

No. 730,587.

PATENTED JUNE 9, 1903.

J. B. TUPPER.  
WRENCH.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.

Fig. 1.

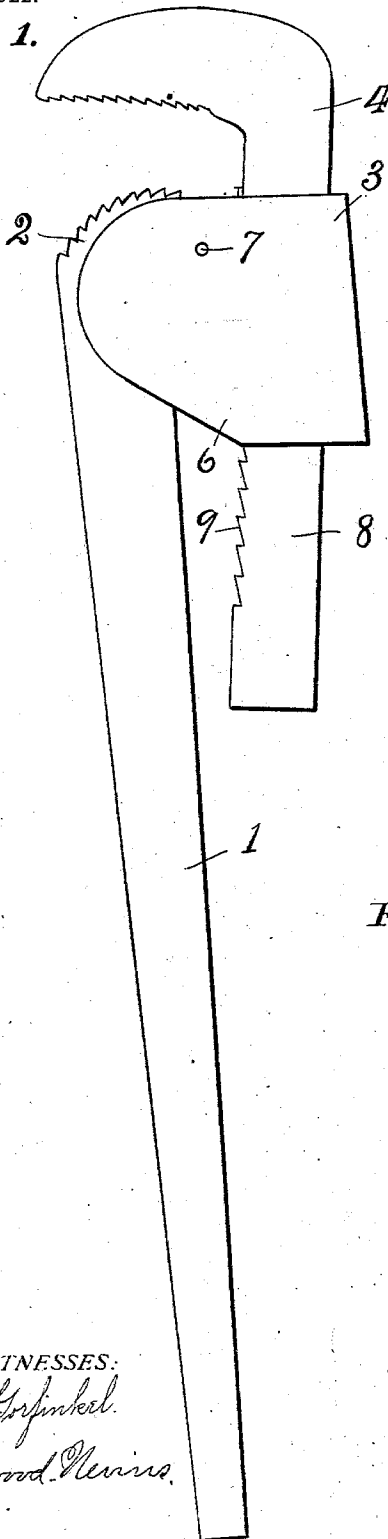


Fig. 2.

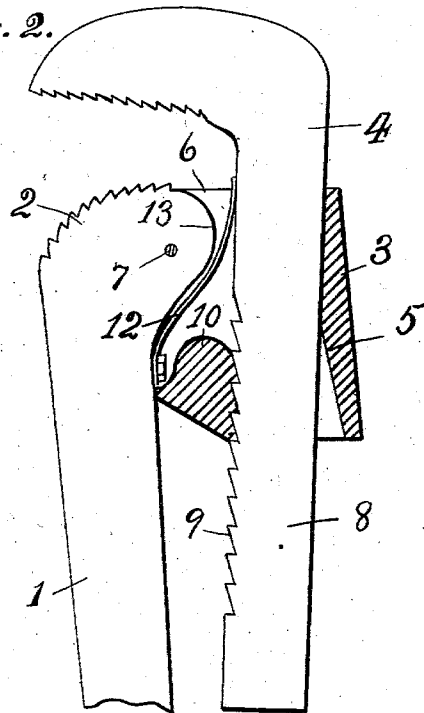
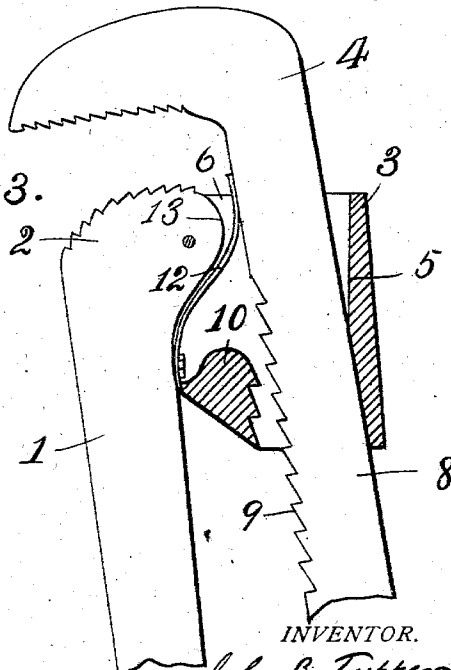


Fig. 3.



WITNESSES:  
Basil Gofinkkel.  
H. Lockwood Nevins.

INVENTOR.  
John B. Tupper  
BY Francis M. Wright.  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOHN B. TUPPER, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO CORBT G. DEAN, OF SAN FRANCISCO, CALIFORNIA.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 730,587, dated June 9, 1903.

Application filed February 24, 1903. Serial No. 144,707. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. TUPPER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to improvements in wrenches, the object of my invention being to provide a wrench for pipes or nuts which shall be cheap and simple in construction and convenient in operation.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the wrench. Fig. 2 is a horizontal section of the same, taken just above the upper surfaces of the jaws, the handle being broken off. Fig. 3 is a similar view showing the position of the parts when it is desired to open out the wrench.

Referring to the drawings, 1 represents the handle of the wrench, having formed thereon a stationary jaw 2. Upon said stationary jaw is pivotally mounted the guide 3 for the movable jaw 4, said guide comprising the back 5 and the sides 6, said sides being secured to the stationary jaw by a pivot-pin 7. On the inner side of the stem 8 of the movable jaw are formed ratchet-teeth 9, and between the sides of the guide is fixedly secured a dog 10, having a suitable number of teeth to engage the ratchet-teeth 9, the dog being shown in the present instance as having three such teeth, although more or less may be used, as desired. Upon the upper end of the handle, immediately below the stationary jaw and on the side next the dog, is secured the lower end of a spring 12, the free end of which extends around the point 13 of said stationary jaw, so that the upper end of the spring presses against the inner surface of the stem of the movable jaw at a point above the pivot 7. The back of the guide is formed on its inner surface at about the middle thereof with a point or ridge which serves as a fulcrum against which the back of the movable-jaw stem rests, and as the free end of the

spring presses said stem backward above said fulcrum it forces the lower end of the stem inward toward the handle.

The operation is as follows: The operator places the jaws over a pipe or wrench, and the pressure of said pipe or wrench between the jaws forces the upper end of the movable jaw back, thereby forcing the ratchet-teeth 9 firmly against the teeth of the dog, so that the jaw is prevented from moving downward. Said jaw can be moved downward to fit any-sized pipe or nut by simply pushing it down upon the nut or pipe, the ratchet-teeth slipping past the teeth of the dog. When it is desired to extend the distance between the jaws, all that is necessary is to press the lower end of the movable-jaw stem outward against the back of the guide, as shown in Fig. 3, when the ratchet-teeth will avoid the teeth of the dog, and the movable-jaw stem can be slid upward to any desired height.

It will be observed that the spring performs two functions. First, it presses the ratchet-teeth against the dog and prevents the movable jaw falling down. Secondly, it presses the lower part of the guideway, and therefore also the lower part of the movable stem, inward against the handle, or, in other words, prevents the guideway and stem from swinging freely away from the handle. This is due to the fact that the pressure of the spring 12 on the stem 8 is above the pivot 7.

I claim—

1. A wrench comprising the handle, the stationary jaw formed thereon, the guideway pivoted thereon having the side walls and back, and having the dog secured between the side walls, the movable jaw having a stem sliding between said dog and back and having ratchet-teeth on its inner side arranged to engage the teeth of the dog when the lower end of the stem inclines inward toward the handle, and the spring secured to the handle near the stationary jaw the upper end of which engages the inner surface of the movable-jaw stem at a point above the pivot of the guideway on the stationary jaw, substantially as described.

2. A wrench comprising the handle, the stationary jaw formed thereon, the guideway pivoted thereon having the side walls and

back, and having the dog secured between the side walls, the movable jaw having a stem sliding between said dog and back and having ratchet-teeth on its inner side arranged to engage the teeth of the dog when the lower end of the stem inclines inward toward the handle, said back having a ridge located between the dog and the point of pressure of the spring upon the movable-jaw stem, and the spring secured to the handle near the stationary jaw the upper end of which engages

the inner surface of the movable-jaw stem at a point above the pivot of the guideway on the stationary jaw, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

J. B. TUPPER.

Witnesses:

BESSIE GORFINKEL,  
F. M. WRIGHT.