

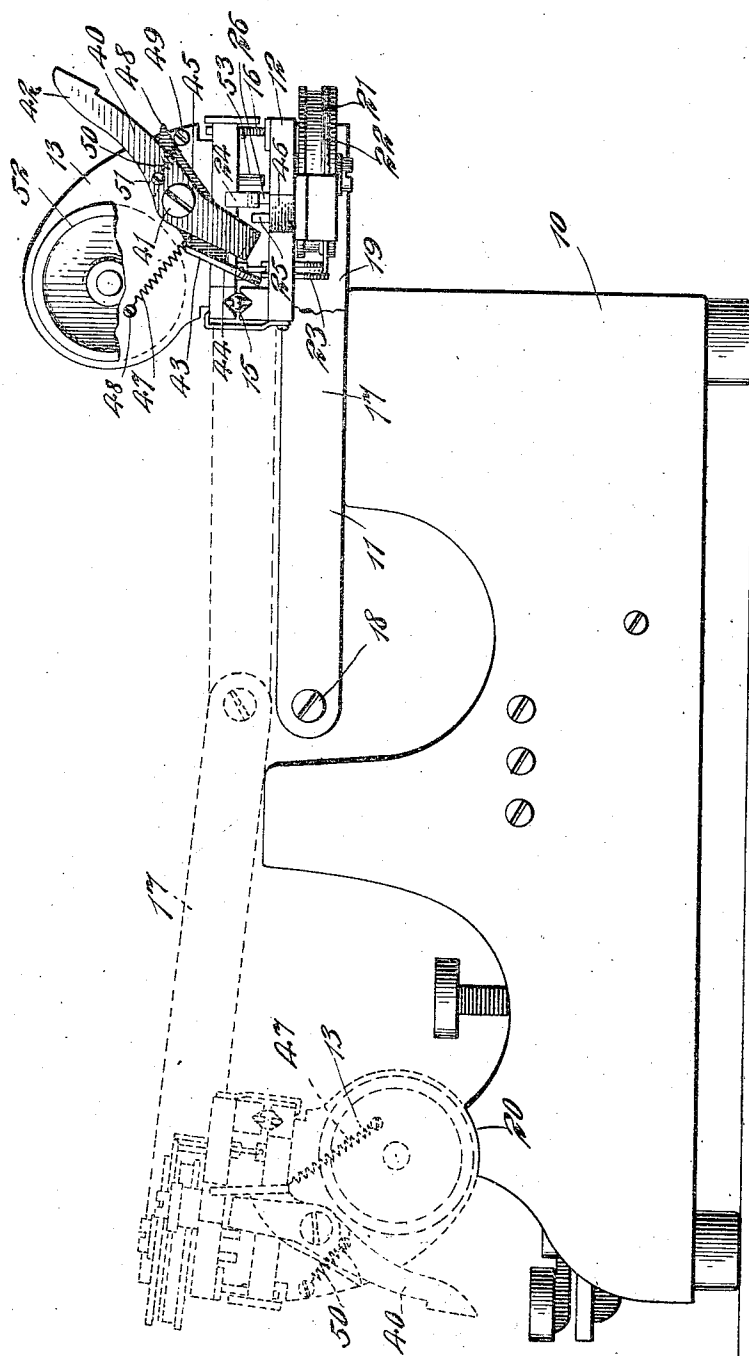
1,064,372.

O. PETERMANN.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 3, 1911.

Patented June 10, 1913.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES
[Signature]
C. Bartels.

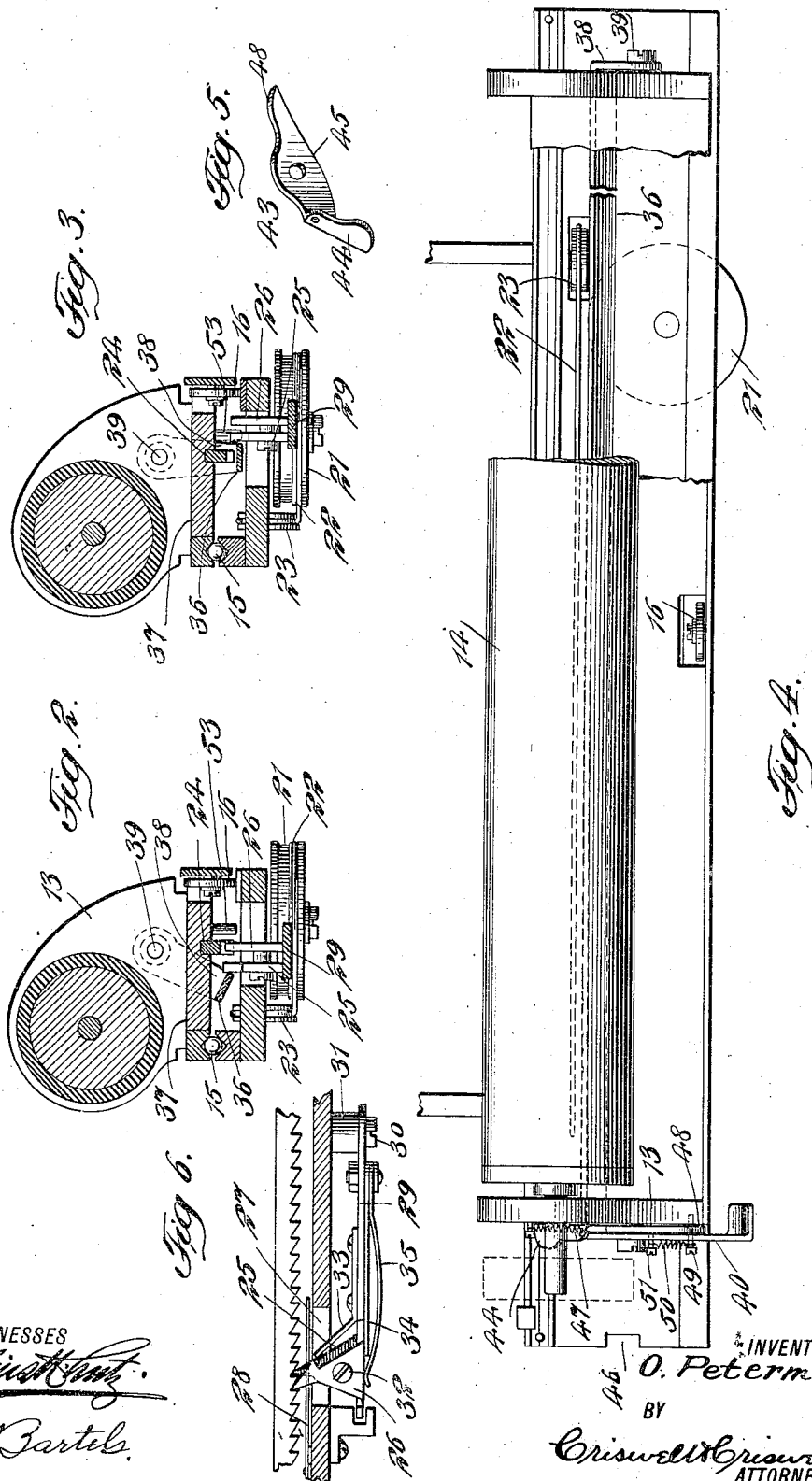
INVENTOR
O. Petermann
BY
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ATTORNEYS

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

OTTO PETERMANN, OF GROTON, NEW YORK, ASSIGNOR TO STANDARD TYPEWRITER COMPANY, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

1,064,372.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed April 3, 1911. Serial No. 618,654.

To all whom it may concern:

Be it known that I, OTTO PETERMANN, a citizen of the Republic of Switzerland, and a resident of Groton, county of Tompkins, and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a full, clear, and exact description.

This invention relates more particularly to front-strike or visible typewriting machines in which the carriage and platen may be folded or shifted into compact relation to another part of the machine when not in use to adapt the machine for transportation or other purposes, and especially to means which will prevent injury to parts of the escapement and which will automatically position the carriage for folding.

It is the usual practice in this class of portable typewriting machines to provide a case which serves as a convenient means for holding the machine when not in use and also as a ready means for transportation purposes. Where the carriage and platen fold over or forward, it is desirable that the carriage be held against movement through the propelling means, and on this account the method heretofore proposed has been to permit one of the escapement dogs to engage the rack and thus prevent the propelling mechanism from forcing the carriage freely along its bed. This has often resulted in the dog which is maintained in engagement with the rack or a tooth of the rack or both being broken or injured by reason of vibration and jars while in transit when shipped in a trunk, by express or by freight, thereby necessitating the return of the machine to the factory for repairs or to have the injured parts replaced. It is also desirable that the case, which holds the machine, be made as small as possible to fit the machine neatly when in a folded position, and to secure this the carriage must be positioned in such a way as to permit it to be folded within the case. This requires adjusting of the carriage with respect to the carriage bed, and frequently necessitates shifting the carriage back and forth several times before the machine can be folded within the case.

The primary object of the invention is to overcome the objections referred to and to provide simple means whereby the dogs may

be thrown entirely free of the rack thereby preventing any possible breakage while in transit, and at the same time provide means whereby the carriage may automatically move and be held in position for folding, without requiring the carriage to be manually moved or adjusted to a certain position before it can be folded over within the holding case as is usual with machines of this kind as ordinarily constructed.

Another object of the invention is to provide simple and efficient means whereby the stop and locking means intended to hold the carriage against the moving force of the propelling mechanism may also actuate the releasing means to move the dogs free of the rack or other part of the escapement mechanism and hold the dogs in their released position, and which stop and locking means will automatically return to a position out of locking engagement by simply moving the carriage and platen a short distance along its bed.

A further object of the invention is to provide simple and inexpensive means which may be readily applied to machines of the class referred to without materially altering their construction.

With these and other objects in view, the invention will be hereinafter more particularly described with reference to the accompanying drawings, which form a part of this specification, and will then be pointed out in the claims at the end of the description.

In the drawings, Figure 1 is a side elevation, partly broken away, of one form of machine embodying my invention, showing the carriage in dotted lines in its folded position. Fig. 2 is a vertical section through the machine showing the dogs in their normal position, one of said dogs being in engagement with the rack. Fig. 3 is a view similar to Fig. 2, except that the dogs have been moved out of engagement and away from the rack. Fig. 4 is a plan view of the carriage, partly broken away and partly in section, a part of the platen and carriage being broken away and brought closer together in order that both sides thereof may be shown. Fig. 5 is a detail perspective view of the stop or locking device; and Fig. 6 is a fragmentary sectional view through the carriage bed showing the rack and the escapement dogs, looking at the loose dog

side of the mechanism from the rear of the machine.

While I show the invention as applied to a machine in which the carriage and platen
5 may be folded over the keyboard, it will be understood that the invention may be also applied to a machine in which the carriage and platen is otherwise shifted or moved into compact relation to another part of the
10 machine, and it will be further understood that instead of a rack and dog escapement mechanism, the invention may be applied to machines having other forms of escape-ments.

15 The frame 10 has a support 11 which may be moved vertically, and on the support is a bed 12 along which a carriage 13 is adapted to move. The carriage 13 may have the usual platen 14 and said carriage may be
20 supported by a suitable ball bearing 15 at its forward edge, and a substantially central roller 16 at its rear edge to permit the carriage to travel lengthwise of the bed 12. The bed 12 is held to two arms 17 forming
25 a part of the support 11, and these arms are pivoted at 18 to similar arms 19 located on opposite sides of the machine, and said arms 17 together with the bed 12 and carriage 13 are adapted to be moved forward on the
30 pivots 18 so that the platen may rest upon a part 20 of the machine frame as shown in dotted lines in Fig. 1.

A spring-actuated drum 21 is held to the under side of the carriage bed 12, and
35 around the drum is a flexible connection 22, one end of which is passed over an idler 23 mounted on the carriage bed 12 and extends forward under the carriage and is secured to a part thereof so that the tendency of
40 said spring-actuated drum is to force the carriage along the bed 12.

The carriage has a rack 24 held thereto and the teeth of this rack are adapted to be engaged by a fixed dog 25 and a loose dog
45 26. These dogs have their upper ends passed through a slot 27 in the carriage bed and said fixed dog is engaged by a spring 28 tending normally to hold one of the dogs in engagement with the rack. The dogs 25
50 and 26 are held to an arm 29 and this arm is pivoted at 30 to a post 31 on the carriage bed, and said arm is adapted to be moved by a part of the escapement mechanism through the universal bar in any suitable
55 way. The loose dog 26 is pivoted at 32 and said loose dog is limited in its movement in one direction by a bracket 33. The dog 26 is substantially triangular in form and is engaged by two springs 34 and 35 on oppo-
60 site sides of its vertical center. The dogs operate in the usual way and when the arm 29 is moved on its pivot, the escapement will be tripped and on the reverse movement the carriage and rack will move a distance cor-
65 responding to one tooth for letter spacing

of the carriage as is usual in typewriting machines.

It will be seen that the tendency of the propelling mechanism is to force the rack and carriage along the bed 12, and unless
70 one of the dogs is in engagement with the rack or some other provision made, the said propelling mechanism would move the carriage to one end of the bed. To avoid this and to lock the carriage ready for folding
75 and to hold the dogs free of the rack to prevent injury thereto, various means may be employed. As shown, a bar 36 extends transversely of the machine under the carriage base 37 and this bar has one
80 end, as 38, bent to form an arm which is pivoted at 39 to one end of the carriage frame. The other end of the bar 36 extends on the outside of the frame and is bent to form a lever 40. This lever 40 is
85 pivoted at 41 and is integral with the bar 36, and the said lever has its outer end 42 forming a finger portion by which the said lever may be moved on its pivot 41. When
90 the lever 40 is operated, the bar 36 will swing under the rack 24 and engage the fixed dog so as to move both dogs and the arm 29 to one side of the rack and entirely
95 free of the same, the position of the pivots 39 and 41 being such as to permit this movement of the bar. The arm 38, bar 36 and lever 40 form a releasing device for the
100 dogs, and said device serves not only to release the dogs from the rack for folding purposes, but also releases the dogs from the rack so that the propelling mechanism may quickly force the carriage along the bed free of the dogs when such a movement is necessary or desirable.

A locking device or stop 43 is pivoted to
105 one end of the carriage. This device is in the form of a lever and has a part 44 at substantially right angles to the body or lever portion 45 of the device, and this part
110 44 is adapted to engage a slot or recess 46 formed in the carriage bed at one end thereof. The device 43 is pivoted at the same point as the lever 40, in this case the screw
115 41, and said device is normally forced in one direction by a spring 47, one end of which is attached to a screw 48 on the carriage, and the other end to a part of the device 43 and tends normally to force the device to the position shown in Fig. 1, in
120 which one end, as 48, is adapted to engage a screw or stop 49 on the carriage to limit its movement. A spring 50 is attached also to the screw 49 and has its other end held to a screw 51 on the lever 40 tending
125 normally to force the lever toward the screw or stop 49. This spring 50 is not absolutely necessary though in addition to forcing the lever 40 in one direction, it also serves to prevent vibration of the lever while writing. When the device 43 is forced inward by
130

pressure of the thumb against the angular portion 44 until the propelling means causes the inner end of said portion to engage the bottom of the slot 46, the carriage will be exactly positioned on the bed 12 so that the same may be folded within the case without any further movement or action on the part of the operator. This may be accomplished by grasping the knob 52 of the platen shaft with one or more fingers of the hand and using the thumb to press against the part 44 of the device 43 to move the same on the pivot 41. The device as it is moved on its pivot will engage the lower arm of the lever 40 and will cause it also to be moved on its pivot, thereby releasing the dogs from engagement with the rack 24, and said lever 40 and the bar 36 will continue to move until the said bar engages a pin 53 projecting downward from the carriage base 37. At this time, the part 44 of the device 43 is in alinement with the slot 46 and as soon as the dog is released from the rack, the propelling mechanism will move the carriage far enough along the bed to force the device to the bottom of the recess or slot 46 which forms a shoulder for this purpose, thus limiting a further movement of the carriage along the bed and also serving to lock the dogs out of engagement with the rack. By this means, it will be seen that the carriage may be quickly positioned for folding purposes and in such a way that the dogs will not be liable to be broken or injured while being shipped or otherwise transported.

It will be understood that when the carriage and platen are restored to their normal position or that wherein the machine is in position for operation, by simply moving the carriage slightly toward the right and until the part 44 of the locking device 43 is disengaged from the slot 46, the spring 47 will force the end 44 away from the slot 46, at the same time permitting the releasing device through the spring 50 to return to its normal position in which the bar 36 rests against the under side of the carriage base 37, and also permitting the dogs to again position themselves for engagement with the rack. It will be further understood that the lever 40 may be operated independent of the device 43 to release the dogs from the rack to permit the carriage to move freely along the bed.

While I show and describe a particular mounting for the carriage to adapt the same to move along its bed, such invention is not claimed in this application but forms a part of an application filed by me March 24, 1911, Sr. No. 616,707.

From the foregoing, it will be seen that simple and efficient means are provided whereby the escapement may be quickly released and locked in said released posi-

tion against the action of the propelling mechanism to adapt the carriage to be folded or shifted into compact relation to another part of the machine when it is desired to transport the same or for other purposes; that the said mechanism is simple in construction and may be readily applied to the machine; that said mechanism effectually prevents injury to the dogs, or to the rack or to other parts of the escapement due to the jar or vibration while shipping or transporting the same; and that said means is so constructed that the escapement mechanism may be made to automatically move into operative position during the unfolding of the machine.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a typewriting machine, the combination with a support, of a carriage adapted to travel along the support and shiftable into compact relation to another part of the machine when not in use, an escapement mechanism, a movable device adapted to release the escapement mechanism to permit the carriage to move freely along its support, and a device adapted to engage the movable device and position the carriage on said support.

2. In a typewriting machine, the combination with a support, of a carriage adapted to move along the support and shiftable into compact relation to another part of the machine when not in use, an escapement mechanism, propelling mechanism, a pivotally held device adapted to release the escapement mechanism to permit the carriage to move freely along its support, and an independent pivoted device adapted to engage and move the escapement releasing device and to lock the carriage against action of the propelling mechanism.

3. In a typewriting machine, the combination with a carriage bed, of a carriage adapted to move along said bed and shiftable into compact relation to another part of the machine when not in use, propelling means for the carriage, and a device adapted to hold and position the carriage to register with said bed in a position ready for its compact movement.

4. In a typewriting machine, the combination with a carriage bed having a slot at one end, of a carriage movable along said bed, propelling means tending normally to force the carriage along the bed, and a device pivoted at one end of the carriage adapted to enter the slot in the bed and lock the carriage against the action of the propelling means.

5. In a typewriting machine, the combination with a frame, of a foldable support, a carriage bed mounted on said support, a carriage having a base and adapted to move

along the bed and foldable into compact relation to another part of the machine, an escapement mechanism, propelling means, a releasing device pivotally held to the carriage and having a bar-like portion extending under the carriage base over the bed and provided with a finger part whereby said device may be moved to release a part of the escapement from engagement with the carriage, a spring normally forcing the device in one direction, said bed having an engaging part, and a device pivotally mounted on the end of the carriage and having a part adapted to engage the engaging part of the carriage bed to limit the travel of the carriage and to position the same to adapt the carriage to be folded.

6. In a typewriting machine, the combination with a support, of a carriage bed mounted on said support, a carriage adapted to move along the bed, an escapement mechanism, propelling means, a releasing device pivotally held to the carriage and having a bar-like portion extending under the carriage and over the bed and provided with a finger part whereby said device may be moved to release a part of the escapement from engagement with the carriage, a spring normally forcing the device in one direction, a stop and lock lever pivotally mounted on the carriage and having a part adapted to engage a part of the carriage bed to limit the travel of the carriage by the propelling means, and a spring tending to force the lever out of engagement with the bed.

7. In a typewriting machine, the combination of a support, a carriage bed mounted on said support, a carriage adapted to move along the bed, an escapement mechanism, a releasing device pivotally held to the carriage and having a bar-like portion extending under the carriage over the bed and provided with a finger part whereby said device may be moved to release a part of the escapement from engagement with the carriage, and a device pivotally mounted on the carriage and having a part adapted to engage a part of the carriage to limit the travel of said carriage.

8. In a typewriting machine, the combination with a support, of a carriage bed mounted on said support, a carriage adapted to move along the bed and shiftable with the support and bed into compact relation to another part of the machine, an escapement mechanism, propelling means, a releasing device pivotally held to the carriage and having a bar-like portion extending under the carriage base over the bed and provided with an operating lever whereby said device may be moved to release a part of the escapement from engagement with the carriage, a spring normally forcing the device in one direction, said bed having a recess at one end, and a lever pivotally mounted

ed on one end of the carriage and having a part adapted to enter the recess in the carriage bed to limit the travel of said carriage by the propelling means and to position the same on the bed to adapt the carriage to be shifted.

9. In a typewriting machine, the combination of a support, a carriage bed mounted on said support, a carriage adapted to move along the bed, an escapement mechanism, propelling means, a releasing device pivotally held to the carriage at its opposite ends and having a bar-like portion extending under the carriage lengthwise thereof over the bed and provided with a lever part whereby said device may be moved to release a part of the escapement from engagement with the carriage, and a device pivotally mounted on one end of the carriage adapted to engage the releasing device and having a part adapted to engage a part of the bed to limit the travel of said carriage by the action of the propelling means and to position the carriage on the bed.

10. In a typewriting machine, the combination with a support, of a carriage shiftable into compact relation to another part of the machine when not in use, and a device adapted to engage a part of the support at one point only and position the carriage with respect to its support ready for its compact movement.

11. In a typewriting machine, a support, a carriage adapted to fold forward with the support, and means for positioning the carriage with respect to said support at one point only ready for its folding movement.

12. In a typewriting machine, the combination with a support, of a carriage shiftable forward into compact relation to another part of the machine when not in use, and a device pivoted to one end of the carriage and adapted to engage a part of the support at one point only and position the carriage with respect to its support ready for its compact movement.

13. In a typewriting machine, the combination with a support, of a carriage shiftable into compact relation to another part of the machine when not in use, escapement mechanism, propelling means, a carriage releasing device, and means cooperating with the releasing device and adapted to engage a part of the support and hold the carriage against movement by the propelling means.

14. In a typewriting machine, the combination with a support, of a carriage movable along said support and shiftable forward into compact relation to another part of the machine when not in use, escapement mechanism, a carriage releasing device extending lengthwise of the carriage and adapted to move a part of said mechanism, and a device pivoted at one end of the carriage and cooperating with the releasing device and

adapted to engage a part of the support to hold the carriage against movement.

15. In a typewriting machine, the combination of a support, a carriage adapted to move along the support, escapement mechanism, propelling mechanism, carriage releasing means, and means adapted to engage a part of the support at one point only and hold the carriage against movement by the propelling means when released and to be automatically disengaged by moving the carriage in the opposite direction.

16. In a typewriting machine, the combination with a support, of a carriage adapted to move along the support, escapement mechanism including movable dogs, a carriage releasing device extending lengthwise of the carriage and adapted to engage and move the dogs, and a pivoted device cooperating with the releasing device but movable independent thereof and adapted to engage a part of the support and hold the carriage against movement when released.

17. In a typewriting machine, the combination of a support, a carriage movable along said support and foldable forward with the same into compact relation to another part of the machine when not in use, propelling mechanism for the carriage, and a device pivotally held at one end of the carriage and adapted to engage a part of the support to position the carriage for folding and to be automatically disengaged from the support when the carriage is moved backward along the support.

18. In a typewriting machine, the combination of a support, a carriage movable along said support and foldable with the same into compact relation to another part of the machine when not in use, propelling mechanism for the carriage, and a pivotally held device adapted to position the carriage for folding.

19. In a typewriting machine, the combination of a support, a carriage movable along said support, escapement mechanism, means for releasing the escapement mechanism, propelling mechanism for the carriage, and means cooperating with the escapement releasing means to position the carriage on its support.

20. In a typewriting machine, the combination of a support, a carriage movable along said support and foldable into compact relation to another part of the machine when not in use, propelling mechanism for the carriage, and a movable device adapted to engage a part of the support to position the carriage for folding and to be automatically disengaged from the support when the carriage is moved backward along the support.

21. In a typewriting machine, the combination with a support, of a carriage bed, a carriage adapted to move along said bed and

shiftable with the bed into compact relation to another part of the machine, said bed having a slot at one end, a rack held to the carriage, dogs adapted to engage the rack, a releasing device having a bar-like portion extending over the bed and pivotally held so as to pass under the rack and engage the dogs to release the same therefrom, propelling mechanism, and a device for engaging the bed and locking the carriage against movement by the propelling mechanism.

22. In a typewriting machine, the combination with a support, of a carriage bed having a slot at one end, a carriage adapted to move along said bed, a rack held to the carriage, dogs adapted to engage the rack, a releasing device having a bar-like portion extending over the bed and pivotally held so as to pass under the rack and engage the dogs to release the same therefrom, propelling mechanism, and a pivotally held device for engaging the slot of the bed and locking the carriage against movement by the propelling mechanism.

23. In a typewriting machine, the combination with a support, of a carriage bed, a carriage adapted to move along said bed and shiftable with the bed into compact relation to another part of the machine, said bed having a slot at one end, a rack held to the carriage, dogs adapted to engage the rack, a releasing device having a bar-like portion extending over the bed and pivotally held so as to pass under the rack and engage the dogs to release the same therefrom, propelling mechanism, a device entering the slot in the bed and locking the carriage against movement by the propelling mechanism, and a spring tending to hold the locking device out of engagement with the bed.

24. In a typewriting machine, the combination with a support, of a bed mounted on the support and adapted to be shifted into compact relation to another part of the machine, said bed having a recess at one end, a carriage adapted to move along the bed, escapement mechanism, propelling mechanism, releasing means, a device having a finger portion adapted to engage and move the releasing means to release the escapement mechanism, and a spring tending normally to force the device in one direction.

25. In a typewriting machine, the combination with a support, of a carriage mounted on the support and adapted to be shifted forward into compact relation to another part of the machine, escapement mechanism, propelling mechanism, releasing means, a pivotally held device mounted on the carriage and having an angular finger portion adapted to engage and move the releasing device to release the escapement mechanism from the carriage, said device being adapted to engage the support, and a spring tending normally to force the device in one direction

to automatically release the same when the carriage is moved against the action of the propelling means.

26. In a typewriting machine, the combination with a carriage bed, of a carriage mounted on the bed, said bed having a recess at one end, escapement mechanism, propelling means, releasing means, a device adapted to enter the recess to lock the carriage against movement and having a finger portion adapted to engage and move the releasing means to release the escapement mechanism from the carriage, and a spring tending normally to force the device in one direction and away from said recess.

27. In a typewriting machine, the combi-

nation with a support, of a bed mounted on the support, a carriage adapted to travel along the bed, escapement mechanism, a device pivotally held to one end of the carriage and having a finger portion and adapted to engage a part of the bed, and a spring tending normally to force the device in one direction out of engagement with the bed and to automatically move said device when the carriage is moved backward along the bed.

This specification signed and witnessed this 30th day of March A. D. 1911.

OTTO PETERMANN.

Witnesses:

C. T. YATES,

F. J. HOWELL.

DISCLAIMER.

1,064,372.—*Otto Petermann*, Groton, N. Y. TYPE-WRITING MACHINE. Patent dated June 10, 1913. Disclaimer filed October 10, 1922, by the assignee *Corona Typewriter Co., Inc.*

Hereby disclaims claim 18 of the said Letters Patent No. 1,064,372, the said claim reading as follows:

"18. In a typewriting machine, the combination of a support, a carriage movable along said support and foldable with the same into compact relation to another part of the machine when not in use, propelling mechanism for the carriage, and a pivotally held device adapted to position the carriage for folding."

[*Official Gazette October 24, 1922.*]