

Aug. 14, 1923.

1,465,041

D. K. HOWELL

TYPEWRITER ATTACHMENT

Filed March 7, 1921

2 Sheets-Sheet 1

Fig. 1

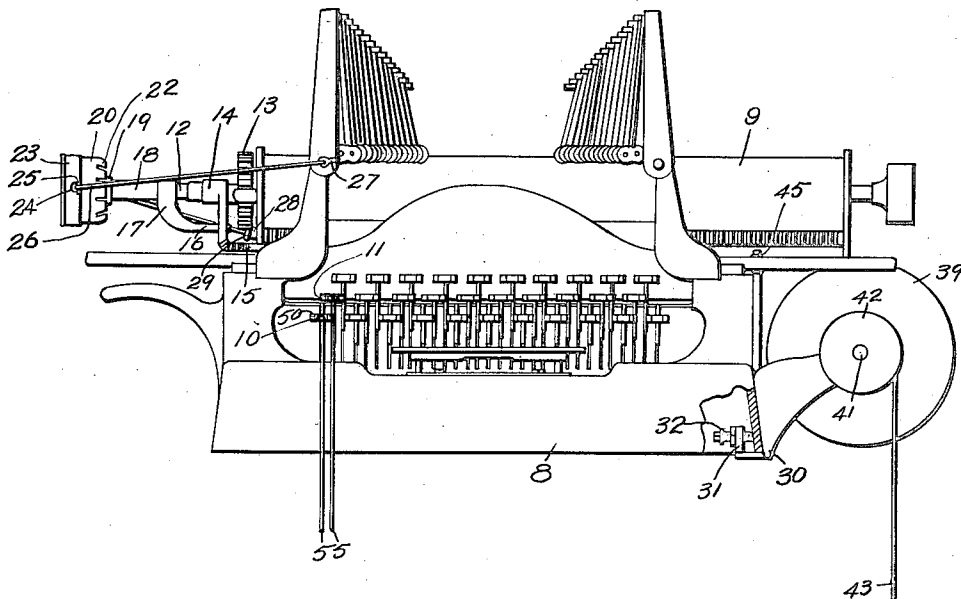


Fig. 5

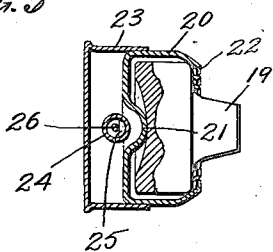
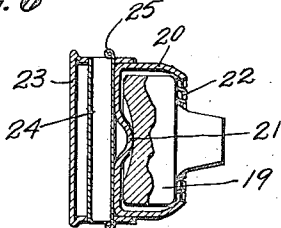


Fig. 6



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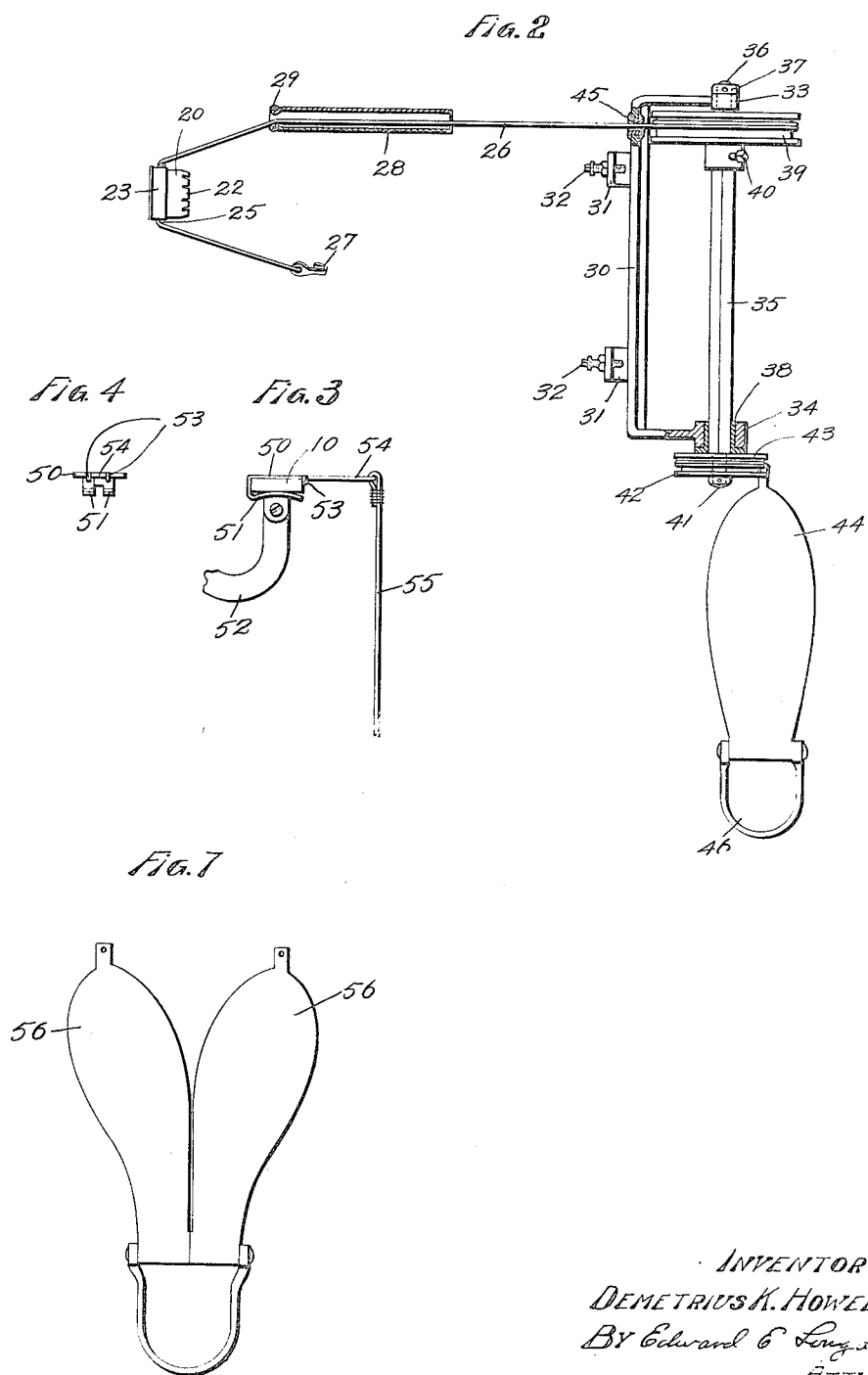
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

DEMETRIUS K. HOWELL, OF ST. LOUIS, MISSOURI.

TYPEWRITER ATTACHMENT.

Application filed March 7, 1921. Serial No. 450,292.

To all whom it may concern:

Be it known that I, DEMETRIUS K. HOWELL, a citizen of the United States, and resident of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Typewriter Attachments, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to improvements in typewriter attachments, and has for its primary object an attachment for use in typewriters which obviates the use of the hands on shift keys and also in the returning and spacing of the carriage.

A further object is to construct an attachment for typewriters whereby the carriage can be returned to commence a new line and rotated for the proper spacing of the lines without removing the hands from position on the key board.

A still further object is to construct an attachment for typewriters whereby the carriage can be shifted without changing the position of the hands on the key board.

A still further object is to construct an attachment for typewriters whereby a considerable amount of time can be saved inasmuch as through the use of my device it is not necessary to remove the hands from the writing position on the key board in order to return the carriage for starting a new line, spacing and shifting. These operations being performed by the feet.

In the drawings:

Fig. 1 is an elevation of a typewriter with my improved attachment secured thereto.

Fig. 2 is a diagrammatic plan view of the carriage returning and spacing attachment showing it in its proper position when attached to the machine.

Fig. 3 is a side elevation of one of the shift keys with the shifting attachment secured thereto.

Fig. 4 is a front elevation of the shift key attachment.

Fig. 5 is a vertical section of the attachment which goes on the platen knob.

Fig. 6 is a horizontal section of the same.

Fig. 7 is a plan view of the double pedal made use of for the shifting of mechanism.

In the construction of my device I employ a typewriter having a base 8 and platen 9 and shift keys 10 and 11. Secured to one end of the platen is a shaft 12 on which is

secured a toothed wheel 13. This wheel is for the line spacing. Loosely secured on the shaft 12 is a gear segment 14, which meshes with a segment 15. The segment 14 is provided with an opening through which the end 16 of a lever 17 passes. This lever is mounted on the sleeve 18, which is slidably mounted on the shaft 12. Secured to the sleeve 18 is a knob 19. This knob is for the purpose of moving the sleeve 18 and carrying with it the lever 17 so that the end 16 thereof will engage with the teeth on the wheel 13. When this is done the segment 15 is partially turned. This imparts rotation to the segment 14 and it in turn to the lever 17, which causes the carriage to rotate. Loosely mounted on the knob 19 is a housing 20, which has a central circular depression 21. This is designed to contact with the outer face of the knob 19 and still permit the knob to rotate without binding. The end 22 of the housing is slit and crimped inwardly so as to allow it to be sprung over the knob and still hold it loosely thereon. Fitted over the housing 20 is a second housing 23, which is closed at one end and has projecting through it a tube 24. This tube is provided at both ends with a beaded portion 25 over which a cable 26 passes. This cable is flexible and may be formed of various materials such as gut, braided silk and the like. The cable 26 has secured to one end a hook 27, which is designed to be attached to the typewriter frame at any convenient point. The cable after passing through the tube 24 is inserted through a tube 28, which is secured to the carriage at the rear of the platen and near the left hand end. This tube is also provided with a beaded end 29. This is for the purpose of reducing friction and wear on the cable. Secured to the right hand side of the frame 8 is a frame 30 having formed integral therewith projections or lugs 31 through which screws 32 pass. This is for the purpose of securing the frame 30 to the typewriter frame 7. Formed integral with the frame 30 are bearings 33 and 34 and in these bearings is mounted a shaft 35, which shaft has its end 36 turned around so as to fit in the bearing 33 and also to receive the set collar 37. The shaft 35 is square, as illustrated in Fig. 2, and has mounted near its opposite end a bushing 38, which is located in the bearing 34. Mounted on the square portion of the shaft 35 is a sheave wheel 39,

which is secured in position by means of the set screw 40. The purpose of this set screw is to adjust the wheel 39 along the shaft so that the cable 26 will be properly fed thereon. Projecting from the bearing 34 is a turned portion 41, which is formed integral with the shaft 35 and on this portion is mounted a sheave wheel 42 around which the cable 43 is adapted to wind, the free end of this cable being attached to a treadle 44. Secured to the frame 30 is an eyelet 45 through which the cable 26 passes, this eyelet acting as a guide for the cable between the tube 29 and sheave wheel 39. The treadle 44 is provided with a heel rest 46 to which the treadle is pivotally secured. This heel rest has a projecting portion 47 and formed integral with this projecting portion is a screw-threaded lug 48 in which is seated a screw 49. This screw limits the depression of the treadle 44 and is so regulated that when the carriage is brought to its farthest point to the right the treadle will rest on the head of the screw 49 and prevent undue strain on the cable 43 and the balance of the mechanism. Secured on the shift keys 10 and 11 is a plate 50. This plate has a pair of prongs 51 formed integral therewith and parallel thereto. These prongs are designed to contact with the underface of the key and to straddle the key bar 52. The front of the plate 50 is provided with a pair of downwardly projecting prongs 53, which are designed to prevent the plate 50 from slipping off of the key backward and with the projecting arm 54 to which one end of cable 55 is attached. The other end of this cable being attached to one of the treadles 56.

In Fig. 7 I have shown a double treadle, which is necessary for a typewriter employing a double shift; or in other words a typewriter in which there are three characters on every key. Where my device is used on a machine employing only two characters on each key, a single treadle constructed like the treadle 44 is used.

I have shown my device attached to a typewriter of the Oliver type and will explain its operation thereon. I have, however, not gone into the detail in which the line spacing mechanism is operated as this forms no part of my invention and is well known to the trade. Furthermore, it is obvious that by minor details in construction, such as can be made by anyone skilled in the art, my device can be used on any make of typewriter and I, therefore, do not desire to limit myself to the precise construction shown in the drawings.

After the device has been placed in position on the machine, as shown in Fig. 1, the keys are operated feeding the machine toward the left. This unrolls the cable 26 from the sheave 39 and at the same time

winds up the cable 43 on the sheave 42 thereby raising the pedal 44. In the event the operator wants to strike a capital letter or use some character in which it is necessary to use the shift key the pedal 56 is depressed and the shifting accomplished without the use of the hands. When the carriage has completed the line the pedal 44, having been raised by the winding up of the cable 43, is depressed. This unwinds the cable 43 from its sheave and winds up the cable 26. During this operation the knob 19 and sleeve 18 are pulled forward on the shaft 12. This engages the end 16 of the lever 17 with one of the teeth formed on the toothed wheel 13. The continued strain on the pedal 44 now draws the carriage toward the right and when the carriage has almost completed its movement toward the right the segment 15 is partially turned by means of a mechanism well known on a typewriter of the Oliver type. This in turn partially rotates the segment 14 and this in turn imparts motion to the end 16 of the lever 17. This end 16 being in engagement with one of the teeth on the toothed wheel 13 will rotate the platen 9 and give the proper spacing.

Having fully described my invention, what I claim is—

1. A typewriter attachment, comprising in combination with a typewriter frame having a carriage slidably mounted thereon and a knob attached to said carriage, a housing loosely mounted on said knob, a frame detachably secured to the typewriter frame, a shaft mounted in said frame, sheave wheels secured on said shaft, a cable secured around each sheave wheel and wound in opposite directions, one of said cables being secured to the typewriter frame and passing around the carriage and through said housing, a treadle secured to the remaining cable for rotating said sheave wheels for returning the carriage to its starting position.

2. A typewriter attachment, comprising in combination with a typewriter frame having a carriage slidably mounted thereon and a knob secured to said carriage, a housing loosely secured to said knob, a cable secured to the typewriter frame and passing through said housing, a treadle, brackets secured to the typewriter frame, a shaft mounted in said brackets, sheave wheels mounted on said shaft, a cable attached to one of said sheave wheels, its opposite end being secured to the treadle, a cable secured to the frame and passing through the housing, and being secured to the remaining sheave wheel, said cables and sheave wheels adapted to return the carriage to its starting point when the treadle is depressed.

In testimony whereof, I have signed my name to this specification.

DEMETRIUS K. HOWELL.