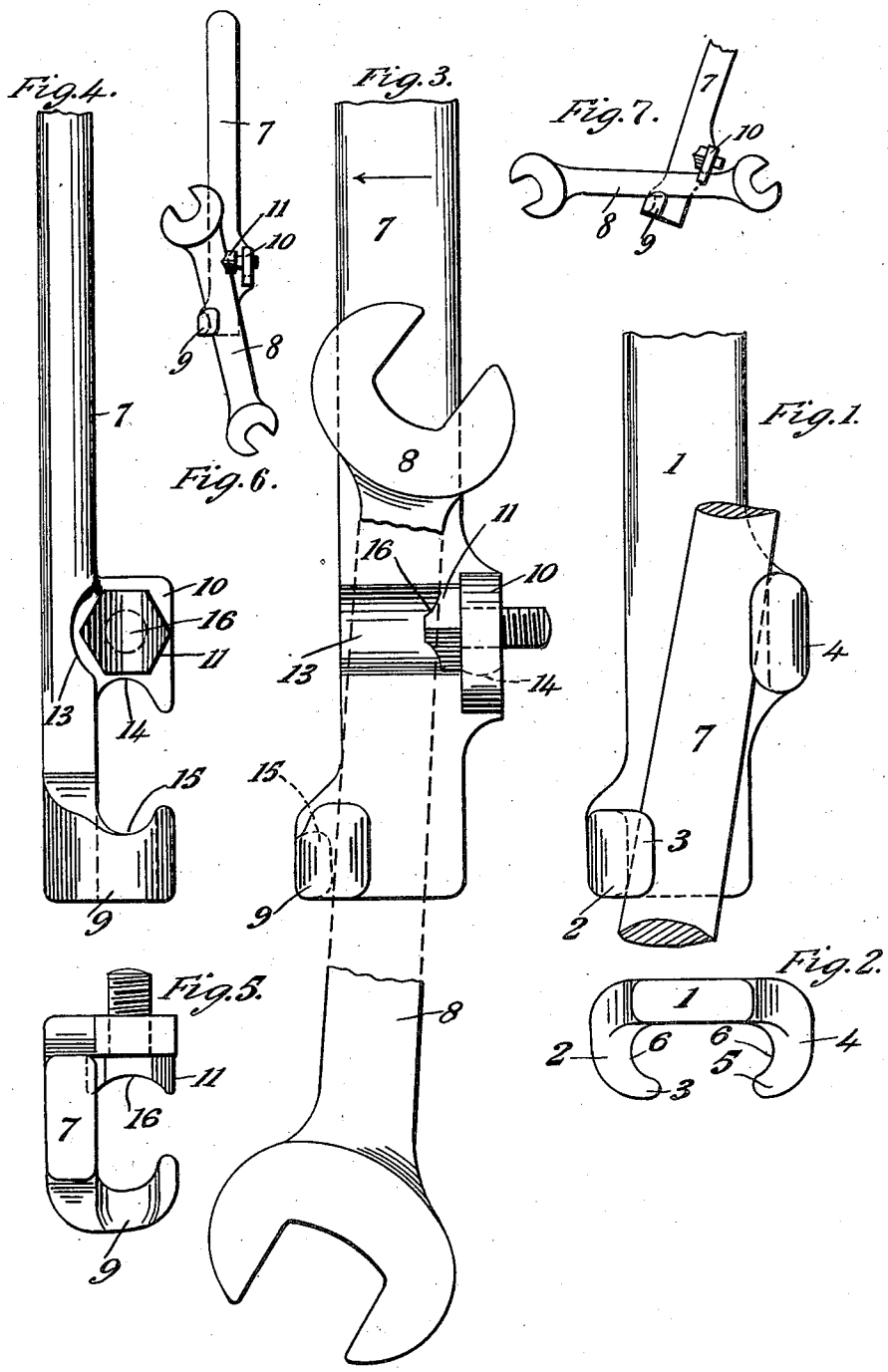
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W. R. K. GANDELL

SPANNER

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By James L. Norris, Attorney

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UNITED STATES PATENT OFFICE.

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SPANNER.

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To all whom it may concern:

Be it known that I, WILLIAM RALEIGH KERR GANDELL, a subject of the King of Great Britain, residing in London, England, have invented certain new and useful Improvements in Connection with Spanners, of which the following is a specification.

Whereas spanners are often made so short that it is impossible to unscrew tight nuts with them without applying additional leverage, the object of my invention is to provide a device or tool which will grip the shaft of either single or double ended spanners and furnish the desired extra leverage.

To achieve this end I take a metal bar of suitable dimensions and fasten or forge a projecting lug or abutment of suitable shape to one side edge at one end of the bar and forge or fasten or movably attach another projecting lug or abutment of suitable shape to the opposite side edge at a suitable distance from the first abutment and projecting on the same side.

The tool is applied to a spanner in such a manner that the shaft of the spanner rests between the two projecting abutments. By applying the tool to either one side of the shaft of the spanner or the other it can be used to tighten nuts or unscrew them.

The projecting abutments on the bar may be of any suitable shape and may be made so as to be relatively adjustable in position so that various sized spanners can be gripped and leverage applied when the tool is fitted thereto, and so that in some forms the tool can be applied at various angles to the spanner shaft.

The tool, with variously constructed projections, is illustrated in the accompanying drawings, in which:—

Fig. 1 is a plan view, and Fig. 2 an end view of the tool in its simplest form, a part of a shank of a spanner gripped by the tool being indicated.

Fig. 3 is a plan view, Fig. 4 a side view, and Fig. 5 an end view of the preferred form of the tool in which one of the abutments is adjustably movable transversely of the bar to suit variously sized spanners, or to enable the tool to be applied to the spanner at various angles. For the sake of clearness, a part of the spanner is indicated in broken lines merely.

Fig. 6 is a diagram showing the tool applied to a spanner at a slight angle, and

Fig. 7 is a diagram showing the tool applied at a more pronounced angle or transversely to the spanner.

In Figs. 1 and 2, the metal bar of the tool is denoted by 1. At or near one end is a lug or abutment 2, which may be formed integrally with the bar. The abutment is offset from the side of the bar and is bent so that its free ends or lip 3 overhangs a face of the bar 1. A second abutment, which may be of similar form and shape, is shown at 4, its lip 5 overhanging the bar. The lips 3 and 5 tend to keep the tool and spanner from separating when leverage is applied. The inner faces 6 of the abutment devices 2 and 4 would be suitably shaped for co-operation with the sides or edges of a spanner.

In the arrangement illustrated in Figs. 3–5, the bar is denoted by 7 and is shown in co-operation with a double headed spanner 8, the tool here forming a straight extension of the spanner. One abutment 9, which may be similar to the end abutment 2 in Fig. 1, is provided at one end of the bar 7, but the second abutment is of a compound nature comprising two parts, one part 10 being fixed or integral with the bar 7, and the other part 11 being movable and adjustably mounted in part 10. The part 11 may conveniently be a set screw that screws to a more or less extent into a tapped hole in part 10. The head of the screw would be suitably grooved on its end face 16 to accommodate the edge of a spanner. To allow of the head of the screw being turned the bar may be recessed, as indicated for example at 13.

When the tool and a spanner have the relative positions shown in Fig. 3, the tool is properly placed or applied for exerting pressure in the direction indicated by the arrow. To exercise pressure in the opposite direction, the tool has to be applied to the reverse side of the spanner shaft.

In some cases it may be a convenience to arrange the tool at a considerable angle or substantially transversely to the spanner shaft, as shown in Fig. 7, instead of lengthwise as shown in Figs. 3 and 6. In order that the tool and spanner may then work harmoniously together, the opposing end faces 14, 15, on the two abutment devices may be suitably shaped for the purpose, for example as shown in Fig. 4.

Having thus described the nature of the

said invention and the best means I know of carrying the same into practical effect, I claim:—

1. A tool for applying additional leverage to a shaft of a spanner, comprising a metal bar having an abutment device adjacent one of its ends for engaging one side edge of the shaft of a spanner when a face of the latter is in juxtaposition to a face of the bar, said abutment device being located at one side of the bar and comprising a body part upstanding from the plane of its said face and lip parts projecting from the body part, one lip part extending in a direction transverse of said face and another lip part extending in a direction parallel with the longitudinal axis of that face, a second abutment device carried by the opposite side of said bar for engaging the opposite side edge of the shaft of the spanner, said second abutment device comprising a stem upstanding from the plane of said face of the bar and having a part integral therewith and projecting therefrom in a direction parallel with the longitudinal axis of the said face and also having a second part projecting therefrom in a direction transverse of said face, substantially as described.

2. A tool for applying additional leverage to a shaft of a spanner, comprising a metal bar having an abutment device adjacent one of its ends for engaging one side edge of the shaft of a spanner when a face of the latter is in juxtaposition to a face of the bar, said abutment device being located at one side of the bar and comprising a body part upstanding from the plane of the face of said bar and lip parts projecting from the body part, one lip part extending in a direction transverse of said face and another lip part extending in a direction parallel with the longitudinal axis of that face, a second abutment device carried by said bar at the side thereof opposite said first named abutment device, for engaging the opposite side edge of the shaft of the spanner, said second abutment device comprising a stem upstanding from said plane and having a part integral therewith and projecting therefrom in a direction parallel with the longitudinal axis of the said face and also having a second part projecting therefrom in a direction transverse of said face, said second part being adjustable with relation to the stem for varying its projection from the stem, as and for the purpose described.

3. A tool for applying additional leverage to a shaft of a spanner, comprising a metal bar having an abutment device adjacent one of its ends for engaging one side edge of the shaft of a spanner when a face of the latter is in juxtaposition to a face of the bar, said abutment device being located at one side of the bar and comprising a body part upstanding from the plane of said face of the bar, and lip parts projecting from the body part, one lip part extending in a direction transverse of said face and another lip part extending in a direction parallel with the longitudinal axis of said face, a second abutment device carried by the opposite side of the bar for engaging the opposite side edge of the shaft of the spanner, said second abutment device comprising a stem upstanding from the plane of said face and having a tapped hole, a part integral with the stem and projecting therefrom in a direction parallel with the longitudinal axis of the said face and a second part projecting from the stem in a direction transverse of said face, said second part consisting of a set-screw adjustably screwed into the said tappet hole, one end of the screw being arranged to project over the said face and the said end having a grooved face on its projecting end.

In testimony whereof I have signed my name to this specification.

WILLIAM RALEIGH KERR GANDELL.