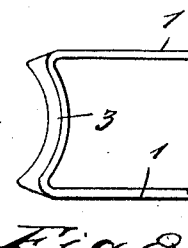
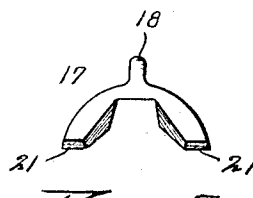
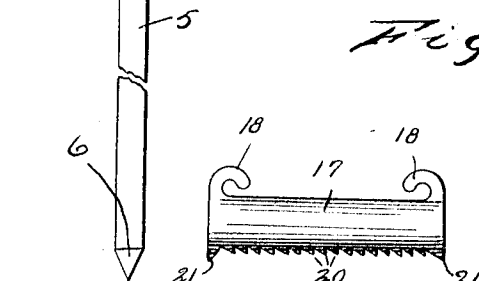
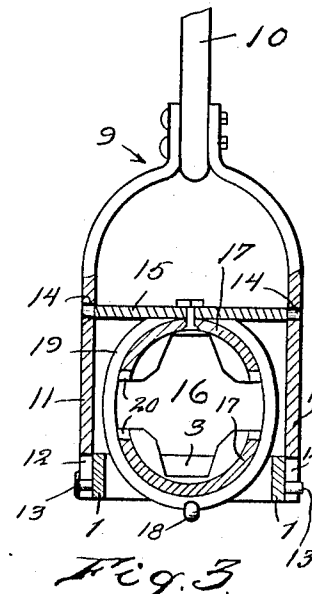
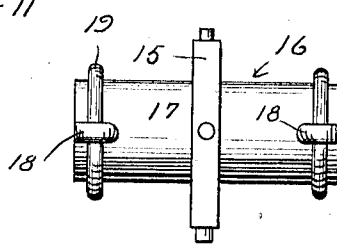
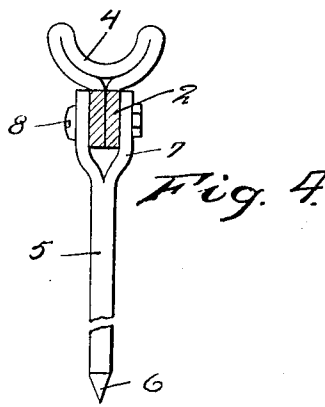
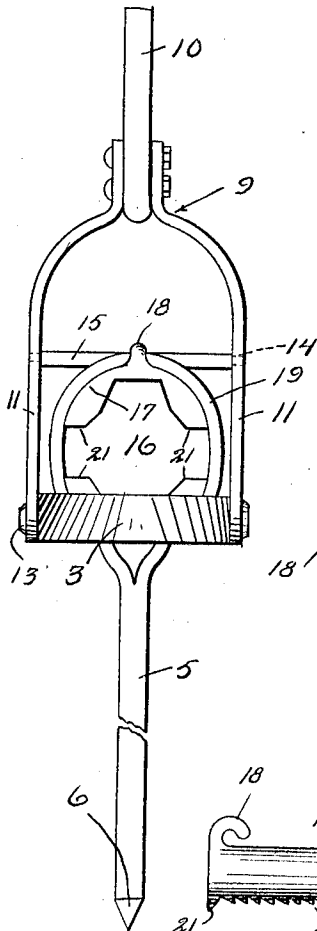
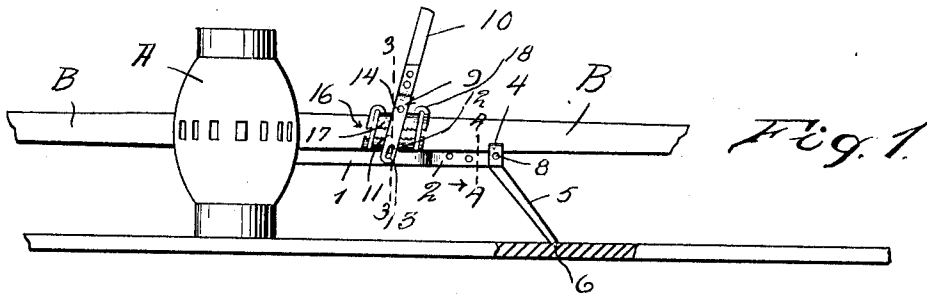


J. LAPLANT.
SPOKE EXTRACTOR.
APPLICATION FILED JUNE 18, 1912.

1,051,600.

Patented Jan. 28, 1913.



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UNITED STATES PATENT OFFICE.

JED LAPLANT, OF MALONE, NEW YORK.

SPOKE-EXTRACTOR.

1,051,600.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed June 18, 1912. Serial No. 704,392.

To all whom it may concern:

Be it known that I, JED LAPLANT, a citizen of the United States, residing at Malone, in the county of Franklin and State of New York, have invented certain new and useful Improvements in Spoke-Extractors, of which the following is a specification.

My invention relates to spoke extractors, and has for its object the provision of a device comprising braces and leverage so designed as to apply a straight line pull on a spoke to be extracted.

An important object is to provide a device of this character which will extract a whole or broken spoke without damaging or enlarging the spoke hole.

Another object is to provide spoke extracting means which may be quickly and easily applied and adjusted.

A further object is to provide a device of this character which will be simple in construction, inexpensive in its manufacture, efficient in operation and durable in service.

Other objects and advantages will be made apparent during the course of the following specification, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my device applied to a wheel, parts being broken away, Fig. 2 is an end view, Fig. 3 is a sectional view on the line 3—3 of Fig. 1, Fig. 4 is a sectional view on the line 4—4 of Fig. 1, Fig. 5 is a top plan view of the clamping jaws and associated parts, detached, Fig. 6 is a detail view of one of the clamping jaws, Fig. 7 is an end view of one of the clamping jaws, and Fig. 8 is a detail of the end of the frame.

Referring more particularly to the drawings wherein is illustrated the preferred embodiment of my invention, A designates the hub of a wheel from which radiate spokes B. The hub is shown as lying on a floor or table with the spokes extending horizontally.

My device comprises an open frame 1, having its rear portion contracted as shown at 2. The forward end of the frame 1 terminates in a curved bar 3 adapted for engagement with the hub A, to serve as a support. The end portion 2 has rigidly secured thereto, as by welding, a substantially Y shaped bracket 4 for engagement with the lower side of a spoke to be extracted. A

supporting leg 5 having one end 6 pointed for engagement with the floor or table, and its other end 7 forked, is pivoted upon said portion 2 of the frame as shown at 8. Intermediate the ends of the frame 1 is pivotally secured an upstanding forked lever 9 which may be of any desired or convenient length. This lever comprises a handle portion 10, and end portions 11 provided adjacent their ends with slots 12 for the reception of bolts or rivets 13 which pass through the sides of the frame 1. This construction permits longitudinal movement of the lever. Disposed within the fork of the lever, and pivotally mounted within apertures 14 in the end portions 11, is a transverse bar 15 which constitutes the supporting element of a clamping jaw structure 16. This clamping structure comprises two similar curved plates 17 provided upon their ends with ears or loops 18 for connection with links 19. The edges of the plates 17 are serrated as shown at 20, the teeth being inclined away from the hub engaging portion of the device. At each end of the edges of the curved plates 17 is an additional toothed extension 21. The upper plate 17 is pivotally connected with the supporting bar 15.

The operation of my device is as follows: The wheel is supposed to be lying upon a floor, table or specially constructed support, with the spokes extending horizontally. The clamping jaw structure is slipped over the spoke to be extracted and the device is slid along the spoke until the curved bar 3 contacts with the hub. The leg 5 is then moved so as to force the bracket 4 into engagement with the lower side of the spoke. The pointed end 6 of the leg will dig into the floor or table and hold the device in place. The lever will extend at a practically right angle to the spoke. Upon swinging the lever slightly toward the outer end of the spoke, the clamping plates will grip the spoke by means of the serrations 20 and teeth 21. Further swinging of the lever extracts the spoke.

It will be noted that the pull exerted upon the spoke is in a straight line, as the slots in the ends of the fork permit a longitudinal movement of the lever, and the clamping plates are free to swing in a vertical plane. It will be also noted that owing to the upper clamping plate 17 being pivotally secured to the bar 15, the clamping structure is free to turn in a horizontal plane, thus prevent-

ing the twisting or bending of a spoke in case lateral pressure is exerted upon the spoke.

By changing the size of clamping plates used, the device is applicable to heavy or light wheels, the size of the clamping plates being governed by the size of the spoke to be acted upon.

It will be understood that various changes in the shape, construction and arrangement of parts may be resorted to without departing from the spirit of the invention or limiting the scope of the following claims; as for instance, by increasing the size of the device and lengthening the leg 5, the device may be used for pulling stakes or posts. In this event the bracket 4 would be against the post and the leg 5 would extend downwardly far enough to engage the ground and act as a brace.

Having thus described my invention what I claim is:

1. In a device of the character described, a frame having one end curved for engagement with the hub of a wheel, a fork on the other end of said frame adapted to engage a spoke, a supporting leg pivotally connected with said frame, a forked lever pivoted upon said frame, said lever having each of its arms provided with an elongated slot at the pivot point, and spoke gripping means swiveled within the fork of said lever.

2. In a device of the character described, a rectangular frame having one end curved for engagement with the hub of a wheel, a

V shaped fork adjacent the other end of said frame, a pointed supporting leg pivotally connected with said frame, a forked lever pivoted upon said frame intermediate its ends, each of the arms of said lever being provided with an elongated slot at its pivot point, a transverse bar extending across the fork of said lever, trunnions upon the ends of said bar mounted in openings in the forked end of said lever, and spoke gripping jaws pivotally connected with said transverse bar.

3. In a device of the character described comprising a frame adapted to engage the hub of a wheel, a support on said frame adapted to engage a spoke, a supporting leg pivotally connected with said frame, and a forked lever pivoted intermediate the ends of the frame, a transverse bar mounted within the fork of said lever, trunnions on the ends of said transverse bar mounted within openings in the arms of said lever, and a spoke gripping clamp pivotally connected with said transverse bar, said clamp comprising two semi-cylindrical plates provided with serrations on their edges, eyes on said plates adjacent their ends, and links extending around said plates and passing through said eyes.

In testimony whereof I hereto affix my signature in the presence of two witnesses.

JED LAPLANT.

Witnesses:

THOS. J. MCKEE,
LORETTA A. MURPHY.