

(No Model.)

W. I. BUNKER.
SADDLE FOR BICYCLES.

No. 471,417.

Patented Mar. 22, 1892.

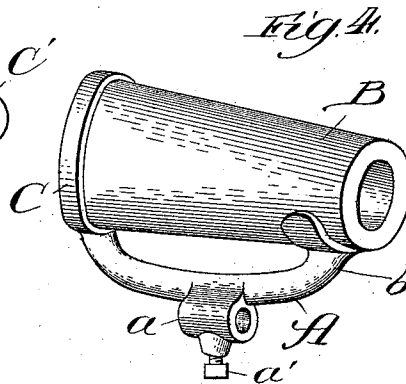
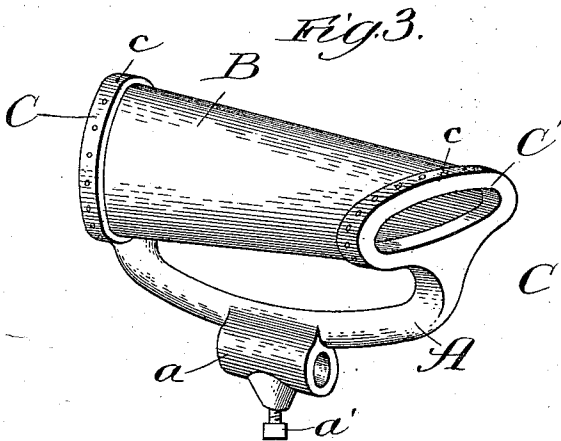
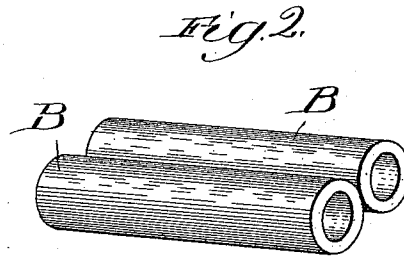
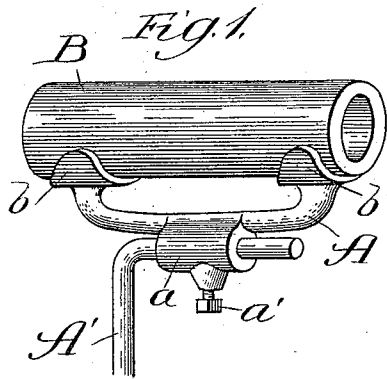


Fig. 6.

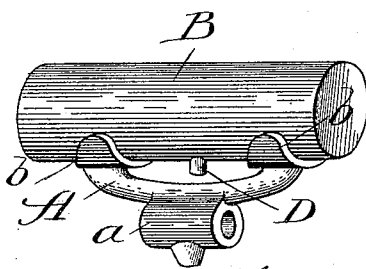


Fig. 5.

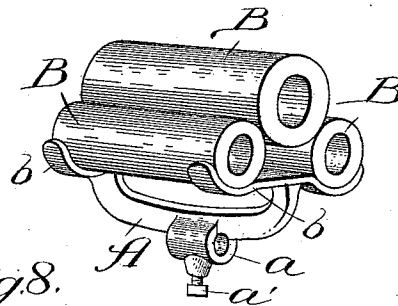


Fig. 7.

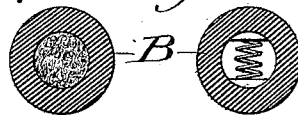
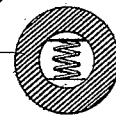


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SADDLE FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 471,417, dated March 22, 1892.

Application filed August 11, 1891. Serial No. 402,342. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM I. BUNKER, a citizen of the United States, residing at La Grange, Cook county, Illinois, have invented a certain new and useful Improvement in Saddles for Bicycles and other Vehicles, of which the following is a specification.

The saddles previously in use for this purpose have had numerous defects which rendered them objectionable. In some instances they are insufficiently elastic or springy, and when coiled springs are placed beneath the saddle to overcome this defect the resiliency of these springs tends to throw the feet of the rider off of the pedals, interfering with the running of the bicycle to the best advantage. The object of my invention is to overcome these and other defects, and to that end I construct a saddle which adapts or shapes itself to the desired form under and by reason of the weight of the rider. In this way the saddle automatically changes its shape under the movements of the rider, so as to offer as little resistance to such movements as possible, leaving the rider free to operate the machine to the best possible advantage.

My improved saddle is simple, durable, and elastic, may be easily and cheaply made, and is efficient in operation; and the invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of one form of saddle made in accordance with my invention; Figs. 2, 3, 4, 5, and 6, perspective views of modifications thereof; and Figs. 7 and 8, vertical cross-sections through the seat of the saddle, illustrating further modifications.

When made in the form shown in Fig. 1, the saddle comprises the bracket A and the seat B. The bracket may be made in the form shown in the drawings, out of any suitable material, and of any desired size. It is preferably provided with a perforated lug or extension *a*, which may be passed over the end of the rod or bar A', by means whereof the saddle is connected to the bicycle. A set-screw *a'* is also preferably provided to secure the bracket in any desired position along the bar. I do not, however, consider this way of connecting the bracket to the bicycle in any way essential, and merely show and describe

it as being one suitable way of accomplishing this result, and, if desired, part of the machine itself may be suitably placed or shaped to receive and support the seat, and therefore I use the term "bracket" in the specification and claims as meaning that portion of the machine supporting the seat, whether made as part of the machine or separate from it.

The saddle B is made in the form of a piece of tubing, of rubber or rubber and canvas in layers, or any other suitable material, cut to the desired length, and secured in the arms *b* of the bracket, which are shaped to fit it, by means of riveting, cementing, or any other method which will securely connect the two parts of the saddle.

In Fig. 2 I have shown a modified form of seat, consisting of two tubes B, secured together or not, as desired, and which may be supported by means of a bracket similar to that shown in the first figure, the form of the arms *b* being suitably modified to accommodate the double tube.

In Fig. 3 the form of the bracket is somewhat modified. It is still provided with a lug *a* or other suitable means of connecting it to the bicycle; but, in place of the arms B, I provide sockets C C', the socket C at the front end of the seat being of a somewhat oval form, with the longer axis in a substantially vertical position, while the socket C' at the rear of the saddle is of a similar form, but with its longer axis in a substantially horizontal position. The ends of the tubing forming the seat are inserted into the sockets and held in place there by means of rivets *c*, as shown, or cementing or any other desired means. While I have shown sockets adapted to inclose both sides of the end of the tubular seat, it will be evident that a mere oval flange adapted to encircle the outside of the tube or to be inserted within the end of the tube might be used as well, since such flange would serve equally to accomplish the desired result, which is to narrow the seat vertically in front and broaden it horizontally in the rear, so that while affording a comfortable seat the saddle shall interfere as little as possible with the movements of the rider.

In Fig. 4 I have shown a form somewhat similar to that in Fig. 3, the bracket being provided at its front end with the same oval

socket or flange, with its longer axis standing in a substantially vertical position. The rear end of the bracket, however, is provided with an arm *b*, of substantially the same shape as those shown in the first figure of the drawings. The front end of the tube is secured to the socket or flange in the manner described when speaking of the form shown in Fig. 3, and the rear end of the tube is secured in any desired manner within the arm *b*, this end of the tube being left in practically its original form. This construction is adapted to attain the same results as that shown in Fig. 3, the form of the seat and bracket being slightly changed.

In Fig. 5 the seat is composed of three pieces of tubing *B*, two of them resting in the arms *b* of the bracket, the form of the bracket being somewhat changed to accommodate the tubes and the third piece secured to the other two by rivets, cement, or other suitable means.

In Fig. 6 I have shown my invention in the form of a pneumatic saddle. The bracket may be of the form shown in this figure, or in any other suitable form adapted to support the seat. This seat consists of a cylinder of material similar to the seats already described, but is closed at its ends and is provided with a tube *D*, through which the air is introduced into the seat to inflate it, this tube being preferably provided with a valve opening inward, so that while air may be introduced past the same the air already in the seat is prevented from escaping.

In Fig. 7 the seat is filled with hair, cotton, or other suitable material, which will assist in maintaining the form of the seat, and in Fig. 8 I have shown upholstering-springs for the same purpose.

By means of this method of construction I provide a saddle which is easy and elastic, shaping and adapting itself under the weight of the rider in such manner as to interfere in the least possible extent with his motions, while at the same time affording a firm and comfortable seat. Moreover, although the saddle is simple and economical to construct it is exceedingly durable.

While I have described more or less precise forms, it is not my intention to limit myself thereto, since I contemplate changes in form, material, and proportions and the substitution of equivalent members, as may be necessary

or desirable. For instance, the seat may be lined with leather or other material, or covered therewith, the method of connecting the bracket to the bicycle and the seat to the bracket may be altered, as circumstances may require, and similar changes may be made in any of the parts of the saddle.

I claim—

1. In a saddle for bicycles and other vehicles, a flexible tubular seat conforming substantially to the desired shape under the weight of the occupant, substantially as and for the purposes set forth.

2. A saddle for bicycles and other vehicles, comprising a bracket and a flexible tubular seat conforming substantially to the desired shape under the weight of the occupant, substantially as and for the purposes set forth.

3. A saddle for bicycles and other vehicles, comprising a bracket and a tubular seat secured thereto, such seat being flattened at one of its ends, substantially as and for the purposes set forth.

4. A saddle for bicycles and other vehicles, comprising a bracket and a tubular seat, such seat being flattened vertically at one end and horizontally at the other, substantially as and for the purposes set forth.

5. A saddle for bicycles and other vehicles, comprising a bracket and a flexible tubular seat secured thereto, such seat being formed of one or more pieces of flexible material adapted to conform automatically to the desired shape under the weight and movements of the occupant, substantially as and for the purposes set forth.

6. A saddle for bicycles and other vehicles, comprising a bracket and a tubular seat secured thereto, springs or other elastic material being placed inside such seat to preserve the form thereof, substantially as and for the purposes set forth.

7. A saddle for bicycles and other vehicles, comprising a bracket, and a tubular seat made in three parts, two of such parts being secured to the bracket and the other part being secured to the first two, substantially as and for the purposes set forth.

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