No. 630,266. Patented Aug. 1, 1899.

H. A. PERRY.

SADDLE.

(Application filed Nov. 4, 1897.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

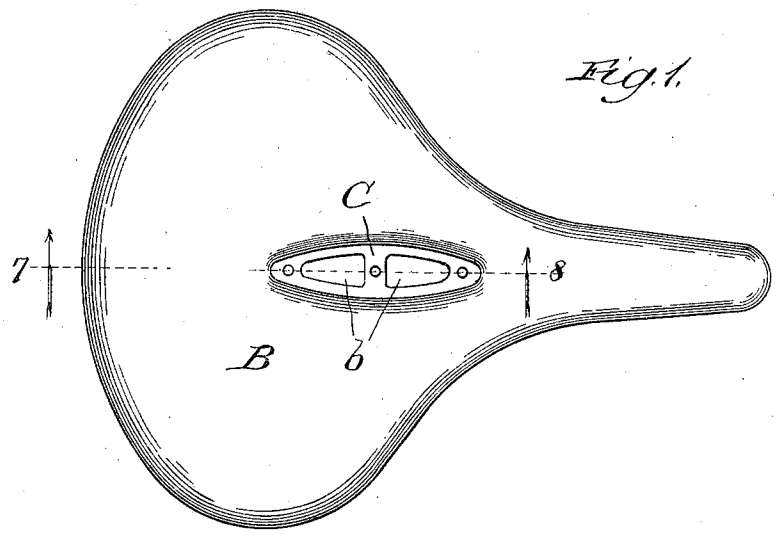


Fig. 2.

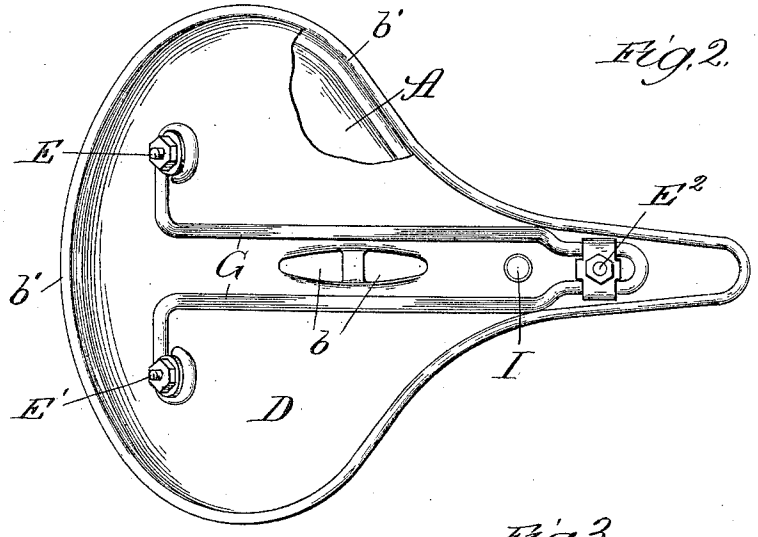
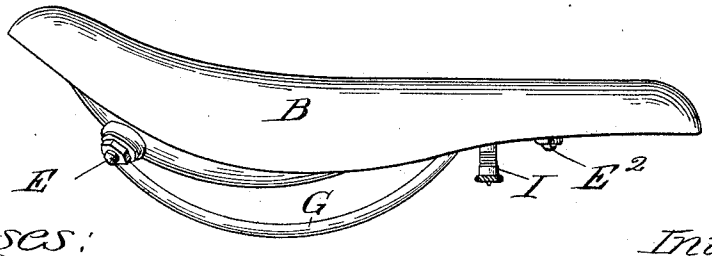


Fig. 3.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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(No Model.) 3 Sheets—Sheet 2.

Fig. 4.

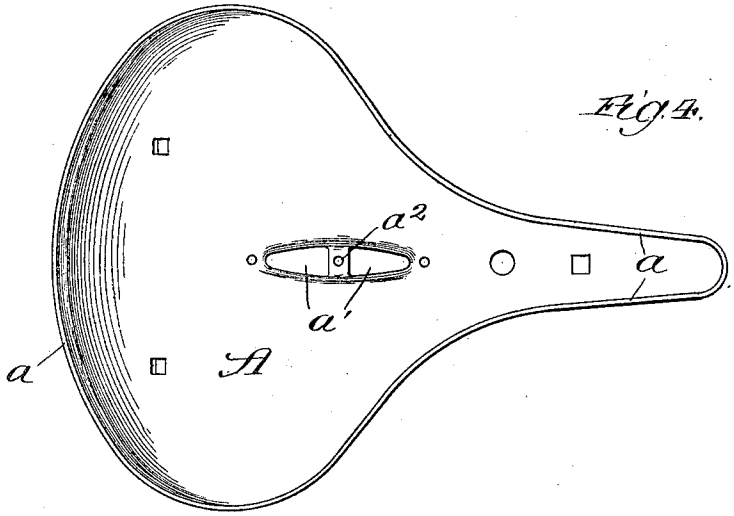
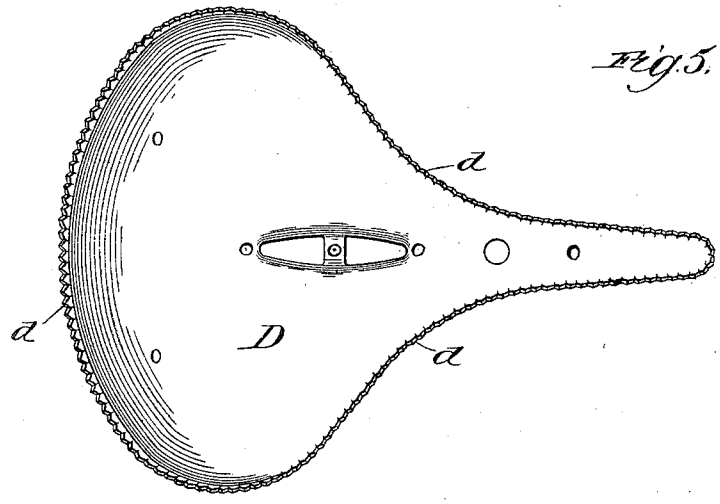


Fig. 5.



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SADDLE

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(No Model.) 3 Sheets—Sheet 3.

Fig. 6.

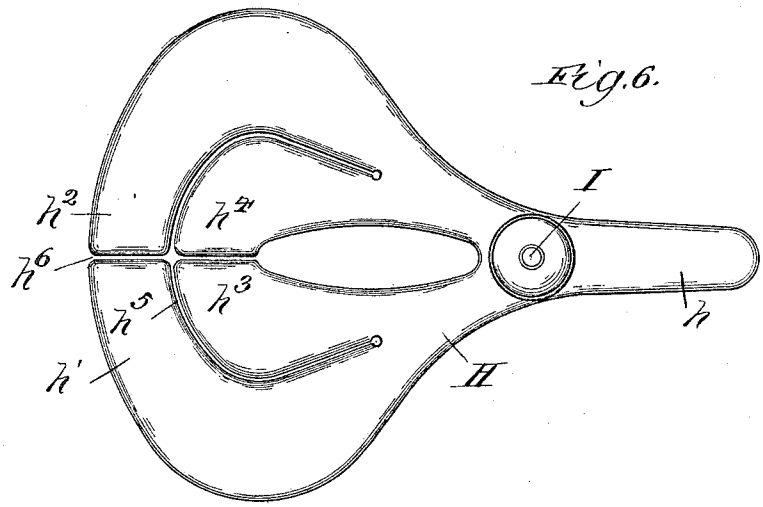


Fig. 7.

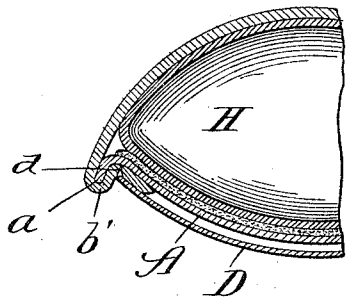
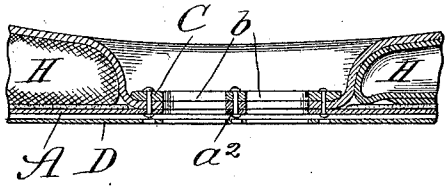


Fig. 8.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HARRY ALONZO PERRY, OF CHICAGO, ILLINOIS.

SADDLE.

SPECIFICATION forming part of Letters Patent No. 630,266, dated August 1, 1899.

Application filed November 4, 1897. Serial No. 657,337. (No model.)

To all whom it may concern:

Be it known that I, HARRY ALONZO PERRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Saddles, of which the following is a specification.

The object of my invention is to provide a simple, economical, and efficient saddle so constructed and arranged as to be readily assembled or taken apart for purposes of repair or renewal.

The invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a plan view of a bicycle-saddle constructed in accordance with my improvements, looking at it from the top. Fig. 2 is a similar view looking at it from the bottom with a portion of the bottom plates broken away; Fig. 3, a side elevation of a saddle constructed in accordance with my improvements; Fig. 4, a plan view of the base-plate, looking at it from the bottom; Fig. 5, a plan view of the upper side of the securing-plate; Fig. 6, a plan view of the lower side of the inner inflatable bag; Fig. 7, an enlarged sectional elevation of the rear portion of the saddle, taken on the line 7 of Fig. 1; and Fig. 8, a longitudinal sectional elevation of a portion of the saddle, taken on the line 8 of Fig. 1.

In the art to which this invention relates it is well known that one of the difficulties encountered in the manufacture and usage of saddles containing pneumatic or other cushions is due to the fact that such saddles are provided with a leather cover, which has been sewed or otherwise permanently secured to some other part of the saddle, making it expensive to assemble the parts initially and difficult to remove the cover and to disassociate the parts for purposes of repair or renewal.

The principal object of my invention therefore is to remove these objections and to provide a saddle which may be constructed or repaired economically, which may be taken apart for the inspection or renewal of parts, and which will act in a simple and efficient manner.

In constructing a saddle in accordance with my improvements I make a base-plate A of the desired shape, size, and strength and provide it at or near its lateral edges with a flanged portion or portions a, bent substantially at right angles and preferably downwardly from the main portion of the plate. This base-plate is preferably provided with a central aperture or opening a', across which a connecting-rib a^2 joins the parts together.

A cover B, preferably formed of leather, is provided and cut in substantially the same shape as the base-plate. This cover is provided with a central opening or openings b and secured to the base-plate at or near its central portion by means of a plate C, which is preferably riveted, though it may be otherwise secured, to the base-plate or dispensed with, if desired. This cover is made of such a size that its lateral edges b' may be folded under and around the annular flange of the base-plate. A supplementary plate D is provided of substantially the same shape as the base-plate and provided at its lateral edge or edges with corrugations or teeth d, preferably bent at an angle to the main portion, so that such supplementary plate may be laid underneath the base-plate and contiguous thereto, as is shown in Fig. 7, so that its teeth contact the inturned edges of the leather cover and act to hold such cover firmly in position. This plate need not be made practically imperforated, as shown in the drawings, but may be cut away for economy of weight, if desired.

To firmly secure and hold the different parts of the saddle together, bolts E, E′, and E^2 are provided, which extend from the main base-plate down through the securing-plate, having their headed portions inside the base-plate or between such base-plate and the cover. A spring G, which may be used as the saddle-spring, is also secured to the securing-plate by means of these bolts and nuts, so that when such bolts and nuts are tightened it acts to secure the cover, base, and securing-plates together and to the supporting saddle-spring.

A proper cushion is provided and inserted between the upper portion of the base-plate and the inner portion of the cover to properly fill such space and afford a yielding resistance to the rider, so as to minimize the shock

and jar incident to riding. A plan view of this cushion is shown in Fig. 6, and consists in a main portion H, having a pommel portion h and rear portions h' h^3 and preferably h^3 and h^4, formed by means of the transverse and longitudinal slits h^5 and h^6. These slits are for two purposes, which will be apparent when the assembling of the saddle is taken into consideration. When an ordinary cushion is used, they serve the purpose of allowing the cushion to be inserted after the cover is put in position—that is, after the central securing-plate C is riveted to the base-plate and the cover the cushion may be inserted, thereby making it economical to handle the parts and rivet them together without being encumbered by the addition of other portions. The slitting of the cushion in this way also serves to permit the removal of the cushion without separating the central securing-plate from the base-plate or cover. When a pneumatic cushion is used, the shape shown in Fig. 6 is serviceable for two purposes—first, to enable the cushion to be inserted or removed without disassociating the cover from the base-plate, and, second, to limit the expansibilty of the rubber bag or prevent undue distention of the same, which will act or tend to keep the cushion or saddle in the normal or desired position. In the assembling of the parts the cushion is placed in position after the central securing-plate is riveted to the base-plate. A small amount of stickem or tire-cement may be used after the cushion is placed in position to join the cushion together where it is slit and also to secure it to the base-plate, if desired. The saddle-cushion when formed in a pneumatic manner is provided with a stem and valve I, preferably in the pommel or forward portion thereof, so that air may be distributed to the different portions as economically as possible.

When assembling the parts, the leather cover is first riveted or otherwise secured at its central portion to the base-plate by means of the central plate. The bolts E, E', and E^2 are next placed in position. The cushion is next inserted in place and its slitted portions cemented together and to the base-plate. The lateral edges of the cover are next turned inwardly and the securing-plate forced into position. The saddle-spring is next placed in position and the nuts for the bolts placed over the springs in threaded engagement with the bolts and firmly secured together, thus securing all of the parts of the saddle together. When it is necessary to repair the saddle or remove the inner cushion for renewal, all that is necessary is to remove the nuts on the securing-bolts, take off the spring and securing-plate, and remove the cushion and repair it or renew it, as the case may be.

The principal advantages due to a saddle constructed as outlined above and shown in the drawings are, first, that the saddle may be constructed economically, in that all sewing is dispensed with; second, it dispenses with several old parts, thereby necessitating less material and reducing the initial expense, and, third, the saddle may be repaired and the parts put together without the necessity for disassociating all of the parts due to the fact that all of the parts that it is necessary to disassociate can be taken apart quickly and economically.

The construction of cushion is one which furnishes a continuous pressure-chamber for the pommel and wing portions, with an unrestricted passage-way from one portion to the other of such chambers, by which equality of pressure is assured and constantly maintained throughout the entire cushion. It will also be seen that a cushion having a separable or divided rear portion is formed by the longitudinal slit which, while permitting the insertion of the cushion, does not produce or cause any break in the continuity of the seating-surface, as such surface remains intact when the cushion is in position, owing to the fact that the wing portions on the separating-line are in contact and directly sustain each other, giving the full benefit of an uninterrupted seating-surface for the rear portion of the cushion.

While I have described my invention with more or less minuteness as regards details as being embodied in certain precise forms and as being adapted to certain specific classes of saddles, I do not desire to be limited thereto unduly or any more than is pointed out in the claims. On the contrary, I contemplate all proper changes in construction, form, and arrangement, the omission of immaterial elements and the substitution of equivalents as circumstances may suggest or necessity render expedient.

I claim—

1. In a saddle, the combination of a base-plate provided with a downwardly-directed flange or rim, a flexible cover having its edges bent over the flange or rim of the base-plate and extended inwardly therefrom along the bottom of the base-plate a desired distance when in position for use, an independent supplementary plate provided with upwardly-directed serrations or teeth around its edges adapted to fit within the flange or rim of the base-plate and bear upon the inwardly-extended edges of the cover and clamp or hold them against the bottom of the base-plate when in position for use, and an inflatable cushion interposed between the cover and the base-plate, substantially as described.

2. In a saddle, the combination of a base-plate provided with a downwardly-directed flange or rim, a flexible cover having its edges bent over the flange or rim of the base-plate and extended inwardly therefrom along the bottom of the base-plate a desired distance when in position for use, an independent supplementary plate adapted to lie within the flange or rim of the base-plate and bear upon the inwardly-extended edges of the cover and clamp or hold them against the bottom of the

base-plate when in position for use, means for detachably securing the base-plate and the supplementary plate together, and an inflatable cushion interposed between the cover and the base-plate, substantially as described.

3. In a saddle, the combination of a base-plate provided with a downwardly-directed flange or rim, a flexible cover having its edges bent over the flange or rim of the base-plate and extending inwardly therefrom along the bottom of the base-plate a desired distance when in position for use, an independent supplementary plate provided with upwardly-directed serrations or teeth around its edges adapted to fit within the flange or rim of the base-plate and bear upon the inwardly-extended edges of the cover and clamp or hold them against the bottom of the base-plate when in position for use, means for detachably securing the base-plate and the supplementary plate together, and an inflatable cushion interposed between the cover and the base-plate, substantially as described.

4. In a saddle of the class described, the combination of a base-plate provided with a central aperture or apertures, and a flanged rim, a cover portion provided with an aperture or apertures and having its edges passed underneath the flanged rim, a metallic piece for securing the cover and base-plate together at or near their central portions, a supplementary plate provided with serrated or notched edges for holding the cover and base-plate together, a bolt-and-nut mechanism for securing the base and supplementary plates together, and a pneumatic cushion inserted between the cover and the base-plate provided with a longitudinal slit in its rear portion to permit the removal or insertion of such cushion without disturbing the relation of the cover and base-plate at their central portions, substantially as described.

5. In a saddle of the class described, the combination of an inflatable cushion provided with transverse and longitudinal slits forming two rearwardly-extending wing portions to permit the removal or insertion of the cushion into or out of its place of use, and a narrow pommel portion uniting the wing portions so as to form a single air-cushion substantially as described.

6. In a saddle, the combination of a base-plate provided with a downwardly-directed flange or rim, a flexible cover having its edges bent over the flange or rim of the base-plate and extended inwardly therefrom along the bottom of the base-plate a desired distance when in position for use, an independent supplementary plate adapted to lie within the flange or rim of the base-plate and bear upon the inwardly-extended edges of the cover and clamp or hold them against the bottom of the base-plate when in position for use, means for detachably securing the base-plate and the supplementary plate together, and an inflatable cushion provided with a longitudinal slit forming two rearwardly-extending wing portions to permit the removal or insertion of the cushion into or out of its place of use without disturbing the relation of cover and base-plate at their central portions and with a narrow pommel portion uniting the wing portions so as to form a single air-cushion, substantially as described.

7. In a saddle of the class described, the combination of a base portion, a cover portion, and an inflatable cushion consisting of a narrow pommel portion and two rearwardly-extended and separated wing portions having a continuous pressure-chamber for the three portions with an unobstructed passageway from one portion to the other of the chambers, whereby equality of pressure is constantly maintained throughout the cushion as a whole and a separable or divided rear portion is provided the wing portions of which directly sustain each other on the separating-line when the cushion is in place, maintaining the seating-surface intact, substantially as described.

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