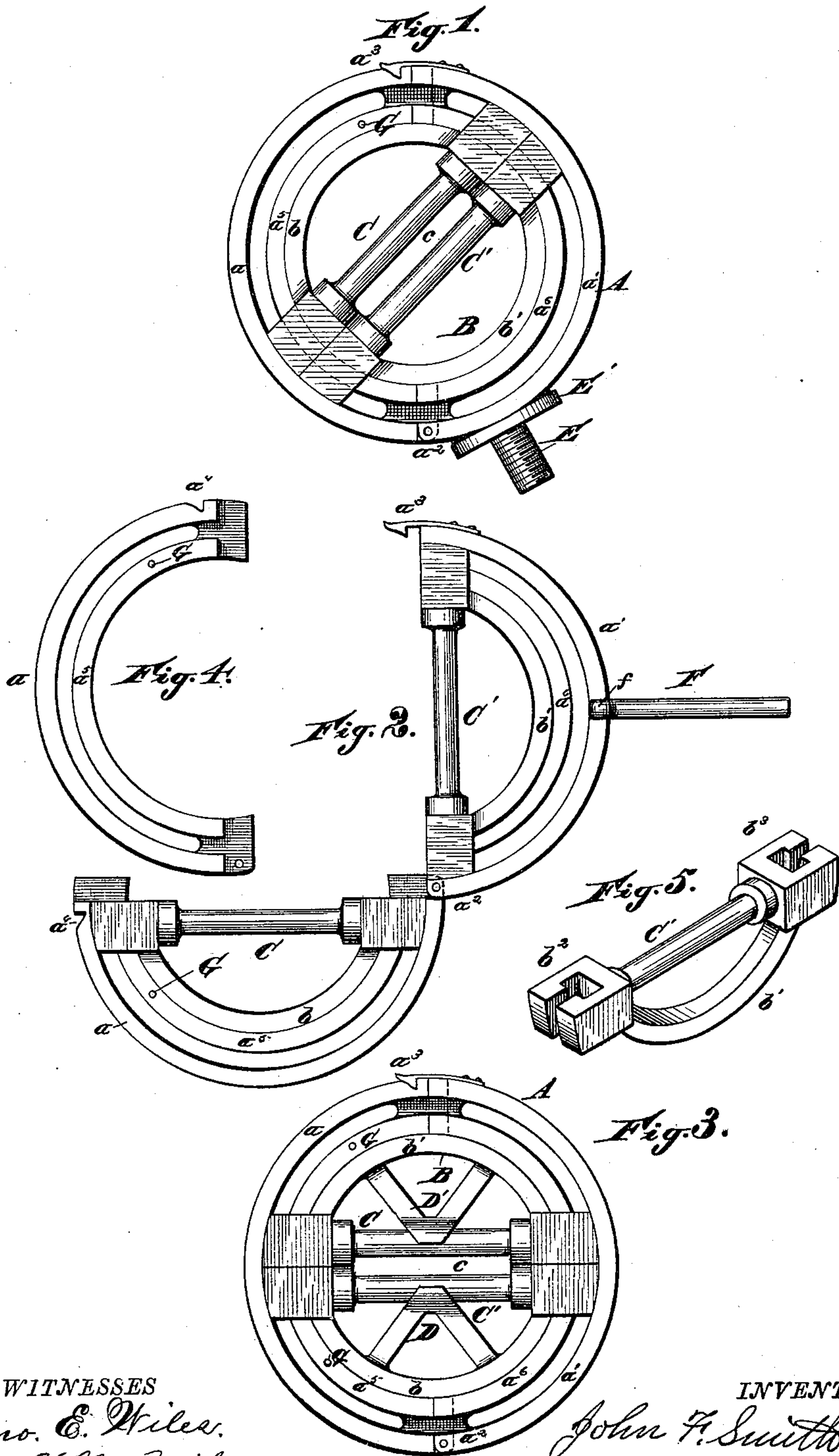


(No Model.)

J. F. SMITH.  
HARNESS RING.

No. 338,568.

Patented Mar. 23, 1886.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JOHN F. SMITH, OF PONTIAC, MICHIGAN.

## HARNESS-RING.

SPECIFICATION forming part of Letters Patent No. 338,568, dated March 23, 1886.

Application filed November 12, 1885. Serial No. 182,584. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. SMITH, of Pontiac, county of Oakland, State of Michigan, have invented a new and useful Improvement in Harness-Rings; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to certain new and useful improvements in harness-rings adapted for various uses thereon—as, for instance, upon the back pad or band, the hames, the martingales, and other locations—the ring embodying the essential features of my invention being capable of these various uses by but slight modifications for attaching the same to the different parts of the harness desired.

The objects of my invention are to provide a harness-ring provided with an interior movable ring free to oscillate about the inner surface of the outer ring, to make said rings so as to be opened for the engagement of a strap or line, and to provide the inner ring with revolving spindles or spools to receive the strap or line. My object therefore contemplates the general construction and arrangements of devices and appliances, as hereinafter more particularly described, and pointed out in the claims, reference also being had to the accompanying drawings, which form a part of this specification.

In the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 shows the same construction opened. Fig. 3 is a modification. Fig. 4 is a separate view of one of the parts of the outer ring, and Fig. 5 is a separate view of one of the parts of the inner ring.

I carry out my invention as follows: A in the drawings represents an outer ring, constructed of two halves or semicircles,  $a$   $a'$ , hinged in any suitable manner, as shown at  $a^2$ , and made to close together and be held together in any proper manner opposite their hinged extremities. A pawl or latch,  $a^3$ , may be employed for a fastening, the same engaging in a notch,  $a^4$ , in the half opposite to that on which the latch is engaged; but any desired fastening may be employed. The parts  $a$   $a'$  of

the outer ring are constructed with circular flanges or tracks  $a^5$   $a^6$ , preferably extended laterally, so as to form a track on both sides of said semicircular parts, and leaving a smooth inner periphery for the travel of the inner ring.

B represents an inner ring, constructed of two parts,  $b$   $b'$ , each consisting of an arc of a circle provided at its extremities with loops or guides  $b^2$   $b^3$ , constructed and arranged to receive the track  $a^5$   $a^6$  of the outer circle and travel thereon. When the two parts  $b$   $b'$  are both engaged in place on the outer ring, and its parts  $a$   $a'$  are closed together, the two halves of the inner ring will necessarily lie in juxtaposition, as shown in Figs. 1 and 3, and will be permitted to travel freely about the entire circle upon the track  $a^5$   $a^6$ .

C and C' represent spindles or spools, one of which is rotatably connected with each of the inner semicircles,  $b$   $b'$ , and toward the ends thereof, but arranged to permit the introduction of a line or strap between the two adjacent spindles, as indicated in the open space  $c$ , Figs. 1 and 3. When the line is engaged in said space between said spindles, it is evident that all friction will be overcome, as the spindles are so mounted as to be free to revolve, while, also, a circular movement is permitted by the engagement of the inner upon the outer circle, as already described. The spindles may be provided, if desired, with braces D D', engaged upon the arc of the inner semicircle, and arranged to bear against or close upon the spindle, so as to prevent the spindle from warping or being bent out of shape, but without preventing the free revolution of the spindle itself.

For certain uses, as in a martingale, the device may have a plain periphery, as shown in Fig. 3. For engagement with a back-pad, the outer ring may be provided with a screw-cut stem, E, and collar E'; or, for engagement with a hame, it may be provided with a stem, F, to be passed through the hame and riveted thereupon, the inner end of said stem F being so engaged with the outer ring as to permit of its turning laterally, the outer ring being cut away to permit the inner end of the stem to be clipped thereon, said stem being provided with a clip for this purpose at its inner end, as shown at  $f$ .



G is a stop upon the track of the outer ring to prevent the inner ring from traveling round and round the circle, and thereby twisting the strap or line. By the use of this device the twisting of the line or strap is obviated entirely when it has been once engaged between the spindles, while the inner ring is free to rotate, permitting a free movement of the strap or line, occasioning much less wear of the harness where my improved rings are used, and allowing a yielding movement, which is found very desirable.

I claim—

1. In a harness-ring, the combination of an outer ring, provided with a circular track or guideway, with a rotatable inner ring having attached oppositely-arranged loops or guides engaging said circular track or guideway, substantially as described.

2. In a harness-ring, the combination of an outer ring comprising two hinged sections, each having a curved track or guideway, and provided with a fastening, with an inner ring composed of circular sections, each having at its extremities loops or guides engaging the track or guideway of the outer ring-sections, substantially as described.

3. In a harness-ring, the combination, with an outer ring, of an inner ring arranged to travel about the inner surface of said outer ring, said inner ring provided with rotatable spindles, substantially as described.

4. The combination, with an outer ring constructed with a track, of an inner ring arranged to travel about the inner surface of said outer

ring upon said track, said inner ring provided with rotatable spindles, substantially as described.

5. The combination, with an outer ring constructed in two semicircular parts, of an inner ring constructed with two rotatable spindles, substantially as described.

6. The combination, with an outer ring constructed of two parts hinged together, of an inner ring provided with rotatable spindles, and arranged to travel about the inner surface of said outer ring, said parts of the outer ring provided with means to connect their free ends when closed together, substantially as described.

7. The combination, with an outer ring provided with means of connection to a harness, of an inner ring arranged to travel about the inner surface of said outer ring, said inner ring provided with rotatable spindles, substantially as described.

8. The combination, with a ring, of rotatable spindles engaged therewith, substantially as and in the manner described.

9. The combination, with an outer ring, of an inner ring movably connected therewith, said outer ring provided with a stem having a movable connection therewith, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN F. SMITH.

Witnesses:

N. S. WRIGHT,

M. B. O'DOHERTY.