No. 635,716. Patented Oct. 24, 1899.

C. M. DAY.

FILLING CARRIER FOR LOOMS.

(Application filed July 8, 1899.)

(No Model.)

Fig. 1.

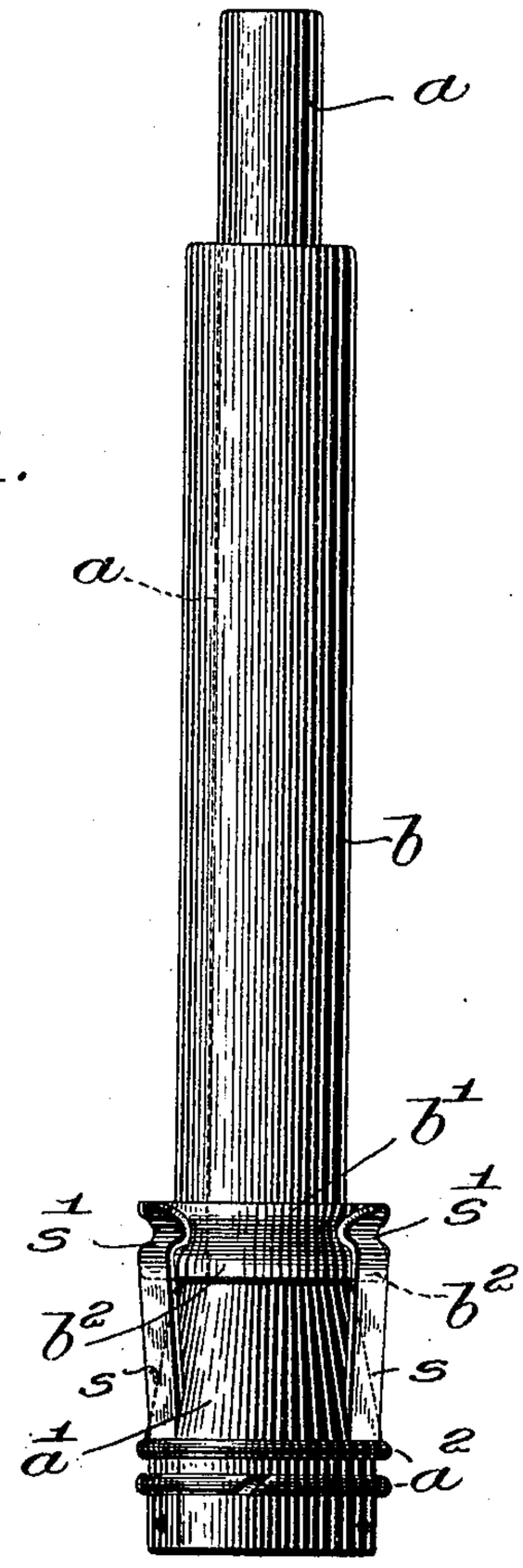

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES M. DAY, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO THE DRAPER COMPANY, OF SAME PLACE AND PORTLAND, MAINE.

FILLING-CARRIER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 635,716, dated October 24, 1899.

Application filed July 8, 1899. Serial No. 723,126. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. DAY, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Filling-Carriers for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a filling-carrier for looms whereby small and comparatively short yarn-supports or bobbins, such as are commonly used in worsted-spinning and the like, may be used in automatic looms of the Northrop type—such, for instance, as shown in United States Patent No. 529,940, dated November 27, 1894, wherein a transferrer engages the head and tip of a filling-carrier and transfers it from a hopper or feeder to the shuttle to effect a change of filling. The head of such a filling-carrier is provided with annular projections or rings to engage and be retained by suitable holding means on the shuttle, as in United States Patent No. 568,718, dated September 29, 1896. In worsted-spinning a short bobbin is employed having a small head, and such bobbins are not of themselves adapted for use in automatic looms of the class referred to. By my present invention such bobbins can be readily used without any material change in the bobbin itself.

Figure 1 is a side elevation, enlarged, of a filling-carrier embodying one form of my invention, an empty yarn-support or bobbin being shown; and Fig. 2 is a top or plan view of the head and connected blade with the bobbin omitted, the detachable connection for holding the bobbin in place being shown on the head.

Referring to Fig. 1, the tubular shell or bobbin b is of usual construction commonly employed in worsted-spinning, the base b' of the bobbin having an annular projection or enlargement b^2 at its lower end.

A blade or skewer a is rigidly attached to a suitable head a', having thereon annular ribs or projections a^2 to engage the holding-jaws of the shuttle, as in Patent No. 568,718 referred to, the blade a being long enough to project beyond the tip end of the shell or bobbin b sufficiently to be engaged by the finger at the outer end of the transferrer shown in Patent No. 529,940, dated November 27, 1894, it being understood that the head a' and the tip of the blade are engaged by the transferrer in effecting a change of filling. The head is provided with one or more spring-fingers s, three being herein shown, secured at their lower end to the head and bent inward at or near their free upper ends, as at s', to spring over the enlargement b^2 of the base of the bobbin b, forming a detachable connection whereby the bobbin is held in place. A longitudinal pull of the bobbin will release it from the grip of the spring-fingers, and a reverse movement of the bobbin pushes it against the head a' and causes them to spring into place.

By means of my invention a very short bobbin or yarn-support may be used in an automatic loom of the type referred to without any change in the construction of the loom.

The head and blade or skewer may be made of any suitable material, preferably wood.

My invention is not restricted to the precise construction and arrangement shown, as the same may be varied in various particulars without departing from the spirit and scope of my invention.

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

1. In a filling-carrier for loom-shuttles, a blade or skewer adapted to be inserted and detachably held in the shuttle, a removable yarn-support, and means to detachably connect said yarn-support and blade, whereby they may be inserted in or removed from the shuttle together.

2. In a filling-carrier for loom-shuttles, a blade having a head to be engaged by a part of the shuttle when the filling-carrier is in operative position, a removable yarn-support adapted to receive the blade, and means mounted on the head to detachably maintain the yarn-support in place on the blade.

3. In a filling-carrier for loom-shuttles, a blade, a rigidly-attached head having annular projections thereupon to be engaged by a part of the shuttle, a tubular bobbin shorter

than and adapted to receive the blade, and means to detachably connect the bobbin to the head.

4. In a filling-carrier for loom-shuttles, a blade, a head secured thereto to be engaged by a part of the shuttle and provided with spring holding-fingers, and a removable bobbin adapted to receive the blade and to be engaged and held in place by said spring-fingers, whereby said blade and bobbin can be inserted in or removed from the shuttle together.

5. In a filling-carrier for loom-shuttles, a head having annular ribs to be engaged by a part of the shuttle, and upright spring holding means, a blade rigidly attached to the head, and a removable bobbin adapted to receive the blade and having its base annularly enlarged to be engaged and held in place by said spring holding means.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES M. DAY.

Witnesses:

GEO. OTIS DRAPER,

ALBERT H. COUSINS.