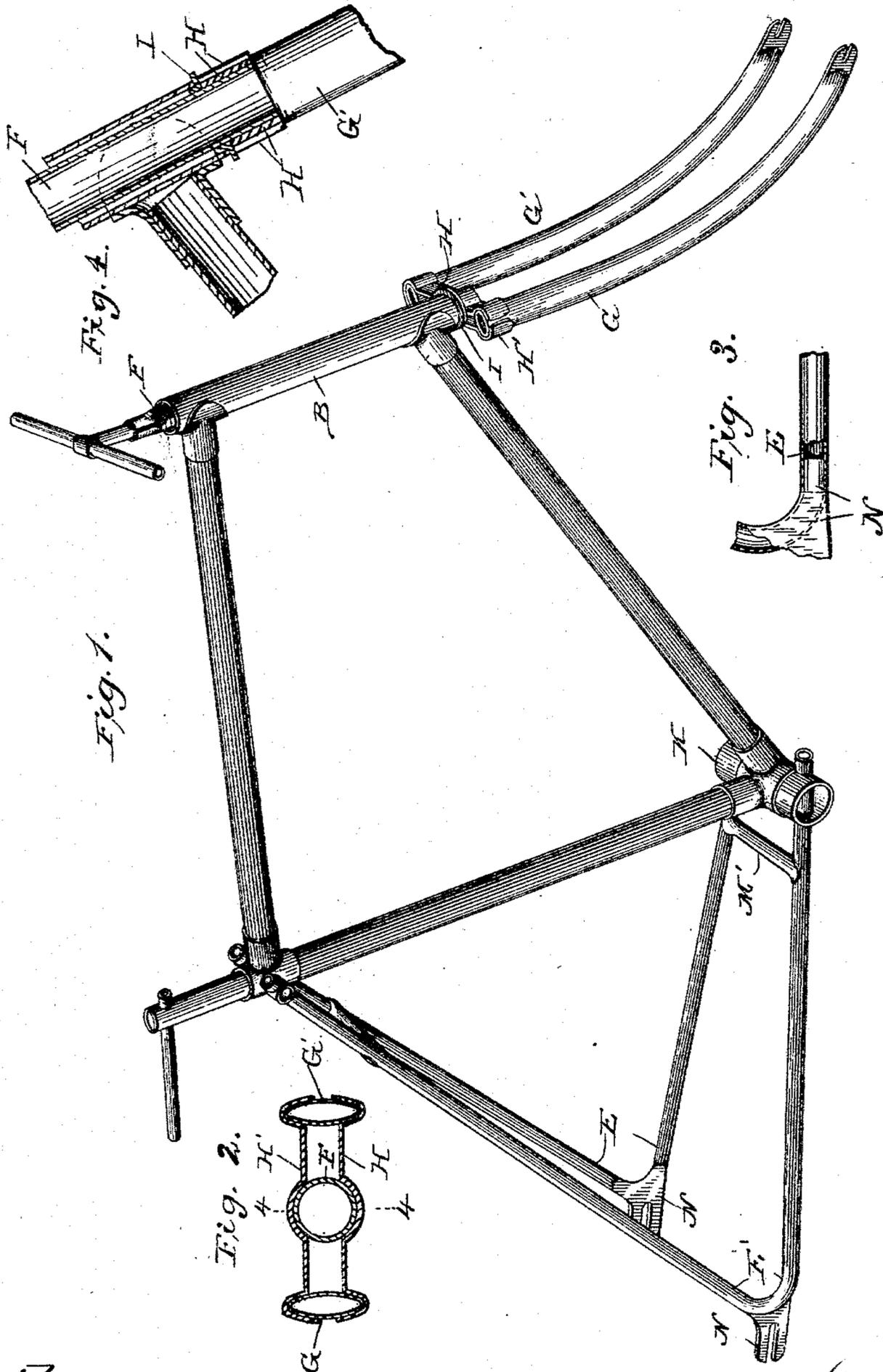


(No Model.)

A. PERKINS.  
CYCLE FRAME.

No. 515,717.

Patented Feb. 27, 1894.



witnesses:  
Harry S. Rohrer.  
Chas F. Miller

Inventor:  
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By Miles & Greene,  
Attys.

# UNITED STATES PATENT OFFICE.

ALBERT PERKINS, OF CHICOPEE, MASSACHUSETTS, ASSIGNOR TO THE A. G. SPALDING & BROTHERS, OF NEW YORK, N. Y., AND THE LAMB KNITTING MACHINE MANUFACTURING COMPANY, OF CHICOPEE FALLS, MASSACHUSETTS.

## CYCLE-FRAME.

SPECIFICATION forming part of Letters Patent No. 515,717, dated February 27, 1894.

Application filed July 28, 1893. Serial No. 481,753. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT PERKINS, a citizen of the United States, residing at Chicopee, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Cycle-Frames; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to 10 which it appertains to make and use the same.

The object of the invention is to improve certain details of construction with a view to making the whole frame of sheet steel and drawn steel tubes, which have well known advantages over other materials, and at the same time to secure forms that, aside from material, give greater strength and are less expensive in manufacture and in repair.

Figure 1 is a perspective view of the frame. 20 Fig. 2 is a transverse section through the upper part of the front fork. Fig. 3 is a detail view of the rear fork. Fig. 4 is a section on the line 4—4, Fig. 2.

The improvements are found in the front 25 and rear forks and relate particularly to the manner of connecting the front fork branches to the "neck," and of fitting the rear fork branches for receiving the rear axle. The neck F is extended down between and equidistant 30 from the front fork branches G, G', and the three are rigidly united by two broad sheet steel plates H, H' laid flatwise across the front and rear sides, respectively, of the overlapping ends of the three members and brazed or 35 electrically welded to each after being bent to fit the surfaces upon which they lie. Upon the upper edges of the plates, which lie in the same plane, rests an annular bearing or sleeve I which is brazed both to the plates

and to the tubes F which it encircles, to form 40 a bearing for the head or tube B. It is evident that this construction replaces the usual "crown" with a very inexpensive arrangement in which the principal strain is borne 45 by steel plates placed edgewise to the strain.

The rear fork is formed by two tubes, E, E', each extending rearwardly downward from the upper part of the frame and bending forward near the rear axle to return to the crank axle tube K. At the bends in the tubes, each is 50 cut away upon the inner side in such manner as to form a bearing for a plane forked steel plate N provided with tongues N' extending, respectively within the branches of the tube E or E'. The plates are preferably flush with 55 the inner sides of the tubes to which they are fixed and they are secured by brazing.

What I claim is—

1. The combination with the front fork 60 branches and the neck extending down between their upper ends, of the two plates bent to fit the front and rear faces, respectively, of the three members and rigidly united to each member throughout the extent of the contact 65 surfaces.

2. The combination with a rear fork tube 70 bent to form upper and lower members and cut away upon the inner side at the bend, of the forked steel plate provided with the tongues, brazed in position against the surface formed by such cutting and with its tongues, respectively, extending within the uncut portions of the tube.

ALBERT PERKINS.

Witnesses:

THOMAS C. PAGE,  
SIDNEY SANDERS.