No. 609,937. Patented Aug. 30, 1898.

D. L. KELLY.

FORK FOR BICYCLES.

(Application filed Feb. 10, 1898.)

(No Model.)

Fig.1.

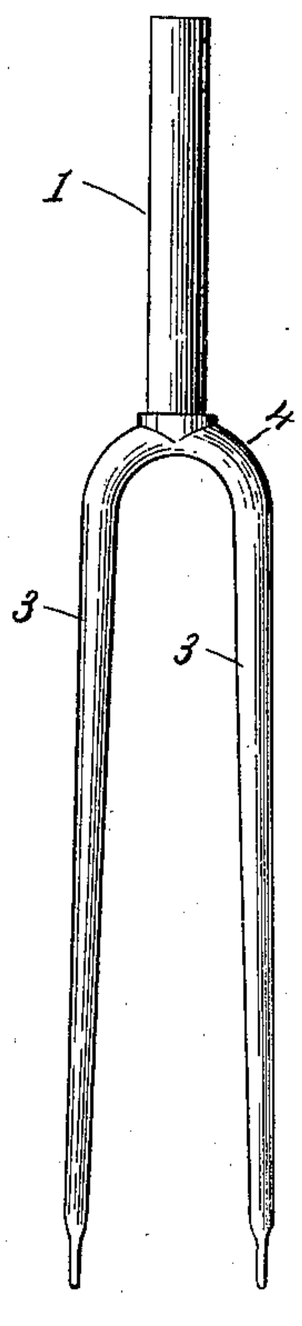

Fig.2.

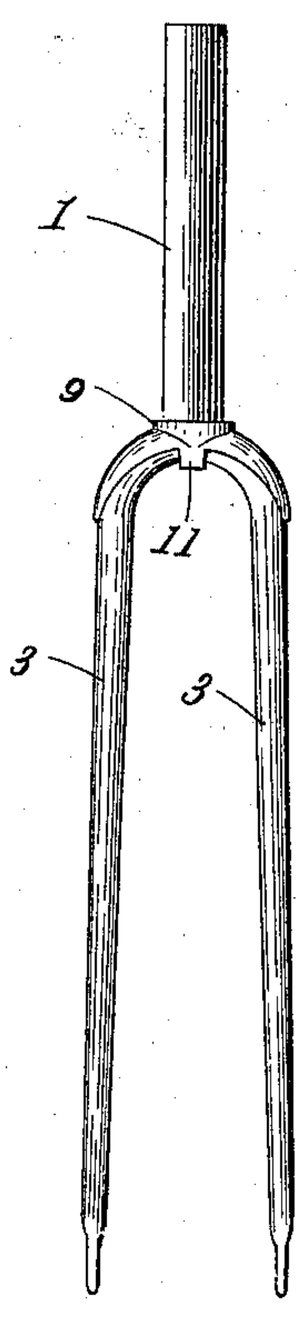

Fig.3.

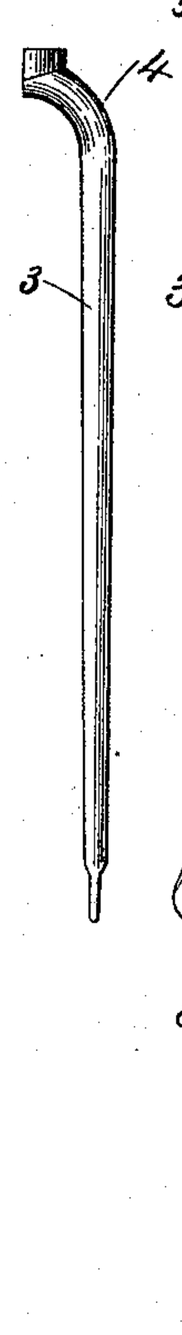

Fig.4.

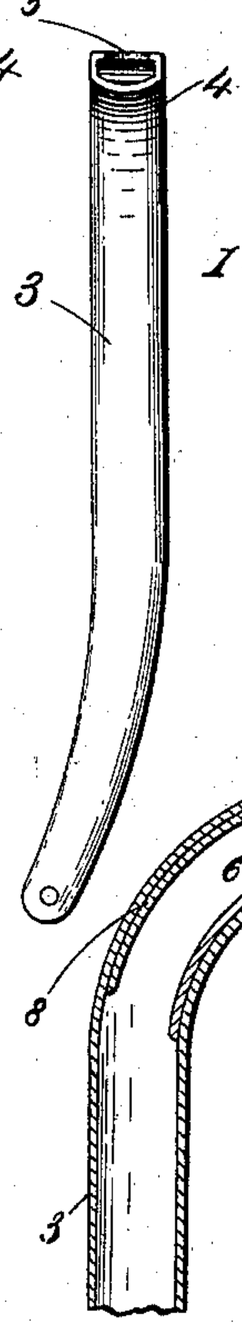

Fig.5.

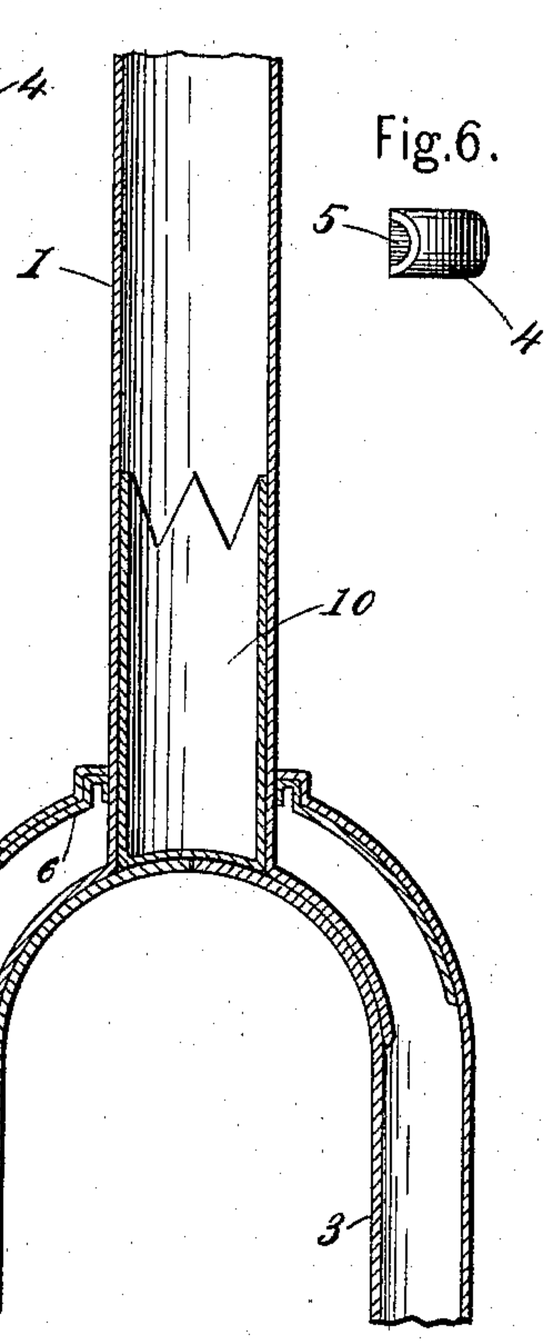

Fig.6.

Fig.7.

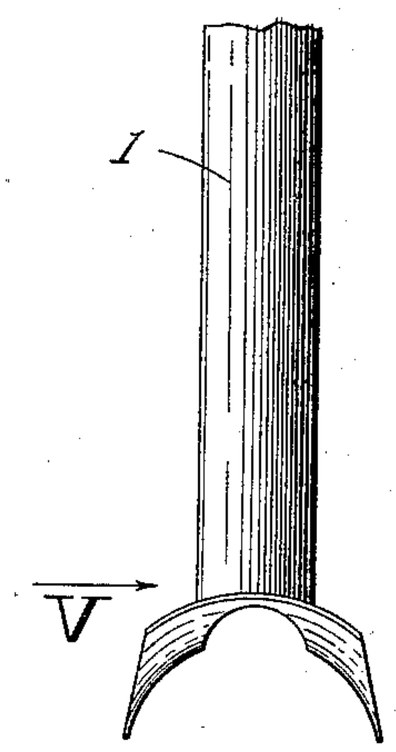

Fig.8.

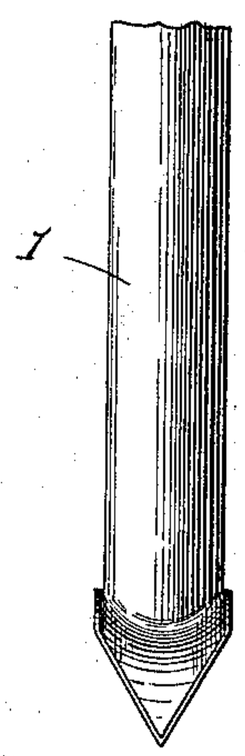

Fig.9.

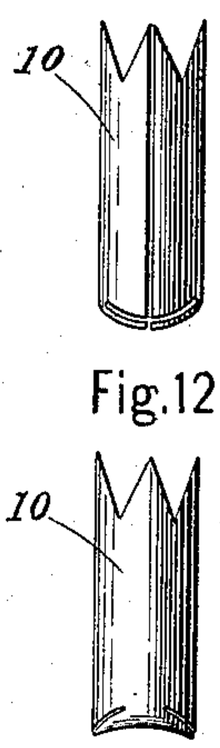

Fig.10.

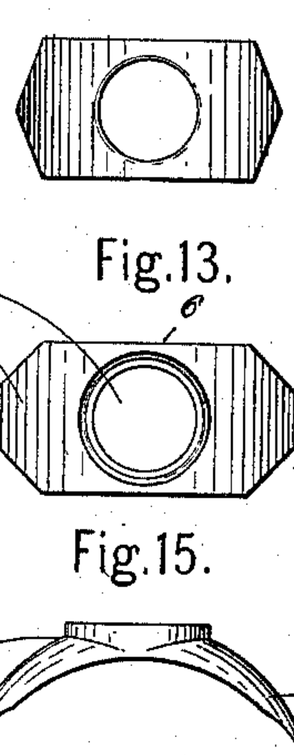

Fig.11.

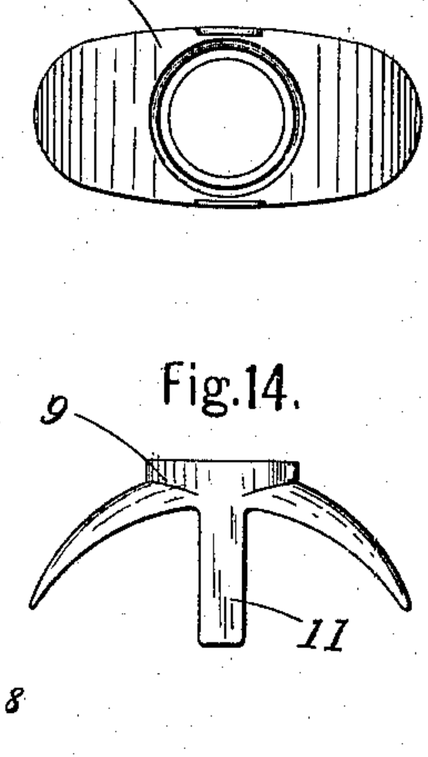

Fig.12.

Fig.13.

Fig.14.

Fig.15.

Fig.16.

Witnesses,
A. J. Sangster
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David L. Kelly Inventor.

By James Sangster Attorney.

UNITED STATES PATENT OFFICE.

DAVID L. KELLY, OF BUFFALO, NEW YORK.

FORK FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 609,937, dated August 30, 1898.

Application filed February 10, 1898. Serial No. 669,750. (No model.)

To all whom it may concern:

Be it known that I, DAVID L. KELLY, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Forks for Bicycles, of which the following is a specification.

My invention relates to an improved fork for bicycles and analogous purposes; and the object of the invention is to simplify, cheapen, and lighten the construction without lessening the strength or stiffness, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation of a bicycle-fork made in accordance with my invention. Fig. 2 is also a front elevation of a bicycle-fork, showing an upper cap or exterior reinforcement placed thereon. Fig. 3 represents a front elevation showing a detached view of one of the fork sides. Fig. 4 represents an inner side elevation of the same. Fig. 5 is an enlarged sectional elevation cutting centrally through the upper portion of the forks and a portion of their fork-stem. Fig. 6 is a top plan view of the fork side illustrated in Fig. 3. Fig. 7 is a side elevation of the fork-stem and its branched lower end. Fig. 8 is also a side elevation of the stem, looking in the direction of the arrow V, Fig. 7, and showing an end view of the branched lower end. Fig. 9 represents a side elevation of the stem-reinforcement, illustrating the side and transverse seams of the reinforcement. Fig. 10 is a bottom view of the stem. Fig. 11 represents a bottom view of the supplementary cap. Fig. 12 represents a side elevation of the stem-reinforcement, looking at substantially a right angle to the view in Fig. 9. Fig. 13 represents a bottom view of the crown portion. Fig. 14 is a side view of the supplementary cap shown in Fig. 11. Fig. 15 represents a side elevation of the crown portion. Fig. 16 represents a bottom or lower end view of the stem-reinforcement shown in Figs. 9 and 12.

Referring to the drawings for the details of construction, in which like numerals represent like parts, the stem is designated by the numeral 1, and is preferably a portion of steel tubing similar to that usually employed for this purpose in bicycle manufacture. The lower end of the stem is split and formed by means of dies or similar mechanism into the forms shown in Figs. 7 and 8.

The fork sides 3 are in the well-known hollow form, and their upper ends 4 are bent or curved substantially as shown in Figs. 3, 4, and 6, a substantially semicircular depression 5 being formed in the upper portion of each end to receive the fork-stem, as will appear more clearly farther on.

The crown portion 6 is provided with a circular opening 7, through which the stem passes, and the arms or side extensions 8, upon which the curved ends of the fork sides fit. The preferred shape and form of the crown portion is illustrated in Figs. 13 and 15.

The cap 9 (shown in Figs. 11 and 14) is designed to be used principally with tandems or larger machines, as it is believed that the plain fork shown in Fig. 1 is sufficiently strong for all practical purposes for single machines.

The stem-reinforcement 10 is preferably in the form shown in Figs. 9, 12, and 16, being formed or stamped from a single portion of sheet metal. However, a section of tubing may be employed, or any other well-known form of reinforcement.

The stamped reinforcement being provided with seams allows the spelter or brazing material to readily flow and thus forms a stronger joint, and for that reason I prefer that form of reinforcement.

In assembling my improved form of fork the several portions are first stamped or otherwise formed in their preferred shape by dies or suitable mechanism. Then the crown portion is slipped upon the stem, the curved ends of the fork sides upon the branched lower end of the stem and the crown portion, and the whole brazed together. Should an exterior cap be required, it is slipped over the stem and upon the curved ends of the fork sides and its extensions 11 bent under the same, substantially as shown in Fig. 2, before the portions are brazed. By this means I produce a fork which is well adapted to be used with the modern style of flush-joint frames now in vogue and a fork in which the upper ends of the fork sides themselves form the crown.

The peculiar construction of the fork tends to materially lighten the same without detracting from its strength, and as the whole is preferably formed of stamped or drawn metal and is in but a few parts it is cheaply manufactured.

I am aware that changes in the form and proportion of parts and in the details of construction of the devices herein shown and described as the preferred embodiment of my invention may be made by a skilled mechanic without departing from the principle or sacrificing the advantages of my invention, and I therefore reserve the right to make such modifications and alterations as fairly fall within the scope of my invention.

I claim as my invention—

1. A bicycle-fork comprising a stem having a branched lower end, a crown portion, and two fork sides having their upper ends curved toward each other and fitted over the crown portion and branched lower end of the stem.

2. A bicycle-fork comprising a stem having a branched lower end, a stem-reinforcement, a crown portion, two fork sides having their upper ends curved toward each other and fitted over the crown portion and branched lower end of the stem, and an outer strengthening-cap.

3. A bicycle-fork comprising a stem having a branched lower end, a reinforcement fitted in the lower end of said stem, a crown portion provided with a central circular opening and adapted to fit over the stem, two hollow fork sides having their upper ends curved toward each other and provided with a semicircular depression on the upper sides thereof, the curved upper ends of the said fork sides being fitted over the crown portion and branched lower end of the stem, with the upper sides of said crown portions encircling the stem and the lower sides meeting to form an arch, as set forth.

DAVID L. KELLY.

Witnesses:
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