F. G. SAYLOR.

COP SKEWER AND BOBBIN FILLER.

APPLICATION FILED DEC. 4, 1915.

1,202,001. Patented Oct. 17, 1916

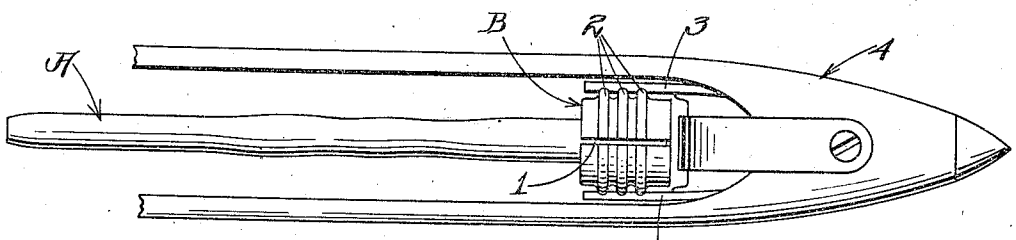

Fig. 1.

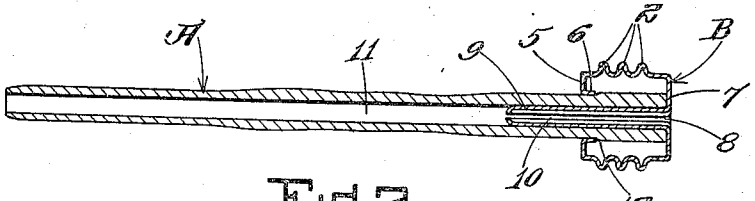

Fig. 2.

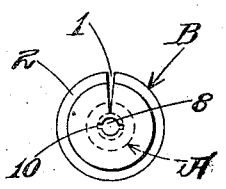

Fig. 3.

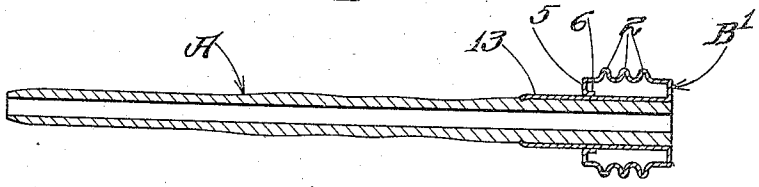

Fig. 4.

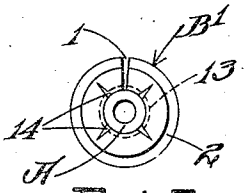

Fig. 5.

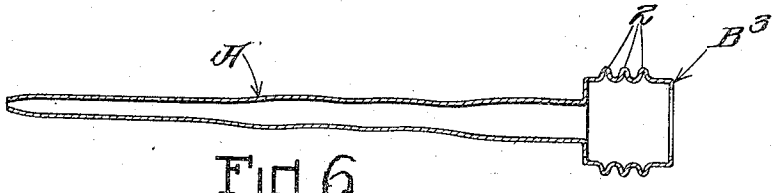

Fig. 6.

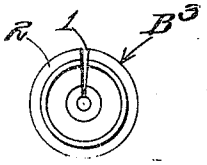

Fig. 7.

INVENTOR:

Franklin G. Saylor.

by Macleod, Calver, Copeland & Dike

Attys.

UNITED STATES PATENT OFFICE.

FRANKLIN G. SAYLOR, OF QUINCY, MASSACHUSETTS, ASSIGNOR OF ONE-FOURTH TO CURTIS R. SOUTHWICK, OF QUINCY, AND THREE-EIGHTHS TO GEORGE A. LUFKIN, OF REVERE, MASSACHUSETTS.

COP-SKEWER AND BOBBIN-FILLER.

1,202,001. Specification of Letters Patent. Patented Oct. 17, 1916.

Application filed December 4, 1915. Serial No. 65,162.

To all whom it may concern:

Be it known that I, FRANKLIN G. SAYLOR, a citizen of the United States, residing at Quincy, county of Norfolk, State of Massachusetts, have invented a certain new and useful Improvement in Cop-Skewers and Bobbin-Fillers, of which the following is a specification, reference being had therein to the accompanying drawings.

Cop skewers or filling carriers for loom shuttles have been constructed with a blade and with a head having annular ribs or rings which are adapted to enter grooves in springs carried by shuttles. Bobbin fillers have also been constructed with a base or head having annular ribs or rings similar to those above described as used on cop skewers. Sometimes the head has been formed entirely of metal, sometimes of wood, and sometimes of metal and wood. The annular ribs however, have usually been formed of wire surrounding the head. The head is usually the first part of the skewer or bobbin to wear out and as it is usually constructed the head is made fast to the blade so that when the head is worn out the skewer or the bobbin, as the case may be, has to be thrown away. Moreover, the blade of the cop skewer is usually made differently from the blade of the bobbin and therefore the cop skewers and bobbins are not interchangeable. Furthermore, as the base of the cop skewer and bobbin has usually been constructed it is very rigid and causes a great deal of wear and tear on the spring jaws of the shuttle.

One object of my invention is to provide a cop skewer and bobbin filler with a head of simple and cheap construction so that they will be far less expensive to replace than those heretofore used.

Another object is to make the head detachable so that a new head may be placed on an old blade.

Another object is to form the head in such manner that it will be more or less yielding and of light weight and produce the least possible wear on the springs.

Another object is to provide the head with annular ribs integral therewith.

Another object is to provide a blade of such form and character that the same device may be employed either as a cop skewer or as a bobbin filler.

The invention will be fully understood when taken in connection with the accompanying drawings and the novel features thereof will be pointed out and clearly defined in the claims at the close of this specification.

In the drawings, Figure 1 is a plan view of one end portion of a shuttle containing a device embodying the invention. Fig. 2 is a longitudinal section of the preferred form of device embodying the invention. Fig. 3 is an end view of the device shown in Fig. 2. Fig. 4 is a longitudinal section of a modified form of device embodying the invention. Fig. 5 is an end view of the device shown in Fig. 4. Fig. 6 is a longitudinal section, and Fig. 7 is an end view of another modified form of the invention.

Referring now to the drawings, Figs. 1, 2, and 3, A is the blade, and B the head of a device embodying the invention.

The blade A may be of any suitable material, namely, wood, metal, or composition. The head B is formed of sheet metal all in one piece and may be stamped out or bent or formed in any suitable way. It is a shell of annular form having a split 1 lengthwise of one side and is formed with a series of annular corrugations forming ribs 2 which are adapted to engage the grooves in the spring jaws 3 of the shuttle 4. The lower end of the head B is formed with an inturned annular flange 5 which has a circular aperture of about the diameter of the blade A, but slightly less, the split extending through the flange, so that when the blade is to be inserted into the head B the flange 5 can be sprung open sufficiently to admit the blade.

The flange is sufficiently resilient to grip the blade after the blade is inserted. The flange 5 is preferably formed with an inwardly turned lip 6 to form a smooth bearing surface against the blade.

The top 7 of the head is of annular form having a central aperture 8 and has a tubular stem 9 connecting with the rim of the aperture 8 and extending back through the shell into the blade. Said tubular stem 9 is formed with a longitudinal split 10 so that it can be sprung in to contract it to insert it into the tubular interior 11 of the blade. In order to assemble the head with the blade

the stem 9 will be contracted by squeezing it, as allowed by the slit 10 already described, and forced into the passage in the blade until the flange 5 reaches the head of the blade, then the flange 5 will be spread open as allowed by the split 1 to enlarge the aperture sufficiently to allow the head of the blade to enter it, then the entire shell will be pushed in until the cap portion 7 comes against the end of the blade as shown in Fig. 2. The tendency of the split stem 9 to spring back to its normal diameter will cause it to bind frictionally on the interior of the tubular blade and the tendency of the flange 5 to contract to its normal form will cause it to bind against the outer periphery of the blade, and thus the entire head B will be firmly held on the blade. Preferably the blade is formed with a shoulder 12 on the outer periphery against which the inturned lip 6 will bear to hold the head B more securely in place. The lip 6 then will snap into place behind the shoulder 12 when the head is forced onto the blade in the manner already described. If the blade A is made of metal the head B can be still more firmly secured, if desired, by soldering the lip 6 to the blade but preferably it is left unsoldered so that it may be detached if desired.

In the modification shown in Figs. 4 and 5, the head B^1 is formed with a tubular stem 13 which goes outside of the blade instead of inside of the bore of the blade. The stem is formed with a plurality of slits 14 so that it may be sprung open sufficiently to enable it to telescope onto the outside of the blade as shown in Fig. 4. The outer portion of the shell is formed integral with the stem in a similar manner to that shown in Fig. 2, having the ribs 2, flange 5, and lip 6, the lip 6, however bearing against the outer periphery of the stem 13 instead of directly against the blade A. The contractile tendency of the head causes it to hug the outside of the blade and hold the head and blade together, although, if desired, the stem may be fastened to the blade by soldering or otherwise, if the blade is of metal.

In the modification shown in Figs. 6 and 7, the head B^3 and blade A are formed integral and of metal, the head being formed with the annular ribs 2 as described in the case of the other forms shown.

What I claim is:

1. A cop skewer or bobbin filler having, in combination with a blade, a head forming a part thereof and consisting of a hollow sheet metal annular shell having an annular cap portion and being formed with a longitudinal slit extending through the side of the head and of the cap to meet the central aperture in the cap, said head being formed with annular ribs pressed up out of the sheet metal and adapted to engage with the jaws of a shuttle.

2. A cop skewer or bobbin filler composed of a single blank of sheet metal shaped to form a hollow blade and a hollow head integral therewith, said head being shaped at its outer end to form a flange portion with a central aperture, said head being formed with a longitudinal slit extending through the side thereof and extending from one edge of the said flange to meet the said central aperture, said head being corrugated to form peripheral ribs adapted to engage with the jaws of the shuttle.

3. A cop skewer or bobbin filler having, in combination with a blade, a head consisting of a hollow sheet metal annular shell having an annular cap portion integral with said head and being formed with a longitudinal slit extending through the side of the head and of the cap to meet the central aperture in the cap, said head being formed with annular ribs pressed up out of the sheet metal and adapted to engage with the jaws of a shuttle.

In testimony whereof I affix my signature, in presence of a witness.

FRANKLIN G. SAYLOR.

Witness:

ALICE H. MORRISON.