No. 631,282. Patented Aug. 22, 1899.

C. S. DIKEMAN.

BICYCLE.

(Application filed Sept. 28, 1898.)

(No Model.)

Fig. 1.

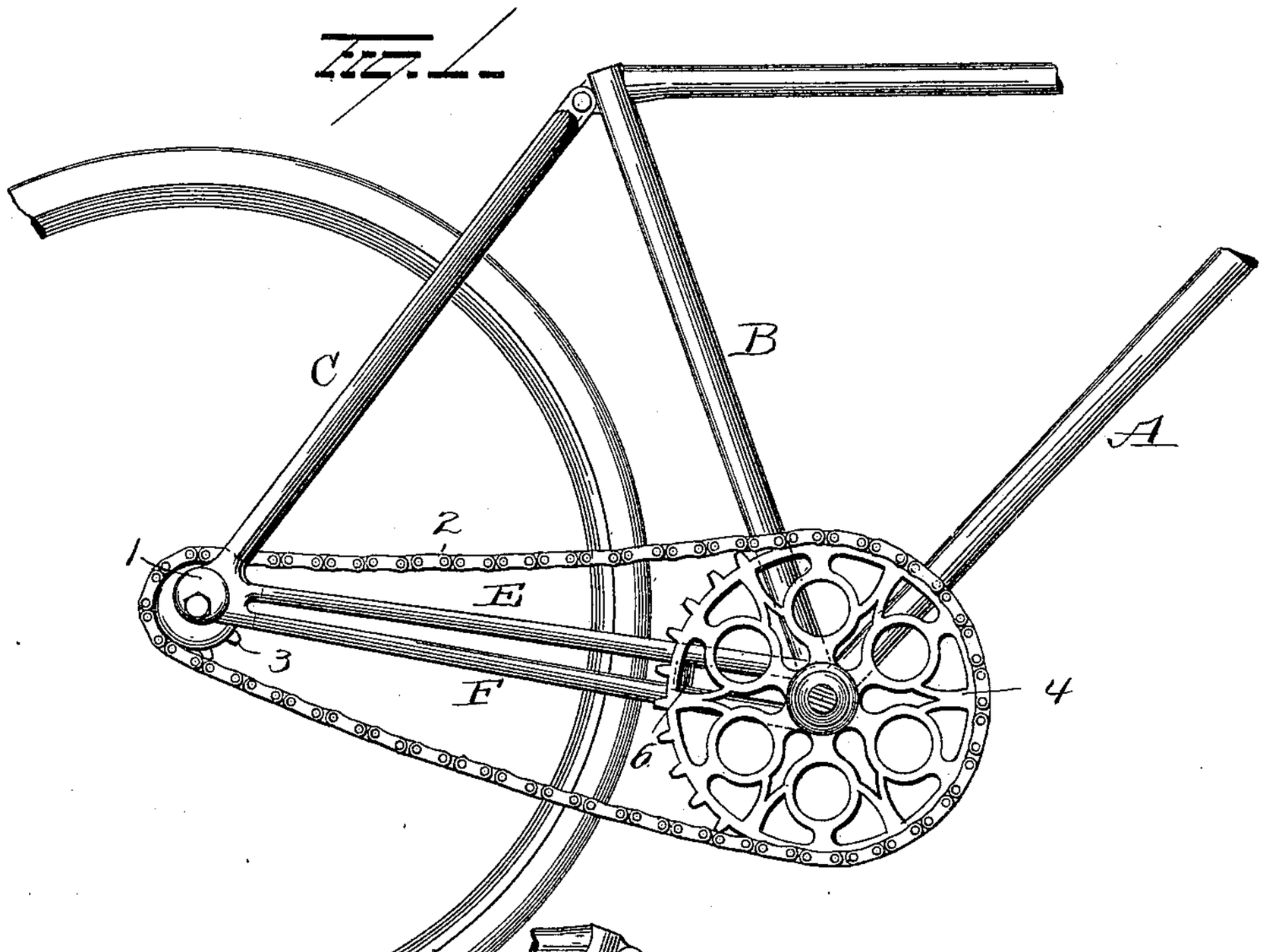
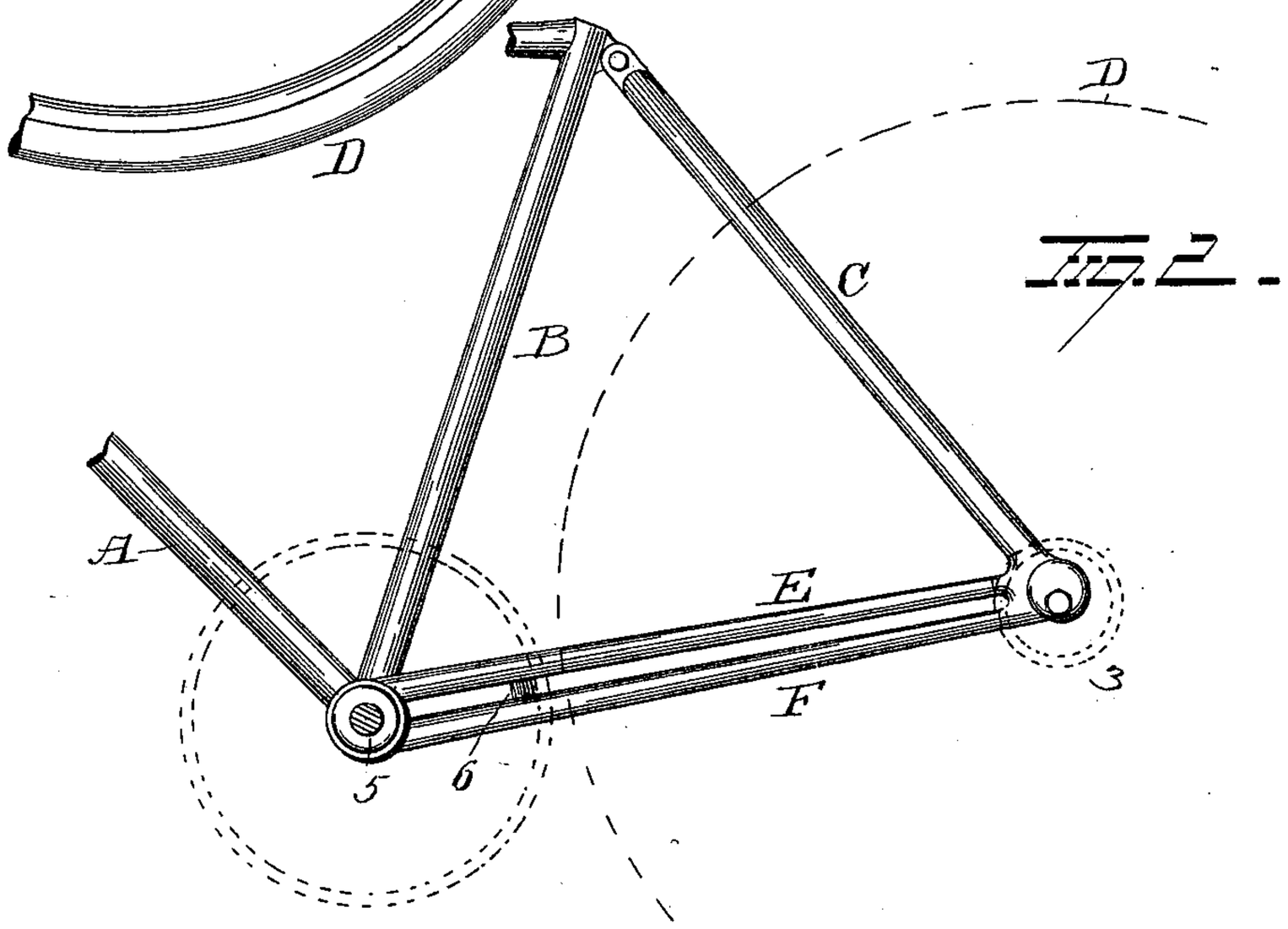


Fig. 2.



WITNESSES
E. D. Nottingham
G. F. Downing.

INVENTOR
C. S. Dikeman
By H. A. Seymour
Attorney

UNITED STATES PATENT OFFICE.

CHARLES S. DIKEMAN, OF TORRINGTON, CONNECTICUT.

BICYCLE.

SPECIFICATION forming part of Letters Patent No. 631,282, dated August 22, 1899.

Application filed September 28, 1898. Serial No. 692,113. (No model.)

To all whom it may concern:

Be it known that I, CHARLES S. DIKEMAN, of Torrington, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Bicycles; 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, the object of the invention being to provide a frame of such construction that it will effectually withstand twisting strains, and hence maintain the sprocket-wheels in alinement.

With this object in view the invention consists in certain novel features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of a portion of one side of a bicycle, showing the invention applied thereto; and Fig. 2 is a similar view of the opposite side of the bicycle.

A represents the lower front bar, B the central brace, and C the rear fork, of a diamond frame, the rear-wheel bearing being secured to and projecting rearwardly from the lower end of the rear fork. The rear-wheel bearing is provided with a cam 1 for adjusting the bearing of the rear axle to maintain it in proper alinement and also for tightening or loosening the drive-chain 2, which passes over the sprocket-wheels 3 and 4. To a depending portion of each one of the rear forks are rigidly and permanently connected the rear and small ends of two tapering tubes or bars E F, which extend forwardly and gradually diverge, their forward and large ends being rigidly and permanently connected to the upper and lower portions of the crank-hanger 5. Each pair of tubes is stiffened and strengthened by means of a stud 6, interposed between them a short distance in rear of the crank-hanger.

By making the tubes E and F tapering and converging their smaller ends I am enabled to connect their rear ends with a depending portion of the rear fork, and thereby secure a very wide bearing or connection between the frame and the forward side of the rear-axle bearing, such extended bearing comprising the lower end of the rear fork and the rear ends of the two tubes, which merge into a single wide and extended connection or support in front of the rear bearing. The forward and larger ends of the tubes are diverged to such an extent as will permit of their being rigidly and permanently secured to the upper and lower portions of the crank-hanger, and thus provide sufficient leverage to prevent the crank-hanger from being thrown out of adjustment by twisting strains. By the employment of tapering tubes arranged to converge at their rear and smaller ends and to diverge at their forward and larger ends I am enabled to very greatly strengthen and stiffen the bicycle-frame without adding materially to its weight and without requiring any change in the form or arrangement of the rear fork. The studs or struts 6, interposed between the tubes near the crank-hanger, serve to stiffen and strengthen the completed brace and relieve the connections between the forward ends of the tubes and the crank-hanger of any undue strains.

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

1. In a bicycle, the combination with the rear fork and crank-hanger, of two tubes or bars disposed on each side of the rear wheel, the tubes of each pair being tapered and arranged to gradually diverge from their smaller to their larger ends, substantially as set forth.

2. In a bicycle, the combination with the rear fork and crank-hanger, of two tubes or bars disposed on each side of the rear wheel, the tubes of each pair being tapered from end to end and arranged to gradually diverge from their rear to their forward ends, the rear and small ends being rigidly and permanently secured to the lower end of the rear fork in front of the rear axle, and the forward ends to the upper and lower portions of the crank-hanger, substantially as set forth.

3. In a bicycle, the combination with the rear fork and crank-hanger, of two tapering tubes or bars arranged to gradually diverge from their rear to their forward ends and con-

nected at their rear and smaller ends with the rear fork at a point in front of the rear axle, and at their forward and large ends to the upper and lower portions of the crank-hanger, and a stud interposed between the tubes near the crank-hanger, substantially as set forth.

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

CHARLES S. DIKEMAN.

Witnesses:
CHAS. L. MCNEIL,
WILLARD A. COWLES.