

(No Model.)

2 Sheets—Sheet 1.

A. L. GARFORD.
VELOCIPEDE SADDLE.

No. 485,186.

Patented Nov. 1, 1892.

Fig 1.

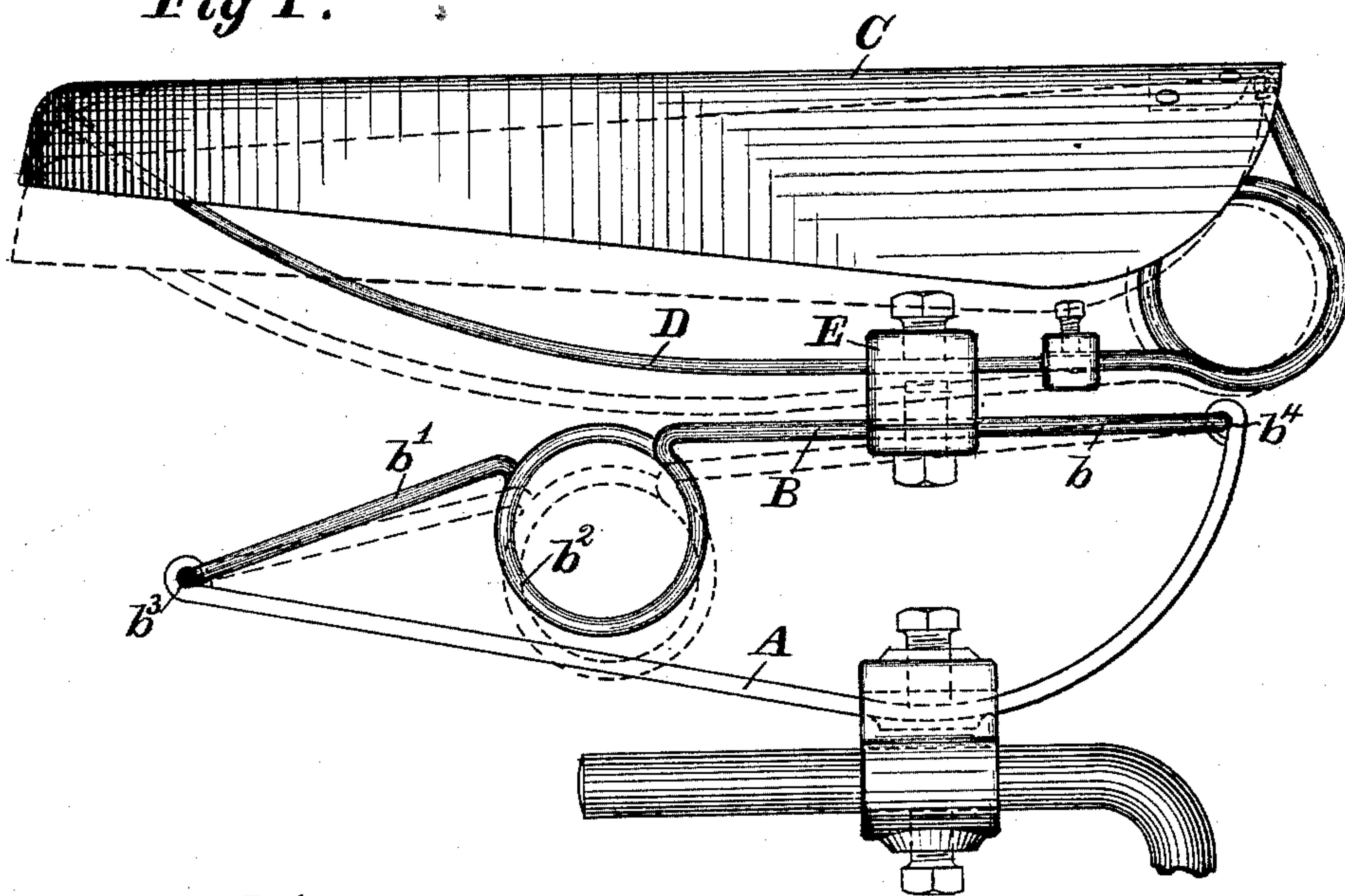


Fig 2.

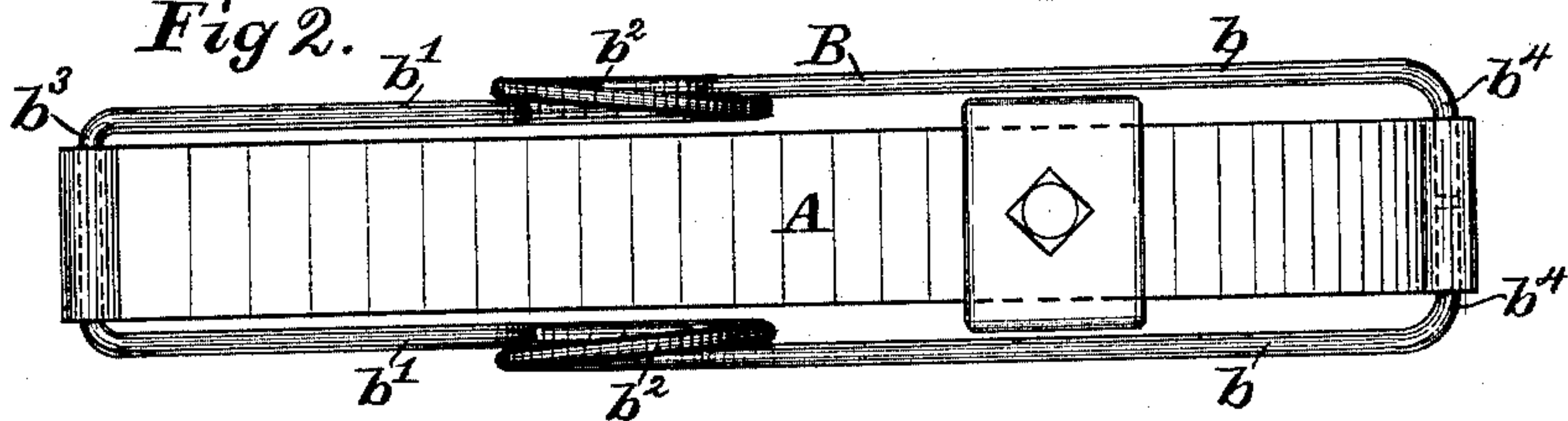


Fig 3.

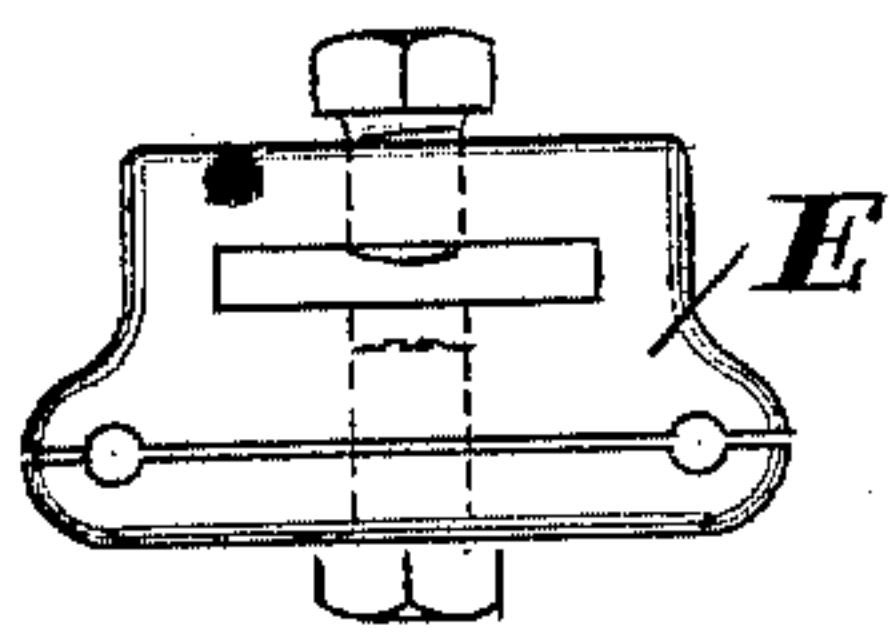
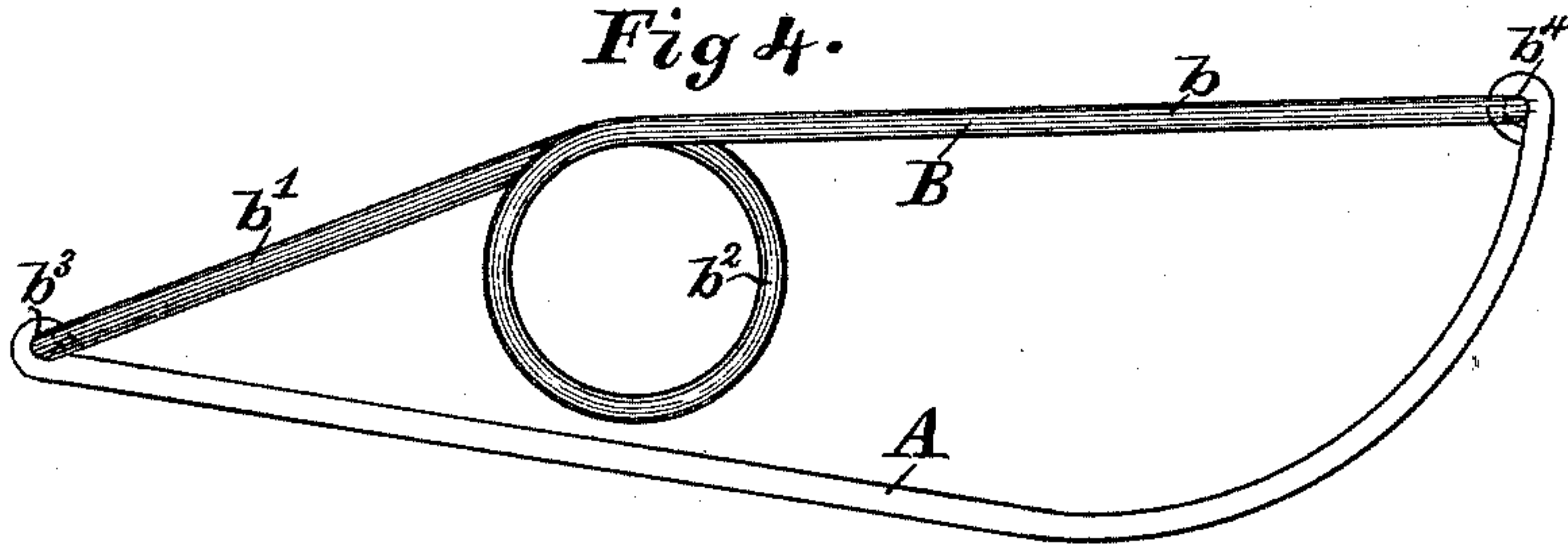


Fig 4.



WITNESSES.

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Fig 5.

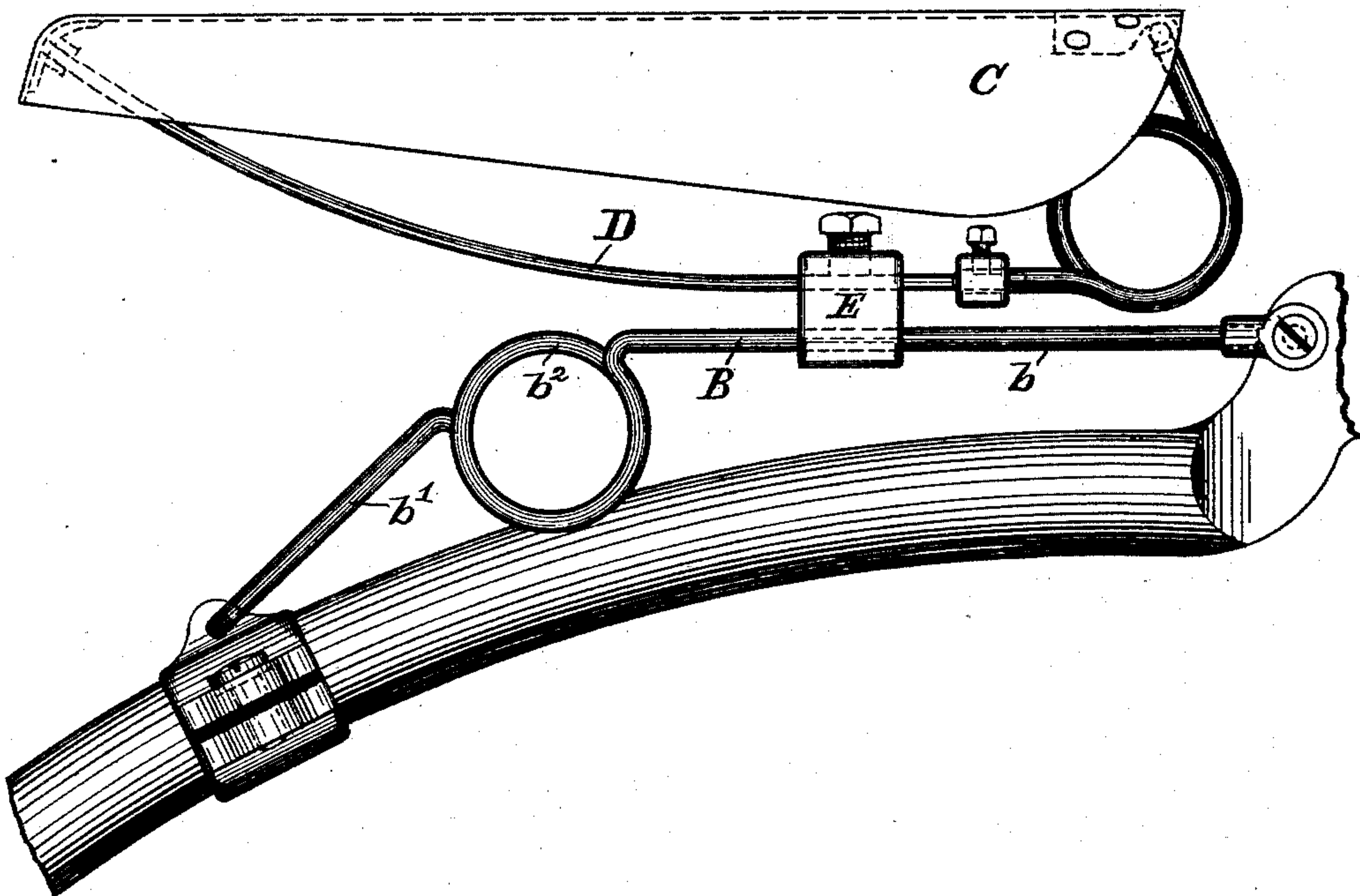


Fig 6.

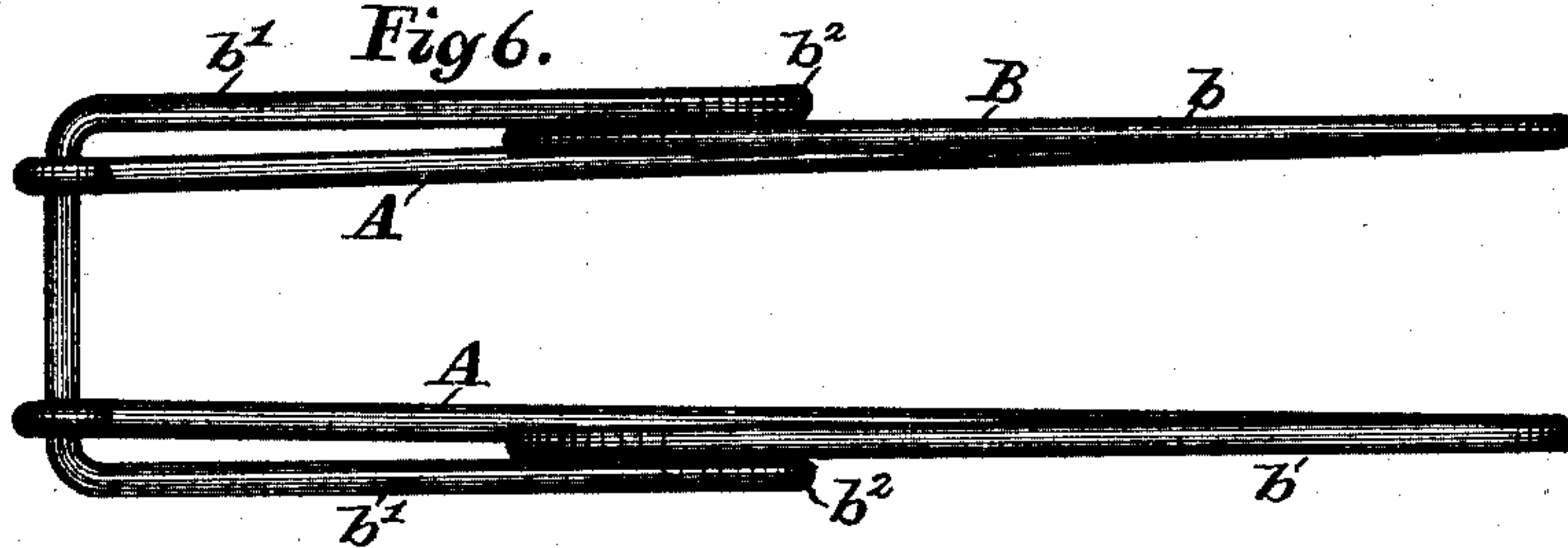
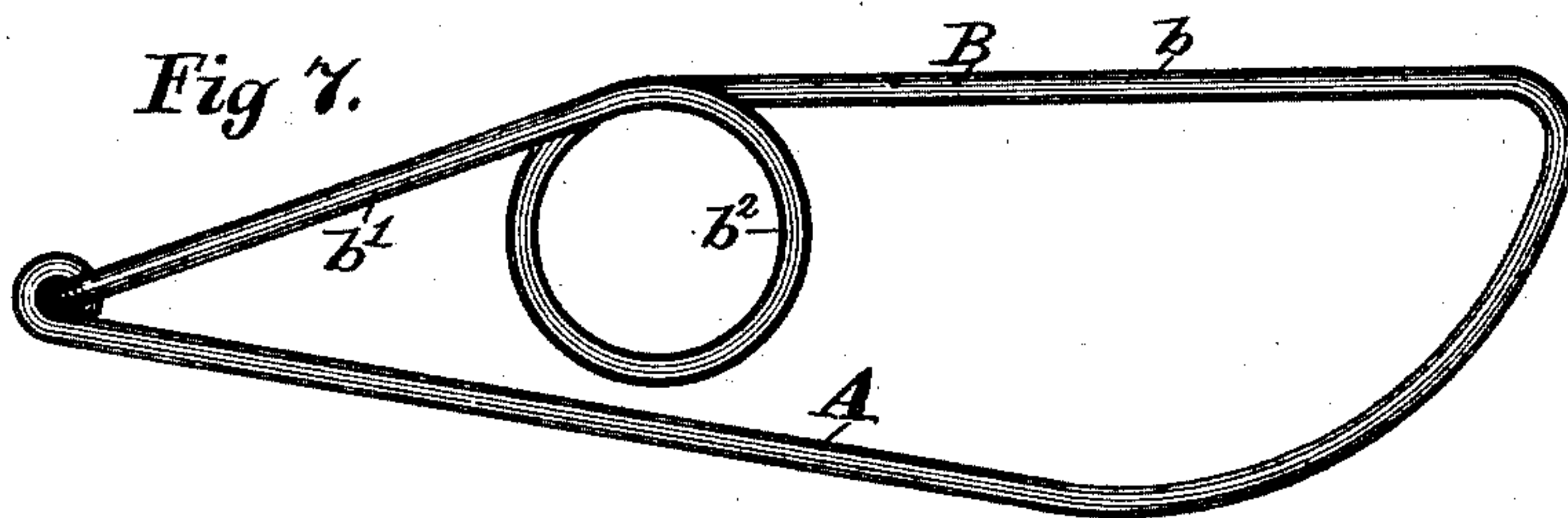


Fig 7.



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UNITED STATES PATENT OFFICE.

ARTHUR L. GARFORD, OF ELYRIA, OHIO.

VELOCIPED-SADDLE.

SPECIFICATION forming part of Letters Patent No. 485,186, dated November 1, 1892.

Application filed January 9, 1892. Serial No. 417,559. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR L. GARFORD, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Velocipede-Saddles, of which the following is a specification.

My invention relates to saddles for bicycles, tricycles, and other similar vehicles, generically called "velocipedes." My object is to produce an easy-riding saddle, which may be made more or less elastic to suit riders of different weights, and with which the rider will move downward and rearward as the springs bend under his weight.

With these objects in view my invention consists in the construction and combination of parts hereinafter described, and pointed out definitely in the claims.

In the drawings, Figure 1 is a side elevation of my improved saddle. Fig. 2 is a plan view of the main spring. Fig. 3 is an end view of the clamp which secures the seat-frame to the arm *b*. Fig. 4 is a side view of a modified form of the spring B. Fig. 5 is a side view of my improved saddle as applied to an ordinary wheel. Fig. 6 is a top view, and Fig. 7 a side view, of the spring B and its supporting-bar made integral with each other.

Referring to the parts by letters, B represents the main spring, which consists, essentially, of two arms *b b'* and a connecting-loop *b²*. The spring B is supported from the ends of its said arms, which, as shown in all the figures except Fig. 5, are connected, respectively, with the ends of a bar A, and the spring B is made of such length that when so connected the two arms thereof lie in different planes at an angle with each other. In what I believe to be the best construction the spring B is made of one piece of round wire, so bent that each of the arms *b b'* consists of two parallel strands, and each strand of the arm *b* is connected with the corresponding strand of the arm *b'* by a coil *b²*, as shown. The two strands of the arm *b'* are connected at their ends by the integral horizontal part *b³*, which serves as the pivot between said arm and the bar A. The ends *b⁴ b⁴* of the wires which constitute the arm *b* are bent into a horizontal position into line with each other, and to-

gether serve as a pivot, which connects said arm *b* with the bar A. The ends of the bar A are provided with eyes, in which said pivots turn. The specific construction above described is that shown in Figs. 1 and 2.

A represents a bar which is to be secured by a suitable clip to the saddle-post or other device for supporting the saddle. This bar may be rigid or slightly flexible, although I prefer to make it of a flat steel plate, so stiff that it will bend only a little, if at all.

C represents the seat, and D its supporting-frame. The frame may be a spring-frame or a rigid frame, as desired. It is attached to the arm *b*, with its rear end over the arm *b'*, by means of a clip E, which may be adjusted upon said arm *b*. This clip is made of such form, substantially as shown, that it prevents the separation of the parts of the arm *b*, and thereby prevents the ends *b⁴ b⁴* from coming out of the eye in the end of the bar A.

The bar A is attached to the saddle-tree in such position, substantially as shown, that the arm *b* is substantially horizontal. Under the rider's weight the arm *b* bends downward, thereby winding up the coil *b² b²* when the spring B is constructed, as in Figs. 1 and 5, and unwinding it when the spring is constructed, as shown in Figs. 4, 6, and 7.

In Fig. 5 I show the saddle adapted to use on an ordinary bicycle. The ends of the spring B, instead of being attached to the bar A, are pivotally connected with the perch or backbone, the points of connection being a suitable distance apart. The rear end of the spring is pivoted to a clamp which is adjustably secured to the backbone, whereby the tension of the spring, as well as the position of the arms *b b'*, may be changed.

In Figs. 6 and 7 I show the spring B and bar A made from a single piece of wire. In this construction the connection of the front arm *b* with the bar A is not literally a pivotal connection, but it is its equivalent, since that end of said arm *b* which connects with the loop moves in a path which is approximately an arc of a circle, of which the center is at or near its forward end.

To increase the elasticity of the saddle, the seat-frame is moved backward on the arm *b*. To decrease the elasticity, it is moved forward.

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

1. In a bicycle-saddle, a spring having two arms which lie in different planes at an angle with each other, and an intermediate loop, a bar to which the ends of said springs are pivotally connected, a clip for securing the bar to the saddle-support of a velocipede, and a seat secured to one arm of said spring, substantially as set forth.

2. In a velocipede-saddle, in combination, a spring having two arms lying in different planes, one substantially horizontal, the other extending downward and rearward, and an intermediate loop, suitable supports to which the ends of said springs are connected, and a seat secured to the horizontal arm of said spring with its rear end over the inclined arm, substantially as set forth.

3. In a velocipede-saddle, in combination, a spring having two arms lying in different planes, one substantially horizontal, the other extending downward and rearward, and a connecting integral loop, a bar to which the ends of said spring are pivoted, a clip adapted to connect said bar to the saddle-support, and a seat secured to the horizontal arm of said

spring with its rear end over the inclined arm, substantially as set forth.

4. In a velocipede-saddle, in combination, a spring having two arms, one lying in a substantially-horizontal plane, the other in a plane inclined downward and rearward therefrom, and an integral connecting-loop, a curved bar supporting said spring from its ends, a clip adapted to connect said bar with the saddle-support, a seat, and a clip for adjustably securing the seat to the horizontal arm of said spring, substantially as set forth.

5. In a velocipede-saddle, a spring consisting of one piece of wire having the arms b b' , each consisting of two parallel strands, the connecting-loops b^2 b^3 , the horizontal part b^3 , and the horizontal ends b^4 b^4 in line with each other, combined with the bar A, having eyes in its ends, a seat, and a clamp adapted to secure the seat to the arm b and to hold the two parts of said arm in fixed relation to each other, and means for securing the bar A to the saddle-support, substantially as set forth.

ARTHUR L. GARFORD.

Witnesses:

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M. S. INGHAM.