No. 747,993. PATENTED DEC. 29, 1903.

J. MARUGG & J. RUPPERT.

LOOM SHUTTLE.

APPLICATION FILED JAN. 25, 1902.

NO MODEL.

Fig. 1.

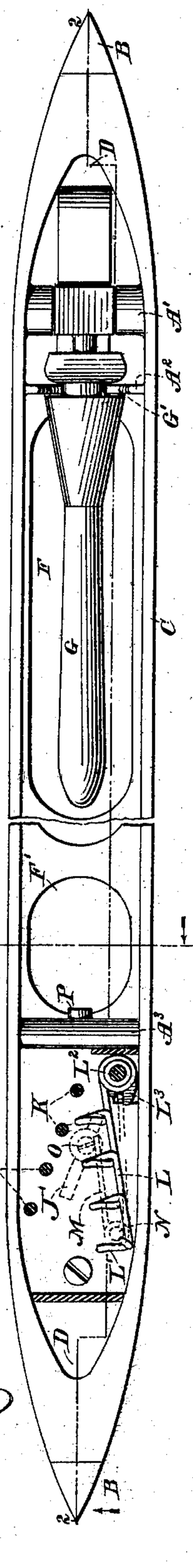


Fig. 2.

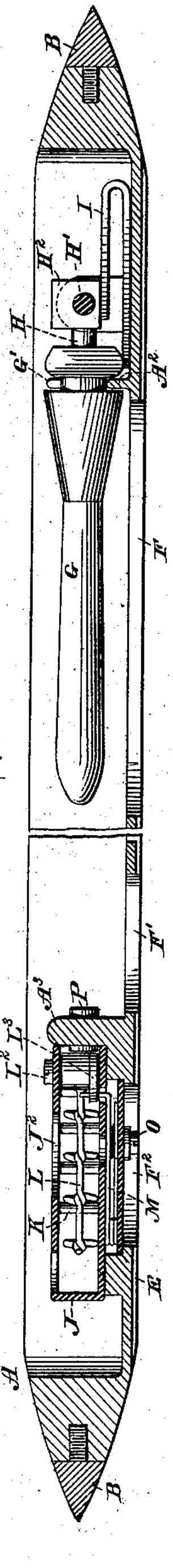


Fig. 4.

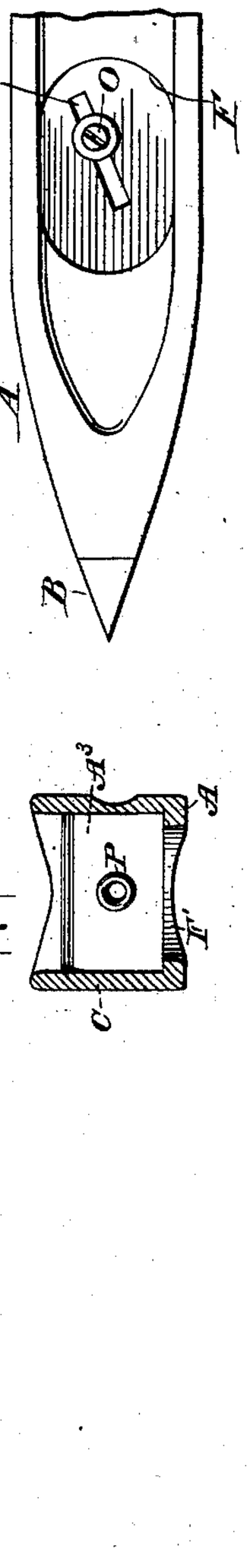
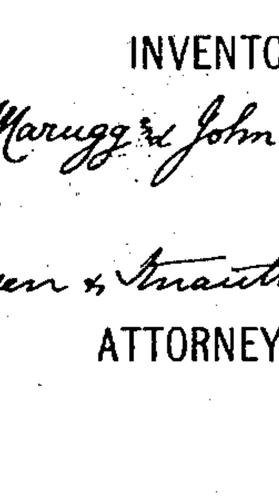


Fig. 3.



WITNESSES:

Gustave Dieterich.

John Lotka

INVENTORS:

John Marugg & John Ruppert

BY

Briesen & Knauth

ATTORNEYS

No. 747,993. Patented December 29, 1903.

UNITED STATES PATENT OFFICE.

JOHN MARUGG AND JOHN RUPPERT, OF JERSEY CITY, NEW JERSEY.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 747,993, dated December 29, 1903.

Application filed January 25, 1902. Serial No. 91,153. (No model.)

To all whom it may concern:

Be it known that we, JOHN MARUGG and JOHN RUPPERT, citizens of the United States, residing at Jersey City Heights, county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Loom-Shuttles, of which the following is a specification.

Our invention relates to shuttles for looms, and has for its object to construct a shuttle in such a manner that it will be light and strong, not liable to warp, and constructed with a novel very efficient tension mechanism, which can be readily adjusted from the outside.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a plan of our improved shuttle. Fig. 2 is a sectional elevation thereof on line 2 2 of Fig. 1. Fig. 3 is a cross-section on line 3 3 of Fig. 1, and Fig. 4 is a bottom plan view of the portion of the shuttle adjacent to the tension mechanism.

As shown in the drawings, the shuttle comprises a body A, which we make of metal, preferably of aluminium alloy. This body is substantially of the same shape as ordinary loom-shuttles and is provided with the customary steel points B, which are engaged by the picker-stick. The body, however, differs from ordinary shuttles by the fact that its walls C are very thin and that the cavity is extended much farther toward the ends than usual, as shown at D. The bottom of the shuttle has the customary longitudinal groove or recess E; but instead of having only the single opening F adjacent to the spool or spindle G we provide additional openings, such as F′ F^2, which serve to lighten the construction, and one of which, F^2, has the further function of rendering a portion of the tension device readily accessible, as will be described presently.

At one end the frame A has inwardly-projected lugs A′, which receive the pivot H′ of the spindle-holder H. This holder is provided with a square portion H^2, engaged by a U-shaped spring I, which is secured to the bottom of the shuttle-cavity. It will be understood that this spring holds the spindle G, with its holder, either in the operative position (shown in Figs. 1 and 2) or in the outer upright position. When the spindle G is down, the groove G′ of the spindle receives a ridge A^2, which projects from the bottom of the shuttle and engages the spindle principally at the bottom, but also at the sides, this ridge being approximately semicircular at the top. At the opposite end of the shuttle is located the tension device. This device is secured in a box J, which is fastened to a cross bar or brace A^3 of the shuttle-body. Within this box are provided stationary pins K, arranged in an oblique line, and on the other side of the box is pivoted an arm L, having a series of eyes L′, this arm having adjacent to its pivot L^2 a slotted projection L^3, which is engaged by one end of a spring M, coiled around a pin N. The other end of this spring fits against an abutment or pin O, which is normally stationary, but which may be moved for adjustment in an oblique slot J′ at the bottom of the box J. It will be obvious that by adjusting the abutment O in the slot J′ the tension of the spring M can be readily adjusted, and this can be done without taking the shuttle apart, since the screw-head of the pin O is readily accessible through the aperture F^2 in the shuttle-bottom. The shuttle is provided with another suitable arrangement of thread-guides, which may be made of porcelain or other suitable material. One of these guides is located in the brace A^3 and is designated as P. The top of the box J is apertured, as engaged at J^2, so that the attendant may readily insert his finger to take hold of the arm L, which greatly assists the passing of the thread through the eyes L′ and around the pins K.

While we have shown a specific adjusting device for the tension mechanism, which adjusting device consists of a pin or abutment sliding in an oblique guideway, we desire it to be understood that our invention is not limited to this construction and that we may employ other mechanism for varying the tension. In other respects also the construction may be modified without departing from the nature of our invention.

We claim as our invention and desire to secure by Letters Patent—

1. A loom-shuttle, comprising a hollow body, a tension device located therein, said device comprising a pivotally-supported coiled spring, one end of which operates said tension device, and a tension-adjusting device engaging the other end of the spring and movable toward and from the pivot of the spring.

2. A loom-shuttle comprising a hollow body, a series of pins located therein, an arm pivoted adjacent to said pins and provided with a series of eyes and with a slotted projection, a pivotally-supported coil-spring, one end of which engages the slotted projection of said arm, and a tension-adjusting device engaging the other end of the spring.

3. A loom-shuttle comprising a hollow body, a tension device having a series of stationary pins, a pivoted arm provided with a series of eyes, a spring engaging said arm and a tension-adjusting abutment engaging said spring and movable obliquely with reference to the axis of the shuttle.

JOHN MARUGG.
JOHN RUPPERT.

Witnesses:
HARRY M. TURK,
ALBERT C. WIECHERS.