

A. DION.
SELF THREADING SHUTTLE.
APPLICATION FILED AUG. 24, 1912.

1,051,704.

Patented Jan. 28, 1913.

2 SHEETS—SHEET 1.

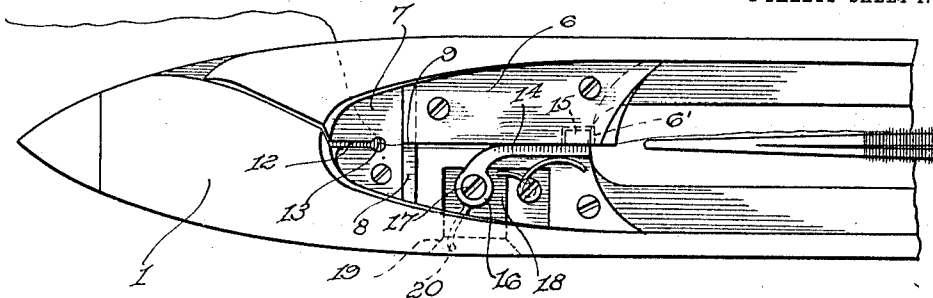


Fig. 1

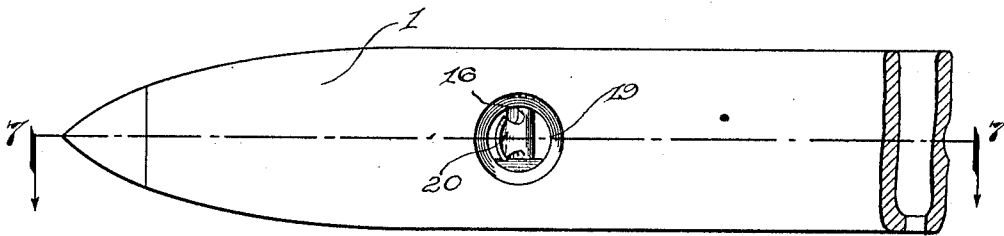


Fig. 2

Fig. 3

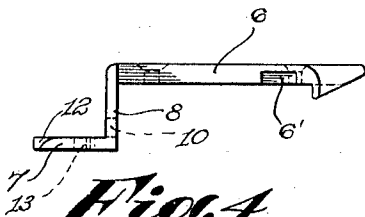
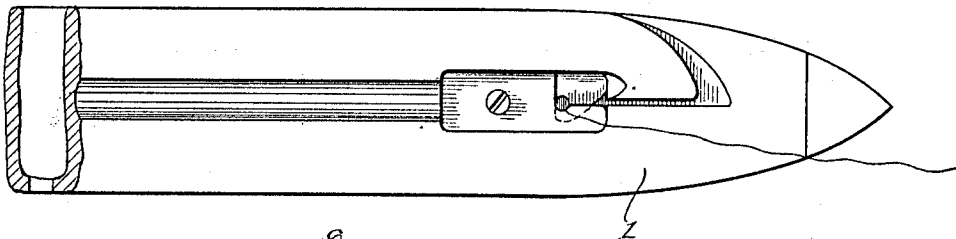


Fig. 4

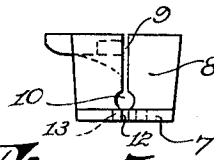


Fig. 5

Witnesses:

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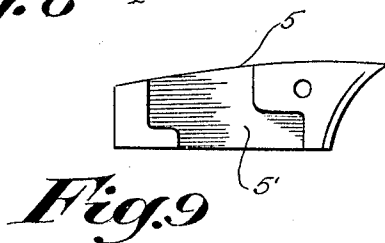
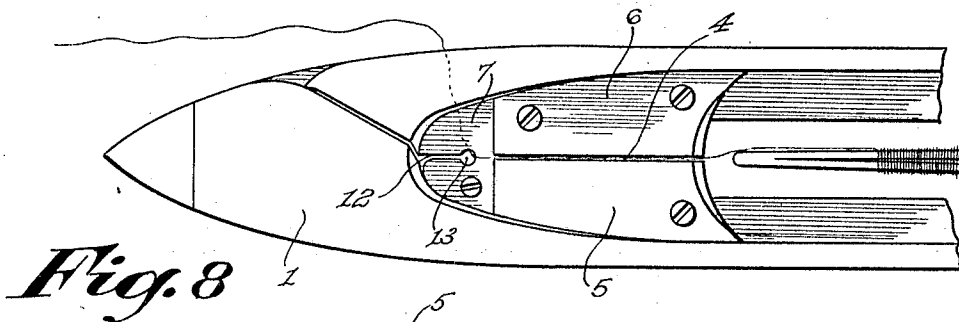
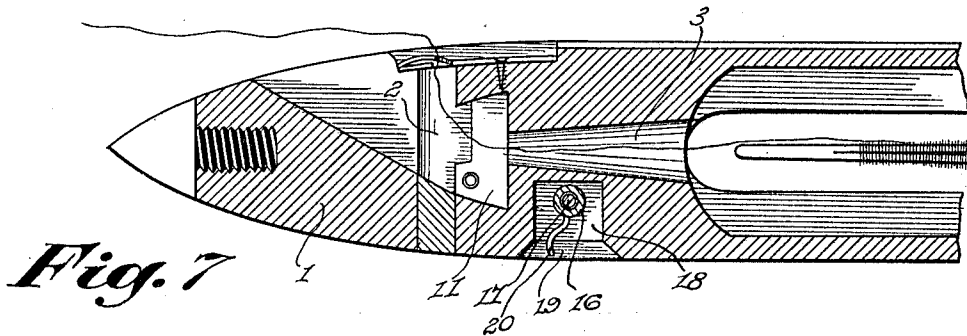
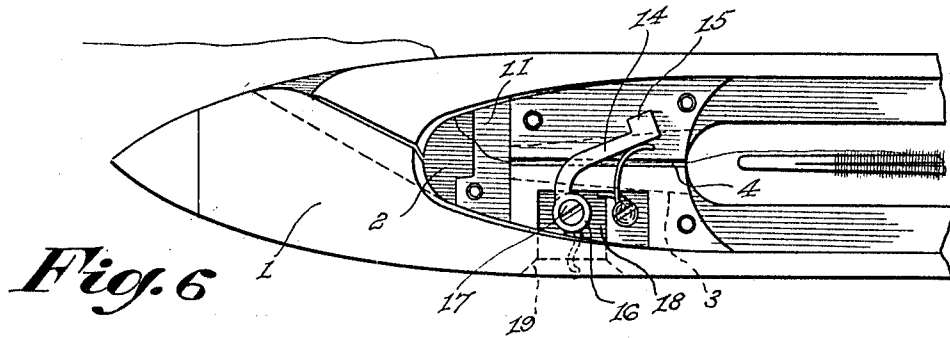
Attorneys

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2 SHEETS-SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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SELF-THREADING SHUTTLE.

1,051,704.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed August 24, 1912. Serial No. 716,799.

To all whom it may concern:

Be it known that I, ARSÈNE DION, a subject of the King of Great Britain, residing at Berkeley, Rhode Island, United States of America, have invented certain new and useful Improvements in Self-Threading Shuttles; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention to be hereinafter described relates to self threading shuttles.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a top plan view of the invention, with one cover plate removed; Fig. 2 is a partial side elevation; Fig. 3 is a similar view of the opposite side; Fig. 4 is a side elevation of cover plate 6; Fig. 5 is a left hand side elevation of Fig. 4; Fig. 6 is a view similar to Fig. 1, with both cover plates removed; Fig. 7 is a horizontal, longitudinal, cross section on line 7—7 of Fig. 2, looking in the direction of the arrows; Fig. 8 is a top plan view of the invention complete; and Fig. 9 is a bottom plan view of cover plate 5.

The main objects of the invention are to provide a simple, efficient, economical, compact, and durable self threading shuttle in which the thread will be positively prevented from slipping out of its guide groove.

Referring to the drawings in detail, 1 indicates the shuttle body provided with the usual diagonal thread slot and lateral kerf leading from the slot to the shuttle eye. The eye passage leads directly into the bottom of a recess 2 in the body of the shuttle. The thread passes from the bobbin to this recess by way of the tubular guide or bore 3. The bore 3 is formed in the shuttle body and extends longitudinally thereof and in line and concentric with the bobbin end so that the thread may be drawn direct from the bobbin without friction. The upper wall of the bore is provided with a longitudinal slot 4 extending its entire length and adapted to guide the thread from the bobbin to the interior of the bore.

Two cover plates 5 and 6 overlies the top wall of the bore and may be removably secured in place by screws or the like as more clearly shown in Fig. 8. The plate 6 is provided with a foot portion 7 to fit into the bottom of the recess 2, and a part 8 connecting the foot 7 with the body part of the cover plate. The two plates 5 and 6 are so arranged that a very narrow space is left between them and directly above the slot 4 so that entrance of the thread to the bore 3 will not be interfered with by the cover plates. It will be noticed that the part 8 extends completely across the perpendicular wall of recess 2 and overlies the end of bore 3; also, that the foot 7 completely overlies the entire bottom wall of the recess 2. Consequently, the part 8 is provided with a perpendicular slot 9 terminating in an eye 10, the slot being alined with the end of slot 4 while the eye is alined with the end of the bore 3. When assembled, that portion of the foot 7 nearest the eye passage must be slightly spaced from the bottom wall of the recess 2, of course. For this purpose, a shoulder 11 is provided. Part of the foot portion 7 rests upon this shoulder, leaving the free end and a part of one side slightly spaced from the bottom of the recess. The foot 7 is provided with a longitudinal slot 12 leading to an eye 13 which falls in line with the eye passage, as shown in Fig. 8. In order to more easily receive the thread in the slot 12 from the diagonal slot of the shuttle, one side wall of the outer end of the slot 7 is beveled or rounded off so that the thread will slide freely about it and into the slot. The other end wall is left straight and abrupt to prevent the thread slipping out of the slot and around the end of the foot 7, as clearly shown in Fig. 8.

Assuming the plates 5 and 6, with the parts 7 and 8, to be in the position shown in Fig. 8, the threading of the shuttle will be effected by simply drawing the thread forward between the plates 5 and 6, downwardly through the diagonal cut or slot, and then rearwardly in the lateral kerf until it is seated in the shuttle eye, as shown in full in dotted lines in Fig. 8.

The thread retaining device comprises a spring pressed lever 14 mounted to swing directly across the slot 4 between the top wall of the bore 3 and the under face of cover plate 5. It is provided with a projecting finger 15 which extends into a notch

6' formed in the under face of the cover plate 6, to receive it. The cover plate 5 is cut out as at 5' to permit free swinging movement of the lever. The lever is provided with a short sleeve or tube 16 adapted to receive a pivot pin or post 17 seated in a recess 18 extending downwardly in the shuttle body at one side of the bore 3. From this recess an opening 18 leads through the shuttle wall. An operating finger piece 20 projects from the sleeve 15 through the opening. By forcing the finger piece 20 toward the left in Figs. 1, 2, 6, and 7, the lever may be swung back against the pressure of spring 21, to inoperative position, for threading the shuttle. As soon as the finger piece is released, the lever will swing to the position of Fig. 1 and prevent accidental dislodgment of the thread.

The inner ends of the cover plates are curved, of course, to guide the thread toward the space between their longitudinal walls, for entrance into the slot 4.

It is thought that the operation and use of the invention will be clear from the preceding detailed description.

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

1. In combination with a self threading shuttle having a longitudinally slotted thread bore, a recess in one side of the body, and an opening leading outwardly from the recess through the side wall, a thread retaining lever fulcrumed in said recess and provided with a finger piece projecting through said opening, said lever being adapted to extend across said slot to retain the thread in the bore, and means for normally maintaining said lever in operative position.

2. In combination with a self threading shuttle having a longitudinally slotted thread bore, a recess in one side of the body, and an opening leading outwardly from the recess through the side wall, a thread retaining lever fulcrumed in said recess and provided with a finger piece projecting through said opening, said lever being adapted to extend across said slot to retain the thread in the bore, and a spring engaging said lever and normally maintaining it in operative position.

3. In combination in a shuttle body provided with a recess in one end and an eye passage leading therefrom, said body having a longitudinally slotted thread bore leading to said recess, said body being also provided with a diagonal slot and a lateral kerf leading from said recess to said eye passage; a horizontal cover plate provided with a foot having a longitudinal slot extending to the free end thereof and terminating in an eye having a vertical connecting portion similarly provided with a slot terminating in an eye, a shoulder for spacing said foot from the bottom of the aforesaid recess, a second horizontal cover plate parallel with and in the same plane as the first cover plate and spaced therefrom to present a slot or narrow passage directly above and in line with the slot of the thread bore, a thread retaining lever mounted beneath said second cover plate and adapted to swing across the slot between the cover plates, and means for swinging said lever to inoperative position.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ARSENE DION.

Witnesses:

AMÉDÉE PINCINCE,
ARSENE BRUNELLE.