(No Model.)

T. LANTT.

WRENCH.

No. 361,704. Patented Apr. 26, 1887.

Fig. 1.

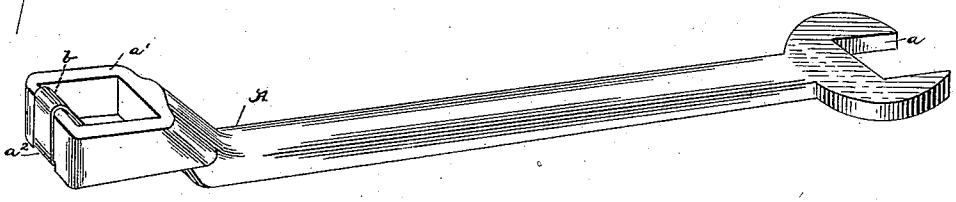


Fig. 2.

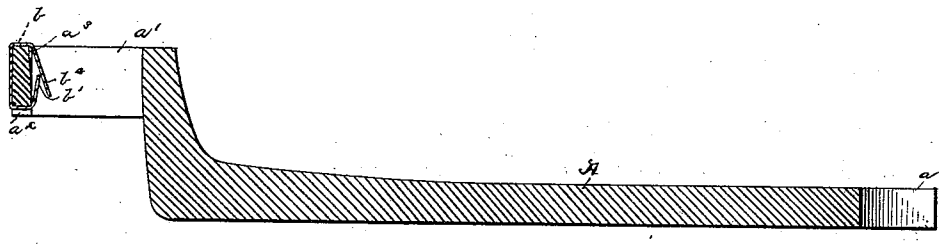
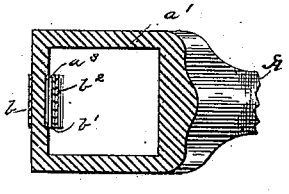


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 361,704, dated April 26, 1887.

Application filed August 2, 1886. Serial No. 209,783. (No model.)

To all whom it may concern:

Be it known that I, TILSON LANTT, a citizen of the United States, residing at Ilion, in the county of Herkimer and State of New York, have invented new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to wrenches for removing nuts from carriage and wagon axles, and for similar purposes; and the object of my invention is to enable the wrench to hold the nut after the latter has been taken off of the axle.

To the above purpose my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of a wrench with my improvement applied. Fig. 2 is a longitudinal vertical section of the wrench. Fig. 3 is a horizontal transverse section through the socket of the wrench, showing the spring-holder for the nut.

In the said drawings, A designates the handle or bar of the wrench, at one end of which is an open rigid jaw, *a*, and at the opposite end a closed square wrench, *a'*. The outer cross-piece, a^2, of wrench *a'* is formed with a depression, a^3, to receive the upper portion of a spring, *b*, as shown. This spring is of flat or tape form, and is bent around the portion a^2 of the wrench *a* in such manner that the end *b'* of said spring lies under the end b^2, so that any pressure against the end b^2 will be resisted both by said end and also by the end *b'*. Thus the spring is double-acting, and when a nut has been taken off of the axle it will be held securely in the wrench *a'*, and cannot drop therefrom.

I am aware that it is old to attach a spring to a wrench to serve in holding the nut in the socket of the wrench after the nut has been withdrawn; but all prior devices have attached the springs to the wrench, so that the point or end of the spring faced the end of the socket which receives the nut, and thus in applying the wrench the end of the spring would oftentimes catch the nut and prevent insertion of the wrench on the nut. Aside from this most serious objection, which would make the device impracticable, the holding properties of such a spring are very limited and weak. I claim to overcome these objections by my form of spring.

It will be observed that in my spring the end of the wrench-socket which first receives the nut has no projecting point or end of the spring to interfere with the insertion of the socket on the nut. On the contrary, the peculiar setting of the end b^2 of the spring will readily permit the reception of the nut in the socket, while the two ends *b' b²*, being compressed flat against the side of the socket when the nut is received therein, serve to press the nut at the proper point to hold it within the socket of the wrench.

My spring can be applied to any form of socket-wrench by grooving or cutting the sides, as shown and described, and fitting the spring in the grooves, the latter serving to prevent the spring from slipping sidewise. No screws or rivets are employed or are necessary to hold my spring in place, though if such may be found desirable the screw or other holding means should be applied on the outside. The groove or depression a^3 will ordinarily provide ample means for holding the spring from lateral movement.

It will be seen that the two ends are set or inclined outwardly from the inner side of the wrench-socket, and, being arranged to provide the greatest pressure at the center of the socket, (where the ends b^2 *b'* lap,) little resistance is offered to the entrance of the nut in the socket, and yet when the nut is fully in place the spring affords the best possible holding-surface for the nut.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In combination with the wrench-socket *a'*, the spring *b*, having the ends *b' b²*, extending inwardly toward the center of the socket within the same and overlapping each other, as set forth.

2. In combination with the wrench-socket

a', provided with grooves or depressions, as described, the nut-holding spring *b*, bent to embrace the wrench-socket and seated within the grooves, the latter obviating displacement of the spring, as set forth.

3. In combination with the wrench socket *a'*, the spring *b*, of a single piece of metal bent to embrace one of the sides of the socket, the ends of the spring being inclined away from the side of the socket within the same and having said ends overlapping at an intermediate point of the socket, as set forth.

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

TILSON LANTT.

Witnesses:
J. H. RUDD,
W. G. SKEEL.