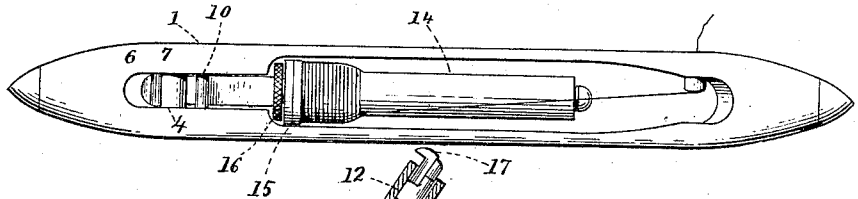
(No Model.)

C. E. BRIGGS.

LOOM SHUTTLE.

No. 415,702. Patented Nov. 26, 1889.

Fig.1.



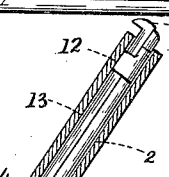


Fig.2.

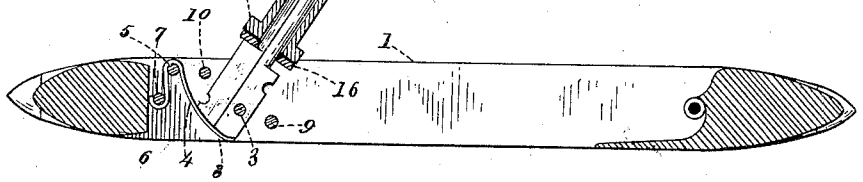


Fig.3.

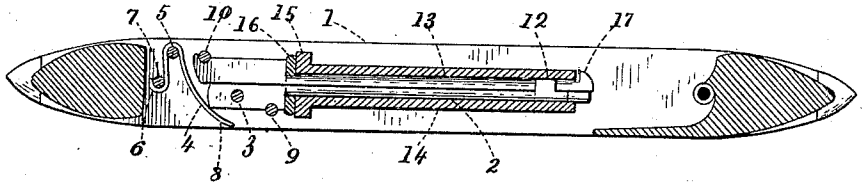


Fig.4.

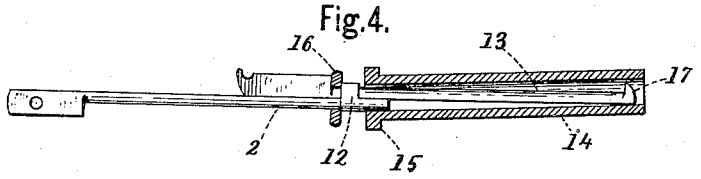
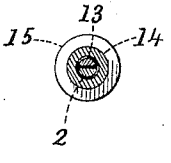


Fig.5.



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UNITED STATES PATENT OFFICE.

CHARLES E. BRIGGS, OF JAMESTOWN, NEW YORK.

LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 415,702, dated November 26, 1889.

Application filed February 11, 1889. Serial No. 299,423. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BRIGGS, a citizen of the United States, residing in Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Loom-Shuttles, of which the following is a specification.

My invention relates to certain new and useful improvements in loom-shuttles, and will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view. Fig. 2 is a vertical longitudinal section through the body of the shuttle, and showing also a longitudinal central section through the spool, the spool and spindle being turned up so as to bring the spool out of the shuttle. Fig. 3 represents a similar sectional view showing the spindle and spool turned down to their normal position within the shuttle. Fig. 4 is a detached side elevation of the spindle in position for removing the spool. Fig. 5 is a cross-section through the spindle and spool.

Heretofore shuttles have sometimes been constructed with a solid spindle having a strong longitudinally-arranged spring secured to the spindle, so that as the spool is pushed onto the spindle and spring it is secured in place and held by the friction of the spring. The objection to this construction is that in the course of time the spool (which is comparatively light) is generally broken or split by the force of the spring, which is at all times pressing outward against the inner side of the spool, so that it becomes useless and has to be replaced by a new one, which in due time is split in the same way.

The object of my invention is to avoid this objection by relieving the spool from all pressure on the spindle, and at the same time holding it securely in place.

In said drawings, 1 is the body or frame of a shuttle, the same being generally made of hard wood, as the most suitable material. The spindle 2 is pivoted to the shuttle by a pin 3 in the same way that an ordinary spindle is secured, and is kept in its normal position, as in Fig. 1, by means of a spring 4 bent over the pin 5, and its end 6 secured to the body by a pin 7, in the usual manner. The opposite end 8 of the spring presses against the under portion of the spindle and holds it to its normal position, (see Fig. 3,) and also in position when turned up, as in Fig. 2. When the spindle is in its normal position, as in Figs. 1 and 3, its under side, forward of the center, rests on the pin 9, and its upper side, back of the center, rests against the pin 10, the said pins entering notches in the parts of the spindle.

I construct my shuttle-spindle in two longitudinal bars, each being semicircular in cross-section, so that when the two are together they form a round bearing for the spool, the lower half 2 being pivoted to the shuttle by the pin 3, in the ordinary manner. At the opposite end of the pivoted portion 2 is a thin metallic sleeve 12, made of the required size to permit the upper portion 13 of the spindle to slide longitudinally back and forth through it, substantially as shown in Fig. 4. The spool 14 is made, in the usual way, of light wood and is carried on the shuttle-spindle.

With my invention the spool and shuttle are first turned up on the pivot or pin 3, and the spool 14 and upper portion of the spindle 13 are drawn longitudinally forward, as shown in Fig. 4, which leaves the spool in a position to be easily drawn off, as shown in said Fig. 4. The spool is put on by simply pushing it over the portion 13, which alone is small enough to allow it to pass over easily, and it can then be pushed over the lower portion 2 until the large end 15 of the spool comes against the washer 16, (which is usually made of felt or other soft material.) It is then turned down into its normal position, as shown in Figs. 1 and 3. In this position it will be seen that as the two portions 2 and 13 of the spindle are together they form a cylindrical bar or rod which fills the longitudinal opening in the spool and holds the laterally-projecting hook portion 17 at the end of the portion 13 up over the end of the spool and prevents it from coming off.

When the spindle is in its normal position, as in Fig. 3, the upper portion 13 cannot be moved forward, because it is securely held by the spring 4 and pin 10 entering the notch in the part 13, so that the spool is

safely secured in place until raised up, as shown in Fig. 2, without any pressure being exerted against the opening in the spool, as hereinbefore mentioned.

I claim as my invention—

1. In a loom-shuttle, the combination, with the shuttle-body, of a pivoted spool-spindle constructed in two portions and secured together by a holding-sleeve, so that the movable portion is capable of a longitudinal sliding movement along the pivoted portion, the movable portion having a hook for holding the spool on, and a spring and means for holding the spindle in its normal position, substantially as described.

2. A loom-shuttle consisting of the shuttle-body, a half-round pivoted portion 2, pivoted thereto, and provided with a spring for keeping it in position, in combination with a half-round spindle portion 13, secured to the portion 2 by a sleeve, so as to have a longitudinal movement thereon, and provided with a projecting portion for holding the spool in place, substantially as described.

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