

988,551.

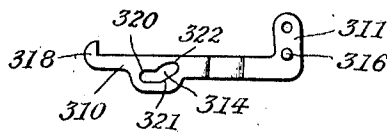
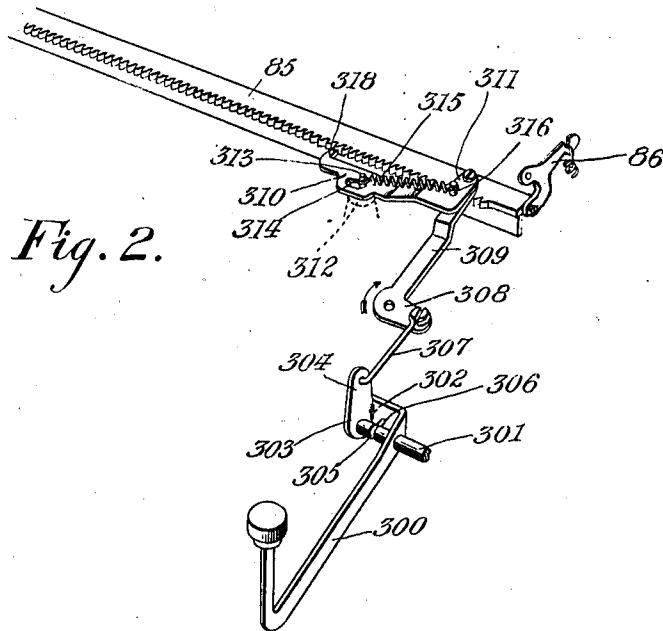
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Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE WILLIAM DAVIS, OF WESTMOUNT, QUEBEC, CANADA.

BACK-SPACER FOR TYPE-WRITERS.

988,551.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed January 3, 1907. Serial No. 350,635.

To all whom it may concern:

Be it known that I, GEORGE WILLIAM DAVIS, of Westmount, Province of Quebec, Canada, have invented certain new and useful Improvements in Back-Spacers for Type-Writers; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention may be said briefly to consist of the several combinations and arrangements of parts hereinafter described and pointed out in the claims. For full comprehension, however, of my invention, reference must be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate the same parts and wherein,

Figure 1 is a side elevation of my improved back spacer; Fig. 2 is a perspective view thereof; and Fig. 3 is a detail view of one of the main operating members thereof.

The main novel feature of the space-back mechanism consists of a pawl which, each time its operating key is actuated, will serve the double purpose of feeding the carriage backward one space only and locking the same against further movement than the said space. This mechanism comprises a key-lever 300 of bell-crank formation fulcrumed loosely upon a rigid shaft 301, one end being bent to present a transverse portion 302 extending at right angles to its main length and a second portion 303 parallel to the main length, while the latter portion has a vertically projecting arm 304, and a perforation in line with another perforation in the main length. This shaft 301 projects through these perforations and has a circumferential groove 305. The transverse portion of the lever carries a screw 306 with a tenon point adapted to engage the groove and localize the lever. A link 307 connects the arm 304 to one arm 308 of a second bell-crank lever the other arm, 309, whereof carries the main actuating member of this mechanism. This member consists of an angular pawl having a long arm 310 extending substantially parallel to the escapement rack 85 and a short arm 311 extending over and transversely to the said rack. The end of the short arm is pivoted to the end of the arm 309 and the angular pawl itself is supported upon a boss 312 projecting upwardly from the main frame and having a rigid pin 313 over which a cam

slot 314 in the pawl fits, while a retractile spring 315 is connected at one end to such pin and at its other end to a pin 316 upon the pawl at the point of juncture of its arms.

The operation of this back spacer is as follows:—The depression of the key turns the bell-crank-lever 308, 309, in the direction indicated thus drawing the pawl 310, 311, in a diagonal direction and moving the carriage one space backward. The spring 315 then causes the inclined portion 321 of the cam slot to act upon the pin 313 and seat the end 322 of the slot upon such pin, simultaneously returning the parts to their normal positions. The length of the slot limits the extent of movement of the pawl and consequently the carriage, and the width of the slot prevents lateral displacement of the pawl.

What I claim is as follows:—

1. In a typewriting machine the combination with a carriage, of space back mechanism including a rigid angular member composed of two arms disposed at an angle to each other, one arm whereof has an engaging device projecting from the same side as and parallel to the other arm, means whereby such member is reciprocated longitudinally and cam mechanism for deflecting the said member laterally and causing the same to engage the carriage and move the same a distance determined by the said member, and means returning the member to its normal position.

2. In a typewriting machine the combination with a carriage having a toothed rack thereon, of a pawl of plate form arranged horizontally with its flat side uppermost, such pawl having a cam slot adapted when in one position to cause the tooth to engage the rack and when in another position disengage such tooth from the rack, a rigid guiding pin projecting through such slot, the side of the pawl adjacent to the rack having a tooth at one end and an arm at its opposite end, a spring yieldingly retaining the pawl against movement in one direction, and reciprocatory means operatively connected to the arm whereby the said pawl is moved against the tension of the said spring.

3. In a typewriting machine, the combination with a carriage having a toothed bar thereon, of an angular pawl composed of two arms disposed at an angle to each other, one arm whereof has a tooth extending from

the same side thereof as the other arm and
a cam slot, a fixed pin engaging such cam
slot, a retractile spring connected at one end
to the pawl and at its other end to the pin,
5 and reciprocatory means whereby the pawl
is moved against the tension of the spring.

In testimony whereof, I have signed my

name to this specification, in the presence of
two subscribing witnesses.

GEORGE WILLIAM DAVIS.

Witnesses:

WILLIAM P. McFEAT,

FRED. J. SEARS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
