C. Unverzagt.

Loom Shuttle

No. 54,445. Patented May 1, 1866.

Fig. 1.

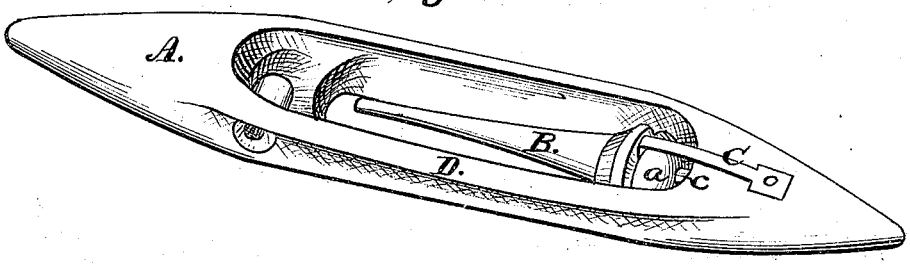

Fig. 2.

Witnesses:

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CLEMENS UNVERZAGT, OF RICHMOND, INDIANA.

IMPROVEMENT IN SHUTTLES AND BOBBINS FOR LOOMS.

Specification forming part of Letters Patent No. **54,445**, dated May 1, 1866; antedated April 30, 1866.

To all whom it may concern:

Be it known that I, CLEMENS UNVERZAGT, of Richmond, Wayne county, Indiana, have invented certain new and useful Improvements in Shuttles and Bobbins; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings which accompany this specification and form a part of the same, and to the letters of reference marked on the same.

The nature of my invention consists, first, in providing the upper portion of the side of the shuttle with a projection beveled on its upper side and at right angles with the perpendicular center of the shuttle on its under side, said beveled part of the projection working against a corresponding ledge in the shuttle-box of the loom for giving the shuttle its proper direction in its transit from end to end; second, in providing the shuttle with a lever-spring having one end rigidly attached to the shuttle-head and the opposite end provided with a bent catch or hook fitting the recess in the head of the bobbin; third, in providing the bobbin with a beveled or conical head which lifts the spring as it is pushed forward and can be placed and fastened at one operation at any point of its circumference, being at the same time constructed with one portion of said conical head flattened, so as to allow the bobbin to be withdrawn without lifting the spring.

To enable those skilled in the art to make and use my said invention, I will proceed to describe the same.

Figure 1 represents the shuttle with its ledge or rib, together with the spring and the bobbin in place. Fig. 2 represents the bobbin with its conical head and flattened side.

In Fig. 1, A is the shuttle. D is the ledge or rib. C is the spring, and B is the bobbin.

In Fig. 2, B is the bobbin. *c* is the conical head, and *a* represents the flat side of the conical head *c*.

The ledge or rib D of the shuttle fits a corresponding bearing or guide in the shuttle-box of the loom, by which it is kept in line in its transit, and at the same time the yarn is protected from abrasion as it runs off the bobbin. The bobbin being placed upon the stem is pushed forward, thereby raising the spring C until the catch of the spring drops into the groove of the bobbin-head, when it is ready for use. This method does not require the full bobbin to be turned with the fingers, thereby displacing the yarn, as in ordinary bobbins, and when empty only requires turning to the flat side *a* of the conical head *c* to be removed without lifting the spring. The general advantages gained by this arrangement are, first, accurate direction of the shuttle; second, facility in placing the bobbin without disarranging the yarn.

Having thus fully described my said improvement, what I claim as new, and desire to secure by Letters Patent, is—

1. A shuttle provided with a projection or rib upon one side, substantially as and for the purposes set forth.

2. The lever-spring C, in combination with the beveled or conical head of the bobbin B, when attached to a shuttle in the manner and for the purpose described.

3. The bobbin B, provided with a conical head, *c*, substantially as and for the purpose described.

4. The combination of the shuttle A, projection D, spring C, and bobbin B, all substantially as and for the purposes set forth and described.

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Witnesses:

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