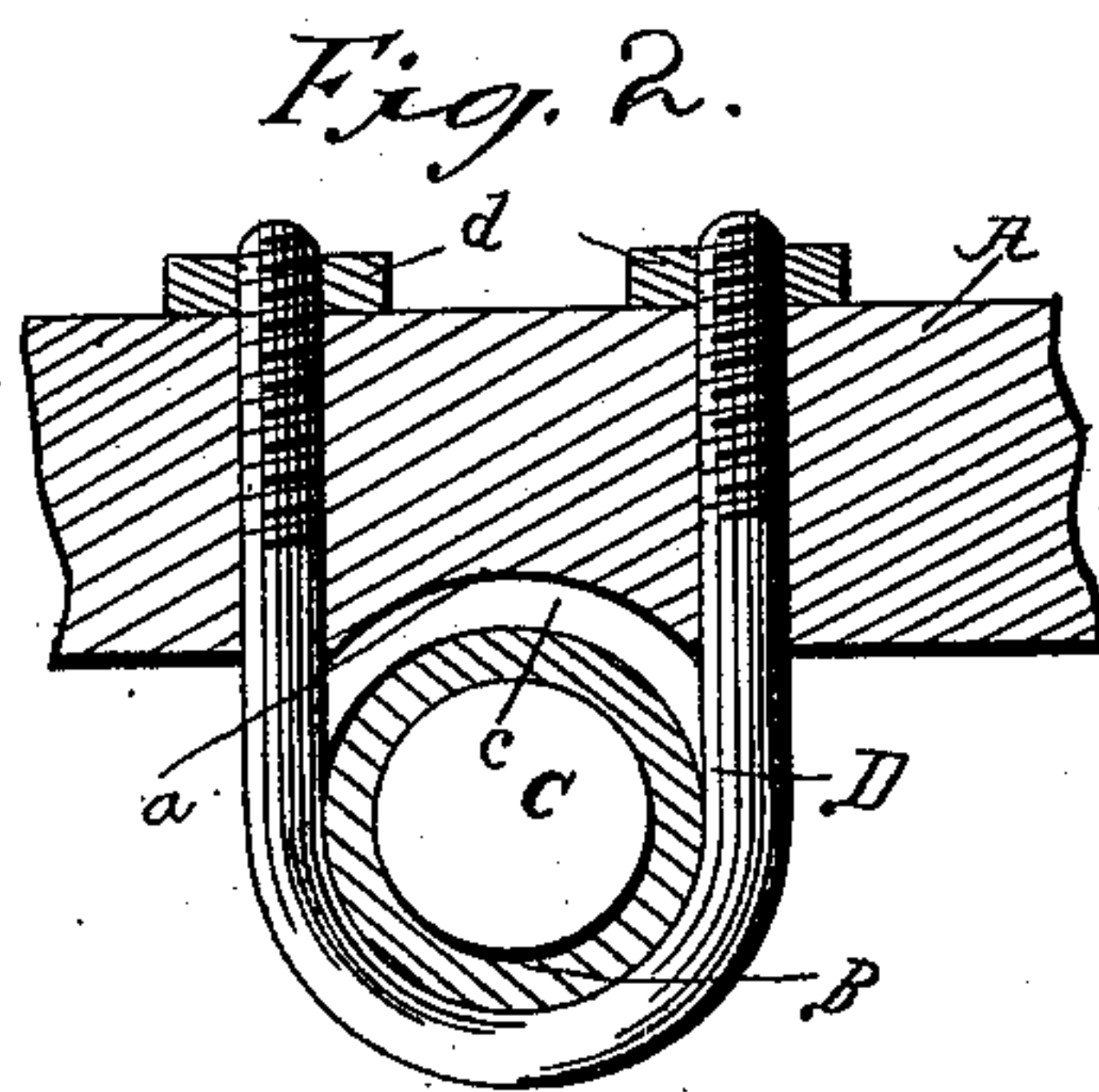
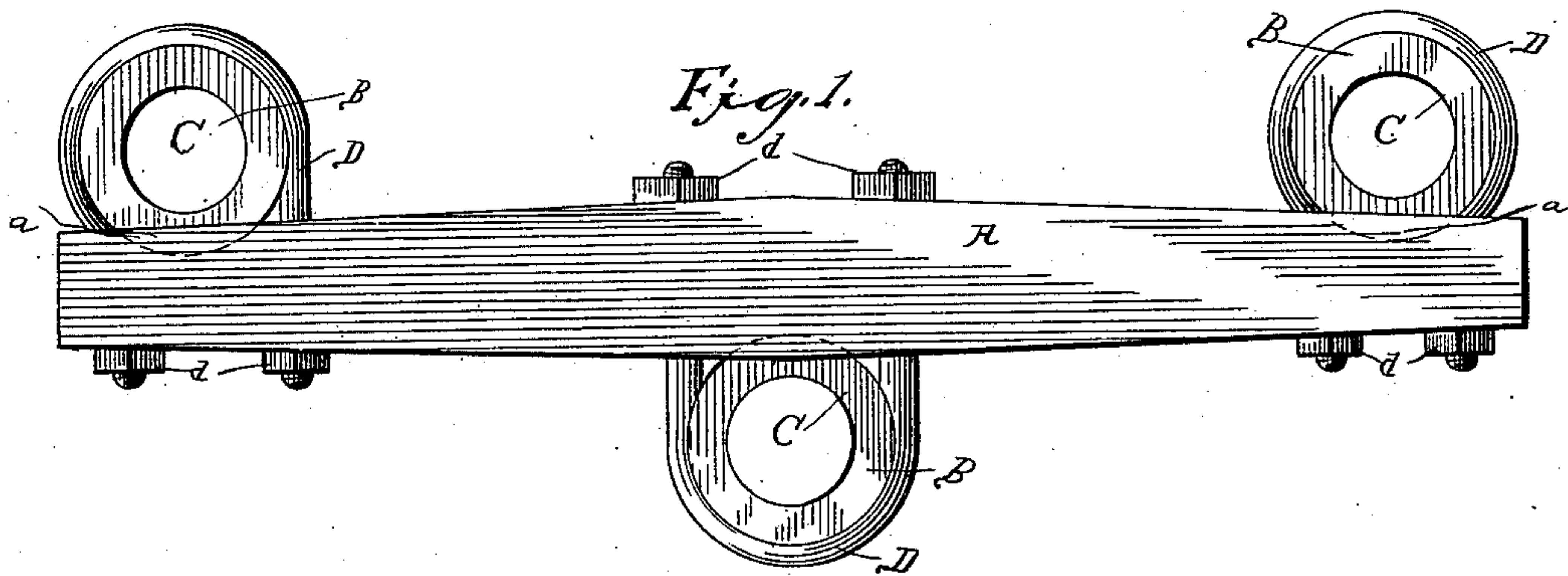


(No Model.)

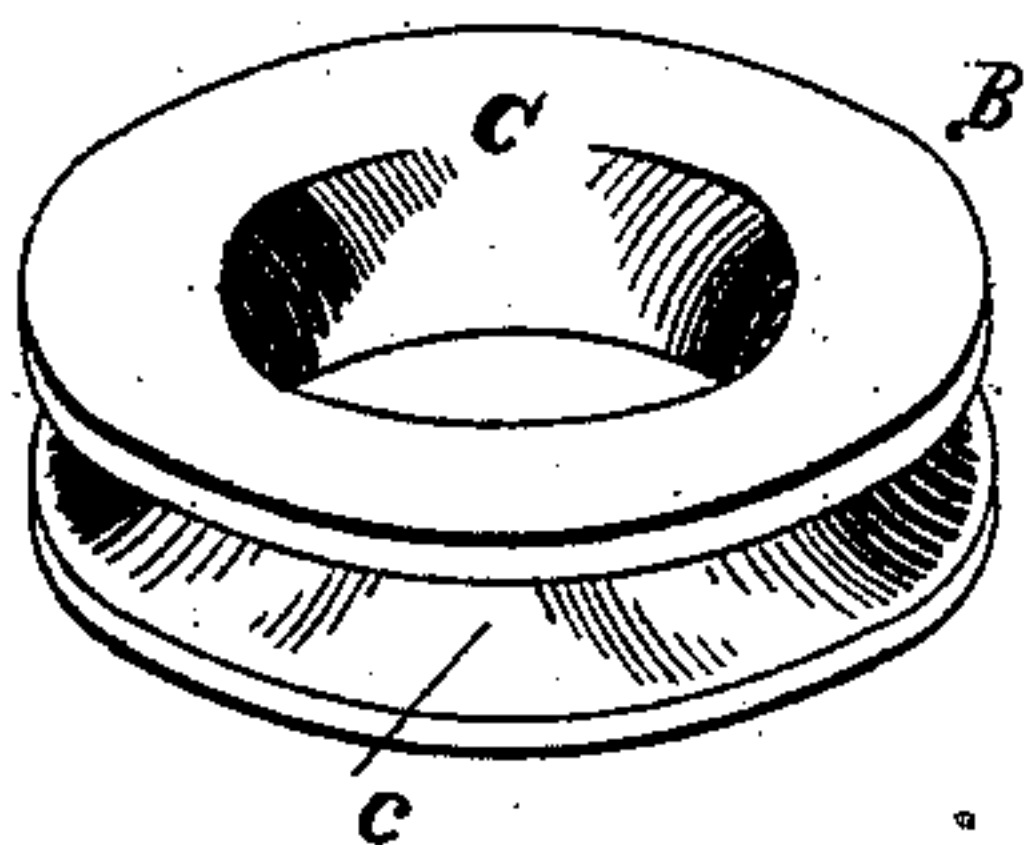
R. L. COX.  
WHIFFLETREE.

No. 362,574.

Patented May 10, 1887.



*Fig. 3.*



Witnesses  
*Henry G. Dietrich*

*E. G. Siggers*

Inventor  
*Richard L. Cox*

By his Attorneys

*C. A. Howdley*

# UNITED STATES PATENT OFFICE.

RICHARD LANIER COX, OF GREENVILLE, NORTH CAROLINA.

## WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 362,574, dated May 10, 1887.

Application filed February 10, 1887. Serial No. 227,188. (No model.)

*To all, whom it may concern:*

Be it known that I, RICHARD LANIER COX, a citizen of the United States, residing at Greenville, in the county of Pitt and State of North Carolina, have invented a new and useful Improvement in Whiffletrees, of which the following is a specification.

The invention relates to improvements in whiffletrees, the objects being to provide a device of this character of stronger construction than usual, and in which the loops for the attachment of the traces and of the tree itself will stand very much more wear than the loops of ordinary construction.

The invention consists, mainly, in making the whiffletree-loops of an interior metal ring and an exterior staple, which passes around one side of the ring, whence its ends pass through openings in the whiffletree and are tapped, and have nuts engaged upon them on the opposite side thereof.

The invention further consists in certain slight details of construction and arrangement hereinafter described, and pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a plan view of the improved whiffletree with loops attached, the end loops having slight modifications of the central loops. Fig. 2 is a central longitudinal section of one end of the whiffletree, showing one of the recesses into which the rings are inserted, the ring being held out of the recess. Fig. 3 is a perspective view of one of the rings that form part of a loop, detached.

Referring to the drawings by letter, A designates the shaft of a whiffletree, having at equal distances from its ends on one edge and centrally on the other edge the longitudinal recesses *a a*, made on arcs of circles of proper radii.

B are the loops composed of the interior metal rings, C, and the exterior metal staples, D. The rings C have grooved peripheries, the grooves *c* being semicircular in cross-section, and the edge of each ring fits into the corresponding recess *a* in the shaft A of the whiffletree, the ring entering the recess deep enough to support and stay the ring vertically. The staples D are rounded centrally to fit snugly into the grooves of the corresponding

links, and their ends, after passing through suitable transverse openings in the axial plane of the whiffletree, are tapped on the opposite side thereof from the rings, and engaged by nuts *d*, by means of which the staples are secured tightly on the rings, and the latter are driven home in the recesses *a a*.

Three slight modifications of the staples are shown in the drawings. In one the bevel of the staple is not more than semicircular, so that it surrounds only one-half of the ring. In the second, the outer part of the bend surrounds the ring on that side down to the edge of the shaft A. In the third, the bend surrounds all parts of the ring outside of the recess *a*.

The last would probably seem to be the preferable modification, as it binds the staple and ring more firmly together. The first modification would probably, however, force the ring more firmly into the recess and stay it more strongly in a vertical direction.

The advantages of the invention are as follows: The loops are more firmly bound to the shaft of the whiffletree than in the usual construction. The loops are by means of the recesses and nuts stayed and supported vertically, and should the rings become worn at their points of junction with the hooks or other devices to which they are attached, the staples can be loosened and the rings partially turned therein, after which the staples are again tightened, thus giving the loops a very great resistance against wear and tear, so that they will outlast a number of ordinary loops.

Having thus described my invention, I claim—

1. A whiffletree composed of a shaft and loops situated at the central part and ends of the shaft, which loops are each composed of a central ring and a staple bent around the outer part of the edge of said ring, and with its end passing through suitable openings in the shaft, tapped on the side thereof opposite the ring, and their tapped portions engaged by nuts, substantially as specified.

2. A whiffletree composed of a shaft and loops situated at the usual points, which loops are each composed of a central ring provided around its periphery with a groove, and a staple bent around the ring, one side fitting accu-



rately in the groove, and with its tapped ends passing through suitable openings in the shaft and engaged by nuts on the edge thereof opposite the ring, substantially as specified.

- 5 3. In a whiffletree, the combination of the shaft provided on its edges, at suitable points, with longitudinal recesses made on the arcs of circles, and the loops, each composed of an internal ring, with a portion of its periphery fitting accurately within one of said recesses,  
10 and a staple surrounding one side of the ring, and with its tapped end passing through proper openings in the shaft and engaged by nuts on the edge opposite the rings, substan-  
15 tially as specified.

4. In a whiffletree, the combination, with the shaft-recesses, substantially as described, of the loops, each composed of a circumferentially-grooved ring, and a staple fitting into said groove and bent around the ring, so  
20 as to cover all parts of the periphery except the portion thereof fitting into one of the recesses of the shaft, substantially as specified.

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

RICHARD LANIER COX.

Witnesses:

W. R. WHICHARD,  
E. H. MOYE, Jr.