W. G. WILSON & G. S. DARLING.

Shuttle Race for Sewing Machines.

No. 233,588. Patented Oct. 19, 1880.

Fig. 1.

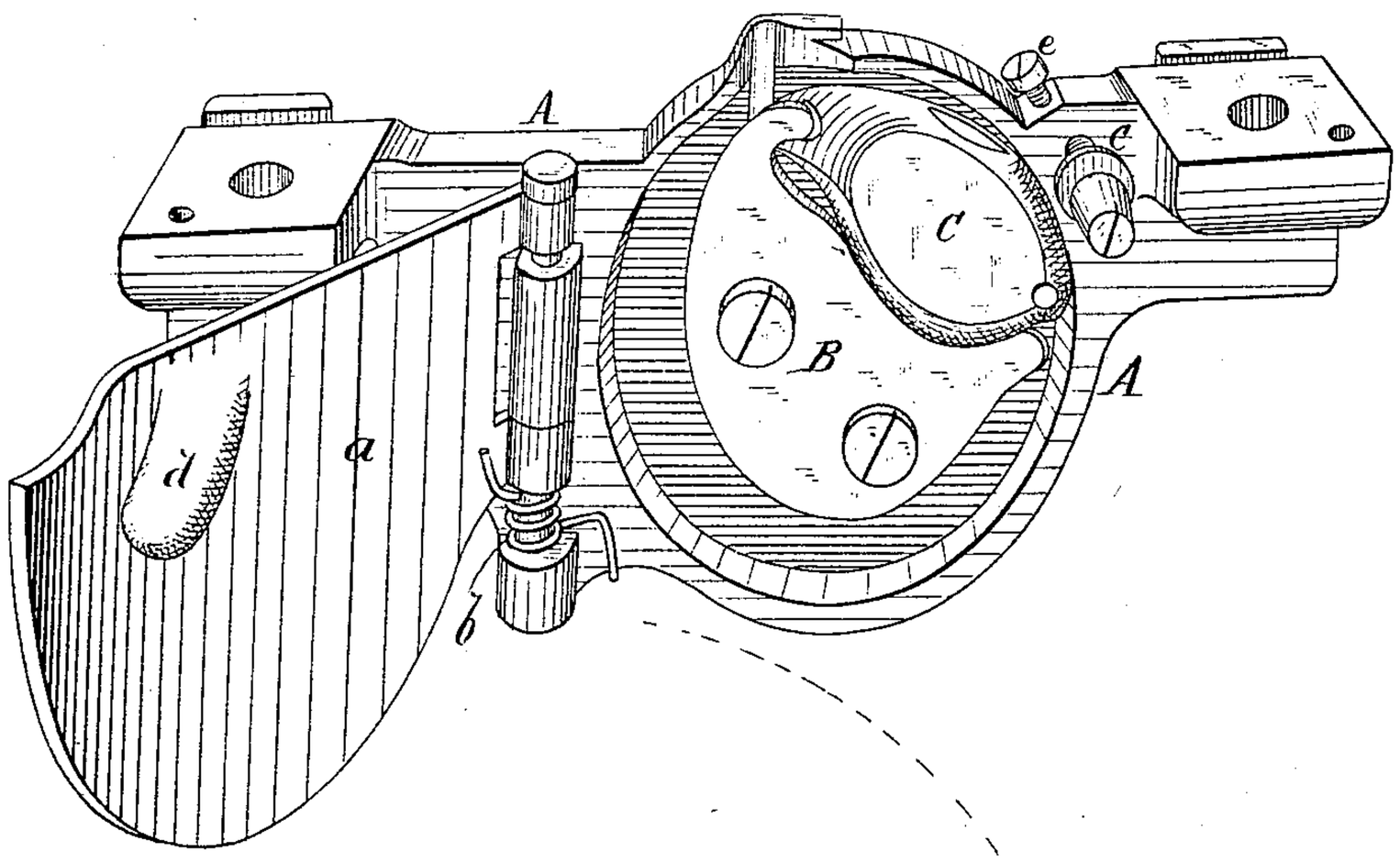
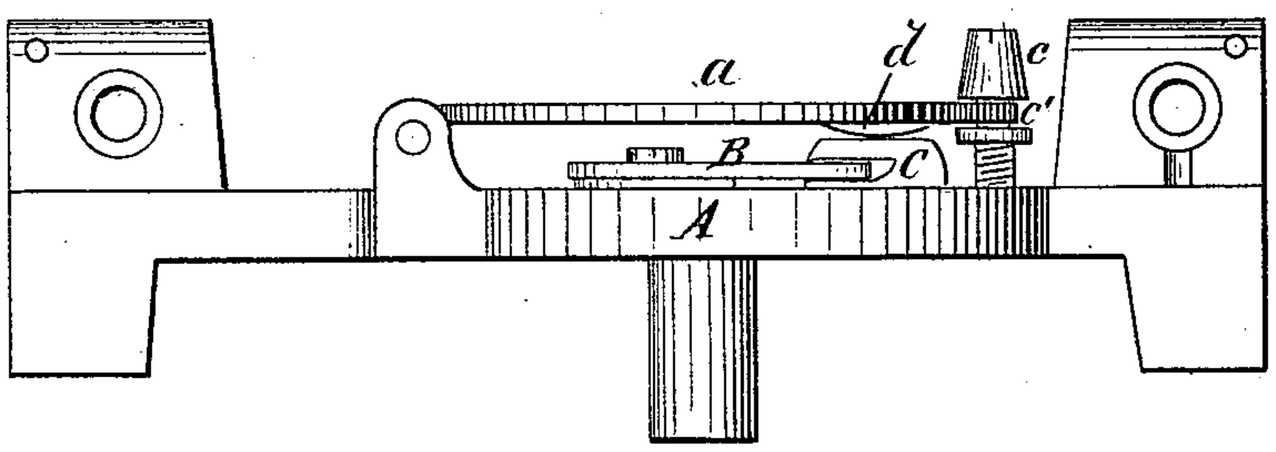


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM G. WILSON AND GEORGE S. DARLING, OF CHICAGO, ILLINOIS, ASSIGNORS TO WILSON SEWING MACHINE COMPANY, OF SAME PLACE.

SHUTTLE-RACE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 233,588, dated October 19, 1880.

Application filed January 15, 1880. Patented in England August 30, 1879.

To all whom it may concern:

Be it known that we, WILLIAM G. WILSON and GEORGE S. DARLING, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Shuttle-Race for Sewing-Machines, of which the following is a specification.

Our improvements relate to circular raceways for oscillating shuttles, and have for their object to guide and steady the shuttle as it starts forward and insure its entering the loop of thread.

The invention consists in the construction and combination of parts, as hereinafter described and claimed.

Figure 1 is a perspective view of a shuttle-race with the door open. Fig. 2 is an inverted plan view of the same.

Similar letters of reference indicate corresponding parts.

A is a casting formed with the circular shuttle-race, that is fitted with a hinged cover, *a*. B is the oscillating shuttle-driver, and C the shuttle. These parts are of usual character as to construction and operation.

The hinge-pin of cover *a* is fitted with a spring, *b*, tending to throw the cover open.

In the casting A, at the side of the race opposite the hinge, a screw-pin, *c*, is fitted, which has a tapering head that is formed with a groove, *c'*, into which the edge of the cover *a* enters when the cover is closed, so that the door is held at a determined distance from the bottom of the race. This distance may be varied by screwing the pin *c* in or out to give the required space for the passage of the loop around the shuttle.

The cover *a* has a slight movement on its hinge-pin in a direction to compress the spring *b* as the cover passes over the tapered head of pin *c* in closing, and to permit its disconnection from the groove *c'* to open it.

Upon the inner surface of cover *a* is a projection, *d*, in such position that when the cover is closed the projection lies over the path of the shuttle and contiguous to the flat side or heel of the shuttle in its backward position.

In operation the door is to be adjusted by pin *c* so that when the shuttle is beneath the projection *d* the shuttle and projection are as close together as may be without touching, and the shuttle is thereby held in position, and when the shuttle starts forward it will travel in a direct line to take the loop without falling away from the race until it takes the loop. As the point of the shuttle enters the loop its heel clears the projection *d*, and there is then sufficient space for the passage of the loop-thread, and the loop-thread holds the shuttle in place. Without the projection *d* the shuttle would fall away from the face of the race and miss the loop on its forward movement.

The adjustable catch *c* permits accurate adjustment, and to prevent accidental derangement is held from turning by a set-screw, *e*.

What we claim as new is—

1. The combination, with a circular shuttle-race, of the hinged cover *a*, adapted to have a slight up-and-down movement upon its hinge-pin, the spring *b* on said hinge-pin, and the adjustable screw-pin *c*, having a tapered head and groove, *c'*, as and for the purpose described.

2. The combination, with a circular shuttle-race, of the door *a*, having the beveled projection *d*, which is located opposite the race, and contiguous to and on the right-hand side of the place where the shuttle enters the needle-thread loop, as shown and described, for the purpose of guiding the shuttle, as specified.

3. In combination with an oscillating shuttle and its raceway, a hinged cover, *a*, formed with a projection, *d*, on its inner surface, and an adjustable stop, *c*, for retaining the cover in place when closed, substantially as shown and described.

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Witnesses:
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