

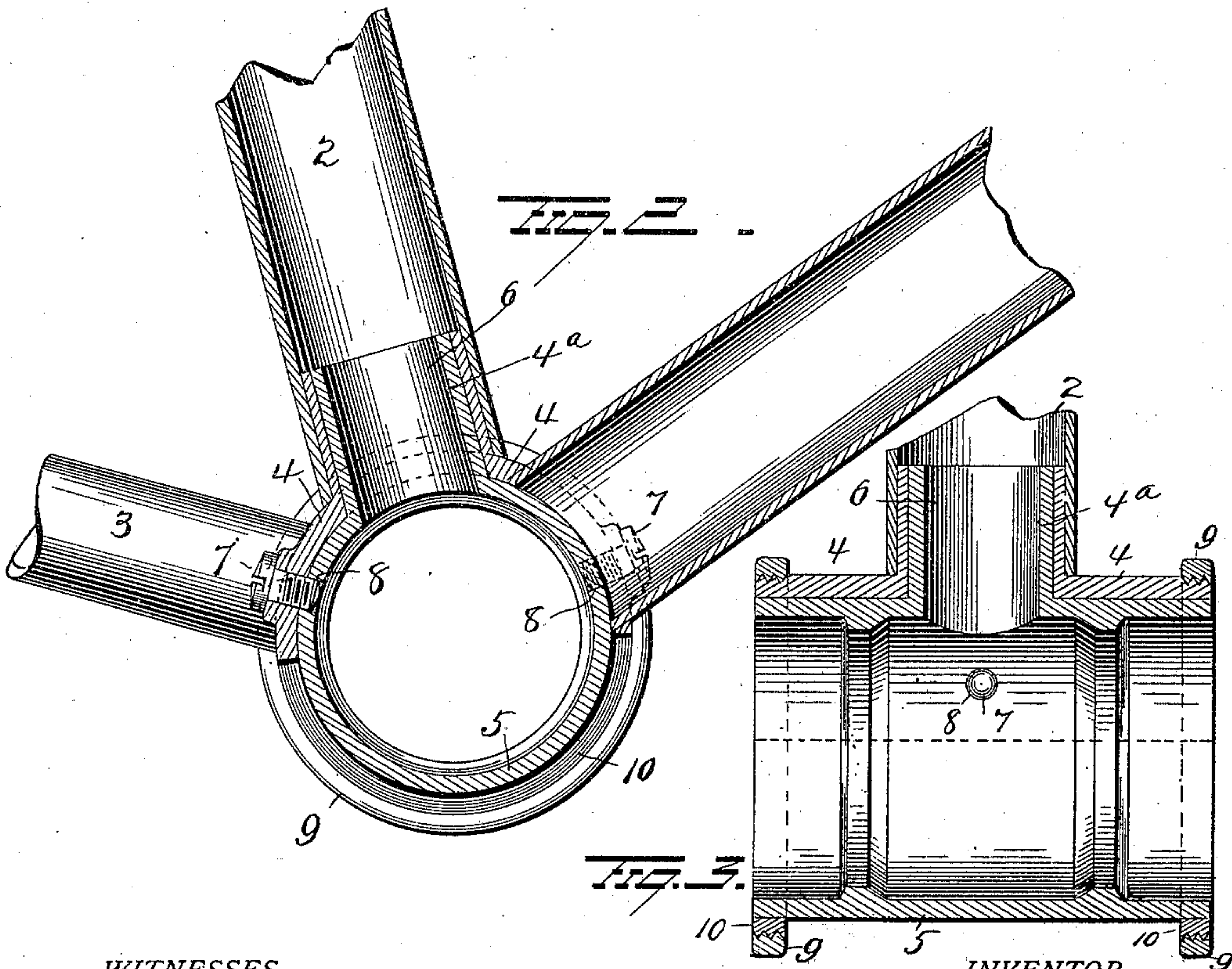
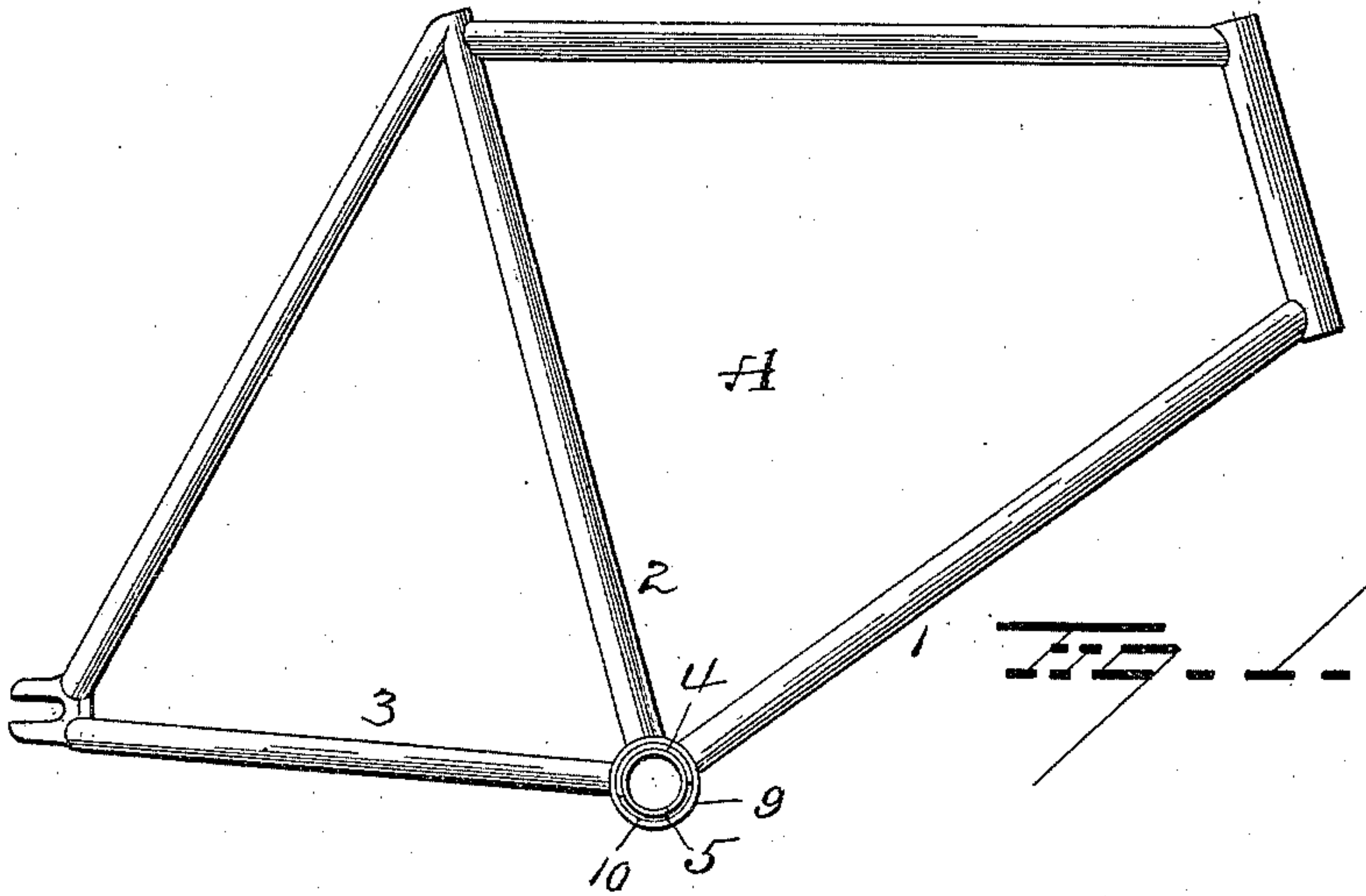
No. 686,034.

Patented Nov. 5, 1901.

C. S. DIKEMAN.
BICYCLE FRAME.

(Application filed Dec. 23, 1898.)

(No Model.)



WITNESSES
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UNITED STATES PATENT OFFICE.

CHARLES S. DIKEMAN, OF TORRINGTON, CONNECTICUT.

BICYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 686,034, dated November 5, 1901.

Application filed December 23, 1898. Serial No. 700,138. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. DIKEMAN, of Torrington, in the State of Connecticut, have invented certain new and useful Improvements in Bicycle-Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in bicycles, and more particularly to the mounting of the crank-shaft, the object of the invention being to so construct the frame that the parts supporting the crank-shaft can be readily removed bodily with the crank-shaft for cleaning.

A further object is to construct the frame in such manner that counterboring of the crank-hanger for forming the bearings for the crank-shaft shall be avoided.

A further object is to provide a crank hanger or bearing which shall obviate the necessity for heating or brazing the same to the bars or tubes of the frame.

A further object is to provide a crank-hanger which shall be simple and cheap in construction, easy of application to and removal from the frame, and which shall be effectual in all respects in the performance of its functions.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of a bicycle-frame, showing my invention. Fig. 2 is a sectional view, and Fig. 3 is a longitudinal section.

A represents a diamond frame for a bicycle the front bar 1, the central standard 2, and the arms of the rear fork 3 of which are connected rigidly together by means of a horizontally-disposed curved plate 4, the latter being thus built into and forming a rigid and integral part of the frame. A nipple 4^a projects from the plate and enters the standard 2. The plate 4 is practically semicircular in cross-section, and against its under face a sleeve 5 is placed. The sleeve 5 is provided with an upwardly-projecting nipple 6, which enters the lower end of the standard 2, and

thus prevents any possibility of endwise displacement of said sleeve. The plate 4 is provided with a series of screw-threaded holes for the reception of screws 7, the ends of which enter threaded sockets 8 in the sleeve, whereby to removably secure the sleeve in place against the curved plate. The sleeve 5 constitutes the crank-hanger for the machine and is provided internally with suitable bearing-faces for balls.

To further guard against displacement of the sleeve or crank-hanger 4, I provide rings 9, which encircle the ends of the curved plate and sleeve. The upper face of the plate 4 is screw-threaded near its ends, and semicircular externally-threaded strips 10 are placed under the ends of the sleeve, so as to aline with the screw-threaded portions of the plate. The rings 9 are internally threaded and are screwed on the threaded portions of the plate 4 and the strips 10.

It has heretofore been customary to make the crank-hanger an integral part of the frame and to japan the frame and the crank-hanger. As the hanger and frame were brazed together, heat was necessarily employed, and consequently the hanger had to be counterbored after the operation of japanning. In heating to braze the hanger to the frame both are liable to be warped and thrown out of alinement. My improved construction of removable sleeve or hanger obviates the necessity of counterboring and also heating of the sleeve holding the bearings. My improved sleeve or hanger can be readily removed and cleaned without danger of defacing the japanned surface of the frame. The crank-hanger or sleeve, the crank, and the bearings can be removed bodily and the whole cleaned by simply immersing them as a whole in a bath, while with constructions heretofore proposed the bearings for the crank-shaft had to be removed piece by piece to be cleaned.

My improvements are simple in construction, easy to handle, and effectual in the performance of their functions.

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

In a bicycle-frame, the combination with the bars or tubes thereof, of a segmental plate secured to said bars or tubes and connecting the

same, a nipple projecting from said segmental plate and entering one of the tubes of the frame, a sleeve disposed against said segmental plate, bearings for balls located inside of
 5 said sleeve, narrow strips located under the ends of the sleeve and abutting at their ends against the lower edges of the segmental plate, the ends of said segmental plate and the lower faces of said strips being screw-threaded, and
 10 rings screwed on the ends of the segmental

plate and over said strips and inclosing the latter.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES S. DIKEMAN.

Witnesses:

ISAAC W. BROOKS,
 JOHN W. BROOKS.