

(No Model.)

J. A. DAVIS, Dec'd.
W. A. DAVIS, Executor.
SHUTTLE.

No. 353,253.

Patented Nov. 23, 1886.

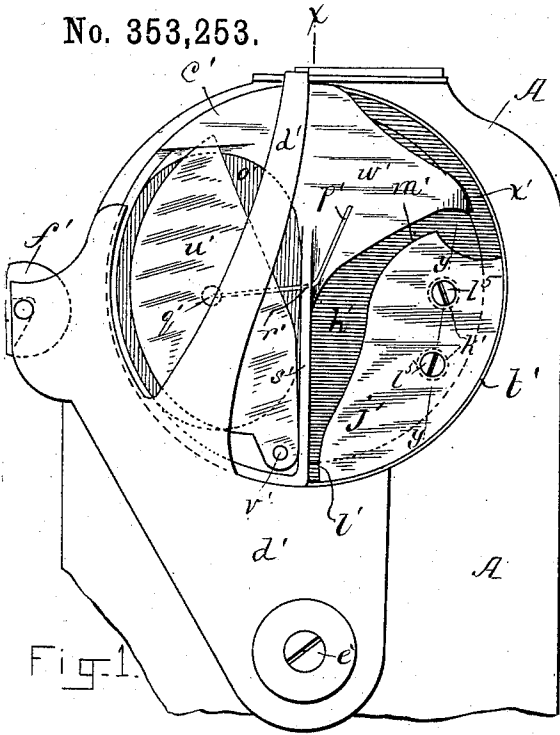


Fig. 1.

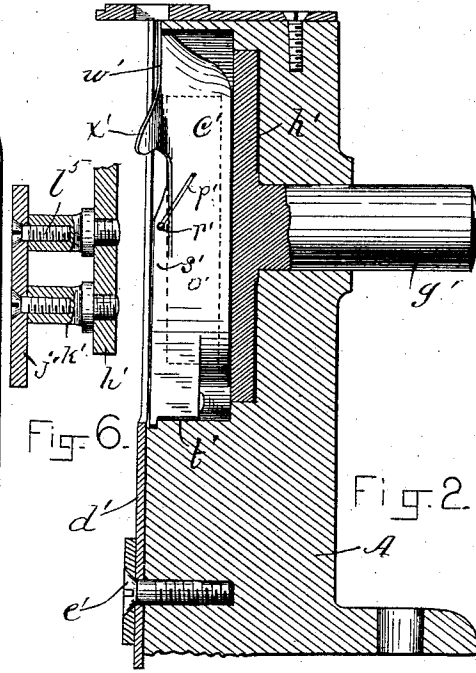


Fig. 6.

Fig. 2.

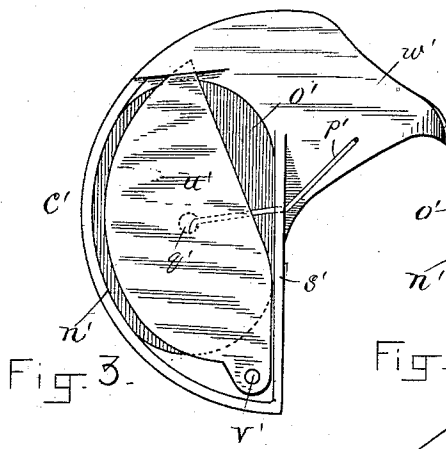


Fig. 3.

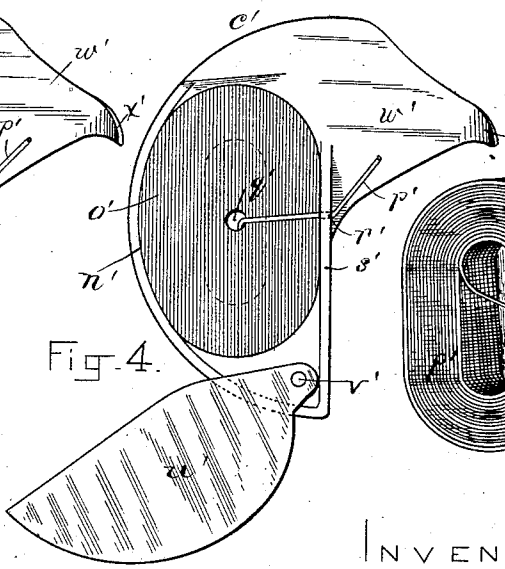


Fig. 4.

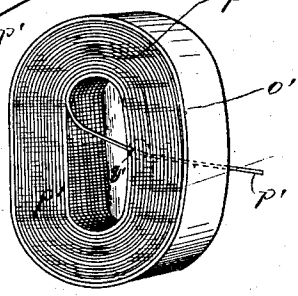


Fig. 5.

WITNESSES:
Chas. S. Gooding,
Robert Wallace.

INVENTOR:
Job A. Davis
by Wm. Mackrood
his Atty.

UNITED STATES PATENT OFFICE.

JOB A. DAVIS, OF BOSTON, MASSACHUSETTS; WILLARD A. DAVIS (EXECUTOR OF SAID JOB A. DAVIS, DECEASED) ASSIGNOR OF ONE-HALF TO LEE E. MOORE, BOTH OF SAME PLACE.

SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 353,253, dated November 23, 1886.

Application filed December 22, 1885. Serial No. 186,468. (No model.)

To all whom it may concern:

Be it known that I, JOB A. DAVIS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Shuttles for Wax Thread Sewing-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This improvement relates to a novel oscillating shuttle for wax-thread sewing-machines, and constitutes one of a series of improvements embodied in the organized machine represented in my application for patent, No. 186,467, filed simultaneously herewith. Parts shown in both these cases are designated by the same letters.

The invention consists in the peculiar form of shuttle hereinafter described, provided with an offset point adapted to engage directly with the loop formed by the hooked needle in its downward movement, as also in the construction and arrangement of the needle and shuttle relatively to each other.

In the appended drawings, Figure 1 is an elevation of my improved shuttle in position in the frame. Fig. 2 is a sectional elevation thereof on line *xx* of Fig. 1. Fig. 3 represents the shuttle removed from the machine; and Fig. 4, the same with the pivoted cap turned down, exposing the front of the thread-case. Fig. 5 shows in perspective the cop in its case removed from the shuttle, as seen from the rear. Fig. 6 is a detail section on line *yy* of Fig. 1.

The shuttle *e'* is received in a circular recess, *t'*, formed in the frame A of the machine, and is oscillated therein by a short shaft, *g'*, having its bearing in the frame, and by a face-plate, *h'*, in said recess. This face-plate has a plate, *j'*, secured to it by fixed studs *k'* and screws *l'*, as shown in Figs. 1 and 6. The plate *j'* is of such size and shape as to nearly fill the portion of the recess *t'* not occupied by the shuttle, so as to actuate the latter by contact with it alternately at the points *l'* and *m'* when the shaft *g'* is oscillated, and yet to leave the shuttle loose, with space for

the upper thread-loop to pass entirely around it. Such loop is formed by the downward movement of the hooked needle, and is held by the needle in position to be engaged by the offset point *x'* on the extension *w'* of the shuttle.

The offset point *x'* extends laterally beyond the body of the shuttle, so as to be outside or in front of the plane in which the shuttle oscillates or rotates, and said point is thus better adapted to take the loops of needle-thread from a hooked needle, with which said shuttle is specially designed to co-operate, as fully shown and described in my application referred to.

After the needle has moved downward to the lowest point, drawing down the thread-loop, it moves up slightly before the shuttle-point enters the loop, thus slacking the loop and facilitating its engagement with the shuttle-point. When the point *x'* of the shuttle engages the loop, it is drawn out and passed around the shuttle by the oscillating movement thereof.

The shuttle is kept in place in the recess *t'* by a plate or arm, *d'*, pivoted to the frame of the machine at *e'*; and secured by a thumb-nut, *f'*. (See Figs. 1 and 2.)

The shuttle *e'* is formed with a recess, *n'*, to receive and hold an oval thread-case, *o'*, which contains the cop of under thread, *p'*. The flat front of the thread-case has a central aperture, *q'*, through which the thread *p'* is drawn, passing thence to a central guide-hole, *r'*, formed in the rib *s'* of the shuttle, and preferably in line with the axis on which it turns. A swinging cap, *v'*, pivoted to the shuttle at *v'*, keeps the thread-case in place or permits its removal, as desired.

What I claim is—

1. A rotary or oscillating sewing-machine shuttle provided with an offset or laterally-projecting point extending beyond or in front of the plane of any part of revolution of the body of the shuttle, substantially as set forth.

2. A rotary or oscillating sewing-machine shuttle having an offset or laterally-project-

ing point extending outside of or beyond the
plane in which any part of the body of the
shuttle works, said shuttle having a recess to
receive the thread and a rib at one side hav-
5 ing a thread-delivery hole at the center of ro-
tation of the shuttle, substantially as set forth.
In testimony whereof I have signed my name

to this specification, in the presence of two
subscribing witnesses, on this 13th day of No-
vember, A. D. 1885.

JOB A. DAVIS.

Witnesses:

MILAN F. STEVENS,
WILLARD A. DAVIS.