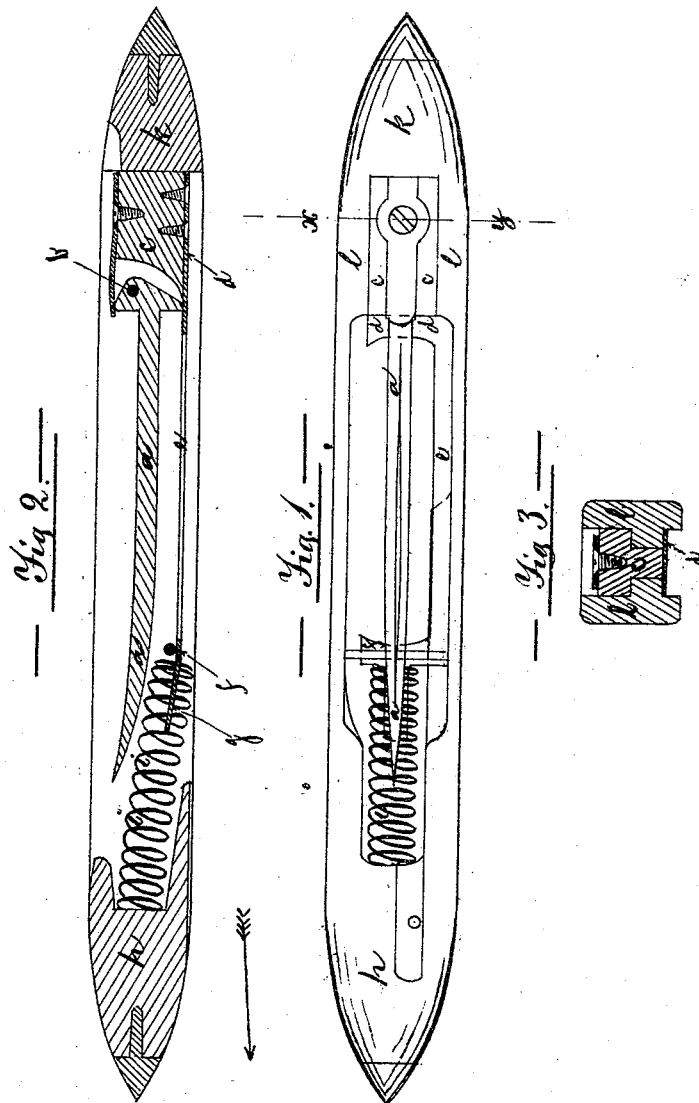


DANIEL WRIGHT.

Improvement in Shuttles for Looms.

No. 115,006.

Patented May 16, 1871.



Witnesses:
Henry C. Fitch
Hugh Lyon

Inventor:
Daniel Wright.
by his attorney, Edwin Andrus.

UNITED STATES PATENT OFFICE.

DANIEL WRIGHT, OF WALTHAM, MASSACHUSETTS, ASSIGNOR TO ORLANDO A. KNEELAND, OF SAME PLACE.

IMPROVEMENT IN SHUTTLES FOR LOOMS.

Specification forming part of Letters Patent No. **115,006**, dated May 16, 1871.

I, DANIEL WRIGHT, of Waltham, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement on Shuttles, of which the following is a specification:

Nature and Objects of the Invention.

The object of my invention relates to improvements on shuttles so as to prevent the picking or breaking of the cops or bobbins when the shuttle strikes the picker in the direction having that tendency.

On the drawing, Figure 1 is a ground plan. Fig. 2 is a longitudinal section; and Fig. 3 is a transverse section over the line *xy*, taken on Fig. 1.

Similar letters refer to similar parts on the drawing.

A great amount of yarn is always wasted in cotton mills on account of the breaking or picking of the cops or bobbins when the shuttle is struck by the picker, in consequence of the momentum of the cops or bobbins that tends to carry the bobbin forward after the shuttle has been brought to rest by contact with the picker.

To prevent this breaking of the cops and bobbins is the purpose of my invention, and I construct my shuttle as follows:

a is the metallic spindle on which the cop or bobbin is held during operation. In the rear end of this spindle is a head through which is made a hole, *b*. A pin projects through this hole *b* and rests its projecting ends in a guide-block, *c*. The guide-block *c* is made to slide forward, together with the spindle *a*, in guides, as shown in section, Fig. 3. Under the guide-block *c* is a plate, *d*, screwed on so as to hold the guide-block *c* onto its seat. The plate *d* is prolonged by the arm *e*, and terminates in

the cross-piece *f* and tongue *g*, as shown in Figs. 1 and 2. In the forward end *h* of the shuttle is a recess in which a spring, *i*, is held. This spring presses with its opposite end against the cross-piece *f*, whereby the pressure from the spring *i* is communicated to the guide-block *c* by means of the arm *e* and plate *d*.

If, now, a cop or bobbin is secured to the spindle *a* and the shuttle set in motion in the direction of the arrow till it is struck by the picker, the inertia of the cop, spindle, and guide-block will continue the forward motion and gradually be arrested by the action of the spring *i* on the pieces *f*, *e*, and *d*, no breaking or picking of the cop or bobbin will take place, owing to the gentleness with which the blow from the picker is taken up by the spring *i*.

The spring *i* I make of steel, brass, rubber, or suitable material, and instead of placing it in the end marked *h*, I may, to equal advantage, place it between the block *c* and the shuttle end *k*, whereby the same result is obtained.

The guide-block *c*, moving in guides *ll*, may be made of a rectangular, *T*, or circular transverse section, or any other one whereby the same result is obtained.

Having thus described the nature and construction of my invention, I wish to secure by Letters Patent, and claim—

The combination, with the spindle *a*, of the guide-block *c*, guides *ll*, hinge *b*, and spring *i*, for the purpose as herein fully set forth and described.

DANIEL WRIGHT.

Witnesses:

C. S. SMITH,
H. J. STONE.