

N. J. WILLIS.
Loom-Shuttle.

No. 165,777.

Patented July 20, 1875.

Fig. 1.

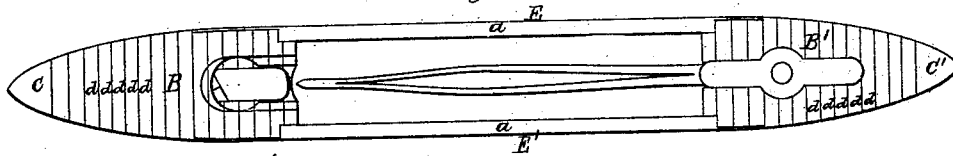


Fig. 2.

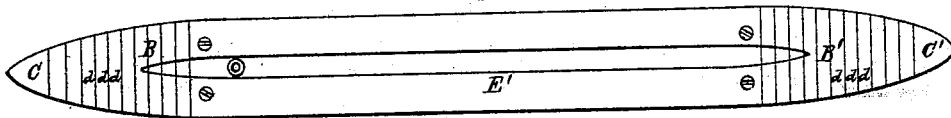


Fig. 3.

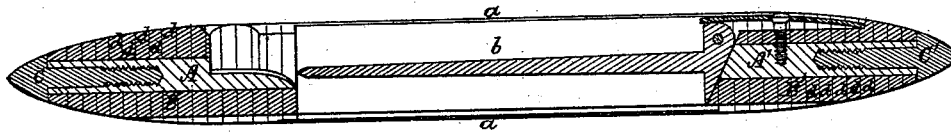
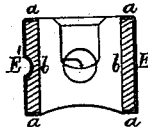


Fig. 4.



Witnesses
S. W. Piper
L. N. Holden

Nemiel J. Willis
by his attorney.
R. H. Eddy

UNITED STATES PATENT OFFICE.

NEWIEL J. WILLIS, OF CAMBRIDGEPORT, ASSIGNOR TO HIMSELF AND
WILLIAM R. POTTER, OF TAUNTON, MASSACHUSETTS.

IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **165,777**, dated July 20, 1875; application filed
June 15, 1875.

To all whom it may concern:

Be it known that I, NEWIEL J. WILLIS, of Cambridgeport, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Loom-Shuttles; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of a shuttle having its body constructed in accordance with my invention.

Loom-shuttles having their bodies made of wood are very liable while in use to splinter more or less on their outer surfaces, and, in consequence thereof, to catch in and break the warp. To avoid this is the purpose of my invention, in the carrying out of which I compose the shuttle-body not only of two wooden or other proper cores, and a series of layers or stratum of leather, rawhide, leather-board, or pasteboard, or other suitable material encompassing each core, but of two connection-plates of metal, all arranged and provided with metallic noses, as represented in the accompanying drawings, in which—

A A' are the two cores; B B', the two series of layers or stratum of sole-leather; C C', the metallic noses, and E E' the metallic side plates, these latter being arranged parallel to each other, and united to the two series B B'. Each of the side plates I usually make very thin, and with top and bottom lips or flanges *a*, between which and against the inner sur-

face of the plate I place and fix a facing, *b*, of leather.

In making each of the tapering parts B B' I drive upon its core-piece A or A' a number of layers or stratum, *d d d*, of sole-leather, or other suitable material not liable to splinter, and cement or glue each piece not only to the core which it encompasses, but to the piece or pieces next to such piece, after which I apply to the core and the pieces of leather or non-splintering material so connected a metallic nose, C or C', and connect the parts B B' by the side plates E E', which I lap on, and screw or otherwise properly fasten to, the parts B B'. The whole shuttle-body is next to be reduced to the necessary form and finished. Each core may have a screw-thread on its outer surface to receive the layers of leather, in which case, if desirable, the core may be of metal, and in one piece with the nose-piece, or it may be separate therefrom. A shuttle-body made as explained will not only be light and strong, but not liable to splinter on its outer surface while in use in a loom, so as to injure or break the warp thereof.

I claim—

The described improved loom-shuttle body, composed of two cores, A A', the two series B B', of layers or stratum, *a*, of leather or analogous material, and the connection-plates E E', all arranged and applied substantially as specified.

NEWIEL J. WILLIS.

Witnesses:

R. H. EDDY,
J. R. SNOW.