F. W. BEEGHLEY.

COPY HOLDER.

APPLICATION FILED DEC. 27, 1919. RENEWED FEB. 25, 1921.

1,374,056.

Patented Apr. 5, 1921.

3 SHEETS—SHEET 1.

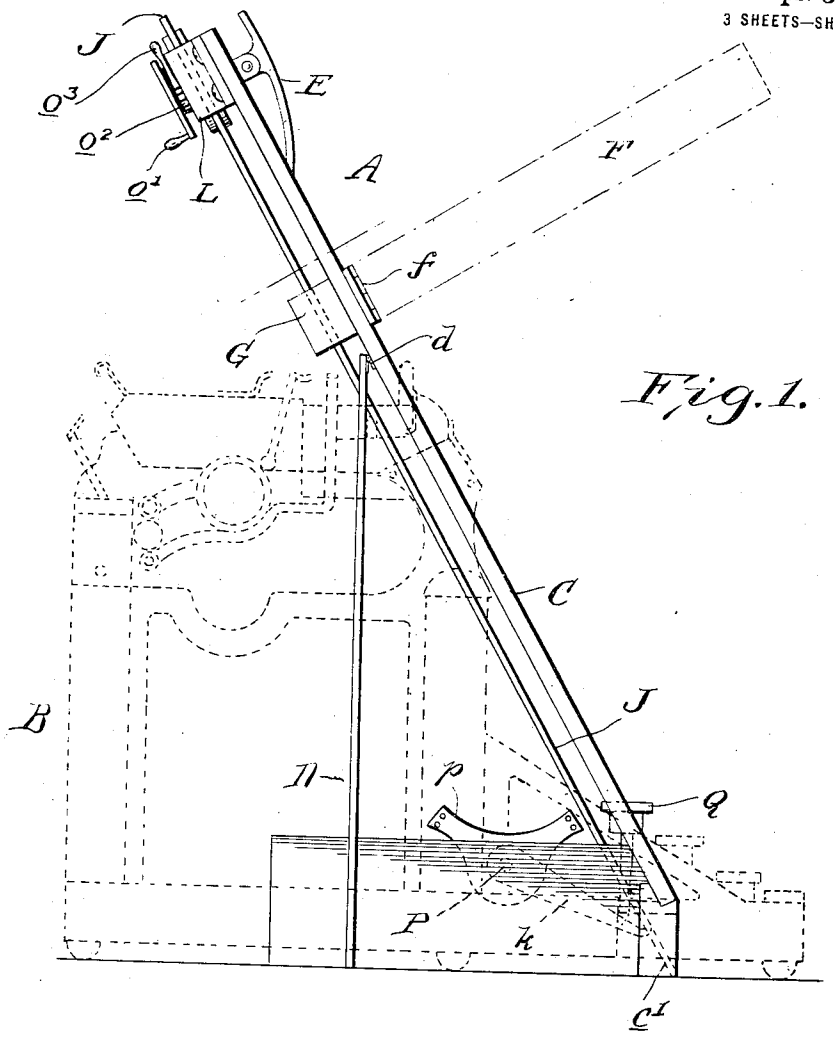


Fig. 1.

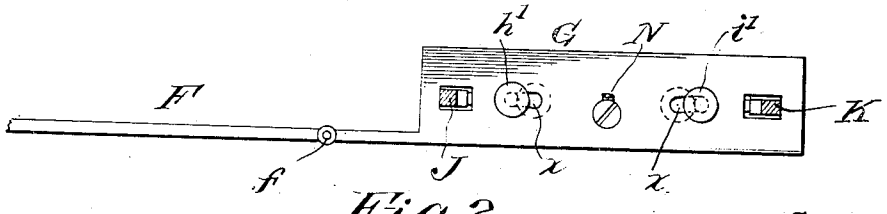


Fig. 2.

Inventor

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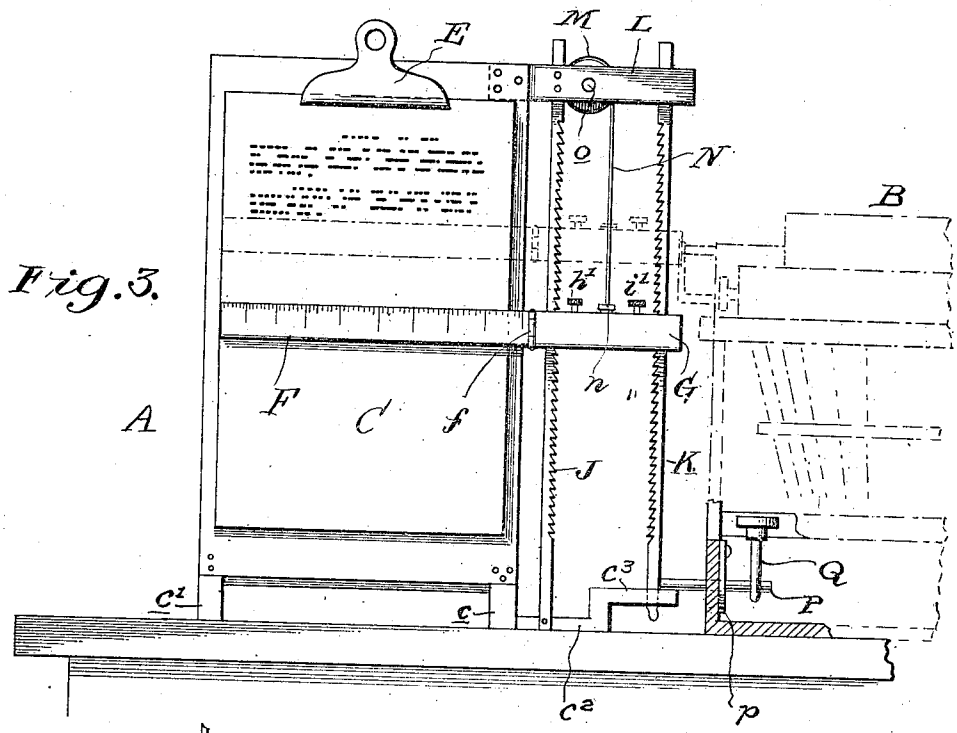
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3 SHEETS—SHEET 2.

Fig. 3.



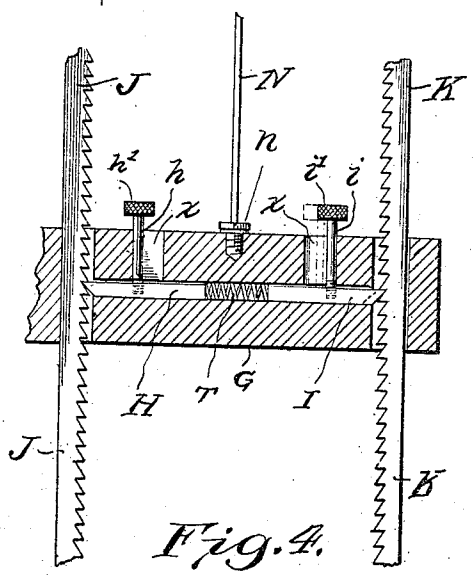


Fig. 4.

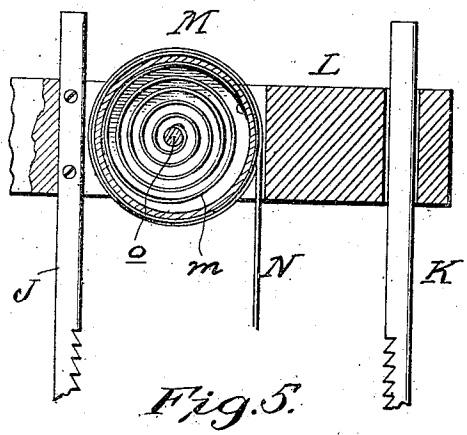


Fig. 5.

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3 SHEETS—SHEET 3.

Fig. 6.

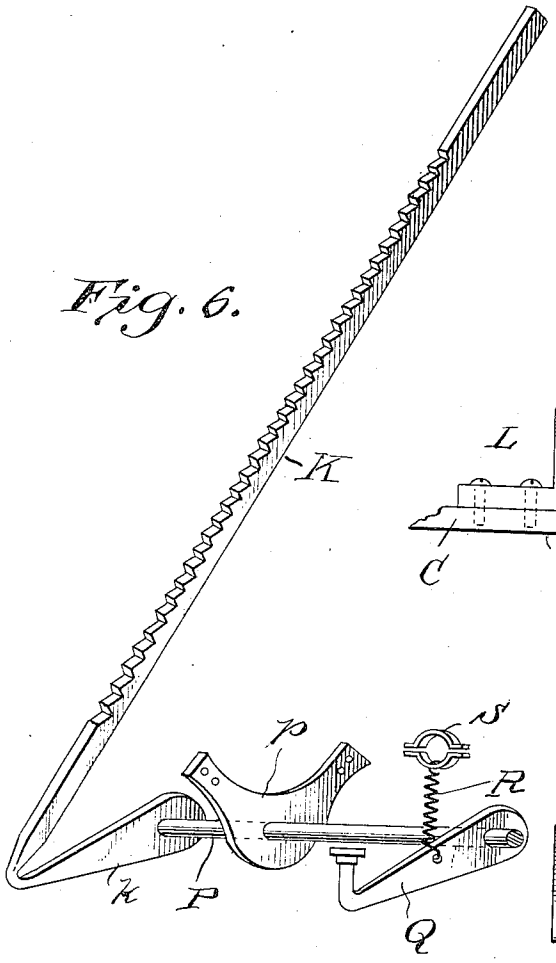
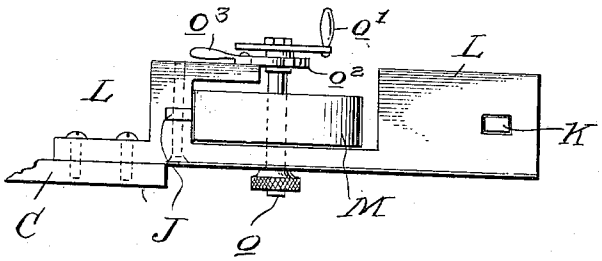


Fig. 7.



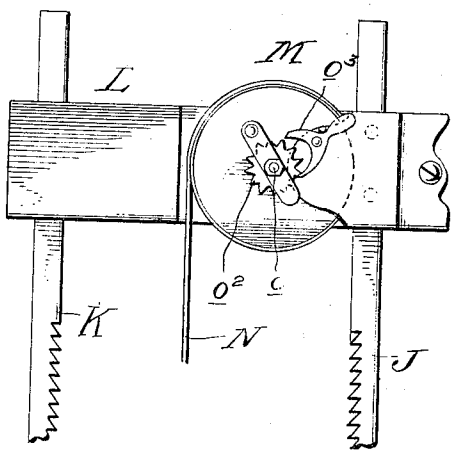


Fig. 9.

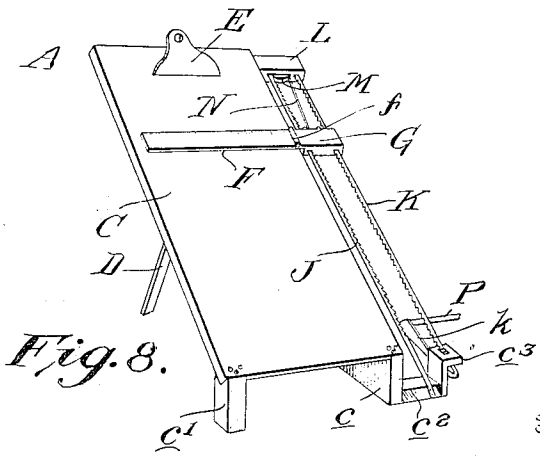


Fig. 8.

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UNITED STATES PATENT OFFICE.

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COPY-HOLDER.

1,374,056. Specification of Letters Patent. Patented Apr. 5, 1921.

Application filed December 27, 1919, Serial No. 347,675. Renewed February 25, 1921. Serial No. 448,257.

(FILED UNDER THE ACT OF MARCH 3, 1883, 22 STAT. L., 625.)

To all whom it may concern:

Be it known that I, FRANCIS W. BEEGHLEY, a citizen of the United States, at present in the United States Navy, have invented certain new and useful Improvements in Copy-Holders, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without the payment to me of any royalty thereon.

This invention relates to copy holders of the kind especially adapted to hold copy for a typewriter, and the object of my invention is to provide a copy holder of simple construction which is provided with a line indicator which may readily be operated by a key in the key-board of the machine to move from line to line as the work progresses.

According to my invention I provide a supporting plate for the copy which is equipped with a clip for the paper to hold it in place, and a line indicator which is moved from line to line by means of a key on the key-board which is operably connected with a rack bar connected with the line indicator in such manner that when the line key is operated, the line indicator will be correspondingly actuated to move from line to line. Means are provided for locking the line indicator when moved to its new position and devices are connected with the line indicator for returning it to its initial position when desired. Other features of the invention will be hereinafter described.

In the accompanying drawings:—

Figure 1 shows a side elevation of a copy holder constructed in accordance with my invention, and shows by dotted lines how the copy holder may be applied to a typewriting machine.

Fig. 2 is a plan view of the line indicator and the pawl carrying piece to which it is connected.

Fig. 3 shows a front elevation of the copy holder and indicates by dotted lines its relation to the typewriting machine.

Fig. 4 is a detail view mainly in section showing the rack bars and the pawl carrying piece through which the rack bars extend.

Fig. 5 is a detail view in section, showing the spring drum which carries a tape connected with the pawl carrying piece and also indicates how the upper ends of the rack bars are connected with a bracket at the upper end of the copy holder.

Fig. 6 is a perspective view showing particularly the movable rack bar and the key mechanism for actuating it.

Fig. 7 is a detail plan view showing how the spring drum is located in a bracket at the upper end of the copy holder.

Fig. 8 is a perspective view of the copy holder detached from the typewriting machine.

Fig. 9 is a detail view of the spring drum mechanism, the rack bars, and the bracket which supports the spring drum mechanism.

The copy holder as a whole is indicated at A and the typewriting machine at B. I have illustrated a well known form of typewriter, but it will be understood that my improvements may be applied to typewriting machines of various kinds.

The plate C on which the copy is supported may be made of any suitable material. Preferably it is provided with bottom supports c, c' and a brace or rest D which may be hinged to the supporting plate at d. E indicates a clip of ordinary construction for holding the copy or paper in place on the supporting plate.

A line indicator F, suitably calibrated as indicated is mounted to move up and down on the copy supporting plate. It has a hinge connection f with a pawl carrier G which as shown is in the form of a block, suitably recessed to receive the pawls H and I, the pawl operating pins h, i, and the rack bars J and K.

The plate support c is formed with an extension c^2 to which the lower end of the rack bar J is firmly secured and with an arm c^3 having a vertical opening in it through which the lower end of the rack bar K extends.

The rack bars extend freely through the openings in the pawl carrier G, the upper end of the bar J being secured to the bracket L which is attached to the plate C, while the upper end of the bar K extends freely through an opening in said bracket. As shown in Fig. 7 the bracket L is detachably connected with the plate C and it is recessed

to receive a spring drum M carrying a tape N secured at n to the pawl carrier G. Any suitable spring drum may be employed, but preferably the spring m is carried within the drum and the tape N is wound on the periphery of the drum. As shown in Figs. 7 and 9, the drum is supported on a shaft o to which the spring is attached as indicated in Fig. 5. This shaft carries a winding handle o' and also a ratchet wheel o^2 engaged by a pawl or dog o^3. By properly setting the pawl, the spring drum mechanism may be locked.

The lower end of the rack bar K is provided with an arm k to which is secured a horizontally arranged rod P extending through a bracket p attached to the frame on the typewriter. The rod carries a key Q which I call the "line key" as it is used to operate the mechanism for moving the line indicator step by step from line to line on the copy.

Fig. 3 indicates how easily the key mechanism may be applied to a typewriter of ordinary construction. The bracket p may be secured to the frame of the typewriter and the rod P may be extended through a hole on the typewriter frame.

A spring R, connected with the key Q and with a fastening device S applied to a suitable part of the typewriter frame, serves to hold the key in its normal or elevated position. The construction is such that when the key is depressed, the rack bar K is moved a short distance downward and when the key is released it returns to normal position and the rack bar K is moved one step backward or upward. The rack bar K coöperates with the pawl I in the pawl carrier G, while the pawl H coöperates with the rack bar J. These pawls are adapted to move horizontally in the pawl carrier and they are pressed outward by a highly tempered spring T interposed between the pawls. Said pawls are provided with pins h and i having headed ends h' and i' respectively. Each pin extends through a wide opening in the pawl carrier so that the pawls may have sufficient freedom of movement and preferably the pins are detachably connected to the pawls to facilitate in assembling or removing the parts from the pawl carrier. Normally the pawls engage the rack bars as shown in Fig. 4, but when the line key is depressed the rack bar K is moved downward and as this bar engages the pawl I, the pawl carrier with the line indicator will be moved downward one space. At the same time, the pawl H is moved downward, withdraws from one tooth in the bar J, and engages another tooth below it. In this way the pawl carrier and line indicator are moved downward relatively to the copy and the teeth in the rack bars and the operating mechanism are such that the line indicator moves a distance precisely equal to the distance between two lines on the copy.

As soon as the line key is released, the rack bar K returns to its original position, *i. e.*, it moves upward the space of one line and the pawl I engages another lower tooth in the series, but while the rack bar K is thus moved upward one space, the pawl carrier G does not move. It is held in its lower position by the pawl H.

It is, of course, not necessary that the bar K should be so moved that the pawl I will engage each tooth in the series, as it is obvious that in the normal operation it may and often does skip or pass over several teeth. The amount of movement given to the pawl carrier is governed by the amount of movement given to the operating key.

The spring drum connected to the pawl carrier places a tension on the pawl carrier so that the latter is held in engagement with the rack bars. When the pawl carrier is moved downward it does so against the force of the spring. When it is desired to move the ruler back to the top of the copy or to any other place thereon, the spring pawls H and I may be withdrawn by means of the headed pins h, i and then the ruler may be moved freely to any desired place on the copy. By means of the pawl o^3 the spring drum mechanism may be securely locked so that the device will not operate until released.

I claim as my invention:—

1. The combination with a typewriting machine of a copy holder, comprising a copy-supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, a pawl mounted on the carrier, a rack bar coöperating with the pawl in the carrier, an operating key mounted within the typewriter frame, a shaft to which the key is secured, a bracket attached to the frame of the typewriting machine through which the shaft passes, a connection between said shaft and the rack bar, and means for locking the pawl carrier and line indicator in set position.

2. The combination with a typewriting machine of a copy holder, comprising a copy-supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, pawls mounted on said carrier, rack bars coöperating with the pawls, an operating key mounted within the typewriter frame, a bracket secured to the frame of the typewriter, a shaft extending through said bracket and to which the key is attached, a spring within the typewriter frame attached to the key for moving it in one direction, devices for attaching one end of the spring to a part of the typewriter frame, a connection between one of the rack bars and said shaft, and devices carried by the pawl carrier coöperating with one of the

rack bars for holding the pawl carrier and the line indicator in set position.

3. A copy holder, comprising a supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, pawls mounted on the carrier, rack bars coöperating with the pawls, means for actuating one of said rack bars to move the pawl carrier with the line indicator, means for locking the pawl carrier to the other rack bar, and means for exerting an upward tension on the pawl carrier.

4. A copy holder, comprising a supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, pawls mounted on the carrier, a spring drum connected with the pawl carrier and exerting an upward tension thereon, rack bars coöperating with the pawls in the carrier, means for actuating one of said rack bars to move the pawl carrier with the line indicator against the tension of the spring drum, means coöperating with the other rack bar for holding the pawl carrier and line indicator in set position, and a pawl for holding the spring drum in locked condition.

5. A copy holder, comprising a supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, pawls mounted on said carrier, rack bars coöperating with the pawls, means for actuating one of said rack bars to move the pawl carrier with the line indicator, means for holding the pawl carrier and line indicator in set position, and devices for unlocking the pawl carrier to permit it to be freely moved vertically with reference to the copy.

6. A copy holder comprising a supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, pawls mounted within said pawl carrier and which are spring pressed in opposite directions, devices for moving said pawls by hand, rack bars cooperating with the pawls, one of which is movable and the other stationary, means for actuating one of said rack bars to move the pawl carrier with the line indicator while the other or stationary rack bar engages the opposing pawl in the carrier, and means for exerting an upward spring tension on the pawl carrier.

7. A copy holder, comprising a supporting plate, a line indicator adapted to move over said plate, a pawl carrier to which the line indicator is connected, pawls mounted on said carrier, a stationary rack bar coöperating with one of the pawls in the pawl carrier, a movable rack bar coöperating with the other pawl in the carrier, an operating key, and connections between said operating key and said movable rack bar.

In testimony whereof, I have hereunto subscribed my name.

FRANCIS W. BEEGHLEY.