A. G. F. KUROWSKI.

TYPEWRITING MACHINE.

APPLICATION FILED AUG. 20, 1919.

1,370,322. Patented Mar. 1, 1921.

Fig. 1.

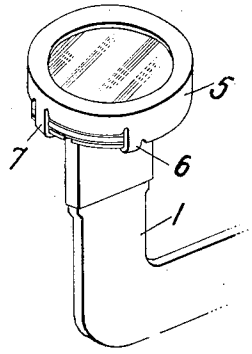


Fig. 2.

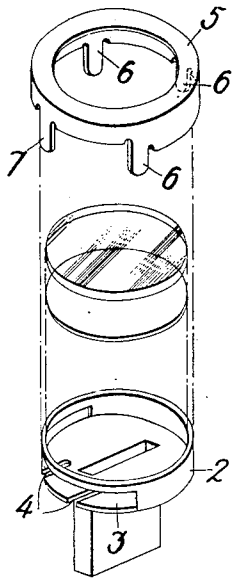


Fig. 3.

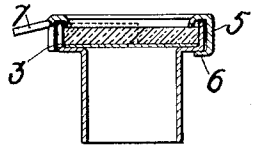
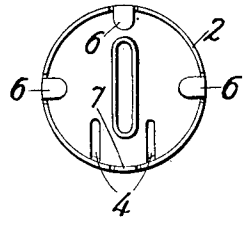


Fig. 4.



Inventor:
Alfred G. F. Kurowski
by B. B. Stickney
Attorney

UNITED STATES PATENT OFFICE.

ALFRED G. F. KUROWSKI, OF BROOKLYN, NEW YORK, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPEWRITING-MACHINE.

1,370,322. Specification of Letters Patent. Patented Mar. 1, 1921.

Application filed August 20, 1919. Serial No. 318,658.

To all whom it may concern:

Be it known that I, ALFRED G. F. KUROWSKI, a subject of the Emperor of Germany or a citizen of Germany, but having taken out preliminary United States naturalization papers, residing in Brooklyn borough, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Typewriting-Machines, of which the following is a specification.

This invention relates to key-tops, and more especially to key-tops of typewriter keys. Such key-tops include a paper on which is printed the designation of the type or types controlled by the particular key, and a glass cover serving to protect the paper. In some instances, it may be desirable to change the type papers so as to substitute others bearing different characters, or to substitute blanks. This invention, therefore, has for an object such improvement in the construction of a key-top that the key-paper thereof may be changed by an operative who is unskilled in mechanics by an extremely simple manipulation.

A feature of the invention consists in the provision of a key-cup for retaining the key-paper and the key-glass, which cup is provided with a slot in its periphery of a size sufficient to permit the key-paper to be inserted and withdrawn. Provision is made for normally covering the slot, so that the key-paper is retained in place, and this covering for the slot is preferably carried by the key-ring and takes the form of a depending bendable tongue, the key-ring being also provided with bendable portions which engage the under side of the key-cup to hold the key-ring securely in place. In order to more conveniently withdraw the key-paper, the bottom of the key-cup may, if desired, be provided with one or more slots for the insertion of a pointed tool.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a perspective view of a key having my improvement applied thereto.

Fig. 2 is a composite view, showing the parts in perspective and separated.

Fig. 3 is sectional view.

Fig. 4 is a bottom view of the key-cup.

Referring to the drawings, the key-stem 1 has mounted upon it a key-cup 2, which differs from the usual key-cup in that its upstanding flange is slightly deeper, and said flange is provided with a slot 3 at the bottom thereof, said slot occupying about half of its circumferential distance.

In order to retain the key-paper and key-glass within each cup, a key ring 5 is provided, said ring having depending prongs 6, which are bent under the cup, as shown in Figs. 1 and 3, to secure the ring to the cup. At a portion of its periphery adjacent the slot 3 in the key-cup, said key-ring is cut away at either side of a depending bendable tongue 7. In order to insert a key-paper or change a key-paper, the tongue 7 is bent to the approximate position shown in Fig. 3 and the key-paper withdrawn. To enable the key-paper to be readily caught hold of by the finger, it may be preliminarily engaged by a pointed instrument of some kind, such, for instance, as a pin, and to facilitate the insertion of such an instrument, slots 4 may be provided in the key-cup, as shown in Fig. 2. After the insertion of the desired paper, the slot 3 is closed by bending the tongue 7 down and under the cup to the position shown in Fig. 1.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. A typewriter key-top comprising a key-cup for retaining a key-paper, said key-cup having a slot for the insertion and withdrawal of the key-paper, and means for closing said slot.

2. A typewriter key-top comprising a key-cup for retaining a key-paper, said key-cup having a slot for the insertion and withdrawal of the key-paper, and flexible means for closing said slot.

3. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said key-cup having a slot for the insertion and withdrawal of the key-paper, and means carried by the key-ring for closing said slot.

4. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said key-cup having a slot for the insertion and withdrawal of the key-paper, and means carried by the key-ring for securing said ring and cup together and for closing said slot.

5. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said key-cup having a slot for the insertion and withdrawal of the key-paper, and a flexible tongue carried by said key-ring for closing said slot.

6. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said key-cup having a slot for the insertion and withdrawal of the key-paper, and a tongue projecting from said key-ring and bendable to one position to permit the withdrawal of the key-paper, and to another position to close the slot, thereby preventing withdrawal of the key-paper.

7. A typewriter key-top including a key-cup for retaining a key-paper, said cup having a slot for the insertion and withdrawal of the key-paper, there being also provision for the insertion of a pointed instrument through the bottom of said key-cup to engage the key-paper.

8. A typewriter key-top comprising a key-cup for retaining a key-paper, and a key-ring, said cup having a slot for insertion and withdrawal of the key-paper, and said key-ring having a cut-away portion coincident with the slot in the key-cup.

9. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said cup having a slot for insertion and withdrawal of the key-paper, said key-ring having a cut-away portion coincident with the slot in the key-cup, and means for closing said slot.

10. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said cup having a slot for insertion and withdrawal of the key-paper, said key-ring having a cut-away portion coincident with the slot in the key-cup, and means carried by said ring for closing said slot.

11. A typewriter key-top comprising a key-cup for retaining a key-paper, a key-ring, said cup having a slot for insertion and withdrawal of the key-paper, said key-ring having a cut-away portion coincident with the slot in the key-cup, and a bendable tongue carried by said key-ring between the ends of the cut-away portion thereof for closing said slot.

12. A typewriter key-top comprising a key-cup for retaining a key-paper, the vertical walls of said cup being provided with a slot for insertion and withdrawal of the key-paper, a key-ring having a cutaway portion coincident with said slot, and having also a bendable tongue positioned centrally of the slot to close the same, and a plurality of depending prongs to secure the ring to the cup.

13. A typewriter key-top comprising a key-cup for retaining a key-paper, the vertical circular walls of said cup being provided with a slot for insertion and withdrawal of the key-paper, the base of said cup being provided with slots for the insertion of a pointed instrument to engage the key-paper, a key-ring having a cutaway portion coincident with said slot, and having also a bendable tongue positioned centrally of the slot to close the same, and a plurality of depending prongs to secure the ring to the cup.

14. A typewriter key-top comprising a key-cup for retaining a key-paper and glass, the vertical walls of said cup being provided with a slot for insertion and withdrawal of the key-paper, the base of said cup being provided with a slot for the insertion of a pointed instrument to engage the key-paper, a flanged key-ring having a cutaway portion coincident with said slot, and having also a bendable tongue positioned centrally of the slot to close the same, and a plurality of depending prongs to secure the ring to the cup, said key-ring being adapted to clamp the key-paper and glass in said cup.

ALFRED G. F. KUROWSKI.

Witnesses:
LEWIS E. WEBER,
EDITH B. LIBBEY.