

### [54] STIRRUP

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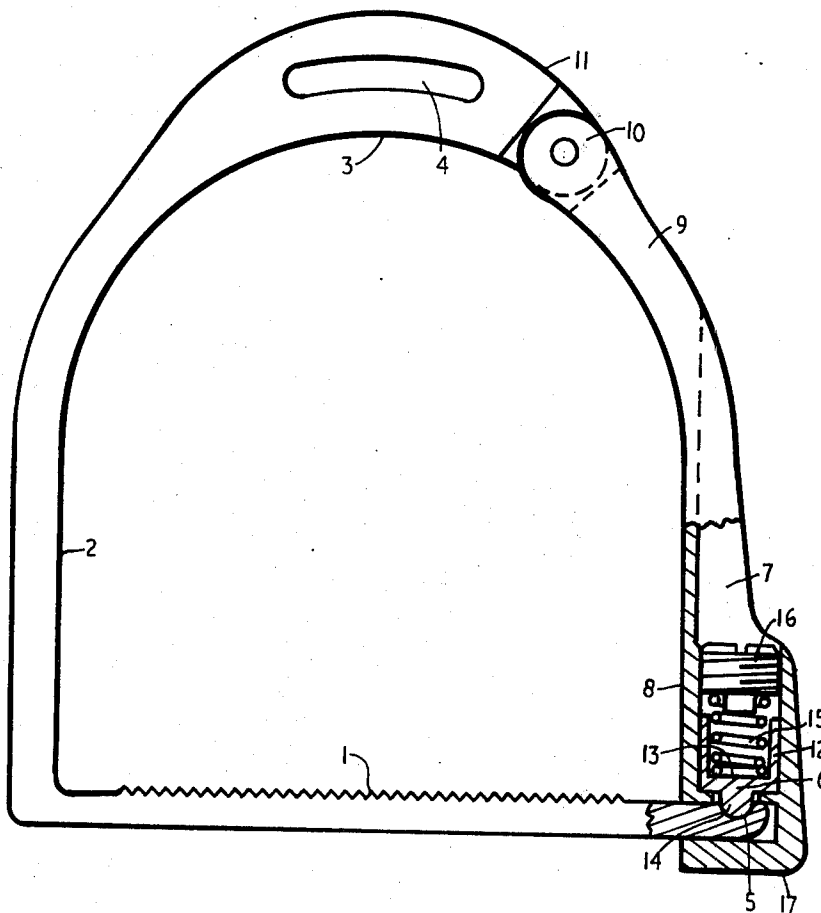
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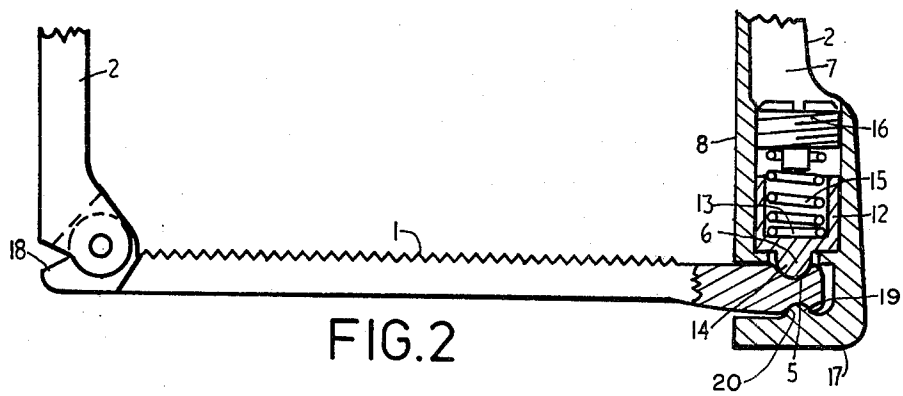
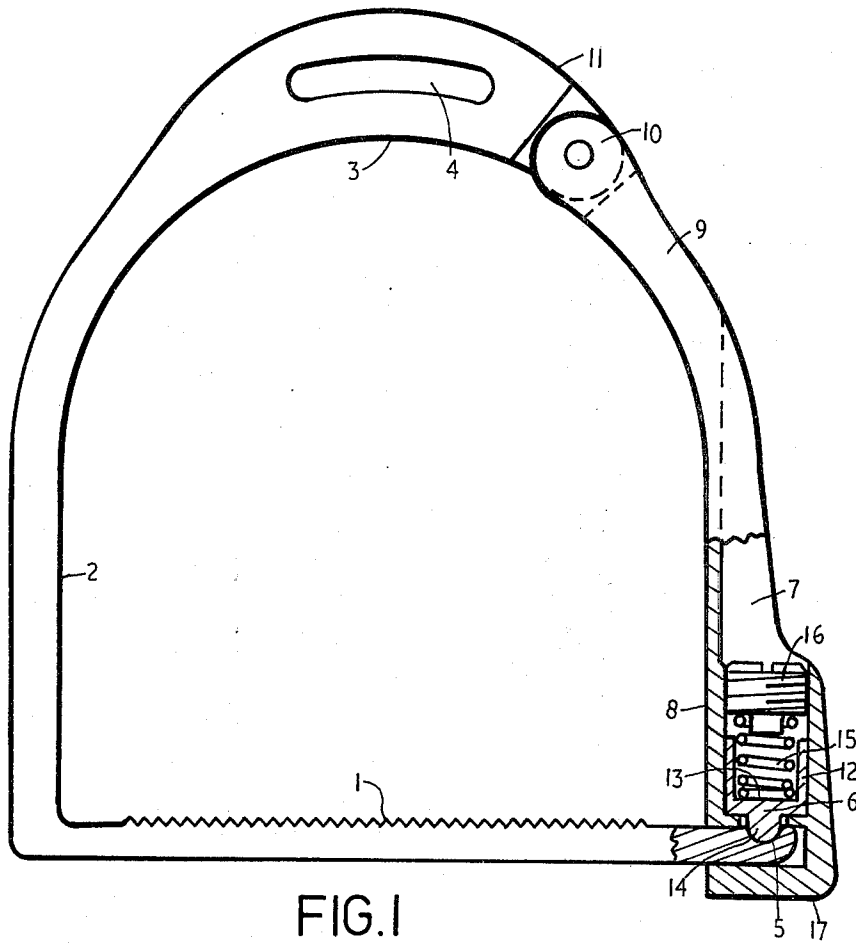
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### ABSTRACT

This invention relates to a stirrup comprising a platform and a support structure adapted for suspending said platform from a saddle leather whereby a rider's foot may be accepted thereon, said structure including a portion displaceable with respect to said platform when an excessive load is applied thereto whereby said rider's foot may be easily extricated from the stirrup in an emergency.

3 Claims, 2 Drawing Figures





## STIRRUP

This invention relates to an improved stirrup.

Present known types of horse stirrups are defective in that a rider, when falling from the horse, can easily get his foot caught in the brace and suffer serious injury through being unable to extricate himself from this situation.

It is an object of this invention therefore to provide a horse stirrup that is substantially free from these defects.

Notwithstanding any other forms that may fall within its scope, one particular form of the invention and variations thereof will hereinafter be described with reference to the accompanying drawings of which FIG. 1 is a part sectional elevation of a stirrup illustrating the constructional elements thereof and FIG. 2 illustrates an alternative method of constructing the stirrup.

In its preferred form the stirrup of FIG. 1 comprises a platform 1 having a side brace 2 extending from one end at right angles. The brace 2 has at its upper end 3 an integrally formed slot 4 adapted to accept a stirrup leather. At the opposite end of the platform 1 is a recess 5 adapted to accept a locking pin 6 which is located in a passage 7 in the lower end 8 of a second brace 9, the opposite end 10 of which is pivotally connected to the free end 11 of the first brace 2.

The locking pin 6 comprises a cylindrical body 12 having a coaxial hole 13 extending partially through it. The lower end of the pin 6 is of a slightly smaller diameter than of the remainder of the body 12 and is rounded at its end 14 and a spring 15 is located in the hole 13 of the pin 6 which is slidably located in the passage 7. The upper end of the passage 7 has an axially adjustable closure 16 which is adapted to apply tension to the spring 15.

The lower end 8 of the brace 9 includes a support 17 which extends beyond the end 8 of the brace 9 and is curved inwardly to engage the under side of the platform 1.

In use, when the rider's foot is caught after he has fallen, the force resulting from the fall will cause the brace 9 to be forced outwardly disconnecting the pin 6 of the support 17 from the platform and allowing the rider's foot to slide sideways from the stirrup. To prevent the brace 9 from disconnecting from the platform 1 under normal conditions, the load applied to the spring 15 by the closure 16 may be suitably adjusted by moving the closure axially towards the end of the brace 9.

In the form shown in FIG. 2 the platform 1 and the brace 2 are pivotally connected at 18 in such a manner that the platform when released will only drop approximately one inch. To prevent accidental release of the platform 1 and the brace 2 the support 17 is provided with a tooth or abutment 19 which is adapted to engage with a recess 20 in the platform 1.

In use, when riding normally the rider's weight causes the tooth 19 to firmly engage the recess 20 ensuring that the stirrup does not open accidentally. If the rider falls the weight is removed from the platform 1 and a force is applied to the brace 2 which moves sideways disengaging from the platform 2. The platform will then move on its pivotal connection 18 permitting the rider's

foot to slide freely out of the stirrup.

The spring 15 should of course be selected according to the compressive forces required on the pin 6. For example, if the load required to fully collapse the spring 15 is 70 lbs. and the closure 16 is adjusted to apply about 20 percent of the maximum compressive load to the spring, the pin 6 will be free to retract into the passage 12 with no problems. This selection will permit the spring mechanism to be adjusted according to the rider's requirements.

To eliminate any possibility of the user tightening the closure 16 to an extent whereby the pin 6 is permanently locked into the recess 5, there may be a limit stop in the passage 7. For example, the passage 7 may be stepped so that the closure is threaded into a portion of the passage 7 that has a larger bore than the portion in which the pin 6 is located. The length of the larger portion of the passage should be long enough to permit substantial adjustment of the closure 16. The shoulder of the step would then act as an abutment against which the closure 16 will stop. The length of the portion of the passage 7 in which the pin 6 is located should have sufficient length to permit the pin 6 to retract fully into it thereby permitting the mechanism to function correctly. Of course, any other suitable means for limiting the axial travel of the closure may be used according to requirements.

It will be appreciated by those skilled in the art that the stirrup will enable a rider experiencing a fall to survive with substantially lesser injuries than would be possible with present known types of stirrups.

What I claim is:

1. A stirrup comprising loop means, for attachment to a saddle leather, a first support integrally formed with and depending from one end of said loop means, a platform having one end coupled to the lower free end of said first support, said loop means, first support, and platform being permanently rigidly interconnected as a single piece so that said platform at all times extends laterally from said first support in vertically spaced relationship with said loop means, a second support having one end pivotally connected to the other end of said loop means and having a lateral slot at its free end to receive the other end of said platform, said free end of said second support further comprising latching means for engaging complementary means on said platform to maintain said second support in engagement with said platform, said latching means disengaging said platform to permit said second support to swing away from said platform when said second support is subjected to an outwardly directed sidewise force, said platform remaining capable of supporting the foot of a rider even after said platform is disengaged by said second support.

2. A stirrup as claimed in claim 1 wherein said latching means comprise an axially displaceable detent pin mounted in a passage formed in said second support, and a compression spring in said passage urging said pin into engagement with a recess in said platform.

3. A stirrup as claimed in claim 2 including means within said passage for adjusting the compressive load of said spring on said detent pin.

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