(No Model.)

G. A. BRADY.

BOBBIN WINDING ATTACHMENT FOR SEWING MACHINES.

No. 257,844. Patented May 16, 1882.

Fig. 1.

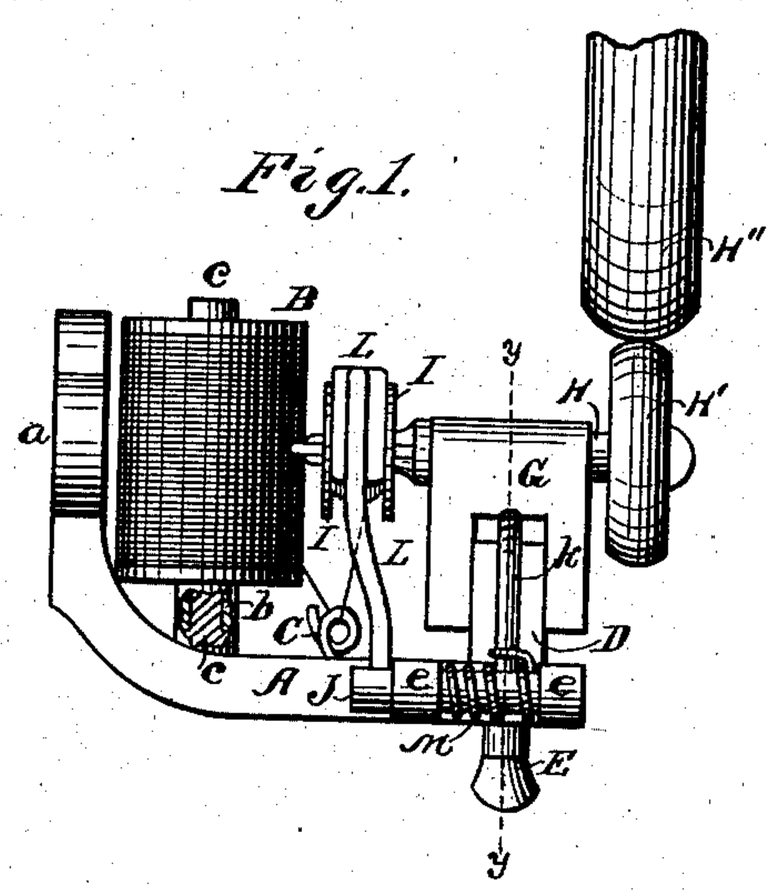


Fig. 2.

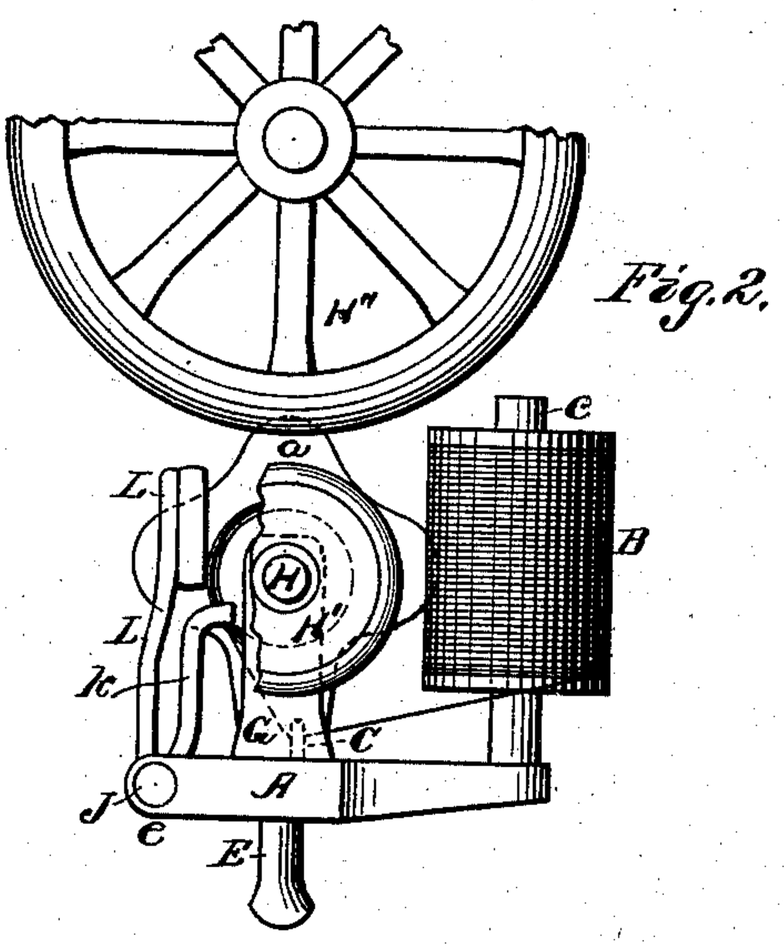


Fig. 3.

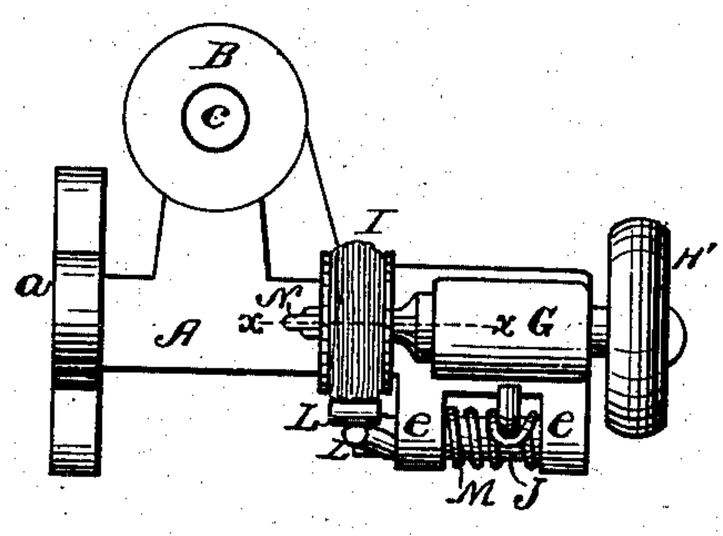


Fig. 4.

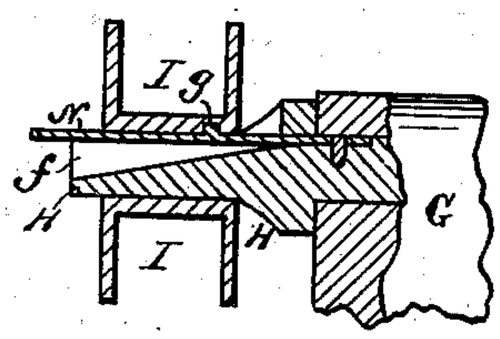
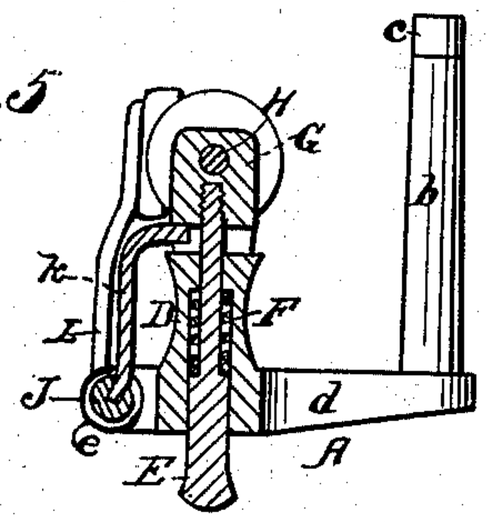


Fig. 5.



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UNITED STATES PATENT OFFICE.

GILBERT A. BRADY, OF CHICAGO, ILLINOIS.

BOBBIN-WINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 257,844, dated May 16, 1882.

Application filed February 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, GILBERT A. BRADY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bobbin-Winding Attachments for Sewing-Machines, of which the following, in connection with the accompanying drawings, is a specification.

In the drawings, Figure 1 is a side elevation of a bobbin-winding attachment embodying my invention. Fig. 2 is an end view of the same. Fig. 3 is a top view thereof. Fig. 4 is a section in the plane of line *x x*, showing the means employed to hold the bobbin in its place removably; and Fig. 5 is a section in the plane of line *y y*, showing the means employed for rendering the bearing for the bobbin shaft or spindle vertically-adjustable.

Like letters of reference indicate like parts.

In the drawings, A represents the frame of the attachment. One part of this frame, *a*, stands vertically, to admit of attachment to the machine; but any well-known or suitable means may be employed for that purpose.

B is the spool, which is mounted on a sleeve, *b*, on a post, *c*, extending vertically from the frame A.

C is an open eye on the frame A.

D is a hollow post, contracted or shouldered near its upper end interiorly, as shown in Fig. 5. The post D stands vertically on the frame A.

E is a loose or vertically-yielding pin, passing through the post D. The pin E is shouldered near its lower end, as shown at *d*, and F is an open spiral spring, arranged around the pin E, and seated on the shoulder *d*. The upper end of the spring F meets the contracted part of the post D.

G is a bearing into which the upper end of the pin E is screwed.

H is a shaft journaled in the bearing G.

H′ is the attachment-driver, mounted on one end of the shaft H, and I is the bobbin, mounted removably on the other end thereof.

J is a shaft or rocker turning in bearings *e e*, extending from the frame A.

K is a catch, and L is a presser-arm, both extending vertically from the part J. The upper end of the catch K is adapted and arranged to support the bearing G in its raised position, and the upper end of the arm L is adapted and arranged to press upon the thread on the bobbin.

M is a spring to hold the catch K and arm L yieldingly in the positions described.

N is a spring-catch applied to the inner end of the shaft H, and arranged in a horizontal groove therein, *f*. A small pin or stud, *g*, extends from the upper side of the spring N. The cylinder of the bobbin has in it a small socket to receive the stud *g*. The free end of the spring N extends far enough beyond the bobbin to be depressed by hand when the bobbin is mounted on its shaft, and the groove *f* is deep enough to admit of the stud *g* being drawn from its engagement with the bobbin by so depressing the spring.

It is to be understood that the attachment is to be so applied to the machine that the driver H′ will be in contact with the driver H″ on the head of the machine when the bearing G is in its raised position, as indicated in Fig. 1, which is the usual position of attachments of this class when applied for work. The bearing G may be raised to its highest position with facility by pressing upward for that purpose upon the lower end of the pin or post E, at which time the upper end of the catch K will move to its engagement with the bearing G automatically, owing to the action of the spring M, and the said bearing will then be supported in its raised position by the catch K. As the catch is moved to its engagement with the bearing G, the upper end of the arm L is moved in between the flanges of the bobbin, or so as to be in contact with the thread on the bobbin before the latter becomes wound or filled with thread. By the time the bobbin is filled the upper end of the arm L will have been pushed outward far enough to carry the catch K from its engagement with the bearing G, and the latter will then fall, so as to carry the driver H′ away from contact with the driver H″. The action of the attachment therefore will then cease. In other words, the attachment will be thrown out of gear automatically with the machine by the time the bobbin is wound.

The bobbin may be applied by slipping it over the catch N and upon the shaft H′, the bobbin being then turned until it is engaged

by the said catch. To remove the bobbin depress the free or exposed end of the said catch and draw the bobbin off its shaft.

My invention relates only to the means employed for throwing the attachment out of gear automatically with the machine at the time the bobbin is fully wound, and to the means employed for fastening the bobbin removably upon its shaft. It is evident, however, that all the details of construction herein described need not be employed for the purpose set forth. For example, the bearing G need not necessarily have a yielding movement, as it may fall by gravity, when released sufficiently, for the purpose of throwing the attachment out of gear with the machine; but I deem it preferable to make it yielding, as well as vertically movable or adjustable, so as to render its movement more certain. The essential feature of this part of my invention is the automatic release device or trip for throwing the attachment out of gear with the machine at the proper time and automatically.

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

A bobbin-winding attachment for sewing-machines, consisting of the combination of the base-piece or frame A, the vertically-movable bearing G, the shaft H, having therein the groove *f* and carrying the spring-catch N, arranged in the said groove, the attachment-driver H′, the shaft or rocker J, having thereon the catch K, and the arm L, the spring M, and the bobbin I, having therein a socket to receive the stud *g*, substantially as and for the purposes specified.

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