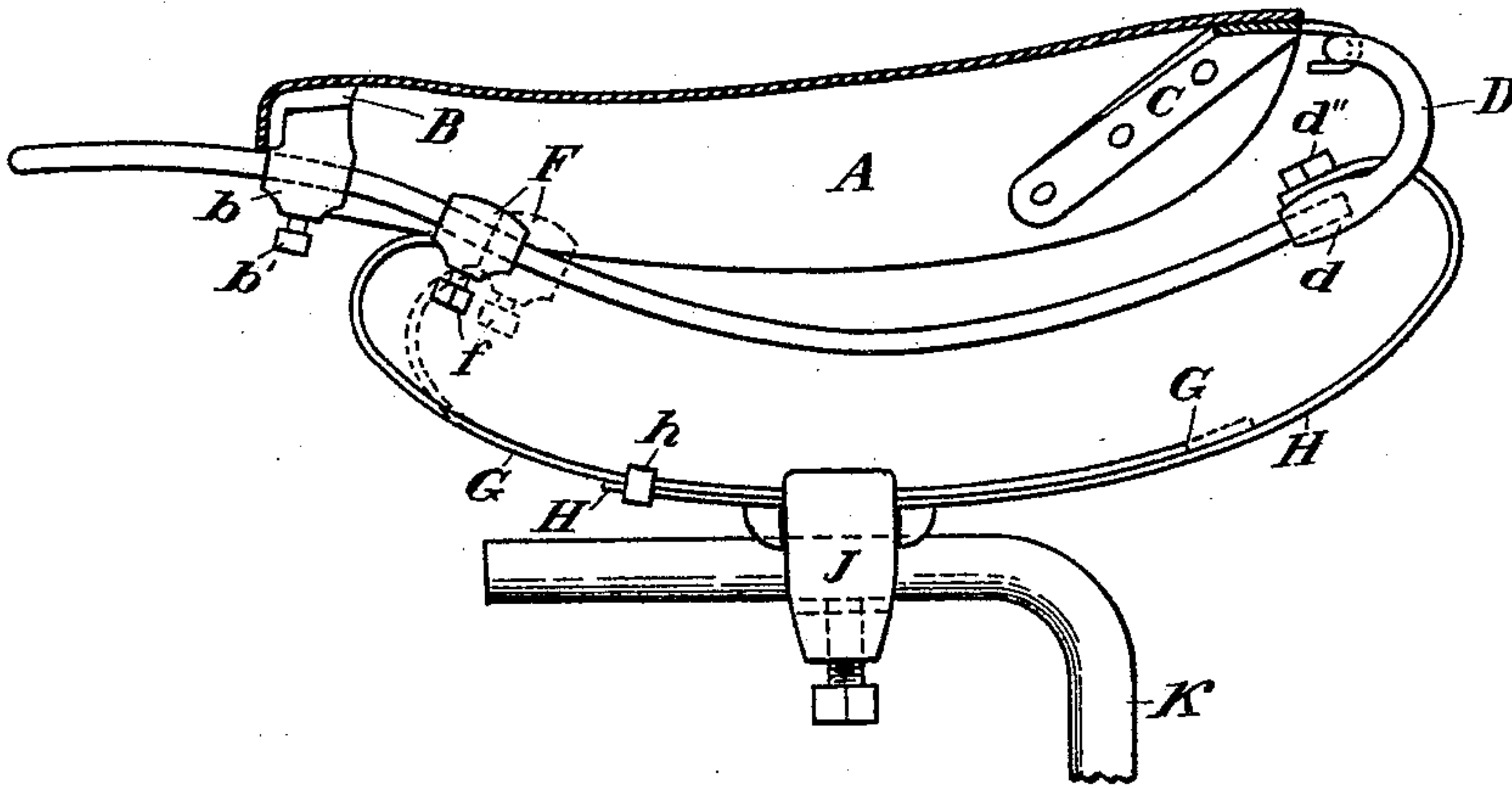


J. H. SAGER.  
SADDLE FOR BICYCLES.

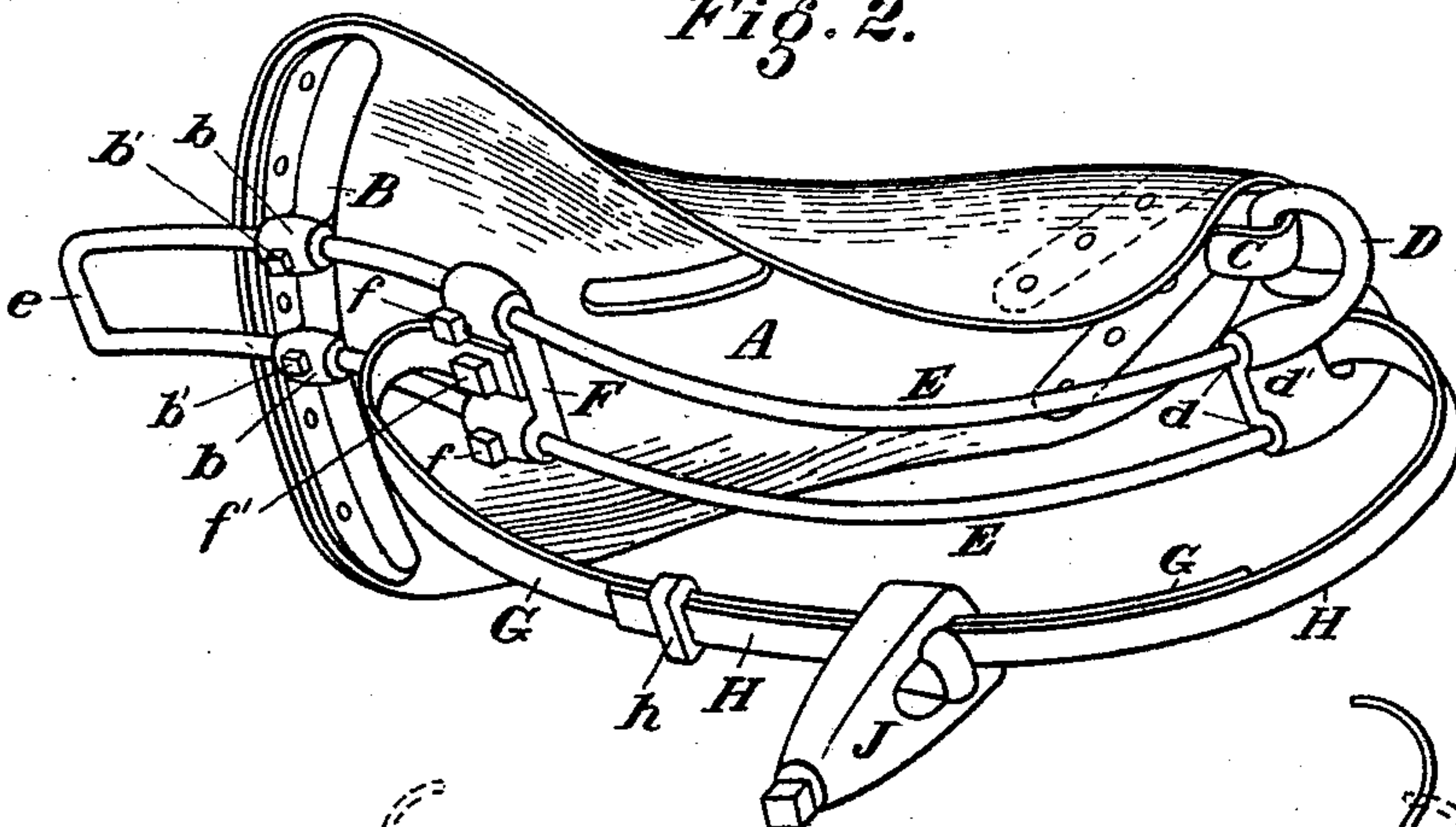
No. 500,156.

Patented June 27, 1893.

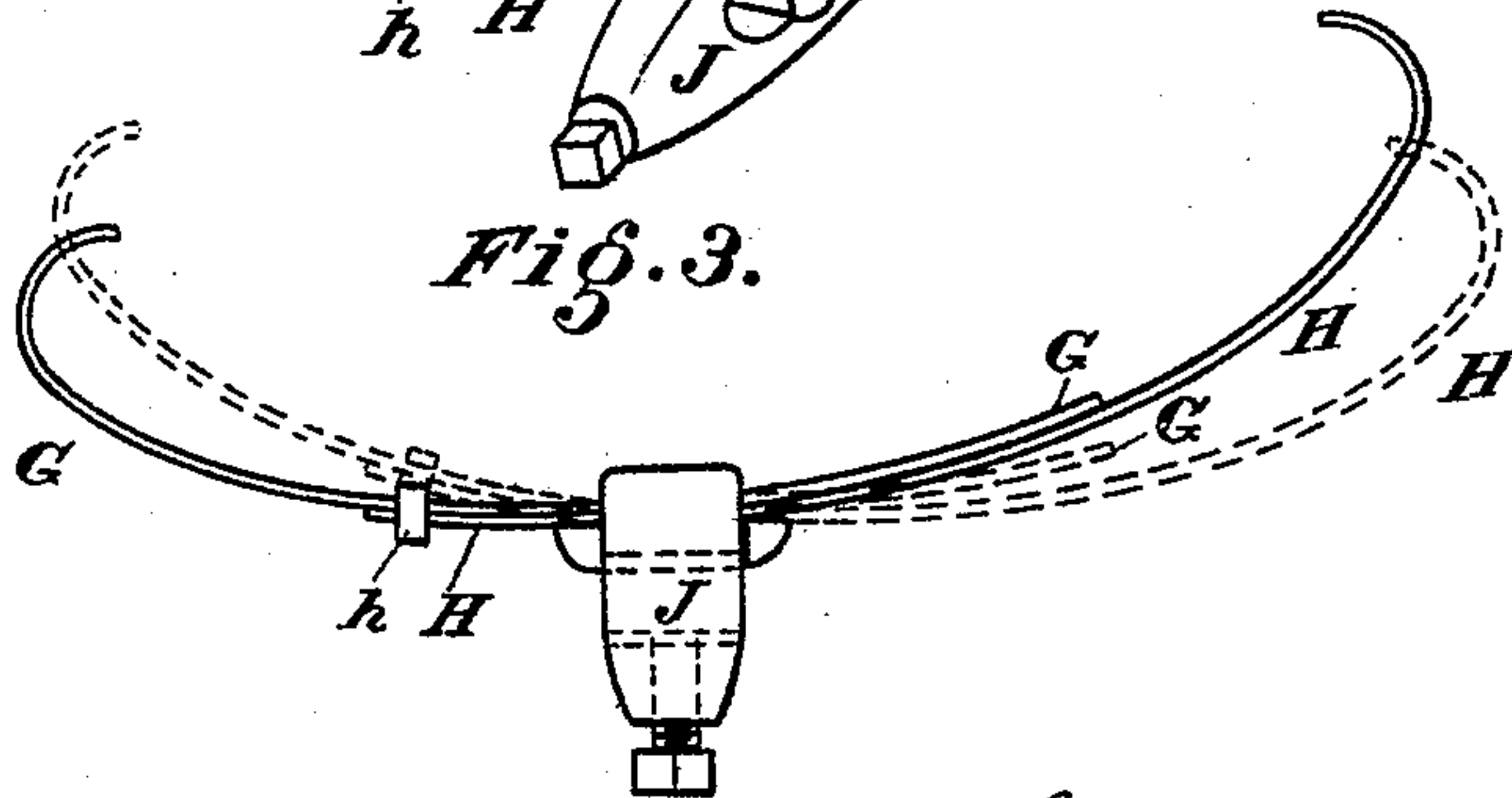
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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(No Model.)

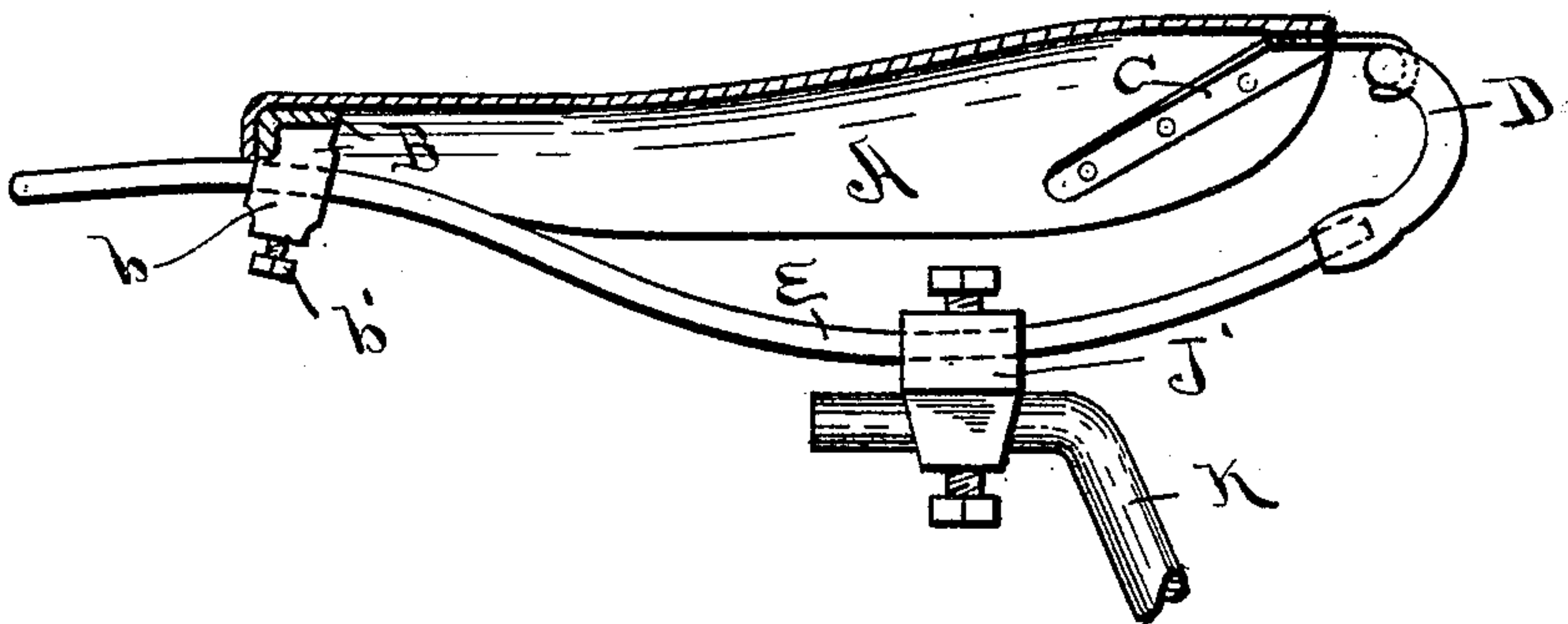
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Patented June 27, 1893.

Fig. 4.



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# UNITED STATES PATENT OFFICE.

JAMES H. SAGER, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE RICH & SAGER COMPANY, OF SAME PLACE.

## SADDLE FOR BICYCLES.

SPECIFICATION forming part of Letters Patent No. 500,156, dated June 27, 1893.

Application filed August 5, 1892. Serial No. 442,287. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. SAGER, a citizen of the United States, and a resident of the city of Rochester, county of Monroe, and State of New York, have invented certain new and useful Improvements in Saddles for Bicycles and Similar Vehicles, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1, is a side elevation of my device having portions of the saddle leather and of the front hook removed in order to show details of construction, and showing by full and dotted lines two positions of one of the leaf springs. Fig. 2, is a perspective view of my device seen from underneath. Fig. 3, is a diagram showing the action of the leaf springs and is more fully explained hereinafter. Fig. 4 is a side elevation of my saddle with the leaf springs removed and a clip supplied for attaching the rods supporting the saddle leather to the saddle support of the bicycle. Portions of the saddle leather and pommel hook are shown removed, to exhibit construction more clearly.

My invention consists in the improvements in saddles for bicycles and similar vehicles hereinafter described and claimed and the object thereof is to provide a strong and elastic saddle capable of adjustment to the varying weights of riders and having means of adjusting the inclination thereof and capable of reduction to a racing or "scorcher" saddle.

This device is an improvement upon the saddle set forth and claimed in the pending joint application of myself and Willard G. Rich, Serial No. 421,892, and is also more economical in construction than that.

Referring to the drawings, A is the saddle leather.

B is the cantle-supporting bar which is fastened to the saddle leather by rivets, as usual.

C is the pommel hook attached to the saddle leather by rivets, as usual.

D is a slotted block or eye having sockets *d d*, and a web *d'* connecting the end containing the sockets, from which end, in the form preferred by me, there extends in a suitable curve the portion forming the eye proper. At the extreme end of the eye, opposite that containing the sockets, is an opening adapted to

engage the pommel hook C. The eye is preferably made of some tough cast metal, such as malleable iron.

To the bar B are attached two lugs *b b*, having perforations therethrough substantially longitudinal with reference to the saddle leather and set screws *b' b'* are provided where-with to clamp rods passing through the perforations in the lugs. It is obvious that there are other well known clamping devices which may be used as the equivalents of the said perforated lugs and set screws.

E E are the two parts of the rod of the frame for supporting and stretching the saddle leather, preferably made of one rod of metal of suitable diameter and rigidity, which is bent at *e* the middle point thereof, so that the two parts shall be parallel and at such a distance apart that they may be inserted through the perforations in the lugs *b b*. The two parts are bent downward in even curves from the rear end of the saddle and rise to the front end.

When the saddle is assembled the two parts E E extend from the lugs *b b*, preferably in regular curves and parallel to each other and the two ends are inserted into and fit tightly in the sockets *d d* of the eye D. The bar B hook C, eye D and rod E E form the frame for supporting and stretching the saddle leather. That part of the rod E E which extends back of the lugs *b b* and to the rear of the saddle is made long enough to permit the stretching of the saddle leather A, by sliding the lugs *b b*, along the two parts E E of the supporting frame and fixing the position of the parts by clamping the set screws *b' b'*. The portion of the rod back of the lugs may extend farther back than is necessary for the purpose just mentioned in order to form a suitable support for a tool bag or other appendage.

The parts heretofore described and explained form the "scorcher" saddle above mentioned, when provided with a clip J' as indicated in Fig. 4, whereby to fasten the rods E E to the saddle support of a bicycle.

In order to form a saddle for ordinary purposes the following parts are added to the scorcher saddle, which is complete in itself. On the two parts E E of said rod and between the lugs *b b* and the eye D is a clamp



F which may be formed as shown with a central web and suitable end portions having perforations therethrough adapted to fit upon the parts E E so as to be moved backward  
 5 and forward along the same. Set screws  $f f'$  serve to fix this clamp at any point upon the parts E E. To the under side of the central web of the clamp is removably fixed, as by a bolt  $f'$ , one end of a leaf spring G and to the  
 10 upper side of the eye D is removably fixed, as by a bolt  $d''$ , one end of a leaf spring H. The leaves, G and H, are recurved, extending from the points of attachment just described, respectively backward and forward from the  
 15 same, then continuing in C-curves toward each other and overlap to a suitable extent, the spring G lying over and upon the spring H. To the spring H is fastened a keeper  $h$ , in which there is a slot through which the spring  
 20 G may slide backward and forward. The front spring H is thus rigidly attached to the saddle supporting frame, while the rearward spring G is capable of movement backward and forward, as shown in the full and dotted  
 25 lines of Fig. 1. By this movement, adjustability of the saddle spring is secured with reference to the weights of different riders. The more the clamp F is brought toward the forward end of the saddle the more the two  
 30 springs will overlap and the stiffer the spring G will be. The two springs for the greater part of their respective lengths are bent as shown in curves which are substantially parallel to the curves of the two parts E E of  
 35 the rod of the supporting frame, so that as the rear spring G is moved backward or forward it will constantly lie upon the front spring H. A clip J serves to fasten the two leaves together and to the saddle support K  
 40 of a bicycle. By loosening the clip J the springs G H may be moved backward or forward in the same and on account of their curvature the saddle is thus tilted so that the pommel or cantle end may be raised or  
 45 lowered to suit the wishes of the particular rider. Fig. 3 shows the action of these springs. In this figure the full lines represent their positions when the rear or cantle end of the saddle is depressed and the front  
 50 or pommel end is raised. In this case the spring G presses downward upon that portion of the spring H which is back of the clip J, and the forward end of the spring H presses upward against that portion of the  
 55 spring G which is forward of the clip J. Each of these springs supplements and increases the stiffness of the other in the manner mentioned and the stiffness may be augmented by sliding the spring G forward so  
 60 that the amount of overlapping is increased, or may be reduced by the reverse action.

The dotted lines in Fig. 3 indicate the action of the springs when the pommel end of the saddle is depressed and the cantle end is  
 65 raised. Under these circumstances those portions of the springs G H which are back of the clip J act in a manner similar to that just

described, inasmuch as the keeper  $h$  holds the two springs together on that side of the clip and forces both to operate together. On the  
 70 other side of the clip J the action is different, for, when the spring H is depressed, it separates from the spring G, and the downward motion of the pommel end of the saddle is resisted by one spring H only. Thus when the  
 75 bicycle strikes an obstruction and the rider is thereby thrown forward upon the saddle he meets a resistance to the shock which is opposed by the single spring H, which is made of such stiffness as to form an easily yield-  
 80 ing support. In the ordinary position of the rider upon the bicycle he is supported mainly by those parts of the two springs to the rear of the clip J and all ordinary jolts or vertical or rearward movements are opposed by both  
 85 springs.

A clip  $J'$ , suitable to attach to a bicycle the "scorcher" saddle above mentioned, is shown in dotted lines in Fig. 4 and may be of any  
 90 suitable form. In order to reduce my ordinary saddle to a "scorcher" the bolts  $d''$  and  $f'$  are unfastened and the leaves G and H are removed and a clip  $J'$  is applied. This may be done in case one or both of the springs G, H should break.  
 95

What I claim is—

1. A bicycle saddle consisting of a saddle leather a pommel hook a cantle bar having perforated lugs and set screws, a rod bent in the middle and adapted to be fastened in  
 100 said lugs, a slotted block fixed on the ends of said rod and adapted to engage said hook and a clip for fastening said rod to a bicycle, substantially as set forth.

2. A bicycle saddle consisting of a saddle  
 105 leather, a pommel hook, a cantle bar having perforated lugs and set screws, a rigid eye having sockets therein and adapted to engage said hook, rods passing through said lugs and clamped therein by the set screws and fixed  
 110 in said socket and a clip for fastening said rods to a bicycle, substantially as set forth.

3. A bicycle saddle, consisting of a saddle leather a cantle bar, a pommel hook, a rigid  
 115 eye, a rod bent in the middle and adjustably fastened at one end to the cantle bar, and at the other end fixed to the eye, the two parts of said rod being parallel and bent downward from the rear end of the saddle and upward  
 120 to the front end thereof, and a clip for fastening the same to a bicycle, substantially as set forth.

4. In a bicycle saddle, the combination of a saddle leather and a saddle supporting frame, constituting a saddle complete in itself, a pair  
 125 of oppositely arranged springs fastened to said frame one adjustably and the other rigidly, and means of fastening said springs together and to a bicycle, substantially as set forth.  
 130

5. In a bicycle saddle the combination of a rigid saddle supporting frame, a recurved spring rigidly attached to one end thereof, a recurved spring adjustably attached to the



other end thereof, one of said springs overlapping and lying upon the other, and means of fastening said springs together and to a bicycle, substantially as set forth.

5 6. In a bicycle saddle, the combination of a saddle leather, a cantle supporting bar, provided with perforated lugs and set screws, a  
10 said block or eye, a clamp adjustably fixable on said rods, a spring attached thereto, a spring rigidly attached to said block or eye, and lying against the other spring and means of fastening said springs together and to a  
15 bicycle, substantially as set forth.

20 7. In a bicycle saddle, the combination of a saddle leather a pommel hook, a cantle supporting bar, having perforated lugs, provided with set screws, an eye adapted to engage the pommel hook, and having sockets therein, rods  
clamped in said lugs, and fixed in the sockets of said eye, a leaf spring attached to said eye and passing rearward underneath said rods, a clamp fastened upon said rods, and movable

backward and forward thereon, and a leaf 25 spring attached to said clamp and passing forward and lapping over and lying upon the leaf spring first mentioned, and a clip adapted to fasten said leaf springs together and to a bicycle, substantially as described. 30

8. In a bicycle saddle, the combination of a saddle leather, a cantle bar attached thereto, a block having sockets therein, means of attaching said block to the pommel end of said leather, rods extending under said leather the 35 full length thereof and having ends set in said sockets, means of fastening the other ends of said rods to said cantle bar, a clamp adjustably fixable on said rods, a spring attached thereto, a spring attached to said block and 40 lying against the other spring and means of fastening said springs together and to a bicycle, substantially as set forth.

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