Feb. 27, 1945. A. F. VON SODEN 2,370,382

REJUVENATING AND RE-INKING RIBBONS FOR TYPEWRITERS AND THE LIKE

Filed June 22, 1942

Fig. 1.

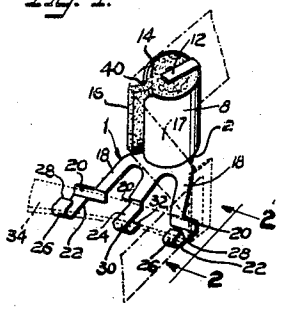


Fig. 2.

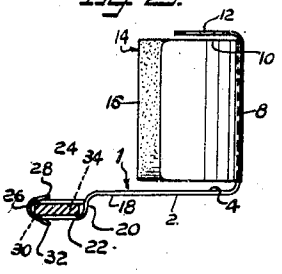


Fig. 3.

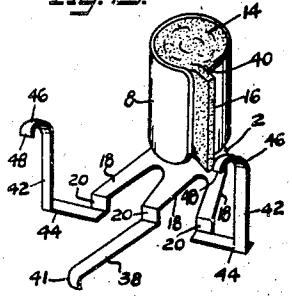


Fig. 4.

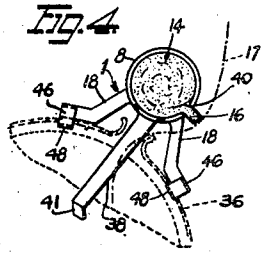


Fig. 5.

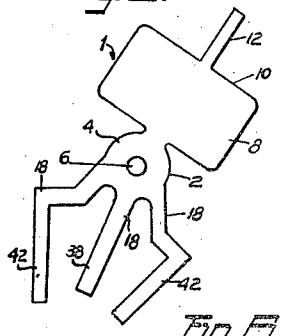


Fig. 6.

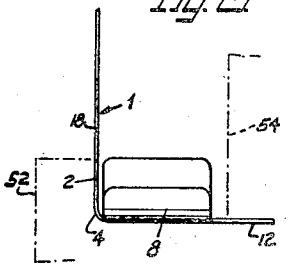


Fig. 7.

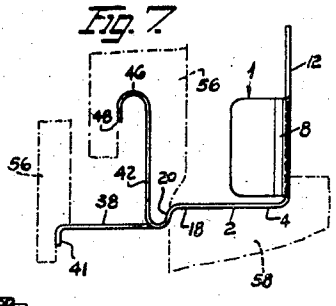


Fig. 8.

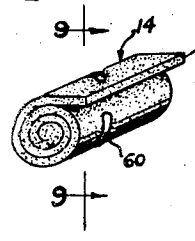
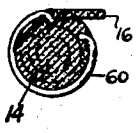


Fig. 9.



INVENTOR

Joseph F. Von Soden

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REJUVENATING AND RE-INKING RIBBONS FOR TYPEWRITERS AND THE LIKE

Adolph F. von Soden, Los Angeles, Calif.

Application June 22, 1942, Serial No. 447,954

5 Claims. (Cl. 197—171)

My invention relates to the typewriter ribbon re-conditioning and re-inking devices and more particularly to such applicators which are adapted for re-conditioning said ribbon in the typewriter machine, without removing same from its position.

Accordingly an object of my invention is to provide said typewriter machine with a suitable ribbon re-inking means comprising a housing which is provided with a suitable ink retaining cartridge means, which when in position, it will permit said typewriter ribbon to function normally while it passes from one spool to the other during the operation of the machine, also to coat the surface of said ribbon, at one or either of its sides, and automatically covering its other side with a light coating of an ink when rolled upon a ribbon spool, thereby increasing and prolonging the durability and the flexibility of said ribbon and also increasing its usefulness and preventing its deterioration.

Another object of my invention is to provide a suitable ribbon re-inking device which is especially adapted for re-inking and for reconditioning said ribbons of the typewriter machine or the like, and which in its construction comprises a suitable housing means adapted for receiving and for holding therein a suitable cartridge means, said housing means having a set of prongs for forming a set of suitable gripper means which are adapted for holding and for maintaining said housing means in its position and close to the ribbon spool cage, so that one of the surfaces of the passing ribbon will come, at all times, in contact with the extended end surface of said cartridge means, said cartridge means being interchangeable and renewable and is charged or saturated with a suitable ink, thus permitting said ribbon, while its surface passes thereover, to be coated with said ink and thereby causing said ribbon to gradually absorb some of it during the operation of said typewriter machine.

Reference now is had to the accompanying drawing, in which the similar reference characters denote the similar parts.

In the drawing:

Fig. 1 is the perspective view of the re-inking attachment shown in position and attached to the "Underwood" typewriter machine, also showing the position of the ribbon when in operation.

Fig. 2 is the end elevational view of the re-inking attachment, taken in the direction of the arrows 2—2, of the Fig. 1.

Fig. 3 shows the perspective view of another type attachment showing altered prong and gripper extensions, which is applicable to the "Royal" typewriter machine.

Fig. 4 shows the top view of the re-inking apparatus shown attached to the "Royal" typewriter machine and showing the position of the ribbon member when in operation.

Fig. 5 shows the form of a blank of the re-inking attachment, which is used in all types of tyepwriter machines, out of which the re-inking apparatus is formed, showing the operation number 1.

Fig. 6 shows the side elevational view of the blank member, showing the first bending and forming operation, for making the cartridge housing.

Fig. 7 shows the second bending and forming operation, for providing the forms of the grippers.

Fig. 8 shows the perspective view of the cartridge which is a cylindrical roll and saturated with the ink in readiness to be deposited within the housing of the blank member.

Fig. 9 is the vertical sectional view of the cartridge showing the position of the spring clip which holds the rolled layers of the cartridge in position, taken on the line 9—9 of the Fig. 8.

Describing my invention more in detail, in its broader aspects, said invention comprises a re-inking device as shown in Figs. 1 and 2, which is particularly adapted for and to the "Underwood" typewriter and which is made entirely out of one piece of material, the blank of which is shown in Fig. 5.

Said device comprises a plate member 1 which is provided with a center member 2 for forming the bottom section 4, while the center is provided with a hole 6 to provide air or ink circulation when the housing plate 8 is formed cylindrically, having a longitudinal throat 40 disposed thereover, as shown.

The outermost section 10 of said housing plate 8 is provided with a suitable tongue extension member 12 which is adapted for holding a cartridge member 14 in place, as shown in Figs. 1 and 2, and which is also for the purpose to prevent said cartridge member 14 from slipping or from turning out of line, thus allowing the sidewardly extending end 16, so disposed within said throat 40, to remain in any desired position and to bear against the surface of the ribbon member 17.

In order to hold said re-inking device in position said center member 2 of said plate member 1 is provided with a set of grippers 18 which extend outwardly therefrom, each of which is pro-

vided with a downward bent as at 20 and then parallel to the gripper section 18 for forming a suitable ledge members, of which, the outer ledge members 22 are lower in their respective positions, while the center ledge member 24 is slightly higher, as shown in Fig. 2, and in addition, said outer ledge members 22 are provided with an upwardly extending ends 26 which terminate with a suitably curved ends 28, while said center ledge member 24 is provided with a downwardly extending end 30 terminating with a curved end 32, so that when said re-inking device is placed in a position, said ledge member 24 including said ledge members 22 will straddle and will overlap the ribbon guide and release lever 34, shown in dotted lines, which is substantially a part of the tyepwriter machine, and the housing plate member 8 when in its position, will not interfere with the movements of the letter hammers and will hold said cartridge member 14 with said extended end 16 in position and against said ribbon 17, during the operation of said machine.

In the Figs. 3 and 4, said re-inking device is shown in one of the modified forms and is applicable for the use with a "Royal" typewriter, comprising a housing plate member 8 which is for the purpose to hold and retain therein the cartridge member 14 and for having its end member 16 extending sidewardly and outwardly therefrom, in order to engage the surface of the ribbon 17 while passing thereby, as shown in Fig. 4.

Due to a slightly modified construction of the ribbon spool cage 36, shown in dotted lines, which is substantially a part of the typewriter machine, said grippers 18 are formed accordingly, in order to meet the required condition.

Therefore said gripper extending sections 18 are provided with a downward bent, as at 20 and then parallel to said gripper sections 18, of which, the center section 38 extends outwardly and terminates with a downward bent 41, while the gripper extensions 42 are provided with an upward bent 44 having their ends 46 terminating with a hook end 48, and which are for engaging the rim section of said spool cage member 36, as shown.

It may be noted, that in said plate member 1, the relative position of said sidewardly extending grippers 18 and a plate member 1 out of which said housing plate 8 is formed, is at a suitable angle, see Fig. 5, so that by reversing said plate member 1 and then forming said housing plate 8 a suitable narrow throat 40 is formed and extends the entire length of said housing plate 8 and which may, due to such forming operation, be at one or the other side of said bottom section 4 and over the center member 2, through which said sidewardly extending end 16 of said cartridge member 14 will pass, for engaging the surface of said ribbon 17, and thereby providing a right hand or the left hand inking device which may be applied to the respective side of the typewriter machine.

It may also be noted, that said grippers 18, as shown in Fig. 5, are universal in their respective positions, thus enabling one skilled in art to form same properly and thereby allowing same to be fitted to any conventional typewriter machine.

In the Fig. 6 is shown one form of bending and forming the housing member 8 and also for forming same properly in relation to the center member 2, having therefor a suitably formed die 52 and a punch member 54, as shown in dotted lines, while in the Fig. 7 a suitable forming punch 56 and a forming die 58 is shown in dotted lines, which is used for completing the forming of said device as described and illustrated in the Figure 3.

In the Figs. 8 and 9 is shown a cartridge member 14, which may, if so desired, be made out of suitable cloth, felt or the like, which is held in its rolled position by means of a suitable spring like ring member 60 and thus allowing said end member or applicator 16 to extend outwardly therefrom, as shown, so that by saturating said cartridge 14 with a suitable ink preparation, then only a small portion of said ink, through said end member 16 and its entire surface so exposed will be distributed and transmitted upon the surface of said typewriter ribbon 17, without removing same from the machine and during its operation.

While I have thus described my invention with great particularity, it will be clear that the same may be modified throughout a wide range.

I accordingly do not propose to be limited to the exact details of construction herein shown on the drawing and described in the specification, but reserve the rights in practice to make the necessary changes and modifications therein, which may come within the scope of the appended claims.

I claim as my invention:

1. In a re-inking device of the class described made out of one piece of material and adapted for attaching same to the typewriter machine, a housing means having a longitudinal throat, a base means in said housing means, a set of gripper means extending out of said base means, a bend in each of said gripper means for attaching and for holding said housing means upon said typewriter machine and in a close proximity to the passing ribbon, a cartridge means detachably and removably disposed in said housing means, an extending end protruding out of said cartridge means and extending through said longitudinal throat of said housing means for contacting the surface of the typewriter ribbon, and ring means over said cartridge means for holding said cartridge means in a tight rolled position when transmitting and when applying thin layer of ink upon the surface of said ribbon, and tongue extension member means extending out of said housing means and disposed over the top of said cartridge means for holding said cartridge means in position during the operation of said typewriter machine.

2. In a typewriter ribbon re-inking device of the class described comprising a cylindrical housing means disposed in close proximity to the passing ribbon, a longitudinal throat means disposed sidewardly in said housing means, and an ink fluid saturated cartridge means detachably and removably disposed within said housing means having its end extending out of and through the entire length of said throat means for applying and for transmitting a quantity of ink upon the ribbon surface and into the ribbon texture, and tongue extension means extending out of said housing means and disposed over the top of said cartridge means for holding said cartridge means in position during the operation of said typewriter machine.

3. In a re-inking device of the class described, made out of one piece material, comprising a housing, a throat in said housing extending its entire length, a base in said housing, a set of gripper means extending out of said base for attaching same to the typewriter machine, an ink

saturated cartridge means removably disposed in said housing for applying a thin layer of ink upon the surface of the passing typewriter ribbon during the operation of the typewriter machine, and a tongue extension means extending out of said housing means and disposed over the top of said cartridge means for holding said cartridge in position and for preventing its upward sliding.

4. In a cartridge of the class described, adapted to be disposed in a device having a housing and adapted for re-inking and re-conditioning the ribbons used in typewriters or the like, comprising a longitudinally rectangular ink absorbent rolled into a circular and a narrow width roll, an ink applicator disposed at the edge end section and extending out of said absorbent roll, and a resilient ring means enclosing the center section of said circular roll for holding said absorbent in a rolled position and for maintaining said ink applicator in a close proximity thereto when disposed within said housing of said device, and for the purpose as set forth.

5. In a device of the class described made out of one piece of material and adapted for re-inking and for re-conditioning the ribbon of the typewriter machine and the like, comprising a housing means attached to and connected with said typewriter machine in a close proximity to the passing ribbon, a base means in said housing means, a longitudinal throat means in said housing means, an ink saturated cartridge means removably disposed within said housing means and resting upon said base means, an ink applicator means extending out of said last mentioned means and protruding through and extending out of said throat means of said housing means for applying and for transmitting a thin layer of ink from said cartridge means upon the surface of said passing ribbon during the operation of said typewriter machine, a tongue means disposed at the top of said housing means for holding said cartridge means in a position and for preventing its upward sliding and out of said housing means, and a resilient ring means encompassing the center section of said cartridge means for restricting the downward flow of the ink and for filtering said ink when passing from said ink applicator upon the surface of said passing typewriter ribbon, substantially as described.

ADOLPH F. VON SODEN.