No. 607,565. Patented July 19, 1898.

J. A. HUNT.

BICYCLE SADDLE.

(Application filed Mar. 2, 1896.)

(No Model.) 4 Sheets—Sheet 1.

Fig. 1.

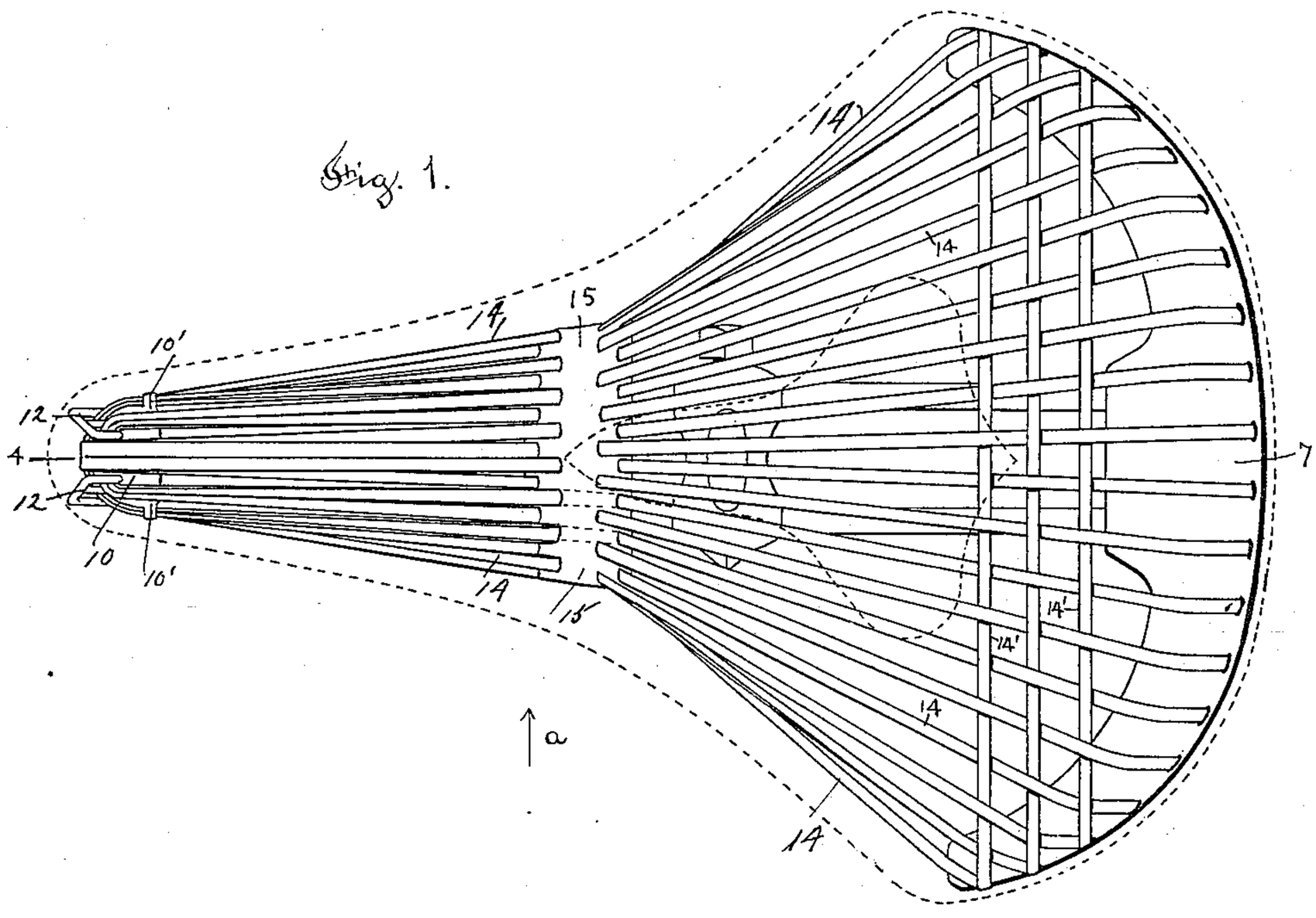
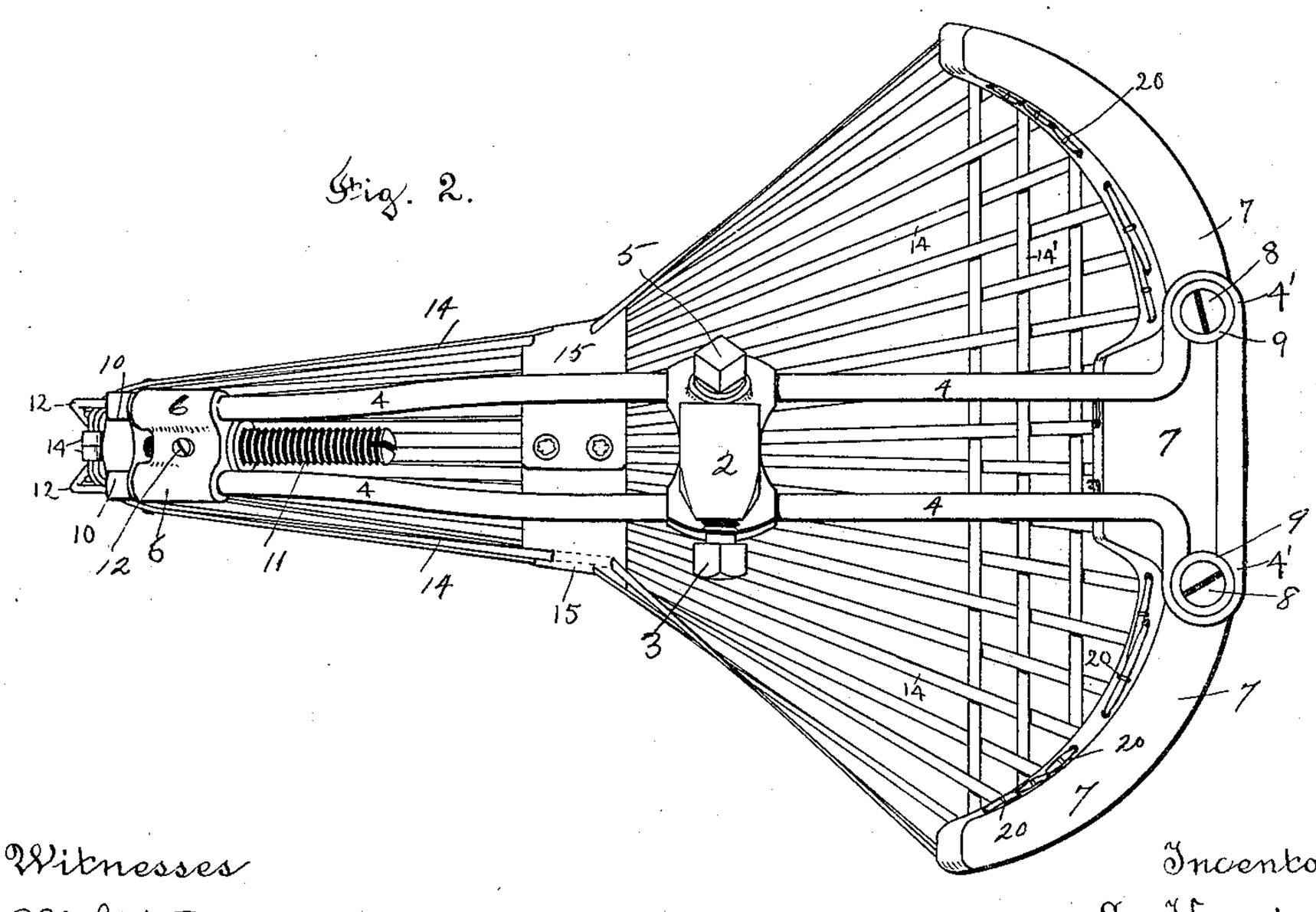


Fig. 2.



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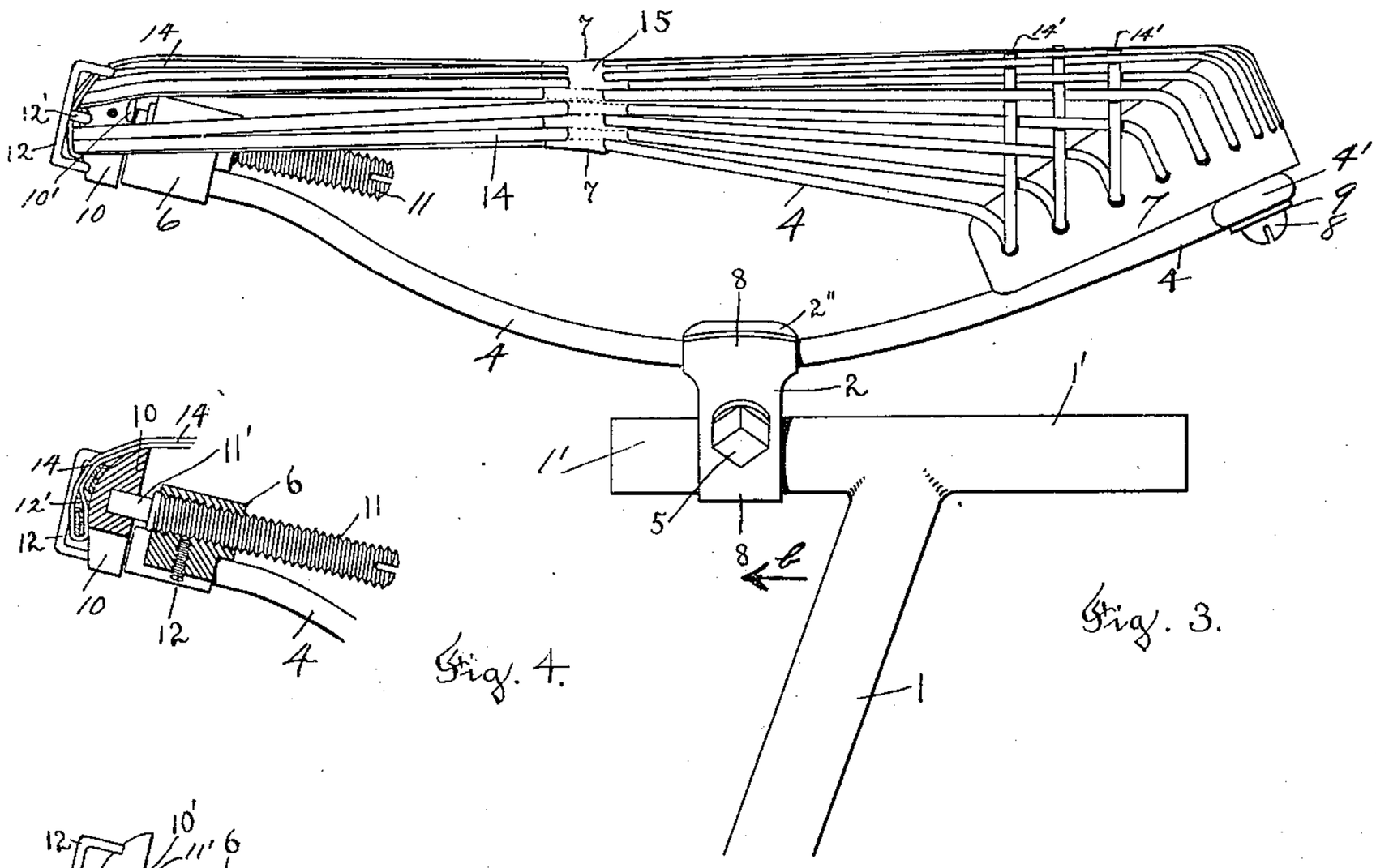

Fig. 3.

Fig. 4.

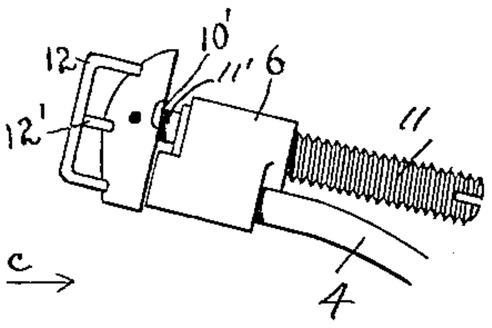

Fig. 5.

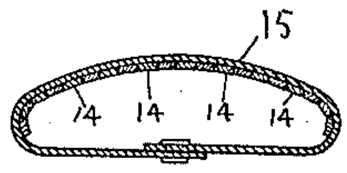

Fig. 7.

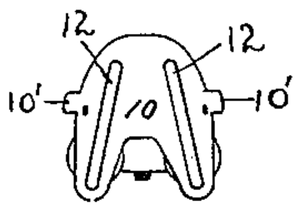

Fig. 6.

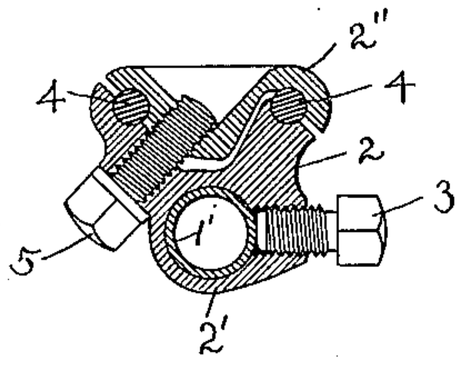

Fig. 8.

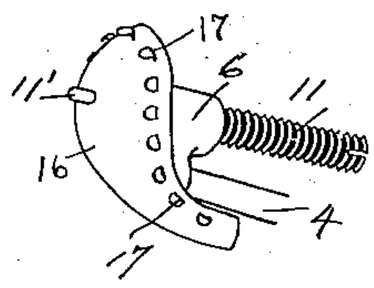

Fig. 9.

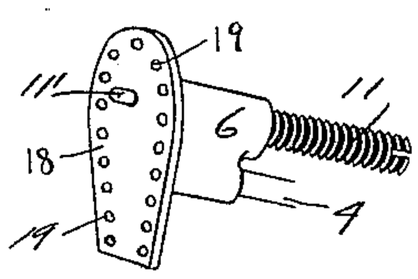

Fig. 10.

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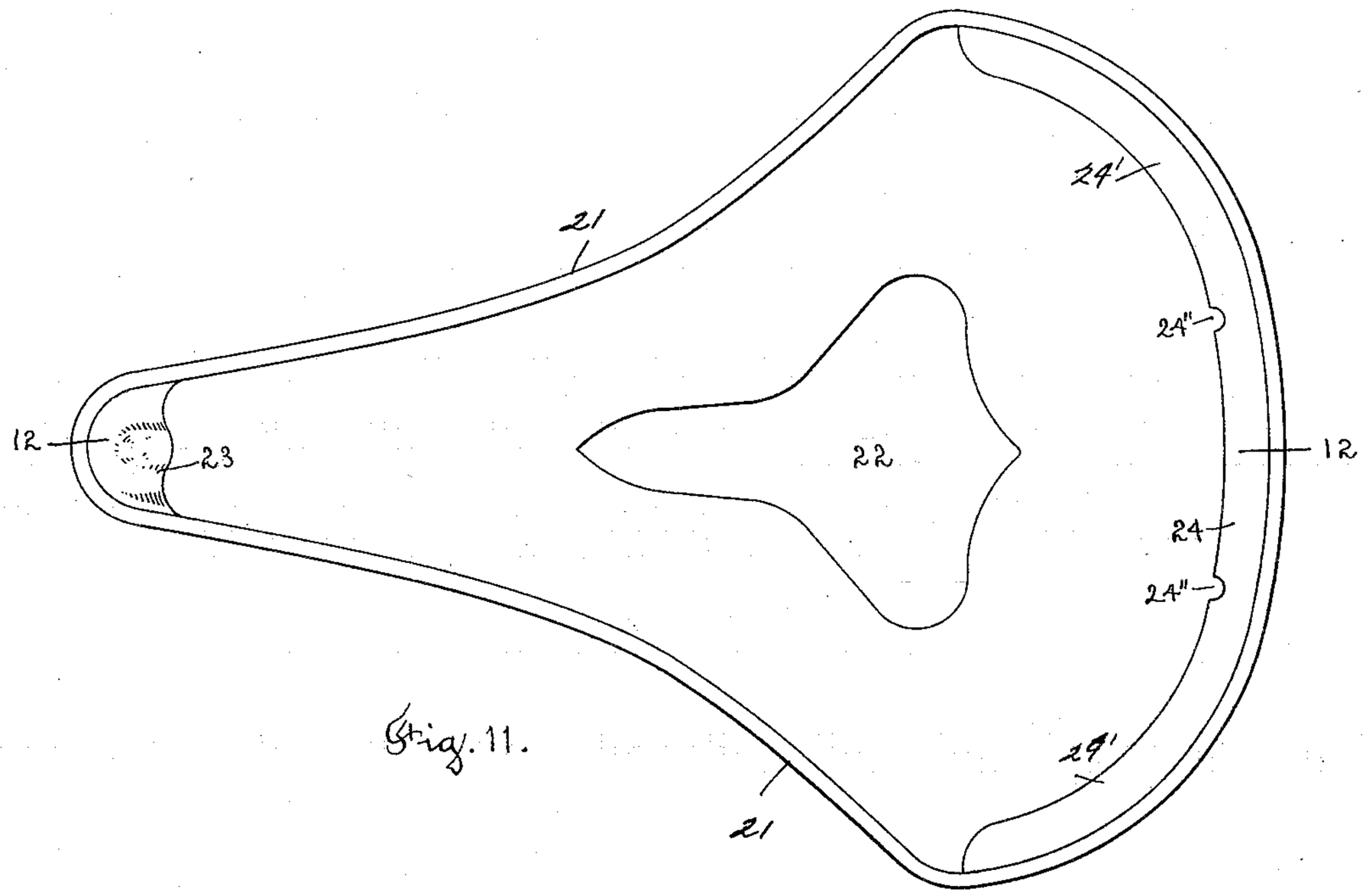

Fig. 11.

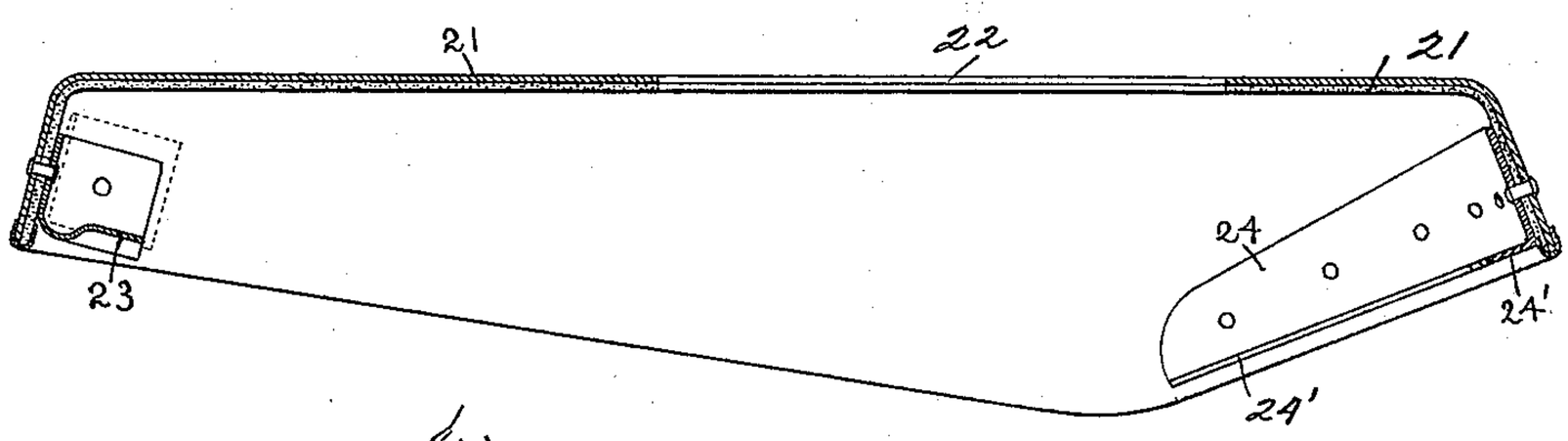

Fig. 12.

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Fig. 13.

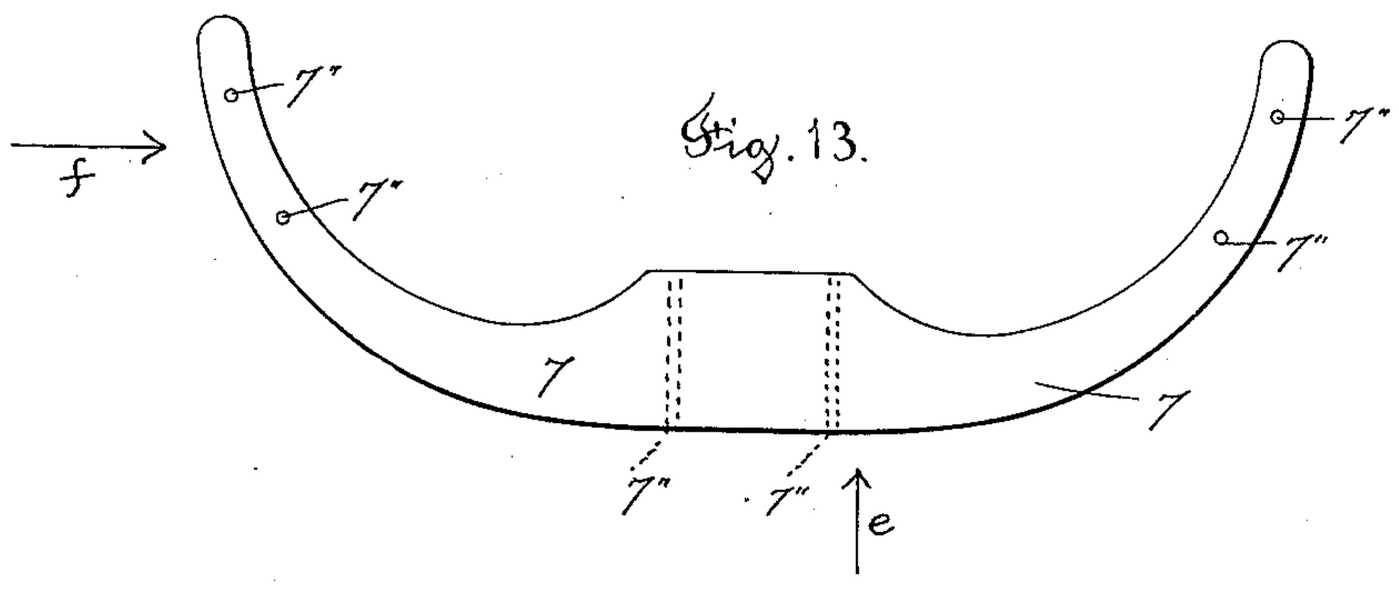


Fig. 14.

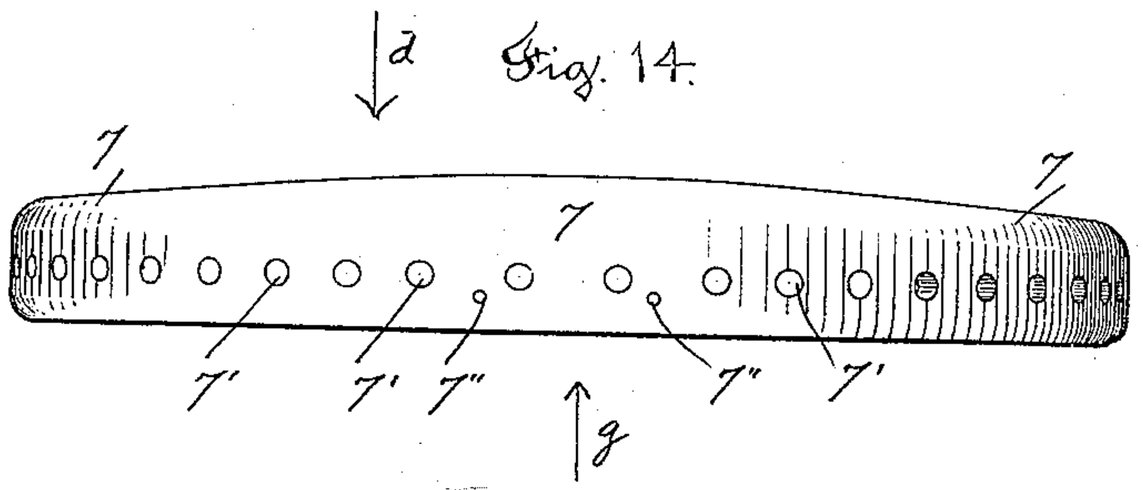


Fig. 15.

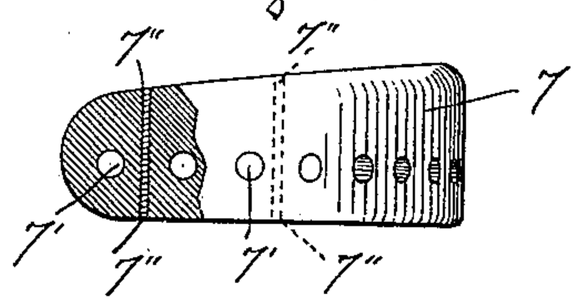
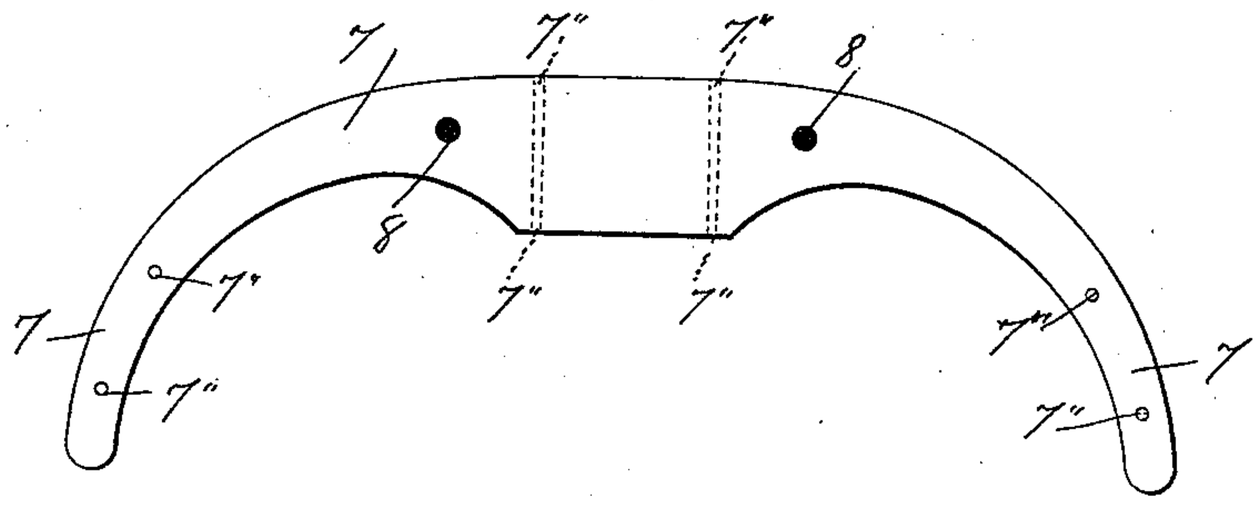


Fig. 16.



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UNITED STATES PATENT OFFICE.

JONATHAN A. HUNT, OF WESTBOROUGH, MASSACHUSETTS.

BICYCLE-SADDLE.

SPECIFICATION forming part of Letters Patent No. 607,565, dated July 19, 1898.

Application filed March 2, 1896. Serial No. 581,445. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN A. HUNT, a citizen of the United States, residing at Westborough, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Bicycle-Saddles, of which the following is a specification.

My invention relates to saddles for bicycles, &c.; and the object of my invention is to provide a saddle of improved construction which will be flexible to adjust itself to the rider and also to provide an improved clamp for clamping the spring or support of the saddle to the saddle-post.

My invention consists in certain novel features of construction of my saddle and clamp, as will be hereinafter fully described.

Referring to the drawings, Figure 1 is a plan view of a saddle of my improved construction. Fig. 2 shows the under side of the saddle. Fig. 3 is a side elevation, looking in the direction of arrow *a*, Fig. 1, showing the saddle-post. Fig. 4 is a section through the pommel end of the saddle on line 4, Fig. 1. Fig. 5 is a side view of the pommel end of the saddle with the seat-covering removed. Fig. 6 is an end view of the pommel end, looking in the direction of arrow *c*, Fig. 5. Fig. 7 is a cross-section of the seat on line 7 7, Fig. 3, looking in the direction of arrow *b*, same figure. Fig. 8 is a cross-section through the clamp on line 8 8, Fig. 3, looking in the direction of arrow *b*, same figure. Fig. 9 shows a modified construction of the pommel end of the saddle. Fig. 10 shows another modified construction of the pommel end of the saddle. Fig. 11 is a bottom view of the seat-cover removed. Fig. 12 is a longitudinal section through the cover on line 12 12, Fig. 11. Fig. 13 is a top view of the wood cantle detached, looking in the direction of arrow *d*, Fig. 14. Fig. 14 is a rear side view looking in the direction of arrow *e*, Fig. 13. Fig. 15 is an end view, partially in section, looking in the direction of arrow *f*, Fig. 13; and Fig. 16 is a bottom view looking in the direction of arrow *g*, Fig. 14.

In the accompanying drawings, 1 is the saddle-post, and 2 the clamp for securing the saddle to the saddle-post. The clamp 2 is made in two parts, forming a stationary and a movable jaw. The lower part or stationary jaw 2′ is provided with an opening through which the horizontal bar 1′ of the saddle-post 1 extends and has a screw-threaded hole tapped into one side thereof, into which a bolt 3 is screwed to secure the lower part 2′ of the clamp 2 to the horizontal support 1′. The upper portion of the part 2′ of the clamp 2 is grooved or recessed to receive the lower portion of the movable jaw 2″ of the clamp 2, and the contiguous faces of the part 2′ and the part-2″ are recessed or grooved to receive the two rods 4, forming the spring. The movable jaw 2″ is secured to the stationary jaw 2′ to secure the saddle-spring in the clamp 2 by a bolt 5, extending through a threaded hole tapped into the side of the lower part 2′ and through a hole tapped through the lower part of the movable jaw 2″, as clearly shown in Fig. 8. By screwing in the bolt 5 the movable jaw 2″ will be drawn down to bind the rods 4 in the clamp, and by screwing out the bolt 5 the movable jaw 2″ will move out to release the rods 4.

It will thus be seen that in my improved clamp for attaching the saddle to the saddle-post the bolt for adjusting the clamp on the saddle-post is on one side of the clamp, and the bolt for adjusting the saddle-spring in the clamp is also on one side of the clamp, (on the opposite side,) so that the same are very accessible and are reached from below the spring.

The saddle-spring 4 is preferably made from a single piece of wire or wire rod, with two substantially parallel portions or members, having an integral transverse loop at their rear ends and having the front ends converge to reduce the width of the spring and disconnected to extend into holes in the cantle-plate and be secured therein, and the two rods, intermediate their rear and front ends, which are in substantially the same horizontal plane, of uniform outward or downward curvature in the arc of a circle. The ends of the transverse loop at the rear of the spring 4 form attaching-eyes 4′, which are secured to the under side of the cantle-plate 7 of the saddle-seat by screws 8, preferably provided with washers 9, inserted between the heads of the screws and the loops 4′, as shown in Fig. 2.

The cantle-plate 7 is preferably made of

wood and of substantially the shape shown in the drawings and is provided with holes 7′, extending through it in a horizontal plane, and two holes 7″, in the under side thereof for the screws 8.

I have found in practice that by reason of the numerous holes 7′ in the cantle 7, through which the strands of leather forming the saddle-seat are passed, and by reason of the great strain on the cantle it will split horizontally with the grain of the wood at the point where the holes 7′ are and also vertically with the grain of the wood where the screw-holes 7″ are. In order to prevent the splitting of the cantle, as above described, I preferably combine with it screw-threaded pins 7″ or threaded pieces of wire, which are screwed vertically into the cantle 7 between the holes 7′, as shown in Fig. 15, and serve to bind the grain of the wood together and prevent the cantle from splitting horizontally. Similar screw-threaded pins 7″ are preferably screwed horizontally through the central portion of the cantle 7 and prevent it from splitting vertically where the screws 8 extend into the cantle. This construction of a wood cantle is very essential to prevent it from splitting and becoming useless.

The pommel end of the saddle has, preferably, an adjustable plate 10, into a hole in the rear face of which the front end 11′ of the adjusting-screw 11 loosely fits. (See Fig. 4.) The adjusting-screw 11 is turned in or out through a threaded hole in the block 6, secured on the front ends of the spring 4, to adjust the pommel-plate 10 and regulate the tension of the saddle-seat.

A small screw 12, turning in a threaded hole in the lower side of the block 6 and bearing at its inner end against the adjusting-screw 11, holds said screw in its adjusted pasition. (See Fig. 4.)

The adjustable pommel-plate 10 is preferably provided on its front face with two loops or staples 12. Each staple has a central bar or leg 12′, thus forming two separate openings in each staple or attaching device for the strips of leather 14 or other suitable flexible but non-elastic material forming the saddle-seat to pass through and preventing the bunching of said strips around a single attaching pin or device. The adjustable pommel-plate 10 also has a projection or ear 10′ on the side edges thereof, which extends between the strips 14 to hold them in their proper relative position, as shown in Figs. 1 and 3.

In order to hold the different longitudinal strips 14 forming the saddle-seat in their proper relative positions and contract or reduce the width of the saddle-seat at its front portion, I combine with said strips a retaining band or device 15, of suitable material, preferably leather, which is provided with two rows of holes or openings therein near each edge arranged alternately, as shown in Fig. 1, and each strip or strand of the seat is inserted through two separate openings to hold it in position. The ends of the bands 15 are riveted together, as shown in Fig. 2, or otherwise secured. The band 15 acts to draw together and hold the longitudinal strips 14 intermediate the front end of the saddle and the rear end thereof, and thus contract or reduce the width of the saddle at its front portion, and the length of the portion of reduced width may be varied as desired by moving the band 15 toward the rear end of the saddle or the front end of the saddle. The band 15 also acts by drawing together the longitudinal strips to tighten said strips at the rear portion of the saddle. The band 15 also acts to hold the outer longitudinal strips or strands between the pommel end of the saddle and the retaining-band substantially parallel with each other and extending at substantially right angles to said band and the outer strips or strands back of the retaining-band at the cantle end of the saddle diverging and extending at an angle to the band.

The rear portion of the saddle-seat is preferably provided with two or more transverse strands 14′, which are interwoven with longitudinal strands, as shown in the drawings.

I preferably make the seat of the saddle of an even number of longitudinal strands of leather or other suitable material, which is flexible, but not elastic—that is, will not stretch like spiral springs—and I preferably begin at the rear or cantle end of the saddle and fasten one end of a strip of leather to the cantle-plate 7 and then pass that strip through the proper pair of holes in the retaining-band 15 and then around the sides of the front or pommel end of the saddle, through the lower openings in the staples 12, back toward the rear of the saddle, and through the proper openings in the retaining-band 15 to the opposite end of the cantle-plate, and through a hole therein, and then secure the end or pass it out through the next hole and up over the upper edge of the cantle-plate and through the holes in the retaining-band 15, around the front end of the saddle, through the proper openings in the staples 12, and back to the opposite end of the cantle-plate, as indicated in the drawings, and so on, until the seat is completed.

The middle strands of the seat pass down from the top of the pommel-plate around the strands at the lower part of the pommel-plate and then up again and back to the cantle-plate, as shown in Figs. 3 and 4.

By providing the pommel-plate 10 with a number of fixed points or pins, around which the strands 14 pass, I prevent any bunching or overlapping of the strands to any extent, as must be the case where a single pin is used.

The tension of the strands 14 may be regulated by means of the adjusting-screw 11, by which the movable pommel-plate 10 is moved out or in.

In Fig. 9 I have shown a modified construction of the pommel-plate in which the plate 16 is provided with a series of hooks or attaching devices 17, around which the strands of leather are looped.

In Fig. 10 I have shown a pommel-plate 18, provided with a series of holes 19, through which the strands of leather are passed.

The saddle-seat is preferably provided with a covering 21, made of leather, lined with felt, as shown in Fig. 12, and of a shape corresponding to the shape of the saddle-seat and having a central opening 22 therein. The cover 21 is preferably secured to the seat by means of a holding-plate 23, riveted into the lower front end thereof and of a shape to fit closely over the pommel end of the saddle-seat, and the rear end of the cover is also provided with a metal holding-plate 24, riveted thereto, corresponding in shape to the shape of the cantle 7, and having a projecting flange or lip 24′, adapted to extend over the lower surface of the cantle 7 to secure the seat-covering thereto. The holding-plate 24 is provided with notches 24″ at the points where the screws 8 are inserted.

The advantages of attaching the covering 21 to the saddle-seat by means of the plates 23 and 24 at the pommel and cantle end of the saddle are apparent. The saddle-covering can be applied to the seat before the spring is secured thereto, and the attaching of the spring and the tightening thereof by means of the adjusting-screw 11 will stretch the covering and secure it firmly to the saddle-seat. The cover 21 may be attached to the seat or to the cantle and pommel end of the seat in any other suitable way.

I prefer to secure the strands of leather 14 to the cantle-plate by staples 20 or other fastening devices, as shown in Fig. 2, so that if one of a pair of strips breaks the other of the pair will slacken, but the rest of the strips will remain intact.

The advantages of my saddle will be readily appreciated by those skilled in the art.

The strips of leather or other material forming the seat are flexible, but not elastic, and they are so secured to the cantle-plate and the pommel-plate that they will always remain in place and will be held in their proper relative positions by the retaining-band 15. By means of the movable pommel-plate and the adjusting-screw 11 the tension of the seat may be regulated.

It will be understood that the details of construction of my saddle may be varied somewhat from what is shown and described, if desired.

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

1. A clamp for bicycle-saddles, &c., made in two parts, the lower part adapted to receive the saddle-post, and to be clamped thereto by a bolt turning in a threaded hole in said lower part, and the upper or removable part adapted to extend into the lower part, and to be drawn down, to clamp the rods of the spring between the two parts, by a bolt extending at one side of the clamp, and through threaded holes in the two parts thereof, substantially as set forth.

2. In a bicycle-saddle, the combination with a spring, of a cantle-plate secured to one end thereof, a pommel-plate at the other end thereof, and strips or strands of lacing intermediate the cantle and pommel, forming the foundation of the saddle, a retaining band or device through which the longitudinal strips or strands pass and are brought together, to reduce the width of the saddle at the pommel end, and a top or cover extending over said strips, and secured to the cantle and pommel, substantially as shown and described.

3. In a saddle for bicycles, &c., the combination with a cantle-plate, a pommel-plate, and a spring or support intermediate the cantle and pommel, of longitudinal strips of flexible material, or lacing, attached to the cantle-plate, and passing through a retaining band or device intermediate the cantle-plate and the pommel-plate, and some of said strips passing around the sides of the pommel-plate, between two or more pins or projections thereon which separate the strips, and others of said strips passing over the top of said pommel-plate and around some of the other strips, and a top or cover extending over the strips or lacing, substantially as shown and described.

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