

(No Model.)

W. KOCH.

BOBBIN FOR THE SHUTTLES OF SEWING MACHINES.

No. 308,078.

Patented Nov. 18, 1884.

Fig: 1.

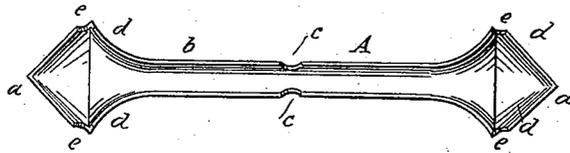


Fig: 2.

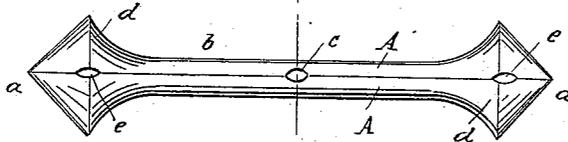
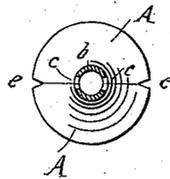


Fig: 3.



WITNESSES:

Amos N. ...
Edward ...

INVENTOR

William Koch
BY *...*

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM KOCH, OF NEW YORK, N. Y.

BOBBIN FOR THE SHUTTLES OF SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 208,078, dated November 18, 1884.

Application filed January 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KOCH, of the city, county, and State of New York, have invented a new and useful Improvement in Bobbins for the Shuttles of Sewing-Machines; and I declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, forming part of this specification.

This invention is in the nature of an improvement in sheet-metal bobbins for the shuttles of sewing-machines; and the invention consists in a shuttle-bobbin struck up from sheet metal, as is more particularly described, shown, and claimed hereinafter.

In the accompanying sheet of drawings, Figure 1 represents a longitudinal section of my bobbin. Fig. 2 is a side view of bobbin. Fig. 3 is a cross-section through *xx*, Fig. 2.

Similar letters of reference indicate like parts in the several figures.

Bobbins for the shuttles of sewing-machines have been made from wood turned to suitable size and shape to render them light and of small cost; but when they are made of wood they often warp out of shape, so that they will not turn truly and freely in the shuttle, they soon wear out and have to be discarded for new ones, and upon attempting to rewind them in a machine used for that purpose their centers are frequently found so much out of line as to render the rewinding impossible. To produce a light and cheap bobbin and at the same time remedy these defects existing in the wooden bobbin, I construct my bobbin from sheet metal, preferably brass, struck up by suitable dies into two or more longitudinal sections, A, each section having the exact form and dimension that will constitute a longitudinal half or a quarter of the entire bobbin, or both head and stem. The sections, whether for half or quarter of the bobbin, having been struck up from thin sheet metal, as stated, are then placed together in proper relation to each other, and at the points or apices *a* they are soldered together and in position. It is not necessary to apply solder for this purpose to any other part of the bobbin or its sections. Through the stem *b* of the bobbin, midway between its ends, is formed an orifice, *c*, and in each head *d* are in like manner formed orifices *e*. Now when my bobbin is constructed sub-

stantially as described, it is supplied with thread or wound by introducing one end of the thread through the orifice *c* in the stem and revolving the bobbin, permitting the thread to fill the bobbin to its capacity between its heads *d*, and when this is done the remaining end of the thread is passed through one of the orifices *e* and drawn between the edges of the sections, which keeps the thread from unwinding on the bobbin until it is placed within the shuttle. When the end is withdrawn from the edges of the sections and the orifice *e*, the bobbin is centered in the shuttle by its points or centers *a*, and is then employed the same as any other bobbin in like position. When the bobbin has become emptied or its thread been used, it is removed from the shuttle, placed in the rewinding-machine, in which machine it is centered by its points *a*, and caused to revolve on these centers, and in revolving winds upon itself the thread, which is supplied by the operator.

It will be seen by the foregoing construction and operation of my bobbin, that since it is made of thin sheet metal struck up in dies, its interior is hollow and the bobbin is therefore as light or lighter than one made of wood, and being made of metal it will not warp out or from its original shape. Its centers *a* will therefore at all times maintain their true axial position, and since these centers are of metal they will revolve for an indefinite time without appreciable wear within the shuttle, and since these centers do not become worn and the shuttle not warped out of shape the same bobbin can be rewound and used over and over again with results quite as satisfactory as if the bobbin were entirely new in each instance. The cost of the bobbin is but very little or no more than the cost of the wooden bobbin; but by reason of the practical indestructible material of which it is made, its longer life renders it in the end very much cheaper than the wooden bobbin.

Instead of making the orifice *c* through the stem of the bobbin, a small slit or tongue may be formed on the stem for the purpose of catching the thread when it is wound thereon; or the orifice and slit may be omitted, if desired.

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

1. A bobbin for sewing-machine shuttles, composed of two or more longitudinal sections of sheet metal united, substantially as described, each section forming a part of both the head and stem, as set forth.
- 5 2. A bobbin for sewing-machine shuttles, composed of two or more united longitudinal sections of sheet metal, and having orifices *c* and *e*, substantially as and for the purpose set
10 forth.
3. A bobbin for sewing-machine shuttles, composed of two or more longitudinal sections of sheet metal united at their points or centers by solder, substantially as set forth.

WILLIAM KOCH.

Witnesses:

G. M. PLYMPTON,
EDWARD L. JOHNS.