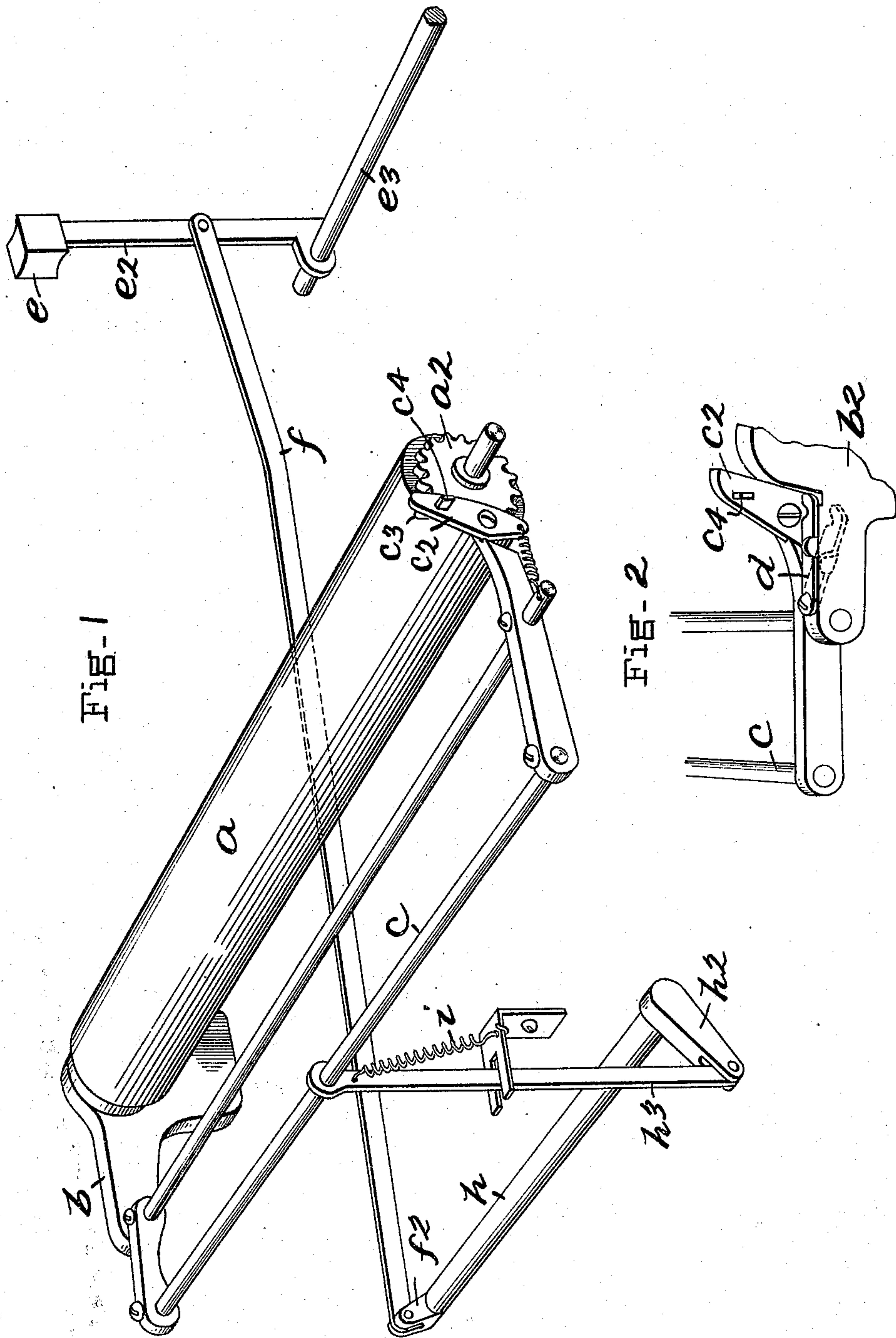


No. 881,631.

PATENTED MAR. 10, 1908.

C. M. SORENSEN.
TYPE WRITER LINER.
APPLICATION FILED OCT. 22, 1907.



Witnesses:
J. Plympton
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UNITED STATES PATENT OFFICE.

CHARLES M. SORESENSEN, OF BROOKLYN, NEW YORK, ASSIGNOR TO VIDAL TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF CUBA.

TYPE-WRITER LINER.

No. 881,631.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed October 22, 1907. Serial No. 398,581.

To all whom it may concern:

Be it known that I, CHARLES M. SORESENSEN, a citizen of the United States of America, and residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Writer Liners, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to typewriters and bears directly upon an application for a patent of the United States filed October 22, 1907, Ser. No. 398,580 upon typewriters, and has for its object to provide devices whereby the platen of such a machine may be operated directly from the keyboard in order to produce the spacing between lines of writing; a further object being to provide means, in such a device, whereby said spacing may be made of different widths and a still further object being to provide such a device which is simple in construction and operation and which may be employed upon typewriters as at present constructed.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which the same reference characters are used to indicate the same parts in each of the views, and in which:—

Figure 1 is a perspective view of my invention, removed from a typewriter and with one of the side supports broken away; and Fig. 2 is a fragmentary view of the support not shown and a spacing adjuster which I employ.

In the drawings forming a part of this application I have shown a platen *a* of a typewriter and preferably of the type usually mounted upon a movable carriage, said platen being mounted in supports *b* and *b*² and between the said supports is pivoted a frame *c* provided with a spring operated pivoted arm *c*² engaging the ratchet wheel *a*² of the platen, said arm *c*² being provided with a lug *c*³ which forms a pawl for the purpose and also with a lug *c*⁴ on the opposite side of said arm.

Pivotaly mounted upon the support *b*² is a plate *d* which may be swung outwardly as indicated in Fig. 2, this plate *d* being in the path of movement of the lug *c*⁴ on the arm *c*² when in normal position and thereby limiting the movement of said arm.

Adjacent the keyboard of the typewriter is a key *e* which is mounted upon a vertical rod *e*² pivoted to a rod or shaft *e*³ secured to a fixed part of the typewriter and pivoted to the rod *e*² is a bar *f* which is pivotally connected with a crank arm *f*² upon a shaft *h* rotatable in the frame of the typewriter and at the rear thereof as clearly shown in the application referred to, said shaft having another crank arm *h*² secured thereto and which is in operative connection with the frame *c* by means of a link *h*³ and, in practice, I employ a spring *i* to normally hold the frame *c* in the position shown.

When the key *e* is moved away from the platen *a*, the shaft *h* is rotated, thereby moving the frame *c* upwardly and thus the arm *c*² downwardly until the lug *c*⁴ engages the plate *d* and in this movement, the lug *c*³ engaging the ratchet *a*², the platen *a* is rotated through a predetermined arc of a circle and spacing of the lines of writing upon a sheet of paper, movable with said platen, is accomplished, and, if the plate *d* be in its alternate position, the lug *c*⁴ may move a greater distance and thus the platen is moved through a greater arc of a circle.

It will be evident that various changes in and modification of the construction herein shown and described may be made without departing from the spirit of my invention or sacrificing its advantages and with this reservation,

What I claim as new and desire to secure by Letters Patent, is:—

1. In combination with the carriage of a typewriter and supports thereof, the platen with a ratchet wheel secured to the platen, a pivoted frame, a spring held pivoted arm carried by said frame and disposed between said ratchet wheel and one of said supports, means on one side of said arm to engage said ratchet wheel to rotate the platen, means on the opposite side of said arm to engage said support and thereby limit the extent of movement of the arm, and means movably carried by said support so as to be movable into and out of the path of travel of said second named means on said arm.

2. In combination with the carriage of a typewriter, the platen thereof, and the supports for said carriage, a pivoted frame, a spring held pivoted arm carried by the frame, a pivoted element on one of said supports, and means on opposite sides of said arm, one

of said means being for rotating the platen and the other means being for engagement with said pivoted element or the support to which it is attached.

5 3. In combination with the carriage of a typewriter, the supports thereof, the platen and a ratchet wheel secured to the platen, a pivoted frame composed of a longitudinal member and end members the latter pivoted
10 to said supports, one of said end members being extended and carrying means to operate said ratchet wheel, a vertical spring held link movably connected at its top to said longitudinal member, a shaft having two crank
15 arms one of which is connected to said link,

a second oscillatory shaft at the keyboard, a vertical arm having an arc-like movement connected to said second shaft to oscillate the same, and a horizontal bar connected to said second crank of the first named shaft 20 and to an intermediate point along the length of said vertical arm.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 21st 25 day of October 1907.

CHARLES M. SORENSEN.

Witnesses:

GEO. F. BENTLEY,
A. J. MOTT LAU.