

July 23, 1957

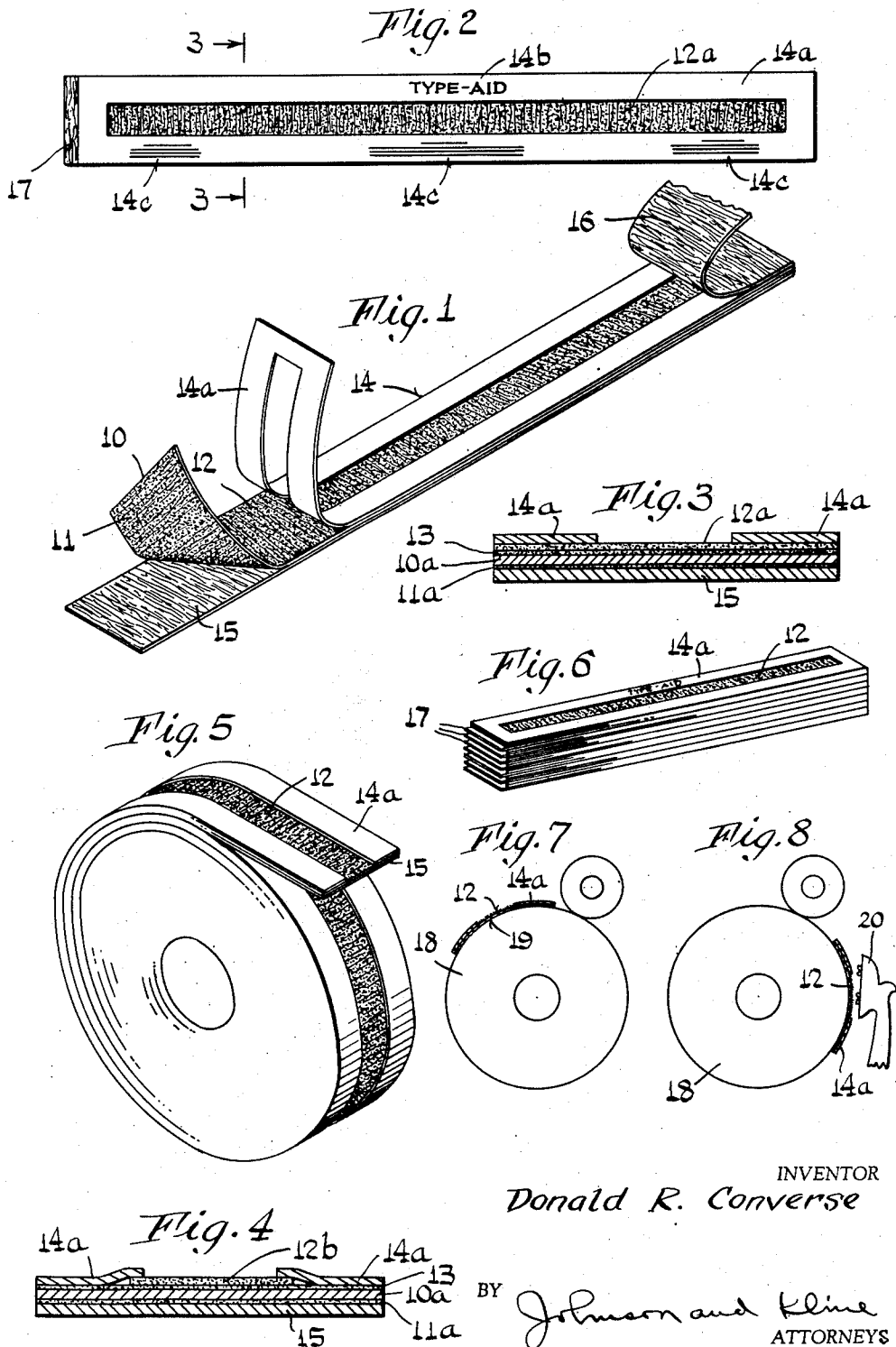
D. R. CONVERSE

2,800,215

METHOD AND MEANS FOR CLEANING TYPE

Filed April 13, 1955

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 9

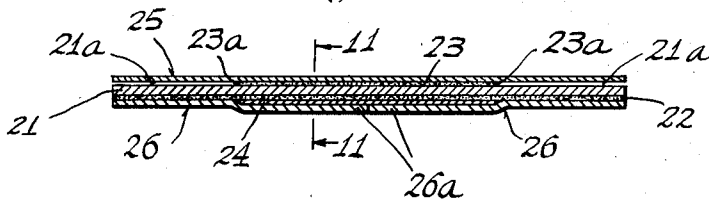
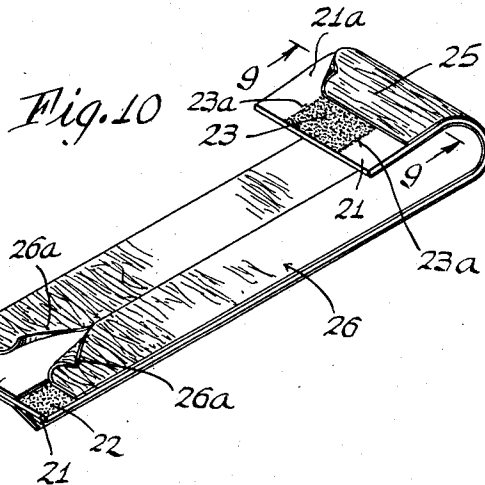
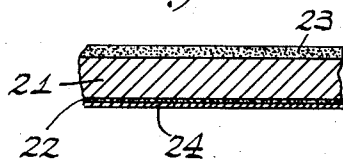


Fig. 11



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1

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METHOD AND MEANS FOR CLEANING TYPE

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10 Claims. (Cl. 197—185)

This invention relates to the method and means for easily and conveniently cleaning type and particularly for cleaning type of typewriting machines.

This application is a continuation-in-part of my co-pending application Serial No. 435,263, filed June 8, 1954 and now abandoned.

Heretofore, it has been the practice in cleaning type to use brushes and solvents or to use plastic kneadable material both of which are so messy and time-consuming as to discourage their use. I have tried to use the usual masking tape and surgical tape to clean the type but it is too thin and not sufficiently compressible to effectively clean the type.

The present invention overcomes these disadvantages by providing a simple device which is easily secured in position and readily rendered operative to remove ink and dirt from the type in such an expeditious manner as to encourage and promote good housekeeping or "typewriter grooming." This is accomplished by providing a flexible base with an adhesive back surface whereby it can be temporarily secured in position on a support or platen, and by having on the front face a tacky surface adapted to be contacted by the type, which tacky surface extends into the crevices in the type and removes the ink and extraneous matter from the type.

In the preferred form of the invention the flexible base member is provided on the back with a coating of pressure sensitive adhesive and has on its front face a layer or coating of tacky material capable of picking up the ink, dirt and dust from the type. Preferably, the tacky material on the face of the base is made in the form of a stripe extending along the base and the base is provided with untacky marginal edges to be contacted by the fingers to aid in pressing the device into adhesive engagement with the platen or support and in otherwise handling the device without soiling the hands. If desired, suitable indicia can be provided on the untacky surfaces, such as instructions or identifications of the manufacturer.

The strip has a predetermined minimum thickness and by controlling the compressibility of the base member or backing for the tacky surface, or the thickness of the layer of tacky material, the amount of penetration into the crevices in the type by the tacky surface can be controlled.

The device of the present invention can be formed in separate units not exceeding the length of the platen or can be manufactured in continuous lengths and rolled into a roll from which desired lengths can be cut. The pressure responsive adhesive surface may be provided with a readily removable protective strip to prevent it from being unintentionally secured to adjacent strips and/or surfaces, and a similar protective strip can be applied over the tacky type-engaging surface so as to prevent dirt and other material from unintentionally adhering thereto.

When the devices are made in unit length, the protective strips may extend beyond the end of the base member or extend over non-adhesive areas to provide a gripping portion whereby they may be readily removed.

2

The present invention provides a novel method which greatly simplifies the cleaning of the type since the device can be easily adhered to a readily accessible portion of the platen, such as along the exposed surface of the platen, and because it is firmly held in tight contact with the platen it can be safely moved by the platen into type-engaging position and then held while the type is moved into engagement therewith, upon the removal of the usual ribbon out of contacting position, and the tacky layer will remove the ink and dirt from the type as they are brought into contact therewith. After the cleaning operation is complete, the device can be readily removed from the platen and stored for reuse without soiling the hands of the operator.

Other features and advantages of the invention will be apparent from the specification and claims when considered in connection with the drawings in which:

Figure 1 is a perspective view of a unit of one form of the invention.

Fig. 2 shows a plan view of a type cleaning unit embodying another form of the invention.

Fig. 3 shows a sectional view on line 3—3 of Fig. 2.

Fig. 4 is a sectional view similar to Fig. 2 of still another form of the invention.

Fig. 5 shows the cleaning device of the present invention in roll form.

Fig. 6 shows a stack of individual cleaning units.

Fig. 7 shows a unit in position on a platen prior to being moved to cleaning position.

Fig. 8 is a view similar to Fig. 7 showing the unit moved into cleaning position.

Fig. 9 is a sectional view taken on line 9—9 of Fig. 10.

Fig. 10 is a perspective view showing the manner in which the protective strips can be removed.

Fig. 11 is a fragmentary sectional view of the strip taken along line 11—11 of Fig. 9.

The type cleaning device of the present invention comprises essentially a flexible base member having on the back surface thereof an adhesive surface, preferably of a pressure sensitive adhesive, whereby it may be readily secured to a platen, and on the front surface of the base member a tacky surface adapted to be engaged by the type to remove ink, dust, dirt and other extraneous matter therefrom.

The base member may be made of woven fabric or paper, plastic tape or any other suitable flexible material, and is preferably formed with a creped surface. As shown in Fig. 1, the base member 10 is formed of plastic or the like material and the surface 11 is inherently a pressure sensitive adhesive surface and the front surface 12 is inherently tacky to be engaged by the type to remove ink and/or lint from the type when engaged thereby.

In the form of the invention shown in Figs. 2 and 3, the pressure sensitive adhesive surface 11a is formed by impregnating and/or coating the base member 10a of fabric or paper with a suitable pressure sensitive adhesive so as to provide an adhesive surface on the back thereof which may be readily secured to the platen and to provide an adhesive surface 13 on the front thereof to which a tacky material 12a may be secured to provide the front tacky surface adapted to be engaged by the type. This tacky material may be rubber, plastic or the like material capable of removing ink and/or lint from the type when engaged thereby.

The tacky material may extend over the entire surface as shown in Figs. 1-3 or be formed as a stripe 12b extending longitudinally of the base member and located inwardly from the margins thereof as shown in Fig. 4.

By controlling the compressibility or deformability of the base member or the layer of tacky material, the extent to which the device enters the crevices of the type to remove the ink and extraneous matter therefrom can

3

be readily controlled. I have discovered that the best results are obtained when the device has a minimum thickness of about 13 mils and is formed with a base member of paper having a tacky rubber base adhesive on the surface thereof which has sufficient internal cohesiveness that it will not break down and stick to the type when struck thereby and which is resilient and readily deformable or displaceable when struck by the type to be displaced thereby so as to extend into the crevices of the type, which are usually between 18 to 28 mils in depth, so as to engage the inner portions thereof and remove the ink and dirt therefrom.

It is to be understood that the thickness of the adhesive coated strip can be increased as required. However, it should not be increased to a point wherein it will engage upon the paper guides of the typewriting machine as the platen and type are fed into cooperating position.

It is at present preferred to provide the front surface with untacky marginal portions 14 whereby the device may be handled conveniently and whereby the device may be pressed into secure relation on the platen by means of running the fingers thereover. While the untacky marginal edge portion may be provided by utilizing a stripe of the tacky material disposed inwardly of the margins and leaving an untacky base member exposed, or by a coating of lacquer along the edges, it is at present preferred to provide in the form of the invention shown in Figs. 1 to 6 a strip or strips of untacky material 14a, such as paper, plastic films or the like, which extend along the base member to form the marginal surfaces and over the edges of the tacky material, as shown in Figs. 3 and 4, protecting the tacky material as the device is turned into the machine as will be explained. Further, the edge material can have identifying indicia, such as trademarks or the like 14b, or instructions 14c printed or otherwise formed thereon if desired.

The device of the present invention can be made up in units having a length less than the length of the platen of the typewriting machine with which it is to be used, as shown in Figs. 1 and 2, or it can be made in continuous lengths and rolled on a roll, as shown in Fig. 5, from which sections can be removed for use as desired.

In order to prevent the adhesive surfaces 11 from being unintentionally adhered to a surface or to one another, a protective strip 15 is provided to overlie said surfaces. This enables the units to be packed in a stack or pile, as shown in Fig. 6, or rolled as shown in Fig. 5, and to be readily separated. Also, if desired, a similar protective strip 16 can be positioned over the tacky surface 12 to prevent dust and extraneous matter from inadvertently adhering thereto. While the protective strip can be gauze or any other suitable material, it is herein illustrated as comprising a paper strip having a creped surface to facilitate its separation.

When the device is in unit form, it is preferred to extend the protective strip, as shown in Fig. 2, so as to provide a gripping portion 17 whereby it can be easily stripped from the back.

The device of the present invention can be so readily applied and utilized as to encourage rather than discourage the cleaning of the type on typewriting machines. It is merely necessary to take a unit or a section cut from a roll, remove the protective strips and place the pressure sensitive adhesive surface in contact with the desired accessible portion of the platen 18, preferably the exposed top surface 19 of the platen as shown in Fig. 7, so that the device extends along the platen. The untacky marginal surfaces 14a permit the device to be readily handled in putting it in position and provide finger-engaging portions whereby the fingers can be run therealong to apply pressure and cause the units to be firmly adhered to the platen. The platen and the type are then relatively moved into the position shown in Fig. 8 in which the tacky surface is disposed opposite the type

4

to be engaged thereby. As the device is moved into this position, the strips 14a will prevent the ribbon guides, paper guides and other carriage elements (not shown) from catching on the edge of the tacky surface. With the device securely adhered to the platen in this position, the ribbon is moved out of the path of movement of the type and into the usual stencil cutting position and the type is then actuated and moved into engagement with the tacky surface to cause the ink and extraneous matter carried thereby to be transferred to the tacky surface.

After all of the type have been cleaned, the device can be readily removed, the protective strips restored, and the device stored for reuse again and again until the tacky surface is filled with material transferred from the type.

In the form of the invention shown in Figs. 9 to 11, the base member 21, preferably formed of a compressible paper or the like material, has on the bottom face a thin coating 22 of pressure sensitive adhesive by which it can be adhered to the platen. On the top face there is provided a longitudinal stripe 23 of pressure sensitive adhesive, preferably a rubber base adhesive having a tacky surface, said stripe having its edges 23a located inwardly from the edges of the paper strip to provide nontacky edge portions 21a on the base. These edge portions may be treated with lacquer or other suitable material or they may be left bare so that there is provided an untacky surface by which the strip may be gripped or contacted to press the device against the platen.

If desired, the undersurface of the device may be provided with a thin coating or layer 24 of plastic material which extends over the middle of the base and underlies the stripe 23 on the top of the base, as shown in Fig. 9. In this figure the relative thicknesses of the strips is somewhat exaggerated to show the layers. However, the sectional view in Fig. 11 is substantially in proportion showing that the coating of plastic material is extremely thin. While various plastics may be used, in the preferred form of the invention the strip is formed from "Mylar" manufactured and sold by E. I. du Pont de Nemours & Company and which is a polyethylene terephthalate material. This material is not tacky and is highly resilient and tough so that it provides an adequate backing for the base.

As noted above, the device should have a minimum thickness of about 13 mils and should be sufficiently compressible or deformable to enter the crevices of the type when struck thereby.

If desired, protective means may be provided for preventing the tacky surface of the stripe 23 and the adhesive 22 on the bottom of the base member from inadvertently adhering to other devices. This comprises a protective strip 25 overlying the top and temporarily adhered to the tacky surface of the stripe 23 and a strip 26 overlying the bottom face and adhered to the edges thereof. It will be noted that the strip 25 extends over the untacky edge portions 21a of the base, as shown in Fig. 9, so that the protective strip can be readily gripped and removed from the top thereof while the protective strip 26 is split longitudinally with the inner adjacent edges 26a overlying the "Mylar" strip and being free to be turned back and gripped and withdrawn as shown in Fig. 10.

The device is applied to the platen and the type moved into engagement therewith as set forth above and the ink and extraneous matter readily removed from the type.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A type cleaning means comprising a flexible member having an adhesive surface on the back thereof adapted to temporarily secure the member in position on a support and having a tacky surface on the front thereof to be engaged by the type, said type cleaning means having a

5

minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same.

2. A type cleaning device comprising a flexible base member having pressure sensitive adhesive on the back thereof adapted to temporarily secure the device to the platen of a typewriting machine and having a stripe of material with a tacky surface on the front thereof to be engaged by the type, said type cleaning device having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same.

3. As an article of manufacture a type cleaning device comprising an elongate flexible base member of a length not to exceed the length of a platen of a typewriting machine having a pressure sensitive adhesive surface on the back thereof adapted to temporarily secure the device to said platen to extend therealong and having a tacky surface on the front thereof to be engaged by the type, said article having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same.

4. As an article of manufacture a type cleaning device comprising an elongate flexible base member of a length not to exceed the length of a platen of a typewriting machine having a pressure sensitive adhesive surface on the back thereof adapted to temporarily secure the device to said platen to extend therealong and having a stripe of tacky material on the front thereof spaced inwardly of the side edges and adapted to be engaged by the type, said article having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same.

5. As an article of manufacture, a type cleaning device comprising an elongate base member of a length not to exceed the length of a platen of a typewriting machine, said base member having pressure sensitive adhesive on the back thereof adapted to temporarily secure the device to the top of the platen to extend therealong and having a layer of tacky material on the front thereof to be engaged by the type, said article having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same, and an untacky marginal portion on the front of the base member to provide a finger-engaging edge portion whereby the device may be readily pressed into engagement with the platen.

6. A type cleaning device comprising an elongate, continuous base member adapted to be wound into a roll and having a pressure sensitive adhesive surface on the back thereof adapted to temporarily secure the device to the platen of a typewriting machine and a removable protective strip overlying said adhesive surface, said base member having a layer of tacky material on the front thereof adapted to be engaged by the type, said type cleaning device having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into

6

crevices in the type to remove ink and dirt from the type to clean the same.

7. As an article of manufacture a type cleaning device comprising an elongate flexible base member of a length not to exceed the length of a platen of a typewriting machine having a pressure sensitive adhesive surface on the back thereof adapted to temporarily secure the device to said platen to extend therealong and having a stripe of tacky material on the front and adapted to be engaged by the type, said stripe being spaced inwardly of the side edges of the base member, leaving untacky edge portions extending therealong, and a narrow strip of plastic adhered to said back to underlie said stripe, said article having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same.

8. As an article of manufacture a type cleaning device comprising an elongate flexible base member of a length not to exceed the length of a platen of a typewriting machine having a pressure sensitive adhesive surface on the back thereof adapted to temporarily secure the device to said platen to extend therealong and having a stripe of tacky material on the front and adapted to be engaged by the type, said stripe being spaced inwardly of the side edges of the base member, leaving untacky edge portions extending therealong, a narrow strip of plastic adhered to said back to underlie said stripe, said article having a minimum thickness of about 13 mils and being compressible so as to be adapted to extend into crevices in the type to remove ink and dirt from the type to clean the same, a protective strip overlying the front and temporarily adhered to said stripe with the edges overlying the untacky edges of the base, and a second protective strip overlying the back of the base, said strip being split longitudinally and temporarily adhered to the back with the adjacent edges of the split portion overlying the strip of plastic.

9. The method of cleaning type in a typewriting machine comprising the steps of temporarily adhering to the surface of a platen the back of a cleaning device having a tacky front surface, and moving the type into engagement with the tacky surface to transfer thereto ink and extraneous matter from the type.

10. The method of cleaning type in a typewriting machine comprising the steps of pressing the pressure sensitive adhesive back surface of a type cleaning device having a tacky front surface into engagement with an accessible surface of a platen to temporarily secure the device thereto, relatively moving the platen and type to locate the tacky surface in position to be engaged by the type, and moving the type into engagement with the tacky surface to transfer thereto ink and extraneous matter from the type.

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