

(No Model.)

D. BRIGGS & S. B. RYND.
KEY OR CAP FOR TYPE WRITING MACHINES.

No. 548,513.

Patented Oct. 22, 1895.

FIG. 1.

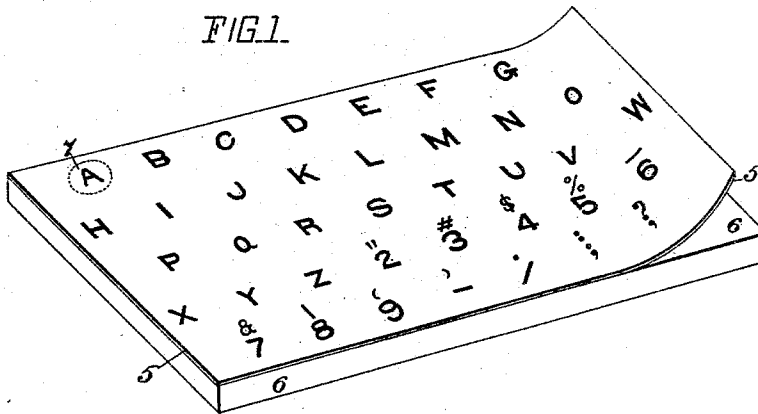


FIG. 2.

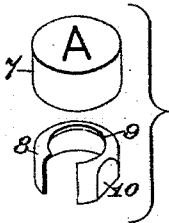


FIG. 3.

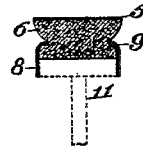
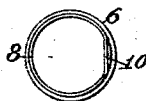


FIG 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

DANIEL BRIGGS AND SMITH B. RYND, OF BROOKLYN, NEW YORK.

KEY OR CAP FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 548,513, dated October 22, 1895.

Application filed May 31, 1895. Serial No. 551,111. (No model.)

To all whom it may concern:

Be it known that we, DANIEL BRIGGS and SMITH B. RYND, citizens of the United States, and residents of Brooklyn, Kings county, New York, have invented an Improved Key or Cap for Type-Writers, &c., of which the following is a specification.

The object of our invention is to make economically, for type-writing and similar key-operated machines, a yielding finger key or cap, which will be durable, but soft and agreeable to the touch, and yet not too elastic to interfere with the proper action of the machine. This object we attain in the manner which we will now describe.

In the accompanying drawings, Figure 1 is a perspective view illustrating the manner of making the key or cap. Fig. 2 is a perspective view, partly in section and drawn to a larger scale, of the two parts of which a detachable cap is composed. Fig. 3 is a sectional view of the finished detachable cap, and Fig. 4 is an under side view of the cap.

Caps for the keys of type-writing machines have been made of rubber, either solid or hollow, and it has also been proposed to make caps with springs. The solid rubber caps are too harsh to the touch, while the hollow rubber or pneumatic caps have not proved durable, and, moreover, are so elastic as to give an imperfect action of the machine and consequent imperfect impression from the type. Spring-caps are open to the same objection and get out of order.

We provide a key or cap which is not open to the objections noted, and this we do by making the key or cap of felt provided with the letter or other sign upon its face.

In the manufacture of our key or cap we proceed in the following manner: We first produce a sheet 5, Fig. 1, of suitable materials with the letters, numerals, punctuation-marks, signs, &c., which the several keys of a machine are to bear or represent. This sheet may be made of rubber or other such material, with the the letters, &c., molded therein in a different color from the body of the sheet. We prefer, however, to make this sheet of textile material, such as silk, into which the letters and other signs are woven in threads of a different color or shade from the ground. The letter-sheet thus produced

is then firmly secured by cementing or otherwise to a sheet 6 of felt of suitable size and thickness. As a convenient means of cementing the letter-sheet to the layer of felt, a thin sheet of rubber may be laid between them, and by the application of heat the two will become very securely fixed together. We then cut out of the compound sheet thus produced blocks or pads 7 of cylindrical or other suitable section, as indicated by dotted lines in Fig. 1 and in full lines at the upper part of Fig. 2, each block bearing a letter, numeral, or sign on the top by reason of the presence of the disk 5 of woven or other material in which the letter or other sign is made. These blocks may conveniently be stamped or cut out by means of hollow dies.

To complete a detachable key-cap we provide each elastic or yielding block thus obtained with a suitable rim 8 to fit over and secure the cap to the ordinary key. (Indicated by dotted lines at 11 in Fig. 3.) By preference this securing-rim 8 is made of a sheet-metal ring with an inwardly-projecting flange 9. The felt 7 is squeezed or sprung into the flanged end of this ring, so that the flange will take into the body of the felt block and so be firmly held to the block, as shown in Fig. 3. Then when the rimmed cap thus produced is put onto the top of the usual finger-key 11 the felt will rest on the surface of the key and form a yielding surface, soft and agreeable to the touch, and yet not so elastic as to interfere with the desired action of the machine. This key-cap is also very durable.

To make the cap self-retaining on the key we flatten or indent one side of the projecting edge of the rim, as shown at 10 in Figs. 2 and 4, this flattened or indented part tending to grip the edge of the key 11 and retain the cap in place when once pushed thereon.

We claim as our invention—

1. The herein described elastic finger-key or cap for typewriter and other machines, consisting of a block of felt having secured to its face a disk carrying a letter or other sign, substantially as set forth.

2. The herein described elastic finger key or cap for typewriter and other machines, consisting of a block of felt having secured to its face a textile disk carrying a letter or other sign.

3. The herein described elastic detachable cap for typewriter and other keys, consisting of a block of felt with a disk carrying a letter or other sign, secured to the surface of the felt block and a securing rim carried by the block, as and for the purpose set forth.

4. The herein described elastic detachable cap for typewriter and other keys, consisting of a block of felt with a woven disk carrying a letter or other sign, cemented to the top thereof and a securing rim, substantially as set forth.

5. The herein described elastic detachable

cap for typewriter and other keys, consisting of a block of felt carrying a letter or other sign and provided with a flanged securing rim having a flattened or indented edge 10, as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

DANIEL BRIGGS.
SMITH B. RYND.

Witnesses:

EDITH J. GRISWOLD,
HUBERT HOWSON.