Feb. 5, 1935. H. NOCKEN 1,990,415

THRUST ROD TYPEWRITER WITHOUT SHIFTING DEVICE

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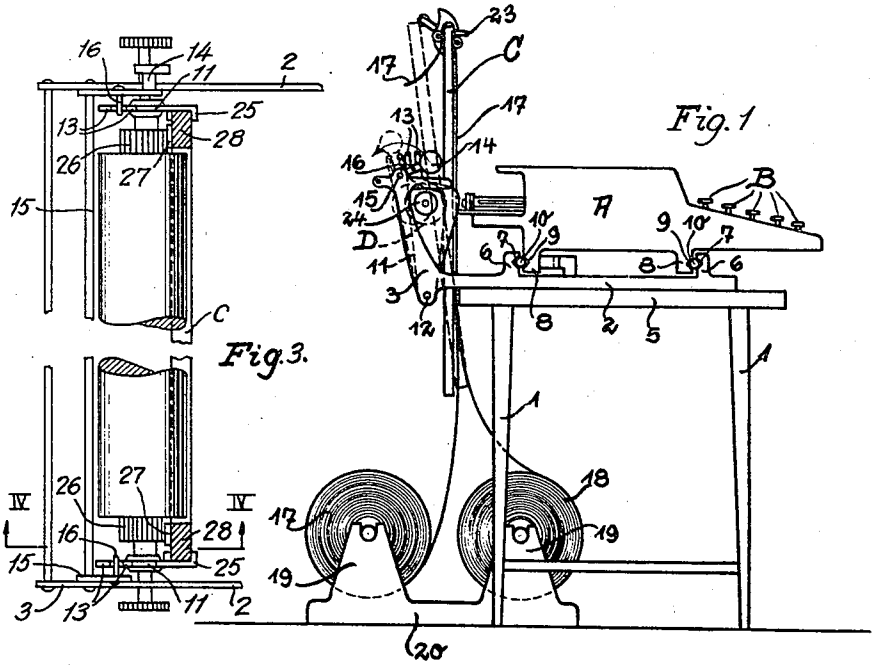


Fig. 1

Fig. 3.

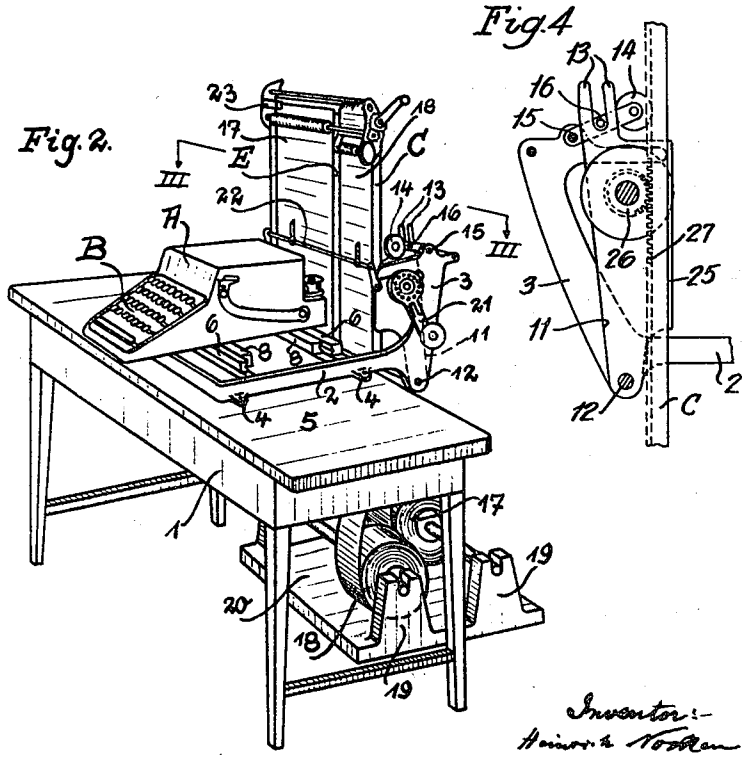


Fig. 2.

Fig. 4

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THRUST ROD TYPEWRITER WITHOUT SHIFTING DEVICE

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2 Claims. (Cl. 197—2)

This invention relates to the construction of a typewriter, chiefly for typing forms printed on a long rolled band. In the known typewriters, equipped for this special purpose, the rolls with the paper webs are situated behind the machine in a bearing frame connected to the carriage of the typewriter, that is participating in the movement thereof. Thus the number and weight of the rolls is limited. Further the returning of the carriage into its initial position requires considerable force. Typewriters are also known, in which the paper rolls are stationary and the carriage is shifted alone. This arrangement is open to the objection that the typing on the rolls becomes distorted and the rolls themselves do not run properly in the machine. The paper rolls are often continuously printed as forms and are intended to receive the text of cards placed in front of the roll to be directly typed on the typewriter. It is very difficult with the above mentioned machines to ensure that the printed matter on the original accurately registers with that on the rolls. According to the invention all these disadvantages are overcome and a very simply constructed typewriter is produced for typing forms printed on long rolled bands. It is novel and fundamentally important for the invention that the typewriter platen is mounted entirely separately from the striking mechanism of the machine, stationary in a frame and the striking mechanism is shiftable on the frame independently of the typewriter platen in front of same and in axial direction thereto.

In the frame carrying the platen and the striking mechanism, the paper or form rolls are mounted, the webs of these rolls being adapted to be pulled through the space between the platen and the striking mechanism and to be pressed against the platen.

An embodiment of the invention is illustrated by way of example in the accompanying drawing, in which:—

Fig. 1 shows the new typewriter in side elevation and

Fig. 2 in perspective view.

Fig. 3 is a section on line III—III of Fig. 2.

Fig. 4 is a section on line IV—IV of Fig. 3.

A framework composed of a frame 2 and lateral cheeks 3 is fixed by means of lugs 4 on the top plate 5 of a table 1. The frame 2 carries transverse guide bars 6 with grooves 7 in their facing surfaces for guiding the printing unit A. The printing unit consists of a keyboard B with all the numbers and only one set of type, for example the capital letters, and has no type lever shifting mechanism. This typewriter differs from the known typewriters only in that the whole machine moves whereas the carriage remains stationary with the platen. The casing of the printing unit A has base bars 8 with grooves 9, which are situated opposite the bars 6. Balls 10 are mounted in the grooves 7, 9 so that the printing unit A, guided by the balls 10, can be shifted backwards and forwards transversely to the frame. The spring winding mechanism, as is usually provided on the carriage of typewriters, can automatically effect the movement of the printing unit A in one direction.

The typewriter platen D is arranged between the lateral cheeks 3 of the framework. It is mounted in levers 11, which are oscillatable near their lower ends with an axle 12 connecting same in the cheeks 3, the upper ends of these levers forming forks 13. In the upper portion of the cheeks 3 a lever 14 is shiftably mounted on a pivot 15 and engages by means of a pin 16 in the gap of the fork 13, thereby enabling the typewriter platen, carried by the arms 11, to be shifted from the position shown in full lines in Fig. 1 into that shown in dotted lines. A frame C, serving for clamping the original sheets and for accommodating the endless copying forms is fitted between the cheeks 3. The endless copying forms are fed by rolls 17, 18 which rest in bearings 19 of a frame 20 arranged between the table legs and are guided between the printing unit A and the typewriter platen B in upward direction over the covering E of the frame C. The frame C is shiftable tangentially to the platen D in the cheeks 3 of the guide grooves 25 and coupled with the platen by pinions 26 which mesh with racks 27 on the side bars 28 of the frame so that by turning the platen by means of a hand crank 21 mounted on the end of the platen the frame C is raised to feed the forms past the platen. The frame C is provided with a form pressing-on bar 22 and other elements for holding the original sheets and copy form webs 17, 18 and also with a knife for severing the forms from the roll webs, after they have been typed. The typewriter platen D has a hand wheel on the outer side for adjusting the line spacing, as is also known.

The machine operates in the following manner:

The individual rolls 17, 18, of which there may be any desired number, are pulled upwards over the covering E of the frame C, on which the original sheet to be written is then placed and held by means of the spring roller 22. In order to facilitate the inserting of the form roll webs,

the lever 14 is first thrown over and consequently the typewriter platen D and the frame C, together with the covering E, are swung outwards into the position shown in dotted lines in Fig. 1. After the clamping of the original sheets and copy webs, the typewriter platen and the frame are returned into the vertical position. The writing is then effected in the ordinary way, the line spacing being effected by raising the frame C by turning the hand crank on the platen causing the pinions to roll on the racks arranged at the sides of the frame C. The copying is effected in known manner by placing carbon paper between the original and form roll web or by carbon paper constructed as a roller, as is known in the production of endless forms.

During the typing merely the printing unit moves along in front of the frame C, E or the typewriter platen D, as the bars 8 of the printing unit, guided by the balls 10, slide on the stationary bars 6 of the frame 2. The typewritten matter is therefore entirely visible.

In order to prevent the printing unit from abutting against the hand crank 21 in its extreme position, it is automatically disengageable.

The details concerning the means for clamping the original sheets and the form rolls, for introducing same, and for supporting and shifting the typewriter platen, are subject to many variations. The feature of the invention consists merely in that, contrary to the ordinary typewriters, the typewriter platen is locally separated from the printing unit and is stationary, so that the printing unit shifts past same in axial direction and a gap exists between the platen and the printing unit which allows the introduction of the original sheets and forms printed on the rolls, and also that the form rolls are mounted stationary. Thus a particularly simple typewriter is produced, which is easy to operate and allows of clear visible writing.

I claim:—

1. A typewriter, comprising in combination a machine frame, a printing unit, cheeks hingedly mounted on said frame, a platen rotatably mounted in said cheeks, guides on the side of said cheeks adjacent said printing unit, a printing frame for the paper to be typed mounted in said guides shiftable tangentially to said platen, said cheeks adapted to swing away from said printing unit together with said platen and said printing frame, said printing unit shiftable longitudinally of said platen, means arranged between said frame and said cheeks and adapted to hold said cheeks, said platen and said printing frame in position for use, and further means between said platen and said printing frame adapted to shift said frame relatively to said platen during the rotation of said platen.

2. A typewriter, comprising in combination a machine frame, cheeks hingedly mounted on said frame, a platen rotatably mounted in said cheeks, a printing unit shiftable on said frame longitudinally of said platen, guides on the sides of said cheeks adjacent said printing unit, a printing frame mounted in said guides shiftable tangentially to said platen, racks on said printing frame, pinions on said platen meshing with said racks and movably coupling said platen with said printing frame, forks on the free ends of said cheeks, a positioning lever on said frame and engaging in said forks, said lever adapted to hold in position for use and to swing out said cheeks, said platen and said frame, and means on said printing frame for holding and severing the paper sheets.

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