B. R. LEE.

TYPE WRITER ATTACHMENT.

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Fig. 2.

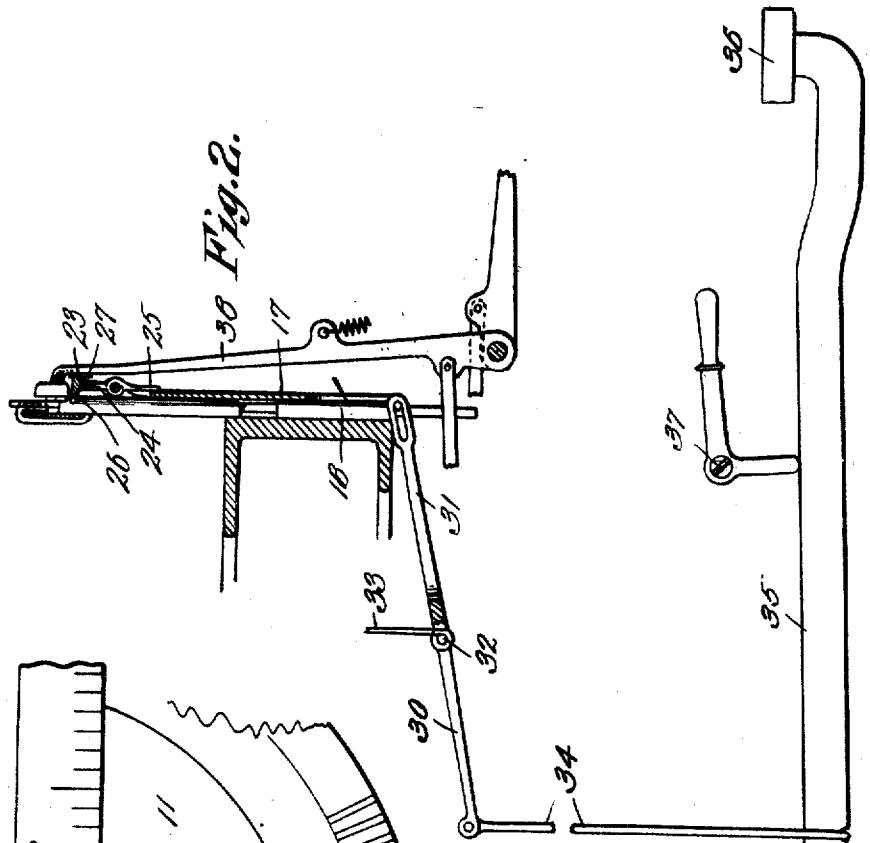
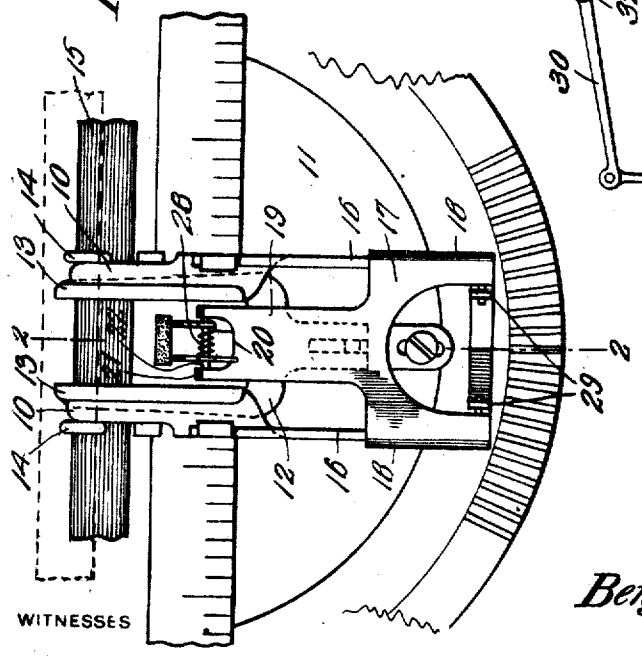


Fig. 1.



WITNESSES

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TYPE-WRITER ATTACHMENT.

1,268,368. Specification of Letters Patent. Patented June 4, 1918.

Application filed November 2, 1917. Serial No. 199,929.

To all whom it may concern:

Be it known that I, BENJIMAN R. LEE, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Type-Writer Attachments, of which the following is a specification.

This invention has relation to improvements in typewriting machines, and has for an object to provide an underscoring device operable automatically during the ordinary operation of the machine.

Another object of the invention is to provide an underscoring device for typewriting machines embodying an underscoring type movable into a position to be engaged by the type bar, whereby a dash is formed beneath the letter struck.

A still further object of the invention is to provide an underscoring device for typewriting machines, mounted to rest normally in an inoperative position with means for adjusting the device in an operative position to be engaged by the type bars in the manner described above.

A still further object of the invention is to provide an underscoring device for typewriting machines which is simple in construction comprising few parts, thereby permitting its manufacture at a low cost and enabling the device to be embodied in typewriting machines of standard makes.

In addition to the foregoing my invention comprehends improvements in the details of construction and arrangement of the parts to be hereinafter more fully described and particularly set forth in the appended claims.

In the accompanying drawings in which similar and corresponding parts are designated by the same characters of reference throughout the several views in which they appear:

Figure 1, is a view in front elevation of the ribbon holder and correlated parts of a conventional form of typewriting machine illustrating the embodiment therein of my invention, and

Fig. 2, is a vertical section taken on the line 2—2 of the preceding figure.

I have illustrated in the accompanying drawings a ribbon holder of a conventional form of typewriter, which consists of a pair of vertical guides 10 stationarily mounted upon a portion 11 of the machine frame. A vertically movable plate 12 is mounted between the guides having edges 13 turned over to form grooves to receive the guides 10, said plate 12 carrying fingers 14 at opposite sides in which the ribbon 15 is engaged. Suitable mechanism is usually provided to elevate the plate 12 to raise the ribbon 14 in a position in front of the platen for engagement by the type of the type bar to make the desired impression on the paper. The normal position of the plate 12 is down, thus lowering the ribbon and permitting uninterrupted view of the writing as it progresses.

For the purposes of my invention I provide a pair of slender rods 16 which may depend from the guide 10 to form guides for a vertically movable plate 17 having opposite vertical edges rolled as at 18 to receive the rod 16 therein. The plate 18 is formed with a vertical extension 19 having its upper end cut away as at 20 to form terminals 21 which are bent around a horizontal rod 22 forming a shaft. My underscoring device also includes an inverted U-shaped type holder 23 having its arms 24 apertured to receive the rod 22 with one arm extended as at 25 to engage the outer face of the extension 19 of the plate 18. The type holder is thus mounted for pivotal movement, and the bight portion is provided with a type face 26 to engage the paper held upon the platen and the front face of the bight portion is provided with a facing 27 of rubber or other material to form a cushion. A coil spring 28 is then embraced about that portion of the rod 22 located between the arms 24 with one terminal of said spring engaging one of the arms and the other terminal the extension 19 whereby to normally retain the upper end of the type holder away from the platen so as to avoid the ribbon when the plate 17 is elevated or depressed, or when the ribbon holder is elevated or depressed during a raised position of said plate 17 in a manner which will be presently obvious.

A pair of inwardly directed pins 29 are secured to the lower portion of the plate 17, and a rod 30 is provided having its forward end bifurcated as at 31 and each member of said bifurcated portion apertured to receive one of the pins 29. A pair of trunnions 32 are formed on said rod at a point intermediate its length, for support in a

bearing 33 mounted on any stationary portion of the typewriting machine frame, while the rear end of the rod 30 is connected to a downwardly extending link 34 having its lower end pivotally connected to a key bar 35 which extends forwardly and is provided with a key 36. It will be apparent that by depressing the key 36 motion will be transmitted from the key bar 35 through the link 34 and rod 30 to the plate 17, thus elevating the plate and disposing the type 26 in a position to be engaged upon the platen. Any suitable device such as a lever 37 may be provided to retain the key bar 35 in a depressed position. For this purpose the mechanism usually provided to hold the shift key down will suffice.

In operation, and to use the underscoring device the key 36 is depressed whereby the plate 17 is elevated and the type face 26 thus positioned so as to engage the platen and inscribe a dash at a point beneath the letter which is struck and formed simultaneously with the formation of the dash. It will be seen that the facing 27 of the type holder is in a position to be directly engaged by the type bar indicated at 38 when the type holder is in an elevated position. Thus, the dash and letter is formed simultaneously and each letter will thus be underscored automatically without the further attention of the operator, as long as the underscoring device is in an elevated position.

While I have illustrated and described my invention with some degree of particularity, I realize that in practice various alterations thereof may be made, and I therefore desire to reserve the right and privilege of changing the form of the details of construction, or otherwise altering the arrangement of the correlative parts without departing from the spirit of the invention or the scope of the appended claims.

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

1. In a typewriting machine, the combination of an underscoring device including a vertically movable plate, a horizontal rod carried by said plate, a type holder carrying an underscoring type pivotally mounted on said rod, a spring engaging the type holder to retain the same normally in an outward position, means for limiting such outward movement, and means for elevating the plate to locate the type holder in a position to be engaged by each type bar to underscore each letter struck.

2. In a typewriting machine, the combination of an underscoring device including a vertically movable plate, a horizontal rod carried by the upper end of said plate, a type holder carrying an underscoring type, said holder being in the form of an inverted U-shaped member having its terminals apertured to receive a rod, a coil spring encircling said rod, having one terminal engaging the holder and the other the plate to retain the holder in a normally outward position, an extension on one of the arms of said type holder to engage the plate to limit the outward movement of the type holder, and means for elevating the plate to be engaged by each type bar to underscore each letter struck.

3. In a typewriting machine, the combination with the guides of the ribbon holder of a depending rod secured to each guide, a plate having opposite vertical edges rolled over to engage the rods whereby to permit a vertical movement of said plate, a vertical extension on said plate, a horizontal rod carried at the upper end of said plate, a type holder substantially U-shaped having its terminals directed downward and apertured to receive the rod, a coil spring encircling said rod engaging the type holder to retain the same in normally outward position, an extension on said type holder engaging the plate to limit such outward movement, an underscoring type carried by said type holder, a facing of resilient material on the front face of said type holder, a rod fulcrumed at an intermediate point and having its forward end bifurcated and pivotally secured to the plate, a link depending from the opposite end and a key bar having a pivotal connection to said link whereby the plate may be elevated upon depression of said key bar to locate the type holder in the position to be engaged by each bar to record an underscoring character beneath each letter struck.

4. In a typewriting machine, a plate mounted for vertical movement adjacent the ribbon supporting mechanism, a pair of upstanding members on said plate, a pintle carried between said upstanding members, a U-shaped member having its terminals apertured to receive the pintle, an extension on one terminal to engage the plate to limit outward movement of said U-shaped member, a type carried by said U-shaped member, a coil spring encircling said pintle having one end connected to the plate and the other to the U-shaped member and means for elevating the plate to position the type for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

BENJIMAN R. LEE.

Witnesses:
WILLIAM B. CLEAGE,
J. E. TOUSLEY.