E. H. WISNER.

TYPE WRITER.

APPLICATION FILED JUNE 27, 1913.

1,098,542.

Patented June 2, 1914.

Fig. 1

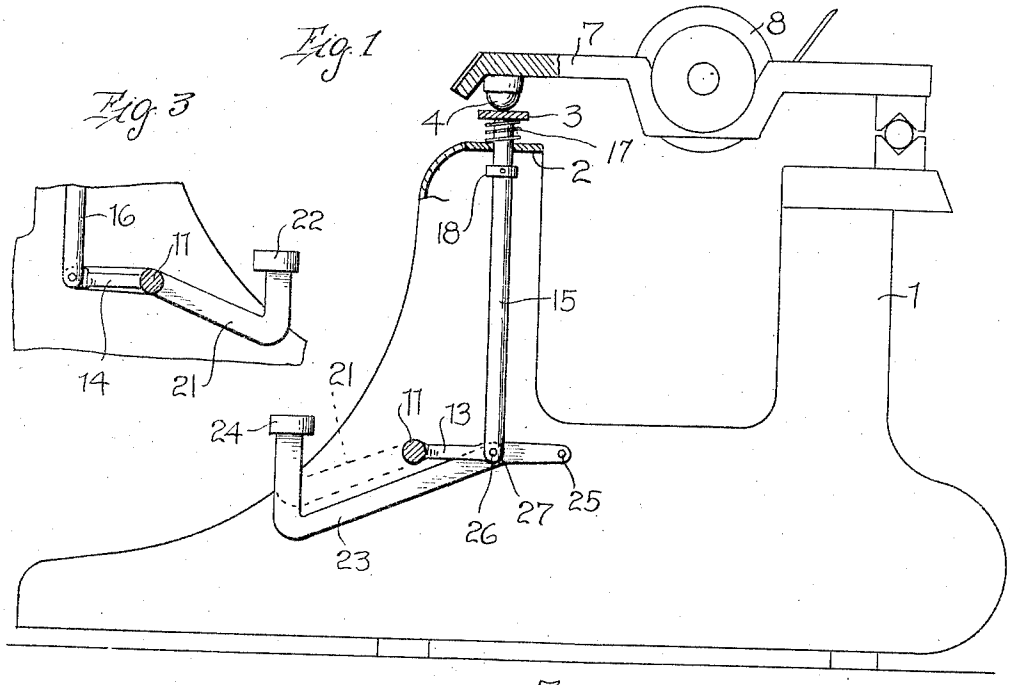
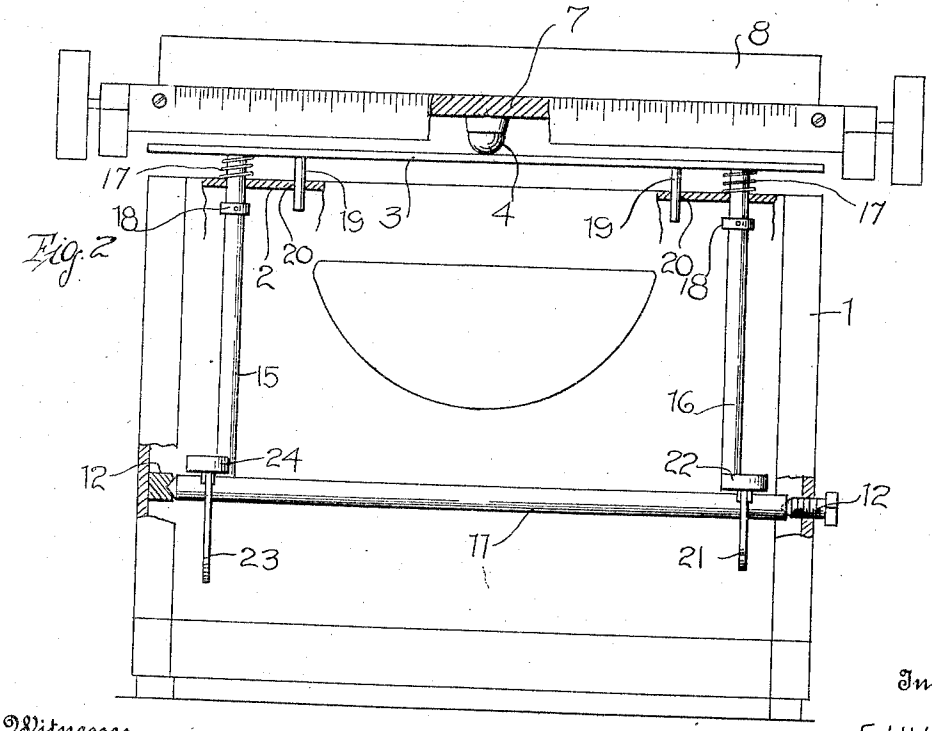


Fig. 3

Fig. 2



Witnesses

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EBER H. WISNER, OF WATERTOWN, SOUTH DAKOTA.

TYPE-WRITER.

1,098,542. Specification of Letters Patent. Patented June 2, 1914.

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To all whom it may concern:

Be it known that I, EBER H. WISNER, a citizen of the United States, residing at Watertown, in the county of Codington and State of South Dakota, have invented certain new and useful Improvements in Type-Writers, of which the following is a specification, reference being had to the accompanying drawings.

This invention comprehends certain new and useful improvements in typewriters and has for an object to provide improved mechanism for raising or lowering the carriage within which the platen roller is mounted to vary the point at which the type upon the type bars strike the platen.

Another object is to provide improved mechanism for varying the position of the platen with respect to the type bars, whereby each type will be given a number of different positions, as may be desired.

Another object is to provide mechanism of the above stated character which will be of extremely simple construction and operation and which will readily raise or lower the member or members upon which the platen carrying carriage is mounted.

A further object is to provide mechanism of this character which will be positive and accurate in operation and also to provide means for resiliently retaining the carriage supporting means in normal position.

With the above and other objects in view, my invention consists in certain novel constructions, combinations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which,

Figure 1 is a transverse vertical sectional view through a typewriter of conventional form with my improved carriage raising and lowering mechanism applied thereto, the operative parts of the machine being removed and the framework and carriage being simply shown in outline with parts thereof in section; Fig. 2 is a front elevational view of the machine with my attachment applied thereto, said view being partly shown in section; and Fig. 3 is a detail side elevational view of a carriage raising lever and parts to which said lever is connected.

Referring more specifically to the drawings in which similar reference characters designate corresponding parts throughout the several views, 1 designates the frame, above the upper strip 2 of which is positioned the vertically movable strip 3 upon which is engaged the bearing ball 4 carried in a suitable socket formed on the under face of the carriage 7, by which is carried the usual platen roller 8. The framework, platen, etc., as shown, are of the Fox typewriter construction, but, it will be understood that these parts may be of any construction desired.

Beneath the upper stationary strip 2 of the frame-work is positioned the rock shaft 11 which has its opposite ends rotatably mounted in the bearing member 12 carried upon the inner faces of the end members of the frame 1. Extending from the rock shaft 11 are the laterally directed arms 13 and 14 and to the free end of the arm 13 is hinged the lower end of the upstanding rod 15 while the lower end of a similar rod 16 is hinged to the free end of the arm 14. The arms 15 and 16 extend through the stationary strip 2 and have their upper ends secured in the vertically movable strip 3, at spaced distances from the opposite ends of said strip and a helical spring 17 is secured around a portion of each of the rods 15 and 16 between the strips 2 and 3 and serve to retain the vertically movable strip 3 in its normal or central position. Each of the rods 15 and 16 has a stop collar 18 mounted thereon a spaced distance from its upper end and adapted for engagement at times against the under face of the stationary strip 2 to limit upward movement of said rods 15 and 16. The vertically movable strip 3 is guided in its vertical movement by means of its guide pins 19 which depend from its under face and project through suitable openings 20 in the stationary strip 2. The vertically movable strip 3 is raised by means of the lever 21 which is mounted upon the rock shaft 11, at one end of the same and is connected with the laterally directed arm 14, whereby the arm 14 will be caused to swing upwardly and force the rod 16 upwardly when the forward end of said lever 21 is pressed downwardly, it being understood that said forward end is curved upwardly and has the key 22 formed upon its extremity. It will also be evident that the rock shaft 11 will be caused to rock in the proper direction, thereby causing the arm 13 to swing upwardly and raise the rod 15 with the rod 16, whereby both ends of the vertically movable strip 3 will be raised to the same height. It will be evident that

when the key 22 is released, the lever 21 will be caused to return to its normal position, thereby allowing the rock shaft 11 to rock in the reverse direction, under action of the spring 17 until the strip 3 is again in normal position. The vertically movable strip 3 is drawn downwardly by means of the lever 23 which has its forward end turned upwardly and provided with the key 24 upon its extremity. The lever 23 is pivoted at its rear end to the adjacent end member of the frame 1 as shown at 25 while the hinge pin 26 connecting the lower end of the rod 15 with the free end of the arm 13 is extended through the lever, a spaced distance from the rear end thereof, as shown at 27. It will be evident that when the key 24 is pressed downwardly, the lever 23 will be caused to swing upon its pivot 25 and thereby draw downwardly upon the rod 15 causing the arm 13 to swing downwardly and thereby rock the rock shaft 11 in the proper direction and cause the arm 14 to also swing downwardly and draw down the rod 16 with the rod 15 and thereby cause downward movement of the opposite ends of the vertically movable strip 3, it being understood that the carriage 7 will, owing to the weight of the same, also move downwardly with the strip 3.

From the foregoing it will be apparent that I have provided a simple and novel form and arrangement of parts whereby the carriage 7 carrying the platen roller 8 may be readily raised or lowered with respect to the type carrying bars, thereby making it possible to write any character desired slightly above or slightly below the main line of characters, as is often necessary in the work of a mathematician or scientist.

While I have shown the preferred construction and arrangement of coöperating parts, it will be understood that minor changes in the details of construction may be made within the scope of the appended claims without departing, in the slightest degree, from the spirit of my invention.

What I claim is:—

1. The combination with a carriage mounted for rocking movement at its rear edge, of a plate resiliently supported in normal position beneath the forward edge of the carriage, the forward edge of the carriage resting upon said plate, and means for raising and lowering the plate to vary the height of the forward edge of said carriage.

2. The combination with a carriage, carriage supporting means and frame, of a rock shaft carried by the frame, vertically movable members connected with the carriage supporting means, connections between the vertically movable members and the rock shaft, means for guiding the carriage upon the carriage supporting means, means connected with one of the vertically movable members for rocking the shaft in one direction to raise the carriage supporting means and carriage a predetermined distance, means connected with the other vertically movable member for rocking the shaft in a reverse direction to lower the carriage supporting means and carriage a predetermined distance, and means for guiding the carriage supporting means.

3. In a typewriter, the combination with a frame including a front horizontal strip, a carriage, means for mounting the rear edge of the carriage upon the frame, a rock shaft mounted in the frame, a pair of spaced arms projecting rearwardly from said rock shaft, a pair of reciprocating rods carried by said arms and projecting through the front horizontal strip, a vertically movable horizontal strip carried by the reciprocating rods above the horizontal front strip, a socket formed on the under face of the forward portion of the carriage, a bearing ball mounted in said socket and engaged upon the vertically movable horizontal strip, means for resiliently retaining the vertically movable horizontal strip in spaced relation to the horizontal front strip, means connected with one of the arms for raising the vertically movable strip, and means connected with the other arms for lowering the vertically movable strip.

4. The combination with a frame and a carriage mounted upon the frame for rocking movement at its rear edge, a plate above the frame and beneath the forward edge of the carriage, a bearing member carried by the forward edge of the frame and resting upon the plate, means for resiliently retaining the plate in normal position, a rock shaft, connections between the rock shaft and the plate, and means for operating the rock shaft to raise and lower the plate, whereby the carriage may be rocked at its rear edge to vary the height of the forward edge thereof.

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

EBER H. WISNER.

Witnesses:
H. J. Fahnestock, Jr.,
S. E. Hanson.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."