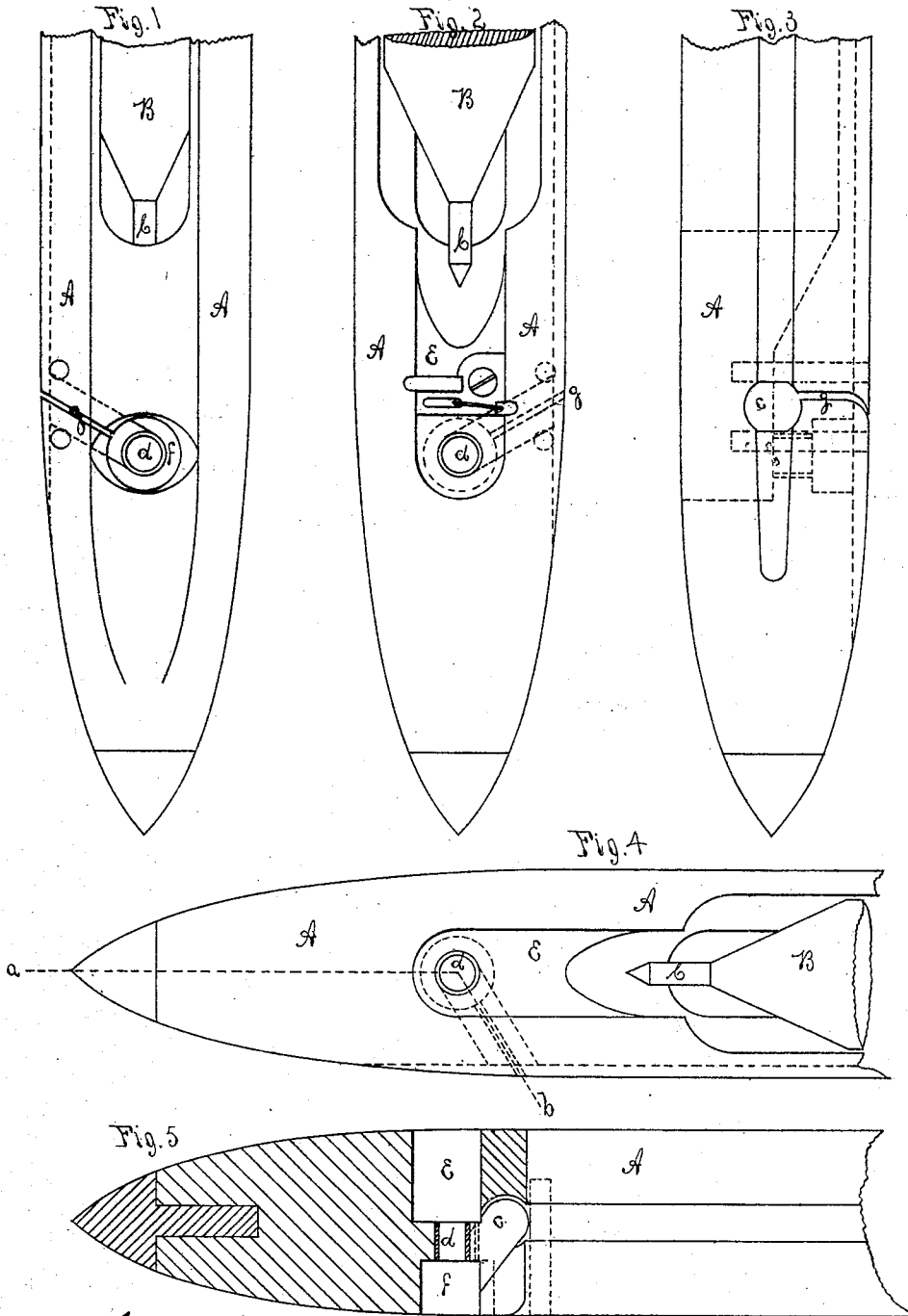


**E. G. SPALDING.**  
**Loom-Shuttles.**

No. 147,075.

Patented Feb. 3, 1874.



*John E. Crane*  
*John C. Brown*      *Edwin S. Spalding*

# UNITED STATES PATENT OFFICE.

EDWIN G. SPALDING, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO FRANK T. JACQUES, CHARLES E. SMITH, AND JOHN L. JACQUES, OF SAME PLACE.

## IMPROVEMENT IN LOOM-SHUTTLES.

Specification forming part of Letters Patent No. **147,075**, dated February 3, 1874; application filed December 1, 1873.

*To all whom it may concern:*

Be it known that I, EDWIN G. SPALDING, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Weavers' Shuttles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 represents a plan or top view; Fig. 2, a side elevation; Fig. 3, a plan with an ordinary friction device. Fig. 4 is a bottom side view, and Figs. 5 and 6 are each a cross-section of Figs. 1 and 3, respectively.

This invention is intended as an improvement on my former one, the application for which bears date November 24, 1873; and relates to the means for threading a shuttle which has a bottom eye and a side eye, the latter opening into the former.

The object of this invention is to facilitate the process of threading the shuttle having the bottom and side eyes, as described, and to obviate the necessity of sucking the filling through, with injury to the operative from the dust and linty fibers drawn into the throat and lungs. This invention consists of a slot, *g*, formed in the under side of the shuttle, through the substance thereof, into the side eye *c*, from its outlet to the bottom eye, or to the recess *F* below the bottom eye, thus forming a passage for the filling from the bottom eye to the eye in the side of the shuttle.

In the said drawings, *A* represents the body of the shuttle, and *B* the cop or bobbin on the spindle *C*. The bottom eye *d* may open into a recess, *F*, or the recess may continue through the bottom of the shuttle and form the bottom eye, and then the side eye will open into the bottom eye. So large a bottom eye will furnish abundant room for the passage of the fill-

ing, the end of which is easily passed through, and then drawn through the slot *g* into the side eye *c*, and the shuttle is threaded. The eye *c* is formed at an angle both inward and downward, as shown, and the slot *g* is at or near the same angle with the eye *c* and with the side of the shuttle. When the shuttle passes through the open shed of the divided warp, the lower division of such warp is drawn across the race of the lay, which is the path of the shuttle, and there is no liability of the lower warp-threads catching in the slot *g* in the under side of the shuttle, even though such slot was at a right angle with the side of the shuttle, whereas, if the slot was in the top edge of the shuttle, as it is in some cases, the warp-threads in the upper division, having no bearing, would be liable to catch in the slot and be severed; and, besides this, they would retard the motion of the shuttle, or cause it to stop in the web.

For the above reasons I consider the slot *g* in the bottom of the shuttle, and forming a communication between the bottom eye and side eye, a very important, new, and useful element for the purpose described.

This shuttle may be provided with a common friction device, such as is described in my former application, and shown in the drawings of this, and such friction device will operate to advantage in either shuttle, although it does not aid in the process of threading the shuttle.

I claim as my invention—

A shuttle having its eyes constructed and arranged, with relation to each other, as described, and with the side eye slotted.

EDWIN G. SPALDING.

Witnesses:

JOHN E. CRANE,  
JOHN C. BLOOD.