

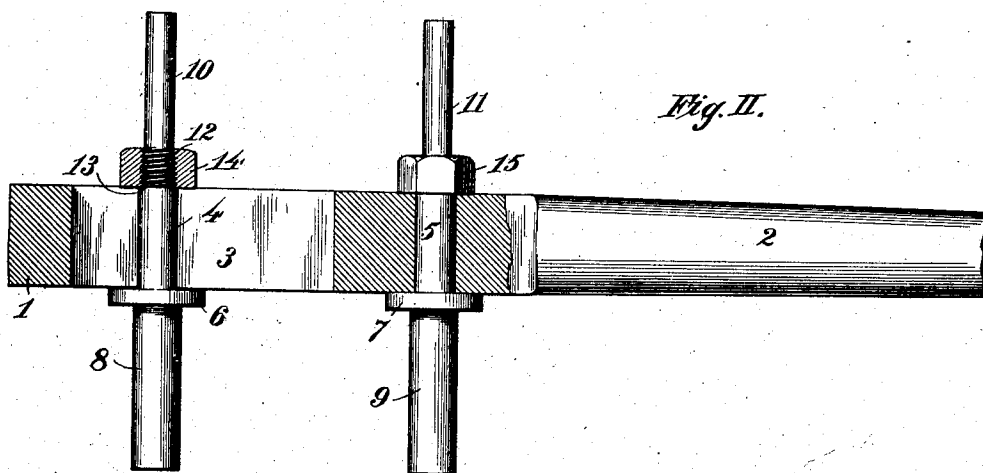
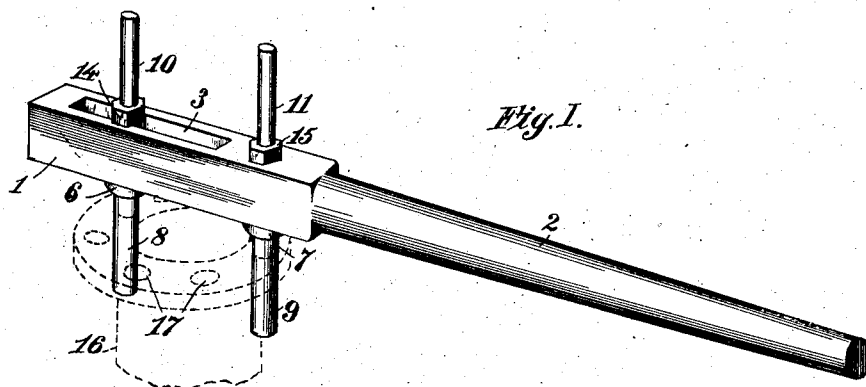
No. 761,523.

PATENTED MAY 31, 1904.

D. S. MILLER, JR.
SPANNER WRENCH.

APPLICATION FILED SEPT. 9, 1903.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

DUGALD STEWART MILLER, JR., OF OWENSBORO, KENTUCKY.

SPANNER-WRENCH.

SPECIFICATION forming part of Letters Patent No. 761,523, dated May 31, 1904.

Application filed September 9, 1903. Serial No. 172,475. (No model.)

To all whom it may concern:

Be it known that I, DUGALD STEWART MILLER, Jr., of Owensboro, in the county of Daviess, State of Kentucky, have invented certain new and useful Improvements in Spanner-Wrenches, of which the following is a complete specification, reference being had to the accompanying drawings.

The object of my invention is to produce a simple, durable, easily-adjustable, and serviceable spanner-wrench adapted, for instance, for use in pipe-fitting for the turning of flange-unions; and the invention consists in those features hereinafter specified in detail and succinctly set forth in the appended claims.

In the accompanying drawings, Figure I is a perspective view of the preferred form of embodiment of my invention applied as in use to a flange-union. Fig. II is an elevation of the subject-matter of Fig. I on a somewhat enlarged scale and showing the working end of the same in longitudinal vertical section, together with the nut of the movable pin, likewise in section.

Referring to the numerals on the drawings, 1 indicates the head of my wrench, and 2 the handle thereof, joined endwise with the head and preferably made integral therewith of a single metal bar, as of steel. The head and the handle may of course be made of any desired dimensions suitable for the work required of the tool, and the head is provided with an oblong slot 3, located, preferably, nearer the extremity of the head opposite the handle and extending approximately through two-thirds of the length of the head, exact dimensions being so widely variable as to be immaterial in a specification like the present one, whose object is to clearly set forth the principle of the invention.

I provide in the head a plurality of pins, preferably two, numbered 4 and 5. (See Fig. II.) Each pin is provided with a preferably integral flange (numbered, respectively, 6 and 7) and with an outwardly-projecting stud end (designated by the numerals 8 and 9, respectively.) Opposite each stud end referred to each pin is preferably provided with another stud end 10 and 11. The respective stud ends

of the respective pins are preferably provided in order to afford, in a wrench, engaging members of different sizes, the stud ends 8 and 9 and 10 and 11, respectively, being of corresponding diameters. The stud ends 8 and 9 may be larger than their respective pins 4 and 5, or not, as preferred; but the stud ends 10 and 11, respectively, are of slightly smaller diameters than their respective pins 4 and 5 in order, preferably, not only to provide a threaded zone 12 upon each, (see Fig. II,) but a shoulder 13, upon and against which, respectively, an externally-flattened nut 14 works.

The pin 5 is set in an aperture provided for it in the body of the head 1 between the handle 2 and the slot 3 and is secured fixedly in place therein by a jam-nut 15, corresponding, substantially, to the nut 14. The only difference in construction between the pins 4 and 5 is that the length of the pin 5 from the face of its flange 7 to its shoulder 13 is a hair's breadth less than the thickness of the head, so that the nut 15 reaches and jams against the face of the head without meeting with any interception from the shoulder 13.

The pin 4 I designate a "floating" pin, being designed to work loosely, but truly and without oscillation, in the slot 3, and the dimensions of the one are fitted to those of the other. The distance between the face of the flange 6 of the pin 4 and that of the shoulder 13 is a hair's breadth greater than the thickness of the head, so that the nut 14, unlike the nut 15, jams against the shoulder and not against the sides of the slot 3, whereby free movement of the pin 4 from end to end of the slot is permitted and the relative rectangular position of the pin 4 with its stud ends, with respect to the head 1, is kept constantly preserved.

The tool as above described is adapted to be used with any flange-union, such as is illustrated in Fig. I in dotted lines and indicated by the numeral 16, or other rotary member provided, like the union, with a series of wrench-holes 17. In practice the stud end of the pins most nearly fitted to the diameter of the wrench-holes is selected and the companion stud ends are entered into available wrench-holes, the floating pin 4 being slid

backward or forward through its slot 3 to enable it to enter the nearest available wrench-hole to the one selected for the insertion of the stud end of the fixed pin 5. The floating
5 pin 4 requires no means of fixing the adjustment to which it may be brought within its slot 3, because when either of its companion stud ends is properly inserted into wrench-
10 holes the wrench-holes become to the tool a means of fixedly adjusting the position of the movable pin. Thus my spanner is always ready for adjustment to service with the minimum manipulation and attention.

What I claim is—

15 1. A spanner comprising the combination of a handle and a slotted head with a fixed pin and a floating pin mounted in the slot of the head.

20 2. A spanner comprising the combination of a handle and a slotted head with a fixed pin

and a floating pin mounted in the slot of the head, said pins being provided upon opposite sides with projecting stud ends, respectively.

3. In a spanner the combination with a handle, and a slotted and apertured head, of a
25 fixed pin in the aperture of the head provided with a flange and jam-nut for securing it in place, and a movable pin in the slot of the head provided with a flange and shoulder and a jam-nut, said shoulder being adapted to
30 limit the movement of the jam-nut and to regulate and preserve the fit of the pin to the sides of said slot.

In testimony of all which I have hereunto subscribed my name.

D. STEWART MILLER, JR.

Witnesses:

H. STEWART MILLER,
H. B. ENGLES.