

(No Model.)

E. W. CRAINE.  
REIN. PROTECTOR.

No. 533,947.

Patented Feb. 12, 1895.

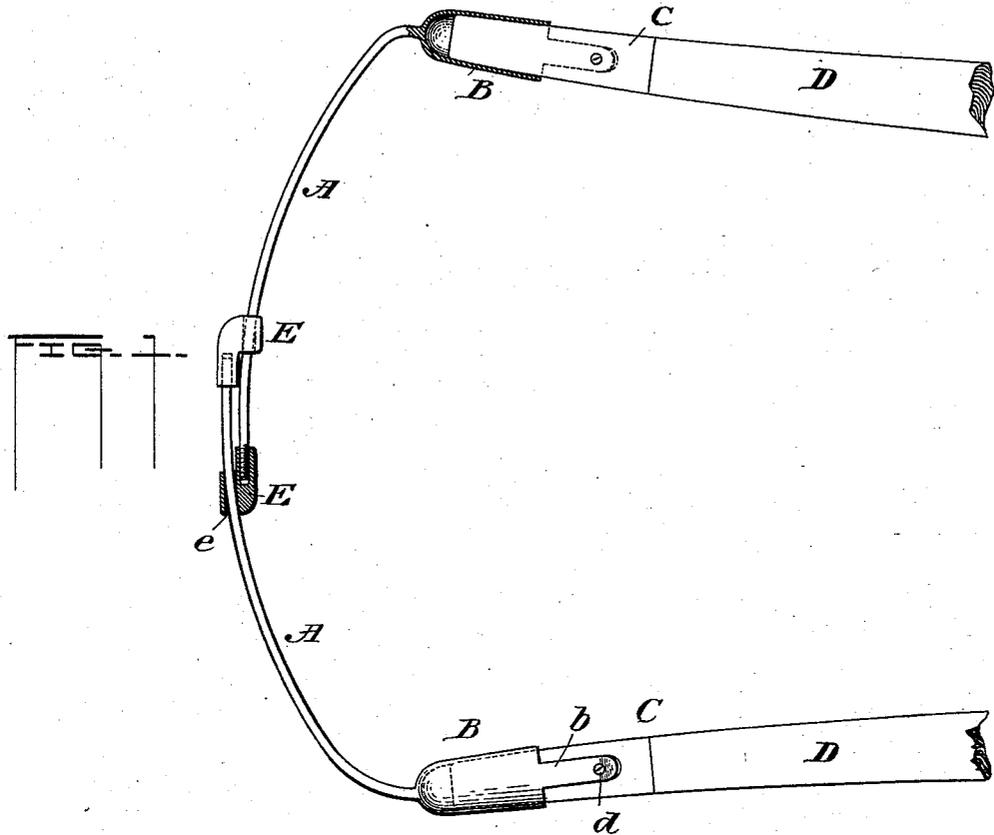
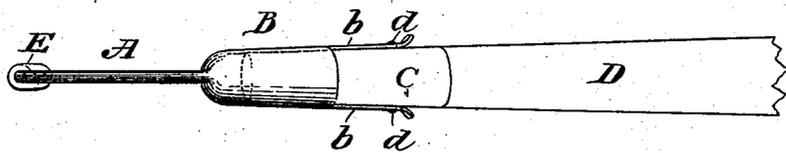


FIG. 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

EDWIN W. CRAINE, OF MISSOURI VALLEY, IOWA.

## REIN-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 533,947, dated February 12, 1895.

Application filed April 10, 1894. Serial No. 507,029. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN W. CRAINE, a citizen of the United States, residing at Missouri Valley, in the county of Harrison and State of Iowa, have invented certain new and useful Improvements in Rein-Protectors; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to vehicles and its object is to prevent the reins from catching under the tips of the shafts or thills of a buggy or other vehicle drawn by a horse.

My said rein protector consists in a rod provided at each end with a socket to fit over the end of the thill. The rod is made in two parts, united by a sliding joint, so as to be applicable to different makes of carriages.

In the drawings, Figure 1 is a top plan view, partly in section, of a protector applied to a pair of thills. Fig. 2 is a side view of the same.

The protector comprises two rods or stout wires A, each provided at one end with a bell-shaped socket B, adapted to fit snugly one of the ferrules C on the end of the thill D. The socket has two fingers b, attached to or integral with it, and composed of spring metal. In each finger is a hole, adapted to snap over the head of a screw d, projecting from the upper and lower sides of the thill. By this means the socket is held firmly but detachably on the thill. The meeting ends of the rods lap past each other, and on the end of each is screwed or otherwise fastened a slide E, consisting of a metal block containing a hole e through which passes the other rod. The ends of the rods can thus be adjusted back and forth to vary the distance between the sockets, in order to conform to the varying

distances between the thills of different vehicles. This also allows the device to yield in case the horse crowds the thills against anything.

The surfaces and bends in the rods and slides are curved, so as to present no angles for the reins to catch on.

I am aware of the patents to Smith, dated August 20, 1872; Jackson, dated March 24, 1885, and Field, dated September 23, 1890, and I do not claim as my invention anything shown or described in said patents.

My improvement is a specific one, and aims to provide an adjustable protector and one which will yield when the horse crowds against any object. This I accomplish by the sliding joint, which, though not new in itself, has never been used in a device of this kind and for this purpose, so far as I am aware.

Having thus described my invention, what I claim is—

1. A rein protector composed of two rods united by a sliding joint, and provided with end sockets, substantially as described.

2. A rein protector composed of two rods, each having a slide embracing the other rod, and having means for attaching it to the thills, substantially as described.

3. A rein protector composed of two rods, united by a sliding joint, and provided at their ends with sockets having perforated spring fingers, substantially as described.

4. The combination with the thills D provided with projecting screws d, of the rods A each having at one end the socket B, provided with perforated spring fingers b, and having at the other end the block E containing a hole through which the other rod passes.

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

EDWIN W. CRAINE.

Witnesses:

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