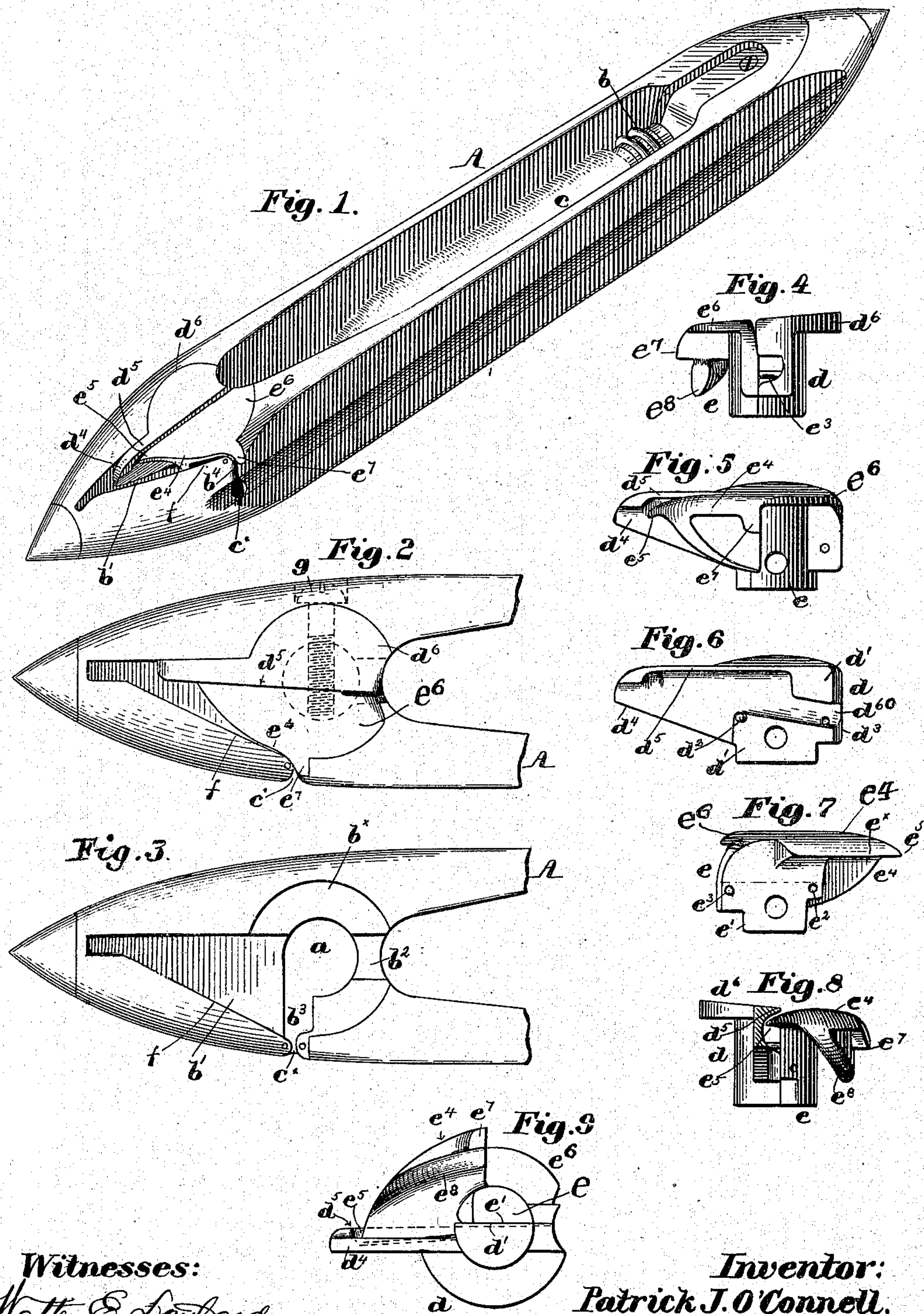


(Model.)

P. J. O'CONNELL.
SELF THREADING LOOM SHUTTLE.

No. 559,306.

Patented Apr. 28, 1896.



Witnesses:
Walter E. Lombard.
Thomas Drummond.

Inventor:
Patrick J. O'Connell,
by Leroy H. Hays, Attys

UNITED STATES PATENT OFFICE.

PATRICK J. O'CONNELL, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO
GEORGE DRAPER & SONS, OF SAME PLACE.

SELF-THREADING LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 559,306, dated April 28, 1896.

Application filed February 12, 1896. Serial No. 578,992. (Model.)

To all whom it may concern:

Be it known that I, PATRICK J. O'CONNELL, 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.

This invention has for its object to provide a shuttle with a novel self-threading device, the construction of which is hereinafter more fully described and claimed.

Figure 1 shows a shuttle containing my improvements; Fig. 2, an enlarged top view of the delivery end of the shuttle; Fig. 3, a like view of the end of the shuttle with the self-threading device removed. Fig. 4 shows an inner end view of the self-threading device detached; Fig. 5, a side elevation thereof; Fig. 6, an inner side view of one half of the device; Fig. 7, an inner side view of the other half of the device; Fig. 8, an outer or front end view of the self-threading device with the end of the finger cut off, and Fig. 9 an under side view thereof.

The open shuttle-body A and the bobbin b, having a cop c of thread, are and may be all as usual. The top side of the front end of the shuttle-body is cut out or chambered, as best shown in Fig. 3, to leave a circular chamber a with a larger circular chamber b^x at its upper end, a point-receiving chamber b' leading from the chamber a toward the end of the body. The chamber a is intersected by two passages b² b³, the wall of the shuttle-body at the end of the passage b³ having a slot b⁴, which leads to the delivery-eye c^x, thus making that eye open for the reception of the bobbin-thread.

The self-threading device is composed of two half-circular parts d e, having, respectively, faces d' e', which abut together, a pin d² on the part d entering a hole e² in part e and a pin e³ in part e entering a hole d³ in part d, the said pins supporting the bobbin-thread after the latter has entered the self-threading device. The part d has a forwardly-extended finger d⁴, recessed at its inner side to leave an overhanging flange d⁵ and a guide-space d⁶⁰, and the top of part d

is provided with an annular semiflange d⁶ to enter the recess b^x. The half e is widened to form a flange e⁶ and has a forwardly-extended horn e⁴, provided with an inwardly-extended lip e^x, which enters the space at the inner side of the finger d⁴ below the flange d⁵, a slot being left between the flange of the finger and the lip of the horn for the passage easily of the bobbin-thread between them, the said slot being substantially straight and located substantially in the line of the axis of the bobbin. The thread entering said slot passes below the shielded point e⁵ of the horn and drops into the space d⁶⁰. As the shuttle returns in its flight the thread caught under the point of the horn draws under the horn and is, by its downwardly-curved breast e⁸ and its outer inclined guiding edge, made to travel in the space f between the horn and the inner wall of the space b' of the shuttle-body, and arriving at the shoulder e⁷ will enter the open delivery-eye c.

The threading device is held in the shuttle by a screw g, which enters the shuttle at its side rather than at its bottom, as heretofore, and said screw, besides holding the device in the shuttle, also acts to hold together the two parts d e of the device. Where the screw for holding the threading device is inserted through the bottom of the shuttle, it will be obvious that the shuttle is weakened in the direction of its length and in the line of the open chamber receiving the bobbin or filling-carrier, and therefore the tendency of the shuttle to split lengthwise is greatly increased; but by inserting the screw through the side of the shuttle the splitting of the shuttle is also obviated. By making each part d and e separately they may be cast in a mold, thus obviating cutting-slots and milling operations, which are very expensive.

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

1. A shuttle-body having a receiving-chamber at its upper side and having in its side wall an open delivery-eye communicating with said chamber, combined with a self-threading device composed of two separate, detachable parts, one of said parts being

made as a finger having its inner side recessed longitudinally to leave an overhanging flange d^5 , the other part, designated as a "horn," having a pointed lip to enter the recess below the said flange, a downwardly-inclined breast e^8 and outer inclined guiding edge, the said guiding edge forming one side of the thread-guiding slot through which the thread travels into the open delivery-eye, substantially as described.

2. A shuttle-body having a receiving-chamber at its upper side and having in its side wall an open delivery-eye communicating with said chamber, combined with a self-threading device composed of two separate, detachable parts, one of said parts being

made as a finger having its inner side recessed longitudinally to leave an overhanging flange d^5 , the other part, designated as a "horn," having a pointed lip to enter the recess below the said flange, and a screw passing through the side of the shuttle-body and entering and holding together the said separate detachable parts, substantially as described.

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

PATRICK J. O'CONNELL.

Witnesses:

S. F. SMITH,

GEO. OTIS DRAPER.