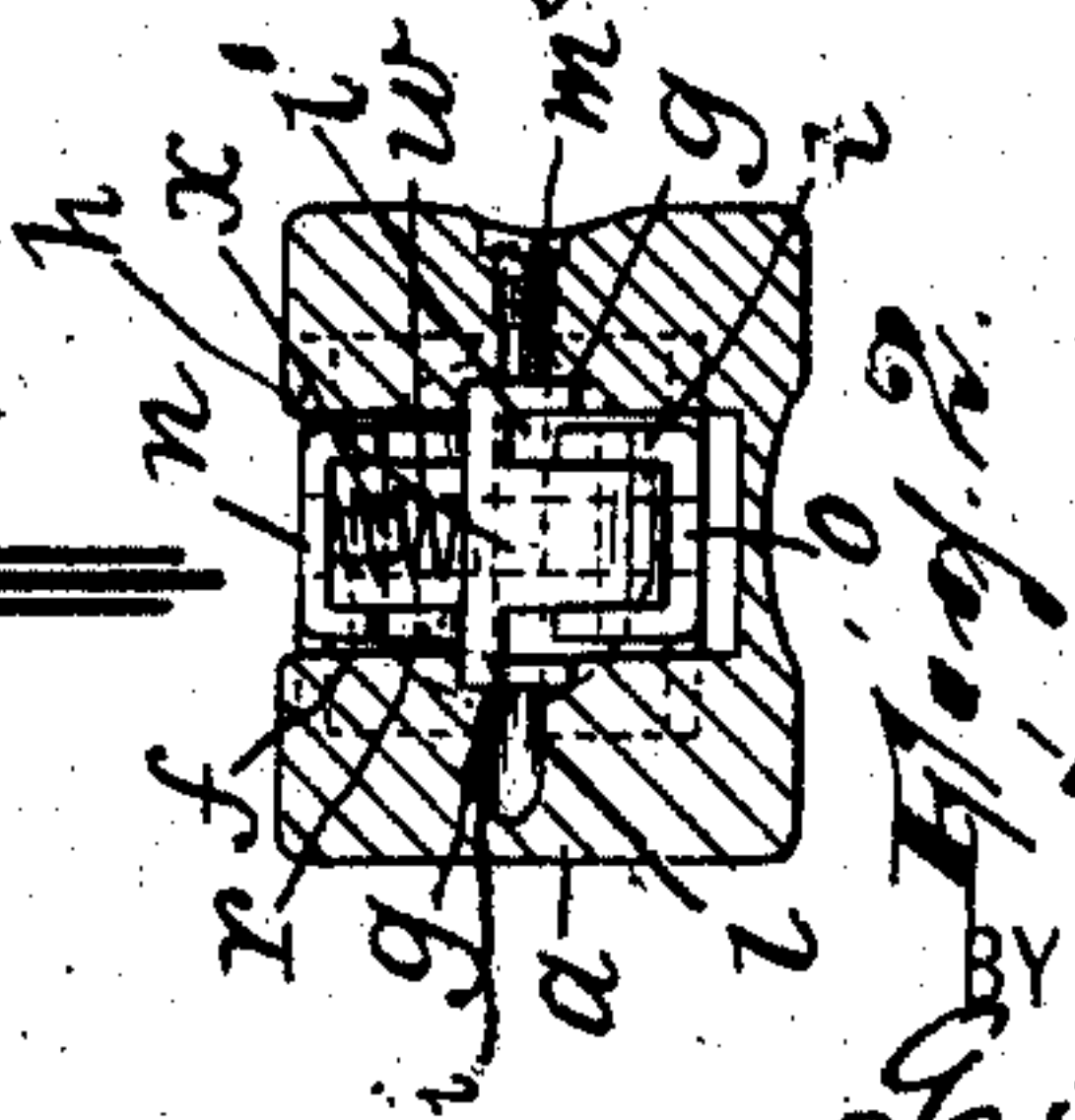
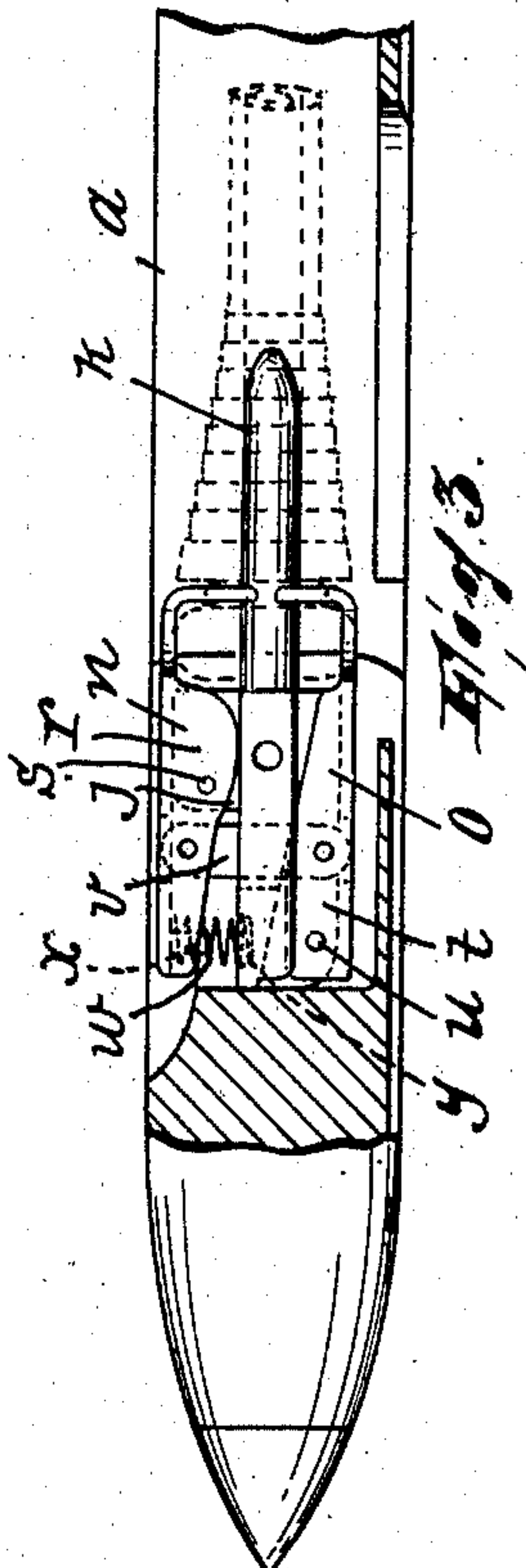
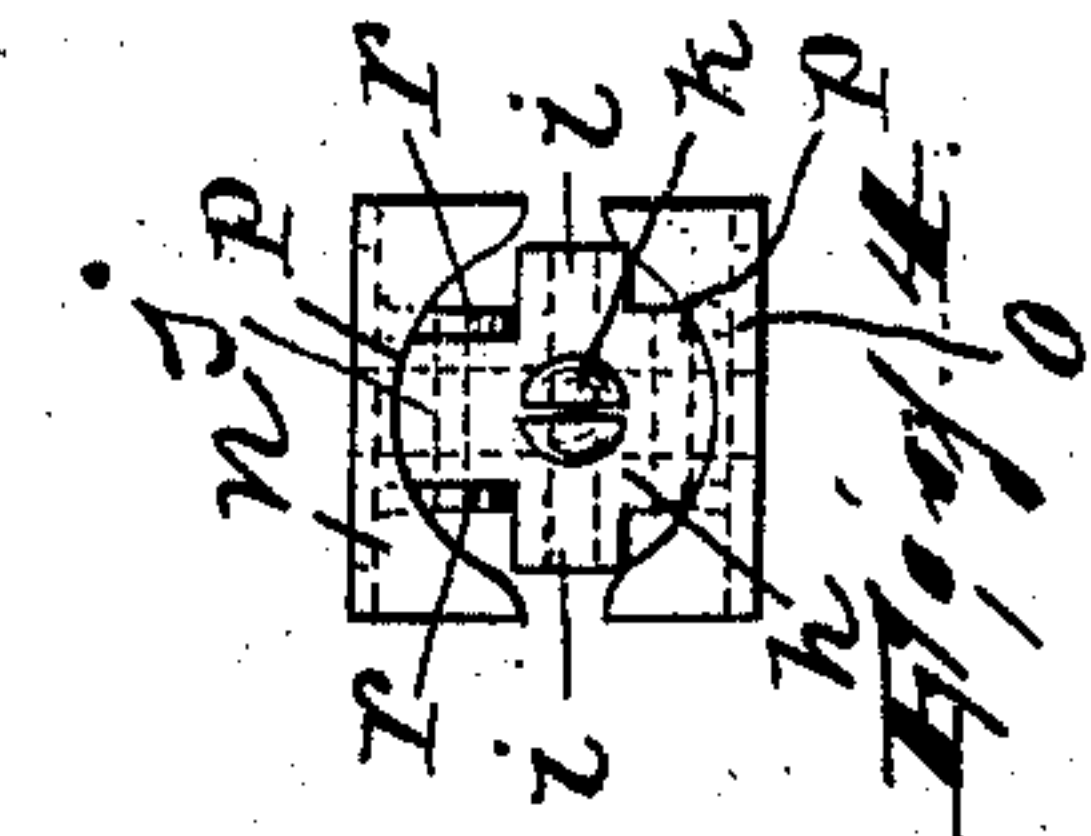
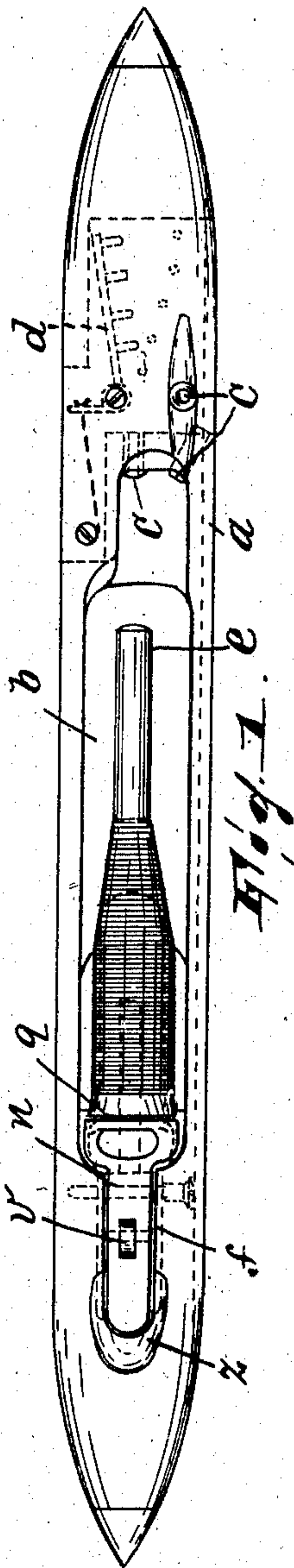


No. 846,466.

PATENTED MAR. 12, 1907.

A. GULDEMAN.
LOOM SHUTTLE.

APPLICATION FILED APR. 20, 1906.



WITNESSES:

Wm. D. Bell.
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UNITED STATES PATENT OFFICE.

ARNOLD GULDEMANN, OF PATERSON, NEW JERSEY.

LOOM-SHUTTLE.

No. 846,466.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed April 20, 1906. Serial No. 312,839.

To all whom it may concern:

Be it known that I, ARNOLD GULDEMANN, a citizen of the United States, residing in Paterson, county of Passaic, State of New Jersey, have invented certain new and useful Improvements in Loom-Shuttles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention is an improvement in shuttles for broad-ware looms; and it has for its object to provide for so mounting the bobbin spindle or skewer in the shuttle as to do away with moving it on a pivot in order to remove therefrom and place thereon the bobbins or quills.

The pivot type of mounting now in common use is objectionable for several reasons, among which may be mentioned the possibility of leaving the spindle in a partly-closed position after replenishing with the result that the projecting end of the quill catches in the warp and does considerable damage thereto and also the frequent splitting of the sides of the shuttle caused both by the leverage action of the spindle and the fact that several securing-screws are necessary to secure the mounting in place.

My invention contemplates supporting the quill or bobbin on a spindle which is at least fixed in the shuttle against pivotal movement and from which the quill or bobbin is removable by sliding the same longitudinally of the shuttle off the spindle.

My invention will be found fully illustrated in the accompanying drawings, wherein—

Figure 1 is a top plan view of the improved shuttle. Fig. 2 is a view showing the spindle-mounting in its left-hand end elevation, as seen in Fig. 3, and the shuttle in cross-section taken in the plane of a certain screw *l*. Fig. 3 is a side view of the shuttle, the same being partly broken away to illustrate in elevation the mounting, and Fig. 4 is a right-hand end elevation of the spindle and its mounting as seen in Fig. 3.

In said drawings, *a* is the shuttle, having the usual bobbin or quill cavity *b*, thread-eyelets *c*, and tension device *d*.

e is the bobbin or quill.

f is a chamber formed as an extension of the cavity *b*, and *g* two grooves opening into the same, the one in the front and the other in the back wall of the shuttle.

h is a block having a rib *i* on each side and a hump or lug *j* on the top thereof at its front end. Preferably formed integral with this block as an axial extension thereof is a short spindle *k*, which is split and somewhat expanded, so that when the bobbin or quill is fitted onto the same it will not slip off. This block is adapted to fit into the chamber *f* by first introducing it to the bobbin-cavity with the spindle projecting inwardly and longitudinally of the shuttle and then slipping it back into the cavity *f*, the ribs *i* sliding in the grooves *g*. In this position the block is held by a screw *l*, having its threaded portion adjacent its head and adapted to engage in the shuttle-wall. It will be observed that only the head end of the screw is exposed and that, furthermore, this single screw is the only device needed and used to keep the mounting in position.

n and *o* are two levers, whose inner ends are turned inwardly toward each other and recessed, as at *p*, so that they may engage in the annular groove *q* in the butt-end of the quill or bobbin. The lever *n* is formed with two parallel longitudinally-extending wings *r* on its under side, and it is fitted over the hump *j* of the block *h* and a pin *s* passed through said wings and the hump to form a fulcrum for said lever. Similarly, the lever *o* is formed with upwardly-extending parallel wings *t*, which receive between them the bottom portion of the block *h* and through which and said block extends a pivoting-pin *u*. It will be observed that the pivots *s* and *u* are near the relatively opposite ends of the levers.

v is a link extending through the block and pivotally connecting the levers *r* and *t*, and being arranged between the pivots *s* and *u* it will be obvious that if the jaw end of one lever moves outwardly the jaw end of the other will also move outwardly.

w is a spring coiled between the block *h* and the free end of lever *n*, being held in place by a pintle *x* on the latter and by a socket *y*, in which it seats in the former. This spring normally keeps the jaw closed.

The grooves *z* on the under sides of the

rib *i* (shown in Fig. 2) are merely to permit the wings *t* on the lever *o* to have free movement.

A finger depression *z* is formed in the top 5 of the shuttle at chamber *f*.

In order to place a quill in the shuttle, the outer end of the lever *n* is pressed on to open the jaws, whereupon the quill previously inserted in the cavity *b* is slipped back on the 10 spindle until the groove *q* is in operative position to be engaged by the jaws upon the release thereof.

Having now fully described my invention, what I claim as new, and desire to secure by 15 Letters Patent, is—

1. The combination of a shuttle, a bobbin-spindle, a mounting therefor arranged in the shuttle, pivoted bobbin-holding jaws, and a

link pivotally connected with said jaws on relatively opposite sides of their pivots, substantially as described. 20

2. The combination of a shuttle having a bobbin-spindle, a mounting therefor arranged in the shuttle, said spindle extending longitudinally of the shuttle, bobbin-holding jaws 25 pivoted in said mounting, and a link pivotally connected with said jaws on relatively opposite sides of their pivots, substantially as described.

In testimony that I claim the foregoing I 30 have hereunto set my hand this 18th day of April, 1906.

ARNOLD GULDEMANN.

Witnesses:

JOHN W. STEWARD,
WM. D. BELL.