

(No Model.)

W. K. BELLIS.
BICYCLE FRAME.

No. 544,021.

Patented Aug. 6, 1895.

Fig. 1.

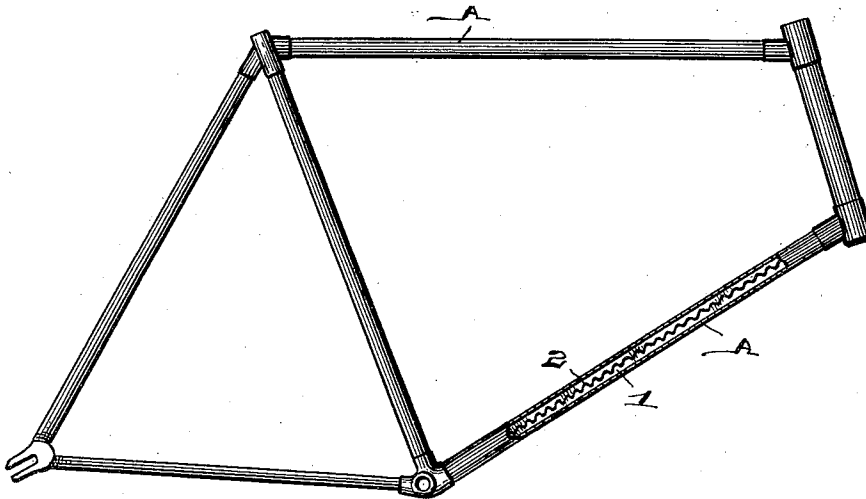


Fig. 2.

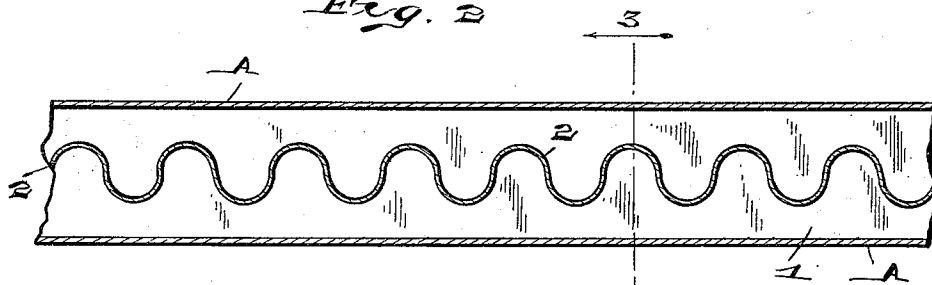
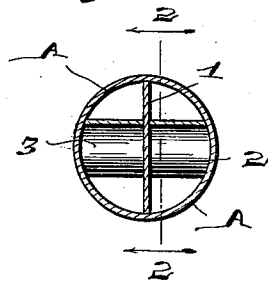


Fig. 3.



WITNESSES:

St. D. Neal
J. A. Walsh

INVENTOR

William H. Bellis,
BY
Chester Bradford,
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM K. BELLIS, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE BELLIS
CYCLE COMPANY, OF SAME PLACE.

BICYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 544,021, dated August 6, 1895.

Application filed May 28, 1895. Serial No. 550,959. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM K. BELLIS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Bicycle-Frames, of which the following is a specification.

The object of my said invention is to produce a light but very strong and rigid bicycle-frame; and it consists in inserting within the thin tubes, which constitute the main portions of such a frame, at such points as it may be desired to stiffen or strengthen, a peculiarly-constructed internal reinforcement or support, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of the main portion of a bicycle-frame, a side of one of the tubes being partially broken away to show my said invention; Fig. 2, a fragmentary sectional view as seen from the dotted line 2 2 in Fig. 3, and Fig. 3 a transverse sectional view as seen from the dotted line 3 3 in Fig. 2.

The frame is mainly composed of the tubes A, and, except as to the peculiar internal reinforcement above mentioned, is or may be of any ordinary or desired form and needs no special description. Said internal reinforcement consists of a straight flat transverse flange or web 1 extending substantially centrally across the tube A from one side to the other with its edges bearing on the opposite sides of the inner surface thereof,

and two serpentine plates or webs 2 and 3, disposed on the two sides of the web 1 and extending thence at right angles therewith, also to the inner surface of the tube A, said structure as a whole extending longitudinally of the frame-tube throughout such portion thereof, as may be desired. It is in this serpentine form of these webs 2 and 3 that my invention principally resides. By means of them, as will be readily understood, a very large proportion of the internal surface of the tubes is borne against by these internal webs forming the reinforcement, and thus a considerably-lighter tube can be used while maintaining the same degree of rigidity than heretofore or where only narrow straight edges bear upon the internal surface of the tube.

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

A bicycle frame composed of tubes provided with internal reinforcement composed of the members 1, 2 and 3, the members 2 and 3 being of a serpentine form longitudinally, whereby a large bearing surface between them and the tube is secured, substantially as shown and described and for the purpose specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 21st day of May, A. D. 1895.

WILLIAM K. BELLIS. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.