Dec. 18, 1934. J. ŠAFAŘ 1,984,599

EDUCATIONAL DEVICE

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Fig. 1.

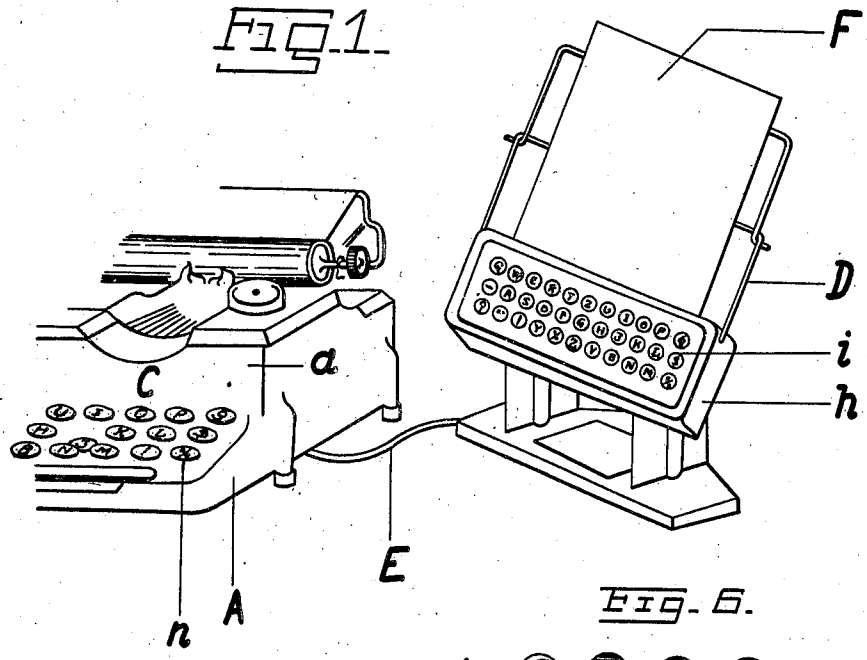

Fig. 5.

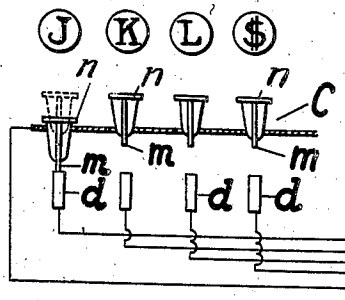

Fig. 6.

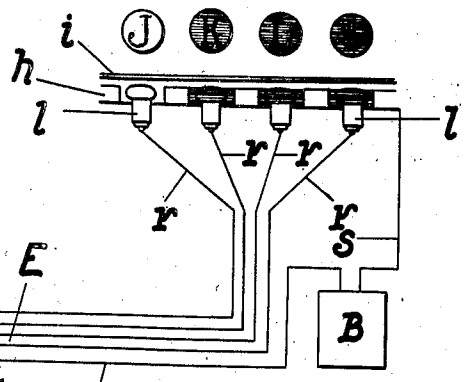

Fig. 4.

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Fig. 2.

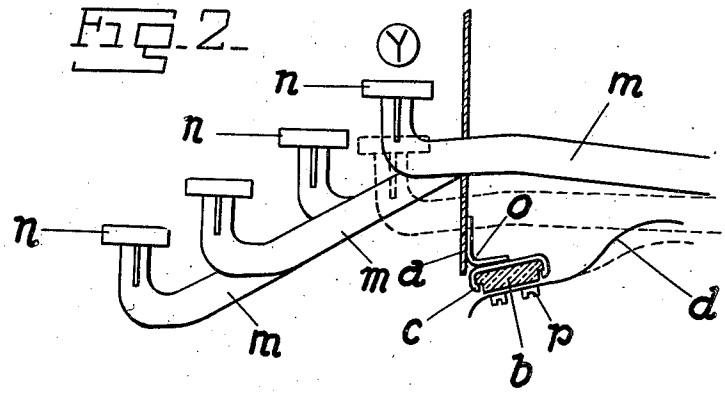


Fig. 3.

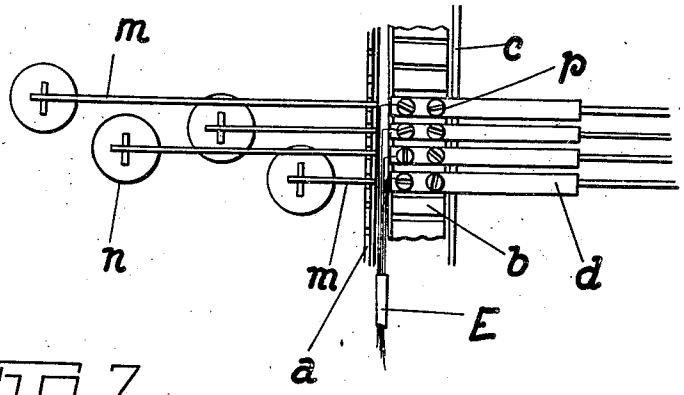
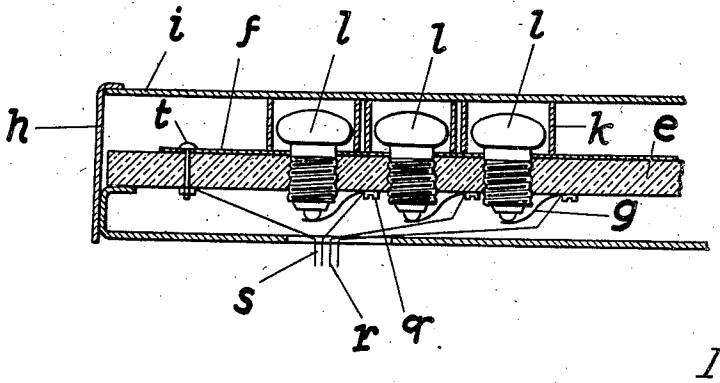


Fig. 7.



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Patented Dec. 18, 1934 1,984,599

UNITED STATES PATENT OFFICE

1,984,599

EDUCATIONAL DEVICE

Josef Šafář, Znaim, Czechoslovakia

Application December 23, 1931, Serial No. 582,765
In Czechoslovakia December 23, 1930

1 Claim. (Cl. 35—16)

My invention relates to educational devices, and more particularly to an educational device for acquiring skill in typing on a keyboard from a copy.

It is an object of my invention to accustom the incipient operator to look only at the copy and not alternately at the copy and the keys of the machine which he or she operates. To this end, I provide a rest for the copy and a distant indicator which is structurally combined with the rest and arranged in the line of vision of the operator looking at the copy on the rest. The indicator is equipped with a number of electric lamps equalling the number of keys in the keyboard. Switching means are coordinated to the keys in the keyboard and adapted to be operated by the keys, and circuits connect the individual switching means to the co-ordinated lamps in the indicator.

My invention will be described as applied to a typewriter but may be used wherever keyboards are controlled, for instance, in typewriting telegraph apparatus, etc.

The object of training pupils in typewriting is to enable them to thoroughly control the keyboard and other mechanisms forming part of a typewriter, with all ten fingers and while looking exclusively at the copy which is normally placed at the right of the typewriter, i. e. without looking at the machine to control its operation. This is what is known as "blind typing".

In the training method as performed heretofore the rule of "blind typing", was mostly disregarded in order to ascertain whether the right key had been depressed. In this manner the pupil may learn to rapidly operate the keys but the overall velocity of operation is greatly reduced by frequent inspection of the keyboard.

These drawbacks are eliminated according to my invention by providing the signalling means referred to. In a preferred embodiment of my invention I provide an indicator with a set of incandescent lamps in combination with a rest for the copy and I place the indicator in the line of vision of the operator as he or she looks at the copy on the rest. A lamp is allotted to each key of the typewriter, and its circuit is so arranged that it will be closed upon depression of the corresponding key, causing the lamp in the circuit to be lighted. The pupil thus observes the lamp signals while looking at the copy.

In the drawings affixed to this specification and forming part thereof an outfit embodying my invention as adapted to a typewriter is illustrated diagrammatically by way of example.

In the drawings

Fig. 1 is a perspective view showing a portion of a typewriter and a rest for the copy equipped with the indicator referred to in the operator's line of vision,

Fig. 2 is a cross section showing a portion of the keyboard,

Fig. 3 is a plan view of Fig. 2, viewed from below,

Fig. 4 is a diagram showing the circuits of four keys of the typewriter in a horizontal row on its keyboard and the four incandescent lamps allotted to them in the corresponding row of the indicator,

Fig. 5 is a plan view of the four keys,

Fig. 6 is a plan view of four markings on a pane of translucent material forming part of the indicator, which markings correspond to the lamps allotted to the four keys, and

Fig. 7 is a horizontal section showing a portion of the indicator.

Referring now to the drawings, and first to Figs. 1, 4, 5 and 6, A is a typewriter with a keyboard C, D is a rest for the copy arranged at the right of the typewriter, *h* is the frame of the indicator referred to, E is a cable for the wires partly constituting the circuits of the lamps *l*, and B is a battery for supplying energy to the circuits, with one of its terminals connected to the lamps by wire *s*, and the other terminal connected to the frame of the typewriter by a wire *u*.

m are the key levers, and *n* are the keys at their outer ends. Arranged below each key lever and adapted to be engaged by it when the corresponding key is depressed, as shown for the "J" type in Fig. 4, is a contact spring *d* which is in the circuit of the corresponding incandescent lamp *l* at the indicator frame *h* so that this lamp will be lighted when the key is depressed and illuminate a pane *i* of transparent or translucent material which is marked with the corresponding type opposite the lamp. Only fifteen of the typewriter keys *n* are shown while in fact the typewriter has thirty keys, as is indicated by the markings on the pane *i*. The keys for the "K", "L" and "S" types are also shown in Fig. 4 but only the "J" type is shown light because the circuit of its lamp has been made. The indicator frame *h* is so arranged at the rest D that it supports the lower edge of the copy F and is in the operator's line of vision as he or she looks at the copy on the rest D.

Referring now to Figs. 2 and 3, *a* is the slotted front plate of the typewriter A in the slots of

which the key levers *m* are mounted to reciprocate, *o* is one out of a set of angle brackets for connecting to the front plate *a* a U-shaped clip *c* which in turn receives a strip *b* of insulating material, such as wood, hard rubber or the like. Preferably the strip *b* is shouldered at its sides and the shanks of the clip *c* are beaded over for engaging below the shoulders, as best seen in Fig. 2. Obviously any other means than the angle brackets *o* may be provided for connecting the clip *c* to the front plate *a*. The strip *b* is notched on its lower face transversely to its longitudinal direction as shown in Fig. 3 and the springs *d* are secured on the seats between two notches by screws *p* or any other suitable means. Each key has a contact spring *d*, a circuit and a lamp *l* allotted to it, the circuit being made by spring *d* when one of the keys is depressed as shown for the "J" key in dotted lines in Figs. 2 and 4.

Referring now to Fig. 7, *e* is a plate of insulating material forming part of the indicator frame *h*, with threaded holes for the reception of incandescent lamps *l*. The incandescent lamps may be of the type usually employed in flash lights. Only three of the lamps are shown, but it will be understood from the foregoing description that there are as many lamps *l* as there are keys *n* and key levers *m* so that a definite lamp is allotted to each type and will be lighted when the key showing this type is depressed. *f* is a metal plate on the outer face of the insulating plate *e* which has openings for the incandescent lamps *l*. *k* are cylindrical diaphragms surrounding the bulbs of the individual lamps *l* and confining the light emitted by them. *i* is a plate, for instance, of glass, on which the types corresponding to the several lamps and keys are marked, preferably on the inner face of the glass plate. The plate *i* is held in the indicator frame *h* by flanges and spaced from the plates *e* and *f* by the diaphragms *k*, as best seen in Fig. 7, *g* are contact springs, one per lamp *l*, which are secured to the inner face of the insulating plate *e* by screws *q*, and *r* are the wires forming part of the circuit of each lamp. The wire *s* is connected to a screw *t* extending through the plates *e* and *f*, so as to connect the battery to the lamp sockets.

Instead of threading the holes in the insulating plate *e* the openings may be plain and provided with threaded sockets for the reception of the lamps *l*. The sockets are electrically connected to each other and secured to the plate *e* by any suitable means.

The battery B is preferably a dry battery of the type usually employed in flash lights. One of its terminals is connected to the frame of the typewriter by a wire *u*, Fig. 4, and its other terminal is connected to the plate *f* by the wire *s* and the screw *t*, as described, the plate *f* being connected to the sockets of all lamps. The contact springs *g* of the individual lamps are connected to the corresponding springs *d* by the wires *r* which are combined into the cable E.

In operation, if the pupil depresses one of the keys *n*, for instance, the key for the type "J" as shown in dotted lines in Figs. 2 and 4 and in full lines in Fig. 1, the circuit of the corresponding lamp *l* is made by the type lever *m* and the spring *d* allotted to this particular key and its lamp, and the reproduction of the type on the glass plate *i* is illuminated. As the indicator frame *h* is structurally combined with the rest, being preferably arranged below the copy F as shown in Fig. 1, it is in the operator's line of vision so that it is not necessary for the operator to look alternately at the copy F and at the machine A for ascertaining whether the right type has been depressed, and the operator's work goes on without interruption. In this manner the pupil is accustomed to "blind typing", saving time and increasing efficiency.

I wish it to be understood that I do not desire to be limited to the exact details of construction shown and described for obvious modifications will occur to a person skilled in the art.

I claim:—

In an educational device for acquiring skill in typing on a keyboard from a copy, a rest for the copy, a distant indicator structurally combined with said rest and arranged in the line of vision of the operator looking at the copy on said rest, a number of electric lamps equalling the number of keys of said keyboard in said indicator, switching means co-ordinated to the keys in said keyboard and adapted to be operated by said keys and circuits connecting the individual switching means to the co-ordinated lamps in said indicator.

JOSEF ŠAFÁŘ.