(No Model.)

# H. H. WILSON.

## WRENCH.

No. 343,940. Patented June 15, 1886.

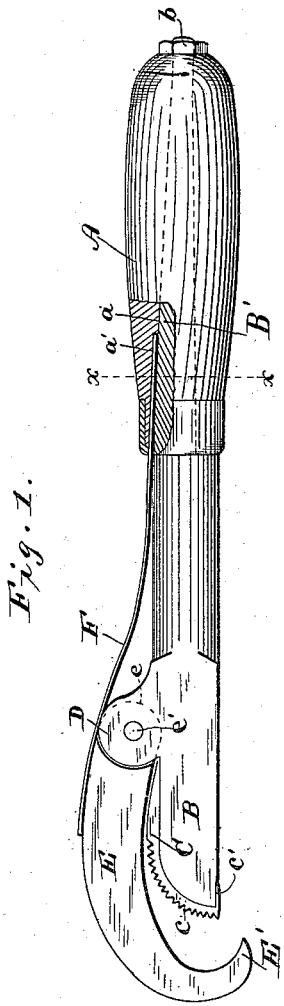

Fig. 1.

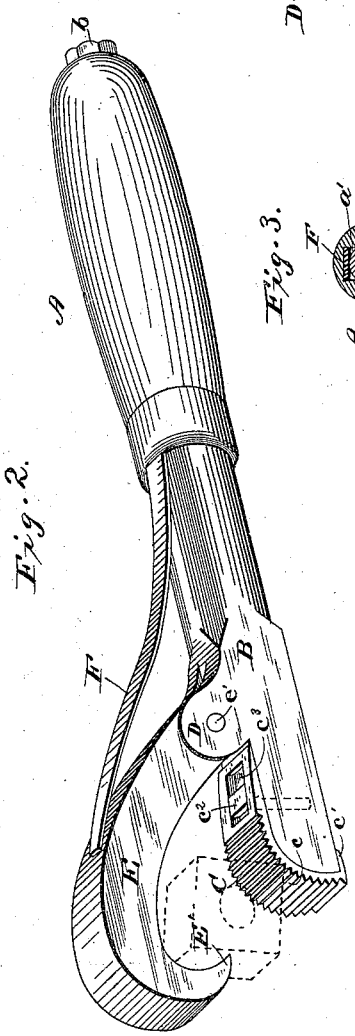

Fig. 2.

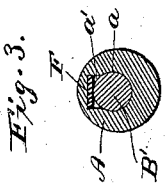

Fig. 3.

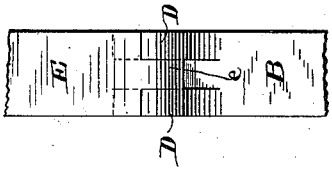

Fig. 4.

Witnesses.
Chas. R. Burr
James M. Dwant.

Inventor.
Henry Harrison Wilson
by Franck D. Johns
his Attorney.

# UNITED STATES PATENT OFFICE.

HENRY HARRISON WILSON, OF HUNTINGTON, INDIANA, ASSIGNOR OF ONE-HALF TO FRANK PIERCE, OF SAME PLACE.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 343,940, dated June 15, 1886.

Application filed January 30, 1886. Serial No. 190,362. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY HARRISON WILSON, a citizen of the United States, residing at Huntington, in the county of Huntington and State of Indiana, have invented certain new and useful Improvements in Wrenches; and I 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.

My invention relates to improvements in pipe-wrenches having removable wearing-surfaces provided with gripping-teeth; and it consists in certain novel construction and arrangement of parts, all of which I will now proceed to point out and describe, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of a wrench embodying my invention. Fig. 2 is a perspective showing the hinged jaw open, and Figs. 3 and 4 are details.

Referring to said drawings, A represents the handle of a wrench, having a longitudinal central bore, *a*.

*a'* is a notch on one side of the bore *a*.

B is a stationary lever-jaw, provided with a shank, B', which passes through the bore *a*, and is secured by a nut, *b*, on its outer end. The outer end of the jaw B is curved on its inner side.

C is a removable wearing-surface curved to conform to the shape of the inner side of the jaw B and provided with gripping-teeth *c*. The outer end of the wearing-surface C is bent and forms a hook end, *c'*, which fits over the end of the jaw B.

$c^3$ is a slot in the wearing-surface. Said wearing-surface is held in place by a bolt, $c^2$, which passes through the slot $c^3$ and a hole in the jaw B.

D D are rounded lugs or ears formed on the jaw B.

E is a curved hinged jaw having a tenon, *e*, on its inner end, which fits in between the lugs D D, and is pivoted to the same by a pin, *e'*. The outer end, E', of the jaw E is formed in the shape of a hook and is sharpened. When in use, the sharp end of the hook grips the object to be turned and aids the teeth to prevent the wrench from slipping.

F is a spring having one end secured in the notch *a'*, its free end bearing against the outside of the jaw E. By means of this spring a quick adjustment of the wrench can be made.

My wrench can be used on small or large pipe, and can also be used as a nut-wrench, as shown in Fig. 2. When the teeth *c* become worn, the wearing-surface C can be removed and a new one put in its place.

I am aware that wrenches have heretofore been provided with removable wearing-surfaces having gripping-teeth, and this I do not claim, broadly; but

What I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, the herein-described wrench, consisting of the stationary jaw B, having the raised lugs D D, the jaw E, pivoted to the lugs D D and provided with the sharp hook end E', and the spring F, in combination with the removable wearing-surface C, having the gripping-teeth *c* and slot $c^3$, and the bolt $c^2$, passing through the slot $c^3$ and jaw B, and securing the wearing-surface to said jaw B, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY HARRISON WILSON.

Witnesses:
WM. C. KOCHER,
CHAS. F. KRANCK.