

No. 627,249.

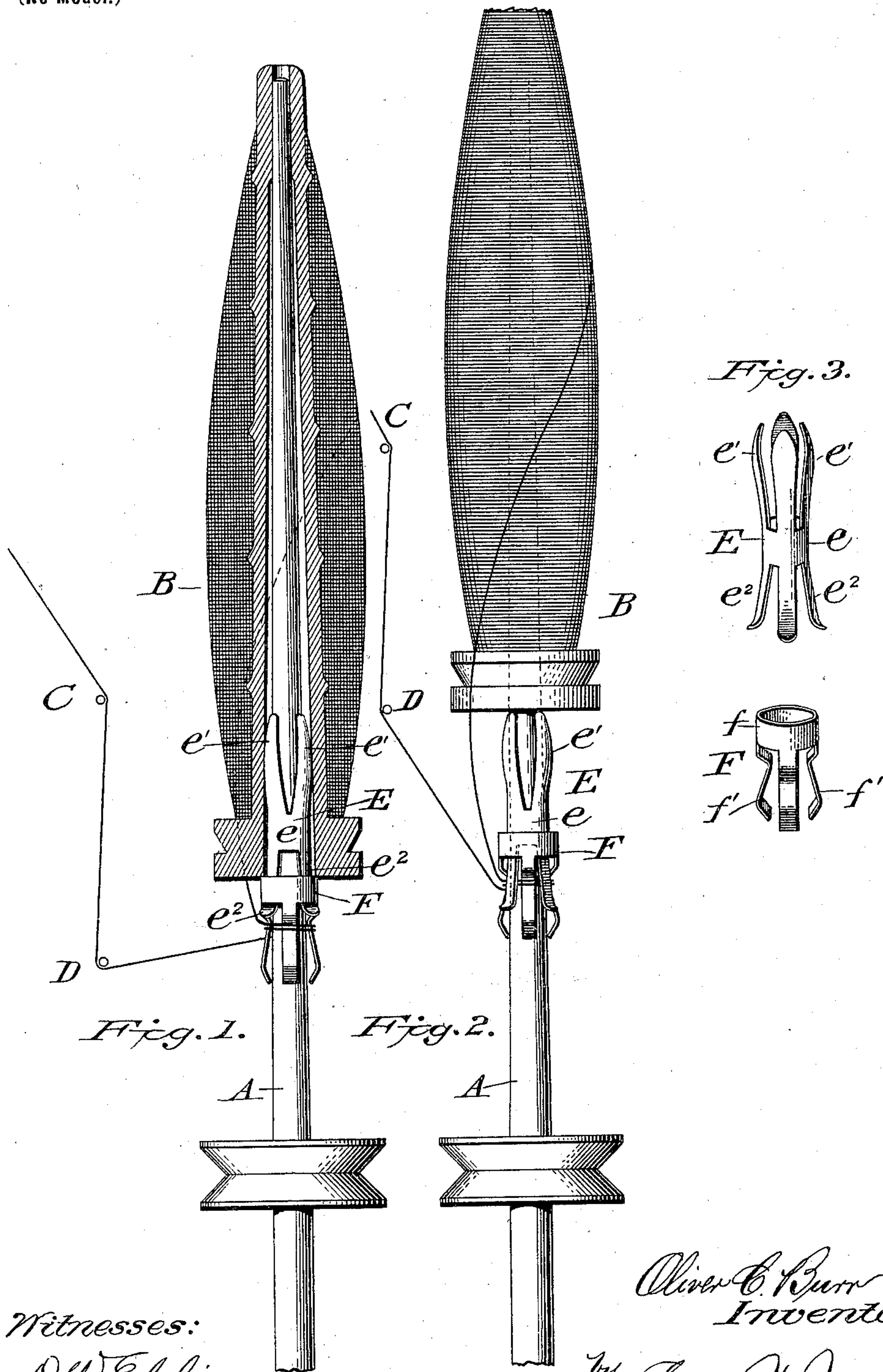
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O. C. BURR.

BOBBIN HOLDER AND THREAD CATCHER FOR SPINDLES.

(Application filed Oct. 6, 1898.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

OLIVER C. BURR, OF NORTH ADAMS, MASSACHUSETTS:

BOBBIN-HOLDER AND THREAD-CATCHER FOR SPINDLES.

SPECIFICATION forming part of Letters Patent No. 627,249, dated June 20, 1899.

Application filed October 6, 1898. Serial No. 692,789. (No model.)

To all whom it may concern:

Be it known that I, OLIVER C. BURR, a citizen of the United States, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Bobbin-Holders and Thread-Catchers for Spindles, of which the following is a specification.

This invention appertains to improvements in attachments for spindles, and has in view to provide a bobbin-holder and thread-catcher which is light and simple in construction and which in use will hold the bobbin centered on the spindle by engaging with the bore thereof, which bobbin-holder is so constructed that a part thereof will coöperate with a thread-catcher, said thread-catcher being mounted on the bobbin-holder and spindle and positioned beneath the bobbin-head, the device being adapted for use with spindles of spinning-machines, mules, or spinning-frames.

My invention embodies a device which includes a bobbin-holder having below that portion which is engaged by the bobbin members which coöperate with a movable thread-catcher about which the thread is wound prior to doffing the bobbin, so that when the bobbin is doffed the thread-carrier will be raised and the thread or yarn which is wound about the same will be brought under the arms which depend from the bobbin-holder, so that the thread or yarn will be grasped between the depending fingers of the bobbin-holder and the spindle, the construction being such that the thread or yarn will be released when the bobbin is pressed home upon the spindle.

The invention consists in the special construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate the invention, Figure 1 is a side elevation, the bobbin being shown in section, as well as the yarn which is wound about the same, and in this view the faller-wire is indicated as lowered, the yarn being in the position which it will occupy prior to doffing. Fig. 2 is a side elevation showing the bobbin raised, the faller-wire in its normal position, and the yarn held by the thread-catcher; and Fig. 3 is a detail perspective view of the bobbin-holder and thread-carrier separated.

The spindle A and bobbin B, as well as the faller-wires, are of the ordinary construction.

The bobbin-holder E is preferably made up of a single piece of resilient metal and comprises a band *e*, the internal diameter of which is slightly less than the diameter of the spindle at the point where it engages the same. From the band extends a plurality of fingers *e'*, shaped so that their upper ends will converge to engage the spindle, thus providing convex or rounded surfaces for engagement with the bore of the bobbin. These fingers are concavo-convex in cross-section, they being bent both longitudinally and transversely. The lower members or claws *e*², which are preferably integral with the band *e*, spring outward and downward therefrom, the ends being curved outward. In the construction of the bobbin-holder the claws or members *e*² are of less width and greater resiliency than the fingers *e'* which project from the opposite side of the band.

The thread-carrier F comprises a ring *f*, having depending arms or members *f'*, and the ring is of such a diameter that it may be passed over the bobbin-holder and will be retained thereon by the outwardly-bent ends of the claws or members *e*². The arms or members *f'* are bent so as to form a recess, with an inclined shoulder forming a part thereof, and below the recess the arms extend outward and downward, the terminals being bent inward. The construction is such that the arms *f'* when the parts are assembled will occupy a position between the claws *e*². The ring *f* is of a diameter slightly greater than the diameter of the bore of the bobbin adjacent to the head, so that the bobbin-head will engage there-with when placed on the spindle. In operation the bobbin-holder and thread-carrier are placed upon the spindle, as shown, and the bobbin when placed on the spindle will be engaged by the fingers *e'*, which center the bobbin, and the head may engage with the ring of the thread-carrier. When a bobbin has been filled with yarn or thread and prior to doffing the same, the faller-wires C D are lowered, which brings the thread below the head of the bobbin and about opposite the arms *f'* of the thread-carrier. The spindle is given a turn or two, which winds the thread about the arms *f'*, said thread lying in the inwardly-

bent portion or recess of said arms. The bobbin is then raised, and the thread which depends therefrom will raise the thread-carrier and cause that portion of the thread which
 5 encircles the arms to be placed beneath the claws c^2 of the bobbin holder or member E, and the thread is broken in the operation of doffing. When an empty bobbin is placed
 10 on the spindle, the faller-wires are raised to their normal position and the thread is given one or two turns about the bobbin sufficient to hold it thereon, after which the bobbin is pressed downward, which operation de-
 15 presses the thread-carrier and frees the end of the thread, which, being released, is wrapped about the bobbin, thus avoiding loose ends. The device hereinbefore described is ex-
 20 tremely light, occupies but little space upon the spindle, and holds the bobbin by internal rather than by external contact. No auxiliary
 25 springs are necessary, and the thread when in engagement with the arms of the thread-carrier causes said arms to frictionally en-
 30 gage the spindle, and with this device the thread is positively released without other manual effort than is required to place the
 35 bobbin properly upon the spindle.

The device hereinbefore described is susceptible of modification as to construction;
 30 but the embodiment shown comprises a practical and cheap form of construction.

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

35 1. In a bobbin-holder, a band carried by the spindle and provided with members which are engaged by the bore of the bobbin, and de-
 40 pending thread-grasping members the lower ends of which are bent outward from the spindle, together with a thread-carrier movably
 45 mounted upon the bobbin-holder.

2. In combination with a spindle, a bobbin-holder and thread-grasping device consisting
 45 of a band which encircles the spindle, bobbin-engaging members which project from the
 50 band said members being curved longitudinally and transversely, and thread-grasping
 55 members which diverge from the opposite side of the band.

3. In a bobbin-holder and thread-grasper

for spindles, the combination with a spindle, a bobbin-holder and thread-grasper mounted
 on the spindle and comprising a retaining-
 band with sets of resilient members which
 project therefrom, one set of the members be-
 55 ing adapted to engage the bore of the bobbin
 when placed on the spindle, the other set of
 members diverging from the band, of a thread-
 carrier movably mounted on the thread-grasp-
 ing members of the device, for the purpose
 60 set forth.

4. In combination with a spindle, a thread-
 holder therefor consisting of a band fixedly
 attached to the spindle and provided with di-
 verging members, of a thread-carrier mov-
 65 ably mounted upon said members and adapted
 when moved thereon to carry the thread
 beneath the diverging members.

5. In combination with a spindle, a bobbin
 and thread holder carried by the spindle, of
 70 a thread-carrier which is movably mounted on
 the bobbin and thread holder the same com-
 prising a band which surrounds the holder
 and has depending members with shoulders,
 75 for the purpose set forth.

6. In combination with a spindle, a bobbin-
 holder and a thread-grasping device mounted
 upon the spindle, of a thread carrier or guide
 mounted movably on the thread-grasping de-
 80 vice, the parts having intermeshing members
 between which the thread is grasped when
 wrapped about the members of the thread-
 carrier, which carrier is raised by the thread
 attached to the bobbin in doffing, and lowered
 85 to release the grasped thread when engaged
 by the bobbin.

7. In a thread-grasper for spindles, the com-
 bination with a spindle, bobbin, and bobbin-
 holder, a thread-grasping means comprising
 90 arms which diverge from the spindle the lower
 ends of said arms being bent outward, of a
 thread-carrier consisting of a band having
 thread receiving and guiding arms.

In testimony whereof I have hereunto set
 my hand in presence of two subscribing wit-
 95 nesses.

OLIVER C. BURR.

Witnesses:

EDWARD C. KIELY,
 THEODORE LUMBAR.