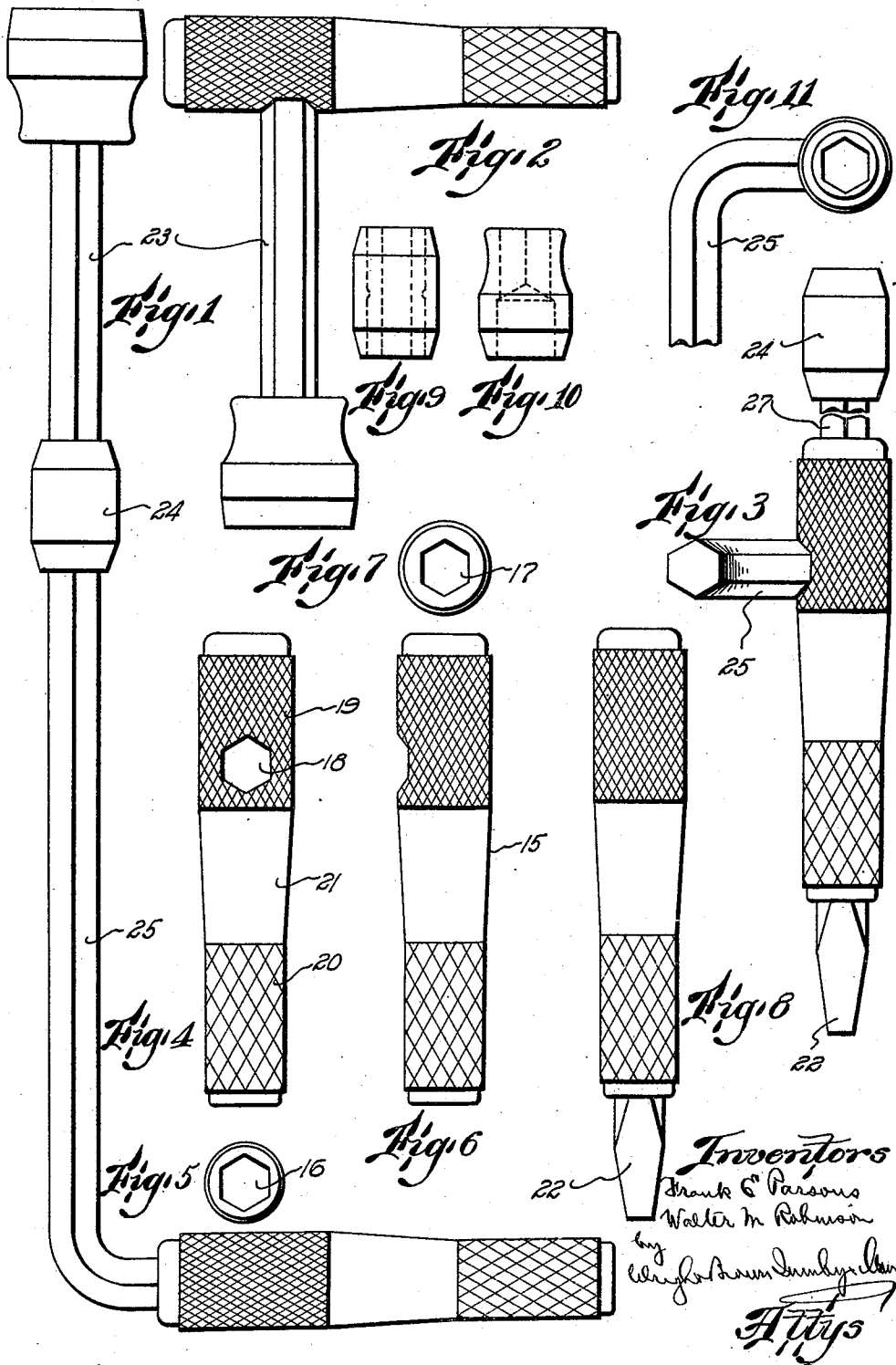


F. E. PARSONS AND W. M. ROBINSON.
WRENCH HANDLE.

APPLICATION FILED JUNE 12, 1920.

1,420,279.

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UNITED STATES PATENT OFFICE.

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WRENCH HANDLE.

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Specification of Letters Patent. Patented June 20, 1922.

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To all whom it may concern:

Be it known that we, FRANK E. PARSONS and WALTER M. ROBINSON, citizens of the United States, residing at Dorchester and Weston, respectively, in the counties of Suffolk and Middlesex, respectively, and State of Massachusetts, have invented new and useful Improvements in Wrench Handles, of which the following is a specification.

The subject of the present invention is a universal tool, adapted to have its various parts used in different relations to make up a variety of tools to be used about a shop, in connection with an automobile, or in other situations where compactness of the tool kit is desirable. The invention contemplates the adaptation of a single handle or holder to various parts as screw drivers, wrenches and the like, and the use of sections of rods to extend the reach of the tool, and the adaptation of the tool for use under unusual and difficult conditions.

The adaptation of the handle or holder to the various possibilities of the device will be illustrated on the accompanying drawings, which it is desired to be considered as illustrative and not in any way to limit the invention to the combination shown and set forth in this specification.

In the drawings

Figure 1 shows the universal handle with a wrench attached thereto through intermediate extension rods and a coupling.

Figure 2 shows parts of the device made up as a T-handle wrench.

Figure 3 shows another combination of the parts made up as a valve grinding combination with an elbowed rod in the side socket.

Figure 4 is a side view of the handle, *per se*, showing the side socket.

Figure 5 shows the socketed small end of the handle.

Figure 6 is a view similar to Figure 4 showing the handle in a different position.

Figure 7 is a view of the large end of the handle showing the socket therein.

Figure 8 shows the handle with a screw driver attached.

Figure 9 shows the coupling detached.

Figure 10 shows one of the nut wrenches detached.

Figure 11 is an end view of the handle with the elbowed end of rod attached thereto.

In describing the device in detail reference will be made to the drawings by reference

numerals, the same numeral designating the same parts in all of the figures.

An element of importance in this invention is a handle or holder 15 which is preferably made of metal and is provided in its ends with sockets 16 and 17 preferably of different diameters which are square, hexagonal or of any other polygonal cross section to receive and grip a tool or other member against rotation relative to the holder. A similar socket 18, preferably the size of one of the end sockets, may be formed in the side as shown in Figures 4 and 6 for similar purposes. The handle may be of any configuration, but preferably comprises two cylindrical portions 19 and 20 with an intermediate frusto-conical portion 21. The cylindrical portions may be knurled as shown or otherwise suited to be gripped by the hand.

The number and variety of tools and connecting parts that may be used in connection with the handle 15 are many, a few of which are shown on the drawings by way of illustration. The handle may be used directly as a tool itself, the socketed ends being employed to turn taps, nuts and the like, or with a tool fitting directly in one of the sockets as in the case of a screw driver shown at 22 in Figures 3 and 8. When it is desired to reach remote parts or those difficult of access, a length of rod 23 may be inserted in one of the sockets and the tool mounted on the end thereof. The reach of the tool may be extended to any length by the use of several lengths of rod secured together by suitable couplings having sockets at both ends such as is shown at 24, Figure 1. Used as a wrench, the handle may be attached to the tool through the medium of a section of rod either as an L-handle (see Figure 1), where a section of rod 25 is used having an elbow thereon which is inserted in the socket at one end of the handle, or as a T-handle (see Figure 2) where the section of rod 23, to which the wrench is attached, is inserted in the side opening 18.

In Figure 3 is illustrated a combination of parts made up for valve grinding or for any other work in which the turning action is against considerable resistance. In this combination the screw driver or other tool may be mounted directly in one end of the handle 15 and a length of rod 27 may be inserted in the other end, another length such as the elbowed length 25 being inserted

in the side socket 18 to afford a turning lever arm. The rod 27 may have a coupling 24 placed thereon against which the operator may exert pressure with one hand while turning the tool with the other. The combination of the arm 25 with its elbowed end extending into the side aperture 18 of the handle 15 and a tool extending from one of the end apertures may be used with the rod 27 inserted in the end of the handle, or omitted as the circumstances require. An elbowed rod is often of great convenience in close quarters as where a nut or bolt is accessible from one side and where there is little room beyond its end.

A plurality of tap or socket wrenches may be provided to be used with the device, a form of which is illustrated in Figure 10. The wrenches are each provided with a socket to receive one end of a coupling rod, and a socket to fit the tap or nut with which it is designed to be used. There may be any number of these wrenches with various sized sockets to be used with different sized taps and nuts.

By the arrangement of interchangeable parts as herein described, the size of a tool kit may be very much reduced and at the same time a tool combination to fit many different circumstances is provided. Such an arrangement is especially desirable in use with an automobile where it is of importance to keep the bulk and weight of equipment as low as possible.

What we claim is:—

1. A combination tool comprising a handle or holder having a plurality of sockets therein, a connecting rod fitting into one of said sockets and tools fitting respectively the end of said rod and one of said sockets.

2. A combination tool comprising a handle having a side socket and a socket at each end, a rod adapted to be inserted in one end socket, a screw-driver adapted to be inserted in the other end socket, and a lever rod adapted to be inserted in the side socket.

3. A tool, comprising a handle having alined sockets at each end and a side socket, a tool adapted to be inserted in one of the end or side sockets, a rod adapted to be inserted in a side or end socket, and a rod

having an elbow, either end of said rod adapted to be inserted into said side socket or in one of the end sockets.

4. A device of the class described comprising a handle having a plurality of sockets therein, a plurality of rods the ends of which fit said sockets, a coupling member for said rods having sockets fitting the ends thereof, and tool elements having sockets fitting said rod ends.

5. A device of the class described comprising a handle having a plurality of relatively angularly disposed sockets therein, a plurality of rods the ends of which fit interchangeably in said sockets, a coupling member having sockets fitting the ends of said rods interchangeably, and tool elements having sockets fitting said rods interchangeably.

6. A device of the class described comprising a handle having a plurality of relatively angularly disposed sockets therein, a plurality of rods the ends of which fit interchangeably in said sockets, one of said rods being bent angularly, a coupling member having sockets fitting the ends of said rods interchangeably, and tool elements having sockets fitting said rods interchangeably.

7. A device of the class described comprising a handle having a plurality of sockets therein, a tool fitting in one of said sockets, and an angularly bent rod fitting at either end interchangeably in said other sockets.

8. A tool comprising a substantially cylindrical handle having alined sockets at its ends to receive detachable members, and a socket extending into its side to receive one of said members.

9. A tool comprising a substantially cylindrical handle having similar sockets of the same size in one end and one side to receive interchangeably detachable members.

10. A tool comprising a substantially cylindrical handle having relatively angularly disposed similar sockets of the same size to receive interchangeably detachable members.

In testimony whereof we have affixed our signatures.

FRANK E. PARSONS.
WALTER M. ROBINSON.