(No Model.)

G. A. GOLAR.

DEVICE FOR REMOVING SPOKES FROM WHEELS.

No. 591,164. Patented Oct. 5, 1897.

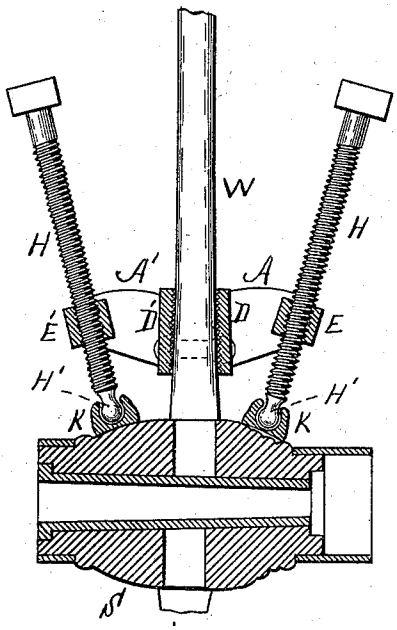


Fig. 2.

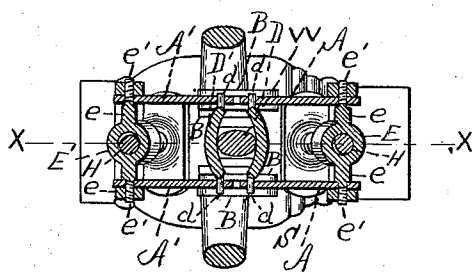


Fig. 3.

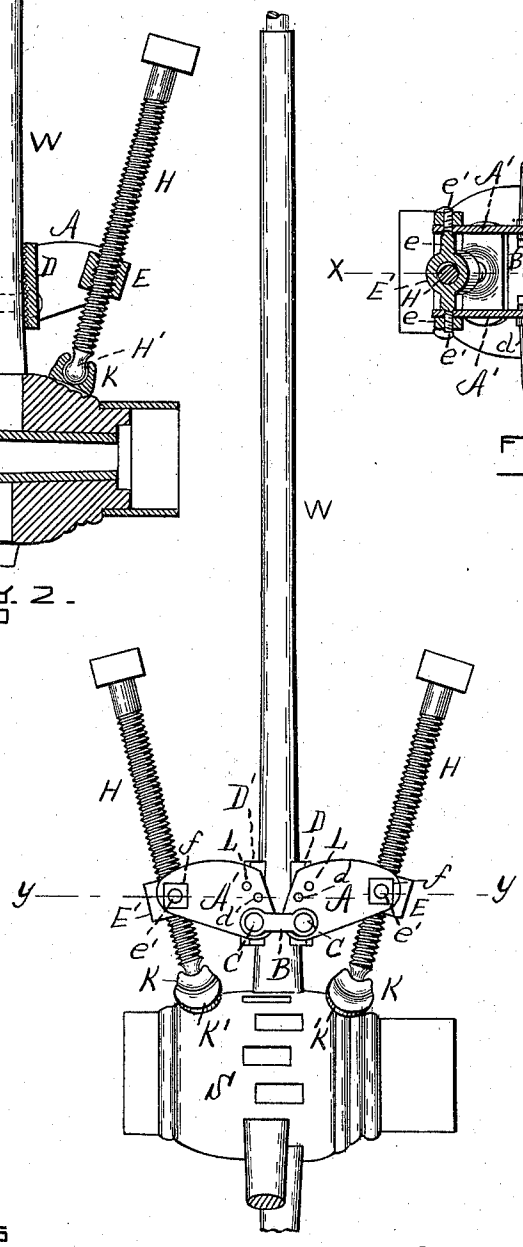


Fig. 1.

WITNESSES

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DEVICE FOR REMOVING SPOKES FROM WHEELS.

SPECIFICATION forming part of Letters Patent No. 591,164, dated October 5, 1897.

Application filed May 19, 1897. Serial No. 637,222. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. GOLAR, a citizen of the United States, residing in Milton, in the county of Norfolk and State of Massachusetts, have invented a new and Improved Device for Removing Spokes from Wheels, of which the following is a specification.

This is a device for removing or extracting spokes from the hubs of wheels, principally for repairing purposes. In this contrivance in case a spoke is to be withdrawn from the hub the felly is first removed (except in certain instances) and my device applied to the spoke around which it is clamped. A socket-wrench in a bit-stock is then applied to the screws making a part of the device with the effect of withdrawing the spoke from the hub without difficulty.

The nature of the invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of my device applied to a spoke which is in position in the hub of a wheel. Fig. 2 is a vertical section taken on line X, Fig. 3. Fig. 3 is a horizontal section taken on line Y, Fig. 1.

Similar letters of reference indicate corresponding parts.

A A′ represent two pairs of similar side plates. Each plate A is pivotally connected with the opposite plate A′ by a pair of links B, the opposite ends of each of which are secured to the plates by suitable pivots C, which extend through corresponding holes in the plates A A′.

D D′ are two clamps concavo-convex in horizontal section, the former of which is provided with oppositely-extending horizontal pivot-pins *d*, which have their bearings in the two plates A, and the latter of which is provided with similar pivot-pins *d*′, having their bearings in the two plates A′. Thus these clamps are hung and adapted to swing freely between the two sets of plates A and A′ near their inner ends.

E E′ are two short internally-screw-threaded tubes, each of which is flanked by the integral extensions *e*, from which extend horizontally in opposite directions the screws *e*′. These screws extend through plain openings in the pairs of plates A A′ near their outer ends, and the said plates are held in the position illustrated by means of nuts *f* upon said screws *e*′. Large and comparatively powerful screws H extend through the threaded tubes E E′ and are squared at their upper ends to accommodate a socket-wrench or may be shaped at said ends to extend into an ordinary bit-stock. The lower ends are formed into balls H′, which extend into the sockets K, adapted to move freely in all directions upon said balls and constituting ball-and-socket joints, each socket having a foot K′, curved on its under side to fit upon an ordinary hub S. All the above parts are constructed, preferably, of metal.

In operation, when a spoke, as W, is to be extracted or forced from its socket in the hub, the device is slipped over the spoke with the inner surface of the clamps D D′ on opposite sides thereof. These clamps are adapted by means of horizontal serrations on their inner faces to grip the spokes firmly. The feet K′ are then set on and against the hub on opposite sides of the spoke and the screws H inclined or set at opposite outward angles, as shown in the drawings, thus enabling the bit-stock to be applied and operated without striking the spoke and spreading the plates A A′ apart, so as to allow the clamp to firmly grip the spoke. A socket-wrench is then placed in a bit-stock and applied to the upper end of the screws H with the effect of lifting the threaded tubes E E′, and hence the plates and clamps, thus lifting the spoke out of its socket.

In rare instances it is advisable after turning up the screws sufficiently to tighten the device in its position to vibrate the spoke just enough to loosen the glue.

In order to accommodate spokes of smaller diameter, an extra pair of perforations L is provided in the plates A A′. The pins C can be withdrawn from the holes in which they are in the drawings and transferred to the holes L and the links B placed in position on said pins. Thus the plates A and A′, and hence the clamps D and D′, are drawn nearer together.

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

1. A device for removing spokes from hubs

of wheels, comprising the two pairs of plates A, A′; the clamps D, D′, the former being pivotally secured to and between the plates A and the latter similarly secured to and between the plates A′; links pivotally connecting each of the pairs of plates A with the pairs of plates A′; internally-screw-threaded tubular connections secured to and between the plates A and the plates A′ near their outer ends; and screws extending through said tubular connections and provided with suitable feet adapted to bear against the hub, substantially as described.

2. The herein-described device for removing spokes from the hubs of wheels, comprising the two pairs of plates A, A′; the clamps D, D′, the former pivotally secured to and between the plates A and the latter similarly secured to and between the plates A′; the links B connecting each plate A with its opposite plate A′; the internally-screw-threaded tubes E, E′ pivotally hung between and secured to the plates A and the plates A′ near their outer ends; the screws H extending through said threaded tubes; and the feet K connected with the lower ends of said screws in such a manner as to enable said feet to accommodate themselves to the surface of the hub, substantially as set forth.

GEORGE A. GOLAR.

Witnesses:
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A. N. BONNEY.