

H. L. W. F. KLEMP.
CARRIAGE FEEDING DEVICE FOR TYPE WRITERS.
APPLICATION FILED AUG. 12, 1910.

978,758.

Patented Dec. 13, 1910.

Fig. 1

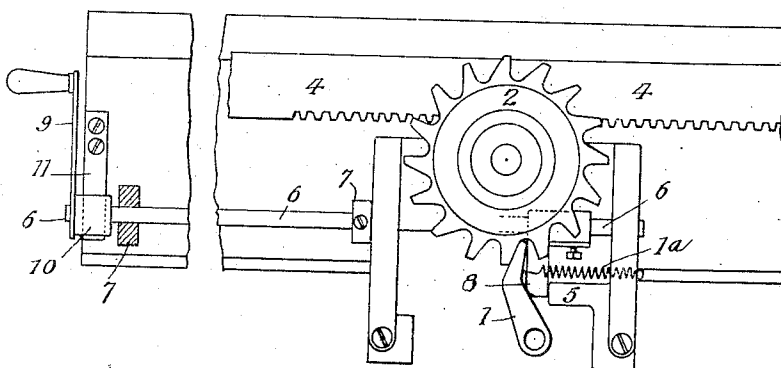


Fig. 2

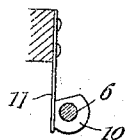
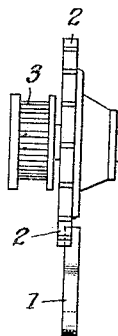


Fig. 3



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CARRIAGE-FEEDING DEVICE FOR TYPE-WRITERS.

978,758.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed August 12, 1910. Serial No. 576,851.

To all whom it may concern:

Be it known that I, HERMANN LOUIS WILHELM FRITZ KLEMP, engineer, of 32-35 Hollmannstrasse, Berlin, Germany, have invented a new and useful Carriage-Feeding Device for Type-Writers, of which the following is a specification.

My invention relates to improvements in carriage-feeding mechanism for typewriting machines, whereby the carriage may be moved a two-letter space instead of a single-letter space at each type impression. This movement is effected by limiting the intermittent rotation of the escapement wheel which is operatively connected with a pinion that constantly meshes with the carriage rack-bar. The difference in spacing accomplished by limiting the rotation of the escapement wheel is effected primarily or chiefly through the agency of a pivoted device in the nature of a dog or pawl. Hereofore, the means employed for varying the movement or throw of such dog or pawl has been complicated and comparatively expensive, and it is the object of my invention to provide a simple and effective substitute, whereby the throw of such dog or pawl may be changed simply by the partial rotation of a rock shaft. In other words, the alteration of the feed of the carriage is effected by means of an arm on a shaft mounted to rock in the machine frame and extending along the path of the carriage, the arm being adjusted by merely turning the shaft a part of a rotation in one or the other direction in accordance with the kind of writing to be produced, either ordinary or spaced. In order to prevent the shaft from inadvertently turning and thereby changing the writing, it is essential to provide a device for securing the adjusting shaft in either position, the said device being automatically engaged with the shaft when turned in either direction.

I will now proceed to describe my invention with reference to the accompanying drawing, in which—

Figure 1 is a side view or elevation of the mechanism embodying my invention. Fig. 2 is a cross section. Fig. 3 is an edge view of the escapement wheel and pinion forming part of the mechanism.

Similar characters of reference refer to similar parts in the several views.

1 denotes an arm which is pivoted and adapted to rock. It is connected with an

escapement wheel 2 and serves for limiting the turn of the latter. The wheel may be fastened on a shaft, which is mounted in the machine frame to turn at right angles to the platen-roll of the carriage and carries pinion 3—see Fig. 3—that constantly meshes with a rack 4 of the carriage. The arm or rocking part 1 is operatively connected with any of the keys of a typewriting machine. Mechanism of this general type for effecting difference in letter-spacing may be found in the well-known Underwood machine, and is illustrated and described, for example, in the United States Patent of J. C. McLaughlin, No. 951,542. In my machine, when the arm 1 is turned to the right, it normally strikes a stop 5 provided on the machine frame, it being retracted by a spiral spring 1^a. In this manner the rotation of the arm or rocking part 1 is limited, but after releasing the depressed key of the keyboard the carriage will be fed each time two or more letters forward and consequently a spaced writing will be produced. Upon the depressed key being released by the finger, the arm or rocking part 1 will be returned to its initial position by the spring usually employed on typewriters for operating the carriage, so that it will be ready for turning to the right when any key is depressed.

A horizontal shaft 6 is according to my invention mounted in the machine frame and arranged parallel to the platen-roll of the carriage and may be prevented from endwise motion in any known manner, for example by means of loose collars 7, 7, and set-screws or the like. An arm 8 is adjustably secured on the shaft 6 so that it can form a lengthening piece for the stop 5. The arm 8 is arranged to be turned by means of a hand-crank 9 fastened with its hub 10 on the shaft 6. The hub 10 is provided with two adjoining faces—see Fig. 2—against either of which a leaf-spring 11 fastened on the machine frame is adapted to bear for holding the shaft 6 with the arm 8 in either of two positions. In one of these positions, illustrated in Fig. 1, the arm 8 is held so as to lengthen the stop 5, so that the arm or rocking part 1, on being released by the gear, will, in moving forward, strike the left face of the arm 8, so that in this manner the turn of the arm or rocking part 1 is hindered and consequently also the feed of the carriage, so that only ordinary writ-

ing can be produced. When, however, the hand-crank 9 is so turned as to cause the leaf spring 11 to bear against the other face on the hub 10, the arm 5 will be turned into the other position and thus withdrawn from the path of the arm or rocking part 1. Then the full turn of the latter will be re-established for producing spaced writing. Thus, by means of the rock-shaft and arm or dog 8 attached thereto, this difference in spaced writing is accomplished, it being requisite only to rotate the shaft a part of a revolution to effect the change desired.

What I claim is:—

1. In an attachment for typewriter carriages of the class indicated, for producing variation in letter spacing, the combination with the rack-bar, a pinion, and an escapement wheel, of the pivoted rocking arm or dog 1 adapted to engage said wheel, a spring for retracting said arm, an adjacent abutment 5 on the frame which serves as a stop for said arm, a rocking shaft arranged parallel with the rack-bar and having an arm or dog 8 secured thereon and projecting at right angles thereto, the arrangement of

parts being as described, whereby, when the shaft is rocked, its arm or dog may be thrown into or out of the space between the first-named arm and the abutment or stop on the frame, as and for the purpose specified.

2. The combination with a rack-bar, a meshing pinion, an escapement wheel, and a pivoted spring-retracted arm or dog adapted to engage said wheel, of a rock shaft arranged parallel to the aforesaid rack-bar and having a laterally projecting arm or dog 8 which is adapted, when the shaft is rotated, to be interposed between the first-named arm and a portion of the frame, the said rock shaft having a hub provided with adjacent flat surfaces, and a leaf spring which is adapted to bear on such surfaces for holding the shaft and its arm locked in either of two positions as required by the spacing to be effected.

HERMANN LOUIS WILHELM FRITZ KLEMP.

Witnesses:

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