

(No Model.)

F. H. BOLTE.
BICYCLE.

No. 534,680.

Patented Feb. 26, 1895.

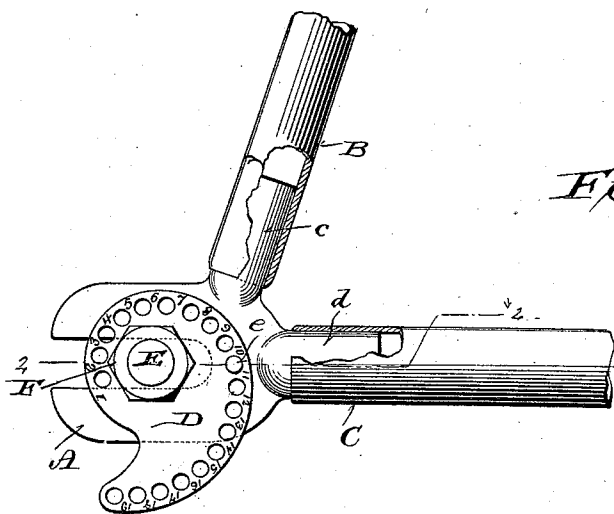


Fig. 1.

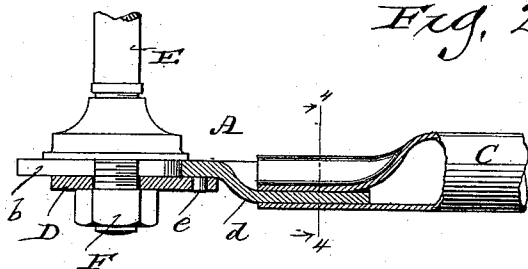


Fig. 2.

Fig. 4.

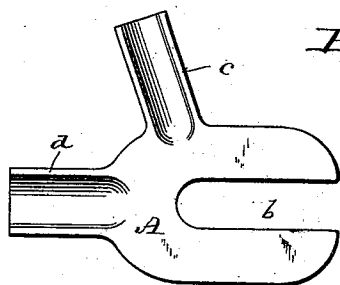
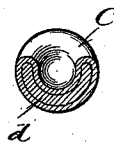


Fig. 3.

Witnesses.
Geo. W. Louny
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UNITED STATES PATENT OFFICE.

FRANK H. BOLTE, OF MILWAUKEE, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE TELEGRAM CYCLE MANUFACTURING COMPANY, OF SAME PLACE.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 534,680, dated February 26, 1895.

Application filed September 15, 1893. Serial No. 485,578. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. BOLTE, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Bicycles; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to lessen weight without diminishing strength in the construction of safety bicycles, said invention consisting in certain peculiarities of construction and combination of parts hereinafter specified with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents my improvements in side elevation; Fig. 2, a horizontal section on line 2—2 of the preceding figure; Fig. 3, an inner side view of an axle-hanger constructed according to my invention, and Fig. 4, a transverse section taken on line 4—4 of Fig. 2.

Referring by letter to the drawings, A represents one of a pair of hangers for the rear axle of a bicycle. One of the objects of my invention being to lessen weight, I make each hanger from a flat steel blank of suitable thickness operated upon by shaping dies. Each hanger has the usual longitudinal slot *b* or other suitable axle-opening and divergent tube-engaging prongs *c*, *d*, these prongs being preferably of semi circular contour in cross-section, whereby I obtain a large amount of brazing surface proportionate to a small diameter of tubing, it being preferable to have the offsets, resultant from the swaging operation, come upon the outer side of said hanger, as herein shown. Those ends of tubes B, C, engaged by the prongs *c*, *d*, of each wheel-hanger are swaged to form sockets that correspond in contour with said prongs and are brazed to the latter, whereby I provide very neat and strong joints, and at the same time I gain space for the sprocket-wheel that is applied to the rear wheel hub of a chain-drive safety bicycle thus enabling me to employ a shorter axle and have less spread of the frame than is usual in the construction of such vehicles.

I am aware of an axle-hanger in which tubular tube engaging arms are a result of a union of two peculiarly constructed metal plates, and I am also aware of such a hanger in the form of a forging having projections brazed in hollows of frame-bars, but it is not practical with either of said hangers to have the inside and outside of their arms or projections brazed to frame-tubes or bars. Hence one of the novel features of my invention consists in having the socket-ends of the frame-tubes correspond to the contour of hanger-prong and face the latter inside and out, as is well illustrated in Figs. 2 and 3.

Each hanger is provided with a lateral stud *e* for engagement with any one of a succession of sockets (preferably perforations) in an eccentric curvilinear washer D parallel to the contour of the same, this washer being arranged on an axle E intermediate of said hanger and a set-nut F run on said axle.

The set of the washers D with relation to the studs *e* on the hangers regulates the adjustment of the axle E in the slotted portions of said hangers, and consequently governs the tension of the drive-chain (not shown) and it is preferable to consecutively number the perforations in said washers so as to insure of even adjustment.

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

A rear axle-hanger for bicycles, the same consisting of a flat piece of steel having an axle-opening and divergent prongs, the latter being of semi-circular contour in cross-section; in combination with tubes having ends thereof in the form of sockets that correspond in contour with said prongs and receive the same, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

FRANK H. BOLTE.

Witnesses:

H. G. UNDERWOOD,
C. W. SCOTT.