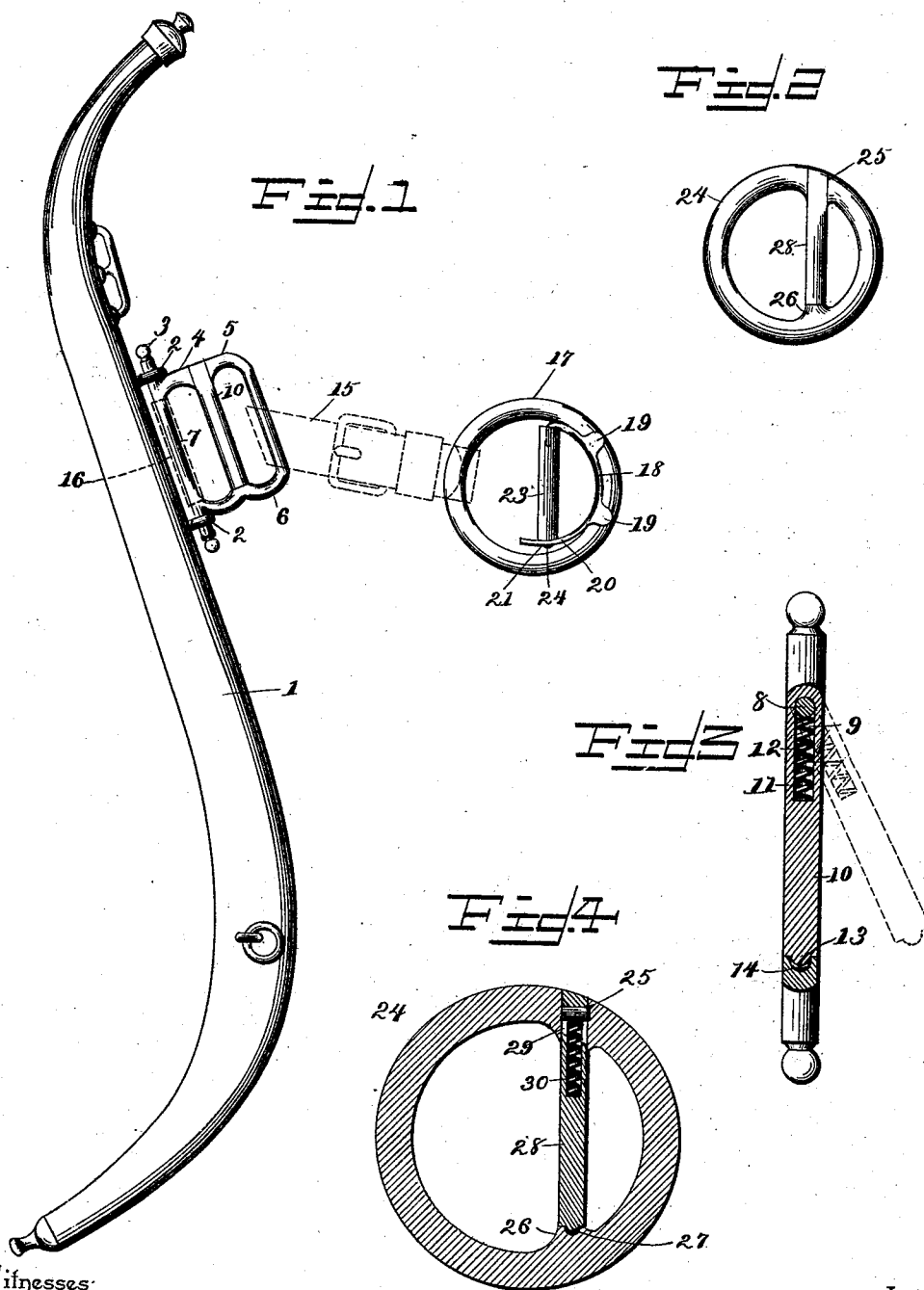


(No Model.)

M. C. FLACK.
LINE RING FOR HARNESS.

No. 509,026.

Patented Nov. 21, 1893.



Witnesses:

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UNITED STATES PATENT OFFICE.

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LINE-RING FOR HARNESS.

SPECIFICATION forming part of Letters Patent No. 509,026, dated November 21, 1893.

Application filed March 15, 1893. Serial No. 466,096. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER C. FLACK, a citizen of the United States, residing at Lake Geneva, in the county of Walworth and State of Wisconsin, have invented a new and useful Line-Ring for Harness, of which the following is a specification.

My invention relates to improvements in harness, and has particular reference to the guide rings employed on the hames, and to the spreader rings employed in double harness.

As is well known, the flat reins are now extensively used and are preferable for many reasons; and furthermore, that said reins are injured by becoming twisted, which twisting naturally occurs in rear of the rein guides. The reins being flat, and twisted first on one side and then on the other naturally the edges thereof are strained more than the intermediate portions and hence become turned, as it were, at the edges and rendered unfit and unsafe for use.

The objects of my invention are to so construct the guide rings employed at the hames, and also the guide rings employed in double harness, as spreaders so that they will prevent the twisting of the reins after the same have once been placed in position. This might readily be accomplished by a peculiar formation of the opening in the rings, and inasmuch as it is often necessary to withdraw the reins from the rings, it is essential that the openings in the rings be sufficiently large to permit of the ready passage of the buckles and other attachments of the reins.

With these objects in view, the invention consists in certain features of construction hereinafter specified and particularly pointed out in the claims.

Referring to the drawings: Figure 1 is an elevation of a hame section or a portion of a pair of hames, the same having a rein and rings therefor, all constructed in accordance with my invention. Fig. 2 is a modified construction of ring. Fig. 3 is a sectional view of that guide-ring employed at the side of the hames, the same being shown open. Fig. 4 is a sectional view of the modified construction of the ring shown in Fig. 2.

Like numerals indicate like parts.

1 designates a hame-section, and from the

side of the same projects a pair of vertically opposite eye bolts 2 in which is loosely mounted a pintle or trunnion 3, formed upon one side of a metal frame or ring 4, and beyond the ends thereof. The ring or frame may, if desired, be secured rigid with the hame section, but I prefer that the same should be pivoted, as shown. The ring or frame comprises, in the present instance, upper and lower end-bars 5 and 6, respectively, and inner and outer side-bars, 7 and 8, respectively, the trunnions being a continuation of the inner bar, 7. The upper end-bar 5, is at its center, reduced to form a bearing-portion 8, which passes through an elongated slot 9, formed in a vertical central tongue or swinging bar 10. The lower end of the slot 9 is formed with a counter-sink 11, and seated therein is a coil-spring 12, whose upper end bears against the bearing portion, and therefore exerts a tendency to press the tongue downward. The tongue is very little longer than the vertical width of the opening in the frame or ring, and therefore, when not otherwise influenced, the spring projects the lower end of the tongue below the edge of cross-bar 6 of the ring or frame. The lower extremity of the tongue has a slight protuberance or lug 13, and the same is designed to engage with a counter-sink or seat 14, formed in the center and at the inner side of the cross-bar 6. The seating of the lug in this cross-bar is accomplished by elevating the tongue 10 against the tension of the coiled spring 12. When once settled it will be seen that the bar is practically rigid and forms a dividing bar within the ring or frame whereby the latter is divided into two spaces or openings. It will be obvious that by elevating the tongue and swinging the same outward the opening in the ring is thus doubled in width and will readily permit of the passage therethrough of lines or reins having buckles and other accessories. In single harness, the line 15 passes between the inner bar 7 and the tongue, and in double harness the same, except the spread-rein which passes between the outer bar 8 and the tongue, as is shown in the present instance. If desired, a loose sleeve or ferrule 16 may be mounted upon the inner bar 7 or any of the other bars. This completes the construction of the guide bar employed at the hame, and I

will next proceed to describe the construction of the spreader ring. 17 designates the spreader-ring, and the same may be of ivory, metal, bone, or any other material. A curved sheet-metal plate 18, fits within and over a portion of the ring 17, the said plate being provided at its edges with a plurality of flanges or clips 19, arranged in pairs and bent to clasp the ring whereby the plate is secured rigidly thereon. The plate 18 is formed of spring-metal and beyond the lowermost clips 19 is curved inward out of its original line forming a spring-tongue 20, which has a perforation, 21, therein. The upper end of the plate 18 has hinged thereto, as at 22, a tongue or bar 23, whose lower end is provided with a lug 24, which by a depression of the tongue 20, may be brought into alignment with the perforation 21, and upon the liberation of said tongue may be engaged thereby so that the bar or tongue 23 is rigid and sub-divides the ring in the same manner as the bar or tongue 10 does the frame or ring 4. Of course, changes may be made in the manner of attaching the tongue to the ring as, for instance, in the modification which I have shown. The ring, 24, is therein shown as of metal provided with perforations and having a portion reduced forming bearing-portion 25, and at a point opposite the same provided with an internal enlargement 26, having counter-sink or seat 27. 28 designates a tongue which is provided with an elongated slot 29 that receives bearing-portion 25, and which has at its lower end a counter-sink, and seated therein a coiled-spring 30, which at its upper end, bears against the bearing-portion of the ring. A lug on the free end of the tongue or bar may be made to engage with the counter-sink in the enlargement 26, in a manner heretofore indicated.

From the foregoing description in connection with the drawings, it will be seen that I have provided a ring which, when the tongue or bar is in position, renders the opening in said ring so small as to prevent the turning of the reins or lines, and hence any twisting of the same whereby the reins or lines are preserved from being torn by reason of such twisting.

Having described my invention, what I claim is—

1. The herein described line guiding spread-

er-ring, the same having at one side a reduced bearing portion and in line therewith a counter-sink or seat, in combination with a tongue having an elongated slot loosely mounted on the reduced bearing-portion, a spring interposed between the end of the slot and the bearing-portion, and a lug on the free end of the tongue adapted to engage with the counter-sink in the ring, substantially as specified.

2. The combination with a hame, and a pair of eye bolts extending therefrom, of a frame or ring having end trunnions engaging with the eye-bolts, and an intermediate pivoted tongue adapted to close or sub-divide the frame, substantially as specified.

3. The combination with a hame, a pair of eye-bolts projecting therefrom and in vertical alignment, of a ring or frame having opposite trunnions at its inner corners, and its upper side between its ends reduced to form a bearing-portion, and its lower side provided with a counter-sink, a tongue having an elongated slot, whose lower end is provided with a lug, engaging with the countersink and a coiled-spring seated in the slot and at its upper end bearing against the bearing-portion, substantially as specified.

4. A harness-ring comprising a frame, a spring pressed tongue yieldingly pivoted at its end to one side thereof and extending there-across, and having a projection at its opposite end adapted to catch in an aperture in the frame, and a spring connected to the tongue for normally holding the same in engagement with the aperture, substantially as specified.

5. The frame, the tongue slotted at one end to loosely engage and reciprocate upon the same, and extending there-across, said tongue being provided at its outer free end with a lug for engaging an aperture in the frame, and a spring seated in the slot of the tongue and bearing against the frame to normally press the tongue in a yielding manner into engagement with said aperture, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MORTIMER C. FLACK.

Witnesses:

E. H. BROOKS,

CHAS. S. FRENCH.