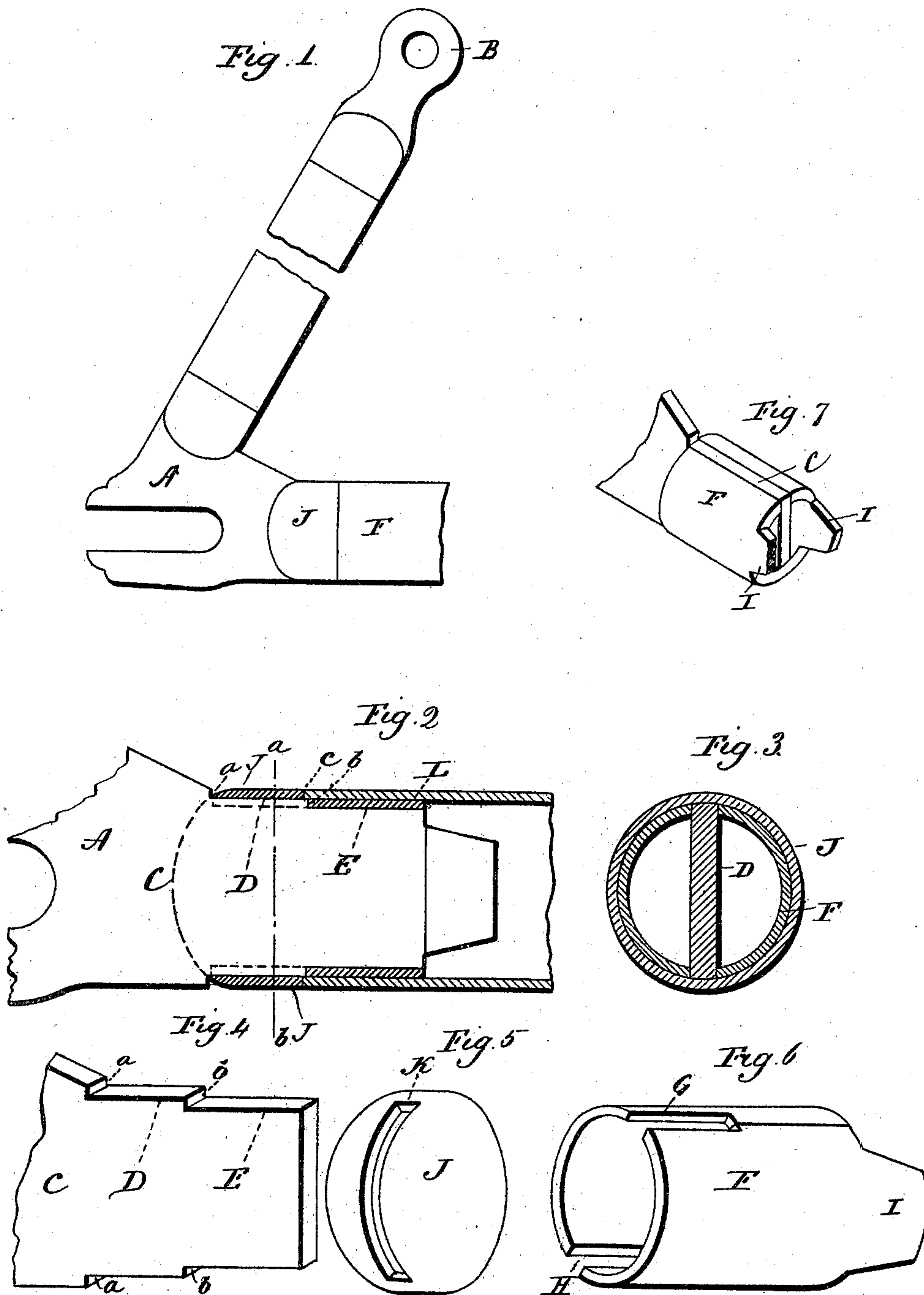


(No Model.)

F. H. BEECHER & R. G. CORNFORTH.  
FITTING FOR CYCLES.

No. 584,663.

Patented June 15, 1897.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

FRANK H. BEECHER AND ROBERT G. CORNFORTH, OF SEYMOUR,  
CONNECTICUT.

## FITTING FOR CYCLES.

SPECIFICATION forming part of Letters Patent No. 584,663, dated June 15, 1897.

Application filed February 15, 1897. Serial No. 623,512. (No model.)

*To all whom it may concern:*

Be it known that we, FRANK H. BEECHER and ROBERT G. CORNFORTH, of Seymour, in the county of New Haven and State of Connecticut, have invented a new Improvement in Fittings for Cycles; and we do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken side view of the two forms of cycle-fittings with the tubes attached thereto; Fig. 2, a sectional view illustrating the arrangement of the coupling members and tube; Fig. 3, a sectional view on line *a b* of Fig. 2; Fig. 4, a perspective view of the outer end of one of the arms; Fig. 5, a perspective view of the cap; Fig. 6, a perspective view of the collar; Fig. 7, a modification.

This invention relates to an improvement in fittings for cycles, and particularly to the means for connecting the tubular portions of the frame with a cast or sheet metal part—such, for instance, as the rear ends of the frame with the bearing for the rear wheel.

In the more general construction of couplings or fittings of this character the coupling is formed by drawing up a single piece of metal, and which drawing generally requires two or more operations and necessitates annealing between the drawing operations.

The object of this invention is to produce a rigid coupling which may be largely produced without drawing; and it consists in the construction as hereinafter described, and particularly recited in the claims.

The coupling is used in connection with a bearing-plate A or an eye B of usual construction, which are formed with flat arms C, reduced in width to form shoulders *a*, beyond which the portion D of the arms corresponds in width to the internal diameter of the tubes to be employed. Beyond the portion D the portion E of the arms is reduced in width, forming shoulders *b*. The coupling-piece proper consists of a strip of metal bent to form a collar F, corresponding in external diameter to the internal diameter of the tubes to be employed, the upper portion of the abut-

ting edges of the collar being cut away to form a slot G, corresponding in width to the thickness of the arms C, and in the opposite side a corresponding slot H is formed. The outer ends of the opposite sides of the collar are formed with extensions I. To the slotted end of the collar F is applied a cap J, which closely fits thereon and which is formed with a slot K, corresponding in width to the notches G H and in length to the width of the portion D of the arms C. The collar F being formed, the cap J is applied thereto and the two parts set over the arms C and so that the cap J takes a bearing against the shoulders *a*, and the inner ends of the slots G H against the shoulders *b*, the portion E of the arms C extending into the collar F. The edge of the cap, which corresponds in thickness to the thickness of the tube to be applied, forms a shoulder *c* for the tube L, which is passed over the collar and abutted against the edge of the cap, as clearly shown in Fig. 2, it being understood that the collar and cap are brazed or otherwise secured to the arms and the tube likewise secured to the collar.

Instead of forming the notch G in the abutting edges of the collar F the edges may be separated throughout their entire length, as shown in Fig. 7, in which case one edge of the arms C will be straight, and so as to omit one of the shoulders *b*, in which case that edge of the arms stands flush with the outer surface of the collar. With this construction the collar proper is readily formed from sheet metal without drawing and the cap may be readily drawn at a single operation. By extending the edges of the collar to form the projections I a long bearing is furnished for the tube and thus the liability of breakage at this point is reduced.

When the parts are secured together, the coupling is as strong if not stronger than when formed from a single piece of metal.

Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In fittings for cycles, the combination with the arms thereof, of a collar constructed to fit within the frame-tube of a cycle, a cap corresponding in internal diameter to the external diameter of said collar, over one end of



which it is set, said cap formed with a slot to receive said arms, which extend into said collar, substantially as described.

2. In fittings for cycles, the combination  
5 with the arms thereof, formed with shoulders upon their edges, of a collar adapted to pass over said arms, and formed with a notch in one end, of a cap applied to the notched end of said collar, and formed with a slot corre-  
10 sponding in length to the width of said arm, which is adapted to extend through it into the said collar, substantially as described.

3. In fittings for cycles, the combination  
15 with the arms thereof formed with shoulders upon their edges, of a collar adapted to pass

over said arms and formed with a notch in one end and with projections at the opposite end, of a cap applied to the notched end of said collar, and formed with a slot corresponding in length to the width of said arm, which  
20 is adapted to extend through it into the said collar, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

FRANK H. BEECHER.

ROBERT G. CORNFORTH.

Witnesses:

H. A. HURD,

F. W. ADAMS.