

(No Model.)

G. H. DAY.
STEP FOR VELOCIPEDES.

No. 388,480.

Patented Aug. 28, 1888.

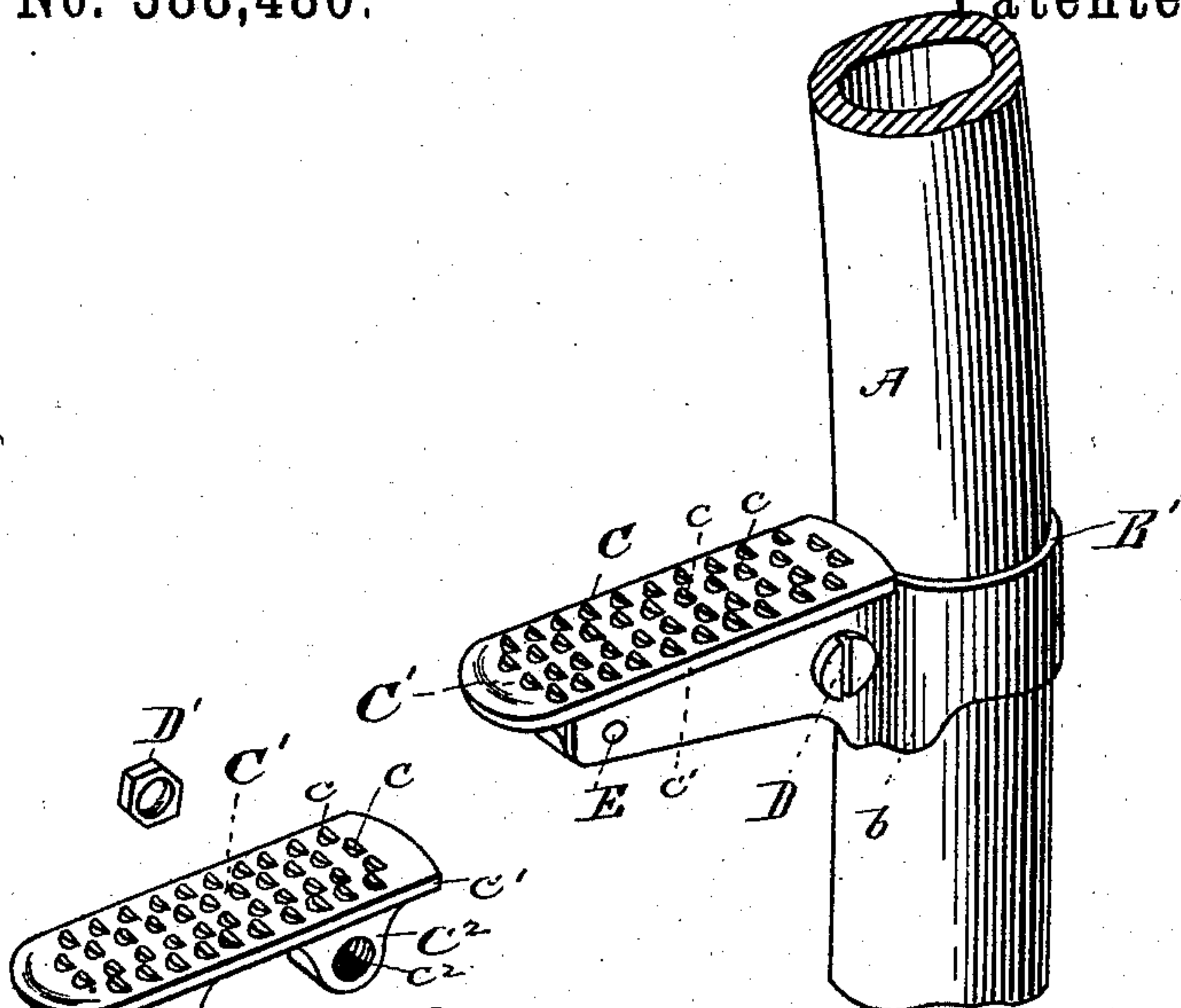


FIG. 1.

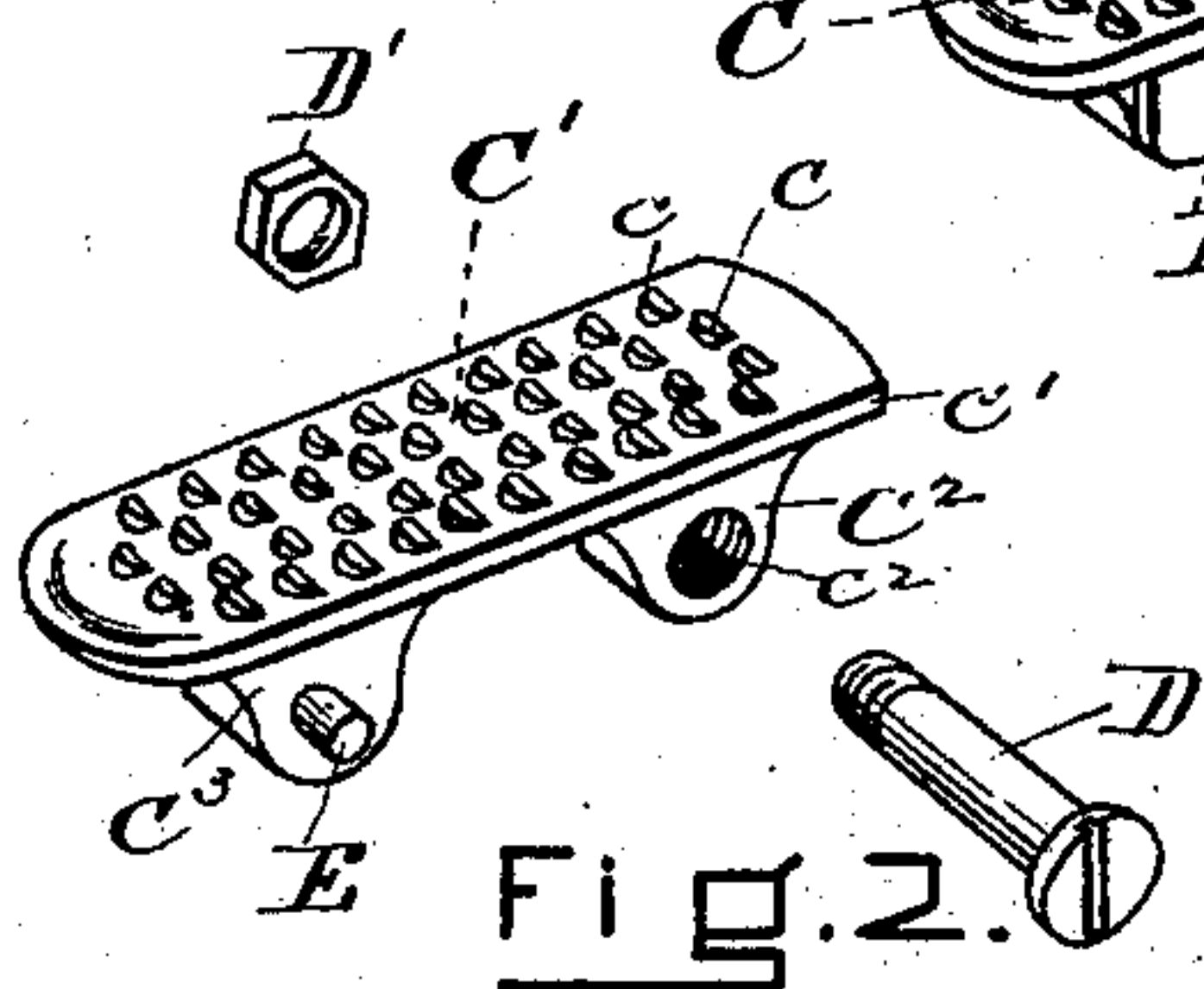


FIG. 2.

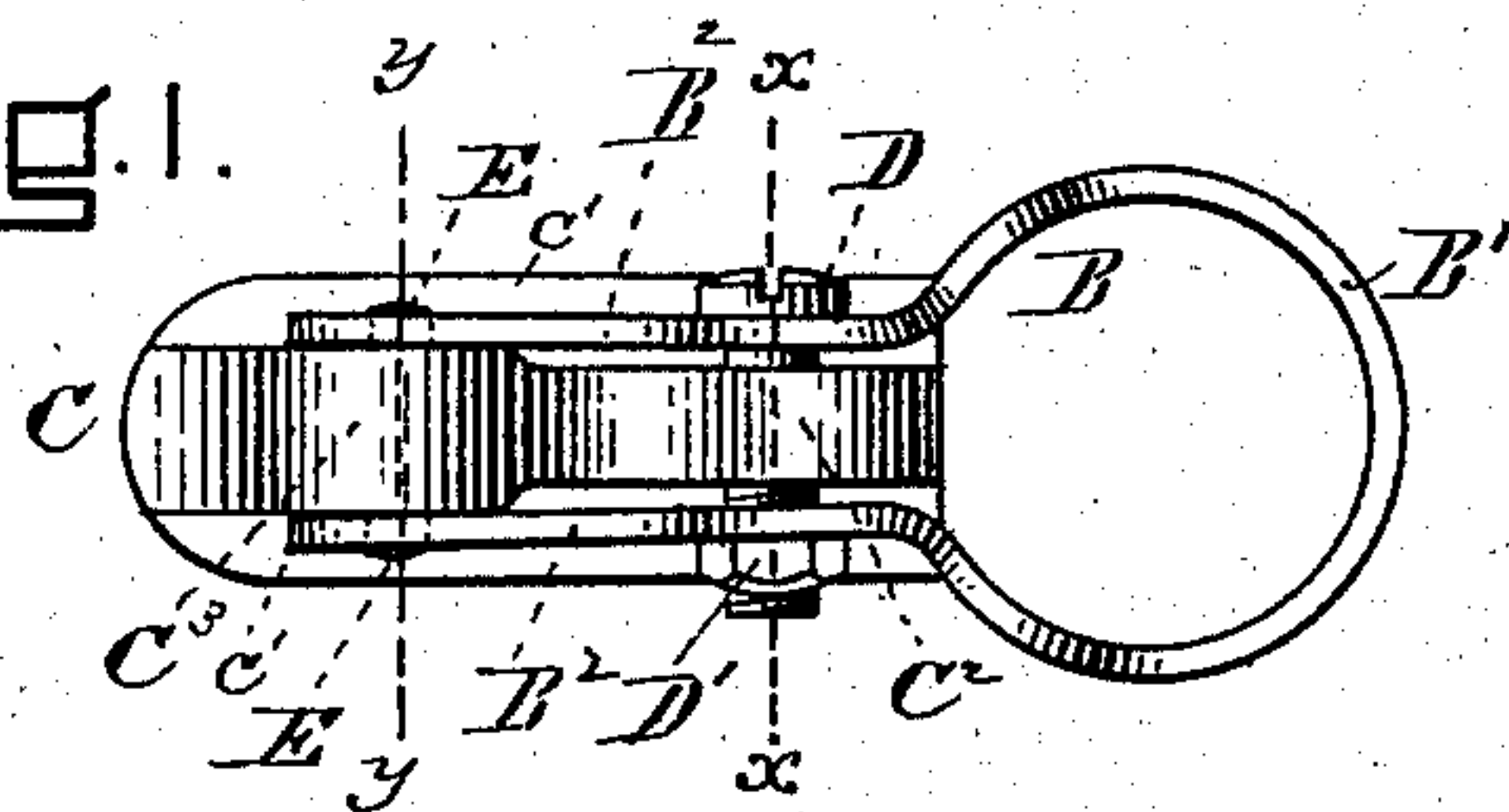


FIG. 4.

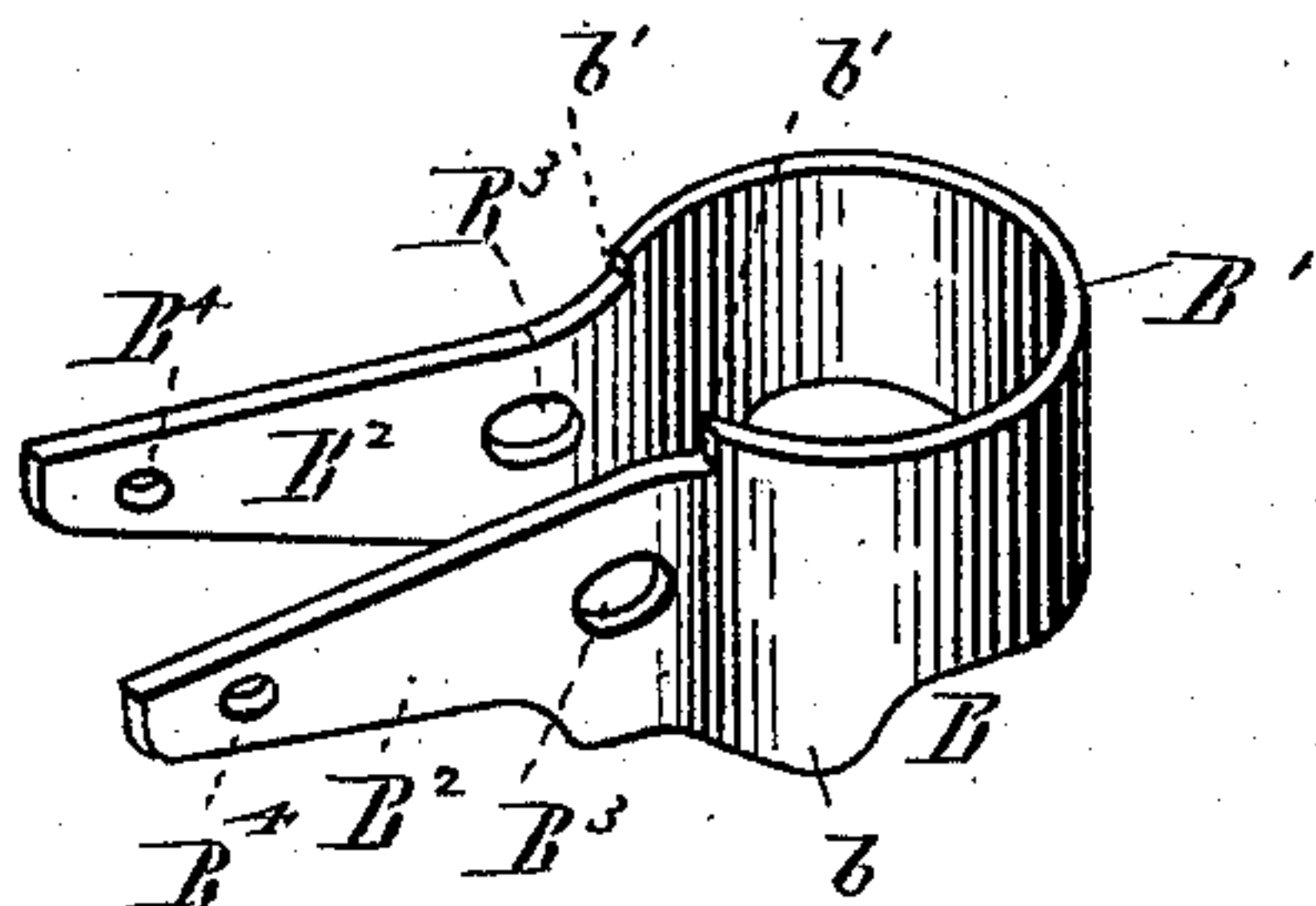


FIG. 3.

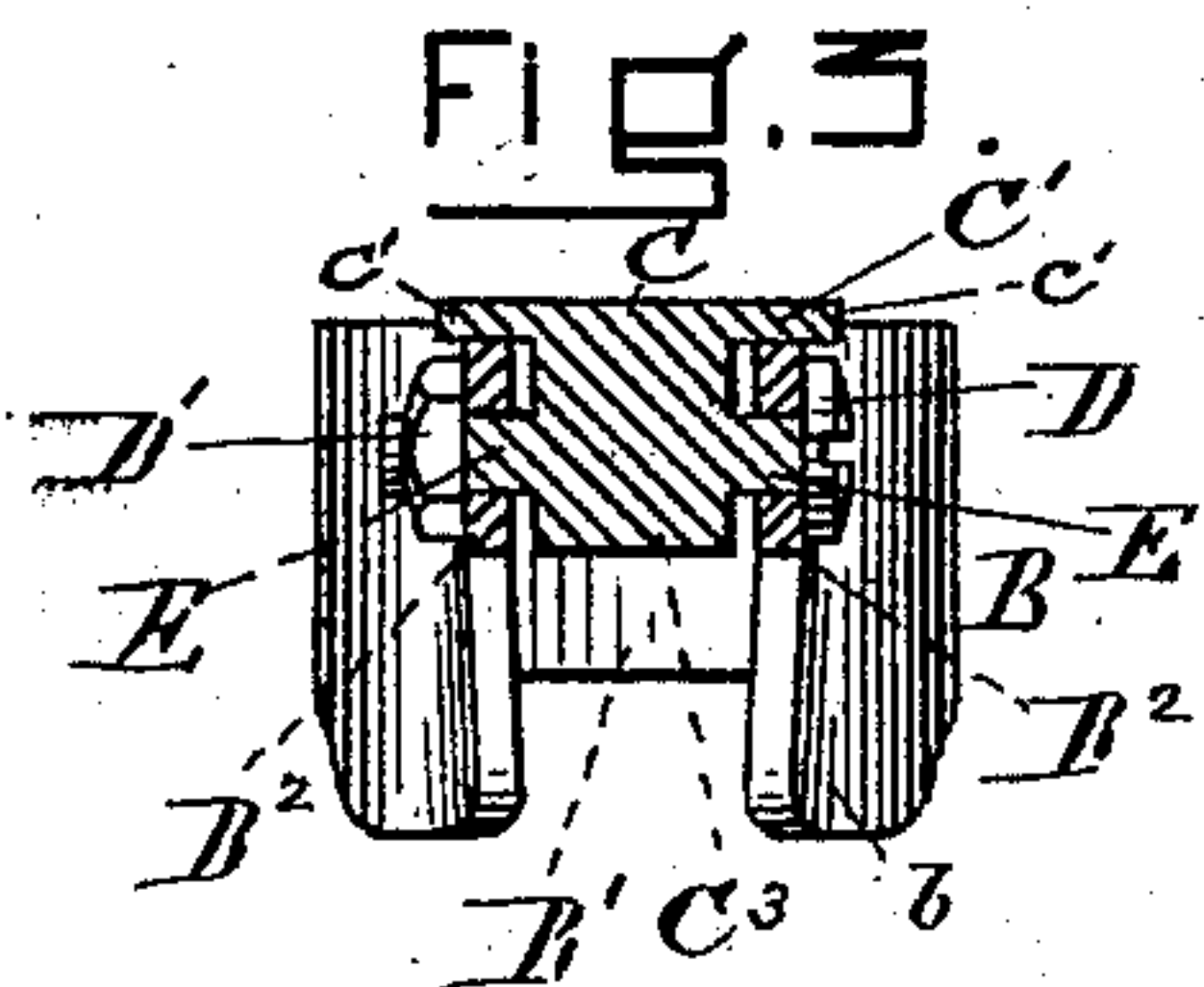


FIG. 6.

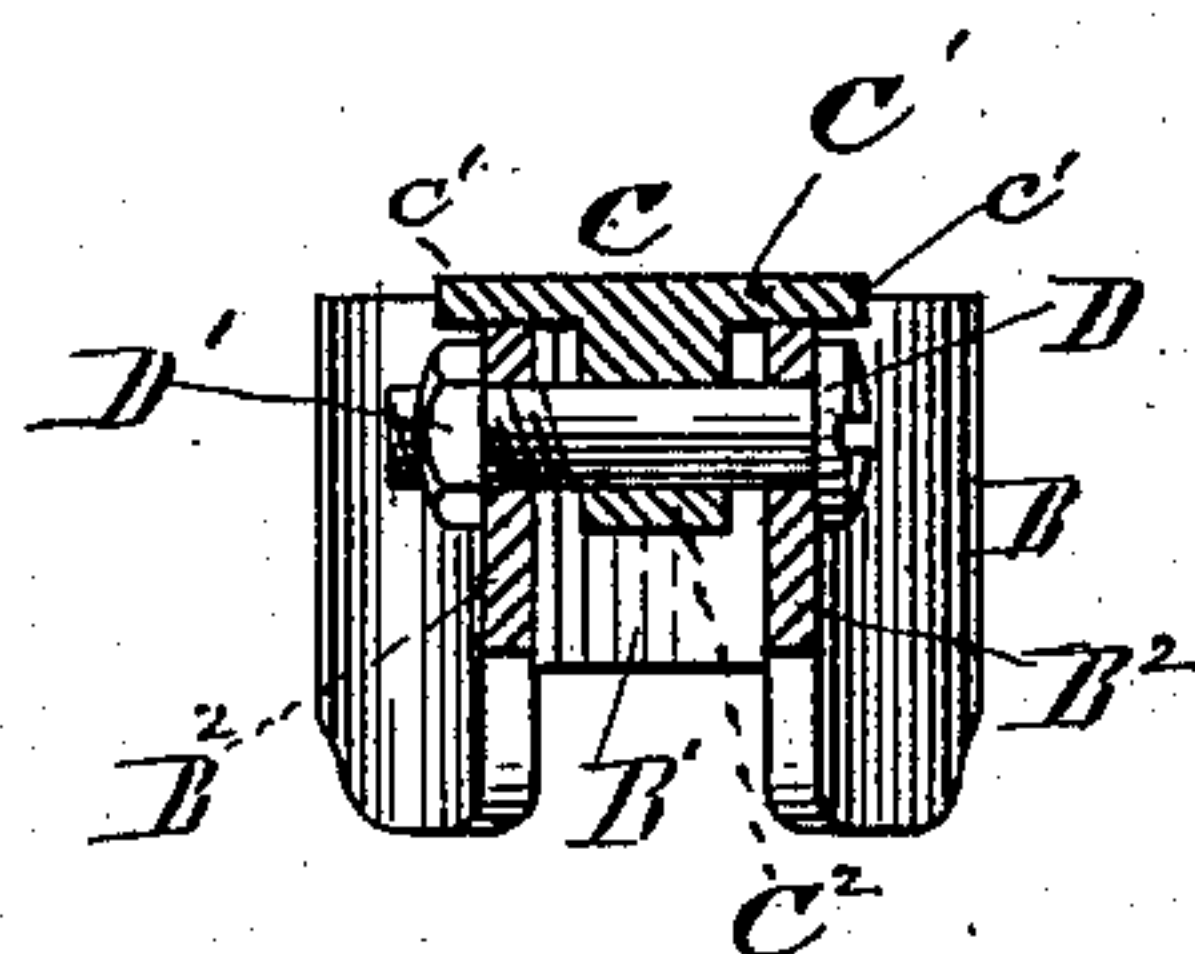


FIG. 5.

WITNESSES.

Everett S. Benson.

Wm. Hubert Dodd.

INVENTOR.

George H. Day.

By Charles E. Pratt,
att'y.

UNITED STATES PATENT OFFICE.

GEORGE H. DAY, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE POPE MANUFACTURING COMPANY, OF PORTLAND, MAINE.

STEP FOR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 388,480, dated August 28, 1888.

[Application filed December 21, 1887. Serial No. 258,566. (No model.)]

To all whom it may concern:

Be it known that I, GEORGE H. DAY, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Steps for Velocipedes, of which the following is a specification.

My improvements relate particularly to that class of steps known as "adjustable" steps, and principally used on bicycles, and are shown as applied in one form to the perch of a bicycle in the accompanying drawings, in which—

Figure 1 represents part of a perch and my improvements in perspective. Figs. 2 and 3 represent my improvements in detail and a part also in perspective. Fig. 4 shows in bottom plan my improvements assembled without the perch; and Fig. 5 represents the same in vertical transverse section on the line $x x$ of Fig. 4, and Fig. 6 represents the same in vertical transverse section on the line $y y$ of Fig. 4.

A is a perch.

B is my improved step attachment, which I prefer to strike out of sheet-steel, having the spring-loop B' and the two branches B^2 B^2 bored at B^3 B^3 for a bolt and at B^4 B^4 for a pin or trunnion. I also prefer to make it with a part cut down on the top, as shown in the drawings, and with the back side of the loop narrower than the front, or, rather, with the braces b left on the front side. The middle of the loop can be left thin. Some of the weight is thus saved, elasticity increased, and the braces $b b$ on the front side make a steadier and stronger bearing on the perch to resist the weight of the rider in mounting.

C is a shoe-piece, which I prefer to construct with a broad slightly oval surface, notched or roughened with the small rasped teeth $c c$ to prevent the shoe from slipping, and with the thin overhanging edges $c' c'$.

C^2 is a lug projecting downward near the inner end of the shoe-piece and tubed to receive a bolt, and C^3 is another lug, which serves as a trip for the ends of the branches B^2 B^2 to rest against and also to carry the pin or trunnions $E E$.

D is a bolt; D' , a nut.

In attaching my improved devices, I first place the attachment B on the perch or portion of the frame which is to suspend it by

springing it over and upon the latter. I then place the shoe-piece upon the branches with the lug C^2 between them, place the bolt D through the holes B^3 B^3 and the hole c^2 in the lug C^2 , and start the nut upon the bolt, taking care as the nut is tightened that the pin $E E$ enters the holes B^4 B^4 in the branches B^2 B^2 . It is obvious now that by leaving the bolt D slack the step can be moved vertically to any desired position, and that by setting up the bolt the loop will be tightened about the perch and all the parts held securely in position together. It is also obvious that modifications in the details of construction may be made by any one skilled in the art while retaining the substance of my invention, and I do not mean to limit myself to the precise things here shown and described.

I am aware that vertically-adjustable velocipede-steps have heretofore been constructed, and also that roughened shoe-pieces have heretofore been used, and I do not claim them.

I am also aware of a step constructed with a slit shoe-piece formed with a back plate or extended rest against the perch, and a spring loop without, extended arms for the shoe-piece to rest on and a bolt and nut to secure them, so that pressure on the shoe-piece tends to tip it about the bolt and press the rigid heel of it against the perch, and I do not claim this; but in my construction there is no heel or back rest to the shoe-piece, and the band or loop has extended arms on which the shoe-piece rests, so that pressure on the shoe-piece, instead of presenting a rigid rest to the perch, is taken by the arms and works a double grip of the elastic loop and open braces b on the perch.

I claim as new and of my invention—

1. An improved adjustable step and attachment, consisting in a spring-loop and extended supporting arms and braces, a bolt and nut, and a shoe-piece resting upon the arms and secured by the bolt.

2. An improved adjustable step and attachment, consisting in a spring-loop and supporting-arms, a bolt and nut, and a shoe-piece resting upon the arms and secured by the bolt, and further secured by a lug and pin-trip between the arms.

3. An improved shoe-piece for a bicycle-step, constructed with a roughened upper surface, a bolt, lug, and a trip part, and side edge rests.
- 5 4. An improved adjusting and a supporting device for a velocipede-step, constructed with a spring-loop and extended arms and downward braces, as *b b*, and a bolt and nut.
5. The combination, with a portion of a velocipede-frame, as *A*, of a step attachment, as *B*, a shoe-piece, as *C*, a bolt and nut, as *D D'*, and a pin-trip, as *E E C'*, constructed to operate essentially as set forth.

GEO. H. DAY.

Witnesses:

G. W. BARNARD,
A. G. HEDSTROM.