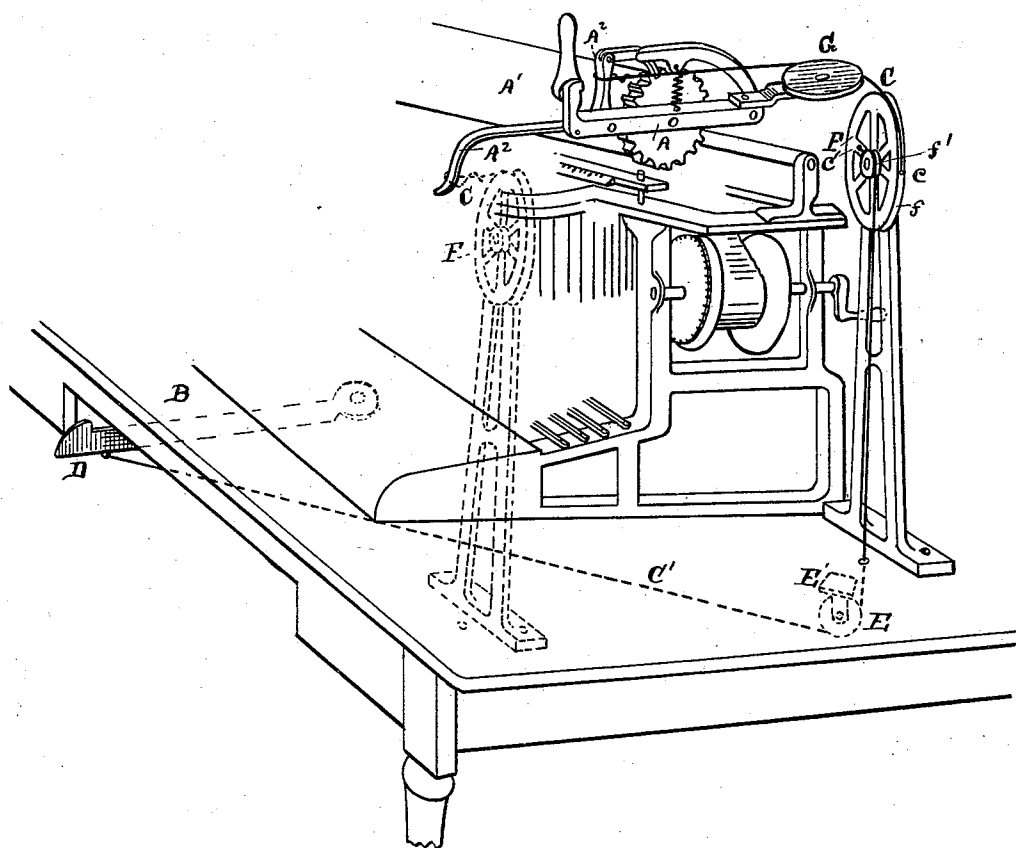


(No Model.)

A. P. DE LONG.
TYPE WRITING MACHINE.

No. 466,332.

Patented Jan. 5, 1892.



Witnesses
John Schuman.
John F. Miller.

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UNITED STATES PATENT OFFICE.

ALLEN P. DE LONG, OF IMLAY CITY, MICHIGAN.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 466,332, dated January 5, 1892.

Application filed October 23, 1890. Serial No. 368,996. (No model.)

To all whom it may concern:

Be it known that I, ALLEN P. DE LONG, a citizen of the United States, residing at Imlay City, county of Lapeer, State of Michigan, have invented a certain new and useful Improvement in Carriage and Platen Shifting Attachments for Type-Writing Machines; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which form a part of this specification.

My invention relates to certain new and useful improvements in a carriage and platen shifting attachment for type-writers, whereby the carriage may be drawn back into primary position and the platen rotated for spacing by mechanism coacting to accomplish both results in a single operation.

To these ends my invention consists of the combinations of devices and appliances hereinafter described and claimed, and illustrated in the accompanying drawing.

The figure is a view in perspective, illustrating my invention applied in the two ways specified, the dotted lines showing the first position referred to.

The desirability of providing a type-writer with mechanism whereby the carriage and the platen may be shifted at the end of each line without the necessity of taking the hands from the key-board for the purpose is evident, since the use of the hands to effect this result every time it is required causes very considerable delay. To overcome this necessity I have designed and applied to type-writers of different constructions an improved device operated by a laterally-moving knee-shifting-lever so arranged that by a single movement of the knee the carriage is shifted to its primary position and the platen rotated to properly space the lines.

My invention aims to accomplish these results in an economical, simple, and efficient manner. To this end A represents a type-writer carriage.

A' is a platen.

A² is the line-spacing lever connected with the carriage arranged to rotate the platen.

B is a type-writer desk or cabinet.

C C' is a cord attached to the line-spacing lever and connected over suitable guide-pulleys to a knee-lever fulcrumed to the under side of the table, preferably in such a manner that the lever may be moved laterally.

While I do not limit myself to any precise arrangement of the cord and guide-pulleys, I find it convenient and advantageous to locate one pulley E underneath the table in any desired manner, as upon a bracket E' set oblique to the length and breadth of the table, as shown, so as to properly carry the cord. From said knee-lever D the portion C' of the cord is led backward in an oblique direction below the table to the proper point with relation to the standard under said oblique pulley E, and thence upward through the desk to an additional pulley F, preferably a double pulley, provided with a larger peripheral groove f and a smaller peripheral groove f'. The portion C of the cord is fastened to the larger peripheral groove, as at c, while the portion C' of the cord is attached to the smaller peripheral groove, as at c'. The employment of a larger and a smaller pulley thus obviously enables the operator to remove the carriage the required distance with less motion of the knee-lever D than if the portion C' of the cord was led over a pulley of the same diameter as that with which the portion C of the cord is connected.

With type-writers of certain constructions the mechanism now described is all that is required to both shift the carriage and rotate the platen, as with the "Smith Premier," for example. With type-writers of a different class, however, as with the "Caligraph" and the "Remington," for example, the portion C of the cord should be led over still another guide-pulley G, so arranged as to lead the cord from the line-spacing lever in a direction at right angles to the movement of the carriage. As so constructed it will be seen that the operation of the knee-lever first retracts the carriage, and then toward the end of the movement of said lever the further pull upon the cord also forces over the platen the required distance.

The accomplishment of both operations by one set of devices and by a single operation of the knee alone renders the device exceed-

ingly convenient and useful, while at the same time the operations can be done much more expeditiously than by hand.

What I claim as my invention is—

5 1. The combination, with a type-writer and its desk, of a lever fulcrumed to the desk, a pulley E, a standard to which is journaled a pulley F, having a hub, a pulley G, secured to carriage of the type-writer and lying in a
10 plane at an angle to the pulley F, a cord C', attached to the lever, engaging the pulley E and secured to the hub of said pulley F, and a cord C, connected to the periphery of said pulley F and to the shifting device of the
15 carriage of the machine.

2. The combination, with a type-writer and its desk, of a knee-lever beneath the desk, a standard on the latter, a pulley journaled therein, a pulley below the desk and set oblique to that on the standard, a horizontal
20 grooved pulley whose edge is in line with the carriage and platen shifting devices, and flexible connections leading from the front end of the knee-lever backward to and under the
25 oblique pulley, over the grooved pulley, and to said devices.

3. The combination, with a type-writer and its desk, of a knee-lever beneath the desk, a standard on the latter, a pulley journaled therein, a horizontal grooved pulley whose
30 edge is in line with the carriage and platen shifting devices, and flexible connections leading from the front end of the knee-lever over the standard-pulley, above the grooved pulley, and to said devices.

4. The combination, with a type-writer and its desk, of a knee-lever beneath the desk, a standard on the latter, a pulley journaled therein, a pulley below the desk and set oblique to that on the standard, and flexible
40 connections leading from the front end of the knee-lever backward to and under the oblique pulley, over the standard-pulley, above the grooved pulley, and to the carriage and platen shifting devices.

45 In testimony whereof I sign this specification in the presence of two witnesses.

ALLEN P. DE LONG.

Witnesses:

DENNIS BURKE,
GEO. R. MANWARING.