

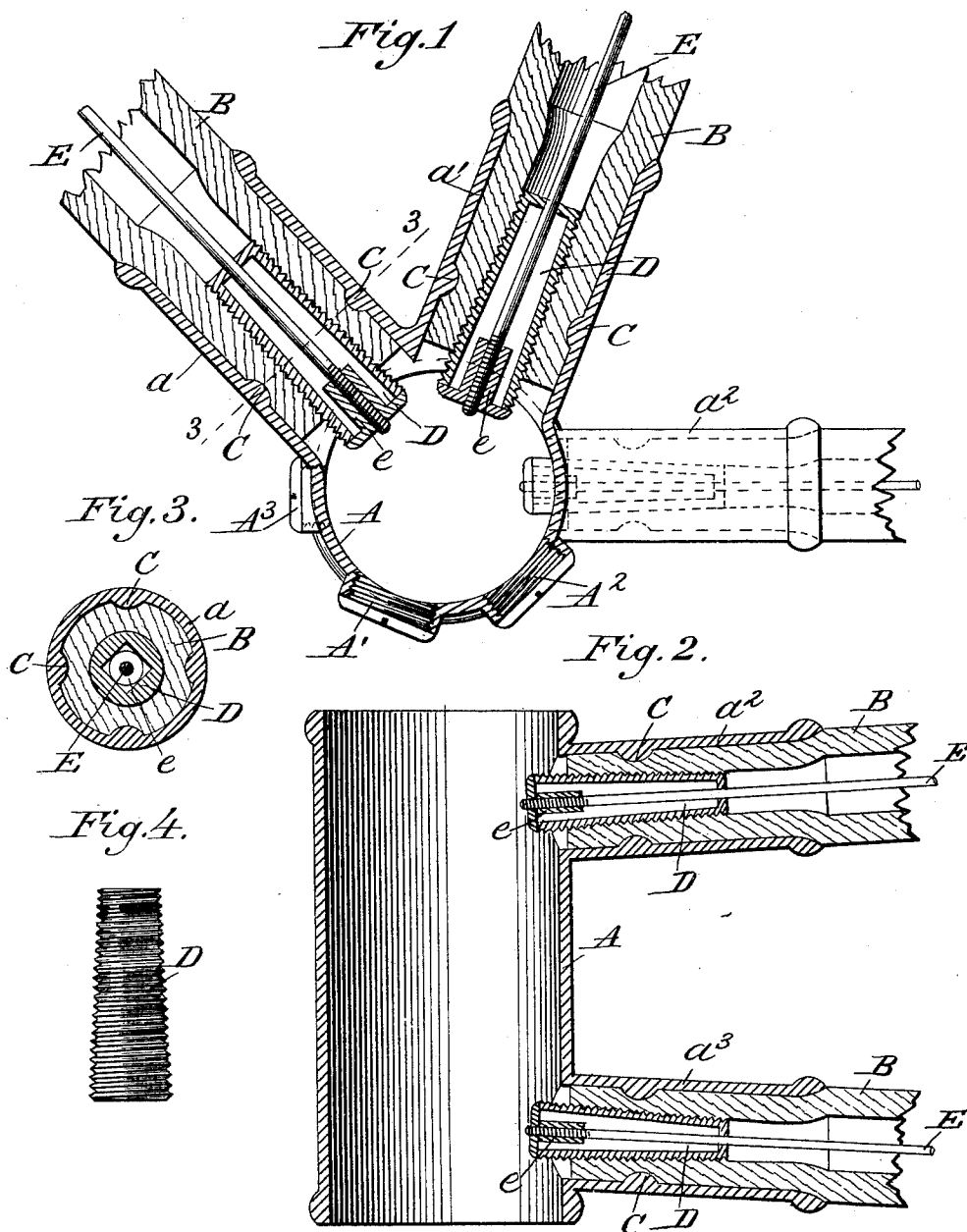
(No Model.)

2 Sheets—Sheet 1.

A. F. TEMPLE.
BICYCLE FRAME.

No. 586,639.

Patented July 20, 1897.



Attest:

H. H. Schott
att. Bayard

Inventor:

Amel G. Temple
per C. W. Vasken,
Att'y.

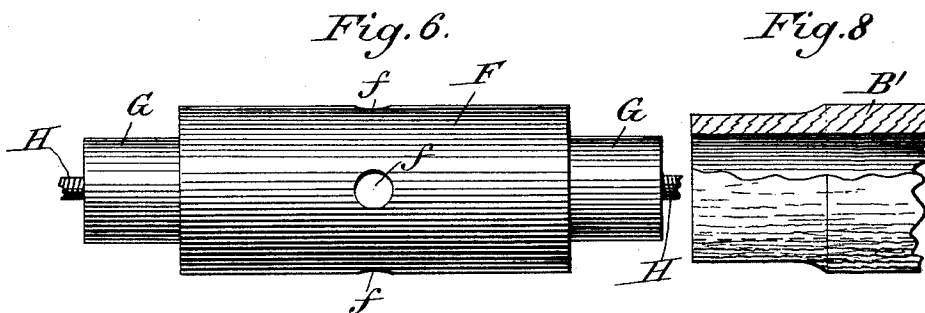
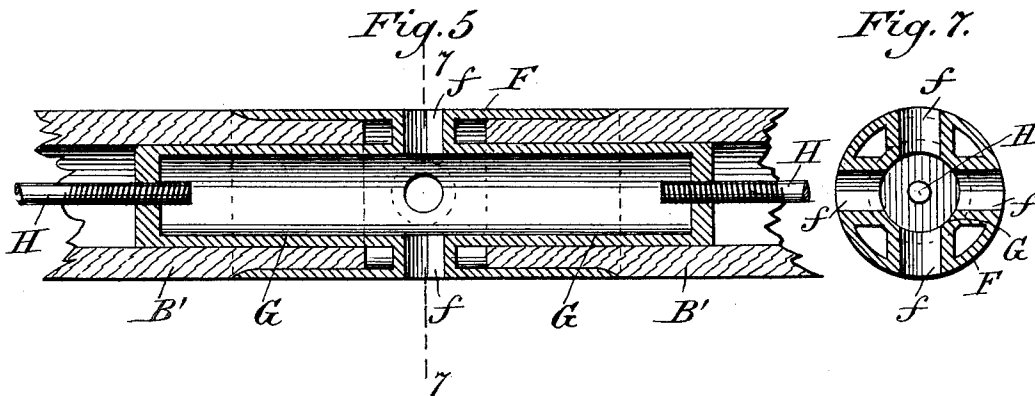
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2 Sheets—Sheet 2.

A. F. TEMPLE.
BICYCLE FRAME.

No. 586,639.

Patented July 20, 1897.



Attest:

J. H. Schott

a.w. Bayard:

Inventor:

Amel G. Temple
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Att'y.

UNITED STATES PATENT OFFICE.

ANSEL F. TEMPLE, OF MUSKEGON, MICHIGAN.

BICYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 586,639, dated July 20, 1897.

Application filed July 24, 1896. Serial No. 600,400. (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.

This 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 joint, illustrating clearly the way in which the wooden rods or parts are fastened to the metal coupling. Fig. 2 is a horizontal sectional view of the same in partial plan. Fig. 3 is a cross-section on the line 3 3 of Fig. 1. Fig. 4 is a detail side view of the tapering screw-plug. Fig. 5 is a longitudinal section showing a modified form of the invention. Fig. 6 is a side elevation of the same. Fig. 7 is a cross-section on the line 7 7 of Fig. 5. Fig. 8 is a partial sectional side view of the end of the wooden rod employed in the form of the invention shown in Figs. 5 and 6.

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

A designates a hollow metallic coupling or part of the main frame of a bicycle or similar machine, the same being a portion, for instance, of a crank-hanger and having the integral sockets a , a' , a^2 , and a^3 , which are designed to receive the ends of wooden rods or frame-pieces constituting the wooden frame of a bicycle, said rods 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 the bicycle, and its construction may vary greatly in different cases. The wooden rods B are made of some suitable hard wood and are bored their entire length, so as to be hollow and light.

The interior of the metallic sockets a , a' , &c., are provided with small protuberances or projections, preferably of hemispherical form, which are cast integral with and forming a part of the socket, there being preferably four of them. These hemispherical projections C may vary in size, and I reserve the liberty of making them larger or smaller, as may be required. The hollow wooden rods B are forced into the sockets a , a' , &c., and driven past the hemispherical projections C.

Into the hollow inner end of each rod B is inserted a tapering metal screw D, one of which is shown in detail in Fig. 4, and the rotation of this screw, and the consequent introduction of it into the hollow bore of rod B, operates as a wedge to force the wood of the rod firmly against the interior wall of the metallic socket a , and hence to compress it tightly against the interior projections C, so that the end of the wooden rod is consequently held firmly and tightly and non-withdrawably within the socket a or a' , as the case may be. The tapering screw-plug D is preferably hollow, so as to be light and also to enable it to receive the central rod E, which passes through it, as shown in Figs. 1 and 2, said rod E having its inner end screw-threaded and engaging the nut-like end e of the screw-plug D, which is situated, as shown in Fig. 1, at the inner end of said plug, the object of the said rod E being to stiffen and strengthen the wood, it being understood, of course, that the opposite end of each of these rods is fastened at the opposite end of the wooden rods B, in like manner as it is at the end nearest the metallic coupling A, as indicated in the drawings.

In the metallic socket A, at points opposite to the sockets a , a' , a^2 , &c., are situated openings provided with screw-caps A' , A^2 , and A^3 , which openings permit access to be had to the taper-plugs D and also to the rods E and the ends e for the purpose of screwing up or releasing said taper-plugs or for removing them and also for removing the rods.

In Figs. 5, 6, 7, and 8 I have represented a modification of means for making a tight and effective joint in a bicycle-frame. In this modification means are shown for connecting together the contiguous ends of two wooden rods B' B'. F denotes a sleeve which embraces externally the contiguous ends of the rods B' B' and is provided with the internal integral plugs G G, which enter the interior bores of the two rods B' B', as clearly shown in Fig. 5. It will be observed that the end of each rod B' is of the form shown in Fig. 8 and is designed to enter within the sleeve between it and the parallel integral plug G. The sleeve F is provided with several perforations *f*, say four or more, which are used for engagement therewith of a rod in order to rotate the sleeve after the manner of a turn-buckle in tightening it upon the rods H H, which rods are similar to the rods E, having the same function as said rods E and engaging the cylindrical plugs G G in the same manner as the tapering plugs D are engaged in Fig. 1. By the aid, therefore, of this sleeve F and the cylindrical plugs G the hollow rods B' B' are enabled to be tightly connected to-

gether and an efficient and durable joint provided.

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

1. The combination with a socket having projections on its inner face, of an inserted hollow wooden rod, a tapering screw-plug introduced into said wooden rod, and a central rod engaging said screw-plug, substantially as described.

2. The combination with a crank-hanger having lateral openings situated opposite the frame-bar sockets and lateral integral metallic sockets which are provided with interior hemispherical projections, of the hollow wooden rods, the tapering screw-plugs, and the central inner rods engaging the screw-plugs, substantially as described.

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

ANSEL F. TEMPLE.

Witnesses:

WM. CARPENTER,
GERTRUDE VOGEL.