Oct. 30, 1928. 1,689,203

O. A. HOKANSON

WORK HOLDING BAIL FOR TYPEWRITERS

Filed June 11, 1923

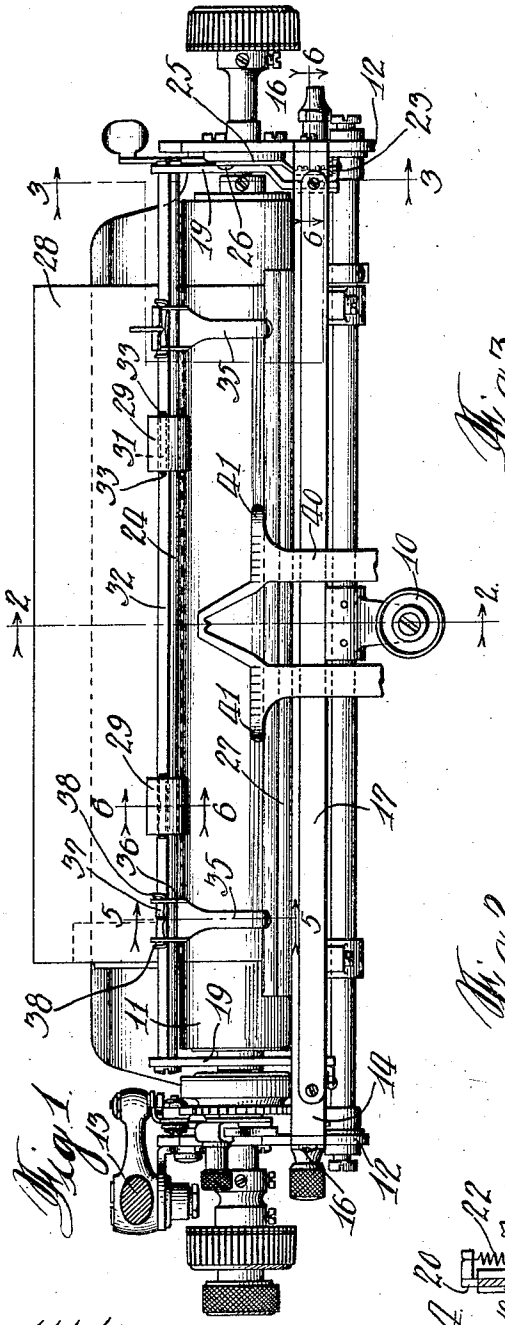


Fig. 1.

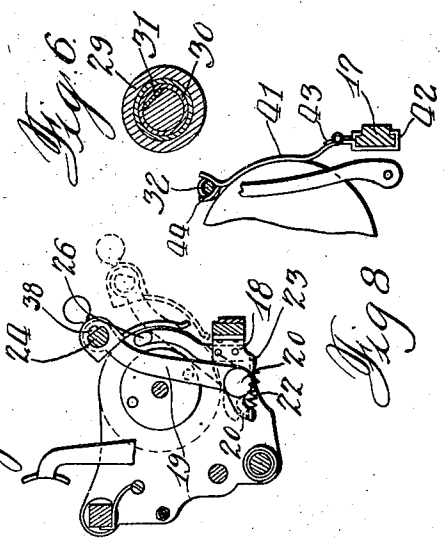


Fig. 6.

Fig. 8

Fig. 3.

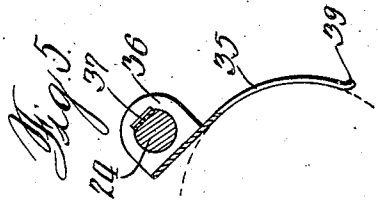


Fig. 5.

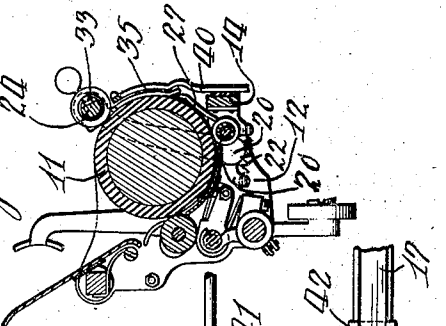


Fig. 2.

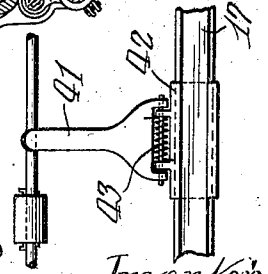


Fig. 7.

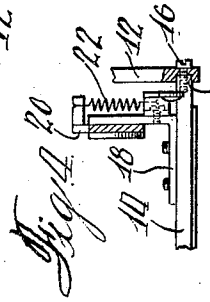


Fig. 4.

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Patented Oct. 30, 1928. 1,689,203

UNITED STATES PATENT OFFICE.

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WORK-HOLDING BAIL FOR TYPEWRITERS.

Application filed June 11, 1923. Serial No. 644,549.

This invention relates to typewriter construction and more particularly a device cooperating with the platen for retaining the work in place during writing operation.

The invention has for its object the provision of work holding mechanism, which shall be of improved construction and convenient and efficient in operation.

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

In the drawing,—

Fig. 1 is an elevation of a platen support such as is used on the Woodstock typewriter having one embodiment of the present invention applied thereto.

Fig. 2 is a vertical section on line 2—2 of Fig. 1.

Fig. 3 is a vertical section on line 3—3 of Fig. 1.

Fig. 4 is a fragmentary plan view with parts in section, showing a detail of construction.

Fig. 5 is a section on line 5—5 of Fig. 1.

Fig. 6 is a section on line 6—6 of Fig. 1.

Fig. 7 is a fragmentary elevation showing a modified form of paper finger mounting.

Fig. 8 is a sectional elevation of the form shown in Fig. 7.

The platen support shown in Fig. 1 is connected by links not shown to the platen carriage frame so that it may be given a limited vertical movement for case shift. The roller 10 travels along the shift rail for imparting this movement to the platen in a manner well known in the art. The platen 11 is journaled in end plates 12 and is provided with the usual line space mechanism operated by a lever 13. A bar 14 extends longitudinally of the platen support between the plates 12, the ends of the bar being fitted in notches 15, as shown in Fig. 4, and detachably held in place by screws 16, one at each end. A scale 17 may be mounted on the front face of the bar 14 if desired. Secured to each end of the bar 14 is a bracket 18 having an arm 19 pivoted at 20 thereon. The arm 19 is provided with a rearwardly extending finger 21, to which a spring 22 is attached. The ends of the springs 22 are secured to lugs 23 carried by the brackets 18. A rod 24 connects the upper ends of the arms 19 so that the arms and rod together constitute a bail which may be swung about the pivots 20 toward and away from the platen roller. The springs 22 normally press the bar toward the platen. A spring tongue 25 is secured to one of the brackets 18 and is provided with a rounded projection 26, which extends into the path of movement of the arm 19. When the arm is swung into broken line position shown in Fig. 3 the projection 26 springs past the arm and provides a stop for retaining it in its forward position.

The platen roller is provided with the usual paper guide 27, so that when the rod 24 is in its forward position and work is fed from the rear about the roller it will be directed upwardly between the rod and the platen. After the paper indicated at 28 has been directed under the bail by the guide 27 a slight pressure may be exerted on the bar 24 sufficient to move it past the stop 26, whereupon it will be swung by the springs 22 toward the platen. The bar 24 preferably carries a series of rollers 29, which are mounted to rotate freely upon the bail but which are frictionally held against longitudinal movement thereon. Each roller is provided with a sleeve 30 slidably mounted on the bar 24, and a leaf spring 31 is interposed between the sleeve 30 and the bar 24 to frictionally retain the sleeve in various longitudinal positions of adjustment. The bar 24 has a portion 32 thereof flattened to provide a bearing for the spring 31, the spring being bent intermediate its ends so that the ends press outwardly against the sleeve while the central portion of the spring resiliently bears upon the flat face 32. Lugs 33 are formed on the ends of the spring to retain it in place within the sleeve. The roller 29 is journaled on the sleeve 30 and is held against longitudinal movement relative to the sleeve by the lugs 33. In addition to the rollers 29 the bar 32 preferably carries two or more downwardly projecting spring fingers 35 to assist in holding the paper against the platen. The fingers 35 have ears 36 bent outwardly there-

from through which the bar 24 passes. The ears 36 are provided with notches for receiving leaf springs 37, the outer ends of which are bent outwardly to press against the ears while the central portion bears upon the flat face 32. Lugs 38 at the ends of the springs 37 retain the springs in position relative to the ears. It will be seen that the fingers 35 will be resiliently held in a position in which the spring 37 rests flatly upon the face 32 and that the spring 37 will resiliently return the fingers 35 to this position. The flat face 32 is so located that the spring 37 resiliently presses the finger 35 against the platen, but permits it to yield outwardly to accommodate the work interposed between the finger and platen. The lower ends of the fingers 35 are bent outwardly as shown at 39 to guide the work between the platen and the inner faces of the fingers. It will be seen from Fig. 1 that the ends of the fingers 35 slightly overlap the paper guide 27 so that the work will be directed from the upper edge of the paper guide beneath the outwardly bent portions 39 of the fingers. When the bail is swung forwardly into the broken line position in Fig. 3, the lower ends of the fingers 35 will remain close to the paper guide 27 due to the relative position of the pivot 27 and to the fact that the springs 37 tend to swing the ends of the fingers inwardly. This will maintain the fingers 35 in proper position to engage the top face of the work and direct it to a position beneath the rollers 29.

The usual line finder is indicated at 40, the ends of the line finder being curved outwardly at 41 so that the fingers 35 will pass beneath the line finder if they are brought near the writing position by the movement of the carriage. The line finder will spring outwardly to accommodate the fingers as indicated in Fig. 2. The rollers 29 are positioned above the upper extremity of the line finder 35 but closely adjacent thereto so that the work will be held as nearly to the printing line as possible and yet permit the rollers to pass the line finder during movement of the carriage. It will be seen that the rollers 29 and fingers 35 can be adjusted along the rod 24 to accommodate different sizes of work. It will also be noted that the entire work-holding mechanism is self-contained and mounted upon the bar 14, which may be removed from the platen frame by releasing the screws 16 and sliding the bar 14 upwardly from the notches 15. This manner of mounting permits ready change of equipment so that standard machines may be easily supplied with the present invention, which can be furnished already assembled on the bar 14 so that it is only necessary to remove the usual bar and replace it with one bearing the paper holding mechanism arranged according to the present invention.

In the construction shown in Figs. 7 and 8, paper fingers 41 are pivotally mounted on slides 42 movable along the bar 17, the fingers being pressed toward the platen by springs 43.

The upper end of the finger 14 may lie in front of the rod 32, or it may be provided with an offset tongue as shown at 44 in Fig. 8 which passes beneath the rod 32 so that the upper end of the finger will always move in unison in either direction with the rod 32.

I claim:

1. The combination with a typewriter platen, of a work holder bar extending longitudinally thereof and having a portion of the face thereof flattened, a spring finger having ears journaled on said bar, and a leaf spring interposed between said ears and the flat portion of said bar and arranged to bear on said bar to resiliently hold said fingers against rotation and frictionally retain said fingers in longitudinal adjustment along said bar.

2. The combination with a typewriter platen, of frame plates adjacent the ends of said platen, a supporting bar connecting said frame plates and detachably secured thereto, brackets mounted on said supporting bar, a work holding bail having arms pivotally mounted on said brackets, and resilient means carried by said bar for controlling the position of said bail.

3. The combination with a typewriter platen, of frame plates arranged adjacent the ends of said platen in which said platen is journaled, said frame plates having recesses formed therein, a bar having the ends thereof fitted in said recesses, means for retaining said bar in position in said recesses, a work holder bail pivotally mounted on said bar, and means carried by said bar for controlling the position of said bail relative to said platen.

4. The combination with a typewriter platen, of a frame for said platen having end members in which said platen is journaled, a supporting bar detachably secured to said end members in front of said platen and below the writing line, brackets mounted on said supporting bar adjacent the ends of said platen, upwardly extending arms pivotally mounted on said brackets, a work holder bar connecting the upper ends of said arms and positioned above the writing line, work engaging members carried by said bar and adjustable longitudinally thereof, a spring carried by said supporting bar for swinging said arms toward said platen, and a resilient detent carried by said bar for retaining said arms in their forward position with said work holding bar spaced outwardly from said platen.

5. The combination with a typewriter platen, of a work holder bail pivotally mounted below the writing line and having a bar extending longitudinally of said platen above the writing line, a paper guide having its

upper edge positioned below the writing line, resilient fingers extending downwardly from said bar to a position adjacent the upper edge of said paper guide, means for retaining said paper bail in a forward position with said bar spaced outwardly from the face of said platen, and resilient means for swinging the lower ends of said fingers inwardly toward said paper guide when said bail is moved to its forward position.

In testimony whereof I have signed my name to this specification on this 8th day of June, A. D. 1923.

OTTO A. HOKANSON.