

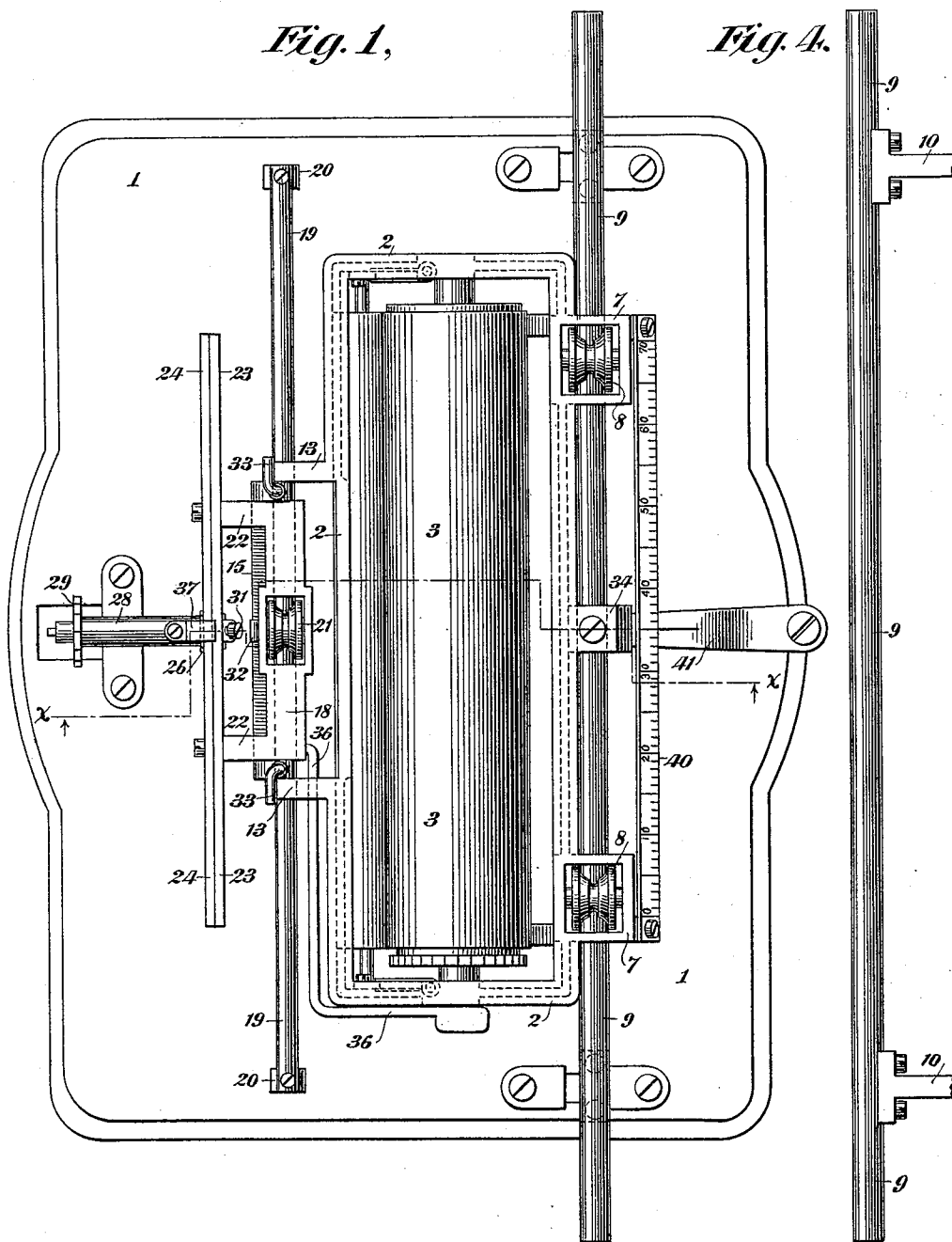
(No Model.)

2 Sheets—Sheet 1.

G. B. WEBB.
TYPE WRITING MACHINE.

No. 520,586.

Patented May 29, 1894.



Witnesses
C. E. Ashley
J. W. Lloyd.

Inventor
George B. Webb
By his Attorneys
Donnelly & Felbel.

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Fig. 2,

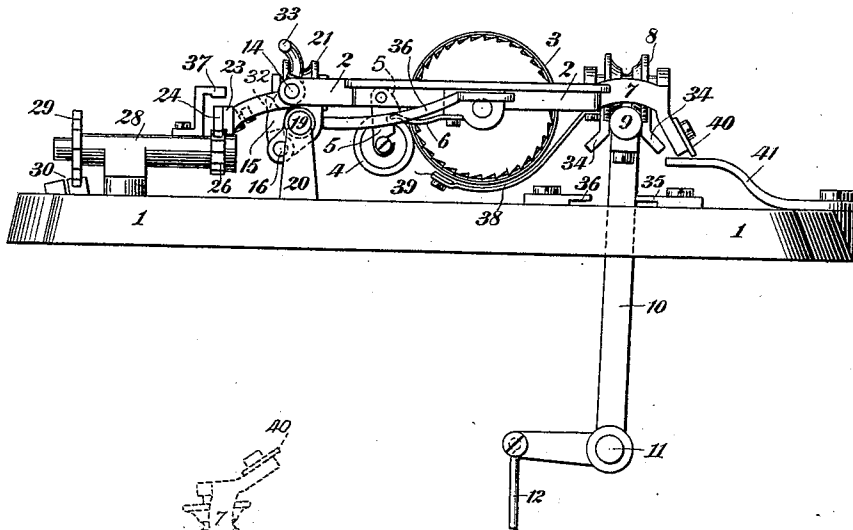
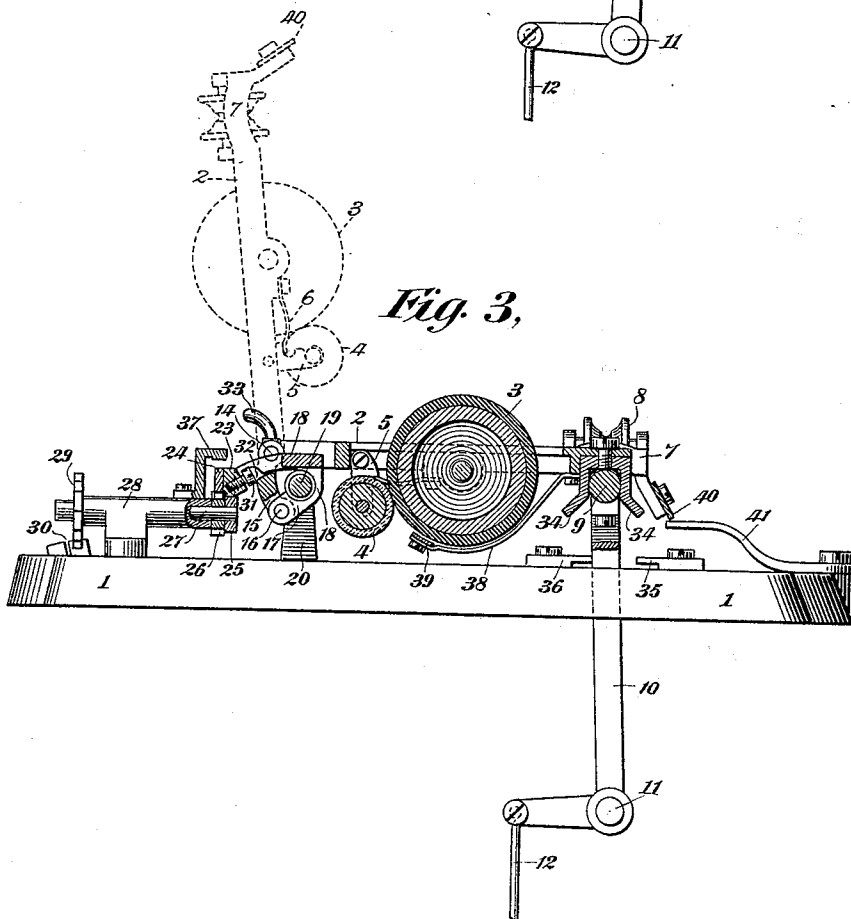


Fig. 3,



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UNITED STATES PATENT OFFICE.

GEORGE B. WEBB, OF NEW YORK, N. Y., ASSIGNOR TO THE WYCKOFF,
SEAMANS & BENEDICT, OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 520,586, dated May 29, 1894.

Application filed September 26, 1892. Renewed March 8, 1894. Serial No. 502,919. (No model.) Patented in England
March 18, 1893, No. 1,570.

To all whom it may concern:

Be it known that I, GEORGE B. WEBB, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention has for its main object to provide, in a type writing machine, a simple, light and readily adjustable and accessible shifting platen-carrier, and consists in the features of construction and combinations of devices hereinafter more fully described and particularly pointed out in the appended claims.

British Patent No. 1,570 of March 18, 1893, has been obtained for this invention.

In the accompanying drawings, Figure 1 is a plan view of as much of a type writing machine as is necessary to illustrate my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical cross-section taken at the line *x, x* of Fig. 1, but with the platen shifted, and Fig. 4 is a front elevation of the shift-rod and the upper portion of the levers to which the said rod is secured.

In the various views the same parts will be found designated by the same numerals of reference.

1 is the top-plate of the machine, 2 the paper-carriage or platen-carrier, 3 the platen mounted to rotate therein, and 4 a feed or pressure-roller hung at the lower ends of pivoted arms 5, having springs 6 to hold said roller normally in contact with the platen. The carriage or platen-carrier is provided at its front side with two frames or housings 7, in each of which is mounted a roll 8, which bears and rides upon a shift-rod 9, secured at the upper ends of a pair of arms or levers 10 mounted upon a rock-shaft 11 held in the frame work of the machine below the top-plate, and by means of a rod 12 connected to a finger lever or shift-key, as usual but not shown. The platen-carrier is provided at its rear side with two arms 13, which project rearwardly and at their free ends are pivoted at 14 to the upper end or portion of a link or coupler 15, which at its lower end or portion

is pivoted at 16 to downwardly and rearwardly-projecting arms 17 of a yoke or small carriage 18, the said arms 17 partially surrounding a guide-rail 19 affixed at its ends to supports 20 on the top-plate. The yoke or small carriage 18 is provided on its upper side, centrally with a roll 21, which bears and rides upon the top of the guide-rail. From said yoke, at each end, extends rearwardly, an arm 22, to which is screwed or otherwise fastened, a bar 23, and a parallel and contiguous feed-rack 24, the bar 23 bearing upon a small anti-friction roll 25, and the feed-rack engaging with a pinion 26. The anti-friction roll 25 and the pinion 26 are both mounted on a shaft 27 arranged to revolve step-by-step in a bearing 28 on the top-plate, and provided with a ratchet-wheel 29 at its rear end, with which engages the feed or spacing-dogs 30. The latter may be connected to any known or suitable spacing rockers or trunnions.

The yoke or small carriage 18 may be connected to any known or suitable carriage driving-mechanism having a tendency to pull the yoke and the connected platen-carrier toward the left. This tendency of the driving-mechanism, as heretofore, is communicated through the rack, pinion and shaft to the ratchet-wheel and spacing dogs, which latter devices prevent the carriage from moving more than one letter space at a time during the operation of printing, as more fully set forth in Letters Patent granted to me March 29, 1892, No. 471,710.

The weight of the rear side of the platen-carrier rests at a point in rear of the guide-rail 19 and thus tends to throw the rack downwardly into engagement with its pinion, and maintain such engagement. If the weight of the carriage were forward of said guide-rail, a spring might be used to keep the rack and pinion normally in mesh, as in my said patent. In either such case it is necessary to avoid pressure between the rack and its pinion; or, in other words, it is essential that the points of the teeth of either member shall not bear unduly at the bases of the notches of the other members, and to insure this operation, I have provided the bar 23 and anti-

friction roll 25. The face of the latter is formed with a radius substantially equal to that of the pitch-line of the teeth of the pinion, and hence, together with the bar 23, limits the downward movement of the feed-rack and defines the extent of engagement between said rack and its pinion. As a consequence, the friction or resistance to movement and the wear of the teeth are largely relieved by the bar and the anti-friction roll. About centrally of the bar 23 is affixed an adjustable stop 31 in the form of a screw, which may serve to limit the rearward vibration or movement of the platen-carrier during the shifting operation of the same for upper case work, a projection 32 on the back of the coupler or link 15 opposite said stop being adapted to contact therewith. The said stop is designed more especially, however, to limit the movement of the platen-carrier and coupler when the platen is raised or turned up, as shown at Fig. 2 for inspection of the work. The coupler 15 is provided with two upwardly-extending stops 33 to limit the hinge motion in the raising of the platen-carrier.

In addition to the front rolls 8, which partially embrace the shift-rail 9, the front of the platen-carrier is provided with a fork 34, which straddles the shift-rail, and which by reason of its flaring sides, is adapted to guide the platen-carrier to its normal position, with the rolls 8 bearing on the shift-rail when the platen-carrier is turned down to a horizontal position. The shift-rail levers 10 rest against front stops 35 on the top-plate in the normal position of the platen-carrier, and strike against and are limited by similar stops 36 in shifting the platen-carrier rearwardly for upper case work; but the stops 36 may be omitted in consequence of the presence of the stop 31, which may also limit the shifting movement of the carriage.

When the platen-carrier is shifted rearwardly the rear part of the same acts on the upper portion of the coupler, and the latter is caused to swing about its pivots 16 below the guide-rail, and since the front part of the platen-carrier is caused to swing about the rock-shaft 11; the whole movement is effected upon pivots or links, which is a much more desirable construction than the sliding plan heretofore largely used. The roll 21 does not support the rear side of the platen-carrier, as such support is effected wholly and at all times by the coupler.

The yoke or small carriage 18 is capable of partial rotation about the rail 19, to enable the feed rack to be lifted from engagement with its shaft in order that the carriage may be quickly moved in either direction, and to facilitate such disengagement of the feed-rack and the pinion, the yoke is provided on its front side with a release-key 36, which is bent to terminate preferably at the left hand side of the platen-carrier. By depressing the finger-portion of the release-key the yoke with its wheel is rocked around the back rod

or rail 19, thereby lifting the rear portion of the platen-carrier slightly and elevating the rack out of engagement with its pinion. The upward movement of the rack may be limited by a stop 37, secured on the bearing or casting 28.

The platen may be provided with a paper-guide 38 at or near each end, which guides may support a scale bar 39, and at the extreme front the platen-carrier may be provided with another scale bar 40 graduated in the same direction as the scale bar 39, and with the scale-bar 40 may be used the stationary pointer or index 41 secured to the top-plate.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a type writing machine, the combination of a platen-carrier, a guide-rail, a yoke adapted to travel thereon, a link or coupler pivoted to said yoke in rear of said guide-rail at one end, and also pivoted to the rear end of the platen-carrier, and means for shifting said platen-carrier.

2. In a type writing machine, the combination of a platen-carrier, a guide-rail, a yoke adapted to travel thereon and provided with downwardly and rearwardly-extending arms, a link or coupler, in rear of said guide-rail, pivoted to the rear portion of the platen-carrier and to said downwardly and rearwardly-extending arms, and a vibratory shift-rod.

3. In a type writing machine, the combination of a platen-carrier, a guide-rail, a yoke adapted to travel and also to oscillate thereon and provided with the feed-rack of an escapement mechanism, a link or coupler in rear of said guide-rail and pivotally-connected to the said yoke and to the rear portion of the platen-carrier, and means for shifting the platen-carrier.

4. In a type writing machine, the combination of a platen-carrier, a guide-rail, a yoke adapted to travel and also to oscillate thereon and provided with a feed-rack, a pinion, a ratchet-wheel, a spacing-dog, a coupler in rear of said guide-rail connected to said yoke and to the rear side of the platen-carrier, a release-key, and means for shifting said platen-carrier.

5. In a type writing machine, the combination of a shifting platen-carrier, a guide-rail, a yoke adapted to travel and also to oscillate thereon, and provided with the feed-rack of an escapement mechanism, a link or coupler, in rear of said guide-rail, pivotally-connected to said yoke and to the rear portion of the platen-carrier, and a stop for limiting the movement of the link or coupler when the platen-carrier is turned up for inspection of the work.

6. In a type writing machine, the combination of a platen-carrier, a guide-rail, a yoke adapted to travel and also to oscillate thereon and provided with a feed-rack, a pinion, a ratchet-wheel, a dog, a link or coupler, in rear of said guide-rail, pivotally-connected to said

yoke and to the rear portion of said platen-carrier, a release-key attached to the said oscillating yoke for raising said feed-rack, a stop to limit the rearward movement of the link or coupler when the platen-carrier is turned up, a stop to limit the hinge-movement of the platen-carrier when turned up, and a vibratory shift-rod.

7. In a type writing machine, the combination of a vibratory feed-rack, a step-by-step rotatory pinion arranged beneath the same, a bearing-bar arranged adjacent to and parallel with said feed-rack, and an anti-friction roll for and beneath said bar arranged adjacent to and parallel with said pinion.

8. In a type writing machine, the combination of a vibratory feed-rack, a bearing-bar, a step-by-step rotatory shaft, a pinion on said shaft to engage the said feed-rack, and an anti-friction roll on said shaft to co-operate with said bearing-bar the feed-rack and the

bearing-bar being arranged in parallel planes, and the pinion and anti-friction roll being also arranged in parallel planes and beneath respectively the said feed-rack and the said bearing-bar.

9. In a type writing machine, the combination of a shifting platen-carrier, a guide-rail, a yoke adapted to travel and also to oscillate thereon, a link or coupler in rear of said guide-rail and pivotally-connected to the rear side of the platen-carrier and to said yoke, a feed-rack and a bearing-bar connected to said yoke, and a step-by-step rotatory shaft provided with a pinion and an anti-friction roll.

Signed at New York city, in the county of New York and State of New York, this 21st day of September, A. D. 1892.

GEORGE B. WEBB.

Witnesses:

JACOB FELBEL,
IDA MACDONALD.