

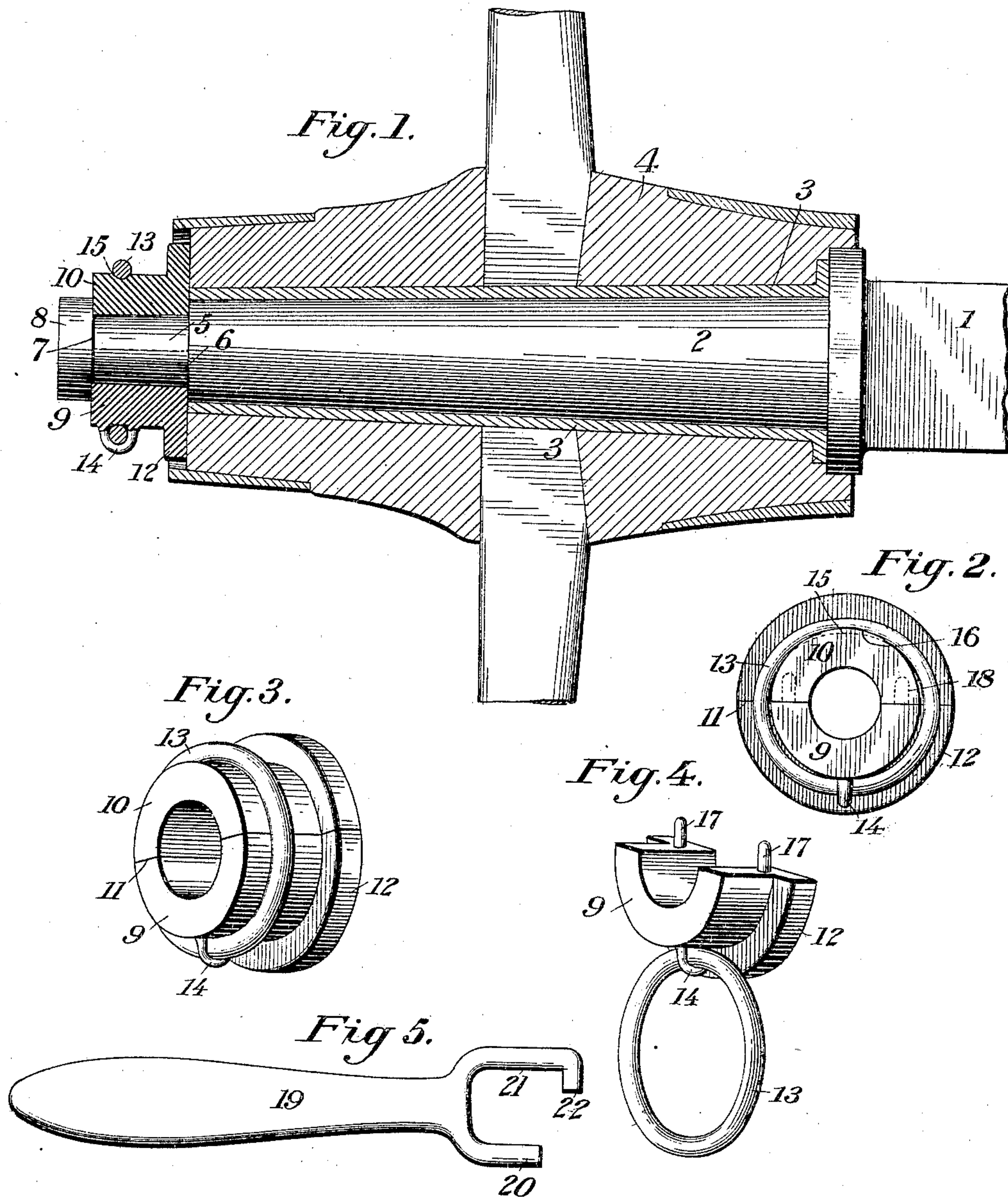
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Patented Oct. 15, 1901.

N. S. ANDERSON.
HUB ATTACHING DEVICE.

(Application filed July 16, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

NATHAN S. ANDERSON, OF KERENS, TEXAS.

HUB-ATTACHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 684,664, dated October 15, 1901.

Application filed July 16, 1901. Serial No. 68,494. (No model.)

To all whom it may concern:

Be it known that I, NATHAN S. ANDERSON, a citizen of the United States, residing at Kerens, in the county of Navarro and State of Texas, have invented a certain new and useful Hub-Attaching Device, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to hub-attaching devices, the object in view being to provide a simple, cheap, and reliable retaining device for holding vehicle-wheel hubs in place upon their axles or spindles, doing away with the usual threaded nut and entirely overcoming the liability of such nut or retaining device working loose.

The primary object of the invention is to do away with screw-threads and at the same time produce a retaining device which is capable of being easily and quickly applied to an axle-spindle and as easily removed whenever it becomes necessary to detach a wheel.

Another object of the invention is to overcome any liability of the retaining device becoming dislodged by accident or in ordinary handling.

With the above and other objects in view, the nature of which will appear more fully as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts, as hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a longitudinal section through a wheel-hub, showing the same mounted upon a spindle and held in place by means of the hub-attaching device forming the subject-matter of this invention. Fig. 2 is a view in elevation of the hub-attaching device, illustrating the elliptical or flattened shape of the spring-ring. Fig. 3 is a perspective view of the same. Fig. 4 is a detail perspective view of the lower segment of the device, showing the spring-ring thrown downward. Fig. 5 is a plan view of the wrench or spanner for placing and displacing the spring-ring.

Similar numerals of reference designate corresponding parts in all the figures of the drawings.

For the purpose of illustrating the present invention I have shown in Fig. 1 an axle 1,

provided with the usual spindle extension 2, 3 designating the inner bearing-sleeve of the hub, the latter being shown at 4.

In carrying out the present invention the outer end portion of the spindle is formed with an annular groove 5, which has the effect of providing oppositely-located inner and outer shoulders 6 and 7, respectively, the shoulder 7 forming the inner face of a collar 8 at the extremity of the spindle.

The hub-attaching device or retainer comprises, essentially, a pair of semicylindrical segments 9 and 10, which meet on a line diametrical to the axial center of the spindle 2, the line of meeting being designated at 11. Furthermore, each of the segments is provided at its inner end with an enlarged semicircular flange 12, so that when the two segments are brought together a complete annular flange is formed at the inner end of the retainer, which flange is adapted to bear against the outer end of the hub 4, as shown in Fig. 1. The segments 9 and 10 are of a size adapting them to fit snugly between the shoulders 6 and 7 on the spindle, so as to prevent movement of the retaining device longitudinally of the spindle.

In order to provide for holding the segments upon the spindle and in engagement with the groove 5, said segments are encircled by a spring-ring 13, which is somewhat elliptical in shape, as indicated in Fig. 2. The ring is connected to one of the segments, as 9, by passing the same through a keeper-loop 14 on said segment. The other segment 10 is provided at a point diametrically opposite from the loop 14 with a groove or depression 15, forming a seat into which the spring-ring is adapted to snap when forced over the segment 10, the engagement between the ring and segment 10 being indicated by the dotted line 16 in Fig. 2, such dotted line indicating the base of the groove or depression for the reception of the ring. The segments are further properly positioned and held with respect to each other by means of dowel-pins 17 on one of the segments, which enter corresponding sockets in the meeting face of the opposing segment. After placing the wheel upon the spindle the segments 9 and 10 are brought together at opposite sides of the spin-

dle between the shoulders 6 and 7 until the
dowel-pins 17 enter the sockets in the oppos-
ing segment. The spring-ring 13 is then
sprung, so as to cause it to pass over the
5 outer ends of both of the segments, and said
ring is then forced onto the segment 10 until
it snaps into the depression 15, being held
therein by reason of the resiliency of the ring
and the tendency for said ring to resume the
10 elliptical form shown in Fig. 2. In order to
remove the retaining device, it is only nec-
essary to reverse the operation just described.

In order to facilitate the application and
removal of the attaching device, I usually
15 employ a wrench or spanner 19, provided with
oppositely-located arms 20 and 21, the arm
20 being straight or plain, while the other
arm 21 is provided with a terminal inbent
hook 22, which is adapted to engage either
20 behind or in front of the spring-ring, while
the end of the straight arm 20 bears against
the outer surface of one of the segments and
forms the fulcrum of the wrench or spanner.

From the foregoing description it will be
25 seen that all screw-threads and nuts, as such,
are dispensed with and the consequent lia-
bility of the nut to work loose. The attach-
ing device herein described is simple in con-
struction, cheap in manufacture, and forms
30 a reliable fastening device for holding the

wheel-hub in place. At the same time the
retaining or attaching device may be dis-
placed or attached for allowing the wheel to
be removed whenever required.

Having thus described the invention, what 35
I claim as new, and desire to secure by Letters
Patent, is—

1. The combination with a grooved and
shouldered spindle, of a hub-attaching device
consisting of a pair of semicylindrical seg- 40
ments adapted to fit the grooved portion of
the spindle, one of said segments being pro-
vided with a depression, and an elliptical
spring-ring adapted to snap into said depres-
sion, said ring being loosely connected to the 45
opposing segment.

2. The combination with a grooved and
shouldered spindle, of a hub-attaching device
comprising a pair of semicylindrical segments
having a dowel-pin connection, one of said 50
segments being provided with a depression,
and a flattened or elliptical-shaped spring-
ring loosely connected to the other segment
and adapted to snap into said depression.

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

NATHAN S. ANDERSON.

Witnesses:

C. C. GARRETT,
W. C. FRAZIER.