United States Patent [19]

Hogue

[11] **3,848,723**

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[54] **ADAPTER KEY CAPS**

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[52] **U.S. Cl.** **197/102**
[51] **Int. Cl.** **B41j 5/16**
[58] **Field of Search** 197/98, 100, 102, 103

[56] **References Cited**

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[57] **ABSTRACT**

An adapter key cap reduces the possibility of typographical errors on a modern typewriter having character and service keys arranged and aligned in parallel rows. A raised, beveled projection disposed on the key cap allows a typist to tactically know when the fingers are properly positioned on the "home keys". When a typist is frequently interrupted by other office tasks, a considerable savings in time is assured by the invention since there is no time wasted visually checking the positioning of the fingers after each interruption.

2 Claims, 4 Drawing Figures

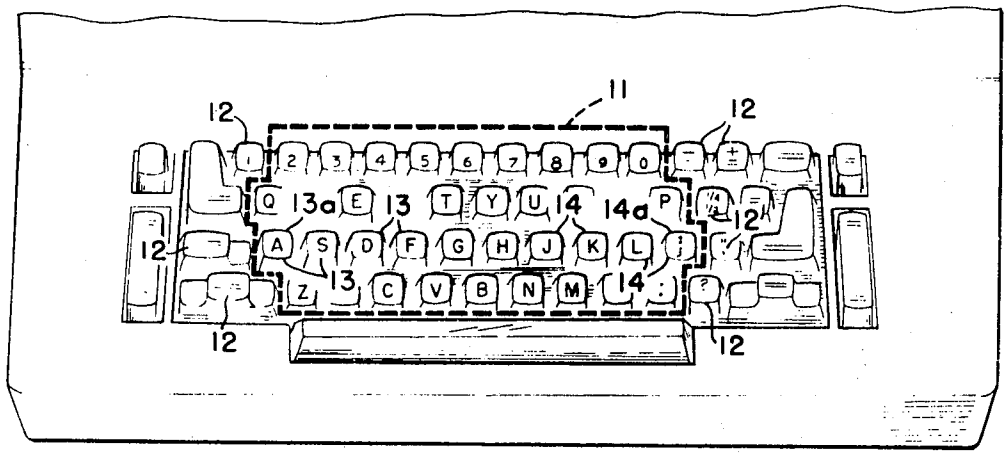
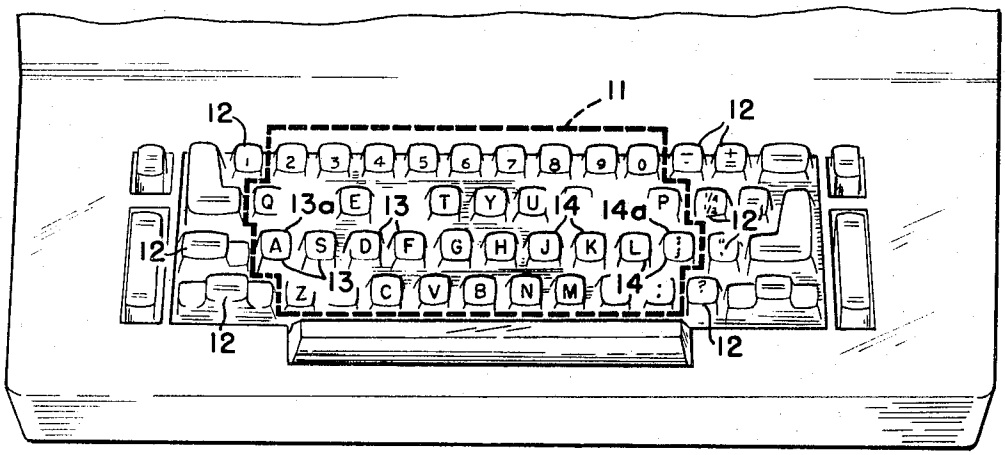


FIG. 1



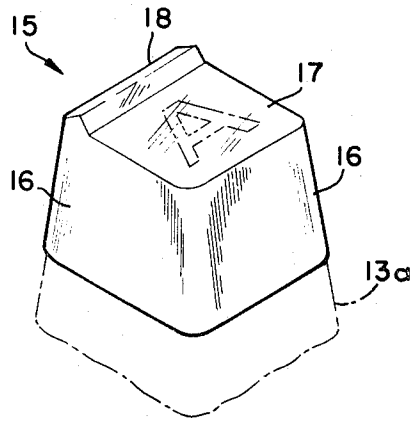


FIG. 2

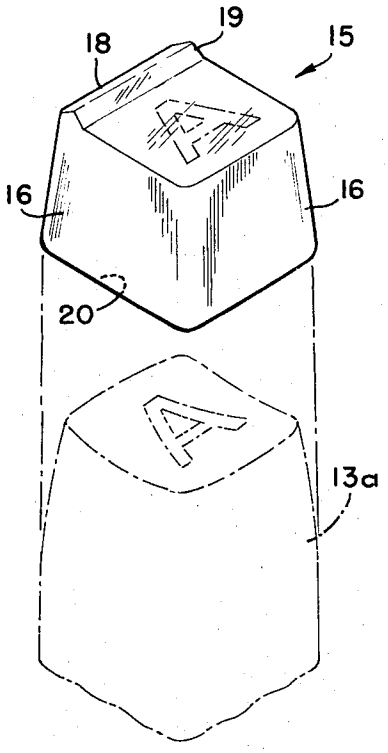


FIG. 3

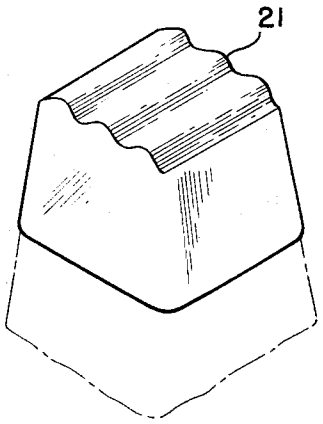


FIG. 4

ADAPTER KEY CAPS

STATEMENT OF GOVERNMENT INTEREST

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

BACKGROUND OF THE INVENTION

In bygone years the typewriters of the day had rows of parallel keys which were interconnected to type a particular character. At the ends of these rows the service keys, for example, the shift key, the shift lock key, carriage return key, etc. were staggered from the rows of character keys so there was less chance of mistakenly positioning the fingers on the wrong keys. There was little time lost because a visual inspection for proper finger placement was unnecessary. Contemporary typewriters, however, have included more function keys along with the character keys and have arranged these function keys in a coextensively aligned relationship with the rows of character keys. Because the exposed surfaces of the service and character keys are identically configured, a popular design being a square, slightly concave surface, it is difficult to tell whether one's hands are properly placed on the typewriter or not. With the older typewriters, the staggered service keys could be felt and a typist could reposition the hands and fingers accordingly. However, with the more modern machines, frequent visual inspections are necessitated. While aligning the service keys with the character keys may augment the speed and capabilities of the more modern typewriters, there is a tendency to create more errors due to improper hand placement. This is particularly true when, for example, a typist's attention is repetitively diverted to the performance of ancillary secretarial duties. Obviously, the possibility of improperly placing the hands and the consequent errors is totally avoided by merely looking where the hands are with respect to the typewriter keyboard. Yet, during a long, arduous typing task that is frequently interrupted, the time wasted during the accumulated inspection periods could be considerable, indeed, and greatly effect the efficiency of a particular typist. One noteworthy attempt to reduce typing errors, particularly in the older models, is shown in the U.S. Pat. No. 1,148,721 issued to R. D. Scott on Aug. 3, 1915. Caps having relatively large upwardly protruding rims were placed on certain keys. These caps being larger than the other keys would tend to distract a typist and could irritate the pads of the fingers during long typing jobs. A need continues to exist for a device which tactically indicates finger location yet does not interfere with the typing efficiency.

SUMMARY OF THE INVENTION

The present invention is directed to providing for an improvement for a typewriter having character and service keys arranged and aligned in parallel rows and all being uniformly shaped with square, concave upper surfaces. An adapter key cap having a hollow, pyramidal frustum configuration is sized to fit over particular ones of the keys and the key cap has a flat surface with a beveled projection to allow a tactile identification of the positioning of the fingers on the keys. These features eliminate the time otherwise wasted during repeated visual inspections for determining the placement of the fingers with respect to the keys.

A prime object of the invention is to provide a device for increasing the efficiency of a typist.

Another object of the invention is to provide a device giving a typist a tactile indication of the placement of the fingers with respect to the keyboard.

Yet another object of the invention is to provide a device for giving a tactile positioning capability which will not irritate the pads of the fingers.

These and other objects of the invention will become more readily apparent from the ensuing specification when taken with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a frontal view of a typewriter keyboard showing the invention in place.

FIG. **2** is an isometric depiction of an adapter key cap mounted on a typewriter.

FIG. **3** is an isometric depiction of the adapter key cap removed from the typewriter key.

FIG. **4** is a variation of the invention.DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, there is shown a representative modern typewriter **10** having a standard arrangement of character keys **11** and a number of service or function keys **12.** When the character keys strike, the letters of the alphabet, numerals, punctuation, etc. are typed and when the service keys are struck some preset function is initiated. These preset functions are provided to ensure the saving of much typing time and to create a more finished end product. For instance, service keys optionally are backspace keys, space bars, return keys, index keys, etc., which automatically repeat a function when they are depressed below a first to a second level and held in-place.

With the additional functions the keyboard becomes more crowded. The luxury of having staggered keys and random spacing no longer can be afforded so that the character keys and the service keys now are arranged more compactly in aligned parallel rows. This arrangement coupled with the fact that the upper surfaces of the character keys and the service keys usually are identically configured with concave surfaces, increases the possibility of typing errors. Consequently, when a typist's attention is diverted from typing, such as to answer a phone, to change the position of a copy being transcribed, etc., a visual observation of the keyboard is necessary to realign the fingers with the proper keys.

Usually, a typist places the pads of the fingers on or near the "home keys." The left hand "home keys" **13,** "a", "s", "d", and "f", and right hand "home keys" **14,** "j", "k", "l", and ";" are located conveniently enough. Yet because the adjacent keys are identically shaped, even the most experienced typist will misplace the fingers from time to time.

The present invention, an adapter key cap **15,** has been designed to reduce the possibility of typographical errors. The adapter key cap has a hollow, pyramidal, frustum configuration with downwardly sloping sides **16** dimensioned to cover and rest upon certain ones of the keys of a modern typewriter. Although the bottom of the key cap is open, a flat upper surface **17** closes the upper end of the cap and lends structural integrity. Since most modern typewriters have keys with

square, concave upper surfaces, the flatness of surface **17** by itself may be sufficient from which a skilled typist could differentiate this surface from the surface of the other keys not so equipped.

By including an outwardly facing beveled projection **18** on the rear perimeter of the flat upper surface, reliable tactile identification of a particular key is greatly facilitated. The outwardly facing beveled projection, by being so mounted on the rear edge of the adapter key cap, does not greatly interfere with typing. By shaping its apex **19,** having an angle greater than 90°, a surface is exposed which does not irritate the pads of the fingers after prolonged periods of typing.

In the present application a typist can easily identify the location of the fingers with respect to the "home keys" by sensing with the pads of the little finger on the left and right hands, respectively, the positioning of the "home key" letter "a", indicated by the reference character **13***a*, and the positioning of the "home key" punctuation ";" indicated by the reference character **14***a*.

Looking to FIGS. **2** and **3** of the drawings, mounting an adapter key cap on the "home key" **13***a* is a simple matter due to the inclusion of an adhesive coating **20** on the cap's inner surface. The hollow adapter key cap is fitted over a key and pressed securely. The key cap should be oriented so as to locate outwardly facing beveled projection **18** on the side away from the typist. Such a location reduces the possibility of irritating a typist's fingers. The possibility of irritation is reduced further by having the apex **19** of the projection shaped with the greater than 90° angle. A typewriter so equipped with the adapter key cap can be operated with a greater degree of efficiency because of a marked reduction in errors otherwise caused by misplacement of the hands.

A variation of the preferred embodiment is shown in FIG. **4** which shows an adapter key cap having a corregated upper surface **21** in place of the single outwardly facing beveled projection of the aforedescribed embodiment. Here again, the angles appearing at the apex of the projections of the corregated surface are greater than 90° to avoid the possibility of irritating the pads of a typist's fingers.

In either configuration the material from which the adapter key cap is fabricated is chosen to be relatively lightweight so as not to interfere with the operation of the typewriter. In other words, a molded, plastic is quite suitable and fabrication of the adapter key cap from a lightweight metal sheet is also contemplated within the scope of this invention.

Obviously, many modifications and variations of the present invention are possible in the light of the above teachings, and, it is therefore understood that within the scope of the disclosed inventive concept, the invention may be practiced otherwise than specifically described.

What is claimed is:

1. In a typewriter having character and service keys arranged in aligned parallel rows and all being uniformly shaped with concave upper surfaces, an improvement therefor is provided comprising:

an adapter key cap fabricated from a lightweight material and having a shell-like wall appearance and further having the configuration of a lower-open-ended hollow pyramidal frustum sized to snugly fit over particular ones of said keys, the closed upper surface of the pyramidal frustum is flat except for being provided with a single outwardly facing beveled projection along its rear perimeter having a cross-sectional shape defining an angle greater than ninety degrees at its apex to reduce the possibility of irritating a typist's fingers and to allow tactile identification, and the underside of the closed upper surface is coated with an adhesive to ensure connection to particular ones of said keys.

2. An improvement according to claim **1** in which there are provided at least three outwardly facing beveled projections arranged in a side-by-side relationship to give the closed upper surface a corrugated configuration.

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