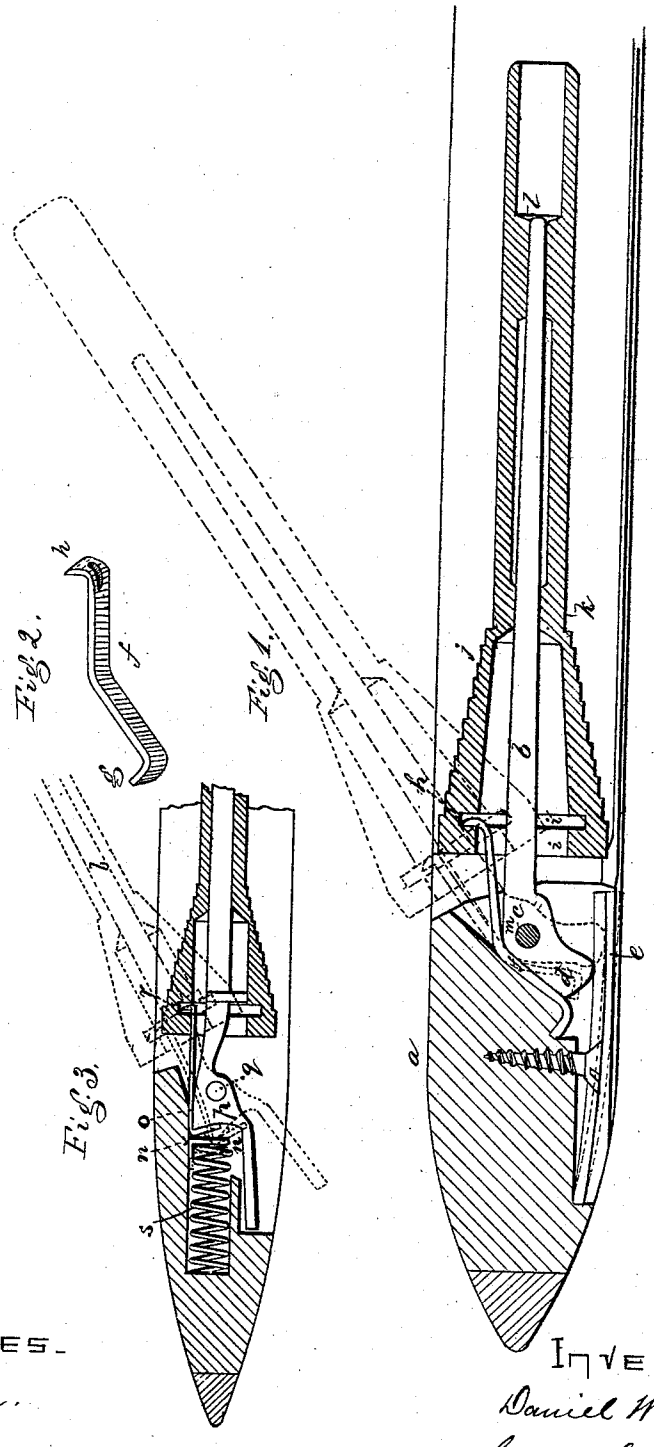
D. WRIGHT.

LOOM-SHUTTLE.

No. 169,505. Patented Nov. 2, 1875.



Witnesses.
L. H. Latimer.
W. J. Pratt.

Inventor.
Daniel Wright
PER Lewis by Gregory Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

DANIEL WRIGHT, OF LOWELL, ASSIGNOR TO SAWYER SPINDLE COMPANY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **169,505**, dated November 2, 1875; application filed June 26, 1875.

To all whom it may concern:

Be it known that I, DANIEL WRIGHT, of Lowell, in the county of Middlesex and State of Massachusetts, have invented Improvements in Shuttles for Looms, of which the following is a specification:

This invention relates to shuttles for looms, and is an improvement on a shuttle described in an application for United States Letters Patent heretofore made by me and allowed. In such application the bobbin-holding catch that engaged the groove in the interior of the bobbin was shown as positively connected with the spindle-head.

In this present invention I have devised a spring that may be readily and easily applied to the ordinary forms of spindle when it is desired to provide the ordinary shuttle with my improved means for holding a bobbin on a spindle by an inner, rather than an outer, groove at or near its base.

Figure 1 represents, in longitudinal section, a shuttle provided with my improvements, the spindle and bobbin being shown in their closed and open positions. Fig. 2 is a view of the bobbin-catch removed, and Fig. 3 is a modification.

The body *a* of the shuttle is of wood or other material, of any well-known shape. The spindle *b* is pivoted at *c*, and back of the pivot is the spindle-head *d*, it being prolonged, and formed, as shown, to act upon a spring, *e*, that acts to hold the spindle in either of its positions, in the usual manner. The bobbin-catch *f* is bent, substantially as shown, and is a detached piece of metal, having a hook, *g*, to meet a shoulder formed in the body of the shuttle, and a hook, *h*, to enter a chamber, *i*, in the end of, and engage a groove, *i'*, formed in the base of, the bobbin *j*, which bobbin may be of any well-known kind. This bobbin-catch is placed between the spindle-head and the shuttle, as shown, and as the position of the spindle is changed the hook *h* and spindle are caused to assume different positions with relation to each other. When closed, as in full line, the spindle and hook are separated, and the spindle-head confines the catch in position, and the bobbin is securely held on the spindle. When the spindle is turned out of the shuttle, as shown in dotted lines, then the part *m* of the spindle is brought against the bobbin-catch, which causes it to turn with the spindle, and in this position the catch is held between the shuttle-body and the part *m* of the spindle, and the hook is brought close to the spindle, and the bobbin may be readily removed.

This invention is not limited to the exact construction of the catch shown, as its shape may be varied without departing from this invention, the gist of which is, a catch separated from the spindle, and adapted to engage a groove within a bobbin. The bobbin has bearings *k l* to fit the spindle.

In the modification shown in Fig. 3 the spindle *b* is held in position by means of the spiral spring *s*, having a cap-plate, *n*, which bears against a bobbin-catch, *o*, fitted to a spindle-head, *p*, having an angular projection back of its pivot *q*, and the hook *r* of this bobbin-catch is to engage a groove in the base of the bobbin, as described with reference to hook *h* in Fig. 1.

It will be noticed that this catch *o* is, in operation, substantially the same as catch *f*. It is formed, however, to fit a spindle-head of different shape; but it moves with the spindle-head, is held by the spindle-head, and is caused to assume positions with relation to the spindle just beyond its pivot, and toward its point, to lock the bobbin in position or to permit it to be removed, as described of the catch in Fig. 1.

In both examples of this invention the catches are disconnected from the spindle; but they move with, and are retained in position and operated by, the spindle and spindle-head.

I claim—

The combination, with a shuttle, of a detached catch, substantially as described, adapted to enter and engage a groove in the base of a bobbin, as set forth.

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

DANIEL WRIGHT.

Witnesses:

G. W. GREGORY,

W. J. PRATT.