No. 737,714. PATENTED SEPT. 1, 1903.

P. P. DAUDELIN.

SHUTTLE AND SHUTTLE EYE.

APPLICATION FILED MAR. 6, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 1.

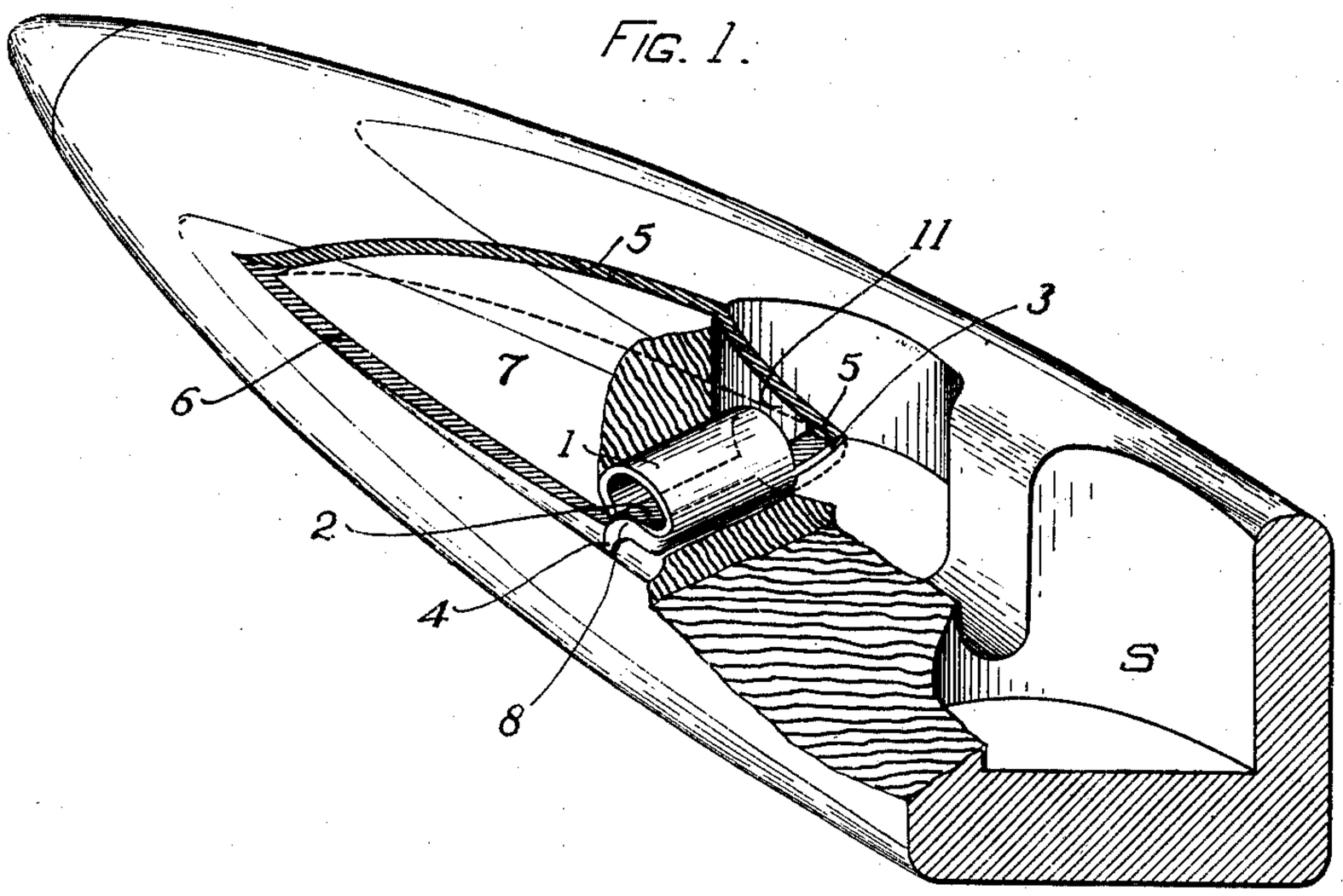

FIG. 2.

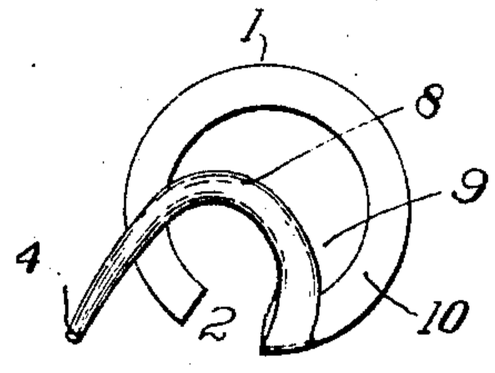

FIG. 3

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SHUTTLE AND SHUTTLE EYE.

APPLICATION FILED MAR. 5, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

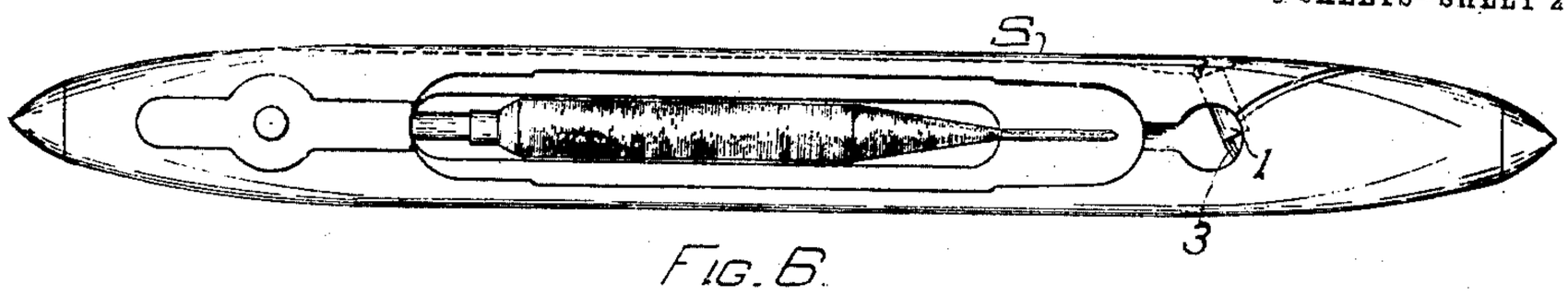

FIG. 6.

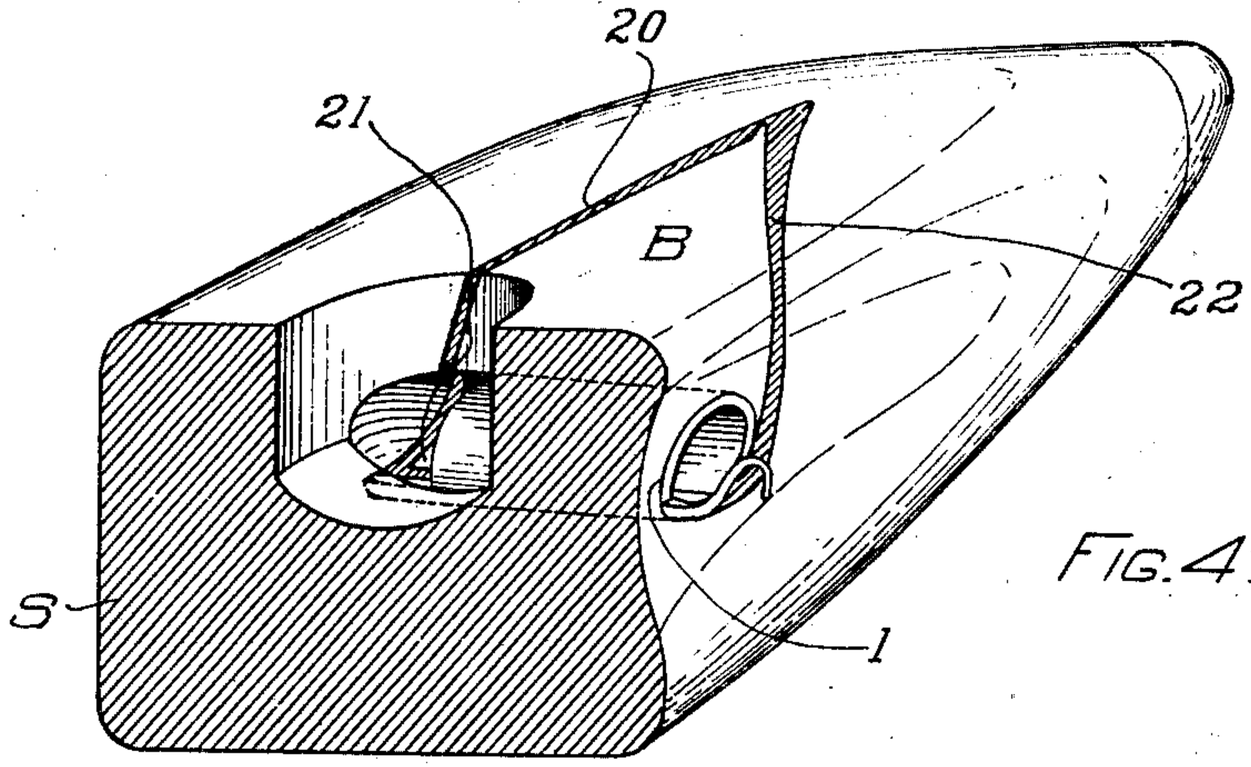

FIG. 4.

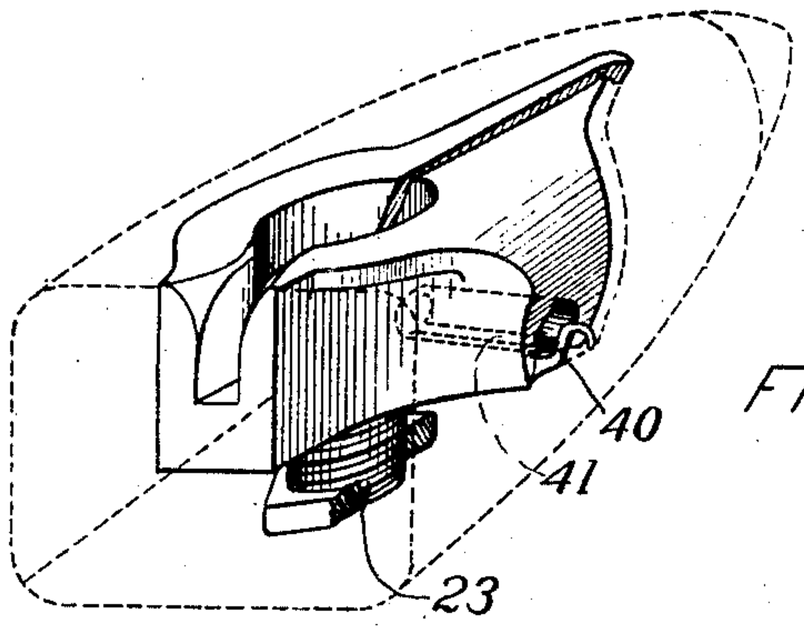

FIG. 5.

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No. 737,714. Patented September 1, 1903.

UNITED STATES PATENT OFFICE.

PIERRE P. DAUDELIN, OF FALL RIVER, MASSACHUSETTS.

SHUTTLE AND SHUTTLE-EYE.

SPECIFICATION forming part of Letters Patent No. 737,714, dated September 1, 1903.

Application filed March 5, 1903. Serial No. 146,358. (No model.)

To all whom it may concern:

Be it known that I, PIERRE PHILIAS DAUDELIN, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Shuttles and Shuttle-Eyes, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a perspective view of the thread-eye and of a shuttle, a part being broken away for greater clearness. Fig. 2 is an under plan view of the thread-eye, greatly enlarged; and Fig. 3 is an end view of the outer end of the thread-eye, also greatly enlarged. Fig. 4 shows a modification in which the thread-slots and intermediate beak are devised for an automatically-threading shuttle. Fig. 5 shows another modification in which my invention is embodied partly in a metal block mounted in the shuttle-body. Fig. 6 is a top plan view of a shuttle embodying my invention.

The object of my invention is to produce an improved shuttle which can be threaded either by hand for ordinary looms or automatically when used in so-called "Northrup" looms or the like, the main novelty of my invention consisting in my new thread-delivery eye and in means for preventing the filling from jumping out of the thread-slots in the shuttle when the shuttle is traveling.

In the drawings, 1 is the chambered body of my new thread-eye, which is formed with a lengthwise slot 2 on its under side. Slot 2 extends the whole length of body 1 and is of a width sufficient for the free passage therethrough of the filling. The inner end of this slotted chambered eye is provided with an inwardly-projecting tang 3, which is on the cop side of the slot 2. The outer end of the eye is provided with an outwardly and downwardly projecting tang 4, also on the cop side of the slot 2. When the eye is in place in the form of shuttle S shown, the inner tang 3 is forced down into the bottom of kerf 5, which is an inwardly-slanting diagonal slot communicating with the horizontal slot 6, at the rear end of which the outer end of my new eye extends to near the outer wall of the shuttle. The kerfs or slots 5 and 6 form the beak 7, under which the filling is passed and by the under side of which the filling is guided when the shuttle is threaded. The inner tang 3 is of some resiliency and if, as shown, it is forced down into the bottom of kerf 5 the resiliency tends to rock the tubular body 1 in the direction of the front end of the shuttle and bring the free end of the outer tang into engagement with the wood. Of course both tangs may be driven into the wood, if desired; but in any case the slot 2, which is along the bottom of the eye, must be kept open for the passage of the filling therethrough. The inner end of the tubular body 1 should be near the longitudinal axis of the shuttle. The filling in its travel passes over the two tangs. In running the force of the wind tends to lift the filling, and a portion of the outer tang is therefore formed with the upwardly-extending bend 8, the high point of this bend being carried well above the bottom of body 1, so as to form the guide depression or space 9, which is between the end wall portion 10 and the upward bend 8 of the outer tang. By this construction the filling is prevented from escaping back into the horizontal slot 2. At the inner end of the eye the filling is kept from escaping by the overhang 11 of the shuttle-body, the slot 5 extending downwardly and inwardly in reference to a vertical plane through the longitudinal axis of the shuttle. The metal thread-eye is inserted endwise in a cylindrical aperture in the shuttle, which aperture intersects slots 5 and 6, forming a thread-passage.

The construction and arrangement set forth may be widely varied without departure from my invention.

In Fig. 4, showing a modification, the beak is formed by the top slot 20, which slants downwardly so as to form the overhang 21 to keep the filling down as it comes from the bobbin or cop, and by the diagonal side slot 22, which opens into slot 20 and extends rearwardly from such intersection down to the exit or thread-delivery eye, which is formed as already described. In this construction the beak 7 is integral with the shuttle S.

In Fig. 5 I show another modification, in which my invention is embodied in a metal block mounted in the shuttle-body, the block having a threaded tang 23 passing through the shuttle-body and provided with a nut,

although the block may be otherwise secured in place. These two modifications illustrate automatically-threading shuttles suitable for use in Northrup looms or the like. In Fig. 5 tang 3 is dispensed with, tang 40 is integral with the block, and the lengthwise threaded groove 41 is in the body of the block.

What I claim is—

1. An improved thread-eye for shuttles, comprising a lengthwise-chambered body portion having a lengthwise bottom slot, and a tang, at each of its opposite ends on one and the same side of the slot; the outer tang having an upwardly-extending bend which forms, with the opposed end wall of the body, a guide-space.

2. The combination of a shuttle having a beak and slots for the passage of the filling thereunder, with a thread-delivery eye formed with a chambered body portion which is lengthwise slotted along its bottom and has a tang at each opposite end on the rear side of said slot; and an overhanging projection at the inner end of the body portion, the outer tang being bent upwardly and forming with the opposed wall of said body, a guide-space for the filling.

3. The combination with a shuttle having a beak and slots for the passage of filling thereunder, with a thread-delivery eye communicating with the outer of said slots, and comprising a chambered body having a lengthwise slot at its bottom portion, and, at its outer end, an upwardly-bent tang which, with the opposed wall of the eye, forms a guide-space for the filling.

In testimony whereof I affix my signature in presence of two witnesses.

PIERRE P. DAUDELIN.

Witnesses:

W. E. COVENEY,

E. A. ALLEN.