Dec. 25, 1928. 1,696,243

A. G. F. KUROWSKI

TYPEWRITING MACHINE

Original Filed Sept. 22, 1924

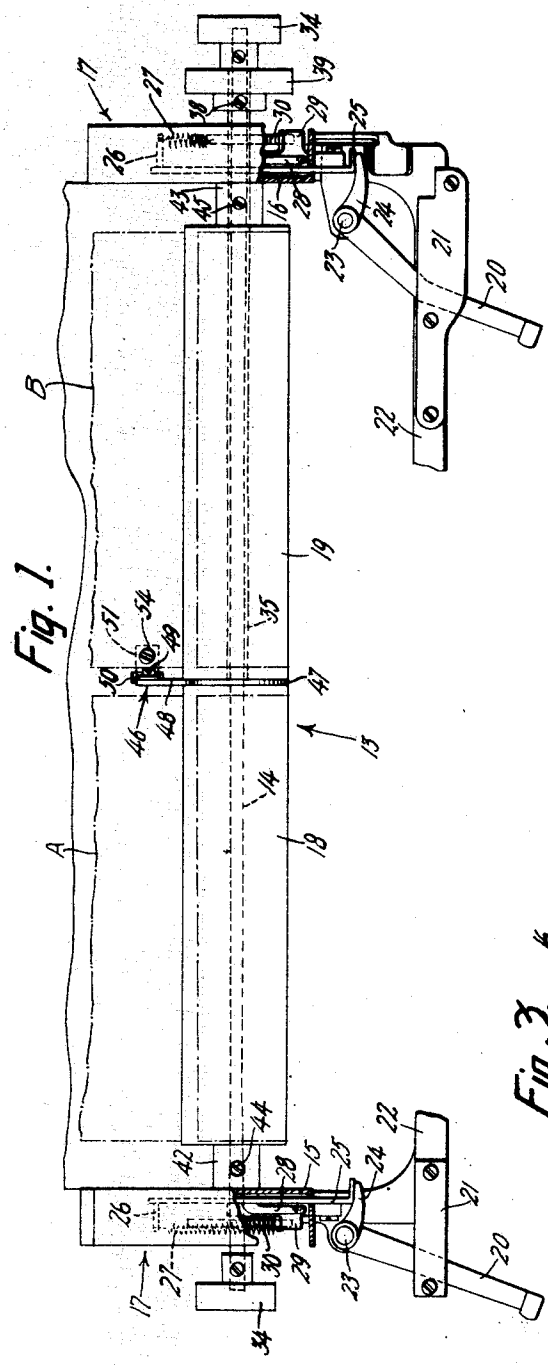


Fig. 1.

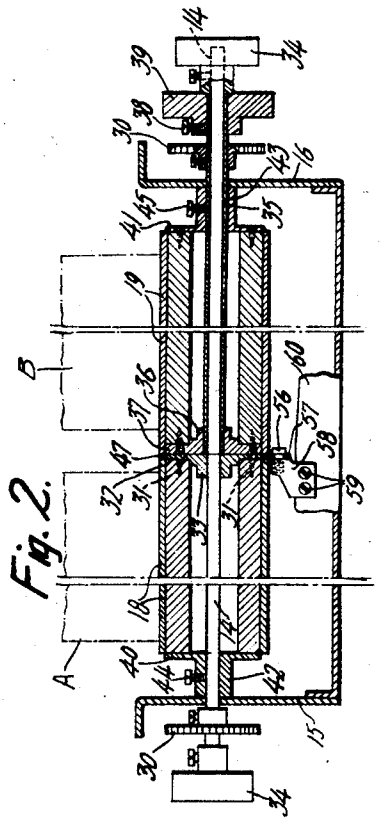


Fig. 2.

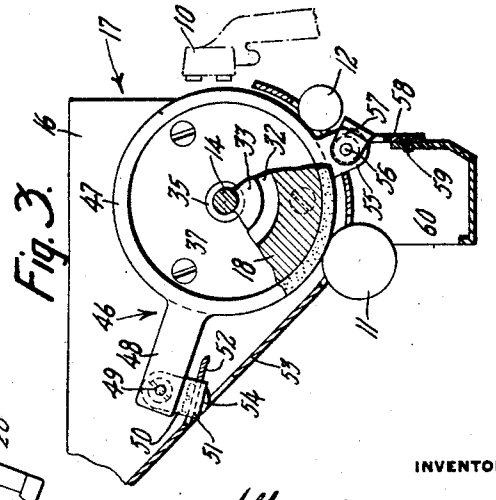


Fig. 3.

INVENTOR

Alfred G F Kurowski

BY B C Stickney

ATTORNEY

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UNITED STATES PATENT OFFICE.

ALFRED G. F. KUROWSKI, OF BROOKLYN, NEW YORK, ASSIGNOR TO UNDERWOOD ELLIOTT FISHER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

TYPEWRITING MACHINE.

Original application filed September 22, 1924, Serial No. 739,020. Divided and this applicaton filed July 31, 1926. Serial No. 126,132.

This invention relates to typewriting machines having divided platens, and more particularly to means for supporting the platen-sections at their inner ends.

According to the present invention one section of the platen is fast to a comparatively thin shaft extending through the entire platen and supported in the end plates of the carriage-frame, platen-rotating means for the section being mounted on the shaft. The other platen-section is fast to a longitudinal sleeve loosely mounted on the shaft, which extends outside the platen section at one end thereof, the platen-rotating means for that section being mounted upon the extension of the sleeve.

Divided platens of this kind are usually of greater length than the usual single platen used in a typewriting machine, and, since the platen-shaft is journaled at the ends only, it is readily seen that the central portion, due to the fact that the platen is divided at the center, and the only support at this point is the thin platen-shaft, is not able to withstand much strain. The type-blows or the slightest misuse of the platen at this point will tend to impair the alignment of the platen, which results in imperfect typing.

A feature of the present invention is to provide a support for the adjacent ends of the platen-sections, thereby rendering the platen much more rigid, and eliminating any possibility of the platen getting out of alignment. The support may be in the form of a brace rigidly mounted on the movable carriage and embracing the inner end of one of the platen sections, thereby supplying the platen with a rigid support at its weakest point.

This is a division of my application, Serial No. 739,020, filed September 22, 1924 (now Patent No. 1,604,645, dated October 26, 1926).

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a top plan view, partly broken away, embodying the present invention.

Figure 2 is a front elevation, partly in section, of certain parts shown in Figure 1.

Figure 3 is a cross-sectional elevation of the invention showing the central brace interposed between the meeting ends of the platen-cylinders.

Type-bars 10 are swung upward to print upon either work-sheet A or B fed by means of feed-rolls 11 and 12 around a platen 13 which is revolubly mounted on a shaft 14, the shaft being supported near its ends in end plates 15 and 16 of a carriage-frame 17. The platen 13 is divided into two separate sections 18 and 19, each section being provided with separate line-spacing mechanism, which consists of a line-space lever 20 shiftable in a slotted guide 21 on the front cross-bar 22 of the carriage-frame 17 and journaled on a pin 23 mounted on the carriage-frame 17. The lever 20 has a pusher 24 arranged to contact with a slide 25 which has a pin 26 connected to a retractable spring 27 which applies tension against the movement of the slide 25. The slide 25 has a spring 28 which presses a pawl 29 into driving relation against a ratchet-wheel 30, so that by operation of the line-space lever 20 the ratchet-wheel 30 will be rotated, which in turn will rotate a platen-section.

Screws 31 secure the platen-section 18 to a flange or disk 32 of a bushing 33, which in turn is fast to the platen-shaft 14. Finger-knobs 34 are secured to the shaft 14 at each end for causing manual rotation of the platen-section 18. For rotating the platen-section 19 a sleeve 35 is provided, which fits around the shaft 14 and is fixed at one end to a bushing 36 having a flange or disk 37 to which the platen-section 19 is secured. The other end of the sleeve 35 protrudes through the carriage-end plate 16 and has attached thereto by means of a screw 38 a finger-knob 39, through which the platen-section 19 may be manually rotated. The platen-sections 18 and 19 are tubular and the flanges or disks 32 and 37 close the inner ends thereof, while their outer ends are respectively closed by end plates 40 and 41 having hubs 42 and 43, the hub 42 of the plate 40 being secured by a screw 44 to the platen-shaft 14, while the end plate 41 has its hub 43 secured by a screw 45 to the sleeve 35.

The platen 13, formed by the platen sections 18 and 19, is considerably longer than the usual single platen used in typewriting machines, and since the only support

for the platen is the platen-shaft 14 which is only supported in the end plates 15 and 16 of the carriage-frame 17, and, due to the fact that the platen is divided at its center, it can readily be seen that the rigidity of the platen at the point of division is greatly lessened, and by the slightest misuse or by the constant type-blows the platen will be bent out of alignment which will result in imperfect typing.

In order to eliminate this defect, there is provided a support 46 in the form of an annulus 47 snugly fitting around the flange 32 of the bushing 33 but permitting the bushing 33 to easily rotate therein. The outer circumference of the annulus 47 is flush with the outer circumference of the platen-sections 18 and 19. The annulus 47 has an arm 48 which by means of a pin 49 is fixed upon a lug 50 forming a part of an angular support 51 secured upon an outstruck ledge 52, cut out preferably from a paper table 53, a set screw 54 removably securing the angular support upon the ledge 52. The annulus 47 is also provided with an arm 55 arranged so as to extend in an opposite direction with respect to the arm 48. A fastening pin 56 positions the arm 55 fixedly upon a lug 57 formed upon a support 58 secured by screws 59 upon a cradle or under part of the platen-frame structure 60. With this construction the platen-sections are provided with supports at both their inner and outer ends, thereby rendering the platen more rigid and able to withstand the type-blows or any slight misuse that it might happen to receive.

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

Having thus described my invention, I claim:

1. In a typewriting machine, the combination of a frame, a platen-shaft revolubly mounted therein, a pair of finger-knobs fixedly secured upon the opposing ends of said shaft, two platen-sections having confronting bores, a rubber sheathing enveloping each platen-section, an annulus having the same diameter as said sheathings and interposed in contact therewith, two hubs projecting in opposite directions into the respective bores, flanges formed upon said hubs, one of said flanges engaging the inner circumference of said annulus, means for securing said annulus against displacement from said frame, said flanges being mounted in contacting relation and being respectively secured to said platen-sections, a sleeve extending through the bore of one section into one of said hubs, said shaft extending into the bore of the other section and projecting through said sleeve, and a finger-knot secured upon said sleeve, said shaft beyond the inner end of said sleeve being fixedly secured for rotation upon the contiguous hub.

2. In a typewriting machine, the combination of a frame, a paper-shelf secured thereupon, a pair of aligning longitudinally-separated platens positioned adjacent the lower portion of said shelf, said paper-shelf being formed with an outstruck ledge projecting forwardly toward said platens, a bracket secured upon said ledge, an arm clamped fixedly upon said bracket and extending toward said platens, an annulus fixed upon said arm between the separated ends of said platens, a platen-shaft extending clear through the platens, means connected to said shaft and including a disk snugly projecting into, so as to rotate within, and be supported by, said annulus, means securing said disk upon one platen, and means rotatably engaging said shaft and connected to the other platen.

3. In a typewriting machine, the combination of a frame having an under intermediate cradle, a split longitudinally-extending platen, a platen-shaft upon which the split platen is mounted, means for enabling either of the split portions of said platen to rotate independently of the other, a disk supporting said shaft between its ends and contacted endwise by both platen-portions and secured for rotation to one of them only, an annulus of the same width as said disk and embracing the same so as to support the latter, a lug formed upon said annulus, a plate secured to said cradle, an arm on said plate secured fixedly upon said lug to support said annulus, and means carried by said annulus and engaging said frame at a point opposite to said arm for supporting purposes.

4. In a typewriting machine having a platen-frame, a platen-shaft and a platen mounted thereon, the combination with a second platen rotatably mounted on said shaft in alignment with the first platen, of a disk centered upon said shaft between both platens and secured to one of the same to rotate therewith, and an annulus stationarily supported on said platen-frame and enveloping the periphery of said disk in such manner as to provide a bearing for said disk and thereby intermediately support said platens and said shaft, there being means upon both platens to locate said annulus upon said disk and also means associated with the platens to rotate either platen at will.

5. In a typewriting machine having a platen-frame, a platen-shaft and a platen mounted thereon, the combination with a second platen rotatably mounted on the shaft in alignment with the first platen, of a pair of adjacent disks centered upon the shaft between said platens and respectively secured to said platens to serve as the inner

ends thereof and rotate therewith, and an annulus stationarily supported on said platen-frame in such manner as to form a bearing for one of said disks by enveloping the periphery thereof, whereby to intermediately support said shaft and both platens, there being also means to rotate either platen at will.

6. In a typewriting machine having a platen-frame, a platen and a shaft therefor, the combination with a second platen rotatably mounted on the shaft in alignment with the first platen, of a disk centered upon the shaft between both platens and secured to one of the same to rotate therewith, an annulus enveloping the periphery of said disk to serve both as a bearing therefor and as an intermediate support for both of said platens, and a plurality of radial arms projecting from said annulus and supported on said platen-frame, there being lugs borne upon said frame to which said radial arms are attached.

ALFRED G. F. KUROWSKI.