April 24, 1928. 1,667,007

O. A. HOKANSON

BACKSPACING MECHANISM FOR TYPEWRITERS

Filed July 29, 1925

FIG. 1

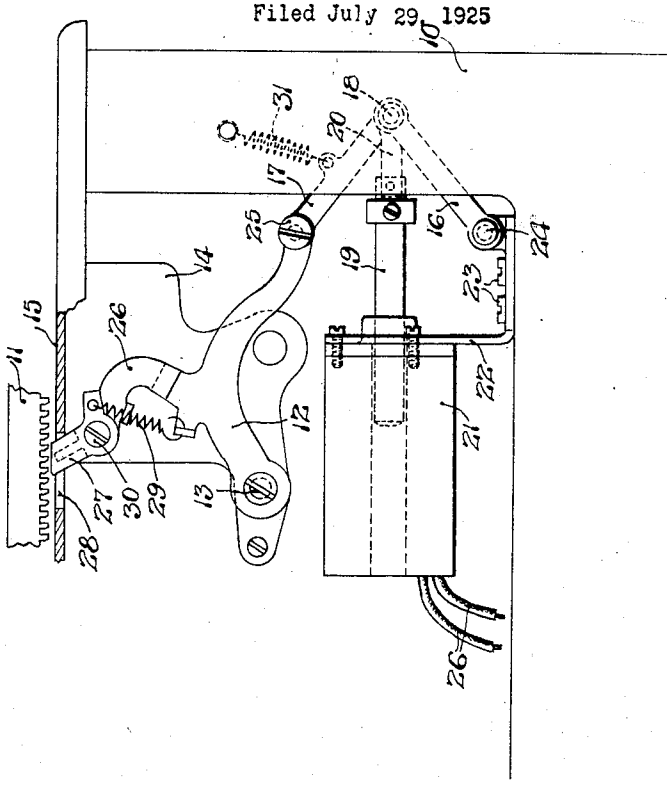
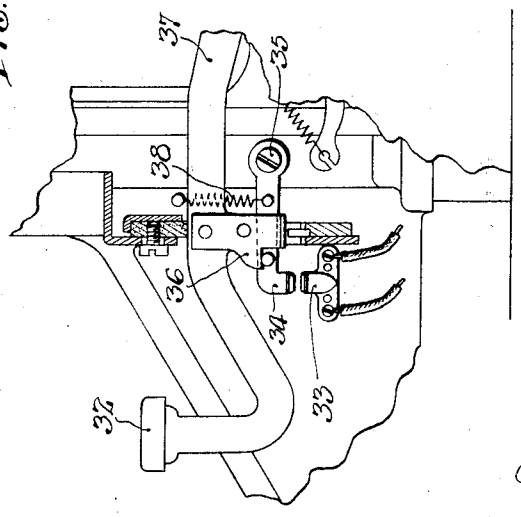


FIG. 2



INVENTOR
Otto A. Hokanson
BY Nissen & Crane
ATTYS.

Patented Apr. 24, 1928. 1,667,007

UNITED STATES PATENT OFFICE.

OTTO A. HOKANSON, OF WOODSTOCK, ILLINOIS, ASSIGNOR TO WOODSTOCK TYPEWRITER COMPANY, OF WOODSTOCK, ILLINOIS, A CORPORATION OF ILLINOIS.

BACKSPACING MECHANISM FOR TYPEWRITERS.

Application filed July 29, 1925. Serial No. 46,747.

This invention relates to mechanism for moving the platen carriage of a typewriter backwardly, step by step, and has for its object the provision of such mechanism which shall be of improved construction and operation and which is electro-magnetically operated.

The invention is simplified in the combination and arrangement of parts shown in the accompanying drawings and described in the following specification, and it is more particularly pointed out in the appended claims.

In the drawings, Fig. 1 is a fragmentary rear view of a portion of a typewriter, showing one embodiment of the present invention applied thereto.

Fig. 2 is a key operated switch for controlling the mechanism illustrated in Fig. 1.

As illustrated in the drawings, the numeral 10 designates the frame of a typewriter provided with the usual platen carriage and type bars. The platen carriage is provided with the usual or any approved escapement mechanism which cooperates with a rack 11, for controlling the movement of the platen transversely of the typewriter frame. A backspace lever 12 is pivotally mounted at 13 on a bracket 14 extending downwardly from the top plate 15 of the typewriter frame. A pair of toggle levers 16 and 17 are pivotally connected at 18 and the pivotal connection 18 is attached to a plunger 19 by means of a link 20. The plunger 19 operates in a solenoid 21, supported on a bracket 22 attached to the frame 10 by screws 23. The lower end of the toggle link 16 is pivoted at 24 to the bracket 23 and the upper link 17 is pivoted at 25 to the lever 12.

When the solenoid 21 is energized by a current in the conductors 26 the plunger 19 will be drawn into the solenoid and the toggle lever will swing the backspace lever 12 on its pivot 13 in a counterclockwise direction, as viewed in Fig. 1.

The upper branch 26 of the lever 12 carries a pawl 27, which projects through a slot 28 in the top plate 15 in position to engage the rack 11. A spring 29 tends to rotate the pawl 27 upon its pivot 30 into engagement with the teeth of the rack 11, but when the lever 12 is in the position shown in Fig. 1, the pawl 27 will engage the end of the slot 28 and be held against the tension of the spring 29 away from the teeth of the rack. A spring 31 is provided for returning the lever 12 and the plunger 19 to their inactive position whenever the solenoid 21 is deenergized.

The circuit for the solenoid 21 is controlled by a backspace key 32 which operates a switch 33 for closing the circuit, in the conductors 26.

A switch blade 34 is pivotally mounted at 35 and operated by a contact lug 36 on the lever 37 controlled by the key 32. A spring 38 normally opens the switch when the key is released.

It will be apparent that operation of the back space key 32 will energize the solenoid 21 and cause back letter space movement of the rack 11. When the key is released, the dog 27 will be returned to position to again engage the rack 11 on the next depression of the key.

The only effort on the part of the operator is that required to depress the key lever 37, since the energy for moving the platen backward in opposition to the platen carriage spring is supplied by the electric current in the circuit 26.

I claim:—

1. In a typewriter, a backspace lever, a solenoid, a plunger arranged to be operated by said solenoid and toggle mechanism for connecting said plunger with said lever.

2. The combination with a typewriter having a rear frame member and a platen carriage rack, of a back space lever for moving said rack, a solenoid mounted on said rear frame member and having its axis extending in the direction of the plane of said rear frame member, a plunger arranged to be operated by said solenoid, toggle links mounted on said rear frame member and connecting said plunger with said backspace lever, an electric circuit for supplying energy to said solenoid, a switch for closing said circuit and a key for operating said switch.

In testimony whereof I have signed my name to this specification on this 24th day of July, A. D. 1925.

OTTO A. HOKANSON.