

955,224.

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SIGHT-ASSISTING ATTACHMENT FOR TYPE-WRITERS.

955,224.

Specification of Letters Patent.

Patented Apr. 19, 1910.

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To all whom it may concern:

Be it known that I, PERRY E. TAYLOR, a citizen of the United States, and resident of the city and county of Schoharie, State of New York, have invented an Improvement in Sight-Assisting Attachments for Type-Writers, of which the following is a specification.

My invention has reference to sight assisting attachment for typewriters and consists of certain improvements fully set forth in the following specification and shown in the accompanying drawings which form a part thereof.

The object of my invention is to provide means whereby the operator of that class of typewriter designed for typewriting in books, may be enabled to readily see the typewriting being placed upon the page of the book, whenever desired, without the necessity of lifting the heavy typewriter carriage. The advantage of this will be readily understood when it is kept in mind that the typewriter for this class of work is practically inverted and the entire typewriter including the key board and type bars and their connecting frames is required to travel over the book, and has heretofore been required to be bodily lifted to obtain a clear view of the typewriting when necessary. Some provision is made whereby the operator by leaning over the machine and looking down between the keys and through the basket containing the type bars may, by displacing the typewriting ribbon obtain a view of the typewriting, but this necessitates the shifting of position and considerable delay in operating the machine. Because of this delay and difficulty in obtaining a view of the typewriting, it is customary to lift the machine each time a view of the printing is desired, and this is very laborious considering the number of times this heavy mechanism would be lifted in a day's work.

The object of my invention is to provide a simple attachment which by means of reflectors with or without magnifying capacity will enable the operator at all times to have a clear view of the type by merely shifting the ribbon adjusting lever. It obviates the necessity of the operator shifting his position to obtain a view of the printing, it removes all necessity for laborious operation, it reduces the wear and tear on the machine, it increases the capacity of the

operator to perform a maximum quantity of work in a given time. In addition to the above advantages, it enables the view of the printing to be greatly magnified so that the operator may, with greater facility and accuracy, read the printing, and this is especially advantageous when the room is not very light or when shadows may mar the clearness of the typewriting.

My invention consists of a frame adapted to be supported in any suitable manner and provided with two mirrors or reflectors arranged at different angles so as to cause the reflection of an upright beam of light leading from the printed matter to be changed into a lateral beam of light directed toward the operator whereby by looking substantially horizontally he may see the typewriting which is arranged below the said mirrors or reflectors.

My invention also consists in making the said reflectors relatively adjustable whereby they can be adjusted as to relative angles or to and from each other to adapt them to the typewriting machine.

My invention further consists in so constructing the mirrors or reflectors, or either of them, whereby the characters being reflected in the beam of light are magnified in the lateral or deflected beam of light.

My invention also comprehends details of constructions which, together with the features above specified, will be better understood by reference to the drawings, in which—

Figure 1 is a sectional elevation of a reflector device adapted for a typewriter embodying my invention; Fig. 2 is a plan view of the same; Fig. 3 is a diagrammatic sectional elevation showing my improved reflecting device in connection with a typewriter; Fig. 4 is a diagrammatic plan view illustrating the position of the reflectors with respect to the upper keys of the typewriter; Fig. 5 is a sectional elevation showing a modification of my improved invention when adapted to read manuscript or typewriting when in position that it could not otherwise readily be read.

2 and 3 represent the support for the page of the book to be typewritten and the part 3 further acts as a guide for the typewriter carriage 4. The typewriter for which my invention is especially intended is of an inverted class and more particularly comprises a pivoted frame 5 carrying the basket and

the type bars as well as the keys and this frame is adapted to be fed transversely across the parts 2 and 3 and frame 4.

7 and 8 represent the key levers.

10 represents the printing ribbon and 11 is a guide therefor carried by the pivoted frame 5 by which it may be shifted so as to permit a view of the typewriting upon the page of the book when desired. The middle, upper key levers 8 are bent as indicated at 9 in Fig. 4 to leave a space through which the typewriting can be seen. My reflecting device may be attached to the typewriter frame 5 by means of clamps 13 formed on the lower part of an upright frame 12. Secured to this upright frame 12 is an angle frame 14 having slots 15 through which clamping bolts 16 pass, said bolts being connected with the frame 12. In this way the frame 14 may be adjusted vertically. Secured to the horizontal arm of the angle frame 14 is another angle frame 17 provided with slots 18. Clamping bolts 19 pass through the frame 14 and the slots 18 of the frame 17 and may be employed to adjustably clamp the frames 17 and 14 together. A mirror frame 20 is adjustably secured against the upright portion of the frame 17 and is provided with clamping bolts 22 which extend through vertical slots 21 in the frame 17 and by which the mirror frame may be adjusted vertically. A mirror 23 is carried by the mirror frame 20.

26 represents two adjustable arms comprising parts 27 and 28 having slots through which adjusting clamping bolts 29 pass and by means of which the said arms may be adjusted as to their length. The free ends of the parts 27 are adjustably clamped at 31 to the mirror frame 20 at each side and said arms 26 may in this manner be radially adjustable with respect to the mirror frame. The free ends of the parts 28 are adjustably clamped at 30 to a reflector frame 24 which is provided with a reflector or mirror 25. By adjusting the mirrors or reflectors 23 and 25 relatively to each other with respect to the typewriting machine a beam of light may pass from the printed matter to the mirror 25 and be reflected therefrom to the mirror 23 and thence to the eye of the operator. In this manner the typewriting can at any time be seen by merely withdrawing the printing tape 10 to one side. This obviates the necessity of lifting the heavy typewriting machine when it is desired to view the typewriting.

If desired a magnifying lens 32 may be employed for magnifying the printing and ordinarily I prefer to apply this magnifying lens 32 to the mirror or reflectors 23 being secured thereto by metallic clips 33. It is evident that the back of the lens itself might be made a reflector. It is immaterial to my invention what the particular details

of construction are with respect to the adjustable features of the frame work or of the character of the lenses themselves so long as they may be combined and supported in such a manner as to enable the typewriting to be reflected to the operator and obviate the necessity of lifting the carriage. As shown, the reflecting device is secured to the pivoted frame 5 of the typewriter and consequently moves with it in every direction even when tilted. For convenience in reading the manuscript or copy which is being typewritten, a duplicate of the reflector device may be clamped upon a support 34 (Fig. 5) which may have a slot 35 through which to view the written or printed matter of the manuscript or copy. This would enable the operator to read the copy without having to lean forward from his position for typewriting.

While I have shown my invention more especially adapted to book typewriting machines, I do not restrict myself thereto as my improved reflecting device may be used in connection with other machines or for other uses.

While I prefer the construction shown, I do not limit myself to the details thereof as these may be modified in various ways without departing from the spirit of the invention.

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

1. A typewriting machine having type-bars and keys arranged above them and the said parts constructed so as to expose printed matter below them when looking down upon and between the keys, and a supporting frame for said type-bars and keys, in combination with reflecting means having a reflecting surface arranged above the keys and type-bars for receiving an upwardly directed beam of light from the printed surface below the type-bars and keys and said means arranged for reflecting said beam of light in the direction of the operator and supported so as to maintain a normally definite fixed relation with the frame supporting the type-bars during the printing operation.

2. In a reflecting attachment of the character described, the combination of a frame provided with means to detachably clamp it in position, two reflectors carried by the frame at a distance apart and having their reflecting surfaces directed toward each other and angularly arranged with respect to each other, and means for adjusting the two reflecting surfaces relatively with respect to each other.

3. In a device of the character described a clamping frame, a reflector supported by the clamping frame, an extensible frame hinged to the clamping frame, means to clamp the

extensible frame in various positions of adjustment, and a second reflector hinged to the free end of the extensible frame whereby it is adjustable as to its angle and relatively to and from and also vertically with respect to the reflector on the clamping frame.

4. In a device of the character described a clamping frame provided with adjustable parts whereby it may be extended horizontally and vertically, a reflector supported by the clamping frame most distant from the clamp thereof, an extensible frame hinged to the clamping frame, means to clamp the extensible frame in various positions of adjustment, and a second reflector hinged to the free end of the extensible frame whereby it is adjustable as to its angle and relatively to and from and also vertically with respect to the reflector on the clamping frame.

5. In a machine of the character described, the combination of a typewriter having type bars and operating keys extending above the bars and said keys so shaped as to form a substantially central opening downward through the machine, a support for the paper and upon which the typewriter with its keys and type bars travel,

and a reflector device supported by the typewriter above the central opening formed by the keys and movable relatively to the support for the paper.

6. The combination of a typewriting machine having type bars and supporting frame therefor, with two reflecting surfaces arranged wholly above the same and at an angle to each other for reflecting a beam of light upward from the surface being printed below the machine to and in the direction of the operator, means for supporting the said reflecting surfaces above the operative portion of the machine and so as to maintain a normally definite fixed relation with the frame of the machine supporting the type bars, and means to shift the typewriter ribbon out of printing position whereby the characters previously printed below it may be reflected by the reflectors.

In testimony of which invention, I hereto set my hand.

PERRY E. TAYLOR.

Witnesses:

R. M. HUNTER,
R. M. KELLY.