Aug. 18, 1925. 1,549,873

O. A. HOKANSON

TYPEWRITER

Filed June 16, 1920 2 Sheets-Sheet 1

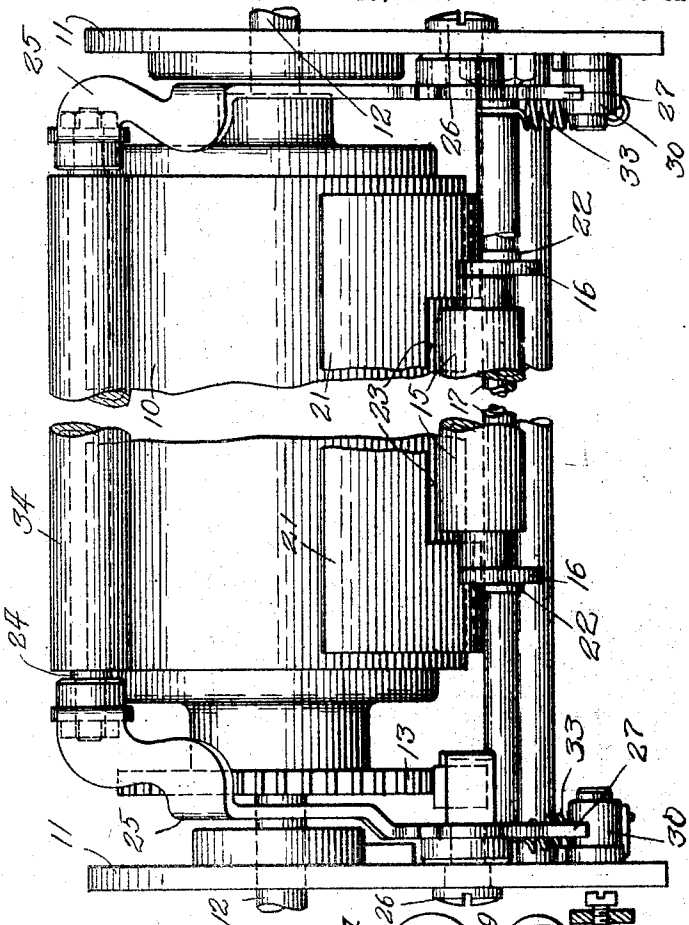


Fig. 2.

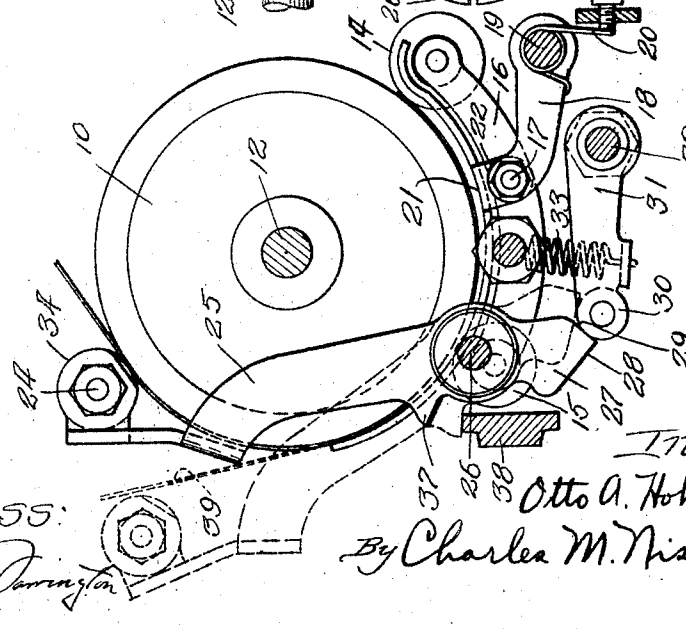


Fig. 1.

Witness:
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TYPEWRITER

Filed June 16, 1920 2 Sheets-Sheet 2

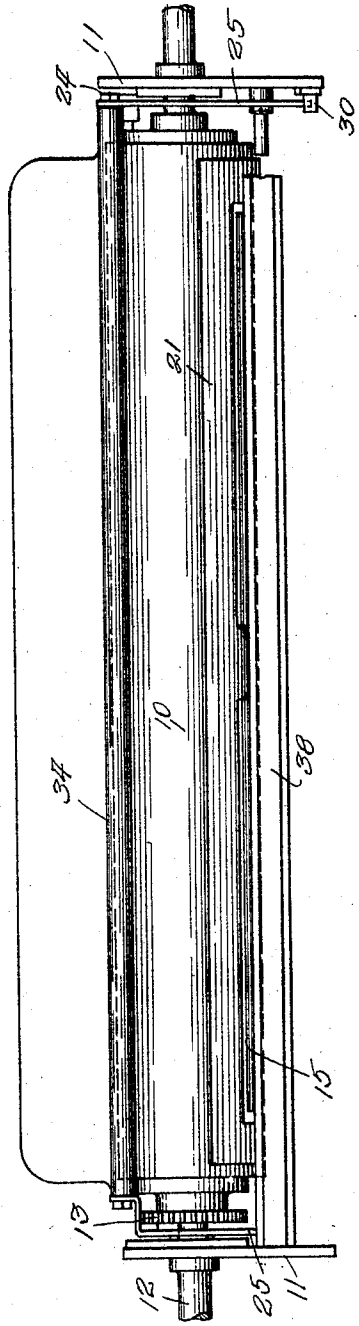


Fig. 3.

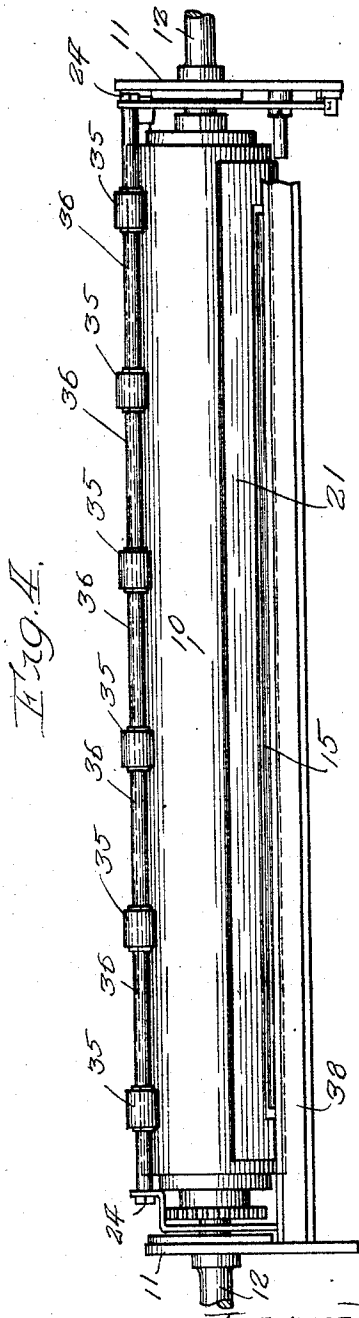


Fig. 4.

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Patented Aug. 18, 1925. 1,549,873

UNITED STATES PATENT OFFICE.

OTTO A. HOKANSON, OF WOODSTOCK, ILLINOIS, ASSIGNOR TO WOODSTOCK TYPEWRITER COMPANY, OF WOODSTOCK, ILLINOIS, A CORPORATION OF ILLINOIS.

TYPEWRITER.

Application filed June 16, 1920. Serial No. 389,273.

To all whom it may concern:

Be it known that I, OTTO A. HOKANSON, a citizen of the United States, residing at Woodstock, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Typewriters, of which the following is a specification.

This invention relates generally to typewriters and more particularly to the mechanism for holding the paper in position on the platen and has for its object the provision of mechanism of the class named which shall be of improved construction and operation.

The invention is exemplified in the combination and arrangement of parts shown in the accompanying drawings and described in the following specification, and it is more particularly pointed out in the appended claims.

In the drawings—

Fig. 1 is an end elevation of a typewriter platen with part of the frame in section showing one embodiment of the present invention;

Fig. 2 is a front elevation of the mechanism shown in Fig. 1;

Fig. 3 is a front elevation of a platen carriage with parts broken away showing the present invention applied to a platen on the carriage; and

Fig. 4 is a view similar to Fig. 3 but illustrating a slightly modified form of the invention.

In the embodiment of the invention illustrated in the drawings, the numeral 10 designates a typewriter platen mounted in end plates 11 of the platen carriage and supported on a platen shaft or spindle 12. A ratchet wheel 13 of any well-known and approved construction is provided for rotating the platen 10 to feed the paper. Paper feed rollers 14 and 15 are supported by arms 16 pivotally mounted on a shaft 17. The shaft 17 is carried by arms 18 pivoted at 19 on the frame of the machine and provided with springs 20 for resiliently pressing the rollers 14 and 15 against the periphery of the platen 10. A curved paper guide plate 21 is positioned between the arms 16 and the platen 10 and is pivotally supported on the shaft 17 by ears 22 connected with the lower face of the guide plate and pivoted on the shaft 17. The guide plate 21 is cut away, as shown at 23, to permit the rollers 14 and 15 to project through the plate into engagement with the periphery of the platen.

In order to hold the paper snugly against the platen at the printing point what are known as paper fingers have heretofore been employed which are usually adjustable along the platen. In the present invention instead of paper fingers a bar 24 is provided which extends along the full length of the platen at a position somewhat above the printing line. This bar is carried by bracket arms 25 pivotally mounted at 26 at opposite ends of the platen carriage, and the bars and arms together constitute what may be termed a paper bail for retaining the paper in position against the platen. The arms 25 are provided with downwardly extending projections 27 having beveled faces 28 and 29 arranged to bear against rollers 30 supported by brackets 31 pivoted at 32 on the end plates 11. Springs 33 serve to press the rollers 30 against either one or the other of the beveled faces 28 and 29. When the arms 25 are in the position shown in Fig. 1 the pressure of the rollers 30 against the faces 29 resiliently swing the arms 25 rearwardly to press the bar 24 against the platen 10. The bar 24 may be covered by a continuous sleeve or roller 34 of rubber or other suitable material for engaging the paper throughout the entire length of the platen. Another arrangement is that shown in Fig. 4 in which roller bands 35 are distributed along the bar 24 and spaced by sleeves 36 interposed between the bands.

When the operator wishes to insert a sheet of paper in the typewriter it is fed from the rear of the platen between the paper guide 21 and the platen roll 10. In order to permit the forward edge of the paper to enter easily between the bar 24 and the surface of the platen the paper bail is drawn forwardly into the position shown in broken lines in Fig. 1. This will cause the rollers 30 to pass the point between the faces 28 and 29 and come to bear upon the face 28 so that the roller 34 is resiliently pressed forwardly. The forward movement of the roller is limited by stops 37 which strike the upper edge of a bar 38 on the platen carriage. As the paper is fed from between the platen and the upper edge of the paper guide 21 its upper edge will be projected between the platen and the roller 34 so that it is not necessary for the operator to guide the paper

between the platen and the paper bail. After the sheet has come to the position shown at 39 in Fig. 1 the operator need merely touch the bail sufficiently to shift the rollers 38 from the beveled surface 28 to the beveled surface 29 when the bail will spring back into position and hold the sheet firmly upon the platen. It will be seen that the only attention which the operator need give to the paper bail is to swing it forwardly before inserting the sheet of paper and give it a touch to move it back into place after the sheet has been inserted. The bail requires no adjustment for different widths of sheets, nor is it necessary to tuck the upper edge of the sheet into position beneath the bail because it is automatically directed into place by the upper edge of the paper guide 21.

I claim:—

1. The combination with a typewriter platen, of a device extending substantially the length of the platen and arranged to bear against the platen at one side of the printing line for holding the paper against the platen at the printing point, means adjacent the ends of the platen for supporting said device for movement about a pivot located at the opposite side of the printing line, and means for retaining said device in a paper-guiding position in front of said platen and spaced therefrom.

2. The combination with a typewriter platen, of a paper holder for said platen comprising a bar extending longitudinally of said platen adjacent the front side thereof, and means for supporting said bar to permit said bar to move forwardly out of engagement with the face of said platen, and the means for retaining said bar in position in front of said platen and spaced forwardly therefrom above the printing line.

3. The combination with a typewriter platen, of a paper guide for directing a sheet of paper as it is fed about said platen, and a paper holder extending longitudinally of the platen to receive the edge of a sheet projected from said guide and for securing said sheet in position against the periphery of said platen, said holder being movable away from said platen to a position adjacent said platen but beyond the path of said sheet as it is fed about said platen so that said sheet will be directed between said holder and said platen, and means for retaining said holder stationary in its forward position.

4. The combination with a typewriter platen, of a device for holding a sheet of paper in position against the surface of said platen, said device comprising a bar extending longitudinally of said platen and movable away from the surface thereof to a position adjacent to and in front of said platen, means for holding said bar stationary in said position, and paper-feeding mechanism for directing a sheet of paper about said platen and between said bar and said platen when said bar is moved away from said platen.

5. The combination with a typewriter platen, of a paper guide having one edge thereof positioned adjacent the printing line, a device for holding a sheet of paper in position against the surface of said platen, said device comprising a bar extending longitudinally of said platen and located on the opposite side of the printing line from the edge of said guide, means for supporting said bar so that it may be moved away from said platen beyond the plane of a sheet fed from between said guide and platen, and means for preventing said bar from passing below the printing line when so moved.

6. The combination with a typewriter platen, of a bar extending longitudinally thereof for holding a sheet of paper in position against the face of said platen, and a detent for resiliently pressing said bar against said platen when said bar is in one position and for resiliently holding said bar away from said platen in a paper-guiding position in front of said platen when said bar is moved into another position.

7. The combination with a typewriter platen, of a paper bail therefor comprising a bar extending longitudinally of said platen and arranged to engage said platen along the front side thereof and above the printing line, arms connected with the ends of said bar and having a pivotal axis below the printing line of said platen, and means for resiliently pressing said bar against said platen and for holding said bar away from said platen when said bar is moved forwardly from the face of said platen.

8. The combination with a typewriter platen, of a paper bail therefor comprising a bar extending longitudinally of said platen and having supporting arms connected with the ends thereof and pivotally mounted to swing toward and away from the axis of said platen, said arms having cam faces connected therewith, and a spring-pressed detent arranged to engage said cam faces and press said bar against said platen when said arms are in one position and to yieldingly hold said bar away from said platen when said arms are in a different position.

9. The combination with a typewriter platen, of a paper bail therefor comprising a bar extending longitudinally of said platen and having a roller thereon for engaging the face of said platen, supporting arms connected with the ends of said bar and pivoted for movement toward and away from the axis of said platen, a spring-pressed detent for swinging said arms in opposite directions from an intermediate position to move said bar against said platen when said arms are on one side of said intermediate position and to move said bar away from said platen

when said arms are on the opposite side of said intermediate position, and means for limiting the movement of said arms away from said platen.

10. The combination with a typewriter platen, of a paper bail therefor comprising a roller arranged to engage the front face of said platen above the printing line thereof, arms located adjacent the ends of said platen for supporting said roller, means for supporting said arms to swing about a pivotal axis located below the printing line of said platen, a spring-pressed detent for resiliently moving said arms in opposite directions from an intermediate position, means for limiting the movement of said roller away from said platen, and paper-feeding mechanism comprising a curved guide for directing a sheet of paper about said platen so that the upper edge thereof will pass between said roller and said platen when said roller is held away from said platen by said detent.

11. The combination with a typewriter platen, of a paper holder for engaging a sheet of paper at various positions along the length of said platen, said holder being movable into and out of operating position against the face of said platen, means for automatically retaining said holder in its operative and inoperative positions, said bar in its inoperative position being disposed adjacent to but spaced from said platen and above the printing line, and paper-feeding mechanism for directing a sheet of paper between said holder and said platen when said holder is in inoperative position.

In testimony whereof I have signed my name to this specification on this 11th day of June, A. D. 1920.

OTTO A. HOKANSON.