

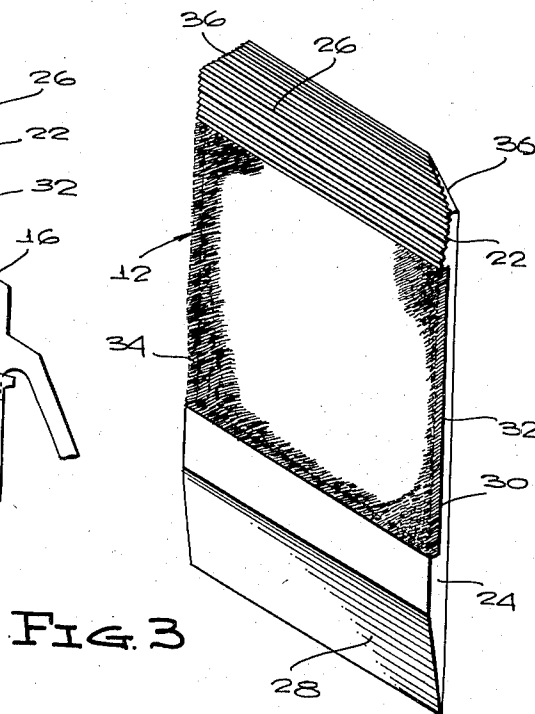
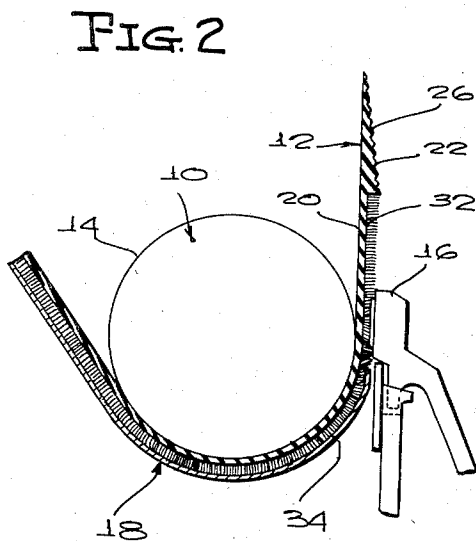
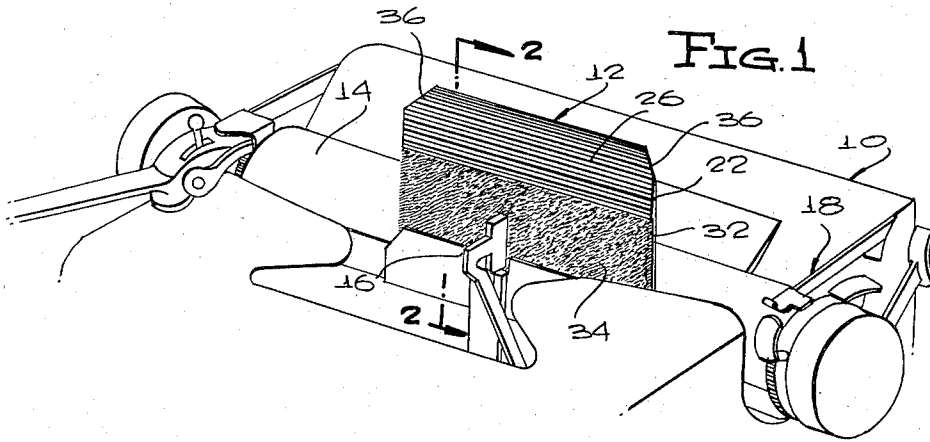
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DEVICE FOR CLEANING TYPEWRITER TYPE

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DEVICE FOR CLEANING TYPEWRITER TYPE

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1 Claim. (Cl. 15—160)

This invention relates to a device adapted for cleaning the type of typewriters and other mechanisms provided with sets of type, such as teletype machines, etc.

Considerable difficulty is experienced in the cleaning of type of machines of the character described. Ordinarily, when lint, dirt, oily substances, and other foreign particles clog the type, it is necessary that each type character be cleaned more or less individually. The conventional practice is to apply any of various cleaning fluids to the bank of type, for the purpose of dissolving and removing the foreign particles. A brush or equivalent means is employed for the purpose of cleaning the bank of type, and is usually shifted back and forth along the row of type, through a number of strokes.

The conventional practice described above has been found to be somewhat unsatisfactory, and in addition, is time-consuming. As a result, it is proposed, as an important object of the present invention, to provide cleaning means for typewriter type which will eliminate the several difficulties hereinbefore noted. To this end, the invention comprises a pad-like, flexible member adapted to be inserted in a typewriter in the same manner as a sheet of paper, with said member being so designed as to cause the type to be self-cleaning, in effect, responsive merely to striking the typewriter keys in a normal, typing operation.

Another object is to provide a cleaning device for typewriter type in which the cleaning action will be substantially more efficient and thorough than that which obtains when conventional practices are employed.

Still another object is to provide a cleaning device for typewriter type which will effect the thorough cleaning of each type character responsive to striking of the associated typewriter a single time, thus to clean the entire bank of typewriter type in a very short time and with maximum ease.

Another object is to provide a cleaning means for typewriter type which can be manufactured at low cost, will be rugged and durable, and will not require any modification or redesign of the typewriter on which it is used.

Still another object of importance is to provide a cleaning device of the character stated that will be characterized by the ease with which the same will be inserted in or removed from the typewriter, and will further be characterized by its adaptability for use over a long period of time without requirement of replacement.

Other objects will appear from the following description, the claim appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, in which:

Figure 1 is a fragmentary perspective view of a conventional typewriter in which has been inserted a type-cleaning device according to the present invention;

Figure 2 is an enlarged transverse sectional view on line 2—2 of Figure 1; and

Figure 3 is a front perspective view, on an enlarged scale, of the cleaning device per se.

Designated generally at 10 is a conventional typewriter, and at 12 there has been similarly designated the type-

cleaning device constituting the present invention. At this point, it should be noted that although the device has been illustrated in association with a typewriter, it can be used to equal advantage on various other mechanisms provided with type, such as teletype machines, etc.

The typewriter, as shown, has the usual platen 14, type 16, and carriage generally designated 18. A sheet of paper, as will be understood, is inserted between the carton and the bed of the carriage, in position to be struck by type 16 during normal typing operation.

In accordance with the present invention, type-cleaning device or brush 12 is inserted in the same manner as a sheet of paper (Figures 1 and 2). In this connection, the particular formation, and the characteristics of the various components used in the brush, are of importance in achieving the desired results. The brush includes a backing member or base 20, formed as a thin sheet of soft rubber or other resilient material having the desired characteristics of flexibility and resiliency. At opposite ends of the sheet, there are integrally formed transverse, wide enlargements 22, 24, respectively. These have back surfaces common to the back surface of the body portion of the base or backing member 20, while having front surfaces that are sharply beveled so as to lie in planes converging with the planes of the back surfaces in a direction toward the respective extremities of the cleaning device. The beveled surfaces have been designated at 26, 28 and are corrugated or otherwise roughened over their entire areas, for ease in inserting the device in the typewriter. The tapered formation, coacting with the roughened front, beveled surfaces 26, 28, serves to permit the device to be inserted between the carriage and the platen proper, with the desired ease.

As shown in Figure 3, adjacent the roughened front surface 28 of the enlargement 24, the enlargement has a relatively wide, smooth surface portion 30 extending over the full width of the device, in a preferred embodiment of the invention.

Between the transversely extending enlargements, the base 20 is maintained at a constant thinness, substantially less than the maximum thickness of the respective enlargements. This results in a shallow recess 32 extending the full width of the device and extending in length from one to the other of the enlargements 24, 22.

Embedded in the base, and completely filling the recess, are bristles 34, which project forwardly and which are very closely spaced, so as to form a thick mat which will be struck by the typewriter type 16 when the associated typewriter (not shown) key is struck in the usual manner, as shown in Figures 1 and 2. The free ends of the bristles 34 are substantially flush with the inner edges of the respective ribs 22, 24, as shown to particular advantage in Figure 2.

In a preferred embodiment, the entire brush would not have a maximum thickness greater than one-eighth inch, it being found through experimentation that the brush should not be over one-eighth of an inch, with the bristles protruding at least one-sixteenth of an inch from the recessed surface of the brush, to insure accurate cleaning of the type.

In use, the device can be inserted in or removed from the typewriter in the same manner as a sheet of paper. When inserted, the device is ready for cleaning of the type, and said cleaning is accomplished merely by striking of each key in the usual manner. It has been found that the type penetrates the mat-like, bristle-covered surface of the brush, in such a manner that the tiny, closely spaced bristles will penetrate all openings of the type, such as that provided, for example, in the letter "O," cleaning the type thoroughly and easily.

It is to be further noted that the device is particularly designed to permit cleaning of the type without the re-

quirement of special cleaning fluid, some of which are of a volatile nature, and therefore represent hazards when used.

Preferably, the bristles are formed of nylon, plastic, or any other material that is sufficiently adapted to retain its position, and that will not mat after extended use.

Referring to Figure 3, it will be seen that at one end of the device, this being the end having the enlargement 22, the corners of the cleaning device are cut away diagonally as at 36, to further facilitate insertion of the device in the typewriter.

The device can, of course, be manufactured at a very low cost, and despite its low cost, may be used over a long period of time. It will be noted that the efficiency in the cleaning operation, and the adaptability of the device for use over an extended period of time, results not only from the closely spaced bristles, but also from the fact that the bristles are bedded down in a thin, resilient base 20, which yields each time the device is struck by the type, coacting with the inherent resiliency of the platen itself in effecting maximum penetration of the cleaning device by the type, even when the associated key is struck with a normal pressure.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor change

in construction that may be permitted within the scope of the appended claim.

What is claimed is:

A type-cleaning device for typewriters comprising: a backing member in the form of a thin sheet formed wholly from a flexible, soft, resilient material integrally provided at opposite ends thereof with transverse, wide enlargements having flat back surfaces lying in planes common to the plane of the back surface of said member and having beveled front surfaces lying in planes extending into convergence with the planes of the back surfaces of the enlargements in directions toward the respective extremities of the device, said surfaces being roughened over their entire areas, the backing member being of a constant thickness substantially less than that of the maximum thickness of the enlargements over the full distance between the enlargements and over the full width of the backing member, thus to define a shallow recess between the enlargements; and closely spaced bristles within the recess projecting forwardly a distance such that the free ends of the bristles terminate at a plane parallel to the plane of the back surface of the backing member, the front surface of the respective enlargements, at the point of maximum thickness of the enlargements, lying in said plane in which the free ends of the bristles lie.

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