(No Model.)

H. P. BRIGGS.

LOOM SHUTTLE.

No. 450,554. Patented Apr. 14, 1891.

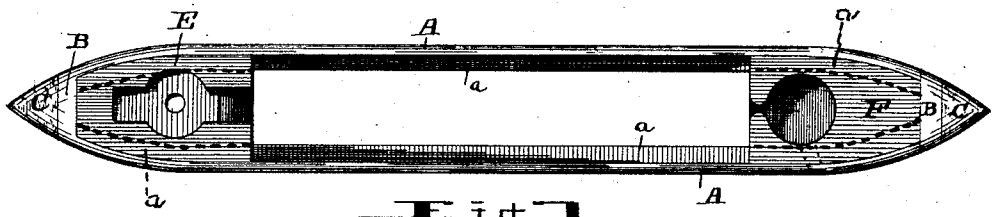


Fig. 1.

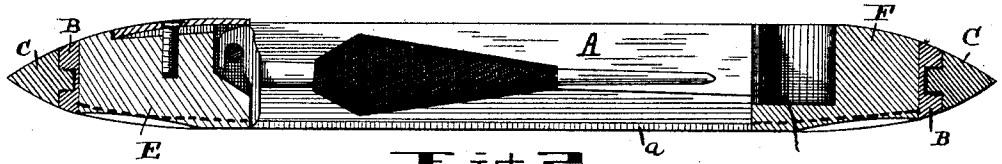
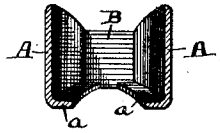


Fig. 2.

Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRICK P. BRIGGS, OF NORTH ADAMS, MASSACHUSETTS.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 450,554, dated April 14, 1891.

Application filed September 29, 1890. Serial No. 366,490. (No model.)

To all whom it may concern:

Be it known that I, HENRICK P. BRIGGS, of North Adams, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Loom-Shuttles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a top plan view of my complete shuttle. Fig. 2 is a longitudinal vertical sectional view through Fig. 1. Fig. 3 is a transverse sectional view through Fig. 1, looking toward one end of the shuttle, the wood block being removed.

The present invention is an improvement in loom-shuttles, and its principal object is to produce a shuttle that will possess the essentials of lightness, strength, and durability, be practically frictionless, and will not splinter nor abrade. Further objects are to make the shuttle of skeleton form, but so that its walls will be rigid and non yielding or springing, and to employ, in connection with this skeleton shuttle-frame, if desired, end fillings of wood or other light and easily-worked material, to which the bobbin-supporting device and thread-guides may be attached.

The invention consists in novel details of construction and arrangement, as will be hereinafter clearly described and claimed.

The shuttle frame or shell is of ordinary form having conical ends, and it is open at top and bottom, being formed of opposite side walls A, that converge at their ends toward each other and are united by transverse integral end pieces B B, which may be continued into the conical points C C; but the latter are, as shown, made of separate pieces of steel and secured to the end pieces—for instance, as shown by screw-threaded stems. The walls A A have inwardly-projecting flanges *a a* at their lower edges, giving the walls an L shape in cross-section. These flanges add stiffness and rigidity to the shuttle-frame and extend the entire length of the walls, preferably as shown. Being at bottom, they do not interfere with the bobbin, and they increase the bearing-surface of the lower portion of the walls A A. This shell or frame so far described can be cast or stamped entire out of metal; but the ordinary metals are entirely too heavy, and it is impractical to make them of such metals, as the walls would have to be so reduced in thickness in order to make the shuttle sufficiently light that it would render them too weak to endure the strain of usage. The ordinary metals bend and become distorted, and steel is too resilient and heavy. I make the frame of aluminum, and this metal possesses the desirable qualities of wood and of steel, being of great tensile strength, of small specific gravity, hard, frictionless, and unyielding. It is not easily abraded and will not splinter—the great fault of wooden shuttles. Practically an aluminum shuttle is indestructible by ordinary usage. It can be substituted for wooden shuttles without increasing the impact force or blow of the picker-sticks and is especially desirable for use in weaving very fine texture fabrics and equally well adapted for weaving the coarsest goods. Being non-oxidizable, an aluminum shuttle is not affected by moisture and will not corrode or rust, while ordinary metals like steel become incrusted, and their efficiency is additionally impaired and the fabrics liable to be mildewed thereby. In short, it will be found that the aluminum shuttle possesses all the advantages of the wooden, metal, composition, or combination shuttles heretofore employed without a single attendant disadvantage. It can be cast or worked out integral, thus obviating riveting or jointing of parts. I provide its ends with steel points because the ends are battered by the impact of the picker-sticks, and it is more economical to make the points removable and hence renewable.

E F, Figs. 1 and 2, designate blocks secured by any suitable means in the ends of the frame, and preferably made of wood or other light easily-worked substance. To block E are attached the bobbin-supporting devices, and in block F is formed the thread-guides, as shown. The blocks make the shuttle lighter than if the space were entirely filled with metal, and block F being of such size as to about equipoise block E, the shuttle can be more equally balanced.

Having described my invention, what I claim as new, and desire to secure by Letters Patent thereon, is—

A compound loom-shuttle consisting of a metallic shell having side walls and connecting end pieces formed integral with the walls, said walls having inwardly-projecting flanges at bottom extending from end piece to end piece, so that the walls are L-shaped in cross-section throughout their length, and conical points on said end pieces, with the non-metallic block having thread-guides secured in one end of the shell, and the non-metallic bobbin-supporting block secured in the opposite end of the shell, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HENRICK P. BRIGGS.

Witnesses:
ARTHUR E. DOWELL,
S. E. PARKER.