

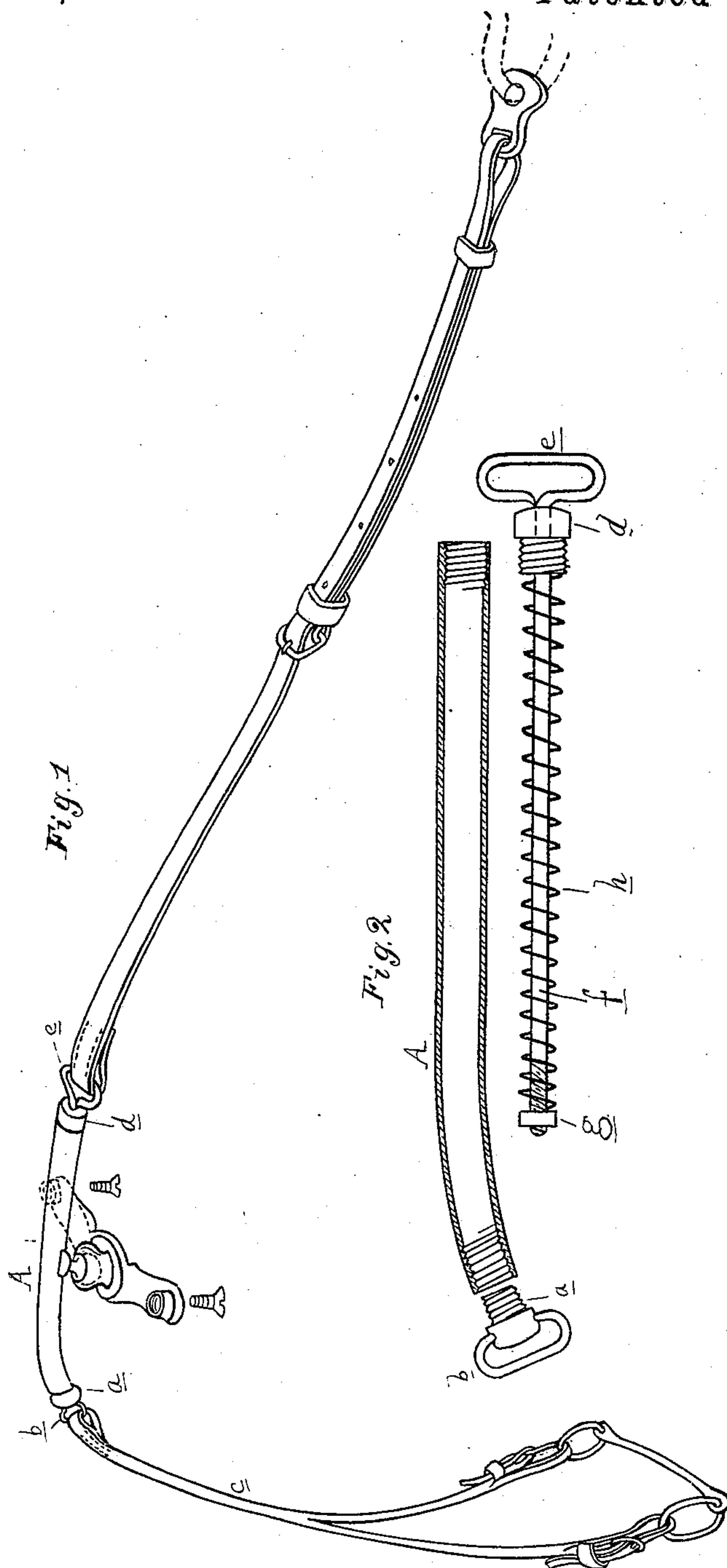
(No Model.)

L. E. CHAMPLAIN & G. G. WINANS.

CHECK REIN SPRING.

No. 312,330.

Patented Feb. 17, 1885.



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UNITED STATES PATENT OFFICE.

L. EUGENE CHAMPLAIN AND GEORGE G. WINANS, OF YPSILANTI, MICHIGAN;
SAID WINANS ASSIGNOR TO LEWIS M. MILLER, OF DETROIT, MICHIGAN.

CHECK-REIN SPRING.

SPECIFICATION forming part of Letters Patent No. 312,330, dated February 17, 1885.

Application filed October 22, 1884. (No model.)

To all whom it may concern:

Be it known that we, L. EUGENE CHAMPLAIN and GEORGE G. WINANS, of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented new and useful Improvements in Check-Rein Springs; and we do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in elastic check-reins; and it consists in the peculiar combinations and the construction and arrangement of parts, herein-after particularly described and claimed.

Figure 1 is a representation of a section of check-rein secured to the spring. Fig. 2 shows the details of construction, the parts of the spring being detached from each other.

In the accompanying drawings, which form a part of this specification, A represents a small cylinder, preferably made of light metal, into one end of which is screwed the plug *a*, to which the loop *b* is attached, and through which a part of the check-rein *c* is secured. *d* is another plug screwed into the opposite end of the cylinder. *e* is a loop formed upon the end of the rod *f*, which passes through the latter-named plug, and terminates in a button or flange, *g*. *h* is a coil-spring around such rod, and interposed between the last-named plug and the button on the end of the rod. To the last-named loop another part or end of the strap which forms the check-rein is attached. It will be observed that this plug *d* not only serves to close the end of the cylinder A, but serves as a guide for the rod *f*, besides forming a point of resistance for the spring *h*. In over checks the interposition of this spring will be found very beneficial, for while the tension of the spring is sufficient to compel the horse to carry his head in the desired position, it at the same time allows him in case of emergency a more free use of his head. In side checks it will also be found beneficial.

The object of the present construction, wherein the plugs are screwed into the ends of the cylinder, is to facilitate repairs when rendered necessary by the spring losing its resisting force under use.

We are aware of the Patents Nos. 59,937 and 223,440, and make no claim to anything shown therein as forming part of our invention.

We attach importance to the apertured plug *d*, for by its use the device can be easily and quickly taken apart for repairs, for by simply unscrewing the said plug the rod *f*, with its spring, can be removed from the cylinder, and the spring replaced by a new one by simply removing the nut *g*; or by screwing up said nut the tension of the spring can be regulated.

Another important feature of our construction is that the cylinder can be bent little or much, as desired, and the loop can be permanently fastened to the tube, and yet the rod with its spring can be readily inserted or removed for adjustment, which cannot be done with devices of this class as heretofore constructed.

On the 19th day of June, 1883, a patent was issued to the undersigned, L. Eugene Champlain, for improvements in over-check attachments, and this property is now the property of both the undersigned; and we design the invention described in this application to be an improvement on the invention described and claimed in that patent. We design to make the tube attached to the universal or ball-and-socket joint with the plugs screwed into the ends provided with loops, and a spring inclosed in the tube or cylinder, as herein described.

It has been found from actual use that where the check-rein runs loosely through the cylinder it soon becomes worn, and often breaks under a sudden strain, such as would be produced by the horse stumbling. This defect is avoided by the construction herein shown and described, for no matter how many or varied the motions made by the horse no wear ever comes on the leather rein; but any wear that takes place comes on the metal, and any extra strain—such as that caused by stumbling—is obviated by the spring.

What we claim as our invention is—

1. The combination, with the cylinder A, pivotally secured to the top of a bridle, and having a portion, *c*, of the check-rein secured to one end of said cylinder, of the rod *f*, sliding in said cylinder and provided with a loop, *e*, connected with another part of the check-

rein, and the spring *h*, arranged around said rod, substantially as and for the purpose specified.

2. The combination, with the cylinder A,
5 provided with a screw-plug, *a*, of the apertured screw-plug *d*, the threaded rod *f*, having loop *e* formed therein and passing through said plug *d*, the adjusting-nut *g*, and the coil-spring *h*, arranged around said rod and find-
10 ing one point of resistance against said nut

and the other against the plug *d*, which also serves to close the end of the cylinder and forms a guide for the rod *f*, substantially as described.

L. EUGENE CHAMPLAIN.
GEORGE G. WINANS.

Witnesses:

H. S. SPRAGUE,
CHARLES J. HUNT.