

(No Model.)

J. LARSON.
Sewing Machine Shuttle.

No. 236,442.

Patented Jan. 11, 1881.

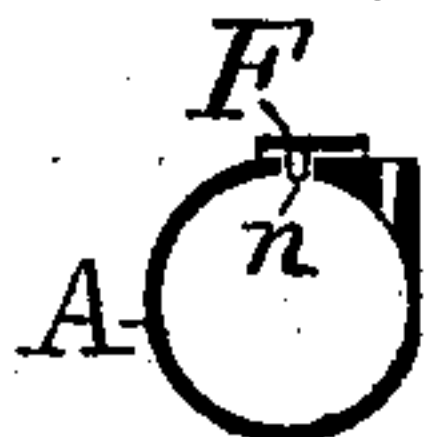
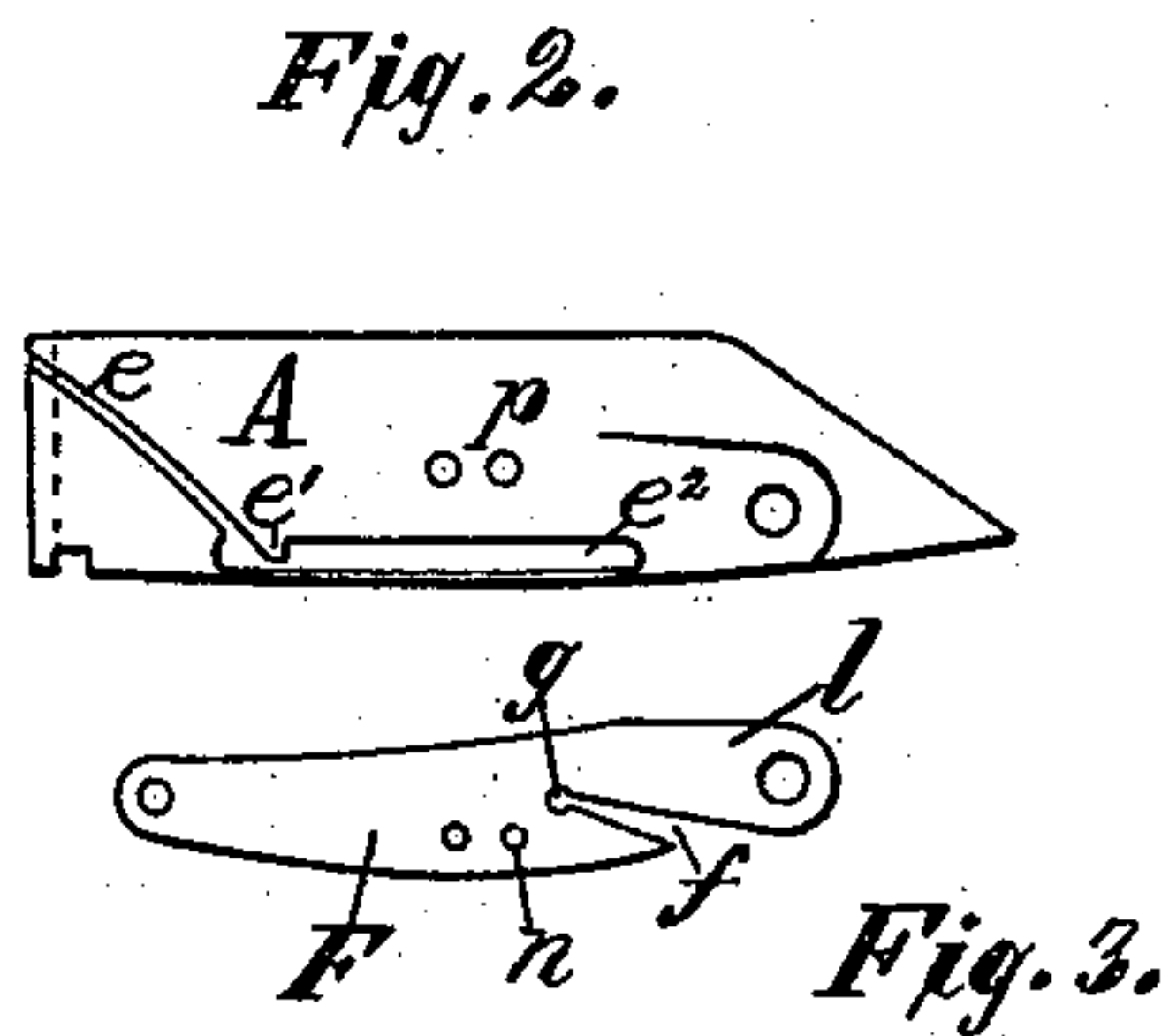
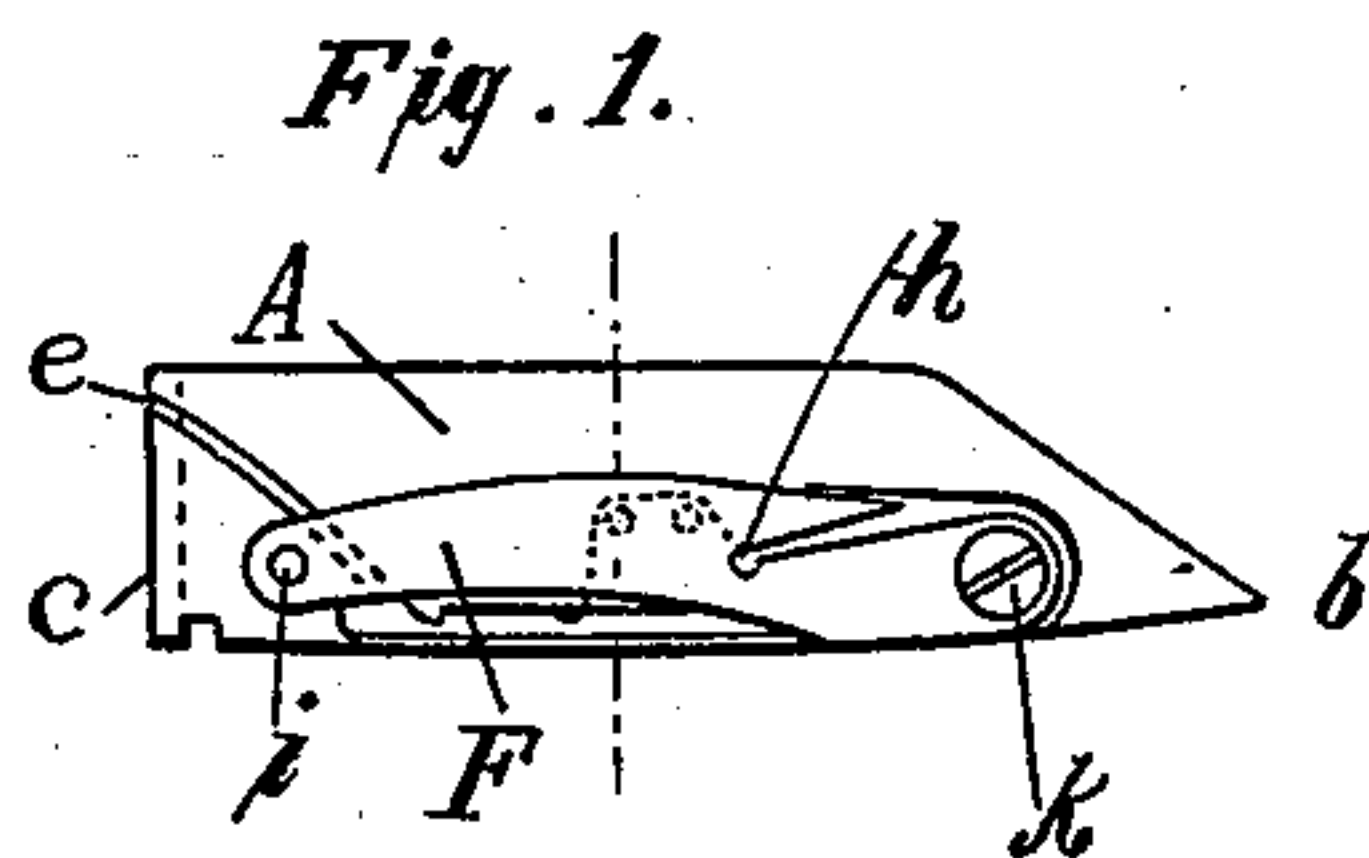


Fig. 4.

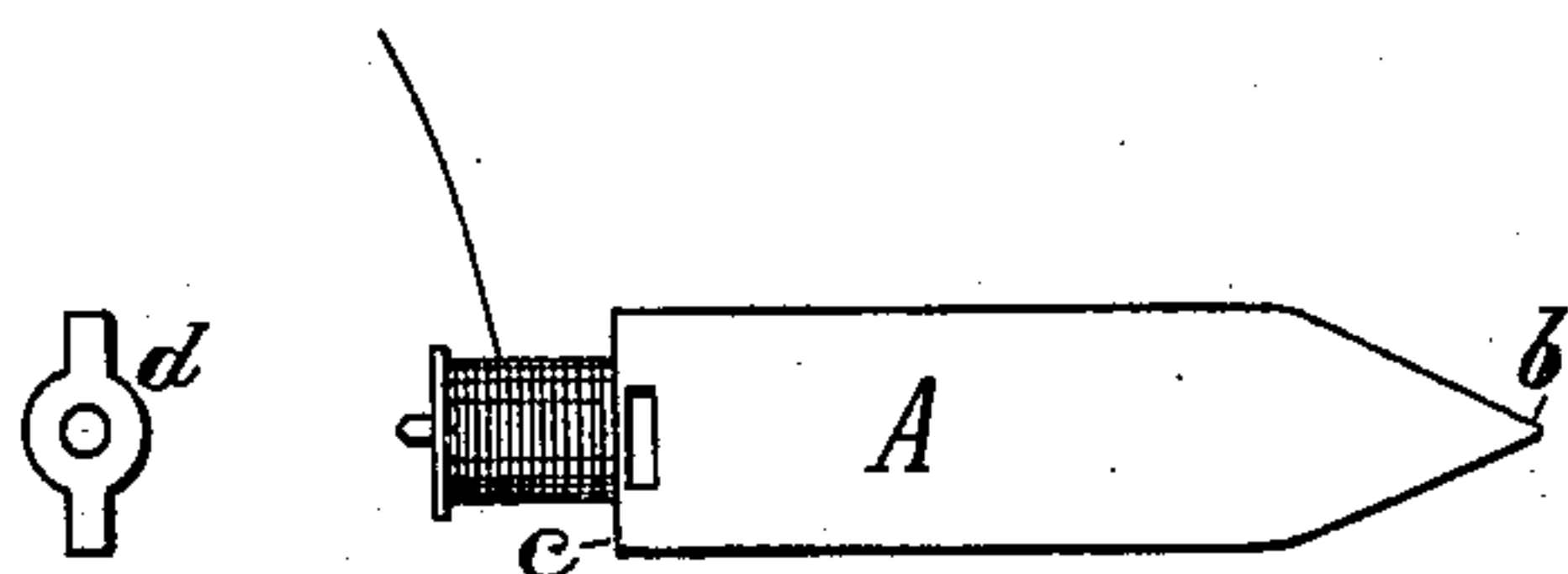


Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN LARSON, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JURGEN P. CHRISTENSEN, OF MANKATO, MINNESOTA.

SEWING-MACHINE SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 236,442, dated January 11, 1881.

Application filed August 6, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN LARSON, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sewing-Machine Shuttles, of which the following is a specification.

My invention relates to an improvement in shuttles for sewing-machines, and is of that class known as "self-threading," which does not require the thread to be passed endwise through an eye formed in the shuttle.

The construction of the shuttle will first be described, and the invention then designated by the claims.

In the accompanying drawings, Figure 1 is a side view of the shuttle. Fig. 2 is a view of the same with the spring removed. Fig. 3 is a reverse or inner side view of the spring. Fig. 4 is a cross-section of the shuttle. Fig. 5 is a view showing the manner of inserting the bobbin and a lid or fastening to secure the same in place.

The letter A designates the case of the shuttle. *b* is the point, and *c* the rear end or heel, which is squared off and closed by a suitable fastening or lid, *d*, secured to the case in any convenient manner. The bobbin is entered at this end. A slot, *e*, is formed in the case, and commences at the heel and extends in a sort of spiral or winding course to *e'*, where, upon one side, a point is formed, which projects abruptly and partly closes the slot, and thence the slot continues straight toward the point of the shuttle, terminating at *e''*. The side of the shuttle-case wherein the slot is formed is recessed near the point to afford place for the attachment of the spring F. Near the forward end of this spring a slit, *f*, is formed, as shown in Figs. 1 and 3, the outer part of which is widest and converges inward to the eye *g*, through which the thread *h* is paid out from the bobbin. The spring is secured to the case by a rivet or screw, *i*, at its heel end, which enters the case on one side of the slot *e*, and by a tension-screw, *k*, at the forward end, which enters the case on the opposite side of the slot. By this arrangement the spring crosses and partly covers the slot, as seen in Fig. 1. The spring is provided on its inner face with two small projecting studs, *n*, and the case has two holes or recesses, *p*, into which these studs enter snugly but loosely. These studs serve to guide the thread, and, with the forward end, *l*, of the spring and the

screw *k*, constitute the tension device. The thread from the bobbin passes out of the straight part of the slot, up under the spring and over the studs *n*, and thence downward and out through the eye *g*. It will be seen that when the tension-screw *k* is tightened the spring is pressed against the case and a greater pressure is brought to bear on the thread, which is drawn out between the spring and case. Thus the tension on the thread is increased. By loosening the screw *k* the tension is lessened.

The operation of threading the shuttle consists in inserting the bobbin endwise in the heel of the shuttle, passing the thread in the slot *e*, securing the bobbin from coming out by the fastening *d*, then drawing the thread toward the point of the shuttle, which causes it to at once take position about the studs *n*, as above described, and to enter the slit *f*, where, by drawing the thread back toward the heel, it will finally stop in the eye *g*, which completes the threading, and the shuttle is ready to be put in the race.

By the above-described construction no part of the thread is exposed to the surface of the race, as where the construction requires the thread to cross the spring on its outer side, as in the shuttle patented to Bouscay, August 13, 1878.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the shuttle body or case having a slot which opens and commences at the end, of a tension-spring having near its forward end a slit widest at its outer part and converging toward the heel part into an open eye, as set forth.

2. The combination of a shuttle body or case having a slot open at the heel, a tension-spring secured to the case having on its inner face a stud over which the thread passes, and near its forward end a slit which extends back toward the heel part and enters an eye, through which the thread is paid out, as set forth.

In witness that I claim the foregoing I hereunto set my hand.

JOHN LARSON.

Witnesses:

FREDRIK GUNDERSEN,
WILH. HANDON.