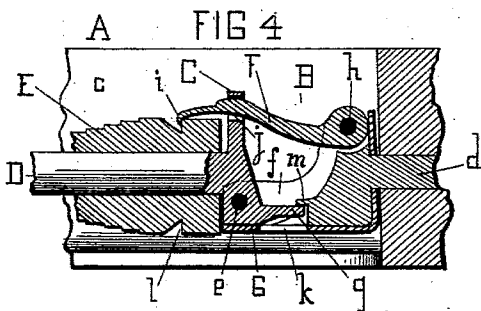
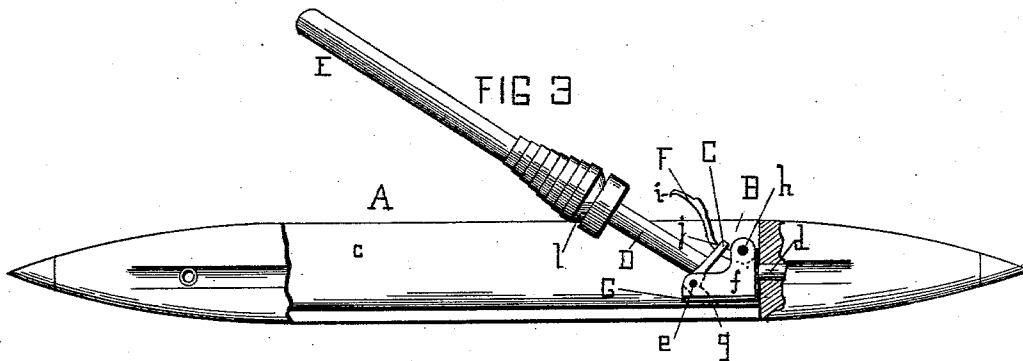
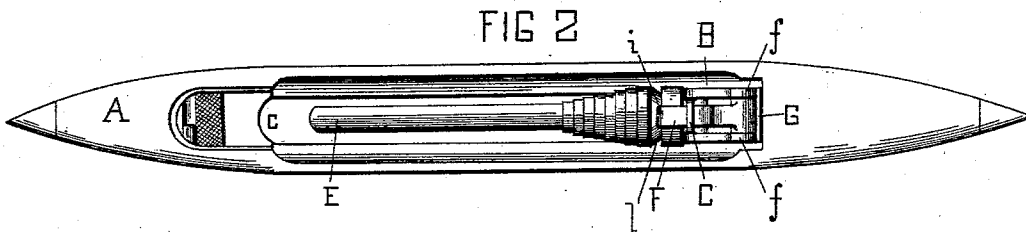
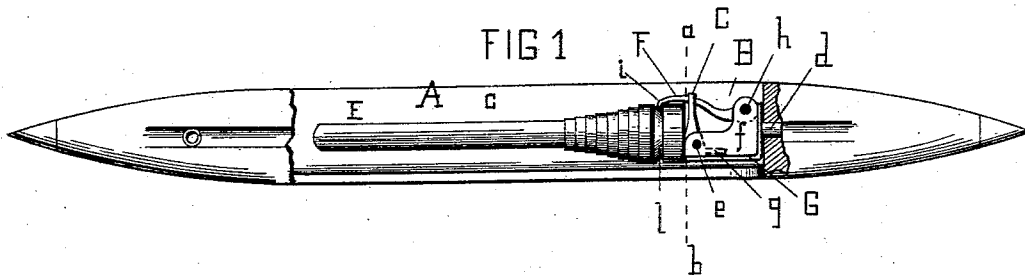


(No Model.)

R. P. PEARSON.
BOBBIN LOCK FOR LOOM SHUTTLES.

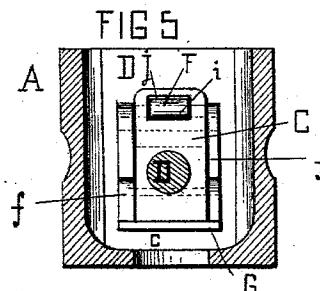
No. 470,703.

Patented Mar. 15, 1892.



WITNESSES

William Spielman
Wm S. Hoffman



INVENTOR

Robert P. Pearson
by Francis D. Pastorius
Solicitor

UNITED STATES PATENT OFFICE.

ROBERT P. PEARSON, OF CAMDEN, NEW JERSEY.

BOBBIN-LOCK FOR LOOM-SHUTTLES.

SPECIFICATION forming part of Letters Patent No. 470,703, dated March 15, 1892.

Application filed January 21, 1891. Serial No. 378,565. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. PEARSON, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented new and useful Bobbin-Locks for Loom-Shuttles, of which the following is a specification.

My invention consists in an improved lock to be applied to shuttles for regulating the vibration of the spindles and securing the bobbin thereon. A vibrating slotted head, to which the spindle is fixed, and a vibrating latch are pivoted at different parts of the lock-frame and in engagement with each other by the latch passing through a slot in the top of the spindle-head and entering a groove in the bobbin-head. They move at the same time. The motion of the spindle-head is imparted to the latch and connects or disconnects the bobbin.

On reference to the accompanying sheet of drawings, making part of this specification, Figure 1 is a longitudinal elevation of my invention, the side of the shuttle-body being removed in part, showing the position occupied by the bobbin when in use. Fig. 2 is a plan view of the shuttle-body shown in Fig. 1. Fig. 3 is a longitudinal elevation, side sectioned, showing the spindle elevated and the latch lifted from the groove in the head of the bobbin. Fig. 4 is an enlarged vertical and longitudinal section showing the latch engaged with the bobbin-head; and Fig. 5 is an enlarged transverse section through the line *a b*, Fig. 1.

Similar letters refer to similar parts in the several views.

A is a shuttle-body, and B a bobbin-lock fixed within its recess *c* by a stub *d*, extending into the solid end of the shuttle-body. On a pivot *e* of the lock-jaws *f* is a vibrating slotted head C, to which the shuttle-spindle D is fixed. A stop *g* projects backward from the said head for limiting the upward vibration of the spindle by contacting with the bottom of the lock-frame, which is opened to give it sufficient swing. As shown, Fig. 4, the stop *g* is horizontal and in engagement with a stop *m* on the stub *d* when the head is perpendicular and the spindle within the shuttle. On a backward vibration of the head for elevating the spindle and unlocking the bobbin

the stop moves through the opening in the bottom of the lock-frame until it contacts with its front end and arrests the vibration of the head.

F is a vibrating latch pivoted to the jaws *f* at *h*. It is connected with the spindle-head C by its hook end *i* passing through the slot *j* of the said head and engaging with a groove *l*, formed in the bobbin-head, by which the bobbin is secured on the spindle. The spindle-head C and the latch F are so combined and pivoted to the lock-frame that they move synchronously, the former serving to actuate the latter. A spring G is fixed to the back of the lock-frame and then bent and extended along its bottom until its loose end bears upwardly against the spindle-head C for retaining the spindle in its normal and horizontal position within the shuttle-body. It has sufficient force for that purpose without preventing the raising and retaining of the spindle in an inclined position when a bobbin is to be replaced, and is slotted at *k* to provide for the swing of the spindle-head stop *g*.

As shown, Figs. 1 and 4, the spindle D is in its horizontal and operative position within the shuttle-body A. The bobbin E is held against the vibrating head C by the end *i* of the latch F taking into the annular groove *l*, formed in its head. The latch is prevented from lifting and unlocking by reason of its connection with the slot *j* in the head C, which holds it down. The spring G, fixed to the back and bottom of the frame, keeps the spindle from raising accidentally. For removing the bobbin E the spindle is raised, the vibration of its head turns and lifts the latch F until its end is released from its contact with the annular groove in the bobbin-head, when the bobbin is free to be removed from the spindle.

I claim—

1. In a bobbin-lock for a loom-shuttle, the combination, with the lock-frame, of a vibrating slotted head having a shuttle-spindle affixed thereto and a vibrating latch adapted to engage with a groove in the head of a bobbin, the said slotted head and said latch being pivoted at different parts of the lock-frame and in engagement with each other by the latch passing through the slotted head in such manner that the vibration of the spin-

dle imparts a like vibration to the latch to lock and unlock the bobbin, for the purpose shown and described.

2. In a bobbin-lock for a loom-shuttle, the
5 combination, with the lock-frame, of a vibrating slotted head having a shuttle-spindle affixed thereto, a vibrating latch adapted to engage with a groove in the head of a bobbin, the said slotted head and said latch being
10 pivoted at different parts of the lock-frame and in engagement with each other by the latch passing through the slotted head in

such manner that the vibration of the spindle imparts a like vibration to the latch to lock and unlock the bobbin, a stop for the slotted
15 head, and a spring fixed to the lock-frame and bearing against the bottom of the slotted head, for the purpose shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT P. PEARSON.

Witnesses:

FRANCIS D. PASTORIUS,
MARTIN V. BERGEN.