

(No Model.)

C. F. LAVENDER.
VELOCIPÈDE.

No. 548,165.

Patented Oct. 15, 1895.

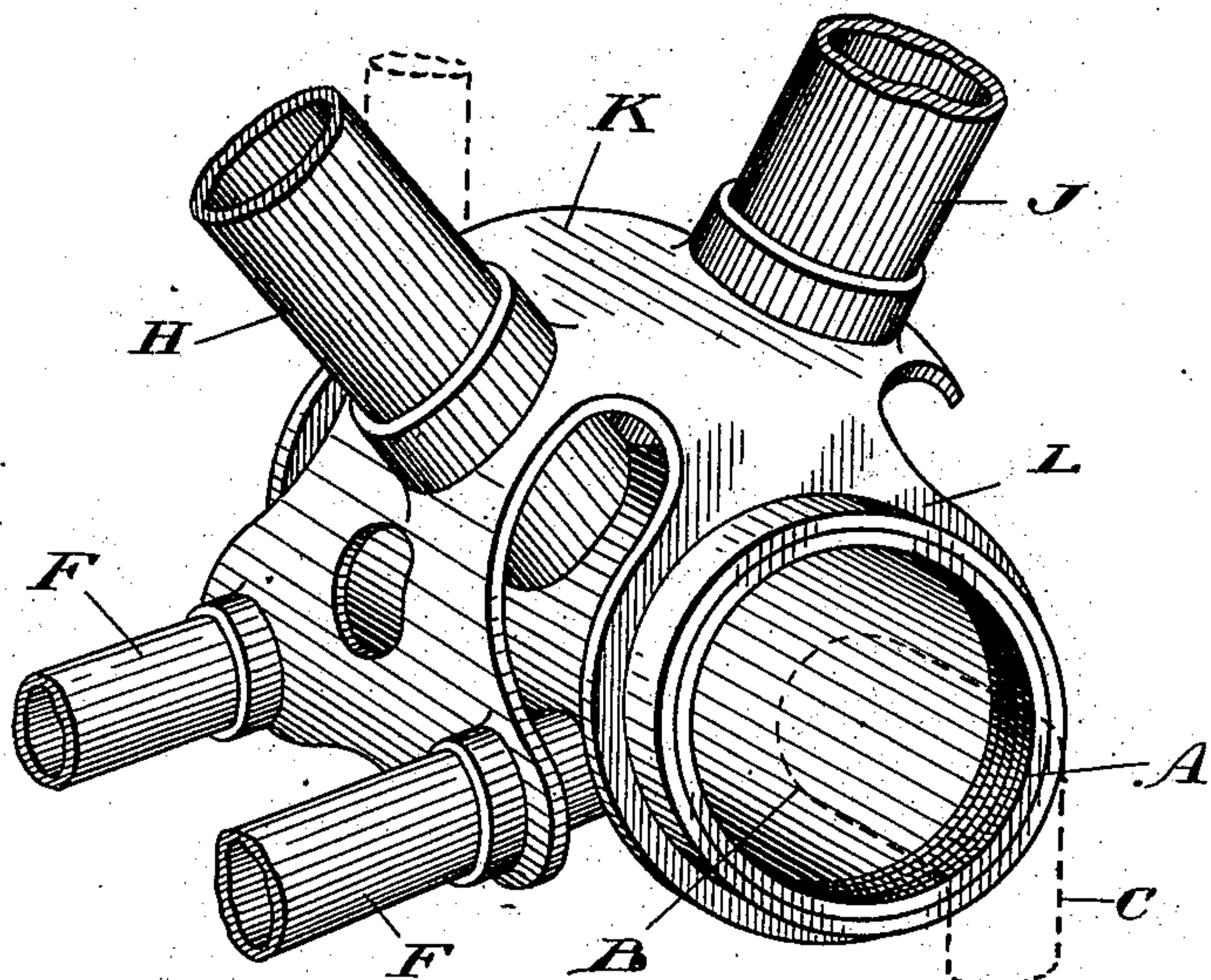


Fig. 1

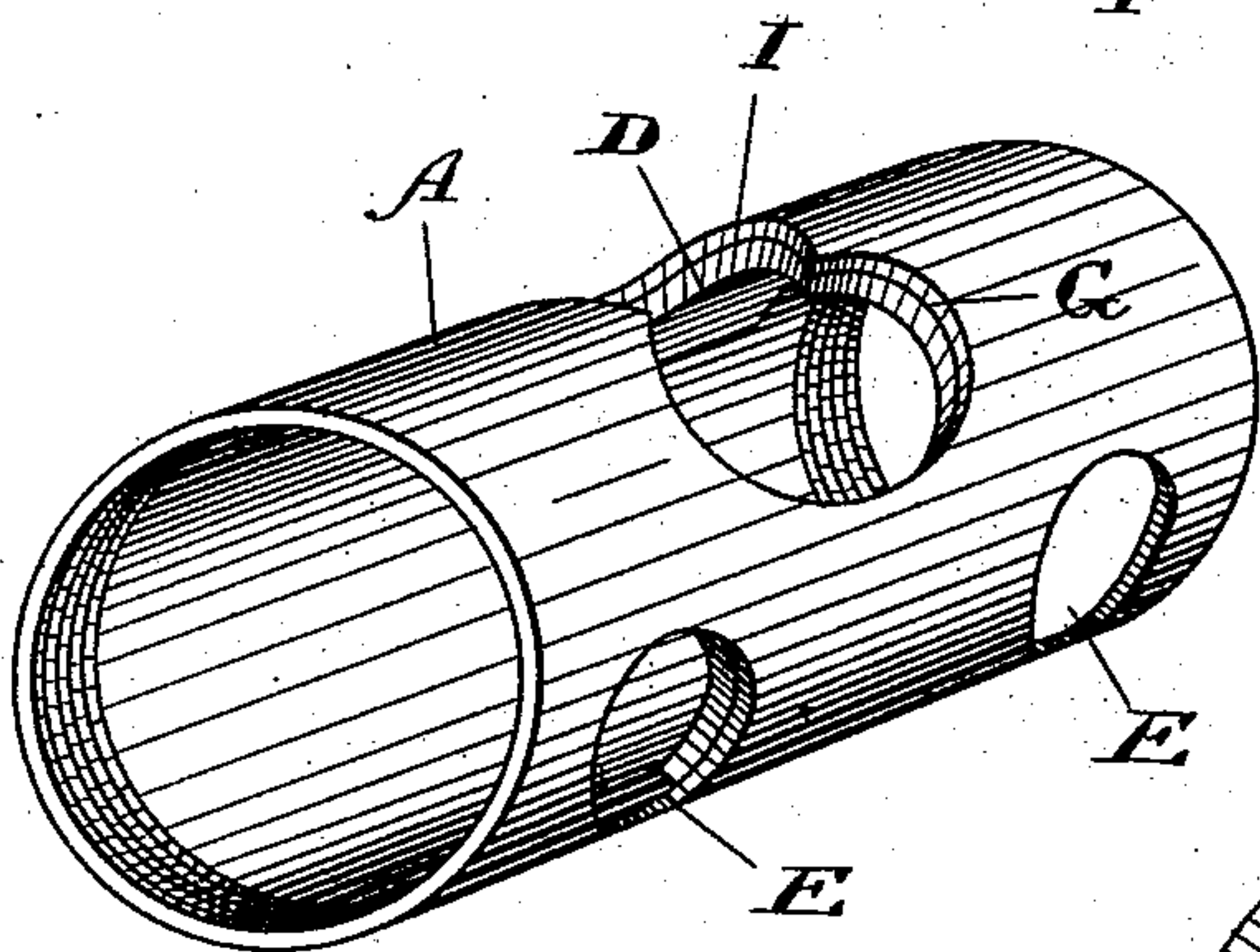


Fig. 2

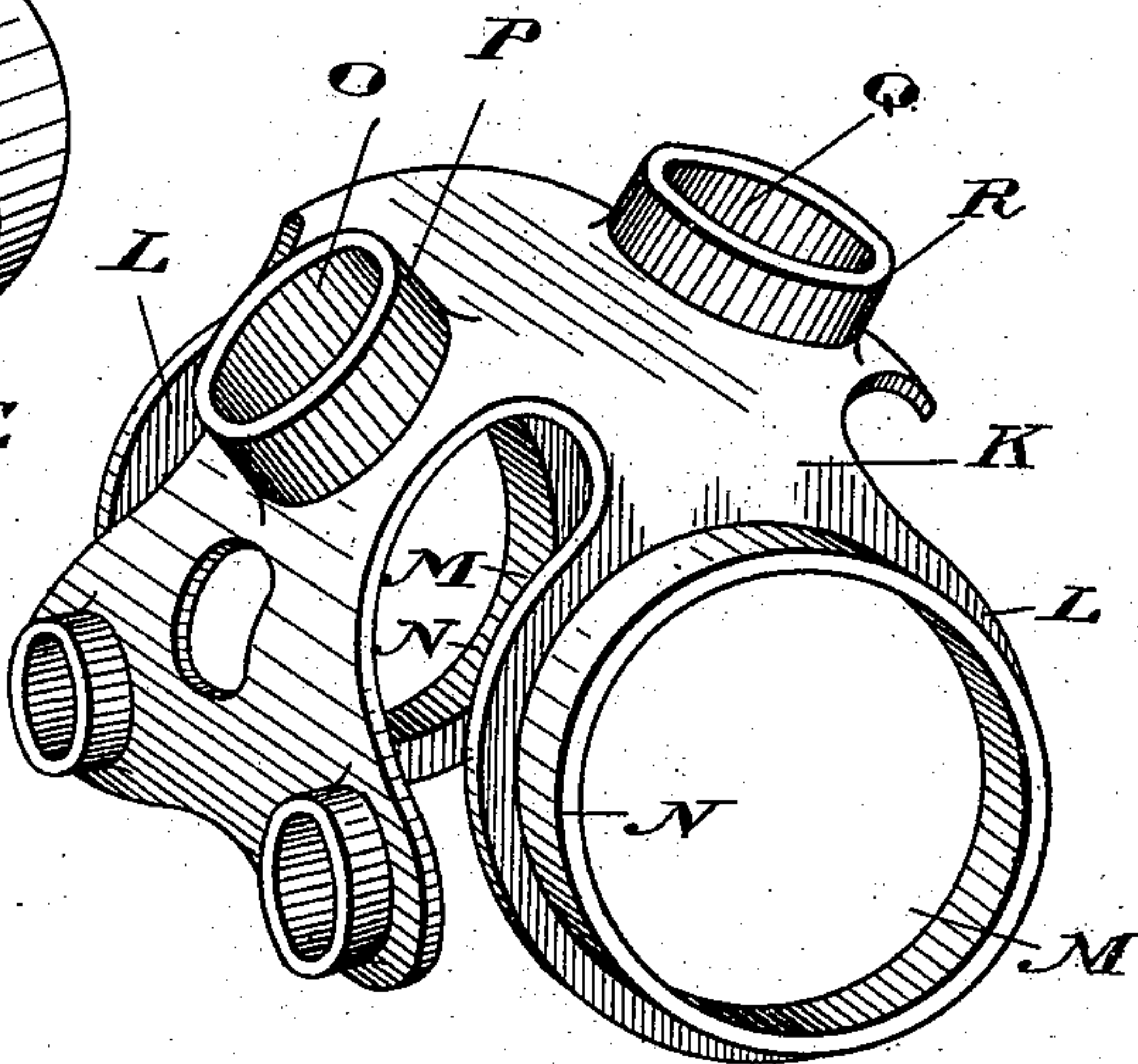


Fig. 3

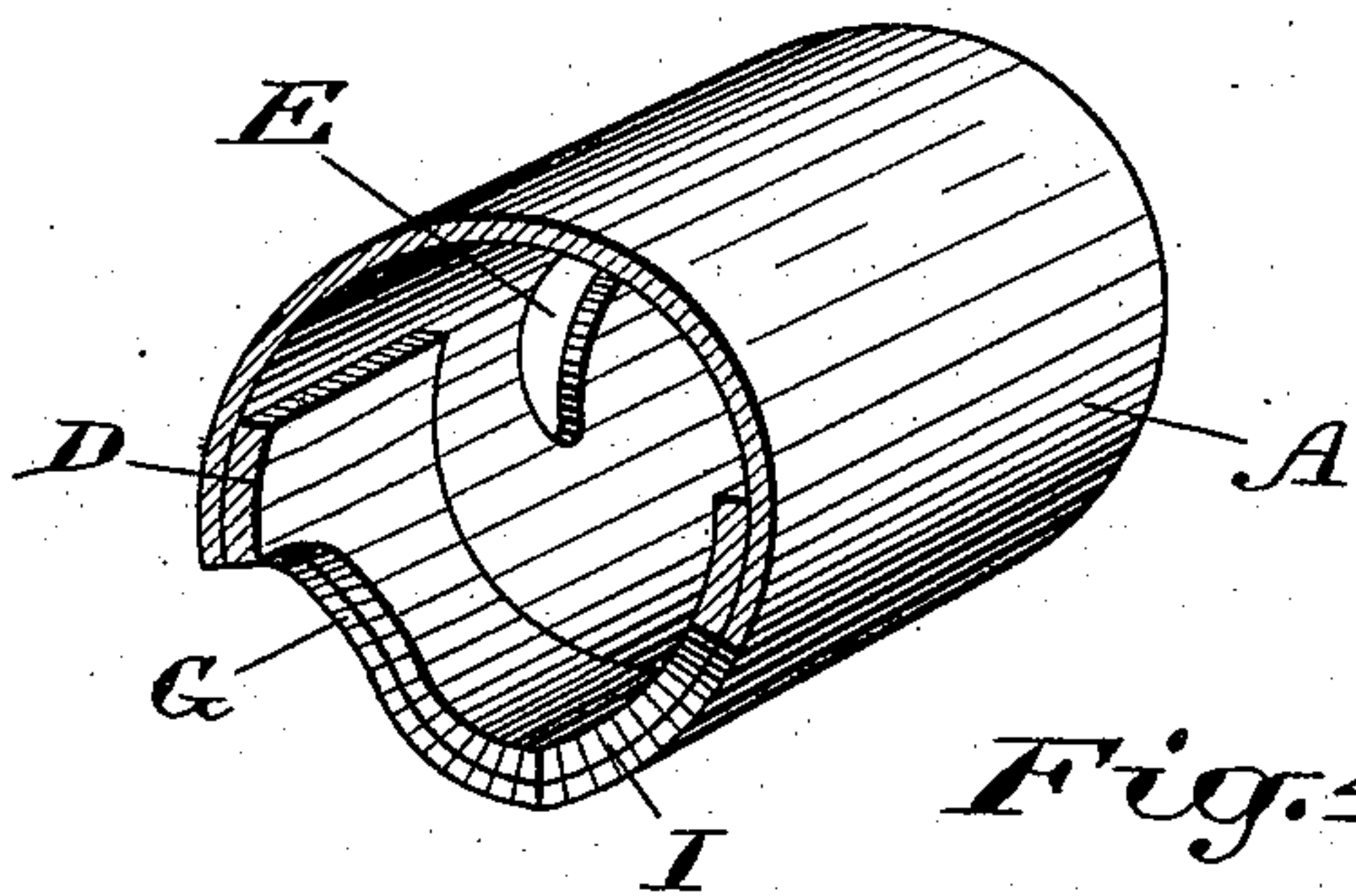


Fig. 4

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES F. LAVENDER, OF TORONTO, CANADA.

VELOCIPEDÉ.

SPECIFICATION forming part of Letters Patent No. 548,165, dated October 15, 1895.

Application filed March 7, 1895. Serial No. 540,857. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. LAVENDER, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Velocipedes; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to certain new and useful improvements in the main frame of a velocipede, and relates more particularly to the structure of the crank-axle bracket; and the object of the invention is to devise a crank-axle bracket in which will be combined lightness, strength, durability, and cheapness of manufacture; and the invention consists, essentially, of a horizontal sheet-metal sleeve to inclose the crank-axle, fitted at each end to receive the bearings for the crank-axle bearings, and a strengthening-bracket partially surrounding the horizontal sleeve, through which are arranged to pass the several adjacent parts of the frame, the whole device being hereinafter more fully set forth, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a part of a frame of a bicycle. Fig. 2 is an enlarged perspective view of the crank-axle bracket. Fig. 3 is a perspective view of a strengthening-bracket. Fig. 4 is a perspective view of the sleeve, partially broken away to show a strengthening-plate within it.

Like letters of reference refer to like parts throughout the specification and drawings.

The crank-axle bracket consists of a horizontal sleeve A, screw-threaded at both ends to receive the bearing-cases B of the crank-axle C. On the inner side of the sleeve A is a strengthening-plate D, and formed through the sleeve A and the strengthening-plate D are two holes E E, for the lower side bars F F of the frame, and formed also through the sleeve A and through the strengthening-plate D is a hole G for the upright H, and a hole I for the lower reach-bar J of the main frame.

It might here be stated that the sleeve A is made from sheet metal, preferably sheet-steel, and that partially surrounding the sleeve A is a sheet-metal bracket K, having two downwardly-depending lugs L, through which

passes the sleeve A. The body of the bracket K, which partially encircles the sleeve, is approximately one inch remote from the sleeve; but I do not confine myself to any particular space between the sleeve and the body of the bracket, as I may alter the space to meet the requirements of the vehicle. Formed through the body of the bracket K are two holes M M in alignment with the holes E E. Each of the holes M M is encircled by a collar N, and passing through the collars N, the holes M M, and entering the holes E E in the sleeve A are the lower side bars F F. Formed through the body of the bracket K is a hole O in alignment with the hole G, and surrounding the hole O is a collar P. Passing through the hole O and collar P and entering the hole G in the sleeve A is the upright H. Formed through the bracket K is a hole Q in alignment with the hole I, and surrounding the hole Q is a collar R. Passing through the collar R and hole Q and entering the hole I in the sleeve A is the lower reach-bar J. The bracket K assists in uniting the adjacent parts of the main frame and gives to these parts strength and rigidity, and by the bracket K being situated at a slight distance remote from the sleeve A the adjacent bars of the main frame are held with sufficient firmness to prevent any possibility of their being torn asunder or from the sleeve A.

By making the crank-axle bracket in the manner hereinbefore described it is possible to make the entire crank-axle bracket of sheet metal and forming it to the required shape by means of dies, this effecting a considerable reduction in the cost of the manufacture of this part of the velocipede. In addition to the saving in the weight and the cost of the manufacture a crank-axle bracket is provided which will add to the strength, durability, and rigidity of the main frame.

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

1. A crank axle bracket consisting of a sleeve, a strengthening bracket partially inclosing the sleeve, depending lugs from the strengthening bracket, through which passes the sleeve, and openings through the strength-

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ening bracket into the sleeve for the bars of the main frame, substantially as specified.

2. A crank axle bracket consisting of a sleeve, a strengthening plate connected to the sleeve, a strengthening bracket partially encircling the sleeve, depending lugs from the strengthening bracket through which passes the sleeve, and openings through the strengthening bracket and sleeve to allow of the frame

bars entering the said sleeve, substantially as specified.

Toronto, this 28th day of February, A. D. 1895.

C. F. LAVENDER.

In presence of—

C. H. RICHES,
J. E. CAMERON.