No. 817,744.

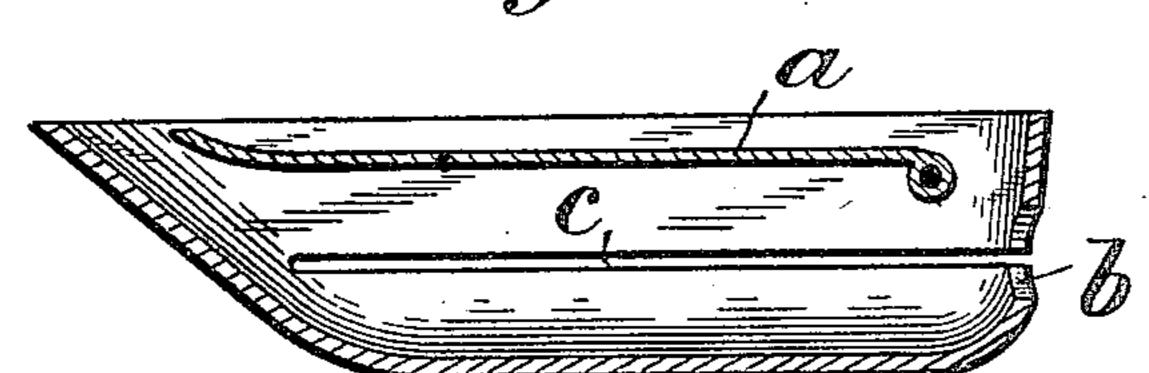
PATENTED APR. 17, 1906.

## E. BERGER.

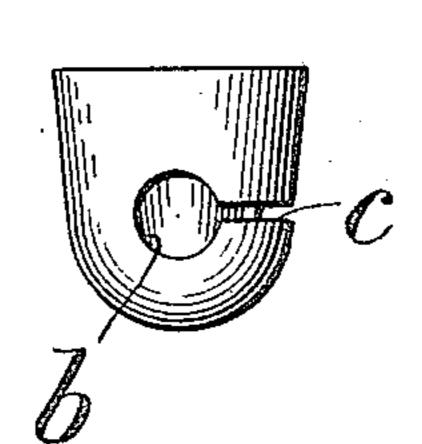
## SHUTTLE FOR EMBROIDERING MACHINES.

APPLICATION FILED JUNE 26, 1905.





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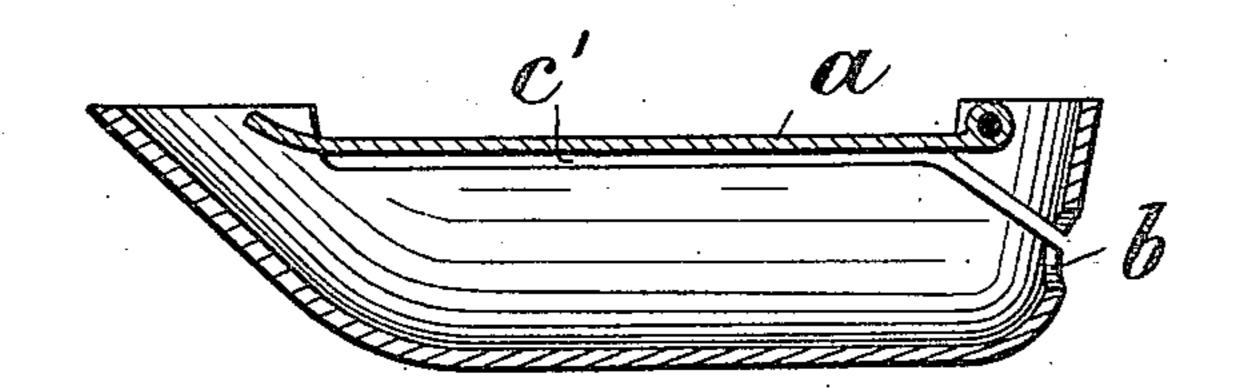
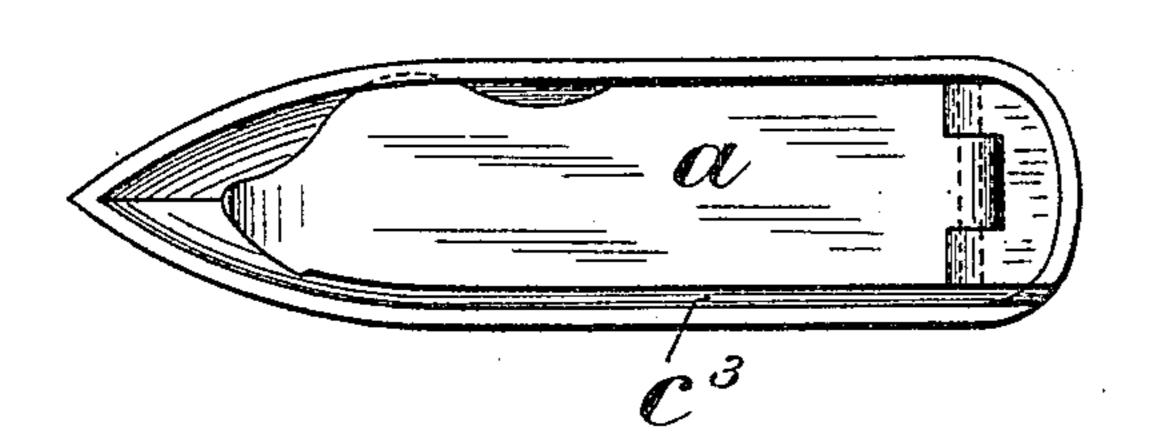


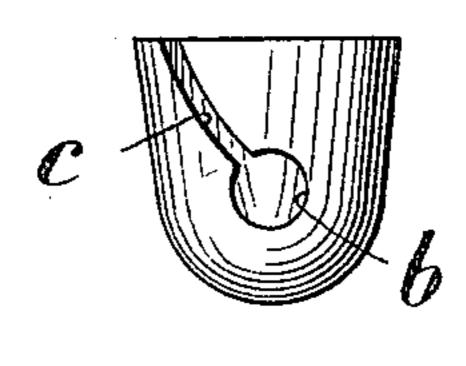
Fig. 3.

Fig. 4.

Fig. 5.







Witnesses:

H. G. Amer. M. Donners Inventor:

Ernst Berger. by Mening Orth arry

## UNITED STATES PATENT OFFICE.

ERNST BERGER, OF RORSCHACH, SWITZERLAND, ASSIGNOR TO THE FIRM OF HENRI LEVY, OF RORSCHACH, SWITZERLAND.

## SHUTTLE FOR EMBROIDERING-MACHINES.

No. 817,744.

Specification of Letters Patent.

Patented April 17, 1906.

Application filed June 26, 1905. Serial No. 267,054.

To all whom it may concern:

Be it known that I, Ernst Berger, a subject of the King of Würtemberg, Germany, residing at Rorschach, in the Republic of Switzerland, have invented new and useful Improvements in Shuttles for Embroidering-Machines, of which the following is a specification.

This invention has relation to shuttles for embroidering - machines, and more particularly to features of construction of such shuttles to adapt them to be mechanically filled or filled and threaded by means forming the subject-matter of another application for patent of even date herewith, Serial No. 267,053.

In my application last referred to I have shown and described mechanism for filling shuttles for embroidering - machines comprising, among other essential features, a rev-20 oluble spindle on which the thread or filling is wound, such spindle being introduced into the shuttle through an aperture in its rear wall, and is withdrawn from the shuttle after the cop of thread has attained a given diame-25 ter. In order that the thread may be properly wound on the spindle, it is necessary that the shuttle be provided with a suitable aperture or slot of such length as to admit of the traversing of the thread along the rotating 30 spindle through the medium of a reciprocating or vibrating thread-guide.

The object of this invention lies in the construction of a shuttle adapted to be mechan-

ically filled, as above set forth.

The accompanying drawings show a form of construction of the invention by way of example, in which—

Figure 1 is a longitudinal section, and Fig. 2 a rear view. Fig. 3 is a longitudinal section; and Fig. 4 an end view thereof, showing one side wall cut away. Fig. 5 is a plan, and Fig. 6 an end view showing the cover a cut away at one side.

The shuttle for embroidering - machines shown is of ordinary form, but provided at its rear with an opening b, which has for its object to render possible the insertion of a spoolspindle into the shuttle, and thereby the winding of a spool (ball or bobbin) in the shut-

tle itself. The shuttle has, further, in one of 50 its side walls a slot c, which runs in the longitudinal direction of the shuttle. This slot is to render possible the guiding to and fro on the spool-spindle of the thread to be spooled.

Instead of being provided with the slot c 55 the shuttle could also be provided with another opening c' in the wall. Further, the cover a could, for example, be cut way on one of its long sides, as at  $c^3$ , Fig. 5, or one side wall along its free edge have a cut-away 60 part reaching below the cover, as at c', Fig. 3.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. A shuttle for embroidering - machines adapted to be mechanically filled, said shuttle having a rear end wall provided with an axial aperture forming a bearing for the reception of a revoluble cop or bobbin winding 7° spindle and serving also as a means for stripping the bobbin formed within the shuttle from said spindle, said shuttle also provided with a thread-feed slot parallel to its longitudinal axis and of such length as to admit of 75 the traversing of the thread along the spindle in the formation of the cop.

2. A shuttle for embroidering - machines adapted to be mechanically filled, said shuttle having a rear end wall provided with an 80 axial aperture forming a bearing for the reception of a revoluble cop or bobbin winding spindle and serving also as a means for stripping the bobbin formed within the shuttle from said spindle, said spindle provided in 85 one of its side walls with a thread-feed slot parallel to its longitudinal axis and of such length as to admit of the traversing of the thread along the spindle in the formation of the cop, said slot merging into the aforesaid 90 spindle-bearing, for the purposes set forth.

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

ERNST BERGER.

Witnesses:

ERNST FISCHER, A. LIEBERKNECHT.