

(No Model.)

H. RAY.

INKING RIBBON SPOOL FOR TYPE WRITING MACHINES.

No. 401,856.

Patented Apr. 23, 1889.

Fig. 1.

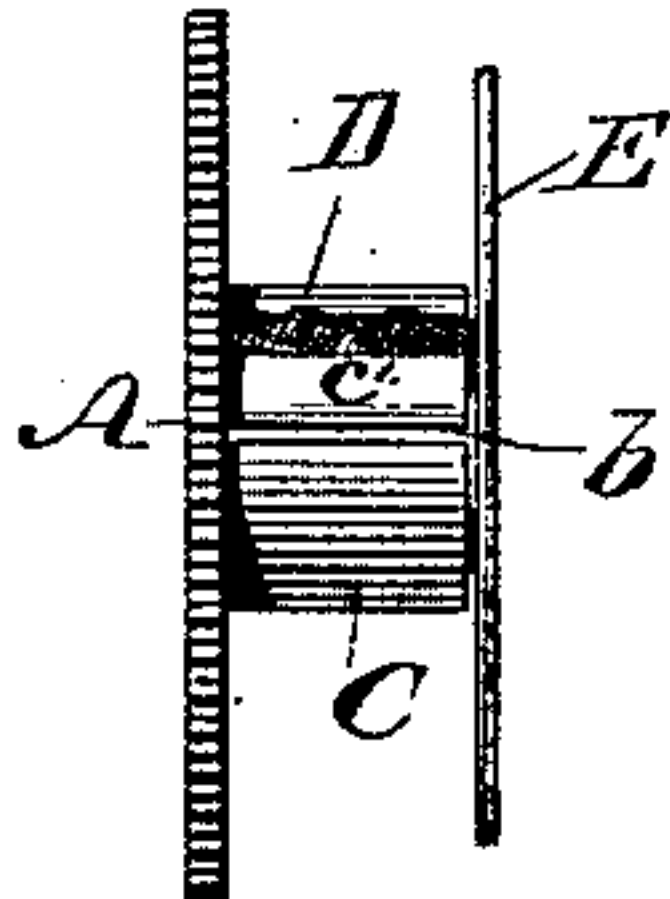


Fig. 2.

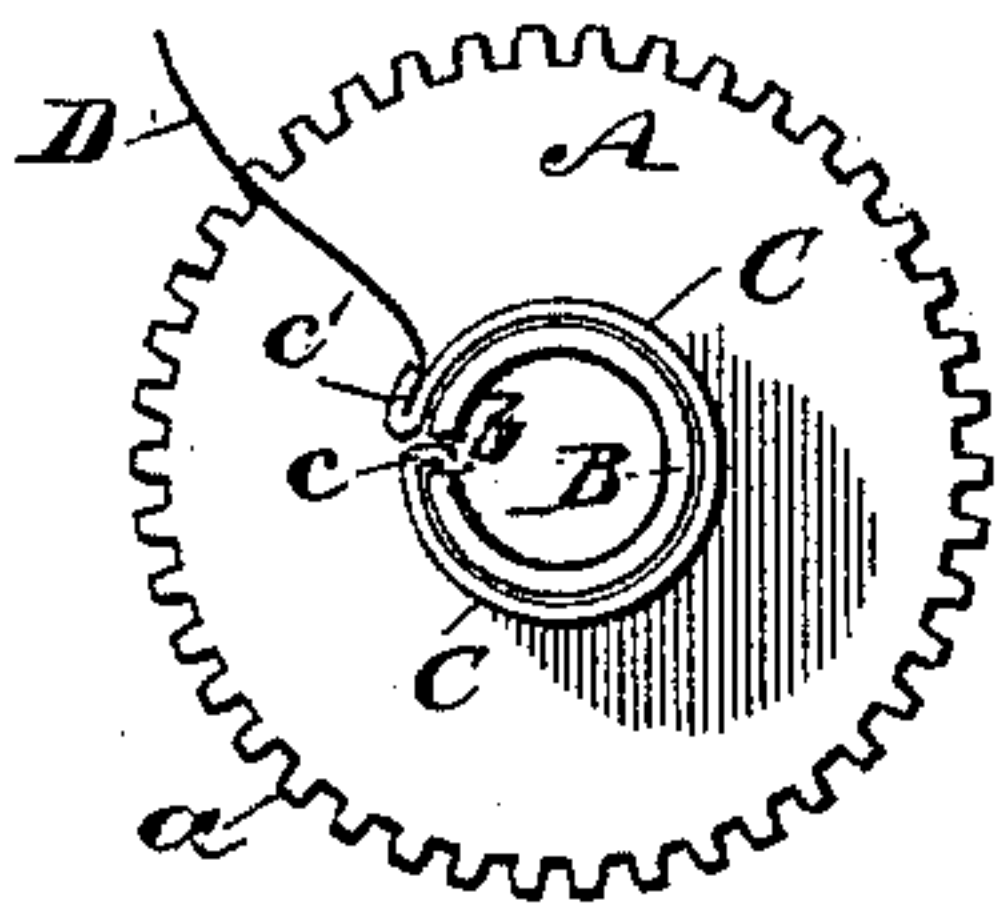


Fig. 3.

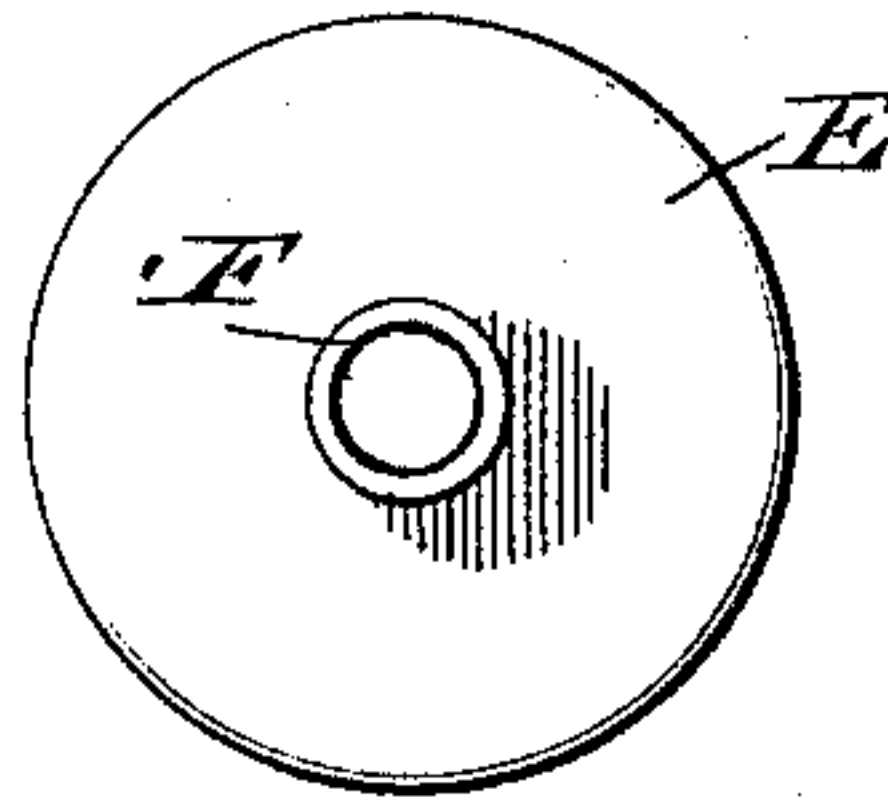


Fig. 4.

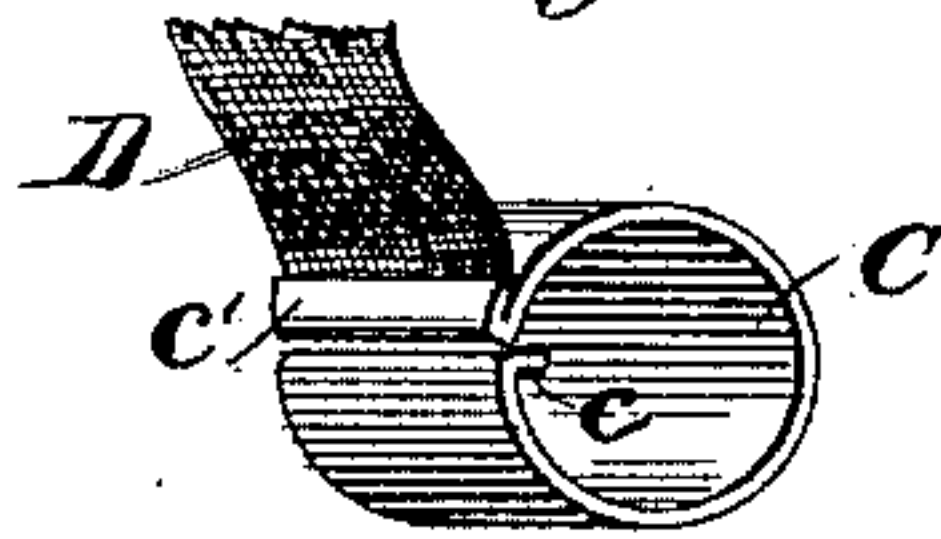
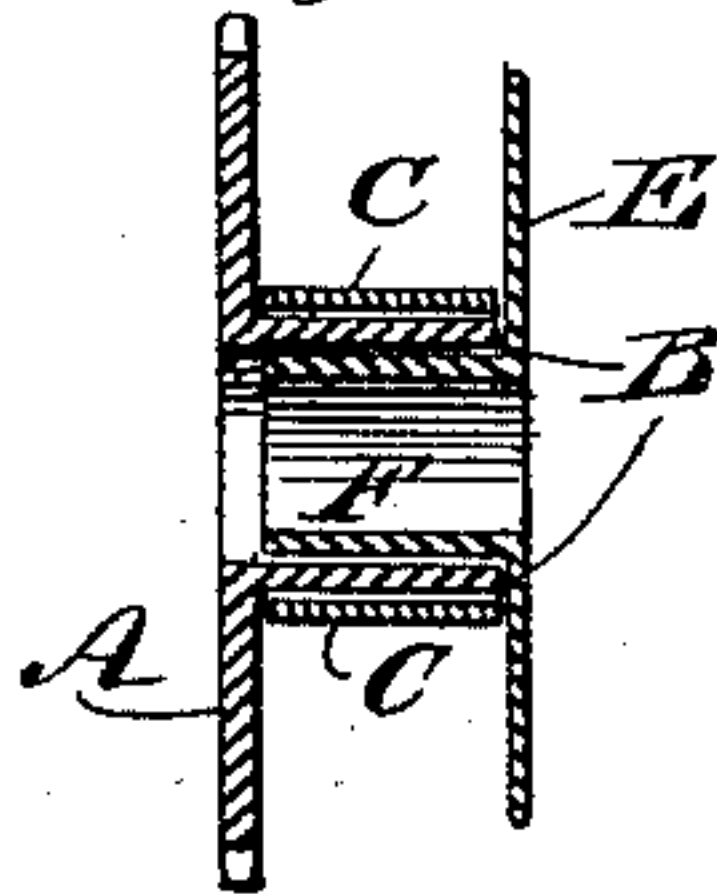


Fig. 5.



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HARVEY RAY, OF MOBILE, ALABAMA.

INKING-RIBBON SPOOL FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 401,856, dated April 23, 1889.

Application filed June 8, 1887. Serial No. 240,632. (No model.)

To all whom it may concern:

Be it known that I, HARVEY RAY, of Mobile, in the county of Mobile and State of Alabama, have invented new and useful Improvements in Inking-Ribbon Spools for Type-Writing Machines, of which the following is a full, clear, and exact description.

My invention relates to inking-ribbon spools for type-writing machines, and has for its object to provide simple inexpensive spools of this character, which will allow separate manufacture and transportation of the inking-ribbons by mail or otherwise, and in such manner that the ribbons may be very quickly and easily adjusted to the type-writer and allow interchange of a series of inking-ribbons of various colors with but a single set of ribbon-spools fitted to the machine.

The invention will first be particularly described, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an edge view of my improved inking-ribbon spool with a small piece of the ribbon held on the bobbin of the spool. Fig. 2 is an inside face view of one side part of the spool with the bobbin on the hub and a part of the inking-ribbon attached. Fig. 3 is an inside face view of the other part of the ribbon-spool. Fig. 4 is a perspective view of the bobbin with a portion of the attached inking-ribbon; and Fig. 5 is a central transverse section through the spool.

One side, A, of the ribbon-spool is shown provided with peripheral teeth *a*, with which mechanism of the type-writer engages for turning the spool to carry a new or fresh part of the inking-ribbon to the point of impression of the type; but the spool may receive motion for this purpose in any approved way. On the side of A is fixed a hub, B, which is slotted lengthwise at *b* to receive an inwardly-bent tongue, *c*, of the inking-ribbon bobbin C, which consists of a plate of metal or other suitable material bent around from its tongue *c* to fit loosely upon the hub B, and at its other end part is bent upon itself to form a clamp, *c'*, into which the end of the inking-ribbon D is fastened, as shown most

clearly in Figs. 2 and 4 of the drawings. The other side part, E, of the spool is provided with a hub, F, which fits snugly inside of the hub B of the side A, and against the end of the bobbin, as will be understood from Figs. 1 and 5 of the drawings. The side plates, A and E, thus form walls, between which the inking-ribbon will be held truly edgewise. The ribbon D will be wound upon the bobbin C and upon itself, and may have any required length up to the full capacity of the spool.

It is obvious that by removing the side portion, E F, from the opposite side part, A B, the bobbin with the ribbon wound on it may be slipped from the hub B of side A and another bobbin carrying a fresh ribbon of the same color or of a different color may be quickly placed on the hub B and the side E F readjusted, and when the free end of the ribbon is secured to an opposite spool the type-writer is ready for operation; hence the advantages of the spool are evident, as inking-ribbons may be quickly and easily substituted, one for the other, without soiling the fingers, and two or more different colors of inking-ribbon can be used on the same spool, thus allowing a variety of inking-ribbons to be used interchangeably on the type-writer with but one set of spools, and the ribbons wound on the bobbins can be furnished by the manufacturer at little expense, and they may be sent by mail or otherwise at a trifling cost, thereby promoting the economical maintenance of the type-writing machine in good order for a wide range of work.

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

1. An inking-ribbon bobbin provided with a clamp on its outer surface, and with an inwardly-extending projection on its inner surface, substantially as described.

2. The inking-ribbon bobbin C, formed of a plate bent into cylindrical form and provided at one end with an inbent lip, *c*, and at the other end with a ribbon-clamp, *c'*, substantially as shown and described.

3. The inking-ribbon bobbin C, provided at one end with an inbent lip, *c*, and at its other end with a clamp, *c'*, combined with an ink-

ing-ribbon, D, held at one end by the clamp c' , and wound upon the bobbin, substantially as herein set forth.

4. The combination, in an inking-ribbon
5 spool for a type-writer, of a side part, A, having a hub, B, slotted at b , a bobbin, C, fitted to said hub and having a tongue, c , entering said slot and adapted to hold the end of the

inking-ribbon, and an opposite side part, E, having a hub, F, fitting the hub B of part A, 10 substantially as described, for the purposes set forth.

HARVEY RAY.

Witnesses:

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