No. 652,864. Patented July 3, 1900.

P. SCHMIDT.

SHUTTLE GUIDING DEVICE.

(Application filed Mar. 16, 1900.)

(No Model.)

Fig. 1.

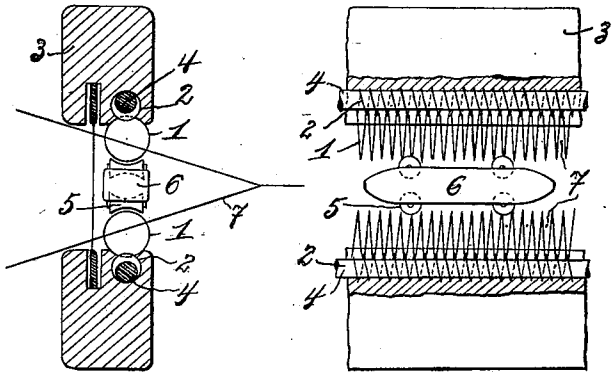


Fig. 2.

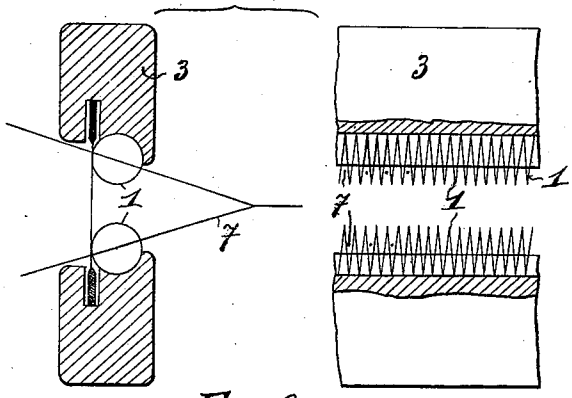
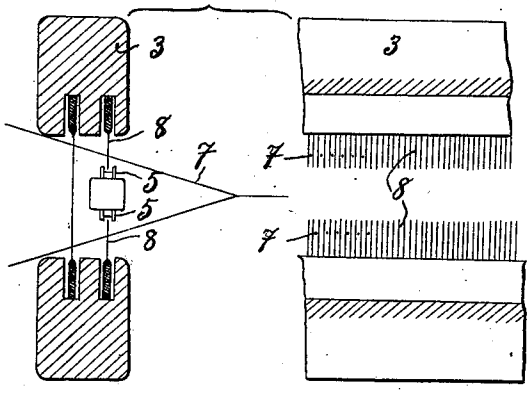


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

PAUL SCHMIDT, OF VIENNA, AUSTRIA-HUNGARY.

SHUTTLE-GUIDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 652,864, dated July 3, 1900.

Application filed March 16, 1900. Serial No. 8,922. (No model.)

To all whom it may concern:

Be it known that I, PAUL SCHMIDT, a subject of the Emperor of Austria-Hungary, residing at Vienna, in the Province of Lower Austria, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Devices for Guiding Shuttles in Weaving-Looms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

In weaving-looms of the construction known hitherto the guiding of the shuttle is effected by providing the shuttle with bowls or rollers arranged in an inclined position, so that the shuttle is forced to run along the race of the batten. In other cases the employment of the bowls is dispensed with and the shuttle is driven simply by the pick across the warp-threads from one shuttle-box to the opposite. The great inconveniences of this way of guiding the shuttle are well known to any one skilled in the art.

According to the present invention, the object of which is to obviate the said inconveniences, two wire coils, or, instead of the same, two wire combs, are suitably affixed to the batten in such a manner that the shuttle will be caused to run between these two coils or combs and is thus firmly guided by the same, so that it cannot be brought out of its path without the application of some external force. Another advantage offered by this system of guiding the shuttle consists in that owing to the same means are given to perform the propulsion of the shuttle not only by the pick, but also by other motive powers—such as, for instance, by electricity.

In the drawings annexed to this specification, Figures 1 to 3 represent three modified arrangements of the improved device for guiding the shuttle in vertical cross-section and in lateral elevation.

According to the arrangement shown in Fig. 1 the device comprises a coil 1, of large diameter, in the threads of which engage the threads of coil 2, of smaller diameter. This coil 2 is arranged in a corresponding recess of the batten 3 and is fixed therein by means of the transverse rod 4. Owing to this arrangement the threads of the larger coil are maintained in equal distances apart and the entire coil is kept in a true straight position.

According to the modified arrangement shown in Fig. 2 the large coils 1 can be arranged direct in the recesses of the batten 3. Finally, a further modification of the improved device consists, as shown in Fig. 3, in that the coils are replaced by combs 8, fastened in the recesses of the batten.

The separate warp-threads pass in the interstices between the threads of the coils or teeth of the combs, so that the shuttle 6, running by means of its bowls 5 on the coils 1 or on the combs 8, passes across the open shed without touching the warp-threads 7. In this manner the warp-threads are considerably spared, and therefore a material of relatively-inferior quality can be employed.

By means of the coils an electrical current can be conducted to the shuttle and the shuttle driven by electricity without the use of pickers, in which case the latter can be entirely dispensed with.

I claim—

1. A loom shuttle-race having oppositely-arranged straight resilient serrated or toothed shuttle guide-tracks, in combination with a shuttle having carrier-wheels engaging both tracks and suitable means for propelling said shuttle, for the purpose set forth.

2. A loom shuttle-race having oppositely-arranged straight resilient serrated or toothed shuttle guide-tracks, said serrations or teeth forming guides for the warp-threads; in combination with a shuttle having carrier-wheels engaging both tracks and suitable means for propelling said shuttle, for the purpose set forth.

3. A loom shuttle-race having oppositely-arranged resilient shuttle guide-tracks consisting of two straight coils of wire; in combination with a shuttle having carrier-wheels engaging both tracks, and suitable means for propelling said shuttle, for the purpose set forth.

4. A loom shuttle-race having oppositely-arranged resilient guide-tracks composed of straight coils of wire whose interspaces form guides for the warp-threads; in combination

with a shuttle having carrier-wheels engaging said tracks, and suitable means for propelling the shuttle, substantially as set forth.

5. A loom shuttle-race having oppositely-arranged resilient guide-tracks for the shuttle-wheels, said tracks formed of coils of wire; in combination with retaining or staying coils intermeshing with the track-coils, for the purpose set forth.

6. A loom shuttle-race having oppositely-arranged resilient guide-tracks for the shuttle-wheels, said tracks formed of wire coils whose interspaces form guides for the warp-threads; in combination with retaining or staying coils intermeshing with the track-coils, for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

PAUL SCHMIDT.

Witnesses:
ALVESTO S. HOGUE,
AUGUST FUGGER.