No. 704,184. Patented July 8, 1902.

C. W. GILLESPIE.

STIRRUP.

(Application filed Nov. 14, 1901.)

(No Model.)

Fig. 1.

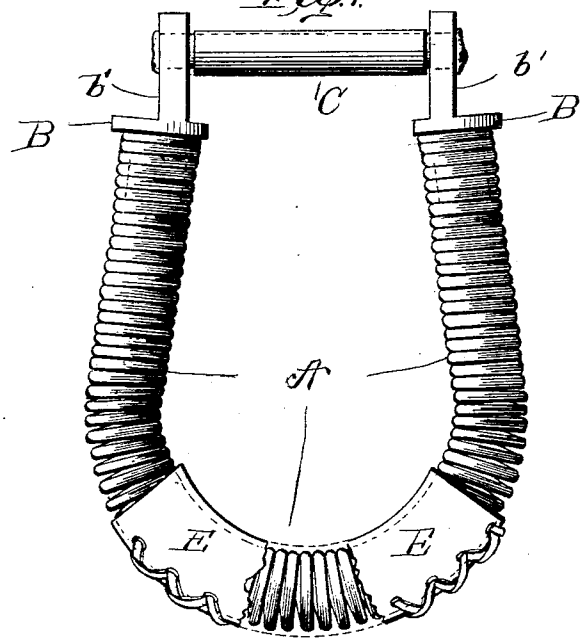


Fig. 2.

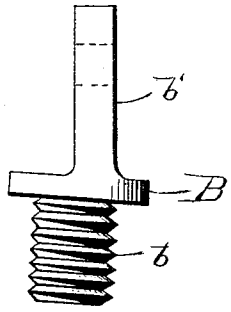
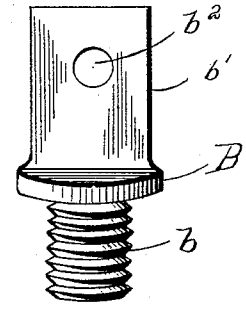


Fig. 3.



Witnesses:
J. M. Fowler Jr.
D. E. Wilson

Inventor:
Charles W. Gillespie
by
J. F. Beale
Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES W. GILLESPIE, OF TASCOSA, TEXAS.

STIRRUP.

SPECIFICATION forming part of Letters Patent No. 704,184, dated July 8, 1902.

Application filed November 14, 1901. Serial No. 82,268. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. GILLESPIE, a citizen of the United States, residing at Tascosa, in the county of Oldham and State of Texas, have invented certain new and useful Improvements in Stirrups; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to stirrups.

Heretofore the objection to elastic stirrups or such as afford a yielding tread to the rider have been the multiplicity of parts, the expense of manufacture, lack of durability, and danger in case of accident of entangling the foot of the rider.

Safety-stirrups have heretofore been designed only to release the rider's foot when thrown or in case of a fall from the horse. If, however, the horse should fall upon the stirrup before the rider could disengage his foot, the metal would bend or give with the weight of the horse and pin or clamp the rider's foot in the stirrup, rendering him helpless to disengage it when the horse regains his feet. This objection applies to all stirrups, and, so far as I am aware, no provision has heretofore been made to avoid this danger.

Now the object of my invention is to provide an elastic stirrup of simple and economical construction which will afford the requisite yield to the tread of the rider and one which in case of accident, such as before named, will resume its normal shape when relieved of the weight of the horse.

In the accompanying drawings, forming a part of this specification, Figure 1 is a front elevation of a stirrup embodying my invention. Figs. 2 and 3 are detail views.

Referring more particularly to the drawings, A denotes a coiled spring bent in **U** shape, forming the tread and sides of the stirrup. B B denote disk-shaped heads of a diameter corresponding to that of the coils of said spring. *b b* denote cores formed integral with said heads, project below the same, and provided one with a right and the other with a left hand thread, the pitch of said threads corresponding to the coils of said spring. *b' b'* denote standards formed integral with said heads, project above the same, and are provided with bolt-holes b^2 b^2. C denotes a bolt which passes through said holes and riveted to said standards. Said bolt is provided with the usual roller D for the stirrup-strap.

E denotes a cover made of leather or other suitable material, provided with a lacing-cord and secured around the tread of the stirrup, as shown in Fig. 1, and extends part-way up the sides of the stirrup to protect the foot from contact with the metal.

In practicing my invention the cores *b b* are twisted or screwed in at each end of the coiled spring, requiring some pressure, as the diameter of the cores is sufficient to slightly spread the coils to insure a tight grasp upon the cores. The coils abutting upon the heads are then soldered thereto or otherwise secured, if preferred, to the heads. If soldered, as shown in the drawings, the union of coil and head may extend downward upon the cores for about half an inch. The lower portion of the core (the relative position of which is shown in dotted lines in Fig. 1) with its threads is thus left free of this rigid union, the object of which is to distribute the strain or pull as much as possible upon the remaining coils in contact with the threads on the lower portion of the core. It will be seen that by this arrangement of unconfined contact of coil and thread at lower end of core I avoid throwing all the weight upon a given point—viz., the point of confined contact at each end of the coiled spring. After the heads are thus secured in position the spring may be placed in a former and bent in the shape desired for the stirrup. It will be seen, as shown in Fig. 1, that when the coiled spring is bowed in **U** shape the coils will assume the relative position shown with their inner sides touching, thus affording a comparatively smooth surface for the inner walls of the stirrup and avoiding any liability of pinching the rider's feet between the coils.

The bolt C, connecting the standards *d' d'*, forms the stirrup-head and serves also as a tie to retain the ends of the coiled spring in position and hold them from springing apart. The lateral pressure of the ends of the spring upon the cores aids in clamping the coils of the spring to the threads on the cores. Again, after the stirrup head or bolt C is fixed in po-

sition and the coiled spring released from the stirrup-former the lateral pressure or tension of the sides will be outward, thus affording spring sides to the stirrup having a tension which tends to spread them apart and which in case of accident would resume their normal position if pressed toward each other. This tension upon the sides of the spring affords the requisite bow to the sides of the stirrup below the head.

In the form of stirrup shown in Fig. 1 the standards b' b' are preferably arranged nearer to the inside of the upper portion of the heads, as shown; but I do not confine my invention to any particular shape or form of stirrup.

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

1. A stirrup having its tread and each side formed of a continuous coiled spring said spring being bent in the form of a stirrup with its ends sprung toward each other and held in such position by a suitable bolt connecting said ends.

2. A stirrup having its tread and sides formed of a coiled spring bent in U shape, heads adapted to be secured to the ends of said springs, and a tie connecting said heads forming a connection adapted to retain the coiled spring in its bent position.

3. A stirrup consisting of a continuous coiled spring bent in U shape, heads having cores adapted to enter the ends of said spring provided with threads adapted to engage with the coils of said spring, standards formed integral with said heads projecting above the same, and a tie connecting said standards.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. GILLESPIE.

Witnesses:
E. D. STARKS,
E. T. MCKINNON.