

1,012,888.

Fig-1

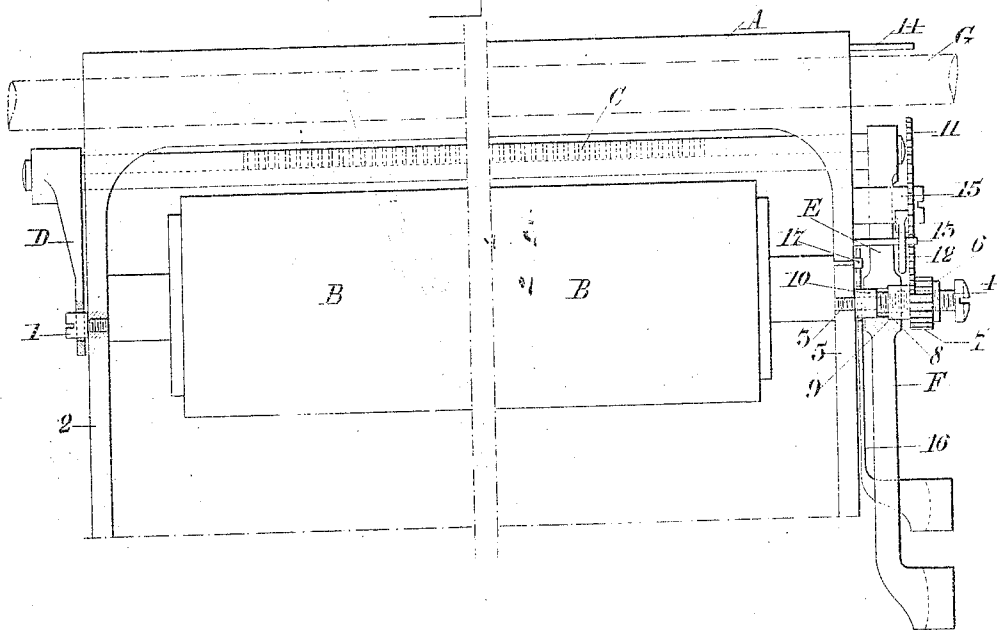
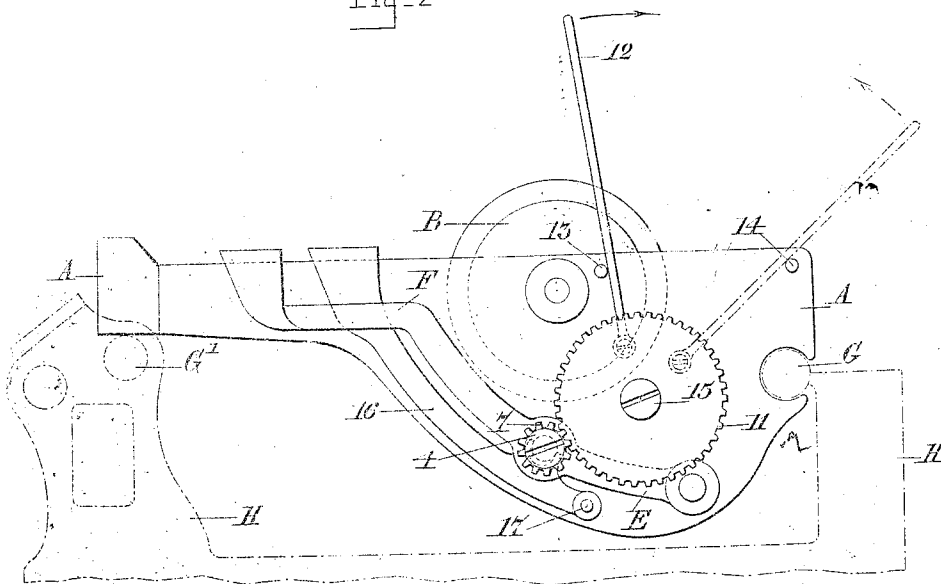


Fig-2



WITNESSES
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SIDNEY LOUIS WALTER MERLIN, OF PARIS, FRANCE.

TYPE-WRITING MACHINE.

1,012,888.

Specification of Letters Patent.

Patented Dec. 26, 1911.

Application filed September 15, 1909. Serial No. 517,910.

To all whom it may concern:

Be it known that I, SIDNEY LOUIS WALTER MERLIN, citizen of Great Britain, residing at Paris, in the Department of the Seine, France, have invented new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to an improvement applicable to typewriting machines of all kinds.

The improvement is as follows: It is well known that the existing machines possess a serious drawback inasmuch as it is impossible to write between the spaces corresponding to those fixed by the rule, whenever for any reason this alteration in the writing is desirable. This makes it impossible to spread out two adjacent letters, relatively to each other, by half the distance that separates them normally, a necessary condition, for example, in the case where it is a question of writing correctly words comprising compound letters or diphthongs. The mechanism which forms the subject matter of the present invention remedies this defect, by imparting to the carriage which supports the platen a horizontal displacement relative to the rack, so as to enable the distance which separates one letter from another to be varied, accurately and with certainty, at the same time permitting the normal spacing of the letters to be subsequently resumed.

The accompanying drawings illustrate several of the improvements in question.

In these drawings, Figure 1 shows a plan view partly in section of a frame or slide and connecting organs of a typewriting machine provided with the improvements which form the subject of the present invention. Fig. 2 shows an end elevation of the improved system in question.

Referring to Fig. 1, it will be seen that A indicates the frame or carriage which supports the platen B, and which moves horizontally with it upon suitable and well known slides such as G, G', which are rigid with the frame H of the machine and partly shown in dotted lines on the drawing. The horizontal motion of the combination above set forth is communicated to it by means of a rack C regulated by a toothed wheel (not shown on the drawing), which wheel or escapement pinion allows it to advance by one tooth at each key stroke.

In the improved construction shown in

Fig. 1 of the drawing, the rack C is mounted upon two fulcrumed levers D and E, placed respectively at each of the ends of the rack. One of them, say the lever E, is integral with a lever F by which the rack C can be raised. But this construction is not in any way obligatory, and the invention is applicable to machines of various types in which the rack is removed from its escapement pinion or mechanism, in any other manner.

According to the present invention, the carriage A and the rack C are not constantly united one to the other in their horizontal movement, but they may receive in this direction a certain relative displacement as regards each other only, and this is effected by means of the following mechanism. The lever D, supporting one of the ends of the rack C, is mounted upon a pivot 1, formed of a large headed screw constructed as a pivot upon which the said lever may have a longitudinal displacement of a given amount; normally the well known retractile spring of the carriage A keeps the side 2 of this latter in contact with the lever D, thus exercising its action upon the rack C. The lever E, F, supporting the other end of the rack C, is mounted upon a pivot of special construction. A screw, with double thread 3, 4, is fixed upon the side 5 of the carriage A. Upon the thread 4 of this screw is placed a sleeve 6 bearing a toothed pinion 7, the end 8 of the said sleeve striking against the shoulder 9 formed, for this purpose, in the lever E, F. The bearings of this latter are then formed of the said end 8 of the sleeve 6 and of a suitable part provided upon the screw 3, 4. The mechanism being so arranged, it will be seen that by turning the piece 7, the end 8 of the sleeve 6 strikes against the shoulder 9 of the lever E, F, locked with the rack C, which is itself locked by its escapement pinion, and causes the screw 4 to advance and consequently to advance the carriage rigidly connected to the screw 3, 4. In this manner it is possible to obtain a certain horizontal displacement of the carriage relative to the rack C, and this without necessitating that this latter should be moved relatively to the escapement pinion or mechanism.

The longitudinal displacement of the carriage relative to the rack is obtained by means of a lever mechanism controlling the movement of the toothed pinion 7. This

latter engages with a toothed wheel 11 which is itself rigidly attached to a controlling lever 12 easily accessible to the operator. The displacements of this lever 12 are, moreover, so limited as to insure a sufficient rotation of the pinion 7, by means of two stops 13, 14 placed, for this purpose, on a suitable part of the carriage frame. The axle 15 of the wheel 11 is mounted at any suitable point of the carriage frame. It is suitable, further, to provide a movable piece, such as 16, pivoted at 17 on the side 3 of the carriage, and intended, in the normal position of the latter, (as shown in the drawing), to form a wedge between the lever supporting the rack and the said carriage. Whenever it is desired to bring into play the improved device which forms the object of the present invention, it is only necessary to remove the aforesaid wedge.

The improved system which forms the subject of the present invention is distinguished essentially from certain systems previously known in which the platen is displaced with regard to the carriage which supports it. These prior constructions possess a very serious drawback, inasmuch as, by reason of the pressure which the pins or the little pressing cylinders exercise upon the sheet or sheets of paper, the said sheets do not follow exactly the longitudinal displacement of the platen with regard to its carriage. From this it results that the alterations which it is desired to make in the writing can only be made accurately upon the first sheet, and the other sheets are displaced with relation to the first one. Moreover, by reason of the relative displacement as above mentioned of the sheets with regard to the striking cylinder, the straightness of the lines is no longer preserved. With the improved system which forms the

object of the present invention, on the contrary, these drawbacks are obviated entirely, because, at the same time the sheets of paper, the platen, and the carriage supporting it, are displaced relatively to the rack which effects the motion of this combination of parts, thus avoiding any relative longitudinal motion of the paper sheets with regard to one another and with regard to the platen.

I claim as my invention:

1. In a typewriting machine, the combination of a platen carrying frame, a platen thereon, a rack, a rack lever connected thereto, a screw rigidly connected to the platen carrying frame, an internally threaded sleeve on said screw and engaging the rack lever, a pinion mounted on said sleeve, a gear wheel operating the pinion, a lever controlling the gear wheel, and fixed stops suitably arranged for limiting the movement of the controlling lever.

2. In a typewriting machine, the combination with the platen carrying frame and the rack, of a threaded rod rigid with said frame; an internally threaded sleeve rotatable in a part carried by said rack and co-operating said rod for longitudinally displacing the said rod, said frame and the platen; a toothed pinion mounted on said sleeve; a toothed wheel co-operating with said pinion; a hand lever capable of turning said wheel through a certain angle; and two fixed stops so positioned as to limit the extent of movement of said lever.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

SIDNEY LOUIS WALTER MERLIN.

Witnesses:

ANDRÉ BORDILLON,
EUGÈNE PICHON.