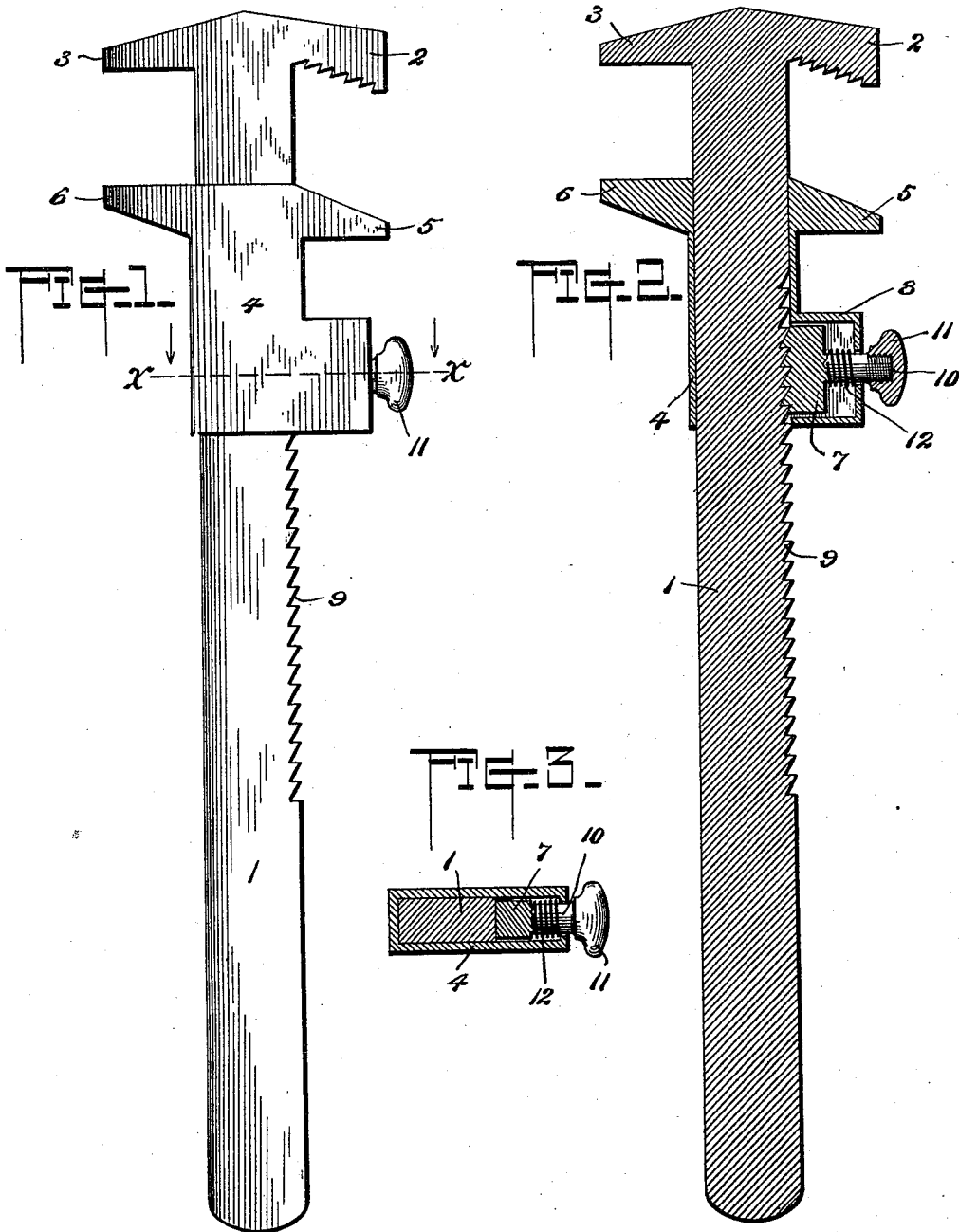


(No Model.)

S. GASSER.  
WRENCH.

No. 582,349.

Patented May 11, 1897.



Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

SANFORD GASSER, OF SHERMAN, MICHIGAN.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 582,349, dated May 11, 1897.

Application filed July 8, 1896. Serial No. 598,451. (No model.)

*To all whom it may concern:*

Be it known that I, SANFORD GASSER, a citizen of the United States, residing at Sherman, in the county of Wexford and State of Michigan, have invented a new and useful Wrench, of which the following is a specification.

The purpose of this invention is to provide a combined pipe and nut wrench which can be readily adjusted to any size of pipe, rod, or nut to be turned and which will grip the same firmly and prevent any slipping.

A prominent feature of the invention is a wrench for firmly and positively gripping round and angular objects, independent sets of jaws being provided for each purpose, and which is capable of being quickly adjusted to different-sized objects, the securing means being protected from injury and the lodgment of dust, and which will be simple and effective for the purposes designed.

Various other objects and advantages will appear as the nature of the invention is disclosed, and to this end reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a side elevation of a wrench embodying the features of this invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a section on the line X X of Fig. 1, looking in the direction of the arrow.

Corresponding and like parts are referred to in the following description and indicated in the several views of the drawings by the same reference-characters.

The wrench comprises a bar or shank 1, integral jaws 2 and 3 at one end of the shank, a head 4, slidably mounted upon the shank and provided with integral jaws 5 and 6, and a clutch 7 for securing the slidable head 4 in the required position upon the shank. The jaws 3 and 6 have their gripping-faces parallel and at right angles to the shank or bar 1 and are intended to grip nuts or angular objects required to be turned. The jaws 2 and 5 are provided for gripping pipes, rods, or other round objects, and may be properly designated as "pipe-gripping jaws." The active face of the jaw 2 inclines toward the shank 1 and is toothed, so as to bite into the pipe, rod, or article to be turned. The active face of the jaw 5 inclines away from the shank 1 and is smooth, so as to facilitate the release

of the pipe when moving the wrench backward to obtain a fresh grip thereon. The inclination of the active faces of the pipe-gripping jaws is unequal, whereby the space formed between the said pipe-gripping jaws is narrower at its inner end than at its outer end, thereby admitting of the pipe or rod being secured by a wedging action in addition to the gripping thereof by the toothed jaw 2. To the successful operation of the pipe-gripping jaws it is essential that the teeth of the jaw 2 point toward the shank or bar 1, so that when turning the wrench forward the teeth will bite into the pipe and at the same time crowd it into the inner end of the contracting space formed between the jaws 2 and 5.

The slidable head 4 has the jaws 5 and 6 formed therewith and is provided with a housing or box-shaped guide 8, in which is located and operates the clutch 7, the latter being a rectangular-shaped block toothed on the face adjacent to the shank or bar 1 and adapted to cooperate with corresponding teeth 9 on one edge or side of the shank 1, so as to secure the head 4 in the required position. The housing or guide 8 is closed on all sides except the one facing the shank 1, thereby completely inclosing the clutch and protecting it from injury and the lodgment of dust and other foreign matter. The clutch 7 has a stem 10, which passes through an opening in the outer end of the box-shaped guide 8 and which is threaded to receive a button 11, and this clutch is held in engagement with the teeth 9 by means of a spring 12, mounted upon the stem 10 and confined between the body of the clutch and the outer end of the guide 8.

Having thus described the invention, what is claimed as new is—

An improved article of manufacture, a combined pipe and nut wrench constructed substantially as illustrated, the same comprising a shank toothed upon one side and having oppositely-extending jaws at one end, the pipe-gripping jaw inclining toward the shank and toothed, a slidable head mounted upon the shank and provided with oppositely-extending companion jaws, the pipe-gripping jaw having its active face smooth and inclining away from the shank at a different angle from the first-mentioned pipe-gripping jaw, whereby the space formed between the said

pipe-gripping jaws is narrower at its inner  
end, and said head having a box-shaped guide,  
a clutch operating in the box-shaped guide  
and completely inclosed thereby, and having  
5 a protruding stem, and a spring mounted  
upon the said stem and located within the  
guide, substantially as and for the purpose  
set forth.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in  
the presence of two witnesses.

SANFORD GASSER.

Witnesses:

R. D. FREDERICK,  
JESSIE L. FERRIS.