

No. 622,005.

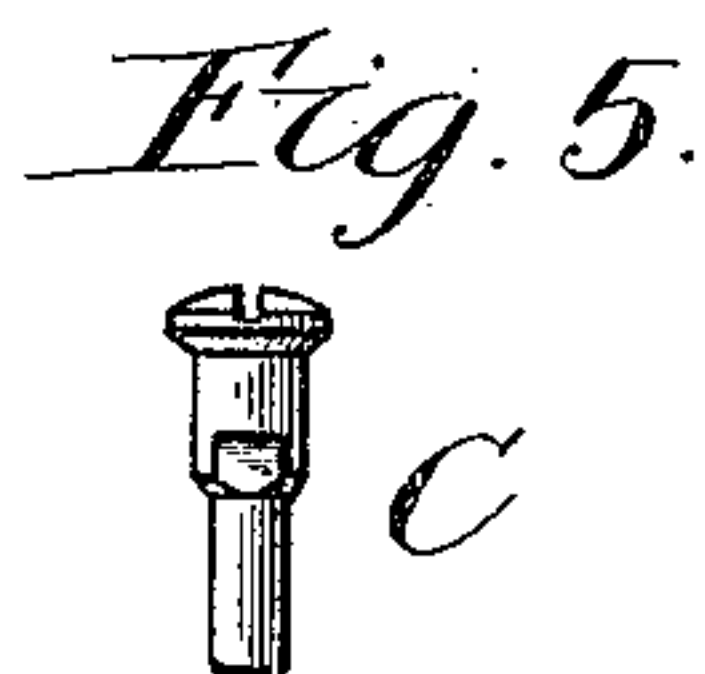
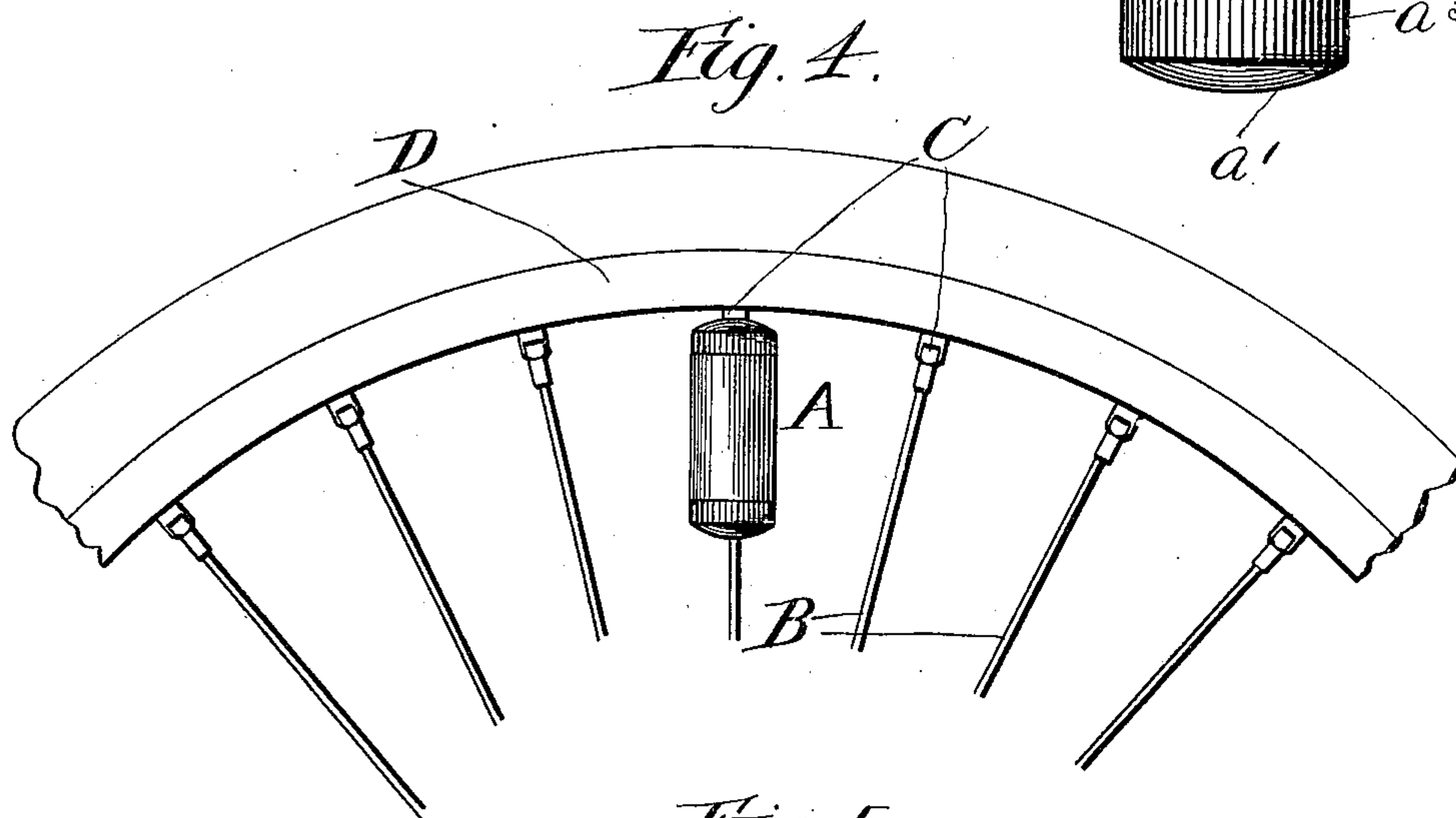
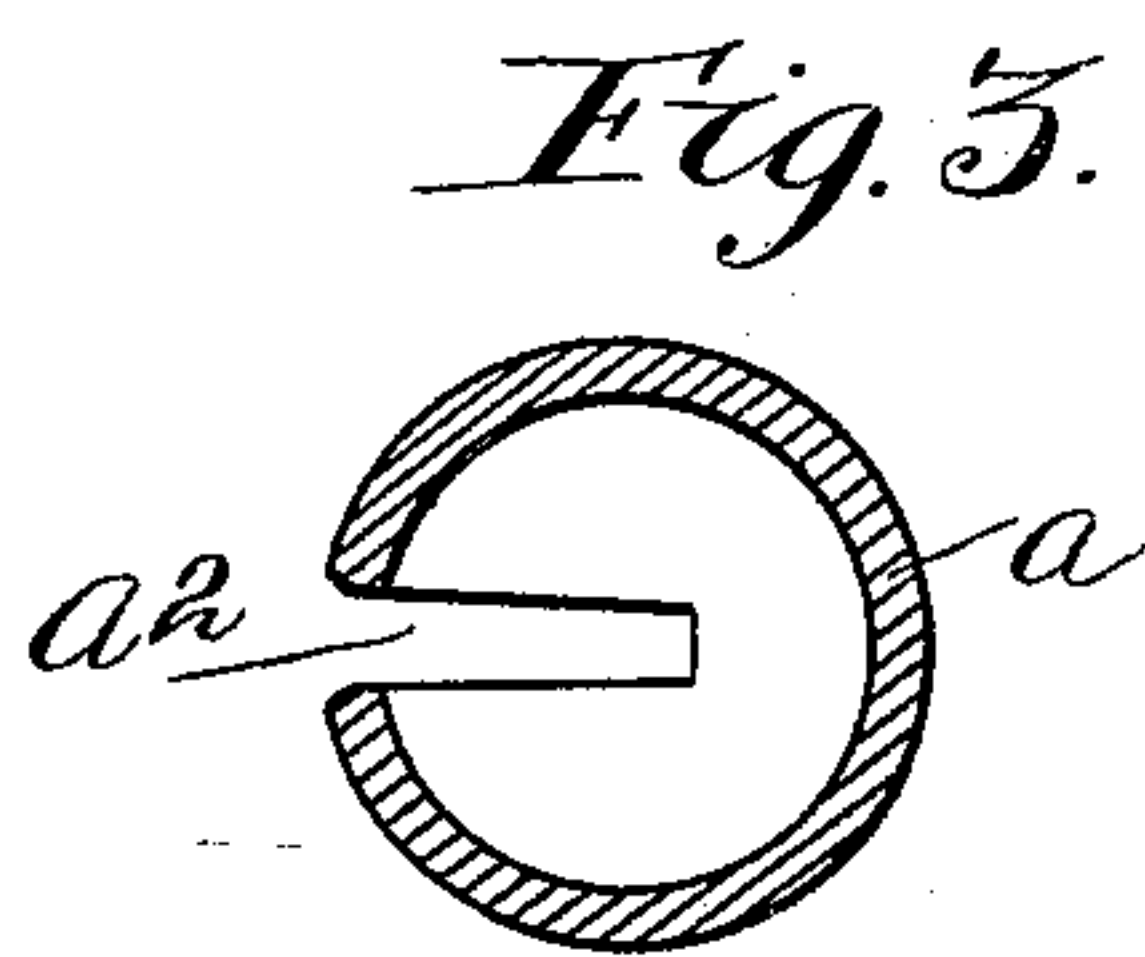
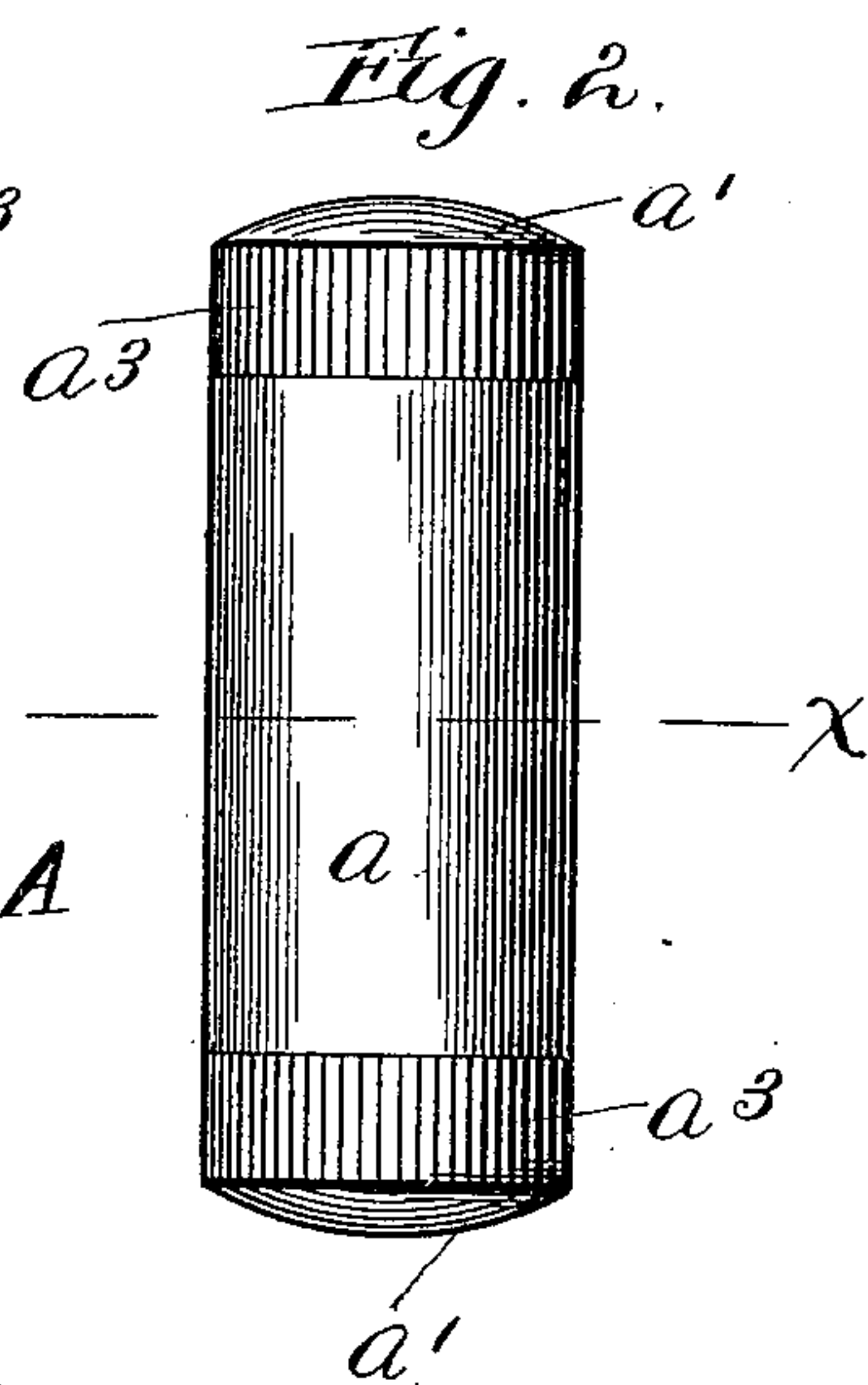
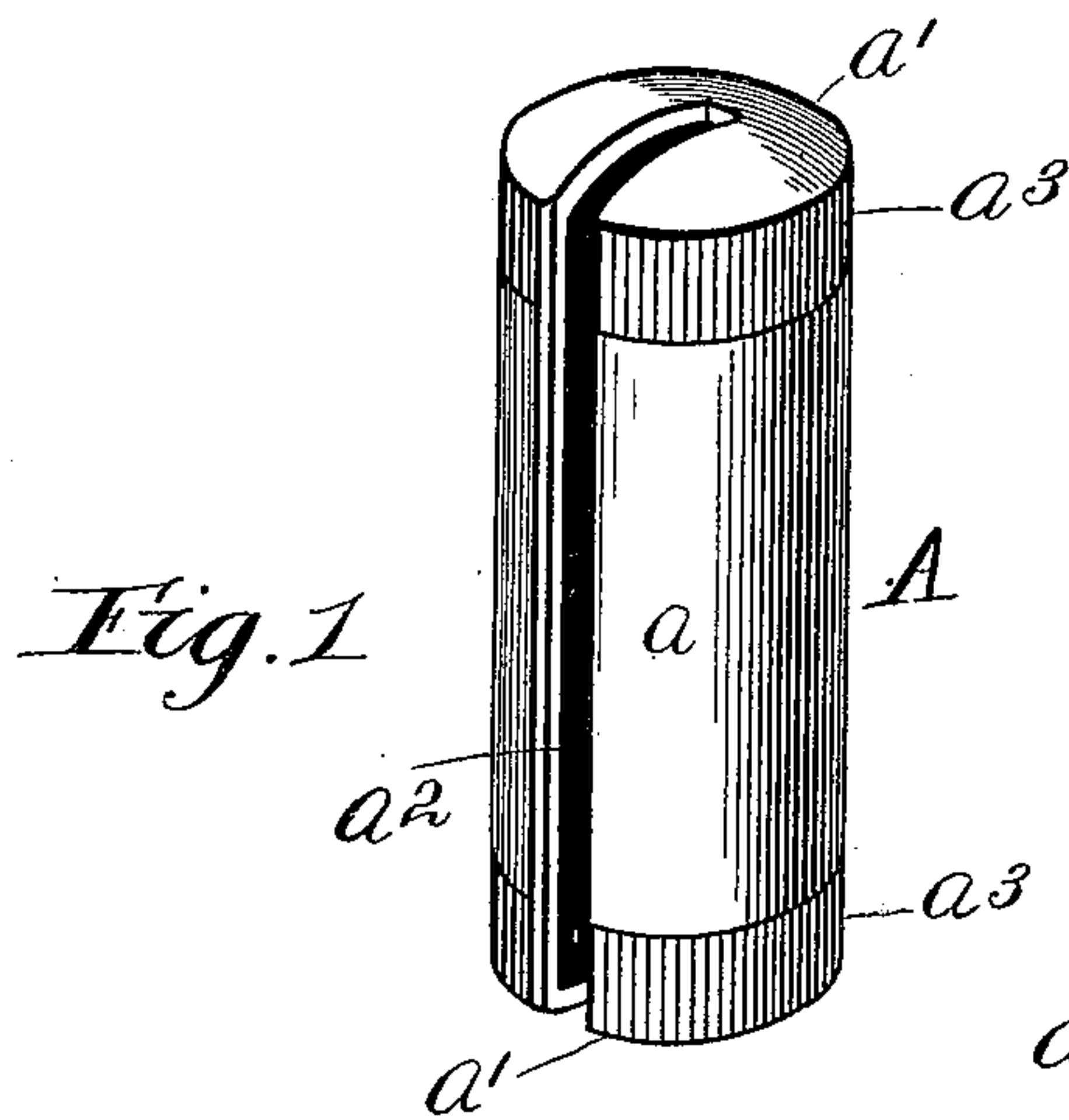
Patented Mar. 28, 1899.

W. HERRICK.

NIPPLE GRIP FOR BICYCLE WRENCHES.

(Application filed Dec. 28, 1897.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM HERRICK, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE MORGAN & WRIGHT, OF SAME PLACE.

NIPPLE-GRIP FOR BICYCLE-WRENCHES.

SPECIFICATION forming part of Letters Patent No. 622,005, dated March 28, 1899.

Application filed December 28, 1897. Serial No. 663,836. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HERRICK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Nipple-Grips for Bicycle-Wrenches, of which the following is a specification.

My invention relates to tools for gripping and adjusting the spoke-nipples on bicycle and other velocipede wheels, so as to tighten up or loosen the spokes, as may be desired. Appliances have heretofore been provided for such purpose; but so far as I am aware the forms or constructions which have been put on the market involve various defects, the same being provided with various adjuncts or attachments, rendering them undesirably complicated and expensive, or being unhandy, difficult to manipulate, and either presenting insufficient surface for permitting the operator to readily and firmly grasp and rotate the tool or a more or less desirably limited surface in a way which entails awkward and inconvenient handling, it being observed that the use of such articles is rendered the more difficult from the fact that the tool must grip the nipple while the latter is extended inwardly through the wheel-rim and in engagement with a spoke and from the further fact that the spaces between the spokes are limited.

The objects of my invention are to overcome all of the foregoing-mentioned defects and to provide a light, simple, economical, and extremely-desirable and highly-efficient construction of nipple-grip which can be conveniently operated.

To the attainment of the foregoing and other useful ends my invention consists in matters hereinafter set forth.

In the accompanying drawings, Figure 1 represents in perspective a nipple-grip embodying my invention. Fig. 2 shows the same in elevation, the unslotted side of the device being represented. Fig. 3 is a section on line $x-x$ in Fig. 2. Fig. 4 shows a portion of a velocipede-wheel and illustrates the application of my improved nipple-grip. Fig. 5 illustrates a full-sized nipple.

The nipple-grip A comprises a substan-

tially cylindric body a , having a longitudinally-arranged slot or channel which extends from end to end thereof and which is of sufficient width and depth to receive and center in such body both a spoke-nipple and a spoke with which the nipple is in engagement and to permit the nipple-grip when turned for the purpose of adjusting the nipple to rotate about an axis extending centrally or substantially centrally and longitudinally through the nipple and the spoke. This is illustrated in Fig. 4, in which a spoke B extends axially through the nipple-grip and engages a nipple C, which latter is received in the slot or channel at one end of the nipple-grip, and thereby engaged by the latter.

The ends a' of the nipple-grip are preferably convexed or rounded, so that when either end is caused to bear against the under side of the wheel-rim D, as will usually be the case, the rotation of the nipple-grip will not injure the wheel-rim.

The body a may have a plain cylindric surface from end to end or it can be milled adjacent to its ends, as at a^3 .

The body a could be made solid and provided with a slot or channel of suitable depth, preferably a little more than one-half the diameter of such body, so as to permit the nipple and spoke to be centered in alinement with the axis of the body when the nipple-grip is applied for the purpose of adjusting the spoke. I prefer, however, as a matter of further improvement to make such body tubular or hollow and with closed ends, whereby while it can be made of steel or the like it will be light and can be more easily carried and manipulated. In such case the longitudinal slot or channel a^2 is formed or cut through one side of the body, with its end portions extending partially across and through the ends of such body, as illustrated. In either case, however, the slot or channel which receives the spoke has its end portions arranged to open through the ends of the body of the nipple-grip, so as to receive the nipple. By this simple arrangement either end of the nipple-grip can be used and the employment of a separately-made nipple-gripping claw attached to the body of the

tool, as heretofore proposed, is avoided. My construction also provides a compact and efficient tool without objectionable projecting claws or the like, since it comprises an ob-
 5 long body of a size and diameter to permit it to be firmly and conveniently grasped by the hand of the user and longitudinally slotted or channeled from end to end in a way to cause each end of the slot or channel to pro-
 10 vide a pair of jaws for engaging a spoke-nipple. It will also be seen that the body A of the nipple-grip is provided with closed ends, which by reason of the slot or channel are suitably recessed to form said jaws, and that
 15 whether such body is solid or hollow it may be said to have closed ends, through which the slot or channel extends.

When the nipple-grip is applied as in Fig. 4, the operator can readily and naturally
 20 grasp the body *a* with one hand and obtain a firm hold thereon, since it will present a length substantially equal to the width of the hand and a diameter sufficient to enable the hand to firmly grasp and hold it. The spaces
 25 between the spokes afford ample room for the operator to thus grasp the nipple-grip, and while such spaces are somewhat limited the spokes at opposite sides of the nipple-grip cannot interfere with the operation of manu-
 30 ally turning the nipple-grip, it being seen that the arm of the operator will extend laterally to the plane of the wheel and that the nipple-grip can be readily operated by a series of comparatively limited deflections of the op-
 35 erator's wrist and consequent partial turns of his hand.

The slot or channel in the nipple-grip is desirably formed with slightly outwardly-diverging walls, so as to permit it to readily se-
 40 cure the nipple and also accommodate different sizes of the same.

Either end of the nipple-grip can be used for engaging a nipple, thereby rendering it more convenient and desirable. No screw adjustments are required, and obviously the
 45 device can be readily and quickly applied and used.

The body *a* is desirably cylindric and preferably tubular. The cylindric form could of course be slightly modified or departed from
 50 without departing from the spirit of my invention, and hence I characterize the same as substantially cylindric.

What I claim as my invention is—

1. A nipple-grip comprising a cylindric or
 55 proximately cylindric body having a longitudinal slot or channel extending from end to end thereof, the terminal portions of the slot or channel being extended through closed or solid ends of said body with their side
 60 walls arranged to form a pair of jaws at each end of the body, substantially as described.

2. A nipple-grip comprising an oblong hollow body having closed or solid ends and provided with a longitudinal slot whereof the
 65 terminal portions extend through and partially across the closed or solid ends of the hollow body to form jaws, substantially as described.

3. A nipple-grip comprising an oblong hol-
 70 low or tubular body having rounded ends *a'*, and provided with a longitudinal channel *a''* having its terminal portions *a'''* extending through and partially across the rounded ends of the hollow body and made with sides which
 75 converge toward the ends of the slot, substantially as described.

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Witnesses:

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