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RIDING SPURS

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This invention relates to improvements in riding spurs, and more particularly to improved bull riding spurs wherein the rowels are resiliently and yieldably associated with the bands or yokes of the spurs.

The primary object of the invention is to provide efficient and durable spurs of this kind which are designed to prevent or reduce the leg muscle strains and pulls to which rodeo riders of bulls are subjected by the powerful, erratic, and sudden movements of bulls which are especially prepared and then released to be ridden by rodeo contestants for prizes and money awards.

Another object of the invention is to provide spurs of the character indicated above which have extra strap or chain loops for additional mounting straps or chains, and wherein the rowels are hinged on the bands or yokes and are yieldably urged upwardly relative thereto so as to be conditioned to be swung downwardly when applied to the flanks of bulls, against the resistance of spring means, so as to relieve undue strains on the leg muscles of riders, and to be swung further downwardly, when desired or necessary, to final stop positions wherein the rowels can be applied with maximum force to flanks of bulls, the arrangement providing for substantially constant contact of the spurs with flanks of bulls without the strains of full force applications thereof.

A further object of the invention is to provide structurally and mechanically superior spurs of the character indicated above which are simple and rugged in construction and are not subject to getting out of order or adjustment under the severe conditions of service contemplated therefor.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

Figure 1 is a rear perspective view of a spur of the invention;

Figure 2 is an enlarged side elevation thereof, showing the rowel in elevated or starting position.

Figure 3 is a view similar to Figure 2, but partly in vertical longitudinal section, and showing the rowel in its extreme depressed and stopped position; and

Figure 4 is a vertical transverse section taken on the line 4—4 of Figure 2.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated spur comprises a U-shaped heel band or yoke 10, preferably of flat bar material, having a curved bight portion 12, and similar straight and parallel arms 14 having free forward ends 16. The band or yoke 10 is preferably of the same width and thickness throughout and has substantially parallel upper and lower edges 18 and 20, respectively.

Fixed, in suitable manner, as by welds 22 to the laterally outward sides of the arms 14 near to and spaced

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from the arm ends 16 are centered lugs 24 having hinge ears 26 on their upper ends, through which are journaled the bottom elements 28 of trapezoidal attaching chain or strap loops or rings 30, through which are engaged mounting straps or chains (not shown) for securing the spurs to the heels of riding boots. The loops or rings 30 are closed and have vertically elongated rear elements 32, shorter vertical forward or front elements 34, and diagonal top elements 36 connected to and extending between the upper ends of the elements 32 and 34. The loops or rings 30, being hinged to the band arms 14 below the upper edge 18 of the band, can be swung against the laterally outward sides of the arms 14 and serves as a brace or support whereby strains and stresses on the hinge ears 26 are relieved.

Extra chain or strap connecting and U-shaped loops 38 are fixed, as by welds 40 to the laterally outward sides of the arms 14 at the rear ends of the arms 14 in diagonal positions and at locations closer to the lower edge 20 than the upper edge 18 of the band 10, to enable the use of extra stabilizing straps (not shown) for more firmly and rigidly connecting the spurs to riding boots.

The illustrated spur further comprises a rowel assembly, generally designated 42, which comprises a single triangular horizontal lug 44 which extends rearwardly from and is fixed at its forward end, as by welds 46, to the center of the outward side of the band bight portion 12. The lug 44 has a rearwardly inclined lower edge 48, and an upper edge which has a horizontal forward portion 50 and a rearwardly declining rear portion 52. The lug 44 is spaced above the lower edge 20 of the heel band 10 and its horizontal upper edge portion 50 is substantially on a level with the upper edge 18 of the band 10, as is clear from Figures 2 and 3. Fixed to or formed on the bight portion 12 and spaced below the lug 44 and in vertical alignment therewith is a preferably cylindrical and rearwardly projecting spring anchoring boss 54. A centralized transverse horizontal pivot pin 56 extends through the lug 44 and reaches beyond the sides thereof and has enlarged heads 58 on its ends.

The rowel assembly 42 further comprises a horizontally and rearwardly elongated, and preferably one-piece, lever 60, which has a flat plain upper edge 62 and a rearwardly inclined bottom edge 64, which extend to a rear end 66. The lever 60 has a forward end which includes an upper portion 62' which is squared or at right angles to the upper edge 62 and a lower rearwardly declining portion 66. The declining lower forward end portion 66 is terminated at its lower end by a cut-out 68 which reaches to and serves as the termination of the forward end of the inclined bottom edge 64.

The rear end part of the lever 60 is bifurcated to provide a pair of rearwardly extending laterally spaced parallel arms 70 defining a rear clevis, and which extend forwardly as far as a vertical partition wall 72, located intermediate the ends of the lever 60.

Formed in the forward part of the lever 60, parallel to the inclined bottom edge 64 and opening through the cut-out 68 is a longitudinal spring seating socket 74 having a rear closed end 76. Seated in the socket 74 is a substantial portion of the read end of a helical expanding spring 78 whose forward end is securably circumposed on the spring anchoring boss 54. The spring 78 is long enough and strong enough to urge the lever 60 upwardly and maintain the lever in its elevated starting position with substantial force, wherein its upper forward end portion 64 bears against the bight portion 12 of the band 10, with the upper edge 62 of the lever

60 on a level with and coplanar with the upper edge 13 of the band 10, as seen in Figures 1 and 2.

The rear end part of the lever 60, above the socket 74 and separated from the socket 74 by the upper side wall 80 of the socket, as seen in Figure 3, is in the form of a forwardly opening clevis having spaced parallel arms 82 which are traversed by the pivot 56 whose heads 58 engage the laterally outward sides of the arms 82. The location of the pivot 56 in the arms 82 is such as the lever 60 is swung downwardly relative to the band 10, against the resistance of the spring 78, to the extreme depressed position of the lever, the lower declining forward end portion 66 of the lever has stop engagement with the band bight portion 12, as shown in Figure 3.

A rowel wheel 84 is disposed between the arms 70 of the rear clevis of the lever 60, and is mounted on a transverse axle 86 which is journaled at its ends through the arms 70 at the rear end 66 of the lever, and has retaining heads 88 on its outer ends.

It is to be observed that the above described construction and relative arrangements of parts assures that the rowel carrying lever 60 is at all times and in all positions thereof strongly and positively supported on the heel band 10, and that the yielding and biasing action of the spring 78 is maintained constantly and positively active, so that the rowel assembly 42 operates smoothly and reliably and destruction or impairment of its action or of its structure is strongly resisted under severest conditions of service.

In operation, the rowel wheels 84 can be maintained constantly and effectively against the flanks of a bull by a rider with a minimum of leg action, where the springs 78 are of sufficient strength and tension, so that the force of and the yielding action of the springs both maintain contact of the rowel wheels 84 with the bull flanks and provide cushioning action between the flanks and the legs of the rider, which prevents or reduces pulling and other leg muscle strains. When maximum forcible application of the rowel wheels 84 is desired, this is obtained simply by exerting full leg pressure inwardly toward the flanks while moving the spurs upwardly, so that the declining forward end portions 66 of the levers 60 make stop engagements with the bight portions 12 of the heel bands 10.

Although there has been shown and described herein a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. A bull riding spur comprising a U-shaped heel band having a bight portion and arms having free forward ends, rings pivoted on the laterally outward sides of said arms near said forward ends, a rowel assembly on and extending rearwardly from the rearward side of said bight portion, said assembly comprising lug means fixed centrally to and extending rearwardly from said bight portion, transverse pivot means extending through said lug means, a horizontally elongated lever having forward and rear end portions, said lever extending rearwardly from said bight portion, front clevis means on said forward end portion interengaged with said lug means and traversed by said pivot means, rear clevis means on said rear end portion of the lever, rowel wheel means carried by and interdigitated with said rear clevis means, and expanding spring means compressed between the bight portion of the heel band and said

forward portion of the lever and yieldably urging said lever upwardly from a depressed position to an elevated position relative to the heel band.

2. A bull riding spur comprising a U-shaped heel band having a bight portion and arms having free forward ends, rings pivoted on the laterally outward sides of said arms near said forward ends, a rowel assembly on and extending rearwardly from the rearward side of said bight portion, said assembly comprising lug means fixed centrally to and extending rearwardly from said bight portion, transverse pivot means extending through said lug means, a horizontally elongated lever having forward and rear end portions, said lever extending rearwardly from said bight portion, front clevis means on said forward end portion interengaged with said lug means and traversed by said pivot means, rear clevis means on said rear end portion of the lever, rowel wheel means carried by and interdigitated with said rear clevis means, and expanding spring means compressed between the bight portion of the heel band and said forward portion of the lever yieldably urging said lever upwardly from a depressed position to an elevated position relative to the heel band, and angularly related upper and lower stop means on the front end portion of the lever, severally engageable with the bight portion of the heel band in extreme elevated and depressed positions of the rowel assembly lever.

3. A bull riding spur comprising a U-shaped heel band having a bight portion having a rear side and laterally spaced arms having forward ends, attaching rings pivoted on the laterally outward sides of said arms near their forward ends, a rowel assembly secured to and extending rearwardly from the rear side of said bight portion, said assembly comprising a single lug fixed centrally to the rear side of the bight portion, a transverse pivot extending through said single lug, an elongated lever having forward and rear end portions, a rearwardly extending rear clevis on said rear end portion, having laterally spaced rear arms, a rowel wheel disposed between and journaled on said rear arms, a forwardly extending front clevis on said forward end portion of the lever having laterally spaced forward arms disposed at opposite sides of said single lug and traversed by said pivot, said forward arms terminating at their forward ends in angularly related upper and lower forward end portions for several stop engagement with the rear side of the heel band bight portion in extreme elevated and depressed positions of said lever relative to the heel band, and expanding spring means compressed between the said bight portion and said lever and yieldably urging said lever upwardly toward its extreme elevated position.

4. A bull riding spur according to claim 3, wherein said lever has a forwardly opening socket located below said forward clevis arms, a helical spring having a rear end seated in said socket and a forward end, and a boss on the rear side of the band bight portion on which the forward end of the spring is securably circumposed.

5. A bull riding spur according to claim 3, wherein extra attaching loops are fixed on the laterally outward sides of the heel band arms near the rear ends thereof.

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