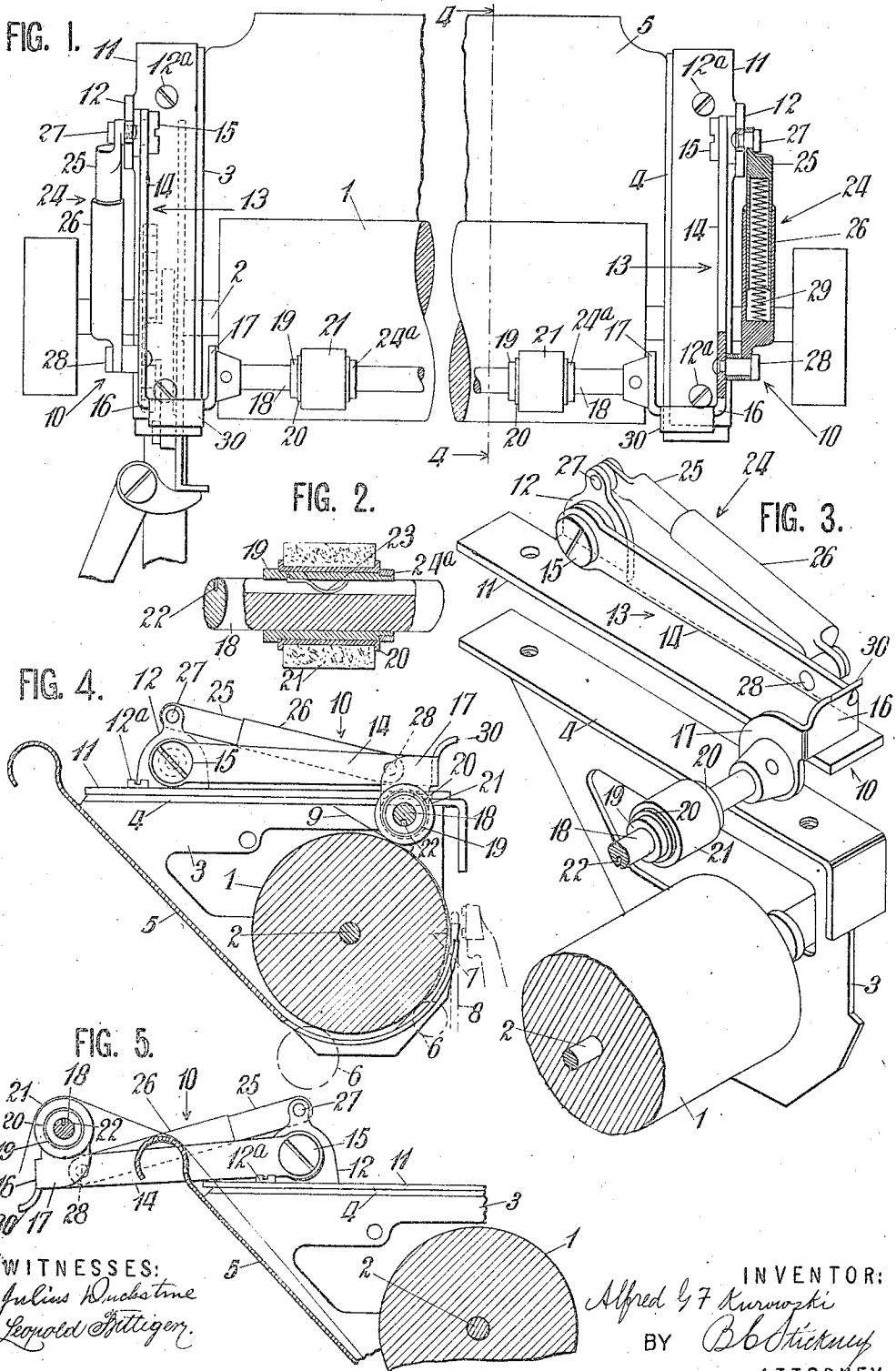


A. G. F. KUROWSKI.
 TYPE WRITING MACHINE.
 APPLICATION FILED NOV. 2, 1916.

1,229,180.

Patented June 5, 1917.



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UNITED STATES PATENT OFFICE.

ALFRED G. F. KUROWSKI, OF BROOKLYN, NEW YORK, ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPE-WRITING MACHINE.

1,229,180.

Specification of Letters Patent.

Patented June 5, 1917.

Application filed November 2, 1916. Serial No. 129,051.

To all whom it may concern:

Be it known that I, ALFRED G. F. KUROWSKI, a subject of the Emperor of Germany, but having taken out United States naturalization papers, residing in Brooklyn borough, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to a card-writing attachment for a typewriting machine.

The device includes bail-carrying rollers, which are forced by spring tension into contact with the surface of the platen. The rollers are adjustable lengthwise of the platen. The device is arranged to be adjustable from an operative position cooperating with the platen to seize a work-member to an inoperative position out of engagement with the platen. The spring means is arranged to automatically lock the swinging bail carrying the rollers in both positions of adjustment, so as to avoid any motion or rattling of the parts.

The spring means includes a bipartite thrust-link telescoping and inclosing the spring itself, so as to form a neat element in which the spring is guarded against catching into anything, and prevented from collecting dust.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a fragmentary top plan view of the platen frame, showing the card-writing attachment in its position effective to smooth out the work-member, and also showing in cross section, one of the thrust-links for locking the device in its active and inactive positions.

Fig. 2 is a detail view showing in section, the mounting of one of the rollers whereby it may be adjusted along its shaft and lengthwise of the platen, and also whereby it may have a rotary movement relatively to its shaft.

Fig. 3 is a fragmentary perspective view, showing the device detached from the platen frame to bring out more clearly its relation to the same.

Fig. 4 is a transverse vertical section taken on the line 4-4 of Fig. 1, and shows the attachment in a position cooperating with the

platen to hold the work-member smooth against the platen.

Fig. 5 is a section similar to Fig. 4, except that the device is shown thrown back to the rear where it is inactive as to its smoothing-out function, but furnishes beyond the apron an additional support or guide for the work-member.

Referring to the specific parts of the invention, 1 indicates the platen secured to an axle 2 mounted to rotate in a platen frame 3. This platen frame 3 includes sides 4 and a paper apron 5. The usual pressure rollers 6, shown in Fig. 4, may be used to cause the work-member to hug the platen on the underside, and to aid in feeding the work-member past the printing point 7. In case of stiff cards, such as index or show cards, being printed, an additional guide 8 may be provided close to the printing point 7.

When the upper margin of the work-member, indicated at 9 as being a stiff card, has passed beyond the printing point 7, it has a tendency to flare away from the platen 1 because of its natural resiliency. To prevent this the card-writing attachment 10 is used to force the card in close curving contact with the platen 1, smoothing out any bulges or buckling. The attachment 10 includes a pair of base-plates 11, which may be detachably secured to the tops of the sides 4 of the platen frame 3 by means of screws 12 already provided on the platen frame. The base-plates 11 are each provided with a bracket 12 extending upwardly to form pivotal supports for a bail 13. This bail 13 includes arms 14 swingingly mounted on the brackets 12 by means of pivot pins 15. These arms 14 are bent inwardly toward each other at 16, and then turned back to form extensions 17, which clear the base-plates 11. These extensions 17 form supports for a shaft 18 which forms the cross bar of the bail 13. Slidably mounted on the shaft 18, there is provided a pair of sleeves 19, each of which supports a spool 20, formed on which in each case is a rubber ring 21, forming a pressure roller.

The sleeves 19 may be adjusted toward and from each other, and lengthwise of the shaft 18, so as to enable the engagement of the rollers with a work-member or work-card 9 of any desired size, and inserted at any lineal position along the platen. To

lock the rollers in any adjusted position, the shaft 18 is provided with a longitudinally-extending groove 22 into which extend bow springs 23 secured to the sleeves 19. These
 5 springs have sufficient resilience to permit forcible lengthwise movement of the rollers, but are strong enough to prevent accidental sidewise movement.

It will be noted that each sleeve 19 is
 10 chamfered, so as to form a reduced portion on which the spool 20 and the ring 21 are adapted to rotate as a whole. A shoulder formed by the chamfer holds the spool against axial movement in one direction,
 15 and a collar 24^a secured onto the other end of the sleeve holds it against movement in the opposite direction.

In order to force the rollers into close relation with the platen 1, and hold the work-member smoothly on the platen, there are provided spring thrust-links 24, one for each arm of the bail 13. These thrust-links are bipartite, one part 25 being of smaller cross section than the other part 26, so as
 20 to telescope into the latter. The parts 25 of the links are pivoted by means of pins 27 to the brackets 12 above the pivotal axes of the corresponding arms 14. The other half links 26 are pivoted to the corresponding arms 14 at points 28 adjacent to the
 30 cross bar of the bail. Within the hollow interior of each of the links 24, there is provided a compression spring 29, which normally tends to force the halves of the
 35 link away from each other.

It will be seen that, when the device is in a position on the platen frame with the bail in its forward position, the springs 29 will tend to increase the length of the
 40 thrust-links 24, thereby forcing the rollers into close relation with respect to the platen 1, so that even a stiff work-member, such as a show card, will be held snugly on the platen.

It will be noted by reference to Fig. 4 that the axial centers of rotation of the rollers and the platen 1 are intersected by the circumference of a circle struck about the axis of rotation of the bail 13 as a center. This enables the pressure of the rollers to be in a radial direction with respect to the platen 1, so as to prevent any tendency of the attachment buckling the card or work-member while still holding it in a
 55 cleaving relation with respect to the platen. In other words, the attachment does not tend to produce a circumferential movement of the work-member relative to the platen. The roller-carrying bail may be adjusted toward and from the platen 1 by means of
 60 handles 30 formed on the arms 14. Comparing Figs. 4 and 5, it will be seen that the bail can be swung from an active posi-

tion with respect to the platen, as in Fig. 4, to an inactive position, as in Fig. 5. In the
 65 latter position, the rollers may act as a guide for the work-member coming to the platen. It will be noted in passing that the pivotal centers 15 and 27 for the bail and thrust-links, respectively, as substantially a
 70 vertical line, so that the thrust-links will act on either side of their pivots to hold the bail still without any chance of its rattling or being displaced accidentally.

It will be noted that when the bail 13 is
 75 swung away from the platen and to a position shown in Fig. 5, the rollers carried by said bail are in proximity to the rounded edge of the paper-table 5, so that said rollers cooperate with said edge of the paper-
 80 table to assist in guiding a work-member or sheet to the platen.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others. 85

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a platen and a paper-table, of a bail adjacent said platen, and rollers
 90 mounted on said bail, said bail hinged between the paper-table and the platen to swing from a forward horizontal position to a rearward horizontal position, and said rollers acting in the forward position of
 95 said bail to maintain a work-member smooth on said platen, and in the rear position of said bail occupying a position well in rear of said paper-table and acting to support a work-sheet in rear of the ma-
 100 chine.

2. The combination with a platen, of a shaft supportable in juxtaposition to said platen, said shaft having a longitudinal groove therein and a pair of rollers adjust-
 105 ably mounted on said shaft each comprising a sleeve, a rubber-covered spool rotatably mounted on said sleeve, and a spring on said sleeve engaged in said groove to hold said rollers by friction in any adjusted posi-
 110 tion along said shaft.

3. The combination with a pair of base-plates, of arms pivoted to said base-plates, each of said arms being bent sidewise to form a portion to engage said base-plates,
 115 each of said arms also being bent back on itself and downwardly to form an extension to clear said base-plates, a shaft mounted in said extensions connecting said arms to form a bail, and rollers mounted on said
 120 shaft.

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Witnesses:

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