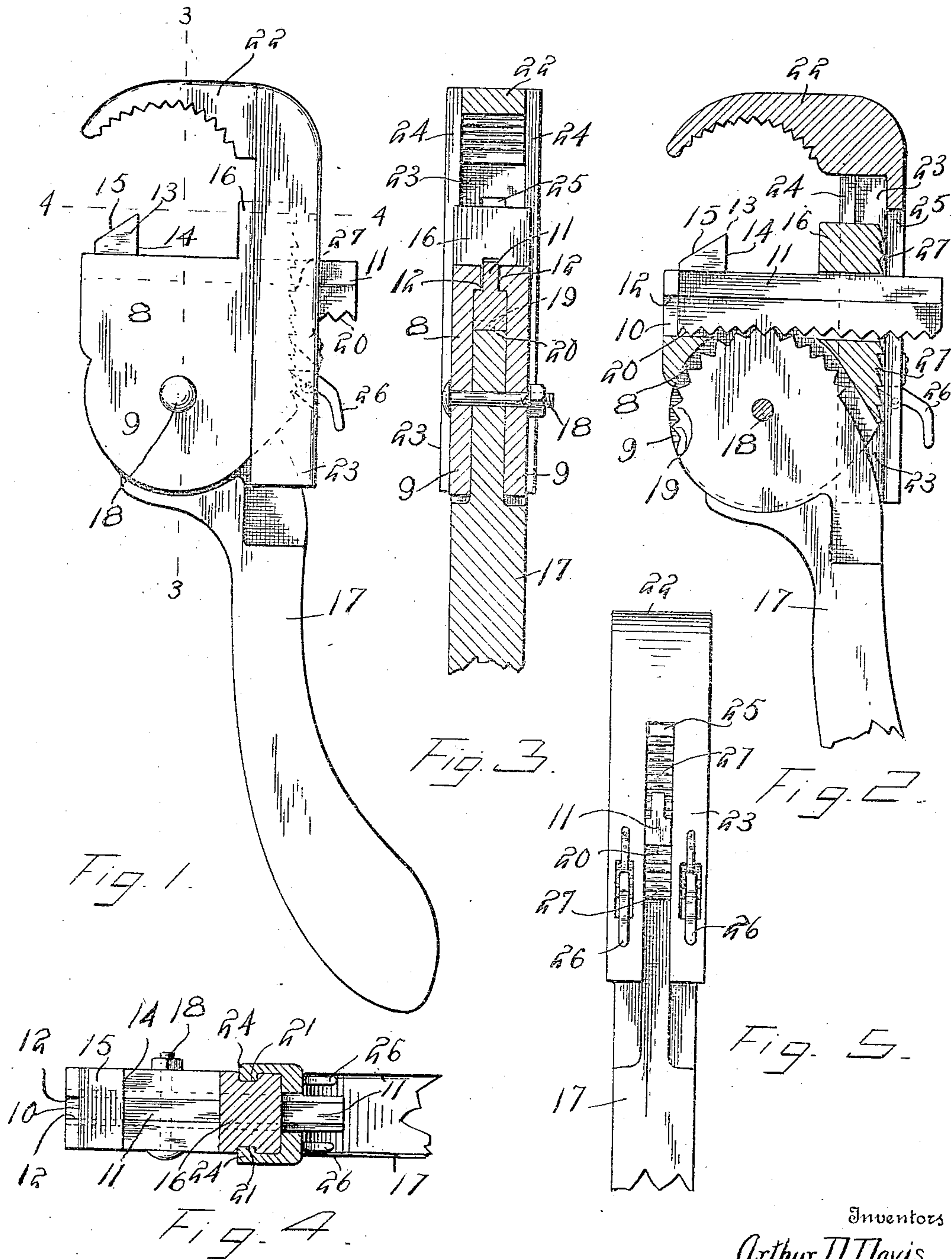


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WRENCH.

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UNITED STATES PATENT OFFICE.

ARTHUR D. DAVIS AND WILLIAM A. THOMPSON, OF CLEVELAND, NORTH CAROLINA.

WRENCH.

943,771.

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To all whom it may concern:

Be it known that we, ARTHUR D. DAVIS and WILLIAM A. THOMPSON, citizens of the United States, residing at Cleveland, in the county of Rowan, State of North Carolina, have invented certain new and useful Improvements in Wrenches; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to a wrench and more particularly to the class of pipe and nut wrenches.

The primary object of the invention is the provision of a wrench which is adapted for use as a monkey wrench and pipe wrench whereby any character of nut can be turned and which is also capable of joining or detaching pipes as the occasion may demand.

Another object of the invention is the provision of a wrench which can be readily and quickly adjusted to engage and manipulate a nut or pipe and that will effectually clamp the work acted upon.

A further object of the invention is the provision of a wrench which can be easily converted from a nut to a pipe wrench and that is simple in construction, durable, efficient in operation, and that can be economically manufactured.

With these and other objects in view the invention consists in the construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawings which disclose the preferred form of embodiment of the invention, and as brought out in the claim hereunto appended. However, it is to be understood that minor changes, variations and modifications may be made such as come properly within the scope of the appended claim without departing from the spirit of the invention or sacrificing any of its advantages.

In the drawings: Figure 1 is a side elevation of the invention. Fig. 2 is a similar view partly in section. Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1. Fig. 4 is a sectional view on the line 4—4 of Fig. 1. Fig. 5 is a fragmentary rear edge view.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

In the drawings the numeral 8 designates

the wrench head or casting which may be of any suitable material although it is preferably made of metal and is formed with spaced parallel cheeks 9 and at the upper edge of the said head between the cheeks is formed an open transverse slot 10 in which is movably mounted a jaw member 11 the latter held within the said slot by inwardly directed flanges 12 which engage channels formed in opposite sides of the movable jaw member. Rising from one end of the jaw member 11 and substantially at right angles to the same is a jaw 13 which latter is formed with an inner plane working face 14 and with a beveled outer face 15 so that the said jaw will engage a nut and also bite into a pipe or the like when the wrench is in use.

Formed on one side of the head 8 is an outward extension 16 the latter forming a stationary jaw and having a straight inner face to engage a nut and cooperate with the movable jaw member 11 to firmly clamp a nut.

Between the cheeks 9 of the head 8 is mounted a lever or handle 17 the same being connected to the said cheeks for swinging movement by a pivot 18 and formed at the substantially circular inner end of the said lever or handle are peripheral ratchet teeth 19 meshing with rack teeth 20 formed at the lower edge of the movable jaw member 11. To advance the jaw member 11 transversely in the head 8 so as to bring the jaw 13 toward the stationary jaw 16 the handle or lever 17 is moved in one direction and upon moving the latter in an opposite direction the said jaw 13 is shifted away from the stationary jaw 16 on the said head.

In opposite sides of the head 8 and directly opposite each other are longitudinal guide grooves 21 which are engaged by a slidable jaw member 22 which latter is provided with a hollow stem or shank 23 with inwardly projecting flanges 24 engaging the guide grooves 21 to hold the jaw member slidably connected to the head 8 of the wrench. The said shank or stem 23 contains in its rear wall an elongated open slot 25 to permit the movement of the jaw member 11 transversely in the head 8.

Formed in the shank 23 at opposite sides of the elongated slot 25 are suitable openings in which are pivotally connected spring controlled locking dogs 26 the latter adapted

to engage rack teeth 27 formed at one edge of the head 8 so as to lock the sliding jaw member 22 in adjusted position.

It is obvious that the sliding jaw member 22 can be readily removed from the head 8 when the wrench is to be used for turning nuts. Should it be desired to use the wrench in tapping pipes or joining the same the slidable jaw member 22 is mounted for sliding movement on the head 8 and by adjusting said jaw member as well as the jaw member 11 the same will firmly grip a pipe.

What is claimed is—

A wrench of the class described comprising a head having spaced parallel cheeks and containing a transverse groove, a movable jaw member mounted in said groove and having rack teeth, a handle pivotally

connected between the cheeks and having ratchet teeth in mesh with the rack teeth of the movable jaw, a stationary jaw formed on said head, a toothed rack formed at one edge of the head, a slidable jaw detachably connected to the head, and locking dogs pivotally connected to said slidable jaw and adapted to engage the rack teeth on the head for holding the slidable jaw in adjusted position.

In testimony whereof, we affix our signatures, in presence of two witnesses.

ARTHUR D. DAVIS.

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