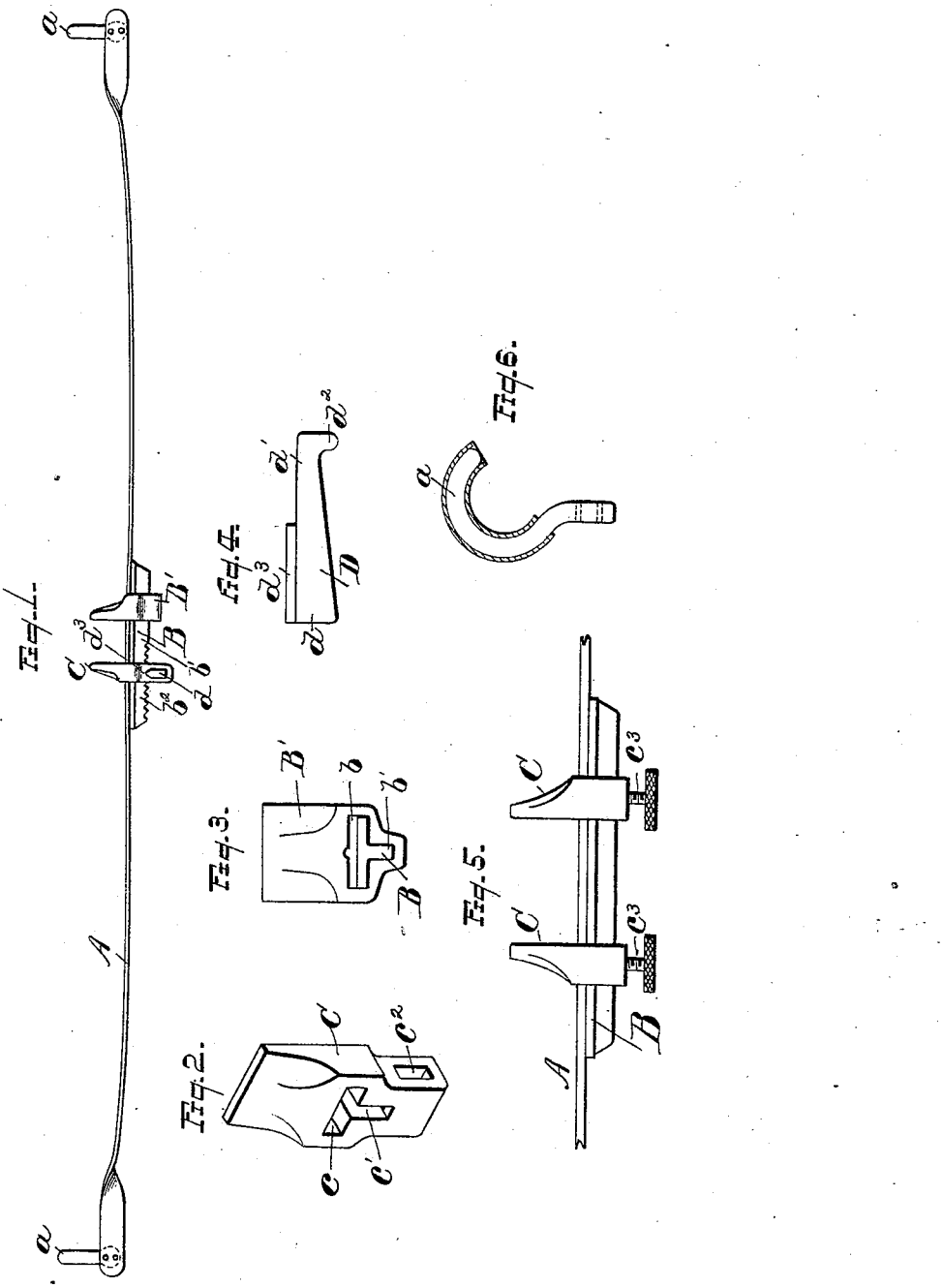
(No Model.)

F. A. WEGNER.

CARRIAGE WRENCH.

No. 420,981. Patented Feb. 11, 1890.



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FREDERICK A. WEGNER, OF THREE RIVERS, MICHIGAN.

CARRIAGE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 420,981, dated February 11, 1890.

Application filed December 31, 1888. Serial No. 295,055. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. WEGNER, a citizen of the United States, residing at Three Rivers, county of St. Joseph, State of Michigan, have invented a certain new and useful Improvement in Carriage-Wrenches; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a side elevation of my improved carriage-wrench. Fig. 2 is a view of the adjustable jaw removed from the shank. Fig. 3 is an end elevation of the stationary jaw removed from the shank. Fig. 4 is a detail view of the locking-key. Fig. 5 is a view of a variation; and Fig. 6 is a sectional view of the hook, showing the rubber coating.

My invention has for its object the provision of a cheap and durable carriage-wrench, in which the jaws are adjustable to any-sized nut, and is designed as an improvement on Letters Patent issued to me on October 9, 1888.

In the above drawings, A represents the bar or shank to which the nut-sockets are attached. This bar or shank extends out and engages by the hooks *a* with the spokes of the wheel. These hooks are riveted or otherwise rigidly fastened to the shank, and are preferably provided with a covering of rubber or other suitable material, thus in a measure preventing the hooks from marring the spokes.

B is a stiffening-shank or backbone, and preferably formed integral therewith is the stationary jaw B′.

b is a slot in the base of the jaw B′, through which the bar or shank A passes. The slot may be made such a size that the shank will fit snugly therein, or the shank may be securely fastened by the insertion of wedges; or the metal of either the shank or jaw may be upset at the edge of the slot, and thus hold the jaw rigidly engaged to the bar or shank.

The stiffening-shank or backbone is provided on its lower side with the rib *b′*, and this rib is on its lower edge notched, as shown at b^2.

C is an adjustable jaw provided with the horizontal slot *c*, adapted to receive the shank A and stiffening-shank B.

c′ is another slot in the jaw C and extends down at right angles to the slot *c*. This slot *c′* is adapted to receive the rib *b′*.

c^2 is an orifice extending transversely through the jaw just below the slot *c′*.

D is a key adapted for insertion in the orifice c^2. This key is tapered longitudinally, one end *d* being larger than the orifice c^2. By providing the small end *d′* with a shoulder d^2 it is prevented from being withdrawn from the orifice c^2, although it is permitted to slide freely therein. It will now be seen that by throwing the key so that the small end is underneath the notched rib the movable jaw C may be freely moved along the shank and adjusted to fit any-sized nut desired. When the jaw has been placed in the position desired, by forcing the larger end of the key underneath the notched ridge, the sharp edge d^3 will engage with the notches and hold the jaw firmly in place. Of course the shape of this key may be varied. So, also, if desired, the jaws may be made in such a shape that they will embrace the corners instead of the sides of the nut.

I would also have it understood that I do not limit myself to any specific means for holding the adjustable jaw in place, since a thumb-screw or set-screw, as shown at c^3 in Fig. 6, may be used, if desired, and would of course be contemplated by my invention.

I would also have it understood that I do not limit myself to the stationary jaw being cast integral with the stiffening-shank B, since this also may be made adjustable and provided with a set-screw or other means for holding it.

I make no claim herein to the feature of twisting the spring-shank so as to permit it to yield in the direction of the revolution of the wheel when the nut reaches its seat, this being the subject-matter of an application filed by me September 17, 1888, Serial No. 285,639; but

What I claim is—

1. A carriage-wrench consisting of a spring-shank provided at its ends with means for engaging the spokes of a wheel, a stiffening-shank located midway between the ends of

the spring-shank, and jaws located on said shanks to engage an axle-nut, substantially as described.

2. A carriage-wrench consisting of a spring-shank, a stiffening-shank located midway between the ends of the spring-shank, a stationary jaw and an adjustable jaw located on said shanks, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

FREDERICK A. WEGNER.

Witnesses:
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