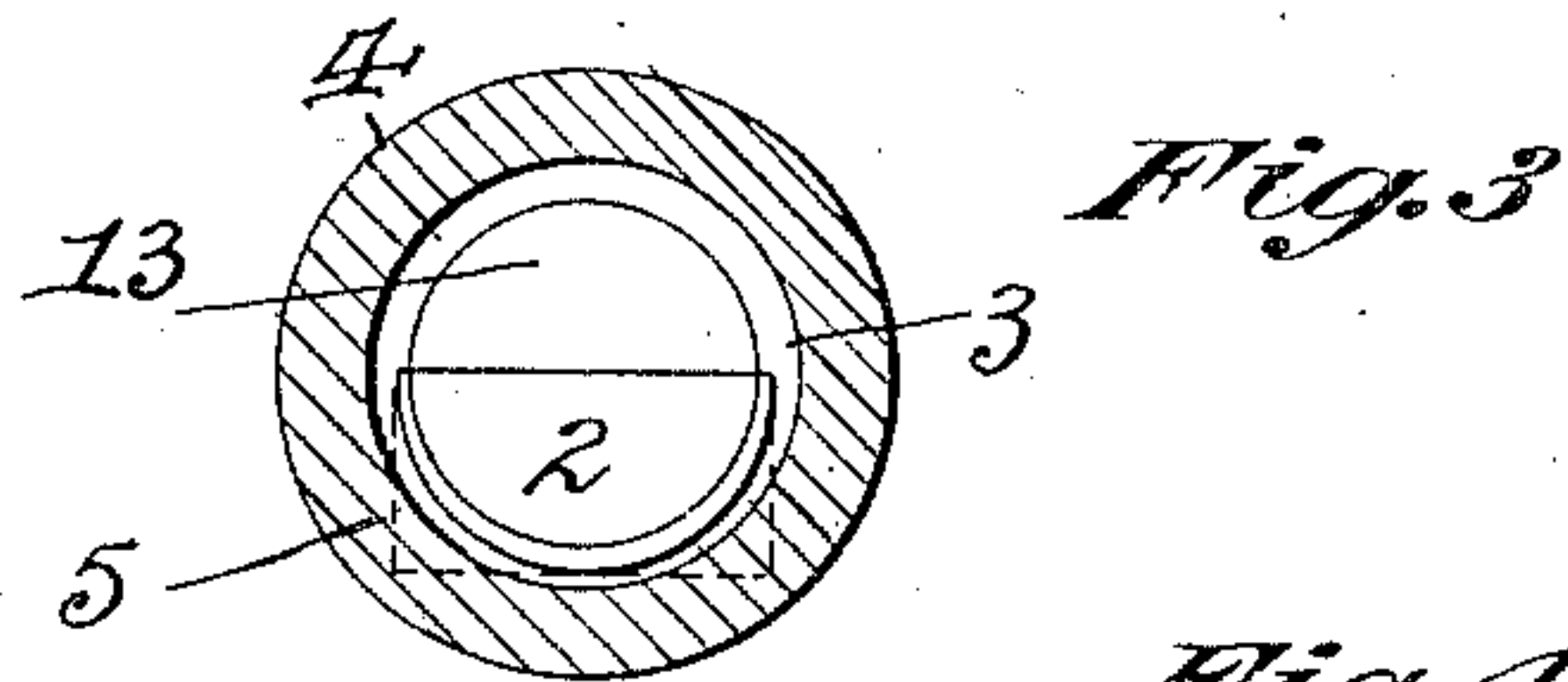
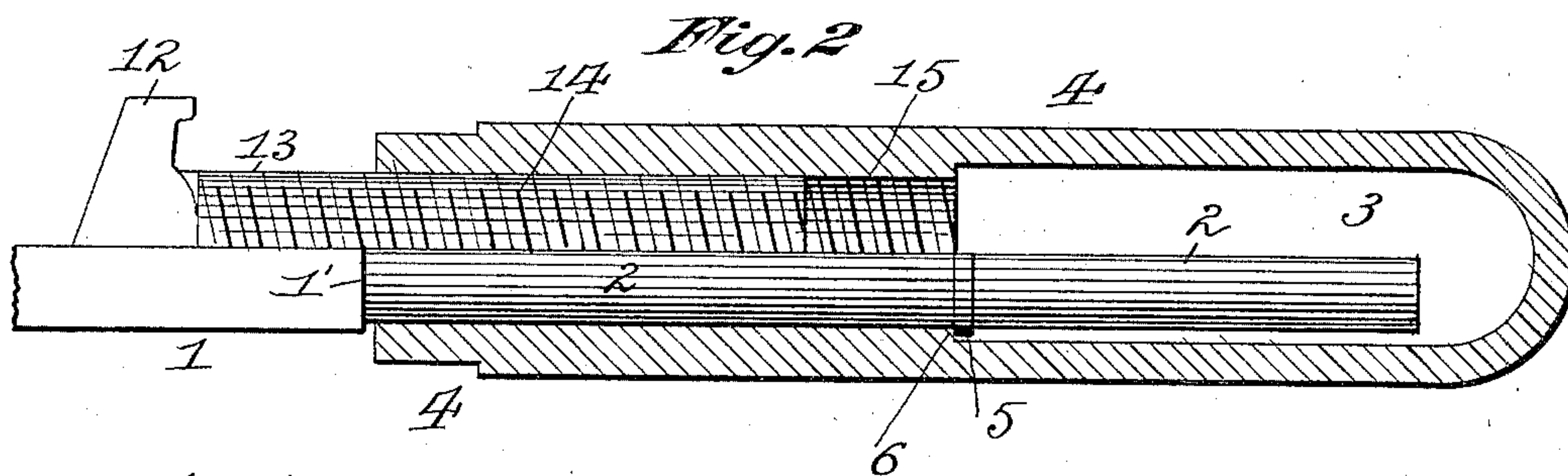
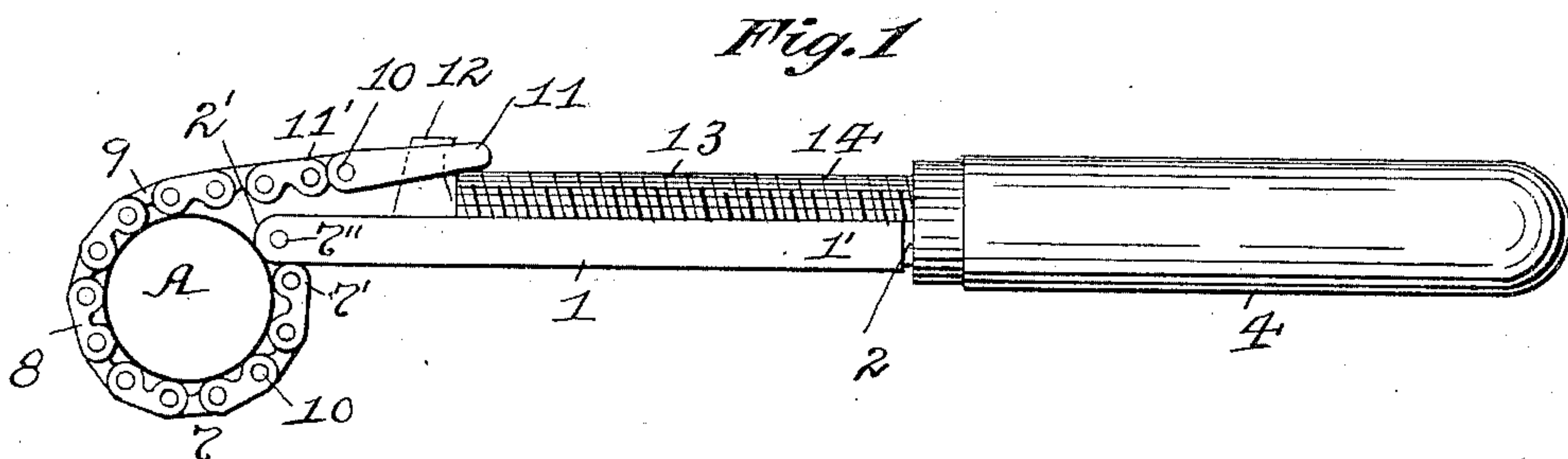
PATENTED APR. 14, 1903.

R. J. LOCKHART.

WRENCH.

APPLICATION FILED JAN. 8, 1903.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

RICHARD JAMES LOCKHART, OF PITTSBURG, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 725,103, dated April 14, 1903.

Application filed January 8, 1903. Serial No. 138,208. (No model.)

To all whom it may concern:

Be it known that I, RICHARD JAMES LOCKHART, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have
5 invented a new and useful Improvement in Wrenches; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to wrenches, and has
10 special reference to what are known as "chain" wrenches.

The object of my invention is to form a cheap and simple construction of wrench which can be applied to nuts, pipes, &c., and
15 which will prevent the marring or nicking of the objects to which the same is applied, as well as one which can be easily and quickly connected to different-size objects and one which can be applied to such objects in narrow spaces or places, such as corners, &c.

My invention consists, generally stated, in the novel arrangement, construction, and combination of parts, as hereinafter more specifically set forth and described, and particularly
25 pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved wrench, I will describe the same more fully, referring to the accompanying
30 drawings, in which—

Figure 1 is a side view of my improved wrench. Fig. 5 is a plan view of the outer end of the supporting-bar. Fig. 4 is a plan view of the end of the chain carrying the loop.
35 Fig. 2 is a longitudinal central section of the handle, showing the other parts in full lines; and Fig. 3 is a cross-section of such handle, showing the locking means.

Like symbols of reference herein indicate
40 like parts in each of the figures of the drawings.

As illustrated, 1 represents the supporting-bar, the inner end 2 of which is adapted to be held within the hollow portion 3 of the
45 handle 4 by means of a pin or shoulder 5 on said inner end 2 fitting against a flange or shoulder 6, formed in said hollow portion 3, as shown in Figs. 2 and 3. The supporting-bar 1 is flat and of rectangular shape, and the
50 outer or portion beyond the inner end 2, with-

in the handle 4, is enlarged or widened, as at 1', while the end of such outer portion 1' is of circular or rounded form, as at 2'. Within the slats 2" of this rounded end 2' is pivoted one end 7' of a chain 7, as at 7'', which chain
55 7 is of the ordinary construction of alternate solid and hollow links 8, which are formed from the short plate-sections 9 and pivoted together at their ends by the pivot-pins 10. The other end 11' of the chain 7 has pivoted
60 to the end pivot-pin 10, through its slots 11'', the loop 11, which is adapted to fit over and catch onto a hook 12, formed on the end of the screw-bar 13, which bar 13 is of semicircular shape in cross-section and is adapted to
65 rest upon and slide along the supporting-bar 1 by means of the screw-threads 14, formed on said bar 13, engaging with a threaded socket 15, formed in the hollow portion 3 of the handle.
70

The use and operation of my improved wrench are as follows: The parts being assembled as shown in Fig. 1, and it is desired to apply the wrench to a pipe, nut, or other object, all that is necessary is to place loop 11 and
75 the chain 7 over and around the object, such as the pipe A, (shown in Fig. 3,) and connect the loop 11 to the hook 12 on the bar 13. After this is done the operator by turning the handle 4 in one direction can screw out
80 the bar 13 by means of the threads 14 on said bar 13 engaging the threaded socket 15 in said handle 4, which will allow said bar 13 to pass or slide along the supporting-bar 1 to a position thereon and cause said chain to
85 tighten around the pipe A. The continued tightening of said chain 7 will cause the same to bind around said pipe and against the rounded end 2' on the bar 1, as shown in Fig. 3, thereby enabling such wrench to grip or
90 bite on said pipe A and permit the same to perform its work in holding said pipe or other object for any desired purpose. The wrench can be released and removed from said pipe A by the operator turning the handle 4 in the
95 other direction from that above described, which will cause the screw-bar 13 to be moved back along the bar 1 and fed into the handle 4 by the threads 14 thereon engaging with the socket 15 in said handle 4, thereby releasing
100

said chain 7, after which the loop 11 can be lifted off the hook 12 on said bar 13 and the said loop and chain 7 removed from around the pipe A.

- 5 When it is desired to remove or separate the parts of my improved wrench for the purpose of packing, shipping, or any other purpose desired, all that is required is to turn the handle 4 in the proper direction, so that
10 the screw-bar 13 is screwed entirely out of its threaded socket 15 and removed from the supporting-bar 1. The bar 1 can then be raised so that the shoulder 5 at its inner end 2' is free from the shoulder 6 in said handle 4 and said
15 bar 1, carrying the chain 7, removed from said handle. The parts can be rearranged in position by placing the inner end 2' of the bar 1, carrying the chain 7, within the hollow portion 3 of the handle 4 a sufficient distance,
20 so that the shoulder 5 thereon passes beyond and comes in contact with the shoulder 6 in said handle, after which the screw-bar 13 can be placed on said bar 1 and screwed into the threaded socket 15 in the handle 4 by its
25 threads 14, when the parts are ready and in position for use.

It will thus be seen that my improved wrench is capable of easy and rapid adjustment to its work and being also capable of
30 separation enables the same to be packed or carried conveniently and within a comparatively small space. By the use of the same in connection with nicked or other polished surfaces of pipe-nuts, &c., it will also
35 be seen that such objects can be held or turned as desired without liability of injury to the surfaces thereof, and in order to insure all possible liability of injury to such nicked or other polished surfaces a strip of paper,
40 linen, or other cloth can be placed around such surface and between the parts of the wrench, so that the binding or gripping action will come upon such paper, cloth, &c.

The wrench is capable of a variety of uses and being made of few parts will not be liable to get out of order or become broken in use or handling.

Various modifications in the construction and design of the various parts of my improved wrench may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

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

- 55 1. A wrench comprising a handle, a supporting-bar extending out from said handle, a screw-bar connected to said handle and adapted to slide on said supporting-bar, and a chain having one end connected to the outer
60 end of said supporting-bar and its opposite end connected to said screw-bar, whereby a movement of the latter will cause the object to be held or turned to be gripped between said chain and the outer end of the support-
65 ing-bar.

2. A wrench comprising a handle, a sup-

porting-bar extending out from said handle, a screw-bar connected to said handle and adapted to slide on said supporting-bar, and a chain having one end pivoted to the outer
70 end of said supporting-bar and its opposite end detachably connected to said screw-bar, whereby a movement of the latter will cause the object to be held or turned to be gripped between such chain and the outer end of the
75 supporting-bar.

3. A wrench comprising a handle, a supporting-bar extending out from said handle and provided with a rounded outer end, a screw-bar connected to said handle and adapt-
80 ed to slide on said supporting-bar, and a chain having one end pivoted to the rounded outer end of said supporting-bar, and its opposite end detachably connected to said screw-bar, whereby a movement of the latter will cause
85 the object to be held or turned to be caught between such chain and the rounded outer end of the supporting-bar.

4. A wrench comprising a handle, a supporting-bar extending out from said handle
90 and provided with a rounded outer end, a screw-bar connected to said handle and adapted to slide on said supporting-bar and provided with a hook thereon, and a chain having one end pivoted to the rounded outer end
95 of said supporting-bar and its opposite end detachably connected by a loop to the hook on said screw-bar, whereby a movement of the latter will cause the object to be held or turned to be caught between such chain and
100 the rounded outer end of the supporting-bar.

5. A wrench comprising a handle having a hollow portion therein, a supporting-bar extending out from said handle and provided with a rounded outer end, a screw-bar on said
105 supporting-bar adapted to engage with the hollow portion in said handle, a hook on said screw-bar, and a chain having one end pivoted to the rounded outer end on said supporting-bar and its opposite end detachably
110 connected by a loop to the hook on said screw-bar, whereby a movement of the latter will cause the object to be held or turned to be caught between said chain and the rounded outer end on the supporting-bar.
115

6. In a wrench, the combination of a handle, having a hollow portion therein, a supporting-bar fitting within said hollow portion, a screw-bar on said supporting-bar, and means within the hollow portion of said handle for
120 detachably connecting said supporting-bar to said handle.

7. In a wrench, the combination of a handle, having a hollow portion therein, a supporting-bar fitting within said hollow portion,
125 a screw-bar on said supporting-bar, a shoulder within said hollow portion, and a shoulder on said supporting-bar adapted to come in contact with said first-named shoulder for detachably connecting said supporting-bar to
130 said handle.

8. In a wrench, the combination of a han-

dle, having a hollow portion therein, a supporting-bar fitting within said hollow portion, a screw-bar on said supporting-bar adapted to engage with a threaded socket in said hollow portion, a shoulder within said hollow portion, and a shoulder for detachably connecting said supporting-bar to said handle.

In testimony whereof I, the said RICHARD JAMES LOCKHART, have hereunto set my hand.

RICHARD JAMES LOCKHART.

Witnesses:

J. N. COOKE,
HARRY HATTON.