No. 611,564. Patented Sept. 27, 1898.

J. M. CRUMP.

SPOKE GRIP.

(Application filed Dec. 31, 1897.)

(No Model.)

Fig. 1.

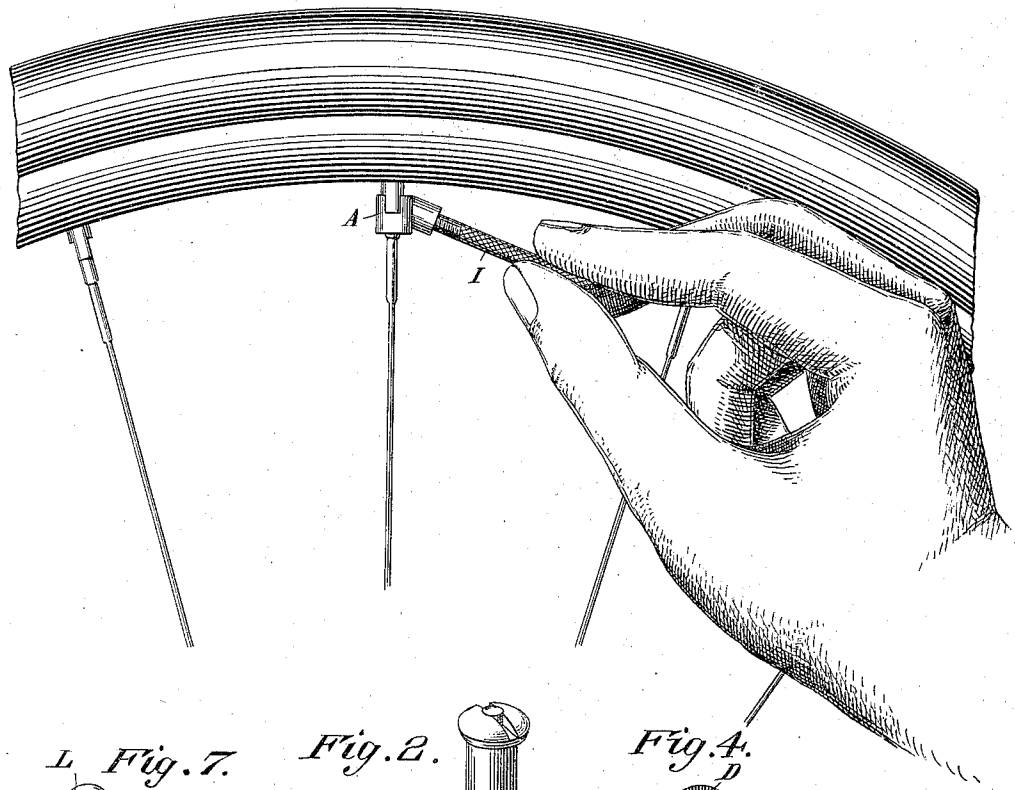


Fig. 7.

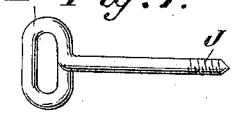


Fig. 2.

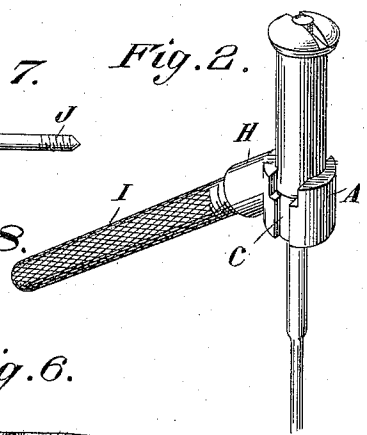


Fig. 4.

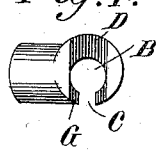


Fig. 8.

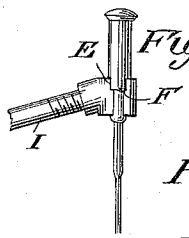


Fig. 3.

Fig. 6.

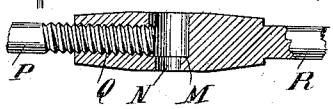
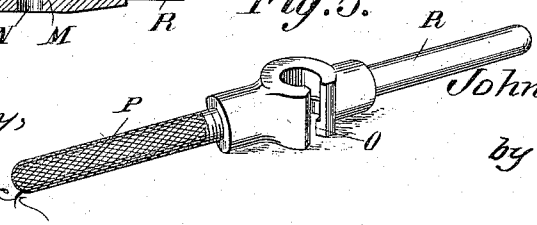


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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SPOKE-GRIP.

SPECIFICATION forming part of Letters Patent No. 611,564, dated September 27, 1898.

Application filed December 31, 1897. Serial No. 665,004. (No model.)

To all whom it may concern:

Be it known that I, JOHN MOORE CRUMP, residing at South Prairie, in the county of Pierce and State of Washington, have invented a new and useful Spoke-Grip, of which the following is a specification.

This invention relates to improvements in spoke-grips; and the object thereof is to provide a simple and improved construction of grip which may be readily attached to the spoke-nipples of any bicycle and conveniently manipulated when it is desired to tighten the spokes or to remove the same when broken.

With the above object in view the invention consists of a head having an opening to receive the nipple and slotted, by means of which it may be inserted upon the spoke and moved to position, and a clamping and operating lever for clamping the head to the nipple and for rotating the same.

The invention further consists in the improved construction, arrangement, and combination of parts hereinafter fully described and afterward specifically pointed out in the claim.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, having reference to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of a portion of the frame of a wheel, showing my improved spoke-grip in position upon the nipple of one of the spokes. Fig. 2 is an enlarged perspective view of my spoke-grip in position upon a spoke-nipple. Fig. 3 is a vertical sectional view of Fig. 2. Fig. 4 is a top plan view of the head of the grip. Fig. 5 is a perspective view of a modified form of grip. Fig. 6 is a vertical longitudinal sectional view of the same. Fig. 7 is a view of a modified form of lever. Fig. 8 is a side elevation of my grip applied to the nipple of a spoke.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the accompanying drawings, A indicates the head of the grip, the same being provided with the central opening B to receive the nipple and with the vertical slot C, communicating with the opening, so that the head can be readily inserted upon the spoke and moved upwardly to engage the nipple. The upper end of the head is slotted transversely, as illustrated at D, to receive the flat portion E of the nipple, the downwardly-faced shoulders formed by said flat portion of the nipple resting upon the upper surface of the head, with a shoulder F, formed by reducing the lower end of said nipple, resting upon the bottom wall G of the slot D.

Formed at one side of the head and communicating therewith is a screw-threaded socket H, which is inclined downwardly, so as to remove the outer end of the operating and clamping lever I from the wheel-rim and enable it to be readily grasped by the fingers of the operator, said operating-lever being screw-threaded on its inner end, as illustrated at J, to enter the screw-threaded socket and adapted to bear against the spoke-nipple and clamp the head thereto, so that as said head is rotated by the lever the nipple will also be rotated upon the screw-threaded end of the spoke. This operating-lever may be either milled, as illustrated in Fig. 2, to prevent the fingers of the operator slipping therefrom, or it may be formed with the loop L at its outer end, as illustrated in the modified construction, as in Fig. 7.

In the modification illustrated in Fig. 5 I provide the head with an annular shoulder M, formed on the interior of the nipple-receiving opening N, said shoulder adapted to bear against the shoulder formed upon the nipple, the large portion of the nipple entering the large portion of the opening and the reduced end thereof engaging the smaller portion of the opening N. The head in this instance is also provided with a vertical slot O, by means of which it may be inserted upon the spoke and moved upwardly to engage the nipple. An operating-lever P is provided, which is screw-threaded to enter a screw-threaded socket Q, carried by the head, and serves to clamp the head to the nipple, as in the former construction, the head also being provided in the present instance with a fixed lever R, secured to the opposite side thereof and disposed in line with the clamping-lever.

From the above description it will be seen

that I have produced a very simple construction of spoke-grip, the same being small, so as to be capable of being carried in the pocket and which may be readily adjusted to fit the nipple of the spoke of any bicycle to tighten said spoke or remove the same, the grip being convenient in manipulation and effective in operation.

While I have illustrated and described the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown and described, but hold that any slight changes or variations such as might suggest themselves to the ordinary mechanic will properly fall within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a spoke-grip, the combination of a head having a nipple-receiving opening formed with a shoulder to engage the shoulder of the nipple and having a vertical slot communicating with said nipple-receiving opening, whereby it may be positioned upon the spoke, and a clamping-lever for securing the head to the nipple and rotate the same, substantially as set forth.

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