

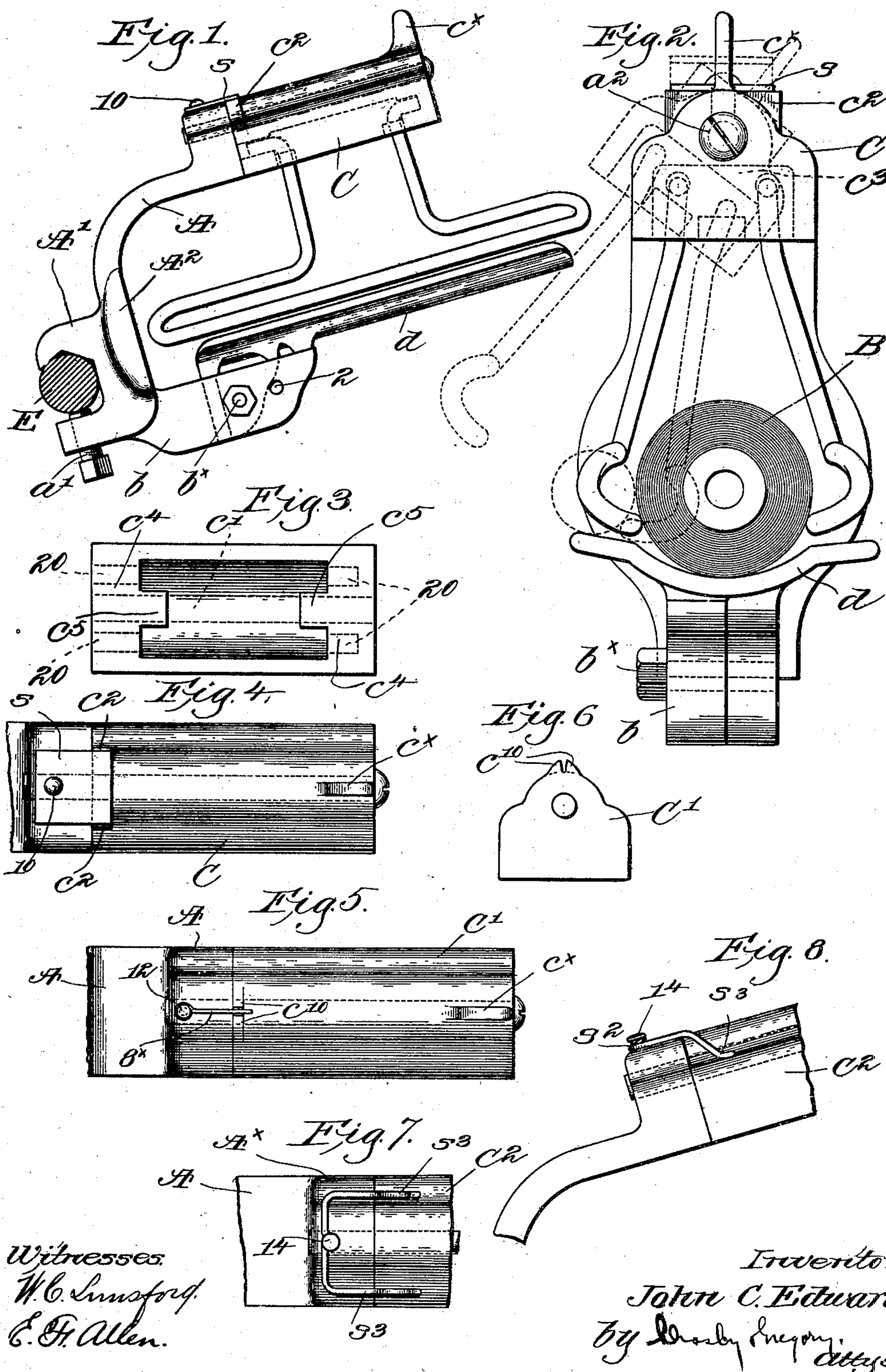
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J. C. EDWARDS.  
BOBBIN HOLDER.

APPLICATION FILED NOV. 17, 1902.

**NO MODEL,**



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## BOBBIN-HOLDER.

SPECIFICATION forming part of Letters Patent No. 731,554, dated June 23, 1903.

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*To all whom it may concern:*

Be it known that I, JOHN C. EDWARDS, a citizen of the United States, and a resident of Brookline, county of Norfolk, State of Massachusetts, have invented an Improvement in Bobbin-Holders, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

10 This invention has for its object the production of a novel bobbin-holder to support a bobbin during the unwinding of the yarn therefrom, my invention including means whereby a spent or empty bobbin can be instantly ejected or discharged from either side of the rest on which it is sustained. When-

15 ever a bobbin is emptied of its yarn, the attendant by a simple movement of his finger can eject the bobbin from either side of the rest, as may be desired, without touching the bobbin itself, the instrumentality by which ejection is effected returning to bobbin-retaining position instantly upon release by the

20 attendant ready for the insertion of a fresh bobbin. The yarn may draw off from either side of the bobbin, and the construction of the apparatus is such that the pull of the yarn cannot accidentally effect ejection of the bobbin.

30 The various novel features of my invention will be fully described in the subjoined specification, and particularly pointed out in the following claims.

Figure 1 is a side elevation of a bobbin-holder embodying one form of my invention. Fig. 2 is an outer end view thereof, showing the bobbin in position, and in dotted lines the ejection of a spent or empty bobbin is illustrated. Fig. 3 is an under side view of the carrier for the side guards. Fig. 4 is a detail top view showing the carrier and a portion of its fixed support of the form illustrated in Figs. 1 and 2. Fig. 5 is a similar detail showing another form of device for maintaining the carrier in position to retain the bobbin on the rest. Fig. 6 is a rear end elevation of the carrier shown in Fig. 5. Fig. 7 is a detail in plan of yet another form of retaining or po-

sitioning device for the carrier, and Fig. 8 is a side elevation thereof.

In Figs. 1 and 2 the bracket *b*, having bolt-holes 2, the bolt *b*<sup>x</sup> to secure to the bracket the rest or pan *d*, on which the bobbin *B* is laid, Fig. 2, the upturned arm *A*, forming a part of the bracket and having a forked clamp *A*<sup>1</sup>, and the set-screw *a*<sup>1</sup> may be and are substantially of well-known construction, the clamp embracing the supporting-bar *E* of the spooler. In front of the clamp the arm *A* is enlarged laterally at *A*<sup>2</sup> to form a back-stop for the bobbin, as usual. The upper end of the arm is turned to slightly overhang the rest *d* and enlarged to form an upturned head or boss *A*<sup>x</sup> with a flat outer face, and a stud *a*<sup>2</sup>, which may be headed at its outer end, is rigidly secured in the boss near its top and extends longitudinally above and substantially in parallelism with the rest *d*. Upon this stud a carrier *C* is fulcrumed to rock in either direction and retained in place between the head *A*<sup>x</sup> and the headed end of the stud *a*<sup>2</sup>. The carrier is preferably made as a casting, its cross-section being substantially as shown in Fig. 2, and it has in its upper portion, preferably above its center of gravity, a longitudinal hole *c*<sup>1</sup> to receive the stud. (See dotted lines, Fig. 3.) By making the external surface of the carrier convex lint or dust is freely shed therefrom. At its outer end the carrier is provided with an upturned finger-piece *c*<sup>x</sup>, and in Figs. 1, 2, and 4 I have shown upturned ears or lugs *c*<sup>2</sup> at the inner end of the carrier, the tops of the lugs being shown as substantially tangential to the convex top of the carrier for a purpose to be described. The carrier is chambered or cored out, as at *c*<sup>3</sup>, Figs. 2 and 4, to leave two thickened end walls *c*<sup>4</sup>, and preferably each wall has an inturned tongue *c*<sup>5</sup>. Holes 20 are made in the inner end wall on opposite sides of the tongue and parallel to the bore *c*<sup>1</sup>, similar holes 22 being made in the other end wall and preferably in alinement with the holes 20. These holes can be very conveniently made by drilling right through the inner end wall and only partly through the other wall, as



shown in Fig. 4, or they may be made in any other desired manner. By leaving the outer ends of the holes 22 closed lint or dust cannot readily enter, and the holes 20 are protected  
5 by the flat face of the head  $A^x$ .

By reference to Fig. 2 it will be seen that the downturned sides of the carrier extend below the holes 20 22, and the holes receive loosely the oppositely-bent ends  $g'$  of the side  
10 guards  $g$ , which latter are thus pivotally supported in and depend from the carrier between the downturned sides thereof and the tongues  $c^5$ . The space between the side and the adjacent face of a tongue is sufficient to  
15 permit limited swinging movement of the guard, so that the guards may adapt themselves to yarn masses of different diameters. The greater part of the weight of the carrier, with the added weight of the guards, is in  
20 the present embodiment of my invention disposed below the fulcrum of the carrier, such weight of itself acting to maintain the carrier and guards in the position shown in Figs. 1 and 2 and also serving to return those parts  
25 to such position after the carrier has been rocked or tilted in either direction. I prefer, however, to provide additional means for maintaining the carrier in the position shown in Figs. 1 and 2, and in said figures and in Fig.  
30 4 I have shown a leaf-spring  $s$ , secured to the head  $A^x$  by a screw 10 or other suitable fastening, the free end of the spring projecting over the tops of the lugs or ears  $c^2$  on the carrier. If the latter is rocked in either direc-  
35 tion, one or the other ear will lift or flex the spring, and as soon as the carrier is freed the spring instantly restores the carrier to normal position. When the attendant wishes to eject a spent bobbin from the bobbin-holder,  
40 he hits the finger-piece  $c^x$  with his hand to thereby rock the carrier in either direction, and, as shown in dotted lines, Fig. 2, such rocking of the carrier acts through its lower side to sweep the adjacent guard laterally  
45 across the rest  $d$  to thereby throw the bobbin off at the side. During such movement the other guard drops against the tongues  $c^5$  and is thereby held up out of the way of the ejected bobbin. The spring acts during the unwind-  
50 ing of the yarn to yieldingly maintain the carrier and guards in bobbin-retaining position, so that even with strong heavy yarn the pull thereof as it draws off the bobbin cannot accidentally cause the bobbin to be ejected.

A different form of retaining device is shown in Figs. 5 and 6, the carrier  $C'$  having two upturned small ears  $c^{10}$  quite close together on its top at the inner end, and a piece of spring-wires<sup>x</sup> of the requisite strength  
60 is secured by a fastening 12 to the head  $A^x$  of the arm  $A$ , the free end of the spring extending longitudinally between the ears. A coil or turn may be made in the spring, through which the fastening 12 is passed. When the  
65 carrier is rocked, the free end of the spring is flexed laterally in one or the other direction.

In Figs. 7 and 8 yet another form of wire

spring is shown, a piece of spring-wire being bent to present two substantially parallel ends  $s^3$  and an intermediate loop or coil  $s^2$ ,  
70 the latter resting on the top of the head  $A^x$  and having a fastening 14 passed through it. The free ends  $s^3$  of the spring are bent down over the front end of the head and bear upon the top of the carrier  $C^2$  at opposite sides of  
75 and somewhat below its fulcrum, as clearly shown. When the carrier is rocked, one or the other of the ends  $s^3$  of the spring will be flexed and will act to return the carrier to normal position when released.  
80

My invention is not restricted to the precise construction and arrangement herein shown and described, as the same may be varied or modified in different particulars without departing from the spirit and scope  
85 of the invention.

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

1. A bobbin-holder having a fixed rest for  
90 and upon which the bobbin is laid, and means to eject a spent bobbin from either side of the rest.

2. A bobbin-holder having a rest for the bobbin, movable guards at the sides of the  
95 bobbin, and means operating by or through either guard to eject a spent bobbin.

3. A bobbin-holder having a rest for the bobbin, laterally-movable, depending guards at the sides of the bobbin, and manually-  
100 controlled means to act through either guard and effect lateral ejection of a bobbin from either side of the bobbin-rest.

4. A bobbin-holder having a rest for the bobbin, an instrumentality to retain the bob-  
105 bin on the rest and also to eject it from either side thereof, and means to normally maintain said instrumentality in bobbin-retaining condition.

5. A bobbin-holder having a rest for the  
110 bobbin, an overhead, rocking carrier, guards depending therefrom for the sides of the bobbin, rocking of the carrier in either direction acting through a guard to eject a spent bobbin from the bobbin-rest, and means to nor-  
115 mally resist such rocking of the carrier.

6. A bobbin-holder having a fixed rest for the bobbin, an instrumentality to retain the bobbin on the rest and also to eject it from  
120 either side thereof, and yielding means to maintain said instrumentality in bobbin-retaining condition.

7. A bobbin-holder having a rest for the bobbin, and an upturned arm, an overhead carrier mounted to rock on a longitudinal ful-  
125 crum secured to the arm, depending side guards for the bobbin, pivotally supported on the carrier below its fulcrum, and yielding means to resist rocking movement of the carrier.  
130

8. A bobbin-holder having a rest for the bobbin, and an upturned arm, an overhead carrier fulcrumed on the arm to rock in either direction on an axis extended longitudinally



of the rest, side guards for the bobbin, pivotally supported at their upper ends on and depending from the carrier, said guards having a limited lateral swing relatively thereto, manual rocking of the carrier acting through the guards to eject a bobbin from either side of the rest, and means to resist such rocking due to the pull of the yarn.

9. A bobbin-holder having a rest for the bobbin, means to eject a spent bobbin from either side of the rest, and a device to prevent ejecting movement of said means by or through the pull of the yarn.

10. A bobbin-holder having a rest for the bobbin, means to eject a spent bobbin from either side of the rest, and a yielding device to prevent ejecting movement of said means by or through the pull of the yarn.

11. A bobbin-holder having a rest for the bobbin, and an overhanging arm, a carrier mounted thereon to rock in either direction, side guards for the bobbin, depending from the carrier, and yielding means to resist rocking movement of the carrier in either direction.

12. A bobbin-holder having a rest for the bobbin, and an overhanging arm, a carrier mounted thereon to rock in either direction and having an upturned finger-piece, side guards for the bobbin, depending from and pivotally connected with the carrier, rocking of the latter acting through a guard to eject a bobbin laterally from the rest, and means

to resist such rocking movement due to pull of the yarn.

13. A bobbin-holder having a rest for the bobbin, and an overhanging arm, a carrier mounted thereon to rock in either direction and having an upturned finger-piece, side guards for the bobbin, depending from and pivotally connected with the carrier, rocking of the latter acting through a guard to eject a bobbin laterally from the rest, a device to prevent the other guard from interfering at such time with the bobbin, and means to resist rocking of the carrier due to the pull of the yarn.

14. A bobbin-holder having a rest for the bobbin, an upturned arm having a longitudinally-extended stud overhanging the rest, a carrier fulcrumed on the stud to rock thereupon in either direction, said carrier having downturned sides, side guards for the bobbin, pivotally mounted on the carrier between its sides, manual rocking of the carrier in either direction acting through a guard to laterally eject a bobbin from the rest, and means mounted on the arm to yieldingly restrain the carrier from rocking movement.

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

JOHN C. EDWARDS.

Witnesses:

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