June 9, 1925. 1,541,043

R. S. GRAHAM

RESILIENT CAP FOR THE KEYS OF TYPEWRITERS OR SIMILAR MACHINES

Filed Feb. 6, 1924

Fig. 1.

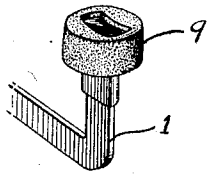


Fig. 2.

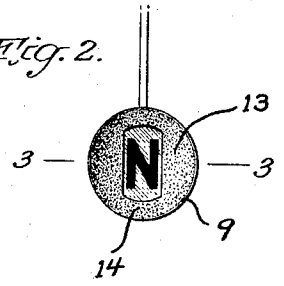


Fig. 3.

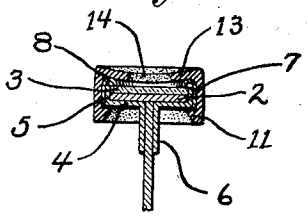


Fig. 4.

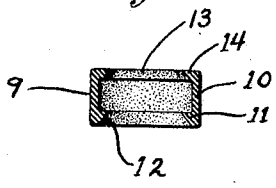
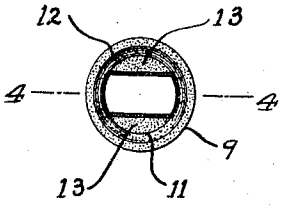


Fig. 5.



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UNITED STATES PATENT OFFICE.

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RESILIENT CAP FOR THE KEYS OF TYPEWRITERS OR SIMILAR MACHINES.

Application filed February 6, 1924. Serial No. 690,899.

To all whom it may concern:

Be it known that I, ROBERT S. GRAHAM, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in a Resilient Cap for the Keys of Typewriters or Similar Machines, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a resilient cap for the keys of typewriters, or similar machines, and the objects of the invention are to provide a resilient or cushioned cap that is interchangeable without reference to the index letter or numeral of the key to which it is to be applied. Further objects of the invention are to provide a cap that will, when applied to a key, have a dish shaped top provided with cushion members that are spaced away from the top of the key to permit of the cushion members being flexed to provide a cushioning effect to the finger of the operator. Still further objects of the invention are to provide means for guiding or stretching the cap over the top of a key, which will permit of its easy removal.

Referring to the drawings:

Figure 1 is a perspective view of the key end of a key bar of a typewriter or similar machine provided with a resilient cap made in accordance with the invention.

Figure 2 is a top view of Figure 1.

Figure 3 is a sectional view on the line 3—3 of Figure 2.

Figure 4 is a sectional view of the resilient cap on the line 4—4 of Figure 5.

Figure 5 is a bottom view of the resilient cap.

In the drawings 1 designates the key end of an ordinary typewriter key bar, or the key end of any similar machine, which is provided in the present instance with the usual key comprising, a circular disk 2 having on its upper surface an index letter or numeral, the same being covered with a circular disk 3 of glass, both supported on a metal key base 4 having an upturned edge 5 and a shank 6 secured to the upturned portion of the key bar. The disks 2 and 3 are held in position on the top of the key base 4 by means of a circular flange 7 surrounding the outer edge of the upturned edge 5 and crimped over the top thereof, and the circumferential edges of the disks 2 and 3, so as to provide a circular beaded edge 8.

The beaded edge 8 of the circular flange 7 forms a continuous bead or ridge about the upper surface of the key not only to secure the parts of the key together but also to provide a suitable working surface for the fingers of the operator to prevent slipping, the circumferential bead or ridge 8 extending upward above the surface of the key to accomplish this purpose.

The typewriter key above described is similar to the typewriter keys in use on a great variety of typewriters and similar key operated machines and is adapted to be covered by a removable resilient rubber cap 9 made in accordance with the present invention.

The typewriter key cap 9 is, in accordance with the present invention, preferably made of rubber suitably molded to provide a hollow disk shaped cap comprising a cylindrical body 10, the inner diameter of which is less than the outer diameter of the key, the key cap being open at the bottom and provided with an inner guide flange 11 the inner edge of which is cut to flare outward as shown at 12 to facilitate the key cap being forced over the top of the key after which the guide flange 11 assumes normal locked position against the bottom of the key as shown in Figure 3.

The key cap 9 is also, in accordance with the present invention, provided with a flat top having side and end cushion members 13 and 14, which surround a top opening so as to make visible the index letter or numeral on the disk 2. In the present instance the top opening in key cap 9 is made greater in length than in breadth, the greater length being in the direction of the key bar to more easily show the index letter or numeral, although if desired the top opening can be made round or other convenient shape to expose the index letter or numeral, however, the elongated opening as shown in the drawings is to be preferred.

The side and end cushion members 13 and 14 are preferably made of uniform thickness and preferably thicker than the sides of the cylindrical body portion 10.

A key cap made as above described will, when forced over the top of a key, as before described, act by reason of the raised beaded

edge 8 on the circumference of the key to become dish shaped as shown in Figures 1 and 3 without however, the bottom of the inner edges of the side and end cushion members 13 and 14 coming in contact with the upper surface of the key as clearly shown in Figure 3.

The dish shape of the top of the key cap is caused not only by the fact that the inner edges of the side and end cushion members are unsupported, but to the fact that the inner circumference of the body portion 10 is less than the outer circumference of the key, which acts to stretch the top of the key cap taut and in so doing dish the same at the center which it is permitted to do by reason of the raised beaded edge 8 on the key and the shape of the opening in the key cap.

It will be seen therefore that a cap provided with an elongated opening, similar to that shown in the drawing, which provides relatively broad side cushion members as compared with relatively narrow end cushion members, will function better as a cushion, and have a greater cushion effect than if, for example, the opening was round in which event the unsupported area would be less.

From the above description it will be seen that a resilient cap is provided which by reason of its construction can easily be forced over, or removed from, the top of a key for a typewriter or similar machine, and that the same will in view of its construction provide a disk shaped top, or working surface, that is spaced away from the top surface of the key and which will permit of the same being flexed by the finger of the operator to cushion the blow when struck.

While the invention has been described with particular reference to the details of construction the same is not to be considered as limited thereto as many changes can be made and still fall within the scope of the invention set forth in the following claims.

What I claim is:

1. A cap for typewriter and similar keys provided with an upwardly extending circumferential ridge, said cap being made in the form of a hollow disk of slightly smaller diameter than the key, a guide flange secured to the bottom of said cap to facilitate the same being stretched over said key, the top of said cap being provided with side and end cushion members, said side members being broader than said end members, and an opening in the top of said cap surrounded by said cushion members, the top of said cap being arranged to rest upon the ridge portion of said key, the central portion of the top of said cap being spaced away from the top of the central portion of said key.

2. A cap for typewriter and similar keys provided with an upwardly extending circumferential ridge, said cap being made in the form of a hollow disk of slightly smaller diameter than the key, the top of said cap being provided with side and end cushion members said side members being broader than said end members, and an opening in the top of said cap surrounded by said cushion members, the top of said cap being normally flat but arranged to become dish shaped when forced over the top of said key into engagement with said ridge, the central portion of the top of said cap being spaced away from the top of the central portion of said key.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ROBERT S. GRAHAM.

Witnesses:

LEO J. MATTY,

LILIAN E. POTTER.