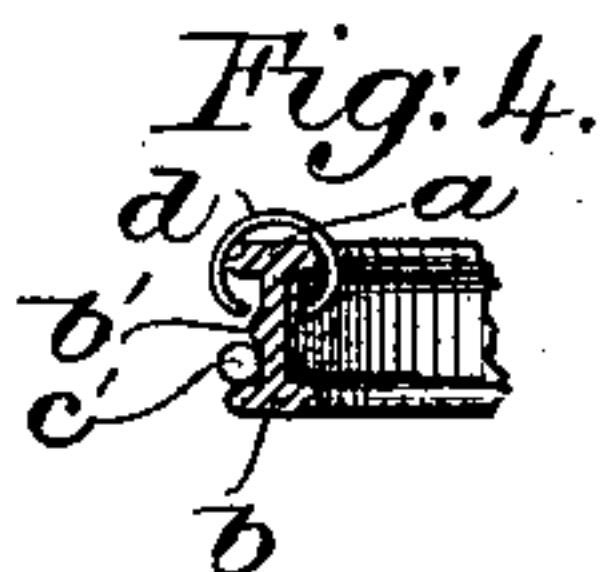
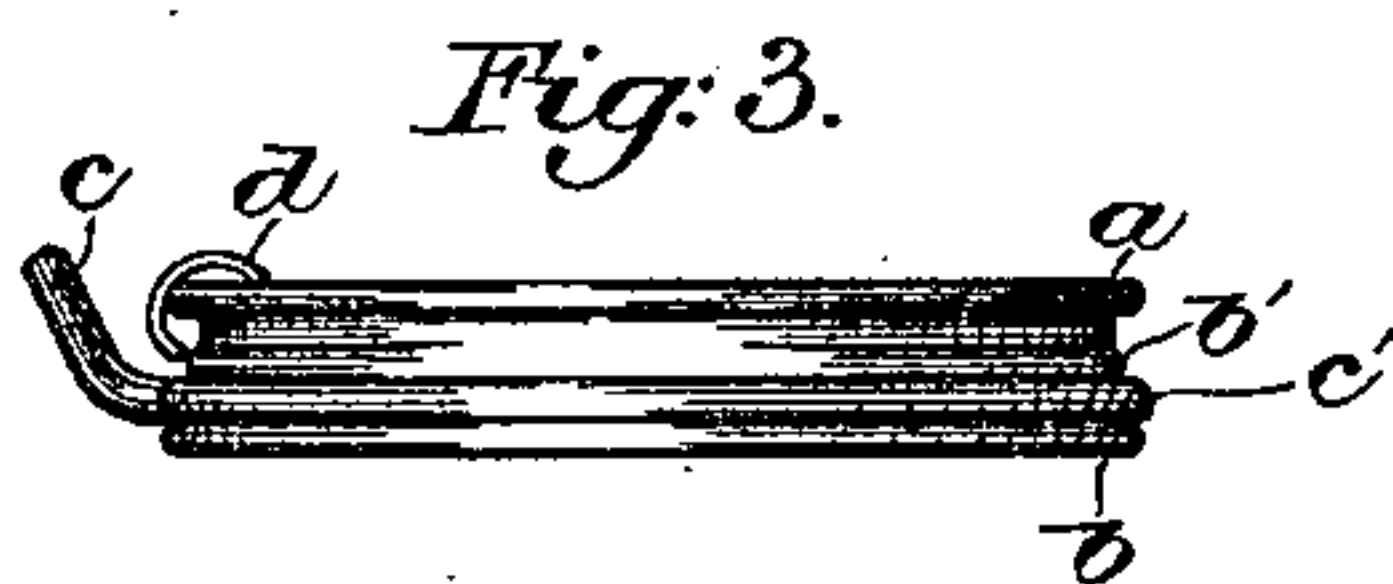


(No Model.)

C. E. TROWBRIDGE.  
SPINNING RING.

No. 438,660.

Patented Oct. 21, 1890.



Witnesses:

Fred. S. Greenleaf  
Frank L. Emery-

Inventor:

Charles E. Trowbridge,  
by Leroy & Gregory  
attys.

# UNITED STATES PATENT OFFICE.

CHARLES E. TROWBRIDGE, OF WHITINSVILLE, MASSACHUSETTS, ASSIGNOR  
TO THE WHITINSVILLE SPINNING RING COMPANY, OF SAME PLACE.

## SPINNING-RING.

SPECIFICATION forming part of Letters Patent No. 438,660, dated October 21, 1890.

Application filed April 8, 1890. Serial No. 347,042. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. TROWBRIDGE, of Whitinsville, county of Worcester, State of Massachusetts, have invented an Improvement in Spinning-Rings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention, relating to spinning-rings, has for its object to combine with a spinning-ring having an annular groove in its body a traveler-clearer having a portion inclined in the direction of the motion of the traveler on  
15 the race of the ring, the traveler-clearer having a spring-like portion to clasp the ring in its annular grooved part.

I have shown my invention as applied to that class of ring known as "double race," it  
20 having an annular body with a raceway at each end thereof. The clearer shown consists of a piece of spring-wire bent to substantially surround the body of the ring, one end of the ring being inclined upwardly near  
25 the line of progress of the traveler, as clearly shown in application Serial No. 347,041. To retain the clearer in position upon the body of the ring, the latter has an annular projection which, as shown, is located substantially  
30 midway between the raceways, thus leaving a groove both above and below said annular projection to receive the spring part of the clearer, the said projection preventing the clearer rising from its true working position.

35 One part of my invention consists in a spinning-ring having an annular groove or depression at its outer side, combined with a traveler-clearer consisting of a portion inclined in the direction of the motion of the traveler on the race and having a spring-like  
40 portion to clasp the ring in the said annular groove to operate as will be described; also, in a ring composed of a body having raceways at its opposite ends and an annular projection between the said raceways, combined  
45 with a traveler-clearer consisting of a portion inclined in the direction of the motion of the traveler on the race, and having a spring-like portion to clasp the ring between the said  
50 annular projection and one of the races thereof, as will be described.

Figure 1 in side elevation represents a ring embodying my invention with a clearer thereon. Fig. 2 is a section through one side of the ring. Fig. 3 is a view of the ring shown  
55 in Fig. 1, looking at the same from the right; and Fig. 4 is a modification showing a section of the ring wherein the body is provided with an annular projection at one side.

Referring to the drawings, the body of the  
60 ring has at each end a race, as *a b*, on which may run any usual traveler *d*, and substantially midway the said raceways the ring is provided with an annular projection *b'*, leaving a groove above and below the same into  
65 which a part of the traveler-clearer may be sprung, according to which end of the ring is used uppermost.

The traveler-clearer herein shown consists of a piece of wire-like material *c*, inclined up-  
70 wardly in the direction of the movement of the traveler on the race of the ring to operate as described in my application Serial No. 347,041, the said upwardly-inclined portion being part of a spring-like clasp *c'*, which par-  
75 tially embraces the ring entering the groove thereof between the projection and the under race upon which the traveler is not running.

The ring will be held in any usual ring-holder, which latter will be attached to the  
80 rail in any usual manner.

The annular projection *b'* may be made upon the outer and inner sides of the body of the ring, as in Fig. 2, or may be solely upon the outer side of the ring, as in Fig. 4, the  
85 said annular projection, whether upon one or both sides of the ring, in addition to keeping the traveler-clearer in proper position with relation to the ring, also serving to strengthen the ring, so that the body portion thereof is  
90 less liable to spring when hardening.

I claim—

1. A spinning-ring having an annular groove or depression at its outer side, combined with a traveler-clearer consisting of a  
95 portion inclined in the direction of the motion of the traveler on the race, and having a spring-like portion to clasp the ring in the said annular groove, to operate substantially as described.

2. A ring composed of a body having raceways at its opposite ends and an annular pro-  
100

jection between the said raceways, combined  
with a traveler-clearer consisting of a portion  
inclined in the direction of the motion of the  
traveler on the race, and having a spring-like  
5 portion to clasp the ring between the said an-  
nular projection and one of the races thereof,  
substantially as described.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

CHARLES E. TROWBRIDGE.

Witnesses:

WILLIAM H. WHITIN,  
ARTHUR F. WHITIN.