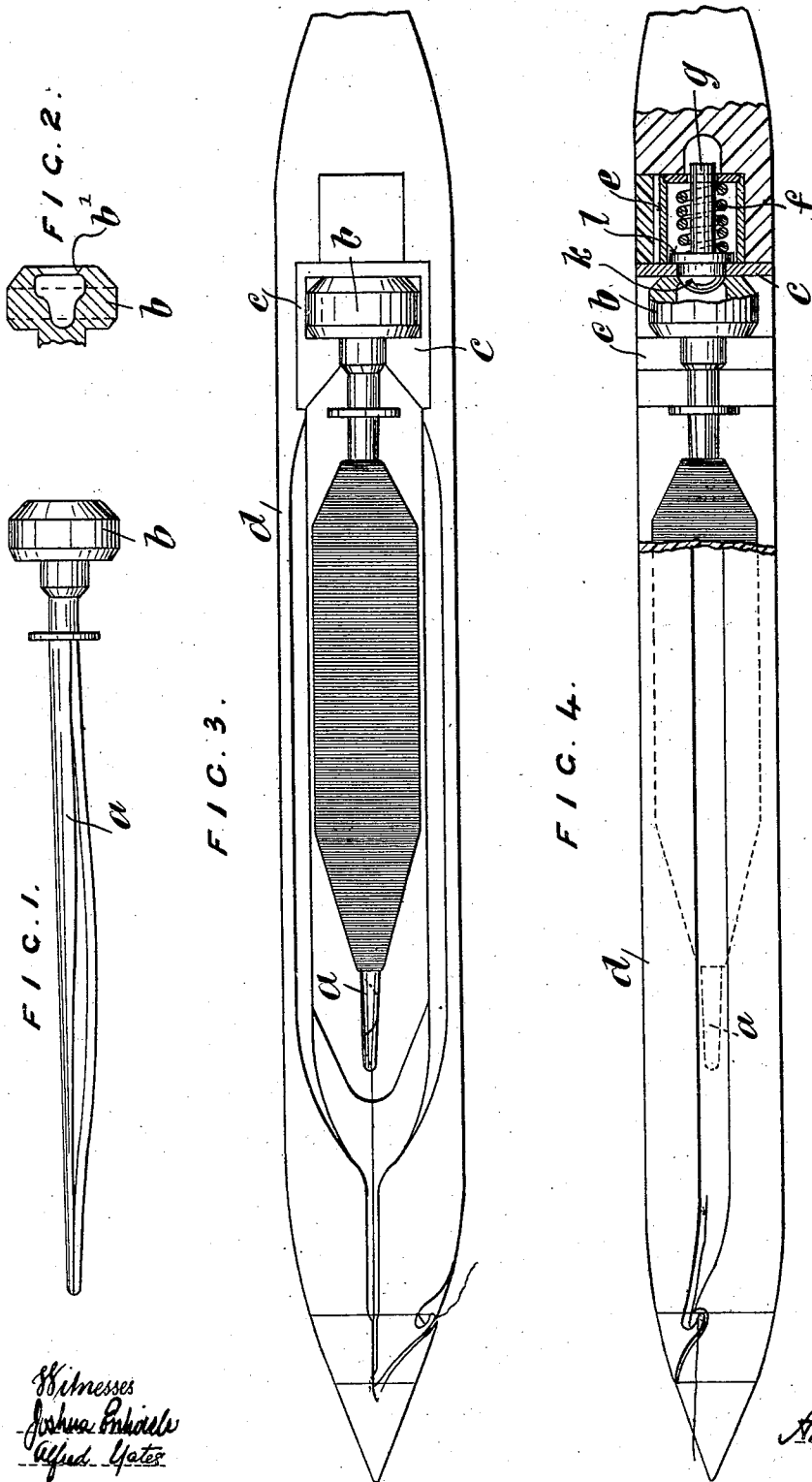


No. 855,514.

PATENTED JUNE 4, 1907.

A. J. JACKSON.
SHUTTLE FOR LOOMS.
APPLICATION FILED JUNE 27, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

ARTHUR JAMES JACKSON, OF ASHTON-ON-MERSEY, ENGLAND.

SHUTTLE FOR LOOMS.

No. 855,514.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed June 27, 1906. Serial No. 323,594.

To all whom it may concern:

Be it known that I, ARTHUR JAMES JACKSON, a subject of Great Britain, residing at Surrey Lodge, Ashton-on-Mersey, in the county of Chester, England, manufacturer, have invented new and useful Improvements in or Relating to Shuttles for Looms, of which the following is a specification.

My invention has reference to shuttles used in looms for weaving and relates to a novel construction of shuttle having a separate detachable shuttle tongue, illustrated in the accompanying sheet of drawings.

Figure 1 shows a removable shuttle tongue used under my invention. Fig. 2 is a sectional elevation of the head of the same. Fig. 3 is a plan view of my improved loom shuttle. Fig. 4 is an elevation thereof partly in section.

In constructing a shuttle in accordance with my invention I dispense with the usual pivoted shuttle tongue upon which the weft cop is skewered and provide a tongue *a* which can be entirely ejected out of the shuttle when it is desired to renew the cop.

The shuttle tongue *a* is of the ordinary or suitable construction except that at the butt end it is provided with a head *b* adapted to fit into a chambered block *c* formed in the shuttle *d*. The chambered block *c* is formed with a hollow cylindrical boss *e* incased within the shuttle *d*, within which, slidable against the action of a coiled spring *f*, is a spindle *g* having a ball or hemi-spherical head *k* as plainly shown in section in Fig. 4. A collar *l* limits the outward movement of the spindle *g*. The head *b* of the shuttle tongue *a* is formed with a hemi-spherical cavity or recess *b'* as shown in the sectional view Fig. 2, to receive the ball, so that when the head of

the shuttle tongue is thrust into the chambered block *c* the ball *k* under the action of the spring *f* snaps into the socket and, with the assistance of the chambered block *c*, retains the tongue in position as is indicated in Figs. 3 and 4.

When the cop is exhausted the tongue is thrust entirely out of the shuttle and is then replaced by a shuttle tongue bearing a full cop. The bottom of the shuttle is or may be cut away sufficiently to allow the shuttle tongue bearing a full cop to be thrust thereout. A number of such tongues *a* may be kept ready provided with cops in order that an empty tongue may be removed and at once replaced by another bearing a cop so that the loom is kept standing for a minimum time, or the improved shuttle may be used in an automatic weft replenishing loom. The usual or any suitable threading means and tension device may be employed in the shuttle.

I declare that what I claim is.

In combination the loom shuttle *d*, a separate shuttle tongue, a head on such shuttle tongue having a ball socket, a chambered block in the shuttle shaped to receive the head on the shuttle tongue, a spring actuated ball in the chambered block to snap into the ball socket of the shuttle tongue head and retain the shuttle tongue in the shuttle substantially as described.

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

ARTHUR JAMES JACKSON.

Witnesses:

JOSHUA ENTWISLE,
ALFRED YATES.