

No. 856,830.

PATENTED JUNE 11, 1907.

C. F. ZANZIG.
SEWING MACHINE SHUTTLE.
APPLICATION FILED MAR. 19, 1908.

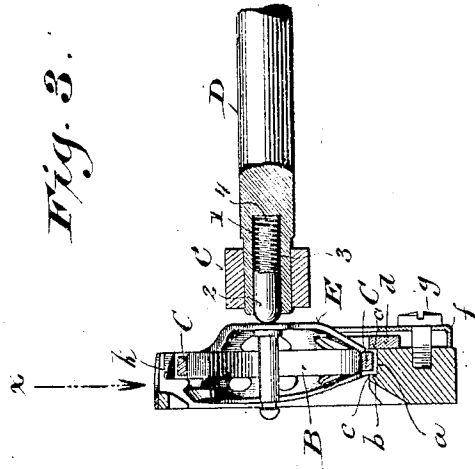


Fig. 3.

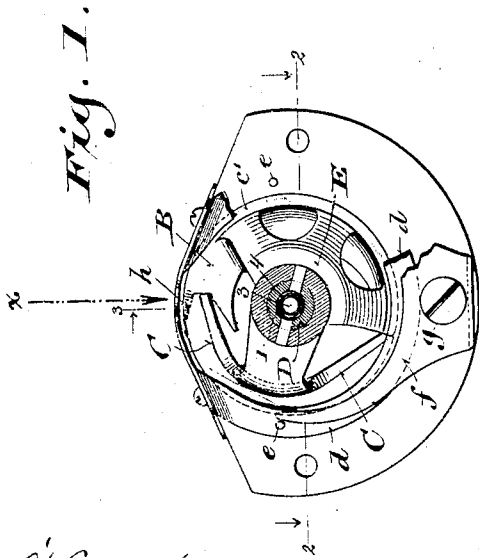


Fig. 1.

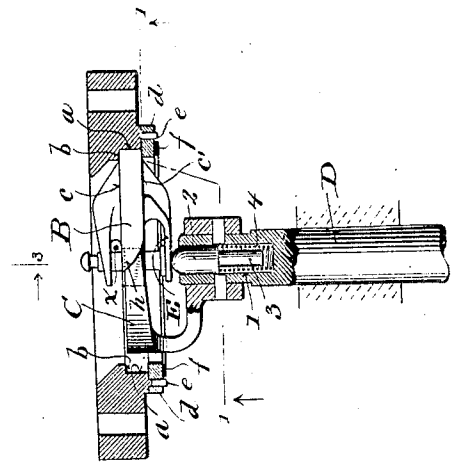


Fig. 2.

Witnesses:
Fred Palm
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UNITED STATES PATENT OFFICE.

CHARLES F. ZANZIG, OF MILWAUKEE, WISCONSIN.

SEWING-MACHINE SHUTTLE.

No. 856,830.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed March 19, 1906. Serial No. 306,775.

To all whom it may concern:

Be it known that I, CHARLES F. ZANZIG, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Sewing-Machine Shuttles; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to provide simple and effective means for preventing sewing machine shuttles from skipping, due to wear of the bearing face of a shuttle, the consequence of which causes the shuttle to become loose in its seat, thereby resulting in imperfect alinement with relation to the machine needle, so that in the travel of said shuttle it fails to catch the thread delivered thereto by the needle, and thus causes the machine to skip stitches; said invention consisting in certain peculiarities of construction and combination of parts as fully set forth hereinafter with reference to the accompanying drawings and subsequently claimed.

In the drawings: Figure 1 represents a face view of a shuttle holder, with shuttle and driving mechanism therefor, embodying the features of my invention, the view being partly broken away and in section as indicated by line 1—1 of Fig. 2; Fig. 2, a top view of the same with the shuttle holder in section as indicated by line 2—2 of Fig. 1, and portions of the driving mechanism broken away and in section to better illustrate the invention, and Fig. 3, a longitudinal sectional view thereof as indicated by line 3—3 of Fig. 1.

Referring by letter to the drawings, A indicates a shuttle holder or guide having fitted therein a shuttle B of the oscillating type, which shuttle is driven by a spanner C secured to a rock shaft D in the usual manner. The shuttle holder or guide is provided with an annular seat *a*, having a shouldered face *b* for the reception of a shuttle, a face *c* of which abuts the shouldered face *b* of the holder, there being a fragmental ring *d* engaging the opposite face *c'* of said shuttle for holding the same in its seat, the ring being held in position on the holder A by dowels *e* and a clamp *f* secured to said holder by a

screw *g* as shown. As indicated by the arrows *x* in Figs. 1 and 3, the needle enters the holder adjacent to the face *c* of the shuttle, the point *h* of which is adapted to engage the thread and form the loop, which in its formation passes over a segmental web E of said shuttle and is shed therefrom in the usual manner.

Continual oscillation of the shuttle causes wear of the faces *c* and *c'*, and the lost motion due thereto results in a wobble of said shuttle, which frequently drops away from the line of the needle and fails to catch the thread delivered thereby. With this in view the rock-shaft D, which is in axial alinement with the shuttle, is centrally bored to form a pocket 1, into which is fitted a conical-headed plug 2, having a reduced shouldered stem 3, between the shoulder of which and the bottom of the pocket is interposed a spiral-spring 4, which spring tends to force the plug against the central portion of the shuttle web, and exert a continuous slight pressure thereon to hold said shuttle up to the working face *b* of its seat.

By the above described arrangement it will be seen that the face *a* of the shuttle may wear off indefinitely without effecting the relation of point *h* thereof to the needle, the spring being always under sufficient tension to hold the shuttle intact, thus increasing the life of a shuttle, which in practice heretofore, had to be renewed frequently, thereby causing much loss of time and expense. The tension exerted upon the segmental web of the shuttle by the conical head of plug 1, is such that it readily yields to permit passage of the thread between said head and shuttle without effecting the operation of the machine.

While I have shown and described my invention in connection with an oscillating shuttle, it is understood that the same is applicable to any form of shuttle wherein a spring-plug may be interposed between the shuttle and driving mechanism therefor, to produce the desired result.

I claim:—

In a shuttle-mechanism having a shuttle-guide, a rotary shuttle fitted in the guide, a segmental web extending from the body of the shuttle to a point concentric with the

axis thereof, and a drive-shaft for the shuttle concentric with the same, the combination of a conical headed plug, said plug being fitted into a recess in the end of the drive-shaft, and a spring interposed between the plug and base of the recess, whereby said plug impinges against the concentric web of the shuttle to hold the same against its guide.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

CHARLES F. ZANZIG.

Witnesses:

GEO. W. YOUNG,

FRED PALM.