

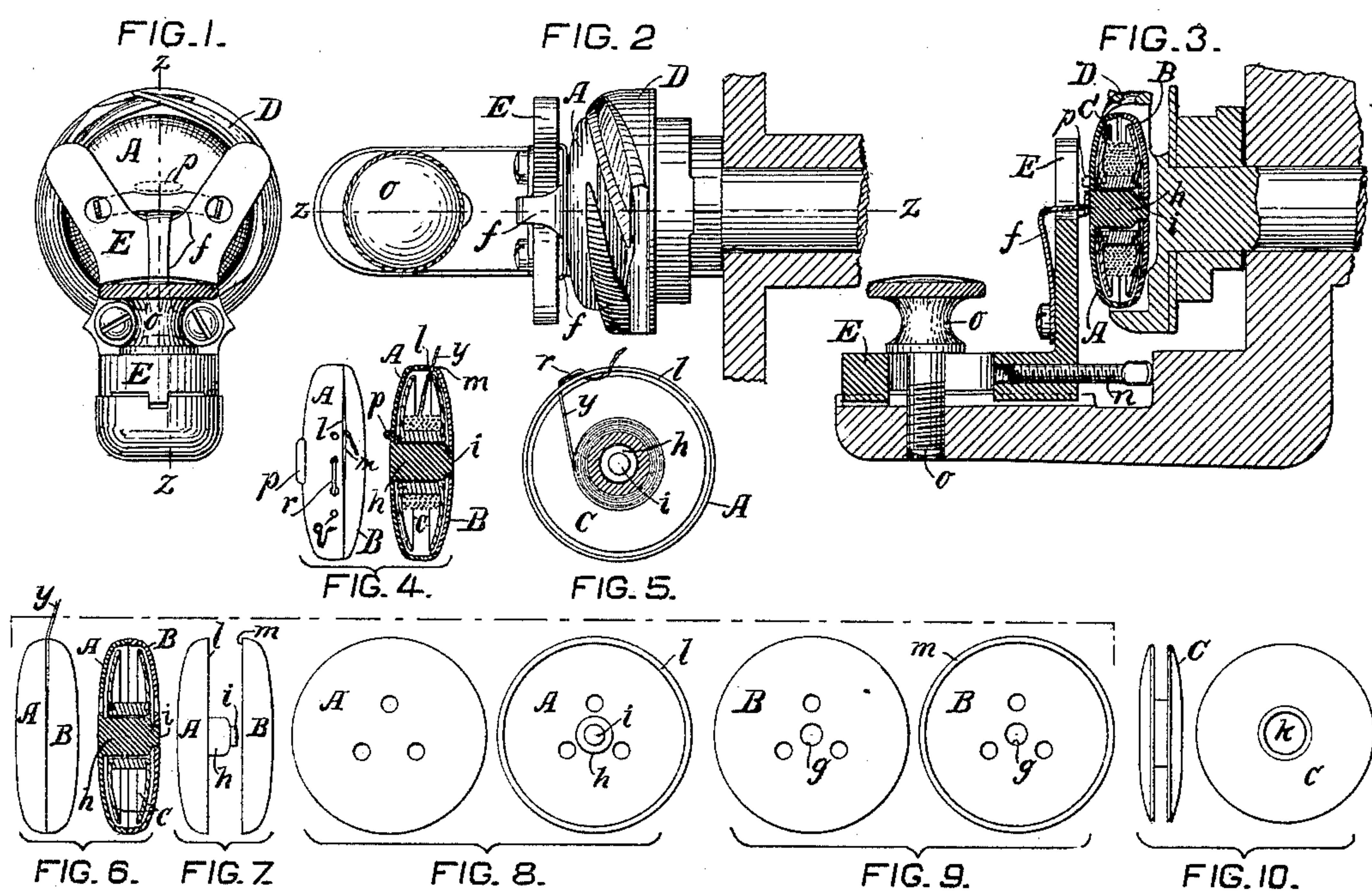
(No Model.)

G. M. MORRIS.

BOBBIN CASE FOR SEWING MACHINES.

No. 339,069.

Patented Mar. 30, 1886.



WITNESSES:

James T. Goodfellow.  
James H. Slade.

INVENTOR:

George M. Morris



# UNITED STATES PATENT OFFICE.

GEORGE M. MORRIS, OF COHOES, ASSIGNOR TO THE NATIONAL MACHINE COMPANY, OF TROY, NEW YORK.

## BOBBIN-CASE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 339,069, dated March 30, 1886.

Application filed December 22, 1881. Serial No. 48,452. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. MORRIS, a citizen of the United States, residing in the city of Cohoes, in the county of Albany and State of New York, have invented a new and useful Improvement in Bobbin-Cases for Sewing-Machines, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in bobbin-cases of sewing-machines for forming lock-stitches by means of a needle and a co-acting rotary hook, which carries the needle-thread around a locking-thread from a spool-like bobbin inclosed on all sides by a case  
15 which is in two laterally-separable circular halves or parts, furnished with an axial support for the bobbin to freely rotate upon, and gently pressed into a suitable recess in the rotary hook by a spring, in combination with  
20 a holder for loosely retaining the bobbin-case in said recess.

The object of this improvement is to secure a very uniform tension on the stretch of thread  
25 from the bobbin by reason of the pressure of the said spring against the two-part bobbin-case in pressing it into the recess in the rotary hook while the stretch of bobbin-thread is being drawn out between any portion whatsoever of the circular peripheries of the two  
30 halves or parts of the case, and whether much or little thread is on the bobbin.

In the aforesaid drawings, Figure 1 is an end elevation, Fig. 2 a plan, and Fig. 3 a vertical section at about the line  $z z$  in Figs. 1  
35 and 2, of a portion of a "No. 8" Wheeler & Wilson revolving-hook sewing-machine, having therein one of my improved bobbin-cases inclosing a partly-filled bobbin. Fig. 4 represents an edge elevation and a diametrical  
40 section of a modification of one of my improved bobbin-cases with a partly-filled bobbin therein, and Fig. 5 is a sectional elevation of the same. Fig. 6 shows an edge elevation  
45 and axial section of the bobbin-case represented in Figs. 1, 2, and 3; and Fig. 7 shows edge elevations, and Figs. 8 and 9 present elevations of the inner and outer sides of the two parts of the same case. Fig. 10 shows in  
50 edge and side elevations the bobbin represented in Figs. 3, 4, and 6.

A and B are the two circular parts of the bobbin-case. C is the bobbin, which has a socket,  $k$ , that is fitted to turn freely on an axial journal,  $h$ , fast on one part, A, of the case. The two parts A and B have all around  
55 their peripheries opposite annular bearings  $l$  and  $m$ , and one of said posts has an axial socket,  $g$ , which fits freely upon an axial journal,  $i$ , on the other part, whereby the two  
60 parts are connected together, as shown in Figs. 3, 4, and 6, in such manner that either one of the two parts can be freely rotated upon the other part, with their annular bearings  $l$  and  $m$   
65 in contact with each other, and that one of the parts can be freely and instantly separated from and reconnected with the other laterally in the direction of their common axis.

In Figs. 1, 2, and 3, D is the revolving hook, which has a suitable recess, in which fits loosely  
70 the two-part bobbin-case A B, which is retained in the recess by the holder E, and the spring  $f$ , which gently presses against the outer side of the bobbin-case in the recess. When  
75 the bobbin C is wound with thread, and inserted and supported in the two-part case A B, and the latter is placed in the recess in the rotary hook D, and loosely retained therein by the holder E and the spring  $f$ , substantially  
80 as shown by Figs. 1, 2, and 3, and a stretch,  $y$ , of the bobbin-thread extends from the bobbin outward between and beyond the two annular bearings  $l m$  of the two parts of the case, as in forming stitches by the sewing-machine, the pressure of the spring  $f$  against  
85 the outer part of the case will cause the stretch of bobbin-thread to be gently pressed by and between the annular bearings  $l m$ , so as to thereby produce a very uniform tension on  
90 the stretch of bobbin-thread as it is drawn out between any portion of the circuit of the bearings  $l m$  which shall be in proper position in respect to the stitch-forming devices of the sewing-machine.

The degree of pressure, and consequent tension of the bearings  $l m$  against the stretch of bobbin-thread, can be adjusted by altering  
95 the degree of pressure of the spring  $f$  against the outer part of the bobbin-case, as by means of the usual stop-screw,  $n$ , and clamp-screw  $o$   
100 of the holder E, or by means of any suitable device adapted to increase and lessen the



pressure of the spring against the case. The bearings *l m* are made to extend all around the two circular parts of the case, and one part of the case is journaled to turn or rotate 5 freely on the other part, in order that when in use in the sewing-machine, if the rotation of the hook shall turn the contiguous part or both parts of the case, one or both of the bearings *l m* can then slip on the stretch of bobbin-thread, and thus avoid pulling the latter so far 10 out of its proper course as to materially vary its tension.

In the modification shown by Fig. 4 the outer part, A, of the case has a low projection, *p*, to rest over the spring *f*, as indicated 15 in Figs. 1 and 3 by dotted lines at *p*, to lessen or prevent the rotation of the outer part of the case by the revolving hook; and in Figs. 4 and 5 the part A of the case is shown as 20 having holes *q*, through which the bobbin-thread can be passed, as shown at *r*, to increase its tension before passing out between the annular bearings *l m*.

I claim as my invention—

25 1. A sewing-machine bobbin-case consisting of two circular parts having opposite annular peripheral bearings, an axial journal for a bobbin, an axial socket in one part and cor-

responding axial journal on the other, and said socket and journal so constructed as to 30 permit free rotation of one part on the other while said annular bearings remain in contact, and to allow free bodily movement of one part toward and away from the other part, substantially as set forth. 35

2. In a sewing-machine, the combination, with its recessed revolving hook, bobbin-case holder, and pressing-spring, of a bobbin-case pressed in the revolving hook by said spring, and consisting of two circular parts having 40 opposite annular peripheral bearings, an axial journal for the bobbin, an axial socket in one part and corresponding axial journal on the other, and said socket and journal so constructed as to permit free bodily movement 45 of one part toward and away from the other, and to allow free rotation of one part on the other part while said annular bearings are in contact, substantially as set forth.

In testimony whereof I hereunto set my hand, 50 in the presence of two subscribing witnesses, this 28th day of April, 1881.

GEORGE M. MORRIS.

Witnesses:

JAMES T. GOODFELLOW,  
JAMES H. SLADE.