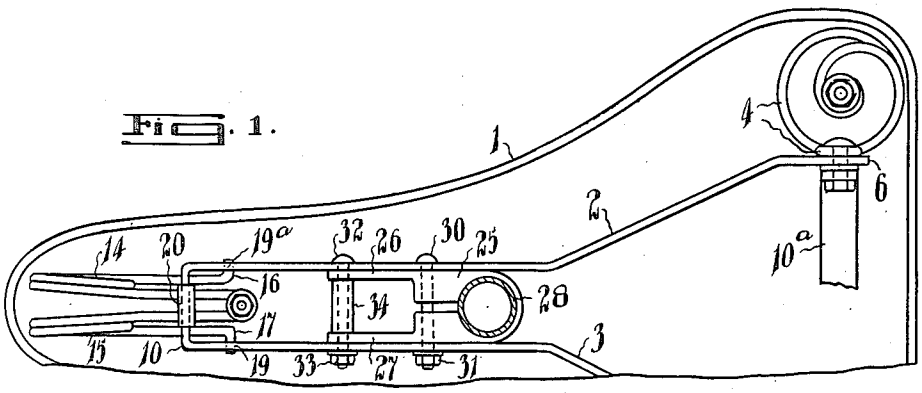
Aug. 10, 1948. C. A. JONES 2,446,933

ADJUSTABLE CYCLE SADDLE

Filed Jan. 6, 1945

Fig. 1.



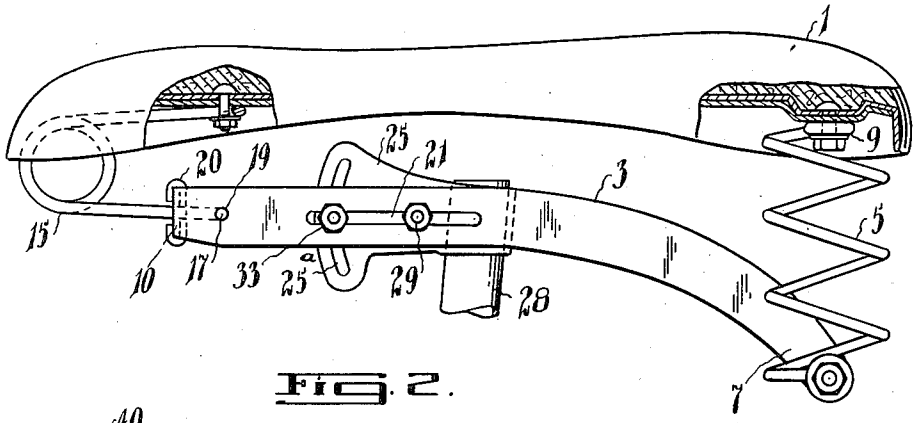


Fig. 2.

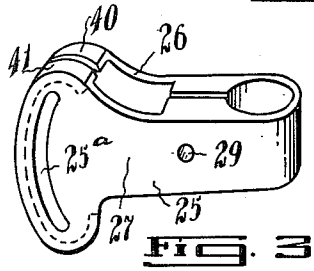


Fig. 3.

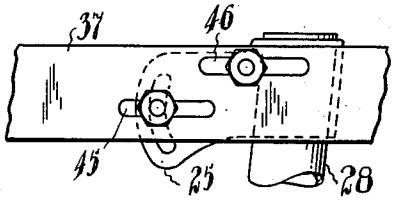


Fig. 4.

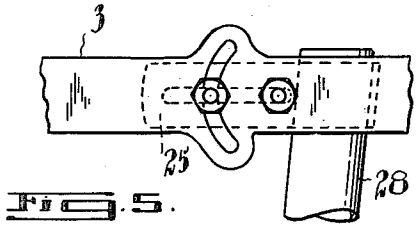


Fig. 5.

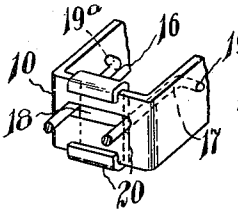


Fig. 6.

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ADJUSTABLE CYCLE SADDLE

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Application January 6, 1945, Serial No. 571,646

13 Claims. (Cl. 155—5.24)

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My invention relates to saddles for motor cycles, bicycles and the like, and its object is the provision of a novel and improved clamp, whereby the saddle may be tilted on its transverse axis to any desired angle, and whereby it may also be adjusted longitudinally.

A further object of my invention is to provide an improved clamping connection between the seat frame and its support, which will hold the parts rigidly in adjusted position, and will make it impossible for the seat to tilt after the adjusting means have been locked in position.

Another object of my invention is to provide a structure which can be conveniently and inexpensively manufactured.

These objects are achieved by the structure hereinafter set forth and illustrated by way of example in the drawing forming a part of this specification.

In the drawings:

Figure 1 is a bottom plan view partly broken away of a saddle and clamp embodying my invention;

Figure 2 is a side elevation of the saddle and clamp referred to in Fig. 1, with portions of the saddle broken away;

Figure 3 is a perspective view of a modified form of clamp;

Figure 4 is a fragmentary side elevation of a modified form of reach member and clamp;

Figure 5 is a fragmentary side elevation of a further modified form of reach member and clamp; and

Figure 6 is a perspective view of the front end of the reach member.

Referring now to the drawings in which like parts are designated by like reference characters, a cycle saddle seat 1 of any desired construction is supported on reach members 2 and 3 disposed below the seat, said reach members carrying at their rear extremities helical springs 4 and 5 respectively. The reach members extend outwardly and downwardly toward the rear, and are connected by a brace bar 10*a*. The lower ends of the helical springs are suitably attached to the rear extremities 6 and 7 of the reach members, and their upper ends are suitably connected at 8 and 9 to the rear of the saddle.

The reach members 2 and 3 are joined together at the front by transverse member 10. I find it convenient to make these three members from a single piece of bar stock suitably bent. The peak of the saddle 1 is secured to the front of the reach members by springs 14 and 15. The lower extremities of these springs have outwardly

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extending tips 16 and 17 which pass through a slot 18 in the transverse member, and are inserted respectively in holes 19 and 19*a* in the reach members.

To prevent the spring extremities from slipping out of holes 19 and 19*a* I insert between them a clip or spacer 20 which embraces the transverse member 10.

Substantially at the central portion of each reach member, I provide longitudinal slots 21, for a purpose which will be hereinafter set forth.

The clamp is a U-shaped resilient member 25 having legs 26 and 27 and embracing the post 28. The reach members are spaced apart sufficiently to receive the clamp between them. The clamp is provided with holes 29 in each leg and a substantially vertical arcuate slot 25*a* at the forward end of each leg. Holes 29 in the clamp register with slots 21 of the reach members, and a bolt 30 on which is screwed a nut 31 passes through said holes and rigidly fixes the reach clamp 25 around the post 28. The reach members are sufficiently resilient so that when the nut 31 is tightened they will bear frictionally against the clamp thus compressing the clamp into tight frictional engagement with the post 28. Another bolt 32 on which is screwed a nut 33 passes through the substantially vertical arcuate slots 25*a* of the clamp and also through the elongated slots 21 of the reach members 2 and 3 thereby locking the reach members to the clamp and preventing unwanted tilting of the saddle about its tranverse axis.

In the preferred form of my invention I provide a sleeve 34 surrounding bolt 32, said sleeve holding the two legs of the clamp in spaced relation, thereby giving a firm foundation for the compressive action of the bolt. However, this combination of bolt and sleeve may be substituted by two separate bolts and nuts joining each leg of the clamp to the adjacent reach member.

In Fig. 3 I show a modification of the clamp wherein the use of a sleeve around the front bolt may be dispensed with. To achieve this result, I bend inwardly the edges of the clamp thus providing inwardly extending opposed flanges 40 and 41. Consequently when the nut is tightened on the bolt, these two flanges 40 and 41 will bear against each other, thereby preventing the legs of the clamp from being unduly pulled inward, and also providing a firm seating action for the bolt.

In my preferred construction, the engaging surfaces of the clamp 25 and the reach members

2 and 3 are roughened or fluted in order to increase the friction between the parts, thereby reducing the chance of relative movement between them when the nuts are not sufficiently tightened.

My provision of longitudinal slots in the reach members intersected by substantially vertical slots in the clamp makes it possible to tilt the seat to any desired angle by merely loosening the nuts 31 and 33. The seat will thus pivot about the transverse axis formed by the bolt 30, and the front bolt 32 will travel upwards or downwards in the substantially vertical slot 25a. At the same time, the elongated slots in the reach members provide for longitudinal movement of the seat. After the desired adjustments have been made the nuts are tightened and the seat is thereby securely locked in position.

It is obvious that if I were to provide only the one bolt 30 about which the seat could be pivoted, it would be very difficult to tighten the nut to an extent sufficient to prevent movement of the seat. However, by providing two bolts suitably spaced this difficulty is removed.

Although I have described my invention as having an elongated longitudinal slot 21 in each reach member, and a hole 29 and a substantially vertical slot in each leg of the clamp 25, I do not wish to restrict myself to this arrangement; it could easily be reversed and fairly satisfactory performance could be provided by having an elongated longitudinal slot in each leg of the clamp 25 and the hole and substantially vertical slot in each reach member 2 and 3 as I have shown in Fig. 5.

In Fig. 4 I show a fragmentary side elevation of a further modified form of reach member and clamp, wherein instead of having a single elongated slot in each reach member, I provide two shorter slots, one 45, being somewhat below and forward of the other 46. The clamp is also necessarily modified in that the leg extends substantially downwardly, as shown.

It is thought that the construction and use of the invention will be apparent from the above description of the various parts and their purpose. It is to be understood that the form of my invention herewith shown and described, is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of my invention, or the scope of the subjoined claims.

What I claim as my invention is:

1. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, a clamp disposed between the reach members adapted to embrace the post, said clamp having a pair of leg members, one of the aforesaid pairs of members having registering longitudinal slots formed therein, and each member of the other of the aforesaid pairs of members having a hole and a substantially vertical slot, the hole in one member of said pair being opposite to and substantially in registration with the hole in the other member of said pair, the holes likewise being in registration with registering longitudinal slots in the first mentioned pair of members, and the vertical slot in one member of said pair, being opposite to and substantially in registration with the vertical slot in the other member of said pair, the vertical slots intersecting registering longitudinal slots in the first mentioned pair of members; and means for clamping the seat on the post and retaining same at a suitable angle relative to the post, said means comprising bolts extending through registering longitudinal slots and the holes and through registering longitudinal slots and the vertical slots, and means for tightening the bolts.

2. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, a clamp disposed between the reach members adapted to embrace the post, said clamp having a pair of leg members, each member of one of the aforesaid pairs of members having a longitudinal slot formed therein, the slot in each member being opposite to and substantially in registration with the slot in the other member of said pair, and each member of the other of the aforesaid pairs of members having a hole and a substantially vertical slot, the hole in one member of said pair being opposite to and substantially in registration with the hole in the other member of said pair, the holes likewise being in registration with the registering longitudinal slots in the first mentioned pair of members, and the vertical slot in one member of said pair being opposite to and substantially in registration with the vertical slot in the other member of said pair, the vertical slots intersecting the registering longitudinal slots in the first mentioned pair of members; and means for clamping the seat on the post and retaining same at a suitable angle relative to the post, said means comprising bolts extending through registering longitudinal slots and the holes and through registering longitudinal slots and the vertical slots, and means for tightening the bolts.

3. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, a clamp disposed between the reach members adapted to embrace the post, said clamp having a pair of leg members, each member of one of the aforesaid pairs of members having two longitudinal slots formed therein, each slot in each member being opposite to and substantially in registration with a slot in the other member of said pair, and each member of the other of the aforesaid pairs of members having a hole and a substantially vertical slot, the hole in one member of said pair being opposite to and substantially in registration with the hole in the other member of said pair, the holes likewise being in registration with two registering longitudinal slots in the first mentioned pair of members, and the vertical slot in one member of said pair being opposite to and substantially in registration with the vertical slot in the other member of said pair, the vertical slots intersecting the other two registering longitudinal slots in the first mentioned pair of members; two bolts one of which passes through two of the registering longitudinal slots and the two registering holes, and the other of which passes thrugh the two other registering longitudinal slots and the two registering vertical slots; and means for tightening the bolts to retain the seat on the post in the desired adjusted position.

4. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, a clamp disposed between the reach members adapted to embrace the post, said clamp having a pair of leg members, one of the aforesaid pairs of members having registering longitudinal slots formed therein, and each member of the other of

the aforesaid pairs of members having a hole and a substantially vertical slot, the hole in one member of said pair being opposite to and substantially in registration with the hole in the other member of said pair, the holes likewise being in registration with registering longitudinal slots in the first mentioned pair of members, and the vertical slot in one member of said pair, being opposite to and substantially in registration with the vertical slot in the other member of said pair, the vertical slots intersecting registering longitudinal slots in the first mentioned pair of members; two bolts one of which passes through registering longitudinal slots and holes, and the other of which passes through registering longitudinal slots and the vertical slots; and means for tightening the bolts to retain the seat in the desired position, the leg members being provided with inwardly extending opposed flanges, the inner edges of which are adapted to contact with one another to hold the legs in spaced relation and provide a firm foundation against which the bolt which passes through the registering longitudinal slots and vertical slots may be tightened.

5. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, said reach members each having a longitudinal slot therein, and the longitudinal slot in one reach member registering with a similar slot in the other reach member; a clamp member disposed between the reach members adapted to embrace a saddle post and having two legs, said clamp member having holes extending therethrough adjacent the post-embracing part thereof, and substantially vertical slots in the legs; and means for clamping the seat on the post and retaining same at a desired angle relative to the post, said means comprising bolts extending through said registering longitudinal slots and the holes and through said registering longitudinal slots and the vertical slots, and means for tightening the bolts.

6. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, said reach members each having two longitudinal slots therein, and the longitudinal slots in one reach member registering with the similar slots in the other reach member; a clamp member disposed between the reach members adapted to embrace the saddle post and having two elongated legs, said clamp member having holes extending therethrough adjacent the post-embracing part thereof, and substantially vertical slots in the legs, a bolt extending through one pair of the slots in the reach members and the holes in the clamp, a bolt extending through the other pair of slots in the reach members and the slots in the legs of the clamp member, and means for tightening said bolts to retain the seat on the post at the desired adjusted position and angle.

7. In a cycle saddle, means for adjustably mounting the saddle on a post, comprising a clamp member adapted to embrace the saddle post and having two legs, said legs each having a longitudinal slot therein, and the longitudinal slot in one leg registering with the slot in the other leg; a pair of spaced apart saddle seat reach members embracing the clamp member, said reach members each having a hole extending therethrough, and the hole in one reach member registering with a similar hole in the other reach member, and said reach members each having a substantially vertical slot in spaced relation to said reach member holes and the vertical slot in one reach member registering with a similar slot in the other reach member; and means for clamping the seat on the post and retaining same at a suitable angle relative to the post, said means comprising bolts extending through registering longitudinal slots and the holes and through registering longitudinal slots and the vertical slots, and means for tightening the bolts.

8. In a cycle saddle; a seat; spaced apart reach members, said reach members being connected by a transverse member at the front end thereof, said transverse member having an aperture therein; spring seat supporting means between the rear of the reach members and the seat; spring supporting means having one end thereof attached to the front of the seat and the other end being bifurcated and passing through said aperture in the transverse member, the said bifurcated ends being detachably secured to the reach members; and a clip embracing the transverse member which extends between the bifurcated portions of one end of the spring supporting means, the vertical edges of said clip bearing against the said bifurcated portions of the spring supporting means so as to hold them in spaced apart relationship and in engagement with the reach members.

9. In a cycle saddle; a seat; spaced apart reach members, said reach members being connected by a transverse member at the front end thereof, said reach members having apertures therein adjacent the front thereof, and said transverse member having an aperture therein; spring seat supporting means between the rear of the reach members and the seat; and spring seat supporting means between the front of the reach members and the seat, said last mentioned means being composed of spring wire having two ends with outwardly extending tips, said ends extending through the aperture in the transverse member, and said tips being inserted in the apertures in the reach member; and a clip embracing the transverse member to hold the two ends of the wires in spaced apart relationship and prevent withdrawal of the tips from the apertures in the reach member.

10. In a cycle saddle; a seat; spaced apart reach members, said reach members being connected by a transverse member at the front end thereof, said reach members having apertures therein adjacent the front thereof, and said transverse member having an aperture therein; spring seat supporting means between the rear of the reach members and the seat; spring seat supporting means between the front of the reach members and the seat, said last mentioned means being composed of spring wire having two ends with outwardly extending tips, said ends extending through the aperture in the transverse member, and said tips being inserted in the apertures in the reach member; and a clip embracing the transverse member between the ends of the springs.

11. In a cycle saddle; a seat; spaced apart reach members, said reach members being connected by a transverse member at the front end and being turned downwardly at the rear; and spring seat supporting means between the front of the reach members and the seat and between the rear of the reach members and the seat, the spring supporting means at the front of the reach member comprising a forked coil spring each end of which passes through the transverse member

and is provided with outwardly extending tips engaging with the reach members, the spring seat supporting means at the rear of each reach member comprising coil springs one end of each of said springs being secured to a reach member, and the other end to the seat; a clip embracing the transverse member and extending between the ends of the forked coil spring, the vertical edges of the said clip bearing against the said ends of the coil spring so as to hold them in spaced apart relationship and prevent disengagement of the outwardly extending tips from the reach members.

12. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, a clamp disposed between reach members adapted to embrace the post, said clamp having a pair of leg members, one of the aforesaid pairs of members having registering slots formed therein, and each member of the other of the aforesaid pairs of members having a hole and a substantially vertical slot, the hole in one member of said pair being opposite to and substantially in registration with the hole in the other member of said pair, the holes likewise being in registration with registering slots in the first mentioned pair of members, and the vertical slot in one member of said pair being opposite to and substantially in registration with the vertical slot in the other member of said pair, the vertical slots intersecting other registering slots in the first mentioned pair of members, two bolts one of which passes through registering holes and slots in both pairs of members, and the other of which passes through other registering slots in one pair of members and the vertical slots in the other pair of members, means for tightening the bolts to retain the seat in the desired position; and means extending between the legs of the clamp for holding the legs in spaced relation and providing a firm foundation against which the bolt which passes through the registering longitudinal slots and vertical slots may be tightened.

13. In a cycle saddle, means for adjustably mounting the saddle on a post comprising a pair of spaced apart saddle seat reach members, a clamp disposed between the reach members

adapted to embrace the post, said clamp having a pair of leg members, one of the aforesaid pairs of members having registering slots formed therein, and each member of the other of the aforesaid pairs of members having a hole and a substantially vertical slot, the hole in one member of said pair being opposite to and substantially in registration with the hole in the other member of said pair, the holes likewise being in registration with registering slots in the first mentioned pair of members, and the vertical slot in one member of said pair being opposite to and substantially in registration with the vertical slot in the other member of said pair, the vertical slots intersecting other registering slots in the first mentioned pair of members, two bolts one of which passes through registering holes and slots in both pairs of members, and the other of which passes through other registering slots in one pair of members and the vertical slots in the other pair of members, means for tightening the bolts to retain the seat in the desired position, the leg members being provided with inwardly extending opposed flanges, the inner edges of which are adapted to contact with one another to hold the legs in spaced relation and provide a firm foundation against which the bolt which passes through the registering longitudinal slots and vertical slots may be tightened.

CHARLES A. JONES.

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