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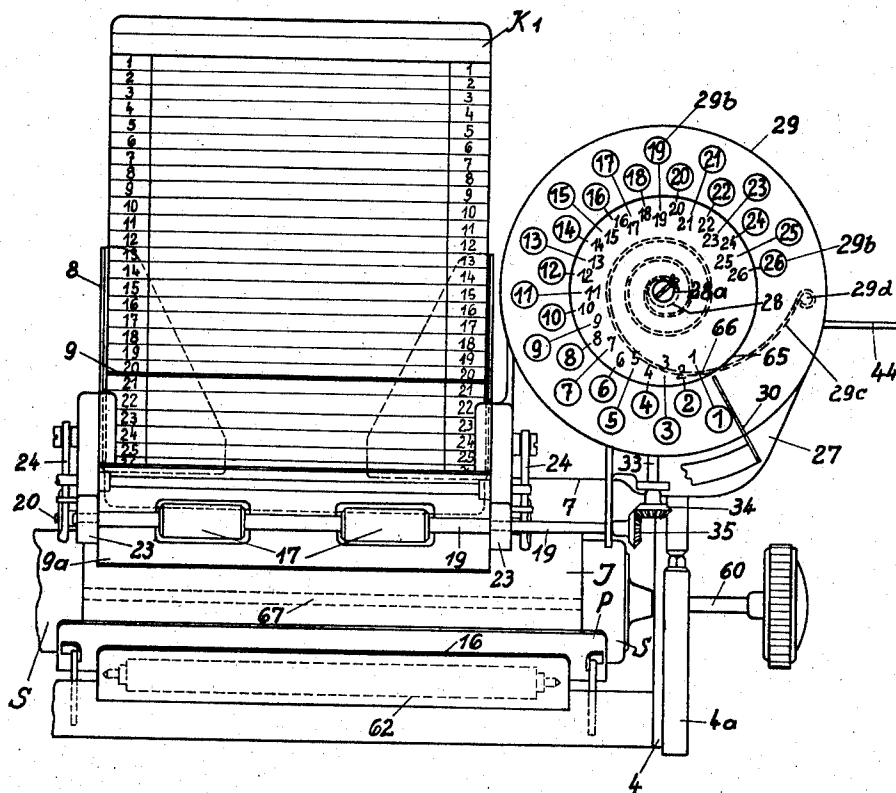
H. D. GEISER
TYPEWRITING MACHINE

2,200,693

Filed Dec. 7, 1937

3 Sheets-Sheet 1

Fig.1



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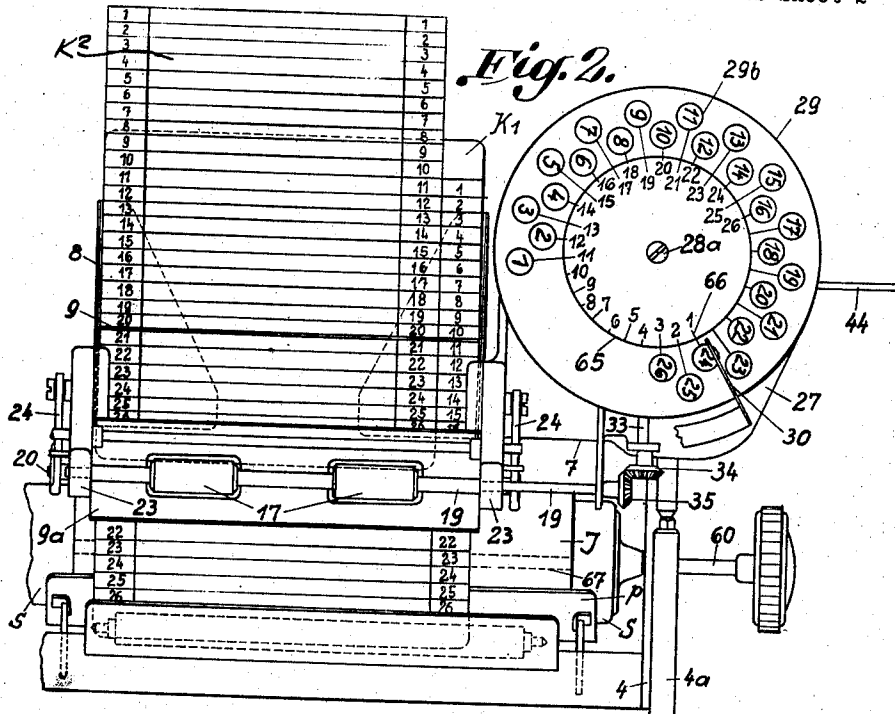
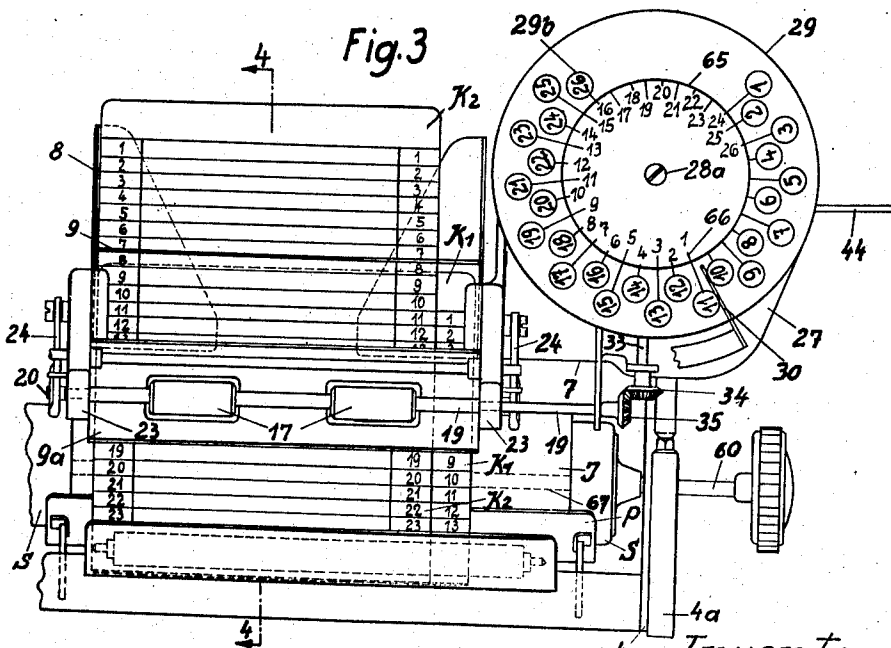
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3 Sheets-Sheet 2



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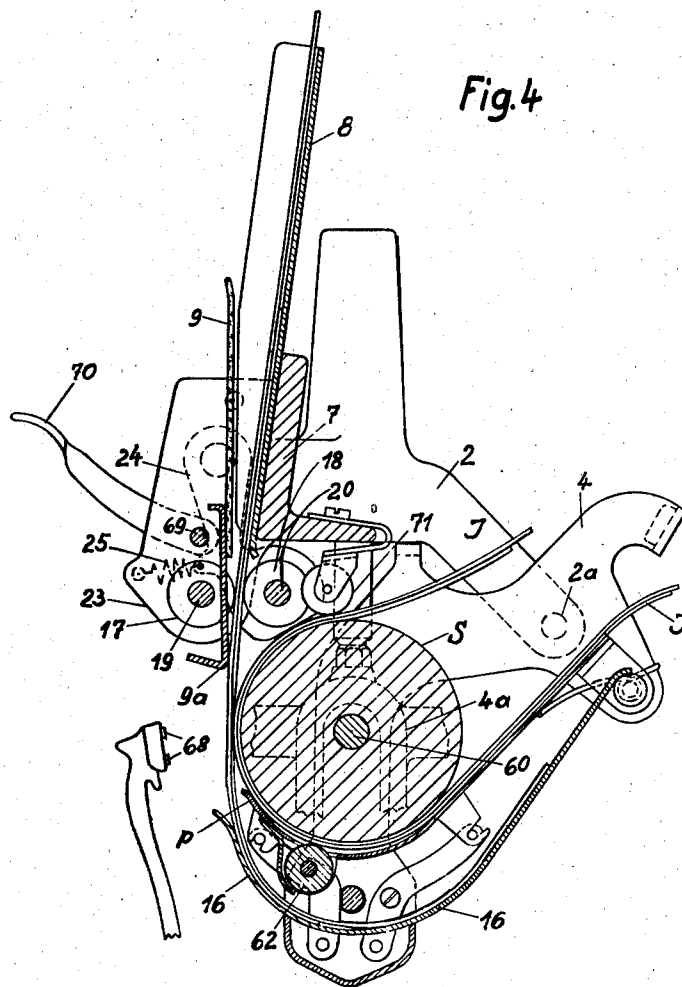
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,200,693

TYPEWRITING MACHINE

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9 Claims. (Cl. 197-119)

This invention relates to a mechanism in writing machines for inserting and adjusting front feed sheets in front of a foundation sheet in the machine by means of feed rollers disposed above the platen roller, said mechanism including means for actuating the feed rollers to feed the front sheets to desired lines, and line selection means having indicator numerals corresponding to the lines of the front feed sheets, according to U. S. Patent No. 2,086,945 issued July 13, 1937.

The object of the present invention is to improve mechanism of the above kind and to make it possible to insert and adjust a plurality of front feed sheets for simultaneously typing on different lines. According to the present invention this result is achieved by providing the selection means with two sets of indicator numerals corresponding to the lines of the front feed sheets, said sets being movable relatively to each other.

A mechanism embodying the invention is illustrated by way of example in the drawings in which Fig. 1 is a front elevation of the device in initial position, Figs. 2 and 3 are similar views showing the mechanism in different positions during its actuation, and Fig. 4 is a section on line 4-4 of Fig. 3.

In the mechanism illustrated in the drawings there is mounted on the non-feed portion 4 of the paper carriage of a typewriter, in which the platen roller S is rotatably supported about its axis 60, a frame consisting mainly of the members 2, 7, 27, this frame being removable. The frame can rock in the paper carriage portion 4 about pins 2a. The frame carries funnel shape guides 8, 9 located above the platen roller S in their position of rest. These guides 8, 9 direct a paper sheet placed in them to feed rolls 17, 18 which are also mounted in the frame above the platen roller. The front guide 9 is provided with an extension 9a extending downwardly over the feed rollers 17, 18. The frame is yieldingly supported relative to the non-feed portion 4 of the paper carriage. Below the platen roller S paper guides P and 16 are mounted in the non-feed portion 4 of the paper carriage. The paper guide P which is provided with pressure rolls 62, serves to hold and guide the foundation sheet J which is usually lapped around the platen roller S along with a carbon sheet. The paper guide 16, holds the front feed sheet, at its front end, which sheet is guided and advanced between guides 8, 9, 9a and the feed rolls 17, 18, and contacts with the platen roller S and the foundation sheet J at the typing line 67, at the level of the printing place

of the types 68, the sheet being guided under the lower surface of the platen roller, below the paper guide P and the press roll 62, and thence to the rear.

The feed rolls 17, 18 carried by shafts 19, 20 are rotatably mounted in the frame 2, 7, 27 by means of arms 23, 24. One of these arms 23, 24 is capable of rocking in the frame. By means of a spring 25 arranged between the arms 23, 24 the feed rolls 17, 18 are pressed one against the other. By means of a holding member 69 and a hand lever 70 the feed rolls can be separated from each other against the action of the spring 25.

The rotation of the feed rolls 17, 18 is effected by means of the shaft 19, the bevel wheels 34, 35, the vertical shaft 33, and gears, not shown, from an actuating member which in the illustrated instance consists of a rotary disk 29. The actuating or control member 29 is connected to a line selection means for effecting a selective rotation of the feed rolls 17, 18 and to feed the front sheet to a desired line. This selection means comprises a number of manipulative holds 29b in the form of finger holes marked with symbols, preferably numerals, corresponding to the lines of the front feed sheet. In the illustrated example numerals 1 to 26 are provided corresponding to 26 writing lines on each front feed sheet. The number of lines may obviously be reduced or increased according to the kind of front feed sheet employed. The front feed sheets are designated by references K¹ and K².

In addition to the set of symbols consisting of the numbered finger holes 29b, there is provided a further set 66 of symbols also corresponding to the lines of the front feed sheets K¹, K². These two sets of symbols can be moved relatively to each other, the second set 66 consisting of numbers arranged on a separate disk 65. The disk 65 does not follow the feed movements of the actuating means 29. It is fixed coaxially with the actuating means 29, by means of a screw 28a arranged in the axis of rotation of the actuating disk 29 and attaching the disk to the part 27 of the frame 2, 7, 27.

The arrangement of the disk 65 with the set of symbols 66 thereon, relatively to the actuating disk 29 and the set of symbols 29b connected thereto, is such that in the initial position of the actuating disk 29, the corresponding symbols of the two sets 29b, 66 exactly register with each other. The disk 65 is so fixed that upon loosening the screw 28a it can be turned to permit adjustment in order to obtain the exact register of the two sets 29b and 66 in the initial position

of the actuating disk 29. By tightening the screw 28a the disk 25 can be retained in its exactly adjusted position.

The actuating disk 29 is under the action of a spring 29c which is diagrammatically shown in Fig. 1. This spring corresponds to the respective part 38 of the Patent Specification 2,086,945 but it is compressed for being disposed to straighten. One end of this spring 29c is secured to the shaft 28, the other end being linked to the bolt 29d of the disk 29. Against the action of this spring 29c, the disk 29 can be rotated clockwise from the initial position of Fig. 1 by dialling it by a finger of the operator inserted in one of the finger holes 29b. By employing the finger hole corresponding to the symbol, the disk is brought into registration with the symbol of the set 66 on the fixed disk 55 corresponding to another line of the front feed sheet. After being advanced in the said clockwise sense the disk 29 is held in any position by means of a pawl mechanism of the kind specified in the Patent Specification 2,086,945. This pawl mechanism can be actuated by means of the hand lever 44 in the manner described and illustrated in the above mentioned Patent Specification 2,086,945.

Preferably the disk 65 is formed as a cover plate for the spring 29c engaging the actuating disk 29 and rotating the same about its axis in counter-clockwise direction. This provides a simple mounting of the second set of symbols 66 and an improvement of the appearance of the mechanism.

The operation of the mechanism will now be described by means of the following example.

The foundation sheet J is assumed to be already in the machine and is further held above the platen roller S by means of press rolls 71 which are preferably resiliently mounted in the frame 2, 7, 27. In front of this foundation sheet there are inserted two front feed sheets K¹ and K² which are to be written both at different lines simultaneously. The entries made on the top sheet are transmitted preferably by means of inserted carbon paper sheets to the second sheet and the foundation sheet. The front feed sheets may consist for example of account cards. In modern bookkeeping it frequently occurs that certain entries which are to be totalled on a foundation sheet, have to be booked into different accounts and therefore must be typed on different account cards.

The two front feed sheets K¹ and K² constitute such different account cards which usually contain entries extending over a number of lines, which are not always the same in both sheets. In the present case for example the card K¹ is already typed up to line 9, and the card K² up to line 19. The next free line on which a new entry is to be made is line 10 on card K¹ and line 20 on card K².

The card K¹ is first inserted in the funnel formed by the guides 8, 9 so that it is gripped at its lower end by the feed rolls 17, 18. The operator selects, for dialling the actuating disk 29 by a finger, the finger hole 29b designated by the numeral 10, and by this means rotates the actuating disk 29 in clockwise direction until the numeral 10 on the said disk registers with the numeral 20 on the fixed disk or stationary member 65, as shown in Fig. 2. This actuation of the disk 29 results in rotation of the feed rolls 17, 18 by means of the parts 33, 34, 35, 19 and therefore a feed of the sheet K¹ gripped by these rolls by a certain amount. On withdrawing the finger,

the actuating disk 29 and the feed rolls 17, 18 are retained in the position of Fig. 2 by the pawl mechanism which is provided behind the disk 29 in the same manner as specified in the Patent 2,086,945, as already mentioned.

Then the second card K² is inserted between the guides 8, 9 until its lower end is gripped by the said rolls 17, 18. The rotation of the actuating disk 29 in clockwise direction is now completed by the finger of the operator inserted in the same finger hole 10 as before until the finger is arrested by the dialling stop 30, and finally released from the actuating disk 29. In this rotation of the actuating disk 29 the two cards K¹ and K² are moved together from the position of the Fig. 2 into the position of Fig. 3 whereby the line 10 of the card K¹ and the line 20 of the card K² arrive in position of registration with the typing line 67 of the foundation sheet J, and can now be typed together. After typing on the adjusted line, the two cards K¹ and K² can be advanced along with the foundation sheet J by one or more lines so that further entries can be made on all the sheets in one or more further lines. This further feeding takes place by actuating the hand lever 44, which is movable in two directions, as may be recognised from the Patent Specification 2,086,945. By lifting the said lever the disk 29 is released by steps, advancing thus the cards K¹ and K² from one line to the following one. By lowering the lever 44, however, the above mentioned pawl mechanism is disengaged. The disk 29 being at once wholly released rotates along in the clockwise direction under the action of the spring 29c back into the initial position of Fig. 1 together with the feed rolls 17, 18. Both cards K¹ and K² are thus automatically ejected. The second card K² can be inserted either in front of or behind the card K¹. On inserting the card K² between the guides 8, 9 the finger of the operator does not have to be fully removed from the selected and already actuated finger hole of the disk 29, which in the present instance is designated by the numeral 10. It is sufficient, after the finger hole with the numeral 10 has been brought into registration with the numeral 20 of the disk 65, to allow a slight yielding of the finger whereby the actuating disk 29 is brought by the action of the spring motor against the corresponding pawl of the pawl mechanism and is held in the adjusted position.

As shown in the Patent Specification 2,086,945, the lever 44 may also be actuated by means of the line spacing device of the machine.

The mechanism according to the present invention thus permits rapid and simultaneous insertion of the two sheets K¹ and K² to different lines so that they can then be typed together in one and the same operation. This permits a substantial simplification in booking entries, and a shortening of the time heretofore required for such bookkeeping operations. Obviously the application of the invention is not limited to typing account cards and a foundation sheet. The mechanism according to the invention can be used also in all other bookkeeping and typing operations in which a plurality of sheets are to be typed simultaneously at different lines, in a commercial writing machine.

I claim:

1. In a writing machine, mechanism for introducing and adjusting front fed sheets with respect to one another in the machine, said mechanism including feed rolls above the platen, a control member movable for actuating the feed

rolls to feed the front fed sheets to desired lines, and sheet-positioning selection means having two sets of indicator symbols of which one set is on the control member and the other set is on a fixed part of the mechanism, each set of symbols corresponding in number to the number of lines on the front fed sheets.

2. A mechanism for inserting and adjusting at least two front fed sheets in a typewriting machine, comprising a guide device for receiving and guiding the front fed sheets to a platen of the typewriting machine, feed rolls disposed above the platen and cooperating with the guide device, a control member having a set of indicator symbols thereon corresponding in number to the lines of type characters printable on the sheets, said control member being rotatably mounted on the typewriting machine above the platen and adjacent the guide device, drive means between the feed rolls and the control member whereby rotation of the control member will rotate the feed rolls, and a stationary member having a set of symbols thereon corresponding in number to the set of symbols on the control member, said control member, upon insertion of one of the sheets in the guide device being rotated an extent determined by selected numbers of both sets of symbols dependent upon the line positions where printing is to take place on both sheets and then upon inserting the second sheet the control member is rotated the remaining distance to bring both sheets down together by the feed rolls to the printing position on the platen where printing is to take place on different lines of both sheets.

3. A mechanism according to claim 2, in which the stationary member is in the form of a disk concentric with the control member surrounding the disk when observed from the front of the typewriting machine.

4. A mechanism according to claim 2, in which a stop member is mounted in fixed position to act as a limit gauge when rotating the control

member the remaining distance with both sheets feeding to the printing position.

5. A mechanism according to claim 1, in which the two sets of indicator symbols are so arranged that in the initial position of the control member, similar symbols of the two sets register with each other.

6. Mechanism according to claim 1, in which one set of symbols is adjustable to permit exact registration of the symbols of the two sets in the initial position.

7. Mechanism according to claim 1, in which the control member is a rotary disk provided with manipulative holds corresponding to the lines of the front fed sheets and can be dialled through different angles of rotation relative to a stop, one of the sets of symbols corresponding to the different lines of the front fed sheets being arranged on a disk non-rotatably mounted coaxially to a rotary disk of the control member.

8. Mechanism according to claim 1, in which a spring motor and a non-rotary disk are provided, the non-rotary disk serving as a cover plate for the spring motor and the motor being arranged coaxially with the control member and serving to return the same to the initial position.

9. In a writing machine, a paper feed mechanism for introducing and adjusting writing-sheets into writing positions, said mechanism including feed rolls above the platen for feeding the writing-sheets, a control member movable for actuating the feed rolls, a line selector device arranged to be actuated in connection with said control member, and at least two sets of indications corresponding to the individual writing lines of the writing-sheets, of which at least one set is movable in connection with the control member relative to another set for introducing at least two writing-sheets to any desired different line positions.

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