(No Model.) 3 Sheets—Sheet 1.

R. E. PHILLIPS.

CYCLE SADDLE.

No. 531,858. Patented Jan. 1, 1895.

FIG. 1.

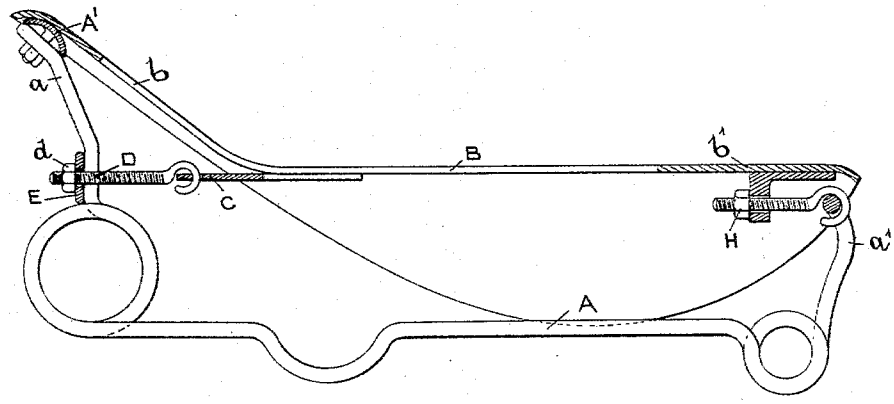


FIG. 2.

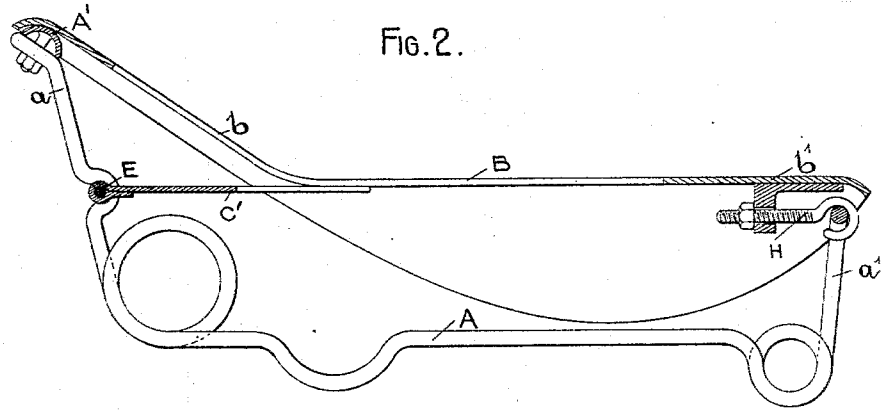


FIG. 3.

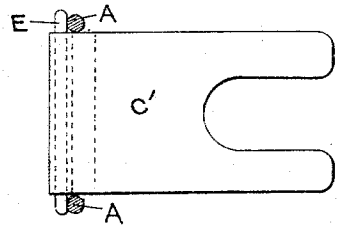


FIG. 4. FIG. 5.

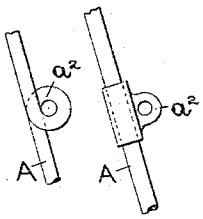
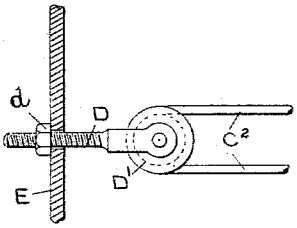


FIG. 6.



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(No Model.) 3 Sheets—Sheet 2.

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FIG. 7.

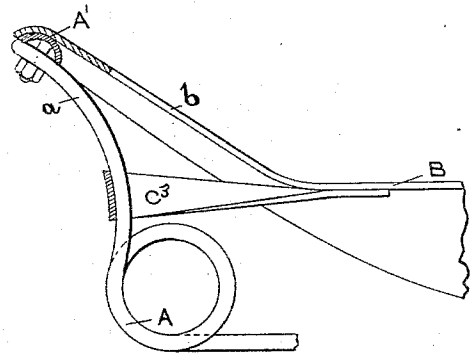


FIG. 8.

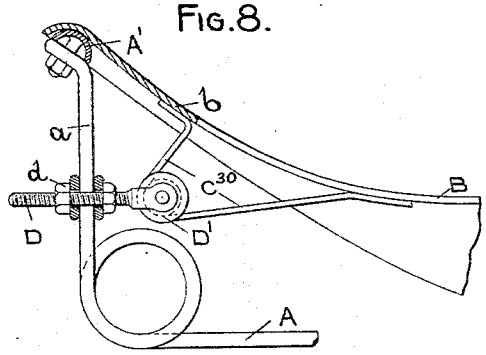
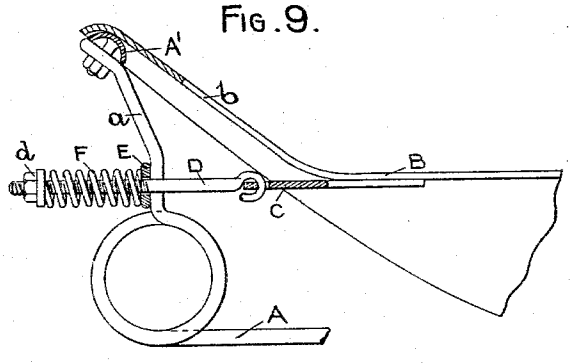


FIG. 9.



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CYCLE SADDLE.

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FIG. 10.

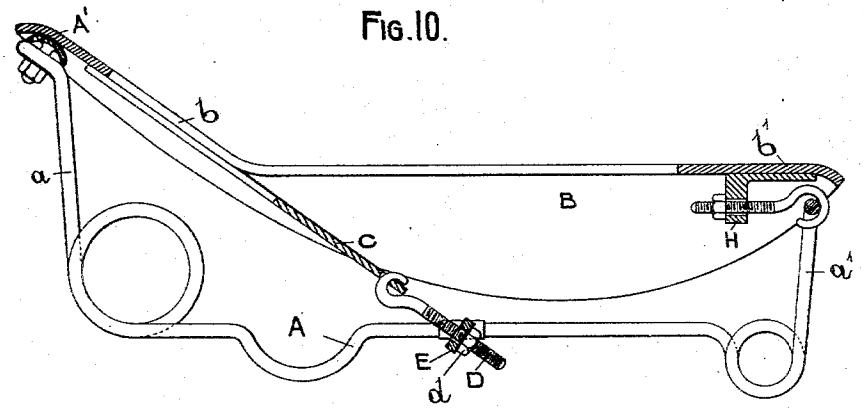


FIG. 11.

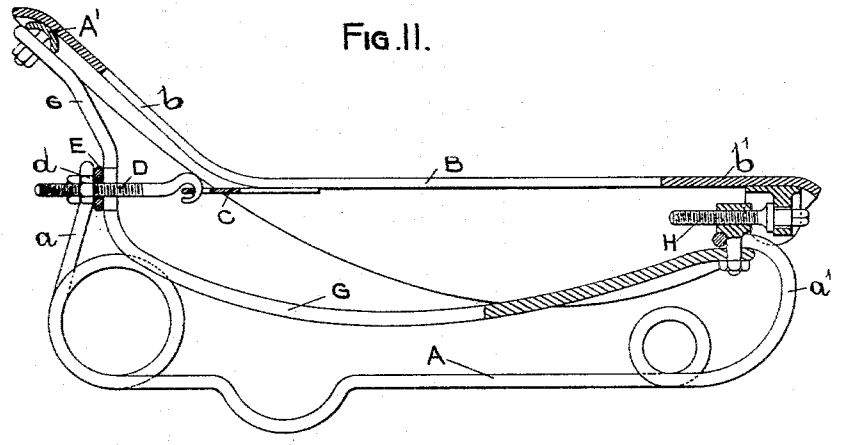
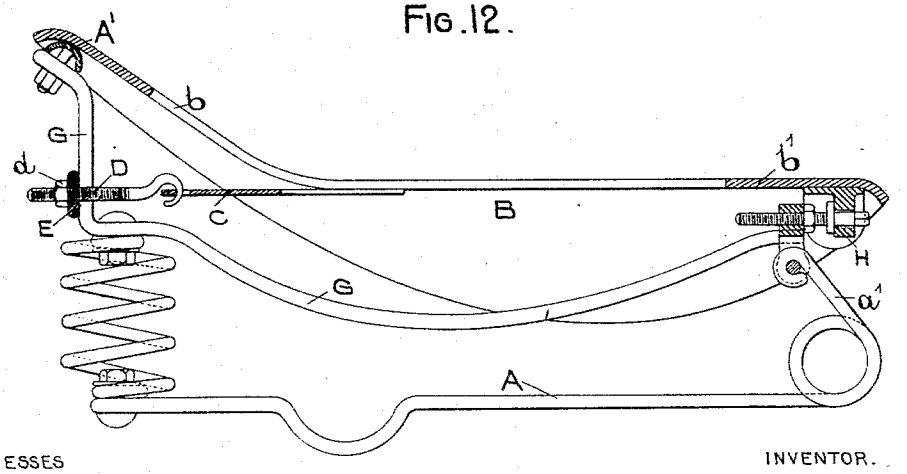


FIG. 12.



WITNESSES

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UNITED STATES PATENT OFFICE.

ROBERT EDWARD PHILLIPS, OF LONDON, ENGLAND.

CYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 531,858, dated January 1, 1895.

Application filed August 13, 1894. Serial No. 520,175. (No model.) Patented in England January 27, 1894, No. 1,824.

To all whom it may concern:

Be it known that I, ROBERT EDWARD PHILLIPS, a subject of the Queen of Great Britain, residing at South Kensington, London, in the county of Middlesex, England, have invented a new and useful Improvement in Cycle-Saddles, (for which I have obtained a patent in Great Britain, numbered 1,824 and bearing date of January 27, 1894,) of which the following is a full and complete specification.

My invention relates to saddles of the suspension or hammock type in which the seat is stretched between the front and rear parts of the supporting frame. The seats of such saddles as at present constructed are flat or approximately flat from front to rear, though means have been devised whereby such seats can be tilted to raise or depress either end of the saddle as found most convenient to the rider.

According to my invention I cause the rear part of a suspension or hammock saddle to curve upward after the pattern of the old fashioned racing saddles having a rigid plate frame and my invention consists in stretching the seat from a convenient part of its length to any suitable part of the supporting frame by means of any suitable stretching device, the object being to so shape the seat as to give the rider something to thrust against, which is entirely absent from the present types of these saddles. I attain this end in the manner shown by the accompanying drawings, in which—

Figure 1 Sheet No. 1 is a view in side elevation, partly in section, of a saddle showing one manner of carrying out my invention. Fig. 2 Sheet No. 1 is a similar view showing a modification in the construction of the stretching device, and Fig. 3 Sheet No. 1 is a view in plan of the said stretching device. Figs. 4 and 5 Sheet No. 1 are broken views showing other means of attaching the stretching device to the supporting frame. Fig. 6 Sheet No. 1 and Figs. 7 and 8 Sheet No. 2 are broken views in side elevation showing other forms the stretching device may assume. Fig. 9 Sheet No. 2 is a broken view showing the introduction of a spring in the stretching device. Fig. 10 Sheet No. 3 is a view in side elevation, partly in section, of a saddle showing an alternative method of applying the stretching device, and Figs. 11 and 12 Sheet No. 3 are views in side elevation partly in section, showing the application of my invention to the under frame of saddles having radius bars.

Throughout the views similar parts are marked with like letters of reference.

The supporting frame A of the saddle may be of any of the known types or constructions with this variation that the part *a* adapted to carry the cantle plate A′ is extended a convenient distance above the front end *a′* of the under frame to give the necessary upward curve to the rear part *b* of the seat B. The seat is preferably made of leather, is of the ordinary shape and it is attached to the front end *a′* of the under frame A by any of the ordinary devices, and it is fixed to the cantle plate A′ by rivets or otherwise in the well-known manner. The seat B however is made longer than the distance between the front end *a′* of the under frame and the cantle plate A′ and instead of being stretched directly between these two parts of the under frame, it is distorted and retained in its desired shape, *i. e.*, flat for a convenient distance from the front part and then curved upward at the rear part by stretching either that part forming the front flat part of the seat as shown by Figs. 1, 2, 7, 8, 9, 11, and 12, or by stretching that part forming the curved or inclined rear part of the seat as shown by Fig. 10.

A convenient form of stretching device consists of a piece of leather or other flexible material C riveted to or otherwise attached to the under side of the seat B and of a threaded pin or stud D attached at one end to the piece C either by a hook and eye connection as shown by Figs. 1, 9, 10, 11 and 12, or by being riveted or sewed thereto or by any other suitable means. The threaded stud D is passed through a plate E lying across the back part *a* of the supporting frame and it is drawn back to stretch the front part *b′* of the seat B taut by means of the nut *d*.

As a modification the stretching device may consist of a piece C′ of leather or other suitable material riveted or otherwise attached to the seat B and folded and fixed round a bar E adapted to rest against the back part *a* of the supporting frame preferably in a groove or recess therein, as shown by Figs. 2

and 3, or to engage with coils a^2 in the members of the supporting frame as shown by Fig. 4. As a modification of this construction the stretching bar may be permanently fixed to the members of the supporting frame, or it may be mounted in small bearings a^2 thereon, as shown by Fig. 5.

Instead of using a single flat piece C a band or cord C^2 may be used, the said band or cord passing round a pulley D' carried by the stud D as shown by Fig. 6. As a further modification the stretching device may consist of a strap C^3 fixed at both ends to the seat B and passing round the back part of the supporting frame A as shown by Fig. 7.

When it is desired that the rear part *b* of the seat B shall assume a true curve shape I prefer to use a band or cord C^{80} or its equivalent, the ends of which are attached to the seat B at one or more places as shown by Fig. 8 and to draw it back by means of a pulley D' as hereinbefore described.

If it is desired to give the seat B increased flexibility a spiral or other suitable spring F may be interposed between the cross bar E and the tensioning nut *d* on the stud D as shown by Fig. 9.

When a radius bar or stretcher G is used, I prefer to extend the said radius bar to carry the cantle plate as shown by Figs. 11 and 12.

As a modification the rear upward sloping part *b* of the seat B may be stretched as shown by Fig. 10, in which case the front end *b'* of the seat will require the ordinary tensioning device.

In the modification shown in Fig. 10, the band or distorting strap C is attached to the upper and inclined portion *b* of the seat instead of being attached to its horizontal portion. The band C in Fig. 10 is provided with a screwthreaded pin D and a nut the same as in Fig. 1, but the pin D is arranged to pass through an eye on the lower part of the frame A instead of on its rear part. The action of the band C is the same in both forms of the device, but the distortion of the leather seat is effected by pulling it downward in different directions.

When the front part of the seat is stretched back and the stretching device is provided with an adjustment as shown by Figs. 1, 8, 9, 11 and 12 the ordinary tensioning device H at the front of the saddle may if desired be dispensed with, but when the stretching device is not provided with an adjustment as shown by Figs. 2 and 7, the tensioning device at the front end of the saddle must be retained. Also when the curved or sloping back part of the seat is stretched as shown by Fig. 10, the ordinary tensioning device at the front end of the saddle must be retained.

The front part of the seat may be attached to the front of the supporting frame either as shown or in any other convenient manner and if a tensioning device is used it may be constructed as shown or in any other convenient manner.

I wish it to be particularly understood that I do not limit myself to the precise details of construction hereinbefore described and illustrated by the accompanying drawings, but that I hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

I desire it to be particularly understood that I lay no claim to any particular construction of supporting or spring frame, but

What I do claim, and desire to secure by Letters Patent, is—

1. A cycle saddle, consisting of a supporting frame, and a suspension seat of flexible material having its front and rear ends attached to the said frame; in combination with a distorting strap connected to the under side of the seat and to the said frame, said strap operating to hold the seat tightly stretched with its main portion substantially horizontal and its rear portion at an obtuse angle to the said main portion and affording a rear support for the rider to thrust against, substantially as set forth.

2. A cycle saddle, consisting of a supporting frame, and a seat of flexible material having its front and rear ends attached to the said frame; in combination with a distorting strap connected to the under side of the seat and to the said frame, and means for adjusting the tension of the said strap, thereby stretching the said seat and holding its main portion substantially horizontal and its rear portion inclined thereto, substantially as described and shown.

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