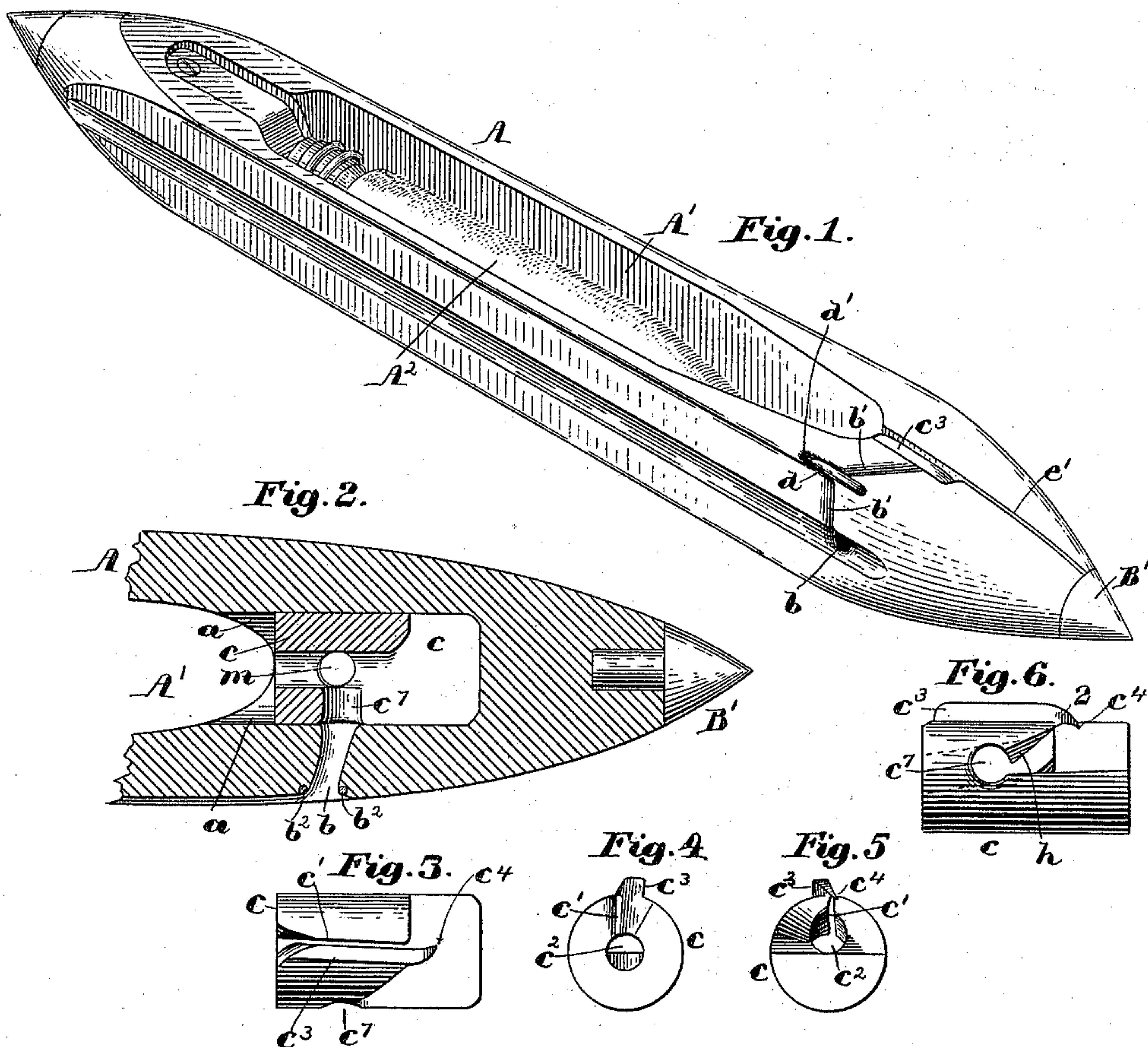


(Model.)

J. H. NORTHROP.
SELF THREADING LOOM SHUTTLE.

No. 598,480.

Patented Feb. 1, 1898.



Witnesses:
Walter E. Lombard
A. C. Harmon

Inventor:
James H. Northrop,
by Crosby Gregory,
Attys.

UNITED STATES PATENT OFFICE.

JAMES H. NORTHROP, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO
GEORGE DRAPER & SONS, OF SAME PLACE.

SELF-THREADING LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 598,480, dated February 1, 1898.

Application filed January 11, 1896. Serial No. 575,116. (Model.)

To all whom it may concern:

Be it known that I, JAMES H. NORTHROP, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Self-Threading Loom-Shuttles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention has for its object the production of a novel shuttle adapted to thread itself automatically in the operation of the shuttle in a loom.

15 The shuttle herein to be described has a delivery-eye at its front side near one end, and the shuttle-body is provided with a slot substantially longitudinal with relation to the center of the shuttle, a second slot intersecting the first slot and the delivery-eye, forming an entrance thereto for the thread, the longitudinal slot having coöperating with it a thread-director provided with a beak which partially closes said slot in front of its intersection with the transverse slot, the
20 beak not impeding the entrance of the filling-thread, but preventing its subsequent escape except at the delivery-eye. A downwardly-inclined breast is provided to move the thread down the transverse slot and into the delivery-eye, while a finger open at its rear end is extended over the transverse slot to permit entrance of the thread to the said slot.

25 Figure 1 shows in perspective a shuttle embodying my present invention; Fig. 2, an enlarged sectional detail thereof; Fig. 3, a top view of the thread-director removed, and Figs. 4, 5, and 6 other views thereof.

30 The shuttle-body A has an opening A' made therein from its upper through its lower side for the passage of the bobbin or filling-carrier A², all as provided for in looms patented to me and forming the subject-matter of United States Patent No. 529,940, dated November 27, 1894, and in which said shuttle is adapted
35 to be automatically supplied with filling while the loom is in action.

My present invention is to insure the automatic threading of the filling into the delivery-eye of the shuttle.

40 Referring to Figs. 1 and 2, the shuttle-body is provided with a chamber a, intersecting the

opening A', and the top side of the shuttle between said opening A' and the tip B' is provided with a substantially longitudinal slot e', intersecting and leading from said chamber, and the said chamber is intersected from the front of the shuttle with a hole b, and this hole is intersected from the top of the shuttle-body with a slot b'.

45 The hole b constitutes the shuttle delivery-eye, and to prevent wear of the wood I have set two metallic pins b² b².

50 In the chamber a I place a thread-director, herein represented as a metallic block c, (shown detached in Figs. 3 to 6,) preferably circular externally, said block having a central opening c², intersected by a slot c', and also having a rib c³, prolonged to form a beak having a point c⁴, which crosses the line of said slot. This block is so placed in the said chamber that said beak, which is also inclined downwardly at 2, stands in and crosses somewhat the said slot e', so that the filling-thread drawn into slot e' as the shuttle is thrown through the shed, the free end of the filling being held by the usual filling-end holder of the loom, will strike the said point and be deflected to one side and will then pass below and under the inclined breast h of the said beak and will enter the opening c². Once into the opening c² and the shuttle having been thrown back again into the shuttle-box at which it received the new filling the filling-thread will enter automatically the slot b', and the strain on the thread will cause it to pass under the end or point of an inclined finger d, the extremity of which rests in a pit d', cut out of the top of the shuttle-body, there being a clear space beveled downwardly under said finger d and between it and the slot b'. The block c has at one side a hole or eye c⁷, into which enters the thread after passing down the under inclined edge of the point c⁴. The filling-thread will be automatically drawn in the movement of the shuttle into these slots in succession and will be laid into the delivery-eye b and issue therefrom into the shed.

55 The block c, Figs. 1 and 2, is held in the shuttle by a suitable screw m, inserted from the under side of the shuttle and entering a threaded part of the block, the end of said screw being shown in Fig. 2.

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

5 A shuttle-body having a chamber intersected by a substantially longitudinal slot in the body, a delivery-eye and a transverse slot in the body joining the said eye with the longitudinal slot, combined with a thread-director held in said slot, and having a beak provided with a laterally-directed point, to partially close the longitudinal slot in front of
10 its intersection with the transverse slot, a downwardly-inclined breast arranged to move

the thread down the transverse slot and into the delivery-eye and a downwardly-inclined 15 finger extended over the transverse slot and open at its rear end, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 20 two subscribing witnesses.

JAMES H. NORTHROP.

Witnesses:

GEO. OTIS DRAPER,
C. N. NICHOLS.