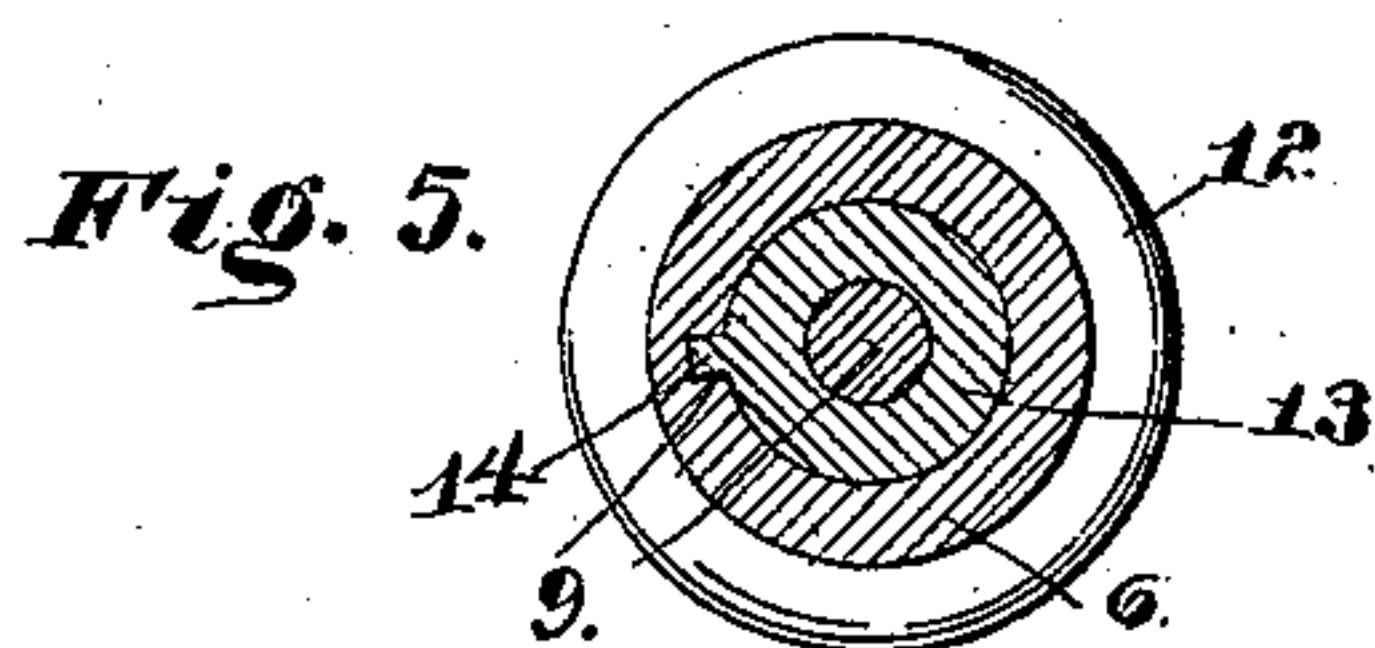
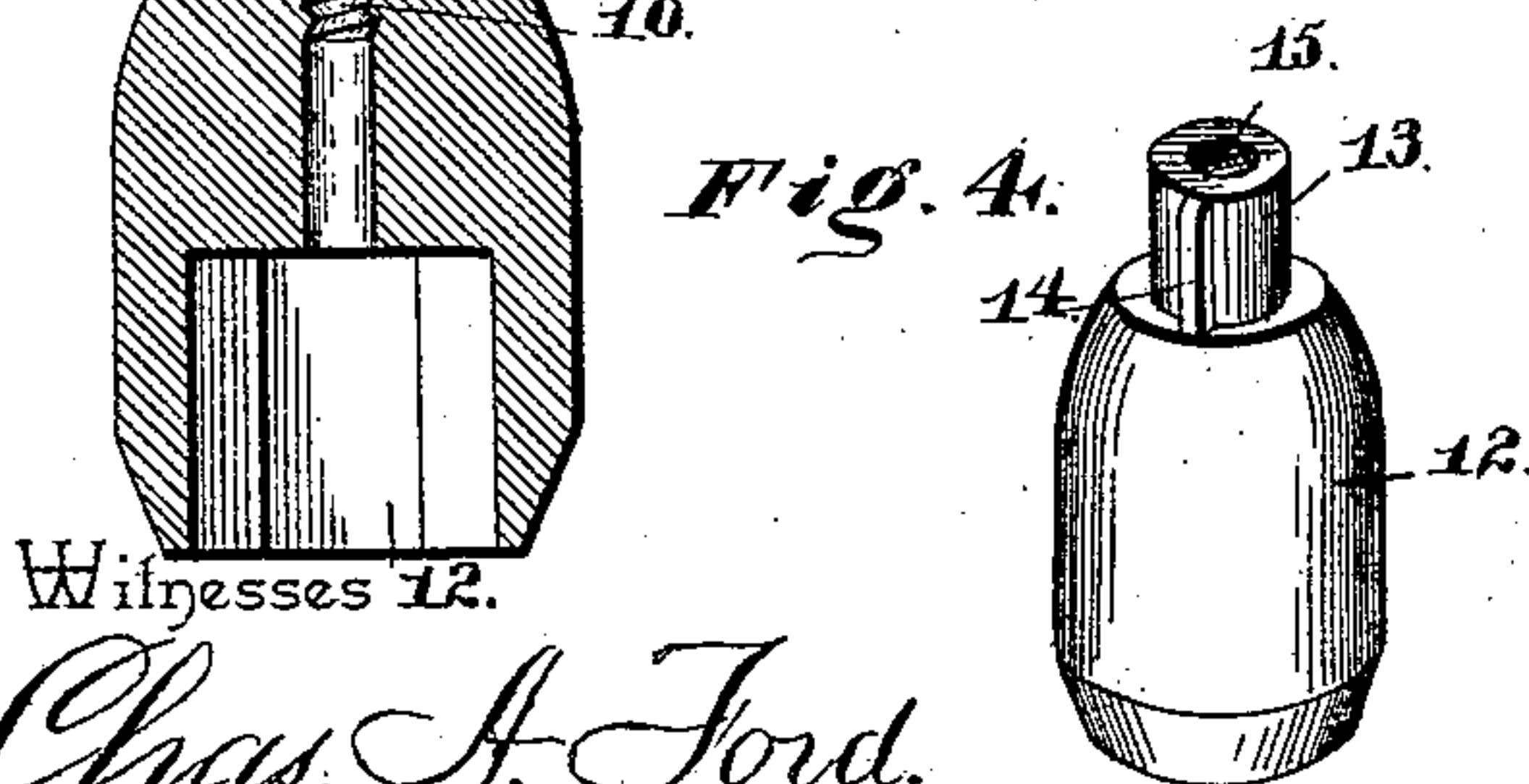
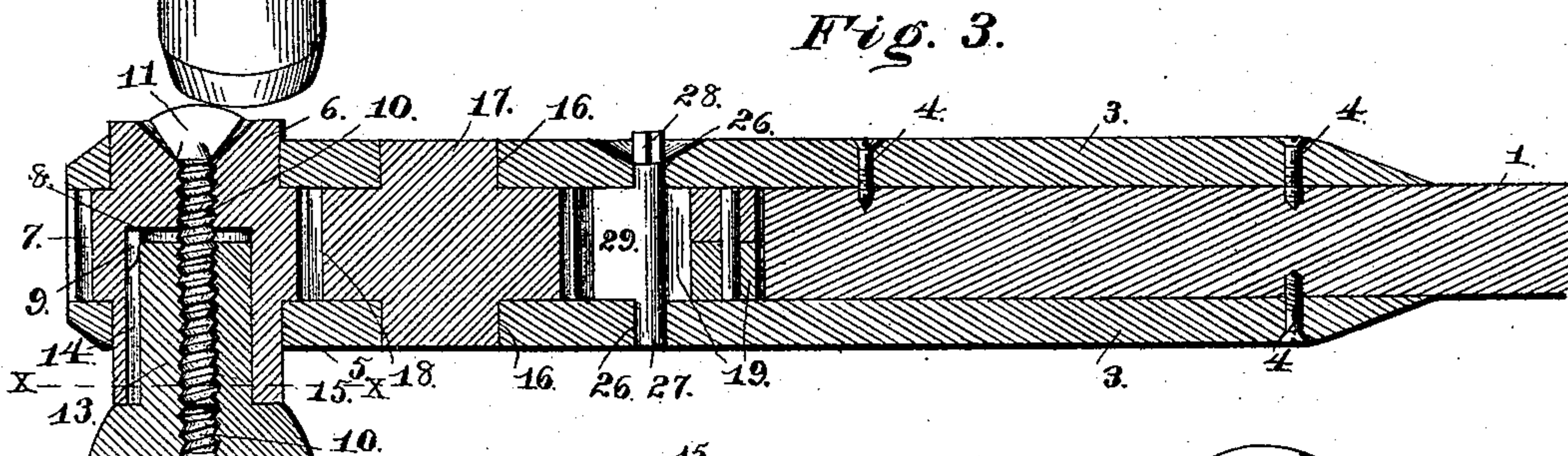
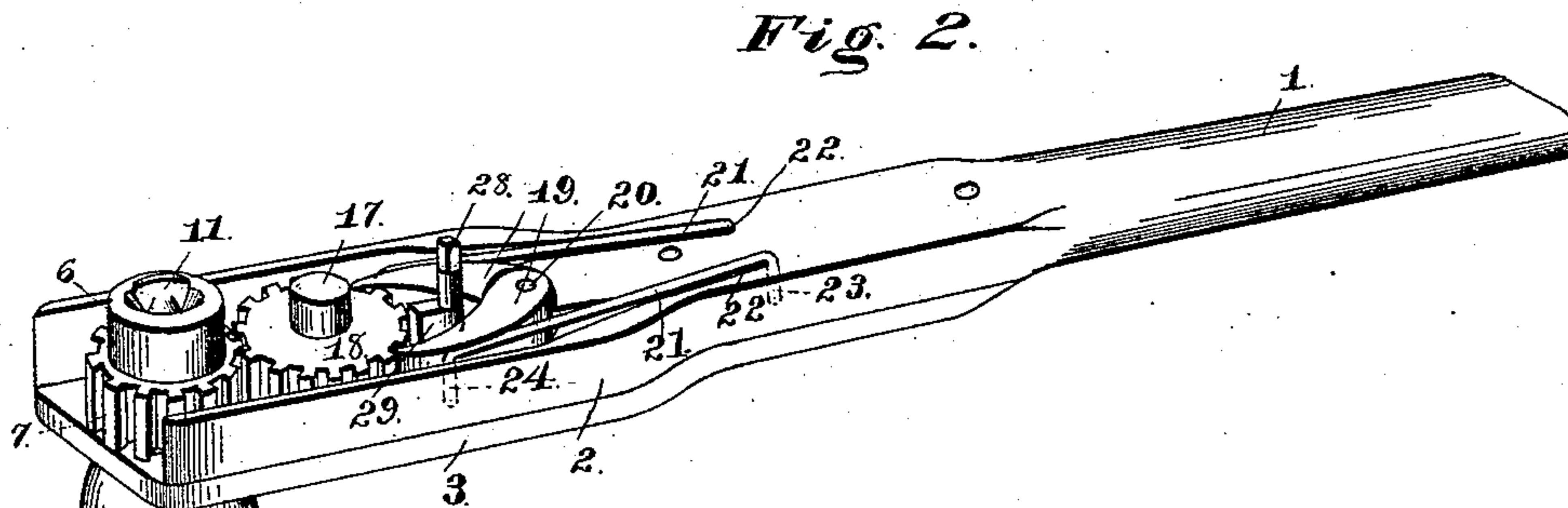
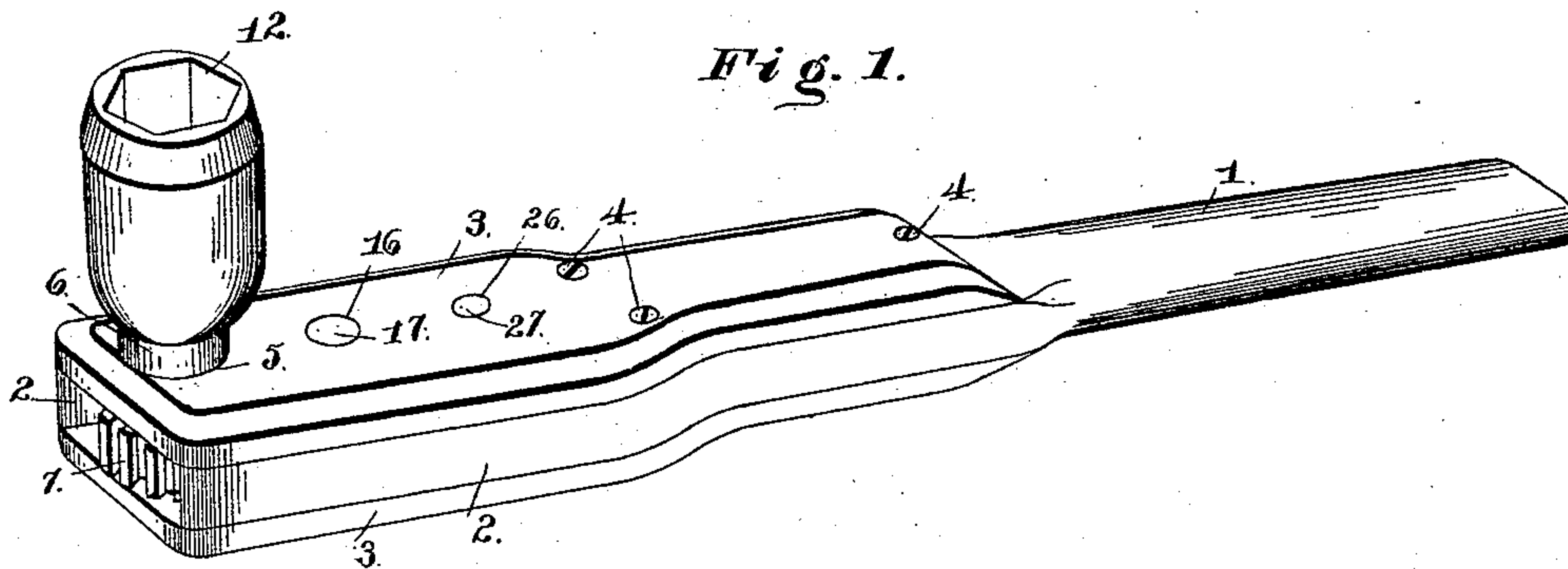


(No Model.)

N. M. WEVER & D. D. BLOUNT.
RATCHET RAILROAD TRACK WRENCH.

No. 471,765.

Patented Mar. 29, 1892.



Witnesses 12.

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UNITED STATES PATENT OFFICE.

NEWTON M. WEVER AND DANIEL D. BLOUNT, OF BARTOW, FLORIDA.

RATCHET RAILROAD-TRACK WRENCH.

SPECIFICATION forming part of Letters Patent No. 471,765, dated March 29, 1892.

Application filed January 6, 1892. Serial No. 417,185. (No model.)

To all whom it may concern:

Be it known that we, NEWTON M. WEVER and DANIEL D. BLOUNT, citizens of the United States, residing at Bartow, in the county of Polk and State of Florida, have invented a new and useful Ratchet Railroad-Track Wrench, of which the following is a specification.

This invention relates to improvements in wrenches for operating on nuts of railway-joints; and the objects of the invention are to simplify and cheapen the construction of the wrench as a whole, provide a ready means for adapting the same to be operated for applying or removing nuts, and to adapt the wrench to receive sockets of various sizes, whereby nuts of various sizes may be operated upon.

With the above objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a wrench constructed in accordance with our invention. Fig. 2 is a similar view, one of the side plates being removed to expose the interior mechanism. Fig. 3 is a transverse section through the socket and socket-receiving hub. Fig. 4 is a detail in perspective of the socket. Fig. 5 is a transverse section on line *xx* of Fig. 3.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing our invention we employ a solid metal shank or handle 1, the front end of which is bifurcated, leaving opposite walls 2. To these walls are secured side plates 3, which by suitable bolts or screws 4, passed into the shank and through the plates, are secured in position in a removable manner. The plates 3 near their front ends have circular bearing-openings 5, and journaled for rotation in said openings is a cylindrical hub 6, provided at its center with an external gear 7. One end of the hub is provided with a bore 8, which extends to near the opposite end, and a groove 9 is formed in the side of the bore. A threaded perforation 10 leads from the opposite end of the hub to the bore, and in the same a thumb-screw 11 is located, the inner end of which extends well into the bore of the hub and the outer end of which is

seated in a countersink formed in the end of the hub and surrounding the perforation 10.

12 designates the nut-receiving socket, and the same is provided with a reduced end forming a cylindrical tenon 13, adapted to fit removably in the bore 8 of the hub 6 and provided with a longitudinally-disposed rib or fin 14, which takes into the groove 9 of the bore, and hence serves to lock the socket and hub against any independent rotation. The extremity of the tenon 13 has a threaded perforation 15, which forms a continuation of the perforation 10 of the hub, is threaded, and consequently receives the end of the thumb-screw, whereby the socket is prevented from accidental withdrawal from its hub. At the same time that accidental removal of the socket is prevented, it will be obvious that intended removal for the purpose of applying a socket of different size may be readily accomplished, in that it is simply necessary to remove the screw from engagement with the socket and withdraw the latter. By thus adapting the wrench for the reception of various sockets nuts of various sizes may be operated upon by the same wrench, so that the utility of the latter is not restricted to any particular character of work, as is sometimes the case with socket-wrenches, though it is primarily intended for railroad use.

Various means for operating the wrench as thus far described will readily suggest themselves, and we do not limit our invention in this particular respect. We have devised one simple and convenient means, to which attention is now called.

Bearing-openings 16 are formed in the plates 3 in rear of the openings 5, and the same receive the ends of the solid hub or trunnion 17, formed on a cog-wheel 18. The cog or ratchet wheel 18 is of greater diameter, preferably, than the gear 7, with which it engages and operates, so that a slow rotation of the cog or ratchet wheel 18 will create a faster rotation of the gear 7 and its hub. In rear of the ratchet 18 a pair of pawls 19 are located, the rear ends of which are overlapped, to permit which the inner faces thereof are recessed, as shown. These pawls are pivoted together by a pin 20, extending through said overlapped ends and the plates 3. The free ends of the pawls engage teeth of the ratchet 18 at oppo-

sides of the same and are normally pressed into such engagement by means of a pair of wire springs 21, let into recesses 22, formed in one of the faces of the shank 1. The rear ends 5 of the springs take in openings 23, formed in the shank, while the front ends of the springs are laterally bent, as at 24, and each takes against the outer side of a pawl 19. Bearing-openings 26 are formed in the opposite plates 10 and in the same is journaled the cylindrical shank 27, which shank has one end squared, as at 28, to receive a key. The shank is provided between its ends with a shifting lug or arm 29, adapted to be thrown against the inner face of either of the pawls 19, so that 15 either of said pawls may be held out of engagement with the teeth of the ratchet 18.

The operation will be clearly understood from the foregoing description, as it is the same as wrenches of this class. By throwing 20 the left-hand pawl out of engagement the wrench is adapted to be turned to the left, so as to remove the nut, and by throwing the right-hand pawl out of engagement the wrench 25 is adapted to be turned to the right for the purpose of applying a nut.

Having described our invention, what we claim is—

1. In a wrench of the class described, the 30 combination, with the shank having opposite bearings and the hub mounted in the bearings and provided at one end with a tenon-receiving mortise and at its opposite end with a threaded perforation communicating therewith, of 35 means for rotating the hub and a set-screw mounted in the perforation and adapted to engage a perforation formed in a tenon occupying the hub, substantially as specified.

2. In a wrench of the class described, the combination, with the handle or shank hav- 40 ing opposite bearings, of the cylindrical hub having a bore at one end and a threaded perforation at the other, the wall of the bore being provided with a longitudinal groove, a nut-receiving socket reduced to form a tenon fit- 45 ting the bore and provided with a rib for engaging the groove and with a threaded perforation agreeing with the perforation in the hub, means for operating the hub, and a set-screw located in the perforation of the hub 50 and taking into that of the tenon, substantially as specified.

3. In a wrench of the class described, the combination, with the shank or handle bifur- 55 cated at its front end and the opposite side plates, of a cylindrical hub journaled in bearings formed in the side plates and having an external gear and a socket, a second gear journaled in the side plates in the rear of the hub, 60 a pair of pivoted pawls engaging the gear, wire springs seated in recesses formed in the shank embracing the pawls, the cylindrical rod journaled in the side plates between the pawls and terminating beyond one of the side plates in a squared key-receiving end, and a 65 lug formed on said rod, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

NEWTON M. WEVER.
DANIEL D. BLOUNT.

Witnesses:

W. H. JOHNSON,
WILSON L. JEWELL.