

(No Model.)

2 Sheets—Sheet 1.

R. O. BARLER.
BICYCLE SADDLE.

No. 567,634.

Patented Sept. 15, 1896.

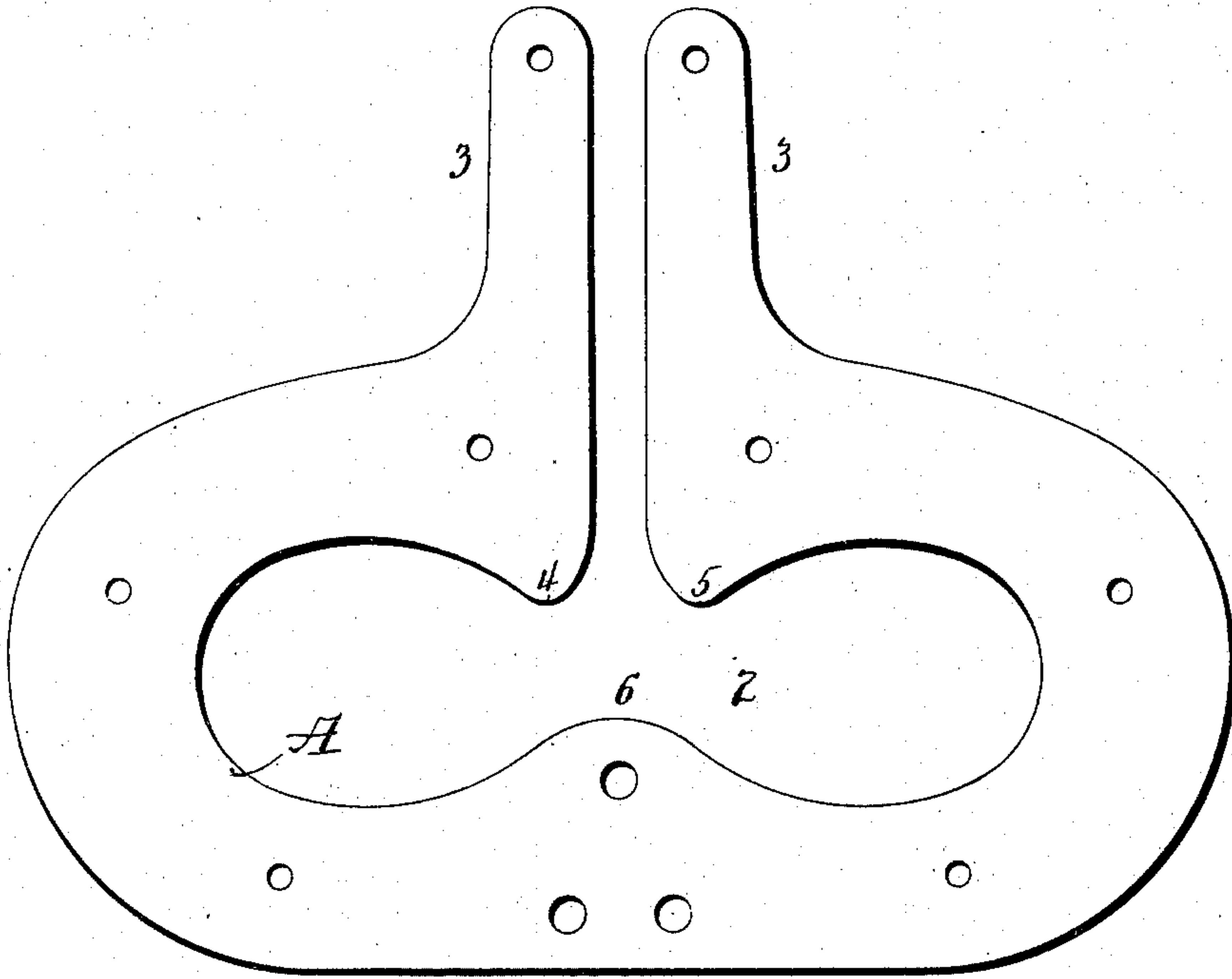


Fig. 1.

A Fig. 2.

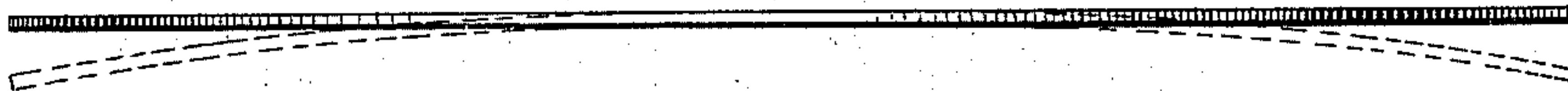
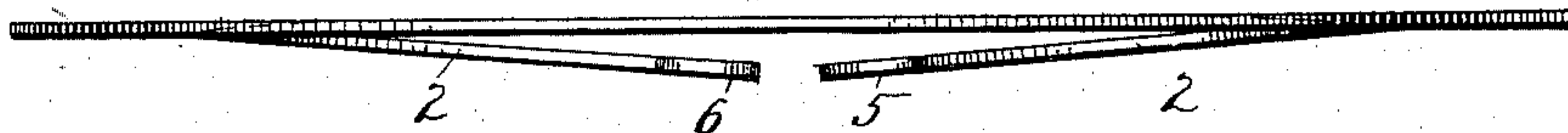


Fig. 3.



A Fig. 4.



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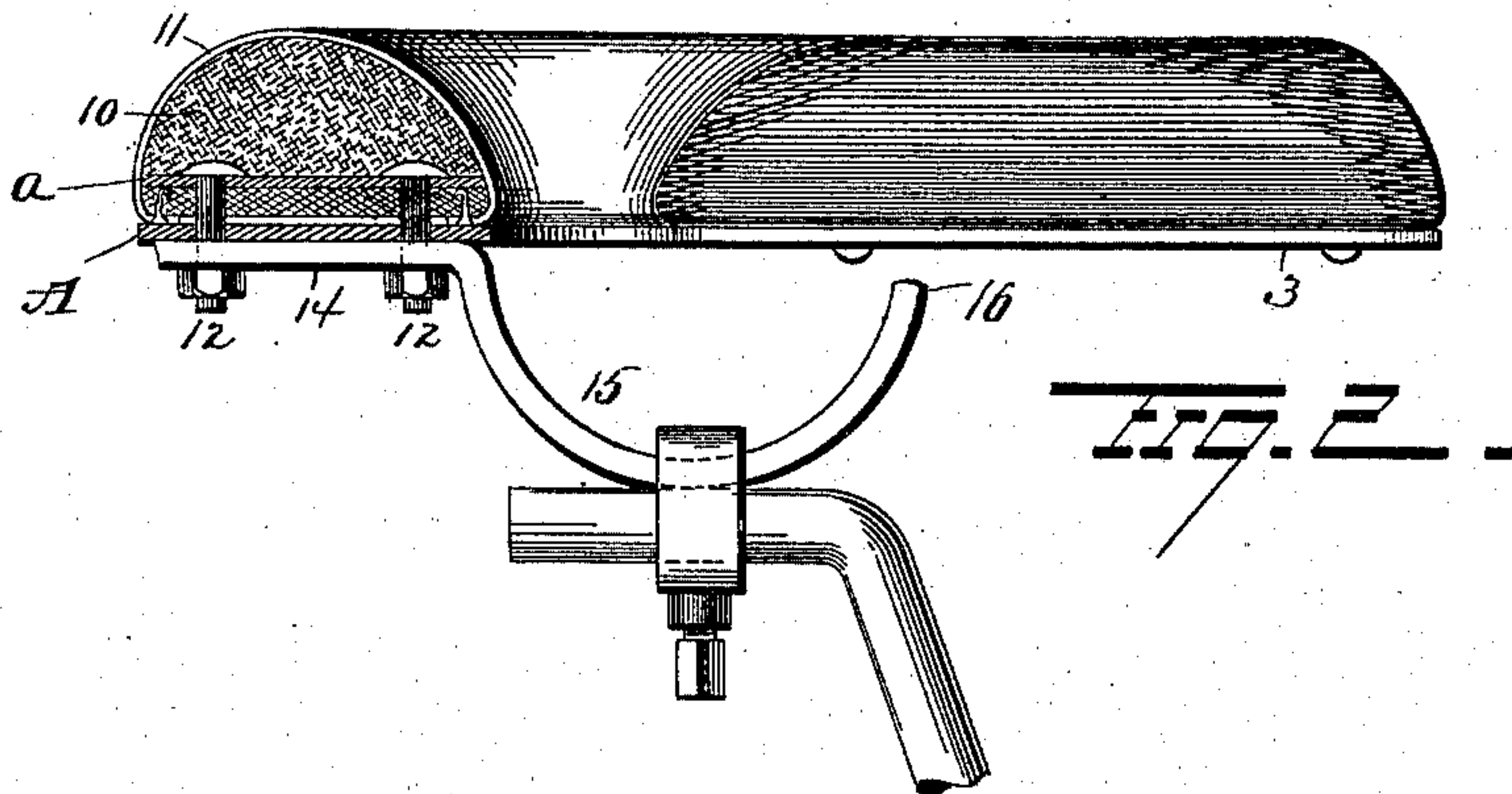


FIG. 2.

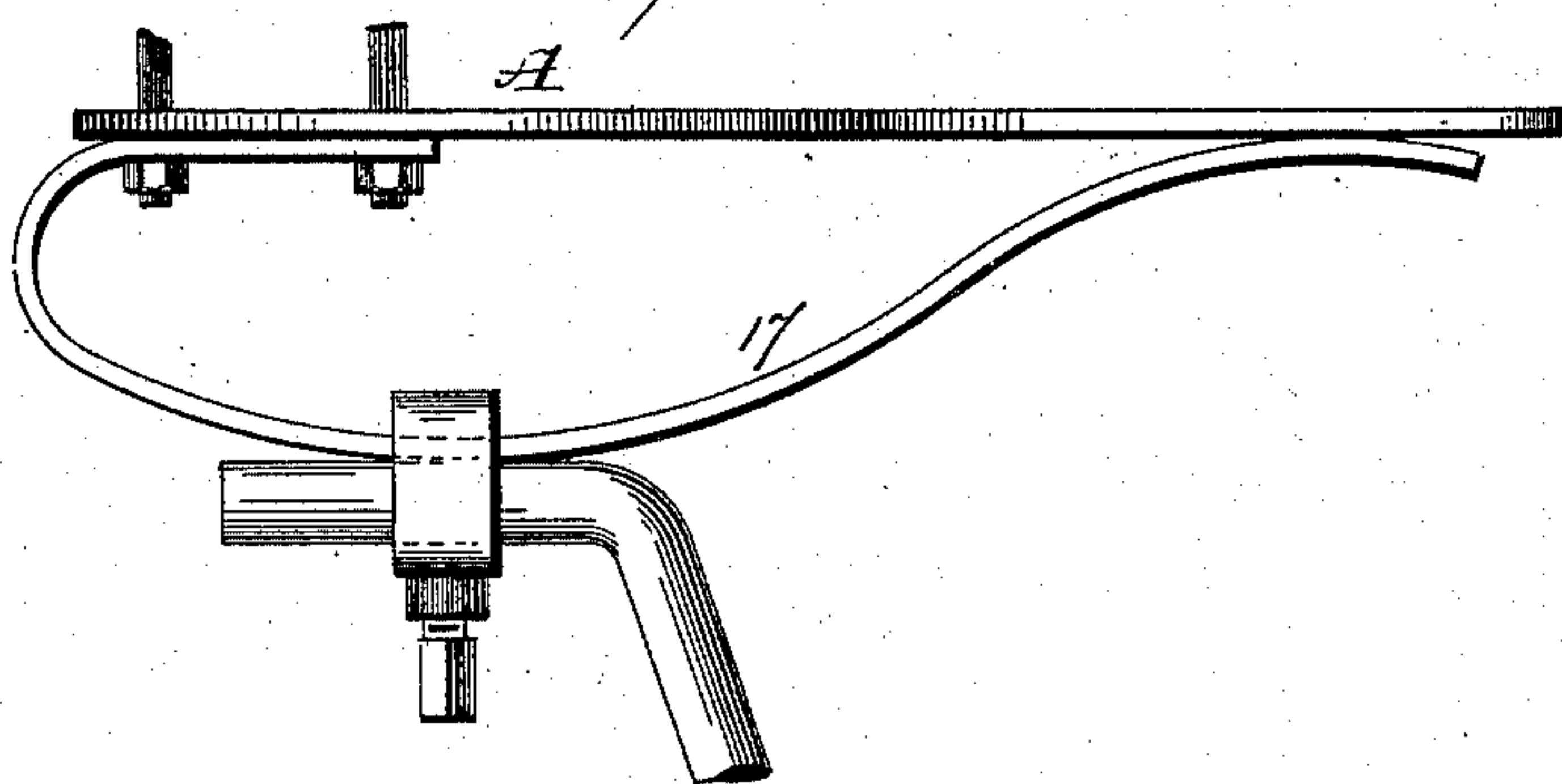


FIG. 6.

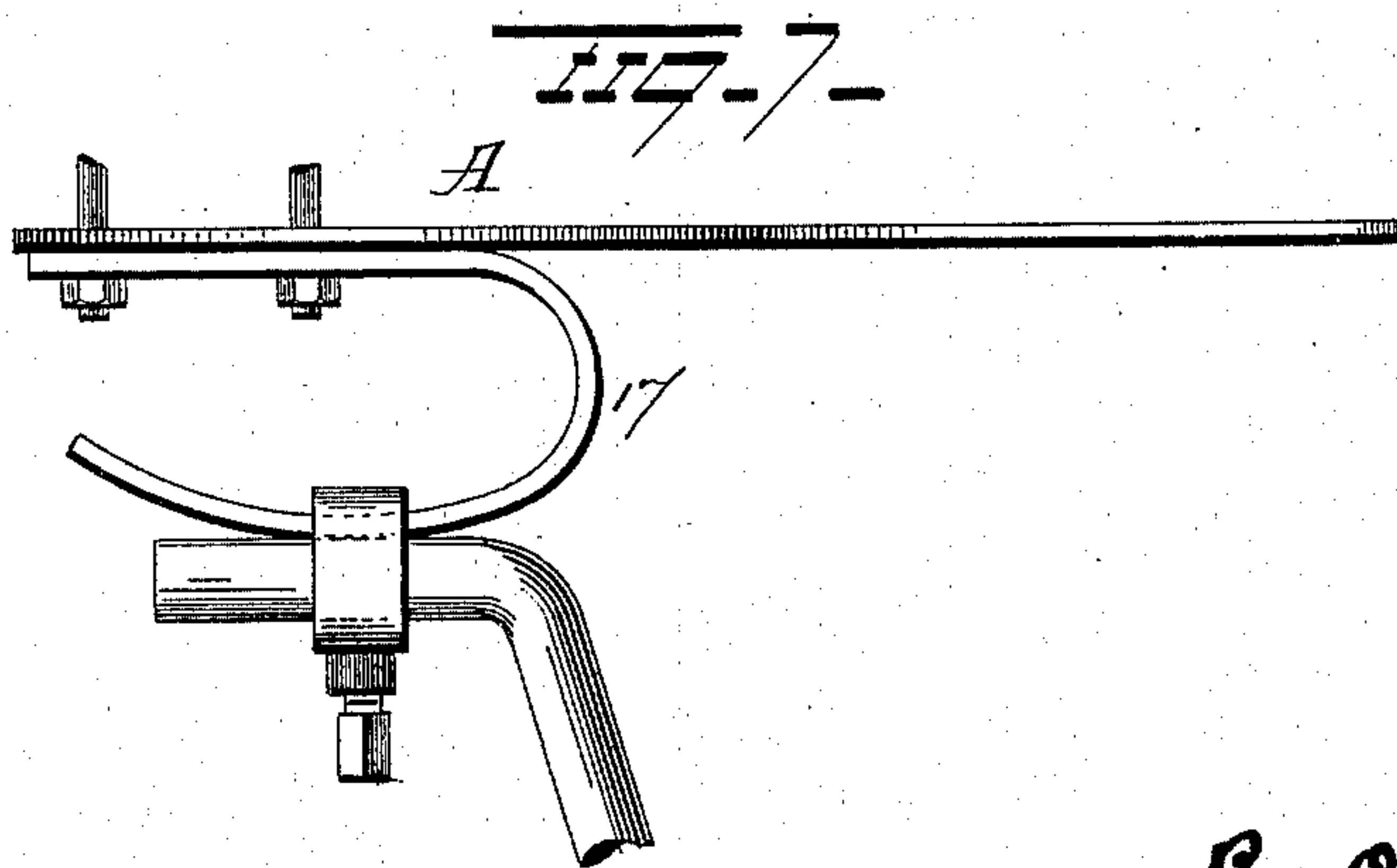


FIG. 7.

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UNITED STATES PATENT OFFICE.

RICHARD O. BARLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE A. C.
BARLER MANUFACTURING COMPANY, OF SAME PLACE.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 567,634, dated September 15, 1896.

Application filed February 20, 1896. Serial No. 580,041. (No model.)

To all whom it may concern:

Be it known that I, RICHARD O. BARLER, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain
5 new and useful Improvements in Bicycle-Saddles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and
10 use the same.

My invention relates to an improvement in bicycle-seats, the object being to provide a yielding elastic seat which will effectually absorb the jarring motion incident to riding
15 over rough places, and thus obviate the continual but almost unconscious shock sustained by the rider to the nervous system.

A still further object is to provide a seat constructed in every way upon anatomical
20 and hygienic principles, not only of such a nature that it will yield to motions of the body and absorb shocks, and thus spare the rider from sustaining them, but also the object is to give such shape to the seat that it will conform to the natural contour of the part of the
25 body accommodated, that is, one which will maintain the body in a natural position without producing irritation or friction at any point or points, impeding natural blood cir-
30 culation or producing the benumbing effect consequent upon the provision of too hard a surface or the support of the rider upon too limited a portion of the body.

With these several objects in view my invention consists in certain novel features of construction and combinations of parts, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is
40 a detached view of the plate. Fig. 2 is a longitudinal sectional view. Figs. 3, 4, and 5 are views which indicate several different positions to which the seat will yield, and Figs. 6 and 7 are modifications.

45 A represents the plate which constitutes the bottom of the saddle and which imparts to it the peculiar properties which my invention possesses, and as this plate constitutes the vital part of the invention, it will be described
50 somewhat in detail; and, first, it is preferably composed of a comparatively thin plate

of the best steel. This is cut by the aid of suitable dies into the general shape indicated in Fig. 1. Obviously this general shape may be varied in different particulars, but the
55 main idea is that it be curved at each side, with a central inclosure 2, and that it be provided with free ends 3 3, which extend approximately parallel with and in proximity to each other, constituting two distinct and sepa-
60 rate horns or pommels, which yield alternately with the downward movement of the legs in pedaling and rise again automatically to resume their normal positions upon the removal of this pressure. These horns or
65 pommels are purposely narrow to conform to the restricted space between the legs at that point, and they must be comparatively close to each other to preserve this dimension and to prevent injury to the clothing or person.
70 The bowing of the plate at each side of the center is not only to give the desired resiliency to the plate, but also to receive the tuberosities, so that the weight will all come upon the gluteal muscles. At the central
75 point the parts of the plate preferably approach each other more nearly, as at points 4, 5, and 6, to furnish more bearing at that point for the rider, and particularly to afford greater strength and width of bearing at the
80 center of the plate, where the latter is supported and all of the strain ultimately comes.

The peculiar shape and construction of the spring or plate constituting the main body of the saddle, having a resilient and automatic
85 movement, admit of a variety of coverings, such as a hard molded form or shape of metal or vegetable composition, and fastened direct to the plate by screws or other suitable means, or a cushion or pad covered with leather.
90

Various means of cushioning the saddle may be adopted. For instance, a pneumatic cushion or pad may be employed, or a stuffed leather cushion may be preferred. Hence these saddles will be differently equipped to
95 suit the trade. A convenient means of attachment of the cushion is that illustrated in Fig. 2, and may be used to advantage, although I do not limit myself to this method. The cushion is built upon a strip of sole-leather, 100
fiber composition, or other suitable material, say a fourth of an inch thick. Immediately

above this a thin steel plate *a* is placed. Then the pad or cushion 10 is formed, and around these several parts the leather cover 11 is stretched, its edges being tacked or otherwise secured to the strip 8, and if tacks are used their ends clench the plate *a* immediately above. The entire pad thus formed is held on the main base-plate A by means of screws or bolts 12 12, or both, as the case may be.

The attachment or connection between the seat and the machine may be varied as I have shown in my drawings, not to mention many other modifications of which it is easy to conceive. In Fig. 2 is shown a bar or plate 14 securely bolted at its rear end to the bottom of plate A at the rear. This bar or plate is curved, as at 15, for two reasons: first, to provide for tilting the seat, which is of course a feature common to many seats now in use, and, secondly, to furnish a stop 16 at the extreme forward or free end to prevent undue downward motion of the horns or pommels, especially in the event of a very heavy rider occupying the seat. It is probable that the horns or pommels would very rarely ever strike this stop, and yet it is in the nature of a safeguard, which it is always well to provide. It will be noticed that the relation of this stop to the horns is not affected by the shifting or tilting of the saddle.

Two other slightly different connections have been illustrated, and they will be briefly described. In each a spring-plate 17 connects the saddle to the machine. In one the plate curves first rearward and then forward, terminating at 18 against the bottom of the horns or pommels to afford a yielding support at that point. In the other the spring curves in the reverse direction. In both the tilting and adjustment are possible, as in Fig. 2.

It is evident that other slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

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

1. A bicycle-saddle comprising a torsional plate supported solely at its rear and center and having a split, divided or double pommel at the forward end, substantially as set forth.

2. A bicycle-saddle comprising a plate bowed out at each side forming a central inclosure with its ends terminating in a pair of horns or pommels in close proximity to each other, said plate thereby rendered susceptible of torsional strain at any point throughout its entire length, substantially as set forth.

3. In a bicycle-saddle consisting essentially of a moderately narrow resilient plate of metal bowed out at either side to form a central opening, supported at or approximately at its center and terminating at its ends in parallel pommels to admit of vibratory motion resulting exclusively from a torsional action of the plate which admits of several spring movements all the way from the support to the ends of the plate, substantially as set forth.

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

RICHARD O. BARLER.

Witnesses:

JAMES H. GORMLEY,
E. A. PETTIBONE.