(No Model.)

A. F. TEMPLE.

BICYCLE FRAME.

No. 589,950. Patented Sept. 14, 1897.

Fig. 1.

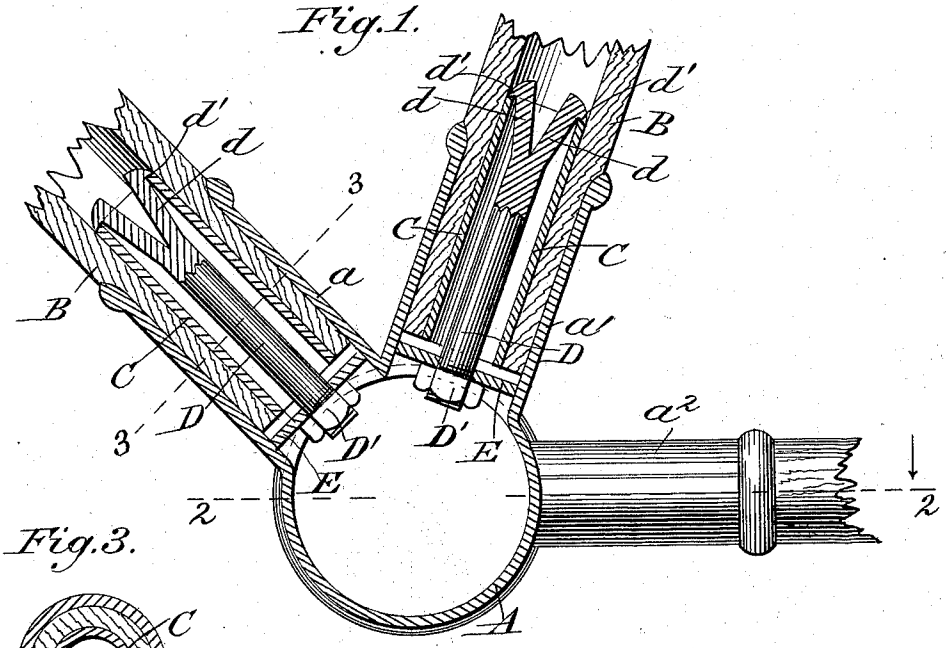


Fig. 3.

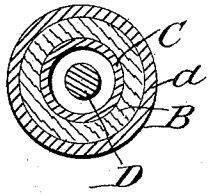
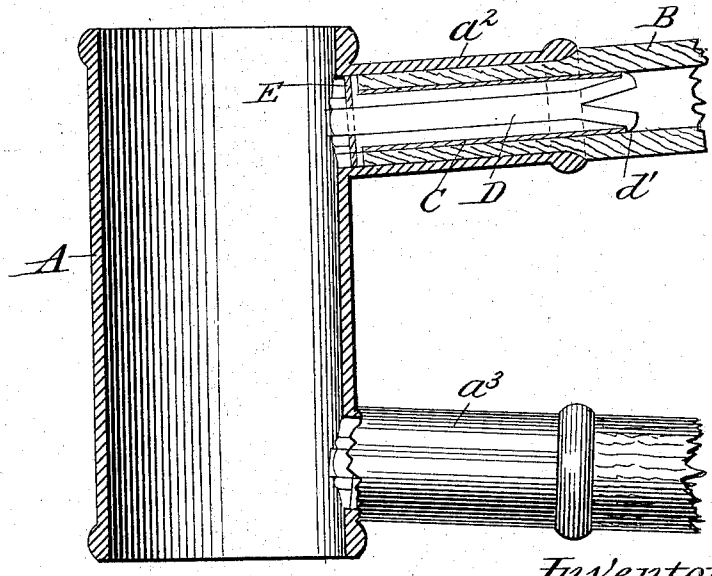


Fig. 2.



Attest:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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BICYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 589,950, dated September 14, 1897.

Application filed July 24, 1896. Serial No. 600,396. (No model.)

To all whom it may concern:

Be it known that I, ANSEL F. TEMPLE, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, 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 present invention relates to an improvement in the construction of bicycle-frames, the object being to enable a stronger fastening or joint to be made at the points where the wooden frame is attached to the metallic sockets, the invention being therefore especially applicable to those frames which are made partly of wood and partly of metal; and the invention therefore consists, essentially, in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical sectional view of my improved bicycle-frame joints, showing clearly the way in which the wooden parts are fastened to the metallic parts of the frame. Fig. 2 is a horizontal sectional plan on the line 2 2 of Fig. 1. Fig. 3 is a cross-section on the line 3 3 of Fig. 1.

Similar letters of reference designate corresponding parts throughout the different figures of the drawings.

A designates a hollow metallic part of the main frame of a bicycle, the same being a portion, for instance, of the crank-hanger and having the integral sockets a, a', a^2, and a^3, which are designed to receive the ends of wooden strips constituting the wooden frame of the bicycle, said strips being designated by the reference-letter B.

It will be understood that the casting A is presented here simply by way of example to represent the metallic socket portion on any part of a bicycle, and its construction may vary greatly in different cases. The wooden parts B are made of some suitable hard wood and are bored the entire length.

Each wooden roll or rod B is provided at the end with a metallic sleeve C, which is forced tightly and securely thereinto, so as to be rigidly and immovably connected therewith. D designates a bolt which is split at one end to provide the prongs d d, said prongs being more or less of a springy character and being shaped at their ends with the lugs or hooking projections d' d'. The split bolt D is introduced into the inner sleeve C and is forced through the same, such forcing action compressing the prongs d d to a certain extent toward each other, so that when the bolt D has been introduced far enough through the sleeve C the said hooked ends d' d' will spring out at the end of the sleeve C and engage therewith, thereby making the bolt D non-removable from the sleeve, as clearly shown in Fig. 1. The other end of the bolt D is furnished with a screw-threaded portion on which is a nut D'.

The inner end of the socket, which receives the end of the wooden roll B—as, for instance, socket a' or socket a—is provided with a transverse plate or partition E, which is perforated at the center with an opening through which passes the inner end of the bolt D, and after said bolt has been inserted through the metal plate E the nut D' is applied to the screw-threaded end of the bolt and tightened up against the plate E, so as to firmly hold the hollow rod B in place. It will be understood that the roll or strip B is forced as tightly as possible into the socket a; but I preferably leave a small space between the inner end thereof and the plate or partition E. The wooden piece is held tightly within the socket in consequence of having been forced thereinto; but it is caused to maintain its position by means of the bolt arrangement which I have just described, the connection of said bolt with the plate E being of such a character that the wooden rod B cannot easily become loosened; but if it should become loose to any small extent such looseness may be taken up by tightening up the bolt D'.

It will thus be seen that I provide a very efficient means for holding the wooden rods of the bicycle-frame within the metallic joints that connect these rods. Joints of the character that I have described may be employed at any point in the bicycle-frame where they will be found efficient and useful. Such joints are cheap of manufacture, easy of application,

and productive of great strength in the bicycle-frame. While they do not add to its weight, they add very greatly to its strength, which is a very important consideration nowadays when the great object to be attained is lightness of weight combined with the maximum of strength.

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

1. In a bicycle-frame, the combination with a metallic joint, of a wooden frame-rod, a rigid sleeve within said rod, and a split bolt connected to the sleeve by being introduced into the same and automatically interlocking with the inner extremity thereof and also to the metallic joint by means of a plate or partition, substantially as described.

2. In a bicycle-frame, the combination with a metallic socket, of a hollow frame-rod, a rigid metallic sleeve within the end of said rod, a split bolt within said sleeve, having its split end connected to the sleeve and its opposite end adjustably connected to the socket by means of a partition-plate and a nut on the end of the bolt, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ANSEL F. TEMPLE.

Witnesses:

WM. CARPENTER,

GERTRUDE VOGEL.