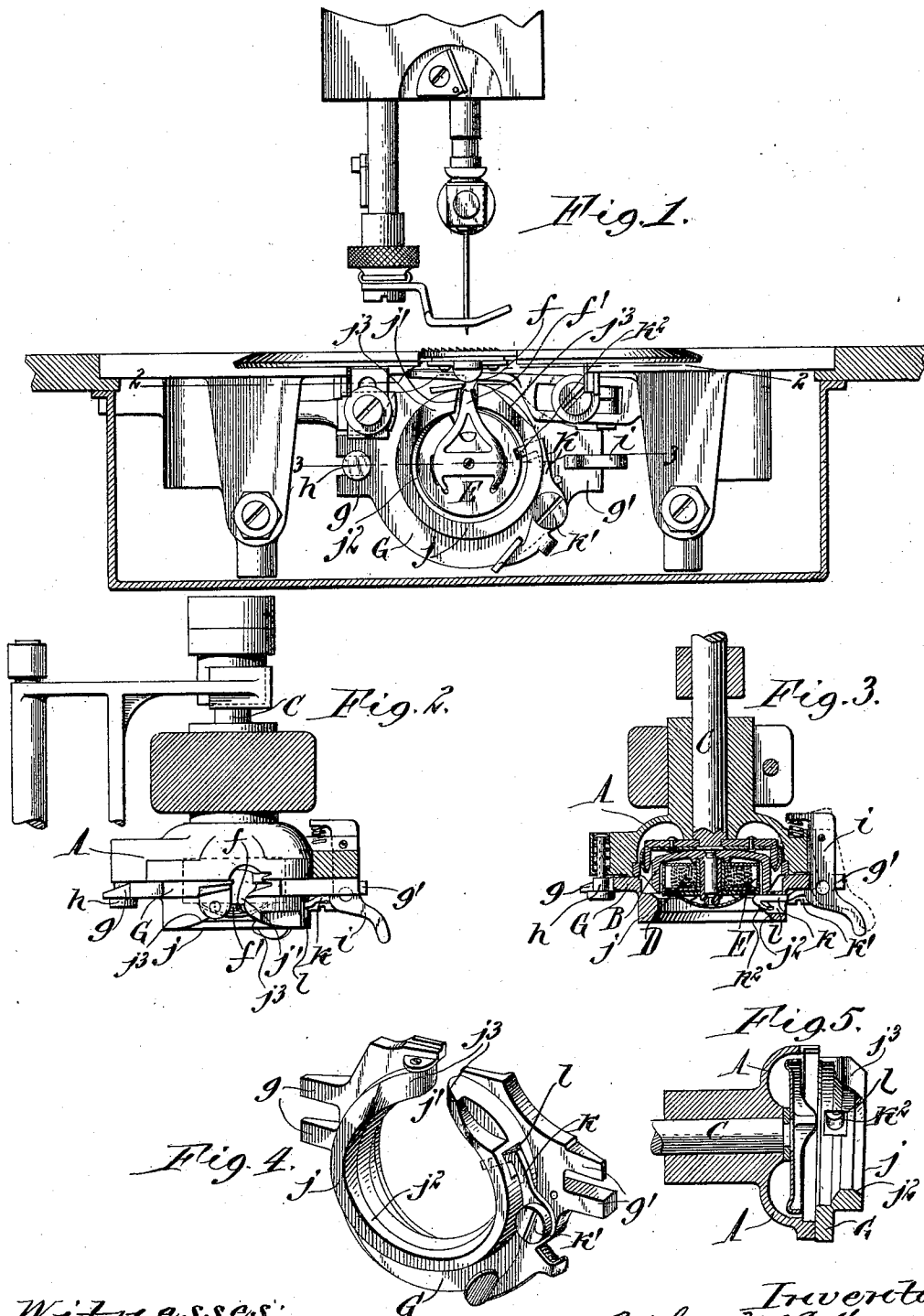


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SHUTTLE RACE COVER.
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983,739.

Patented Feb. 7, 1911.



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SHUTTLE-RACE COVER.

983,739.

Specification of Letters Patent.

Patented Feb. 7, 1911.

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To all whom it may concern:

Be it known that I, MICHAEL McCaffrey, a citizen of the United States, residing at Tonawanda, in the county of Erie and State of New York, have invented a new and useful Improvement in Shuttle-Race Covers, of which the following is a specification.

This invention relates to the covers of shuttle-races containing rotary shuttles. With such covers, as ordinarily constructed, difficulty is experienced in inserting the bobbin-case in the shuttle, and careless or unsteady persons are liable to insert the same improperly, in which case the needle is broken.

One of the objects of my invention is to improve the construction of the cover with a view of facilitating the insertion of the bobbin-case and guiding it into its proper position relative to the usual top-opening of the cover, in the act of inserting it, thus enabling this to be properly done with comparatively little care or attention on the part of the operator.

A further object of the invention is to increase the strength and durability of the shuttle-race cover.

In the accompanying drawings: Figure 1 is a transverse section of a sewing machine embodying the invention, the plane of the section being immediately in front of the shuttle-race cover. Figs. 2 and 3 are horizontal sections on lines 2—2 and 3—3, respectively. Fig. 4 is a perspective view of the cover. Fig. 5 is a vertical longitudinal section of the shuttle-race casing and the cover, omitting the shuttle.

Similar letters of reference indicate corresponding parts throughout the several views.

A indicates the shuttle race, B the shuttle, C the shuttle-shaft, D the bobbin, E the bobbin-case, *f* the lip of the bobbin case and *f*¹ the tension spring thereof. These elements form no part of my invention and may be of any suitable or well known construction.

G indicates the shuttle-race cover which may be removably attached to the shuttle-race by any suitable means. In the construction shown, it is provided at opposite sides with the customary slotted lugs *g*, *g*¹, the lug *g* interlocking with the usual headed pin *h* carried by the shuttle-race and the

other lug *g*¹ interlocking with the usual latch *i* pivoted to the shuttle-race.

The shuttle-race cover is of the usual circular or ring-like form and provided on its outer side with a raised annular mouth or rim *j* through which the bobbin and its case are introduced into the shuttle. In the top of the cover and its rim *j* is the customary opening *j*¹ which receives the lip *f* and tension spring *f*¹ of the bobbin-case.

Compared with the shuttle-race covers hitherto in use, the rim *j* of my improved cover is considerably deeper, so that the bobbin case can not reach its proper place in the shuttle unless its lip and tension spring are brought into register with the top-opening *j*¹ of the rim. The face of the rim *j* is flared or beveled at its inner edge, as shown at *j*², to facilitate the insertion of the bobbin-case. In order to guide or direct the lip and tension spring of the bobbin-case into the opening *j*¹, the upper portions of the rim-face are beveled or inclined toward said opening, as shown at *j*³, these inclines receding gradually from the highest or most salient portion of the rim to, or nearly to, the face of the cover-body G. By this improved construction, in inserting the bobbin-case, it is only necessary to bring its lip and tension spring approximately in line with the rim-opening *j*¹, the lip being directed into the opening by one or the other of the inclines or beveled faces *j*³. The proper insertion of the bobbin-case is thus insured without special care or attention on the part of the operator, it having been found in practice that the inclines *j*³ in conjunction with the comparatively deep construction of the rim practically compel inexperienced and unsteady or elderly persons to properly insert the bobbin-case.

k indicates a suitable locking device or catch for holding the bobbin-case in the shuttle. The preferred device shown in the drawings consists of a spring-pressed latch pivoted at *k*¹ to the face of the shuttle-race cover and having a beveled nose *k*² which is deflected aside by the bobbin-case in inserting it and automatically overlaps the case when the latter reaches its proper place. The nose of this latch passes through a radial opening *l* in the side of the rim *j*. This opening does not extend outwardly to the face of the rim but terminates short thereof, leaving a portion of the rim solid at this

point, correspondingly strengthening it and rendering it less liable to break at said opening. This construction affords the further advantage of not confusing a new operator, because the beveled nose of the catch is largely concealed; whereas in the shuttle-race covers heretofore employed, the catch was wholly exposed and therefore confusing to such operators.

While affording the several advantages hereinbefore described, this improved shuttle-race cover can be produced at practically the same cost as the covers now commonly in use.

I claim as my invention:

1. A shuttle-race cover having a raised annular rim provided with an opening for the lip and tension spring of a bobbin-case, the face of the rim being provided with an incline which leads to said opening and the outer end of which terminates at said face.

2. A shuttle-race cover having a raised annular rim provided at its top with an opening for the lip and tension spring of a bobbin-case, the rim being integral with the cover and having a flared mouth and its face having inclines arranged on opposite sides of said opening and leading thereto, the outer ends of said inclines terminating at the face of the rim.

3. A shuttle-race cover having a raised annular rim, said rim being provided in its wall with an opening extending radially therethrough but terminating short of the face of the rim, and a bobbin-case latch extending through said opening.

Witness my hand this 13th day of September, 1909.

MICHAEL McCAFFREY.

Witnesses:

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