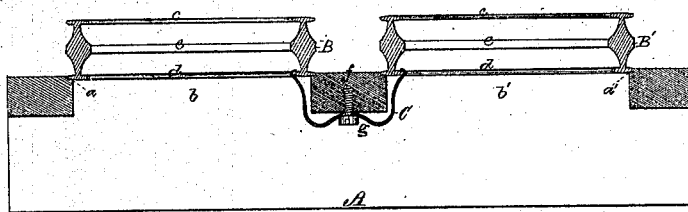


C. E. Trowbridge,
Spinning Ring.
No. 112655 *Patented Mar. 14. 1871.*

Fig. 1.



Witnesses
L. N. Piper
L. N. Moller

C. E. Trowbridge
by his attorney
N. W. Hedy

UNITED STATES PATENT OFFICE.

CHARLES EDWARD TROWBRIDGE, OF WHITINSVILLE, MASSACHUSETTS.

IMPROVEMENT IN FASTENERS FOR SPINNING-RINGS.

Specification forming part of Letters Patent No. **112,655**, dated March 14, 1871.

To all persons to whom these presents may come:

Be it known that I, CHARLES EDWARD TROWBRIDGE, of Whitinsville, in the county of Worcester and State of Massachusetts, have made a new and useful invention having reference to Ring and Traveler Spinning-Frames; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 denotes a longitudinal and vertical section of two "duplex-race" rings and a portion of their supporting-rail with my invention applied thereto, such race and rings being well-known parts of a "ring and traveler spinning frame" or machine.

The nature of such invention or improvement, as it may be termed, consists in the arrangement of a spring-catch or ring-fastener on the under side of the ring-rail, so as, when in engagement with the ring, to extend up within the opening of the ring-rail and catch or take upon the inner flange of the lower race of the ring, when such ring may be a duplex-race ring, or in a rabbet or notch in the ring, when what is termed a "single-race ring," in order to hold or aid in holding the ring in place on the rail or in the circular rabbet or socket for the reception of such ring.

In order to hold the duplex-race ring in its socket it has been customary heretofore to accomplish the same by means of one or more screws, or such and washers arranged on the upper surface of the rail, and close to and so as to lap on or over the outer flange of the lower race of the ring. On such holding devices, arranged on the upper surface of the rail and extended above such, filaments are liable to gather and impede the traveler while in operation. Besides, they are obstacles in the way of wiping the top of the rail in order to cleanse it of oil or dust.

It will readily be seen that by arranging the ring-fastening underneath the ring-rail, and so constructing and applying such fastening that it may be caused to catch or take upon the inner flange of the lower race of the duplex-race ring, all danger of collecting filaments on the fastener, and the evil consequences

thereof, will be avoided, and the upper surface of the ring will be free from any projections necessary for securing the ring in its socket.

My improvement is also applicable to a spinning-ring when having a single race, and provided with either a circular or an eccentric shank to fit into a socket in the rail, or into another or eccentric ring to enter the socket of the rail, as in such case the fastener will take or catch upon the circular shoulder or rabbet usually below the inner flange of the race. When applied to a shanked ring the improvement saves the necessity of one or more clamp-screws inserted horizontally in the rail for the purpose of holding the ring in place in its socket. It also saves the necessity of splitting the eccentric annular carrier of the ring, in order to effect, by means of a clamp-screw, the retraction of it and the ring in place in the socket of the ring-rail.

In the drawing, A denotes the ring-rail as provided with duplex-race rings B B', resting in sockets or circular rabbets *a a'*, made in the top of the rail and around the spindle-openings *b b'*, which go down through the rail. Each duplex-race ring has two annular races, *c d*, united by a connection, *e*.

The ring-fastener is shown at C as arranged between the two openings *b b'*, and underneath the rail or its top part *f*. Such ring-fastener, as shown, is constructed as an elastic spring-latch to extend up within the opening of the rail and take or catch upon the inner flange of the lower race of the ring.

The fastener may be fixed to the rail by a screw, *g*, or other proper connection; or it may be simply an elastic yoke, applied so as to embrace the inner flanges of the lower races of two next adjacent rings, all as represented. I usually employ two fasteners to each ring-socket; but, if desirable, any other suitable number may be used.

When made as represented—viz., as elastic catches, of sheet steel or metal—they should be formed so as to enable the ring to be readily engaged with or disengaged from them by an operative or attendant on the machine. They, however, when in engagement with the ring, should hold it in place in its socket with

sufficient tenacity or power to prevent displacement of it while the traveler may be in operation.

I claim—

The spring-catch or ring-fastener arranged on the under side of or underneath the ring-rail, and extended up within the spindle-opening thereof, and constructed substantially in the manner described, so as to enable such

fastener to catch or take upon the inner flange of the lower race of the ring, or upon a shoulder or its equivalent made in or on the ring; all substantially as set forth.

CHARLES EDWARD TROWBRIDGE.

Witnesses:

R. H. EDDY,

FRANK H. I. HERSEY.