April 29, 1941. L. M. VORDEMBERGE 2,239,764

SADDLE AND GIRTH CONNECTOR

Filed April 6, 1938 2 Sheets-Sheet 1

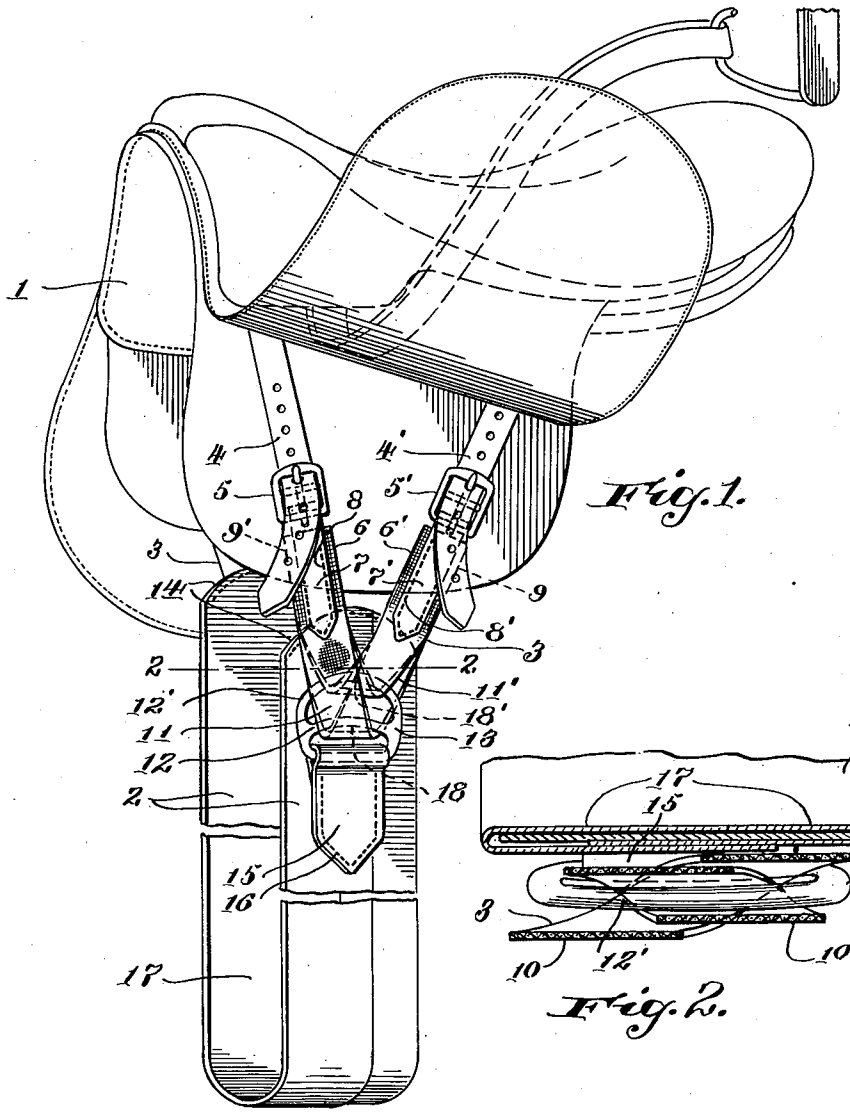


Fig. 1.

Fig. 2.

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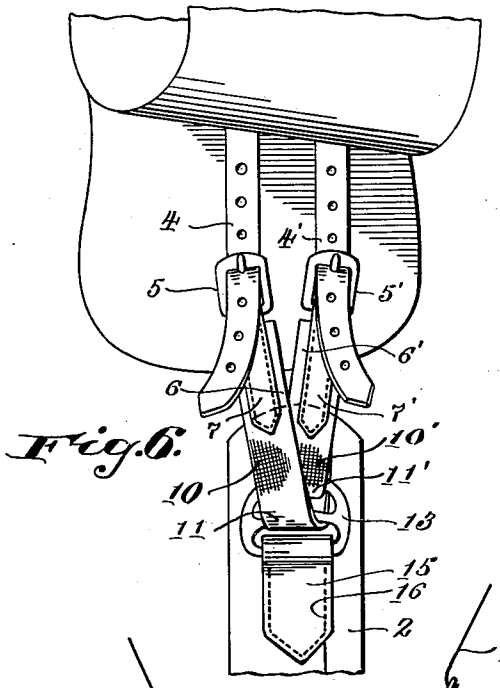


Fig. 6.

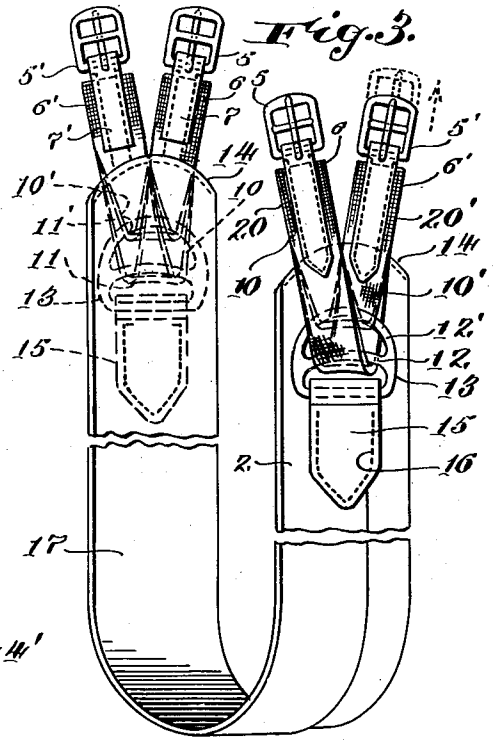


Fig. 3.

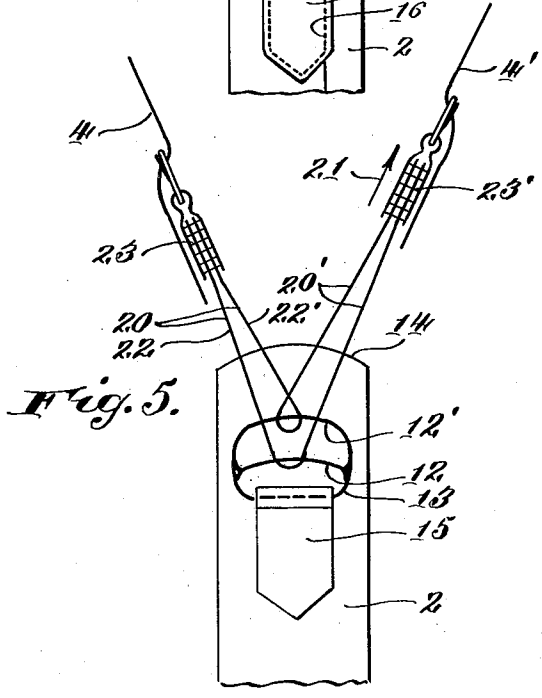


Fig. 5.

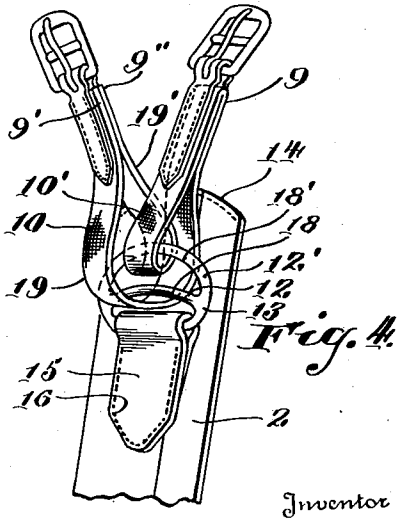


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE

2,239,764

SADDLE AND GIRTH CONNECTOR

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Application April 6, 1938, Serial No. 200,288

2 Claims. (Cl. 54—23)

The present invention relates to improvements in connectors for engaging saddle structures with their respective girth members and particularly as to the provision of means in combination therewith whereby unequal strains introduced to the connector from the saddle structure will be equalized and compensated through the connector member and introduced to the girth in the form of an equalized strain.

Important objects of the present invention is to provide a saddle and girth with a connector comprising means cooperative with the saddle and girth structures whereby when the same is applied to a horse, particularly of the saddle or racing breed, where it is essentially important that the saddle and girth structures maintain at all times a snug, secure and non-slipping fit to the animal's back, the present improved form of connector will provide these necessary essentials for a comfortably fitting and safe type of saddle and girth structure.

A further object of the present invention is to provide means whereby, when the present invention is used, the animal may be substantially free from the usual chafing and breathing difficulties found in the use of the average type of saddle and girth connecting devices.

Another important object of the present invention is to provide means whereby when unequal saddle strains applied to the connector are being equalized between the saddle and girth structures, the connector is still further provided with auxiliary means, functioning independently of the equalizing means, whereby the girth is caused to fit more snugly to the animal, without the usual slippage of this member, further, the means referred to above being in the form of a connector strap structure, composed of elastic webbing, the same allowing and causing the various structures in question to adapt themselves to a natural position of secureness, and adaptation to the animal, whether he is at rest or in motion. This is an important feature as to high spirited saddle horses and race horses. The elasticity of the connector element in this respect together with the equalizing features of the connector element allows for a minimum of difficulty to the horse in breathing while running, allowing the lungs to expand to varying degrees in a natural way, without the usual discomfort in this respect, which is a great advantage to a horse when running at high speeds as in racing or hunting.

A further object of the invention is to provide an equalizing connector of the present type, comprising a structural design which provides means whereby the elements of the structure which ordinarily are renewed from time to time, may be replaced or renewed in the present instance without disturbing the fixed structural features of the girth or saddle.

Still another object of the present invention is to provide a connector of the present type having means of equalization, in combination with means for tending to cause the equalized tension from the saddle to move toward the longitudinal axis of the means for engaging the connector member to the girth structure.

With these and other objects in view, the invention consists of certain other novel features of construction and combination of parts as will be specifically described in the following description and claims.

In the accompanying drawings I have illustrated several forms of saddle and girth connectors embodying the various features of my invention in their preferred forms.

Figure 1 is a perspective view of a side elevation of a saddle and girth structure with the new and novel type of equalizing connector associated therewith in operative position.

Figure 2 is a sectional plan view, taken on the line 2—2 of Figure 1, illustrating the relative positions of the loop portions of the strap members in connection with the girth link member.

Figure 3 is a perspective view, partly broken away for purposes of shortening the actual length of the girth structure illustrated, disclosing the girth member and the saddle connector as applied to both ends thereof.

Figure 4 is a fragmentary perspective view of one end of the girth member, illustrating the saddle connector applied thereto, the strap portions of the connector proper being slightly flexed outwardly in a distended manner for purposes of disclosing the direction of wrapping of the loop portions of the strap members about the girth link member.

Figure 5 is a diagrammatic view of a slightly modified form of strap structure for the connector member, shown applied to one end of the girth member, wherein the strap structure is made up into two parts.

Figure 6 is a fragmentary view of a side elevation of the connector invention as applied to a saddle structure having billets that are closely associated and depending from the saddle in close parallel relation, illustrating the adaptability of the connector to varying types and

spacing of the billet members in comparison to those shown in Figure 1.

Referring to the drawings by reference numerals, each of which represents the same or similar parts throughout the various views, the invention consists of a saddle structure 1, a girth 2 therefor, and a connector member 3 for engaging the saddle to the girth member. The saddle structure 1 is provided with billet straps 4 and 4', with particular reference to Figure 1 of the drawings, for purposes of engaging the connector and girth structures to the saddle by means of the connector buckle members 5 and 5', the same being fixedly engaged to the upper ends 6 and 6' of the V shaped strap structure of the connector 3 by means of their respective supporting strap structures 7 and 7', which may be securely fastened to the ends of the connector as shown by stitching as indicated at 8 and 8'. This stitching serves a double purpose, in that it also acts as a means of securely fastening and fixing the folded portion 9 and the end portions 9' and 9'', as shown particularly in Figures 4 and 5, of the double strap structure of the connector. This strap in the present instance is illustrated as made up of elastic webbing as indicated at 10 and 10' in Figure 2, wherein the strap material is shown in section, the purpose of which will be hereinafter described.

The inverted apex of the V shaped strap structure of the connector comprises two strap loop portions 11 and 11', the same being looped about and in sliding engagement with the arched bar portions 12 and 12' of the girth link member 13, the same being fixedly engaged to the girth 2 at a point below the end 14 thereof, for purposes of forming a fender and guard against the link member and its respective strap fastening structure 15, which in turn may be held fast to the girth 2 by means of stitching 16 as indicated in the drawings, coming into direct contact with the skin of the horse, thus preventing the possibility of chafing the horse at this point.

The structure and combination of elements as described above provides means whereby the connector 3 and its girth and saddle fastening means will act and function to equalize and compensate unequal strains introduced to the connector proper by way of the billet straps 4 and 4' from the saddle, and introduce these strains from the saddle to the girth in the form and character of uniform pulls or strains. In the present instance it has been found highly desirable, through actual practice of the invention, to apply these equalized strains to the girth at a point substantially in line with the longitudinal axis of the girth proper, whereby these pulls or strains may be more evenly distributed over the surface 17 of the girth which comes into direct contact with the skin and body of the horse thus providing girth contact that has a comfortable feel to the horse and reduction of the chances of chafing to the animal's skin reduced to a minimum.

Upon a dominating strain from the saddle structure introduced to the equalizing connector structure 3 by way of either of the billet strap members 4 or 4', the respective strap portions of the connector member associated with the billet strap that has the dominating pull over the lesser strained billet strap and its respective connector elements, will tend to cause its respective strap loop portions to move up in the direction of the said pull by causing the loop portions 11 and 11' to move in sliding engagement with their respective link bar engaging members 12' and 12. As these irregular pull or strains from the saddle structure are taking place constantly during the various striding positions and movements of the horse, it is important to provide means whereby, due to the constant sliding engagement of the loop portions of the connector with the bars of the link member 13, the loop portions of the straps maintain a center position as to each of their respective engaging bar members 12' and 12 for purposes of preventing the edges of the respective straps from constantly wearing against the sides of the link member and also to at all times cause the constant flow of equalized pulls from the connector to be introduced to the girth substantially in line with its longitudinal axis. To this end the link bars 12 and 12' are arched as shown at 18 and 18', thus presenting a concave strap contacting surface to the loop portions of the straps that have sliding engagement therewith. This concaved or arched strap contacting surface of the bar members tends to cause the loop portions of the straps to constantly move towards the centers of their respective bar members, for the purpose as described above.

For purposes of providing means whereby the respective free or open portions 19 and 19' of the connector strap structure may be looped about their respective link bars 12 and 12' without kinking these strap portions and also to freely allow these portions of the strap members to have a sliding and yielding relation as to each other, whereby the buckled ends of the connector strap structure may be freely adaptable to varying spaced relation when engaged to different types of saddle structures wherein the billet strap members vary as to spaced relation from each other and angularity of position as to direction. These sliding and overlapping portions of the strap structure are important in respect to allowing the respective ends of the connector strap structure, and their attendant strap portions 20 and 20' to move in a converging direction, and terminating in substantially complete convergence at their respective points of engagement with the girth link member 13, thus providing means whereby all equalized impulses are introduced wholly at the said point of convergence of the said strap structure.

For purposes of allowing still further means of absorbing strains from the saddle structure, and independent strains introduced direct to the girth proper, such as those caused by the breathing of the horse, the invention is provided with means of absorbing these strains independently of the action or function of the connector equalizing element. To this end and for this purpose the connector strap members or portions 19 and 19' are made up of elastic webbing, whereby strains introduced to the connector that may at times be fully equalized both as to the saddle structure and its respective girth member may be fully absorbed in a yielding manner through the elastic webbing structure indicated at 10 and 10'.

Figure 5 of the drawings illustrates in a diagrammatic manner the function and operation of the equalizing elements of the connector operating in a cooperative manner with the elastic elements of the strap structure of the connector. In this instance the connector strap portion 20' is shown as being pulled upwardly in the direction of the arrow 21 and the connector strap portion 20 remaining somewhat in fixed position as to its original location before the pull was introduced

to the strap portion 20'. In this figure the connector strap structure is indicated as composed of two separate strap members 22 and 22', with their free respective ends stitched together as indicated at 23 and 23' respectively.

Figure 6 of the drawings illustrates the use and application of the invention to a fragmentary portion of an English type of saddle structure wherein the billet straps are in somewhat close spaced relation and the ready adaptation of the connector strap portions 20 and 20' to the closeness of the billet straps in this instance through the novel means of telescoping these strap portions 20 and 20' of the connector, as described hereinbefore. In this respect comparison may be noted particularly with reference to Figure 1 of the drawings. In this view the invention is shown as applied to a western type of saddle structure, wherein the billet strap members are widely separated and moving in a converging direction. The connector strap portions 20 and 20' are readily adaptable to this type of saddle connecting means without in any way cramping, kinking or interfering with the natural position of rest of the connector strap members, particularly at their respective points of engagement with the link means for engaging the same to the girth structure.

With further reference to the fender or guard portion 14 of the girth member 2, it will be noted that this member or portion 14 of the fender which is a continuation of the girth structure allows and provides means for complete protection of the horse at this point against the constant adapting movements of the loop portions of the connector strap members, where the same is in sliding engagement with the structure of the girth link member 13.

Referring further to the overlapping and sliding relation between the connector strap portions 20 and 20', with particular reference to Figure 2 of the drawings, wherein the loop portions 11 and 11' of the connector straps are fully illustrated as being in overlapped, superimposed relation with each other near their points of engagement with their respective bar members 12 and 12', it will be noted that these members are in complete convergence with each other near these points of connection whereby all strains from the saddle are caused to converge to and be delivered to a common line of connection with the girth.

With reference to Figure 3 of the drawings, wherein the girth and its connector strap structure is shown somewhat in detail and separated from the saddle structure, it will be noted the connector strap and link structure is fully duplicated on the opposite end of the girth proper, in this respect it will be understood that reference numerals applied to the near end of the structure as shown in this and other views of the drawings, as well as the descriptive matter relating thereto as to novel features and functions are also applicable to the duplicate structure as shown at the far end of the girth in Figure 3.

I have thus described my invention in detail in order that its operation and structure may be fully understood; however it is understood the terms used herein are used in a descriptive manner and not intended to be applied in a limiting sense; the scope of the invention being defined in the claims.

What I claim and desire to secure by Letters Patent is:

1. A saddle and girth connector having means for equalizing forward and rearward strains between the saddle and the girth, said means comprising a strap structure composed of elastic webbing, having end and loop portions, the end portions having means for fixedly engaging the same in predetermined adjustment with the saddle structure, the loop portions of the strap structure being slidably engaged to means fixedly positioned to the girth at a point substantially in line with the longitudinal axis of the girth structure and below the ends thereof, the same providing means whereby the forward and rearward strains of the saddle structure upon the connector will be equalized and applied to the girth at a point substantially in line with the longitudinal axis of the same in a sliding, yielding and resilient manner.

2. A girth of the class described having means for engaging the same to a saddle structure, the same comprising elastic strap members, the said members assuming the formation of a V when in operative position of attachment to the saddle structure, the upper ends of the straps as to each end of the V formation being fixed relatively to each other, the lower portions of the straps forming the inverted apex of the V formation being in sliding engagement, and in spaced relation, as to each other, with means fixedly engaged to the girth at a point below the end portion of the girth.

LOUIS M. VORDEMBERGE.