(No Model.)

O. E. LAFLEUR.

BOBBIN SUPPORT OR HOLDER.

No. 567,647. Patented Sept. 15, 1896.

FIG. 1.

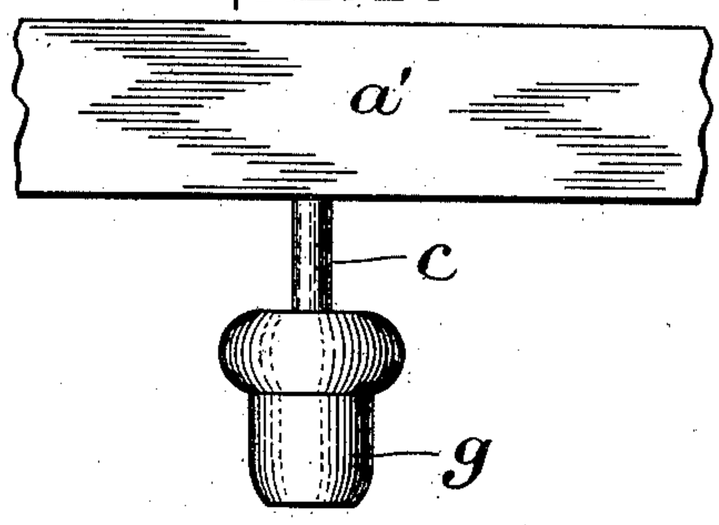
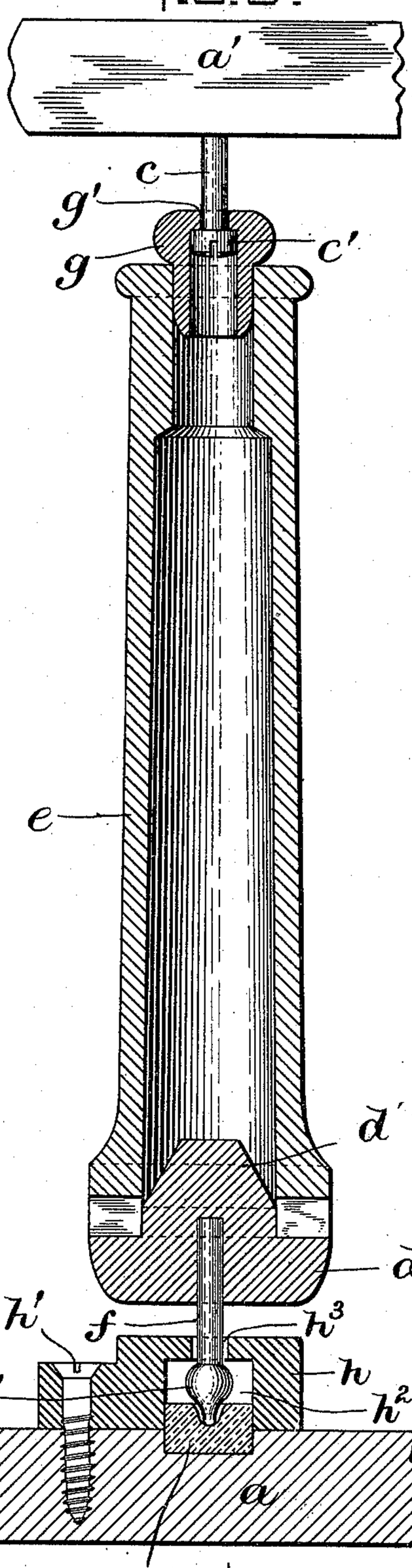
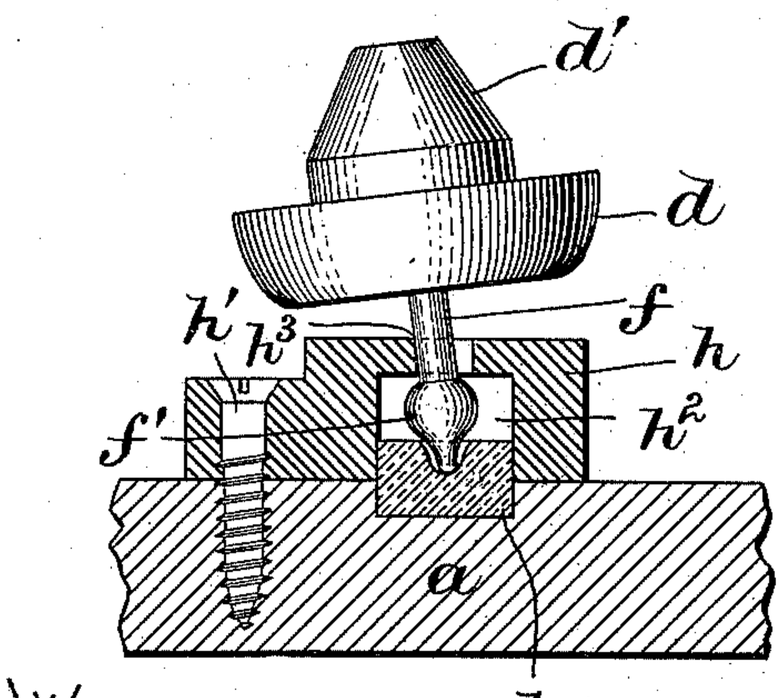


FIG. 2.





WITNESSES:

A. D. Harrison

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INVENTOR:

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by Wright Brown & Quinby

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UNITED STATES PATENT OFFICE.

OLIVER E. LAFLEUR, OF WOONSOCKET, RHODE ISLAND, ASSIGNOR TO THE WOONSOCKET MACHINE AND PRESS COMPANY, OF SAME PLACE.

BOBBIN SUPPORT OR HOLDER.

SPECIFICATION forming part of Letters Patent No. 567,647, dated September 15, 1896.

Application filed November 25, 1895. Serial No. 569,981. (No model.)

To all whom it may concern:

Be it known that I, OLIVER E. LAFLEUR, of Woonsocket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Bobbin Supports or Holders, of which the following is a specification.

This invention relates to means for rotatively supporting a bobbin in a spinning-frame or other like machine in such manner that the bobbin can be readily and quickly applied and removed.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an elevation showing portions of the creels of a spinning-machine provided with my improved bobbin supporting or holding devices. Fig. 2 represents a sectional view of said devices and a bobbin engaged therewith.

In the drawings, a and a' represent the creels or portions of a spinning-frame with which the bobbin-supporting devices are engaged. The creel a is provided with a step b, which may be of glass, while the creel a' is provided with a fixed downwardly-projecting stud or bearing c, the lower end of which has a head or enlargement c'.

d represents a base adapted to engage the lower end of a bobbin e, said base being preferably a circular piece of wood formed to bear upon the lower end of a bobbin and having a projection d' formed to enter and fit the lower end of the bore of the bobbin. To the base d is affixed a pivot or spindle f, which is concentric with the projection d' and projects downwardly from the base, its lower end being formed to bear and rotate upon the step b.

g represents a hollow bearing having a contracted portion g' at its upper end, which is formed to inclose the stud c, but is smaller than the head c' thereof, the bearing g being thus adapted to rotate freely upon the stud c and to move vertically, its downward movement being limited by the head c'. The bearing g is formed to enter the upper end of the bobbin e.

h represents a keeper, which is a block, preferably of metal, suitably attached, as by a screw h', to the creel a, and having a cavity h^2, which receives an enlargement f' on the pivot or spindle f, said keeper having also a contracted opening h^3 of smaller diameter than the enlargement f', but of sufficient size to permit the pivot or spindle f to rotate freely without frictional resistance by contact with the walls of said opening.

When the bobbin is removed, the base d is supported by the bearing of the pivot f upon the wall of the opening h^3, said base and pivot being confined to their operative location by the keeper. To engage the bobbin with the base d and bearing g, the operator places the lower end of the bobbin upon the base, clasping the bobbin in one hand, and with the other hand raises the bearing g sufficiently to permit the upper end of the bobbin to be swung under the stud c. The bearing g is then allowed to drop into the upper end of the bore of the bobbin, the bearing being formed to closely fit said bore. The bobbin is now securely supported, and is adapted to rotate with but slight frictional resistance, the spindle or pivot f being held upright by the engagement of the base and bearing with the bobbin, so that it turns freely upon the step, the bearing at the same time turning freely upon the stud c.

The base d, with its pivot or spindle, and the bearing g, with its confining-stud, may be supplied for application to machines already in use.

Many spinning-frames, fly-frames, &c., are provided with steps similar to the step a' to support the lower end of a skewer which passes through the bobbin and is detachably engaged with the upper creel.

The keeper h may be screwed to an ordinary creel fitted with steps, as last indicated.

It will be seen that the spindle and base are adapted to swing or oscillate laterally on the step. The base is therefore adapted to be displaced or inclined laterally for the convenient reception and removal of the bobbin, and is centered or restored to its operative position by the bobbin when the latter is engaged with the loose bearing g and with the base, the stud c and the loose bearing cooperating with the bobbin in holding the base and its spindle properly centered, so that the spindle is in contact only with its step and

therefore runs with the minimum of frictional resistance.

It will be seen that the devices comprising my improved support or holder are very light and simple and cannot be displaced from their operative locations on the machine.

I claim—

1. A bobbin support or holder comprising a base to engage the lower end of the bobbin, a spindle projecting from said base, a step for said spindle, means to retain the spindle to the step and permit it to freely oscillate or move laterally, and devices above the step to support the upper end of the bobbin.

2. A bobbin support or holder comprising a fixed step, a base formed to engage the lower end of a bobbin and provided with a spindle adapted to rotate on the step, a keeper to limit the lateral movement of the spindle and base and prevent their removal from the step, a fixed vertical stud above the step, and a loose bearing which is rotatable and vertically movable on said stud and is formed to enter the upper end of the bobbin.

3. A bobbin support or holder comprising a fixed step, a rotary base formed to engage the lower end of a bobbin and provided with a pivot or spindle bearing on said step, said pivot having an enlargement, a fixed keeper having a cavity containing the enlargement on the spindle, and a spindle-receiving orifice of smaller diameter than the enlargement above said cavity, the form of the socket and orifice being such that the spindle rotates without frictional contact with the keeper when engaged with a bobbin, a hollow journal formed to engage the upper end of the bobbin, and a fixed stud or bearing on which said journal rotates and is vertically movable.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 18th day of November, A. D. 1895.

OLIVER E. LAFLEUR.

Witnesses:
MALCOLM CAMPBELL,
I. M. AVERY.