June 27, 1939. W. A. DOBSON 2,163,940

TYPEWRITING MACHINE

Original Filed Nov. 14, 1935 2 Sheets-Sheet 1

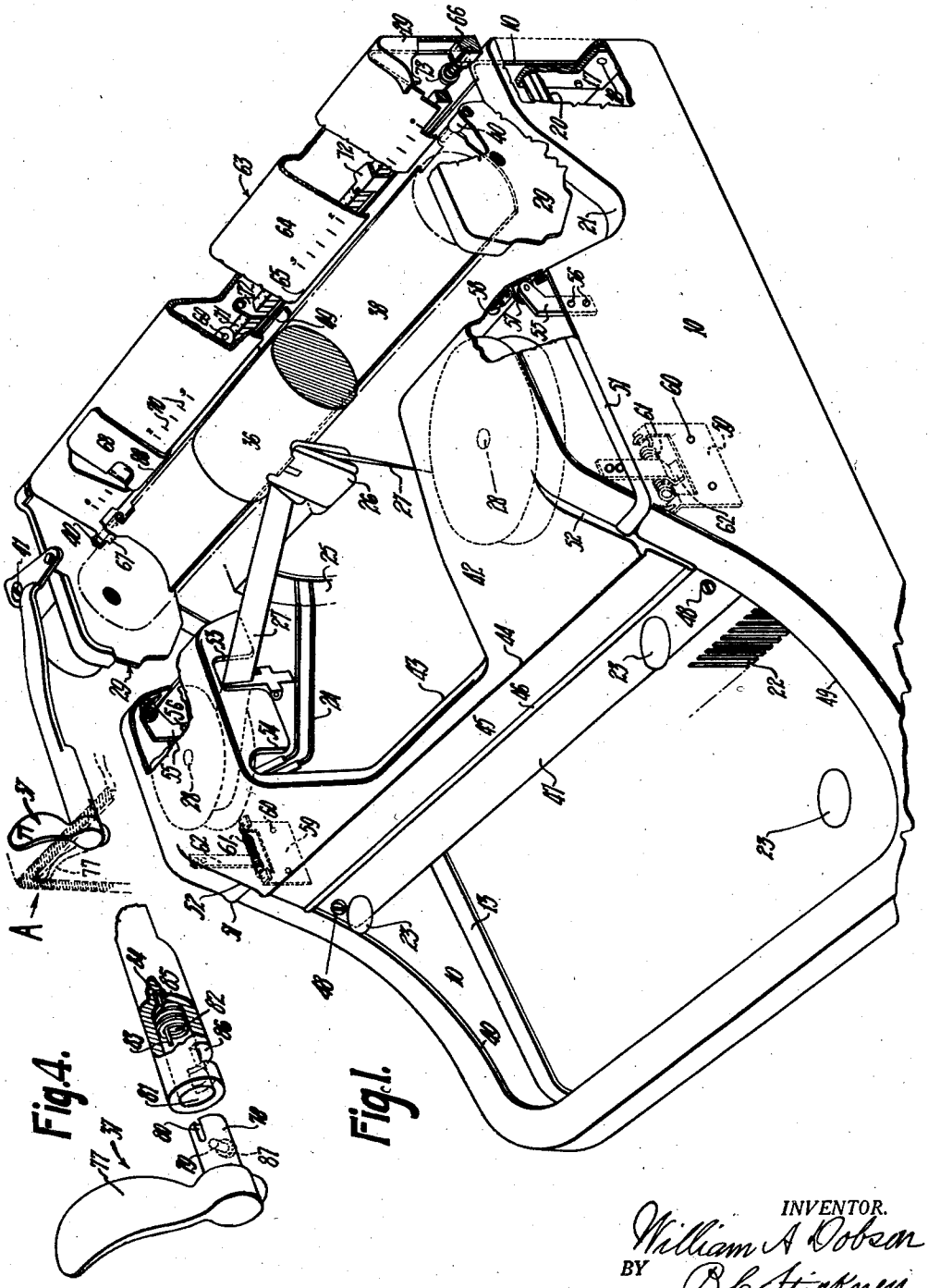


Fig. 1.



Fig. 4.

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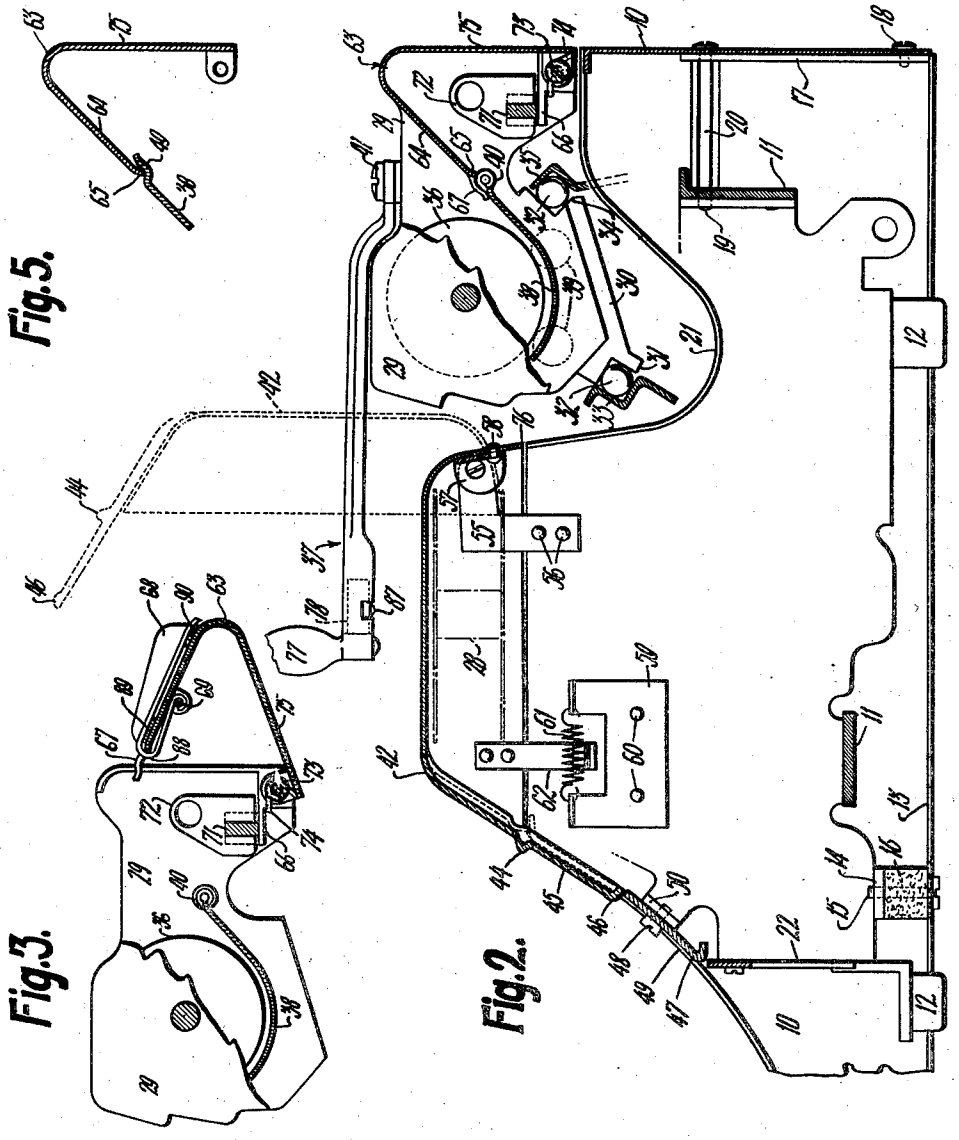


Fig.5.

Fig.3.

Fig.2.

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## TYPEWRITING MACHINE

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Original application November 14, 1935, Serial No. 49,682. Divided and this application March 4, 1937, Serial No. 128,898

4 Claims. (Cl. 197—186)

This invention relates to typewriters, and more particularly to masks for portable typewriters.

The invention has for one of its objects to provide a simple, inexpensive and attractive outer covering or mask for a typewriter frame and parts supported thereby. It is a particular aim of the invention to provide an assembly of a body frame mask section with a cover mask section which shrouds the ribbon spools and mountings therefor, and to provide such a cover mask section as may be easily manipulated to render the spools accessible for ribbon changing, repair and cleaning.

The invention in one of its more specific aspects has the object of definitely relating the cover mask with the machine yet providing an extremely compact structure which may be moved to obtain access to the ribbon spools without removing the platen of the typewriter or any of the ribbon vibrating mechanism and without disturbing the ribbon itself.

It is a further object of the invention to provide a movable cover mask which when normally related with other parts of the machine in the actual typing operation closely matches adjacent portions of the body mask so that the effect given by the assembly is that of a unitary mask covering both body frame and ribbon spools and providing a front panel or cowling obscuring operating parts of the typewriter behind the keyboard.

Another object is to define a medial opening above the type basket which enables the operator to have clear vision of the types as they approach the printing point and of the typing line.

This application is a division of my application Serial No. 49,682, filed November 14, 1935, Patent No. 2,126,315, issued August 9, 1938.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a view looking down on an Underwood portable typewriter towards the upper right front corner of the machine, and showing parts of the ribbon-spool cover and parts of the paper-shelf and rear dust-guard broken away.

Figure 2 is an inside side elevation, for the most part in section, and showing in dotted lines the ribbon-spool cover or top of the mask in the raised or open position.

Figure 3 is a view similar to that of Figure 2, but showing the carriage only with the combined paper-shelf and rear dust-guard in the turned-back or open position.

Figure 4 is a perspective view of my improved line-space lever with the parts in disassembled position.

Figure 5 is an elevation sectioned to show the combined paper-shelf and dust-guard in the paper-feeding relationship to the curved deflector-plate.

In the Underwood portable typewriter shown in the drawings, a protecting ornamental mask 10 comprises a lower portion which encases the sides, rear and extreme front portion of a frame 11, which is supported on legs 12. Inwardly-turned flanges 13 on the bottom of the mask 10 underlie inwardly-turned lugs 14, connected with the frame 11, to which they are tied by screws 15 which are surrounded by felt vibration killers 16. Reinforcing plates 17 are secured to the inner rear wall of the mask 10 by screws 18, or by rivets, or by spot-welding, and studs 19 tie together the united plate 17 and mask 10, and the rear wall of the frame 11, these parts being spaced apart by collars 20 surrounding the studs 19. The length of the studs 19 and the collars 20 coincides with or exceeds the distance through which the upper parts of the typewriter overhang rearwardly the vertical rear wall of the frame 11 of the typewriter, so that the rear wall of the mask 10 lies in the vertical plane passing through the rear or boundary of said upper parts. The side wall of the mask 10 has a concave portion 21 in the upper edge of the wall for the passage of the carriage of the typewriting machine. Typewriter-parts, conventional with Underwood portable machines, are shown as follows: a comb type-bar guide 22, keys 23, type-bars 24, a segment 25, a type-bar guide 26, a ribbon 27, ribbon-spools 28, and a reciprocating carriage 29. The reciprocating carriage 29 is mounted on a frame 30, having a front carriage-rail 31 and a rear carriage-rail 34, which engage, by anti-friction balls 32, the front rail 33 and the rear rail 35 of the usual shift-frame. The conventional platen 36 is mounted on the carriage and controlled by an improved line-space lever 37. A paper-deflector 38, carrying rolls 39, has pivotal mountings 40 in the side wall of the carriage beneath the platen 36. The line-space lever 37 is fastened for pivotal horizontal movement on the carriage by a screw 41. The top or one-piece ribbon-spool cover 42 of the mask 10 has a central lowered edge 43 in the front, below which, extending across the cover, is a horizontal bead or finger-piece ridge 44, below which is a front cross-piece 45, terminating in a lower edge bead 46. A front cross-bar 47 is locked by screws 48 in inclined inturned lugs 50 of the

frame 11. Along both sides of the cover 42 extend finger-piece ridges 51 which coincide with the lower edges. The forward portion of the top cover projects forwardly the width of flanges 52 to provide clearance space for the type-bars and to improve the ornamental appearance. On either side of the top cover, in the inner downwardly-extending walls, there are cut-away recesses 53 through which the ribbon 27 is free to pass, and, forwardly of these cut-away portions, are supplemental cut-away recesses 54 which provide for type-bar clearance. Brackets 55 have vertical parts secured by rivets 56, or the like, to the upper edges of the inner side walls of the mask 10, and these vertical parts 55 have rearward extensions which are pivoted to lugs 57 which project forwardly from plates 58 secured to the inside of the rear wall of the top by rivets at a point spaced somewhat above the lower edge of said cover so as to provide minimum clearance between it and the carriage 29. It is apparent from the drawings that, when the top cover 42 is lifted to the upper position, shown in dotted lines in Figure 2, the lower edge 76 of the top cover contacts the rear vertical edges and the lower edges of the rear extensions of the brackets 55, so providing a positive stop which prevents the turning of the cover rearwardly beyond the vertical position illustrated in the drawings, and so prevents any interference between the cover and the carriage of the typewriter. On the inner side walls of the mask 10, brackets 59, each having spaced ears, are secured by rivets 60, and coil springs 61 are mounted transversely between the ears of each bracket. Securing hooks 62 depend from the inside of the cover or top 42 to provide a spring catch to secure the top cover in the horizontal or closed position.

From the foregoing it will be obvious that the lower mask section and the cover mask section provide a combined mask for the typewriter frame and associated parts which, when the sections are in normal position, gives the appearance of a unitary mask. The portions of the upper mask section which shroud the ribbon spools are in the form of caps with walls having their lower edges in matching relation with the upper edges of the lower mask section. The upper mask section with its ribbon spool caps and connecting cross-piece or panel 45 which forms a cowl at the front of the machine, provides an extremely close fitting cover which, however, is readily movable to a wide open position for access to the spools. The line of matching of the upper and lower mask sections is substantially below the point of articulation of the upper cover and the beads or finger piece ridges 51 serve to conceal the matching line.

It will be seen that the top cover section is formed into the ribbon spool caps mainly, and by that I mean that it results that no horizontal top expanse is presented by the cover section other than that which serves for the tops of said caps proper, as shown in Figure 1.

A combined paper-shelf and dust-guard 63 comprises a forwardly-inclined paper-shelf 64, having a downwardly-turned lower edge 65 and forwardly-extending tongues 67, which are convexed to overlie the rear edge of the paper-deflector 38. A side-edge guide 68 is slidably mounted on a transverse rod 69 on the rear of the paper-shelf.

The construction of the side-edge guide 68 and its mounting on the paper-shelf 64, over the usual indicating scales 70 for aligning, is clearly shown in Figures 1 and 3. The guide 68 is formed of metal that possesses resiliency and has the lower end turned back to form a resilient loop 88 that fits over the bottom downwardly-turned edge 65 of the shelf 64, passes through the transverse slot formed between the edge 65 and the top edge of the paper-deflector 38, and is turned to form a bearing that overlies the transverse rod 69. On the rear of the guide 68 two transverse strips of felt or other anti-scratching material are fastened by a suitable adhesive, one strip 90 at the top and another strip 89 at the bottom, so providing two horizontal spaced-apart tracks along the lines of which the guide 68 is resiliently pressed against the face of the paper-shelf 64 because of the resilient pressure of the rear end of the guide 68 on the transverse rod 69. It is now clear that the guide 68 can be moved to the right or left at will, but possesses sufficient inherent tension to remain in the set position in normal operation. The rear edge of the paper-deflector 38 has a centrally located rear extension 49 upon which the lower edge 65 of the paper-shelf 64 rests and which forms a closure for the intervening slot to prevent entrance of a work-sheet therein.

Beneath the paper-shelf and mounted in the end walls of the carriage is a conventional transversely slotted rod 71 which carries stops 72. On the inner walls of the carriage are mounted blocks 66 which carry pivots 73, around which are coil springs 74, the ends of which engage the blocks 66 and the lower edge of the shelf-guard 63 respectively, so that tension is exerted constantly to turn the shelf-guard 63 into closed or engaging position with the paper-deflector 38. The shelf-guard 63 has a vertical downwardly-extending apron or rear wall 75, which lies in the same vertical plane as the rear wall of the mask 10, and whose lower edge is flush with the upper edge of the rear wall of the mask. It is evident that this construction makes a rear wall for the typewriter which is substantially closed throughout, and thereby prevents access of dust to the working parts of the typewriter, and, moreover, adds to the ornamental appearance of the machine. The operation of the combined paper-shelf and dust-apron is apparent in Figure 1 in the cut-away portion of the shelf-guard 63, where the transversely slotted rod 71 is shown with its adjustable stops 72. When desired to change the location of any of the stops, the fingers are pressed on the upper portion of the shelf-guard 63 against the tension of the coil springs 74, and lift and turn the paper-shelf 64 backwardly and downwardly to the position shown in Figure 3, when access to the transversely slotted rod 71 and the stop 72 is easily had. Upon release of the fingers, the coil springs automatically return the shelf-guard to the closed or operative position shown in Figures 1 and 2.

Reference is now made to Figure 4 for illustration of the detailed construction of the improved line-space lever 37, having a finger-piece 77 all of whose surfaces are of smooth, unbroken contour where liability of an operator scratching a finger or breaking off a finger-nail is entirely eliminated, which is rotatably mounted and spring-tensioned normally to remain in the upright or operative position, but which has no exposed scratchy parts such as screwheads. In Figure 4, the parts are in the disassembled position

better to show their relationship when assembled. A cylindrical extension 78 has a radially tapped bore 79 and a lengthwise groove 80 and snugly fits an axial cylindrical bore 81 in which is a coil-spring 82 whose outer end 83 fits in the groove 80 and whose inner end 84 fits in a small bore or wire-receiving hole 85 in the bottom of the cylindrical bore 81. In the assembled position the radial tapped bore 79 is exposed by an arcuate slot 86 in the wall of the bore 81 and receives a threaded stop-screw 87. The tapped bore 79 and stop-screw 87 are so positioned that when they are near one end of the slot 86 the finger-piece 77 is in the horizontal position and when they are near the opposite end the finger-piece is in the upright or operative position. Rotatable finger-pieces are old in the art as shown in Patent No. 1,873,293, to Conard, for Attachment to portable typewriters for facilitating their encasement. In my improvement there are no sharp-edged or scratchy parts for scratching the skin of the finger or breaking a finger-nail thereon. The coil-spring 82 is entirely enclosed from dirt and corrosion, and is prevented by the stop-screw 87 from uncoiling beyond a predetermined arc. As shown in Figure 1 in dotted line, when the portable casing A is closed upon the enclosed portable typewriter, the finger-piece 77 is pushed down by the casing against the tension of the spring so that when the case A is opened the finger-piece forthwith rises to the operative or upright position.

Having now shown and described preferred embodiments of my invention, and recognizing that many changes may be made in the details of construction without departing from the spirit and scope of the invention, I claim:

1. In a typewriter, in combination a frame, a carriage mounted thereon, and a mask supported on said frame, and comprising a lower portion that encases the sides, rear and extreme front portion of the frame, a broad top covering the ribbon-spools and the sides of the machine-frame, and a hinge at the back, said hinge comprising vertical brackets symmetrically positioned on the top edges of the inner side walls of the mask, each bracket having a horizontal rearward extension at the top, and apertured lugs secured to the inside rear wall of said cover and pivotally connected with said rear extensions, the rear edges of said brackets forming stops for the lower rear edge of said top, whereby said cover in the open position is prevented from engaging said carriage.

2. In a typewriter having a platen, an array of front-strike type carriers, and ribbon spools at the opposite sides of said array; a mask structure for said typewriter comprising lower side walls having top edges, a lower front wall between said side walls and having a top edge line depressed substantially below the side wall top edges, and a cover-section hinged for displacement and formed mainly into ribbon spool caps having outer side walls surmounting said lower side walls, said cover-section incuding a depending front apron having a bottom edge line adjacent and fitted to the depressed top edge line of said lower wall, said apron being substantially higher at its lateral end portions relatively to its intermediate portion to form front walls for said ribbon spool caps, the top edge of said apron being thus depressed at said intermediate portion to conduce to exposing the printing line, said apron forming substantially the sole connection between said ribbon spool caps.

3. In a typewriter having a platen, an array of front-strike type bars, and ribbon spools at the opposite sides of said array; a mask structure for said typewriter comprising lower side walls having top edges, a lower front wall between said side walls and having a top edge line depressed substantially below the side wall top edges, and a cover section hinged for dispacement and formed mainly into ribbon spool caps having outer side walls surmounting said lower side walls, said cover section being also formed with inner side walls depending from the tops of the ribbon spool caps, said inner side walls being notched upwardly from their lower edges to clear the paths of the ribbon and the outer type bars, said cover section including a depending front apron having a bottom edge line adjacent and fitted to the depressed top edge line on said lower wall, said apron being substantially higher at its lateral end portions relatively to its intermediate portion to form front walls for said ribbon spool caps, the top edge of said apron being thus depressed at said intermediate portion to conduce to exposing the printing line, said apron forming substantially the sole connection between said ribbon spool caps.

4. In a typewriter having a platen, an array of front-strike type carriers, and ribbon spools at the opposite sides of said array; a mask structure for said typewriter comprising lower side walls having top edges, and front edges sloping downwardly and forwardly from said top edges, a lower front wall between said side walls and aligned with the slope of said front edges, said lower front wall having a top edge line depressed substantially below the side wall top edges, and a cover section hinged for displacement and formed mainly into ribbon spool caps having outer side walls surmounting said lower side walls, said cover section including a downwardly and forwardly sloping front apron having a bottom edge line adjacent and fitted to the depressed top edge line of said lower wall, said apron being substantially higher at its lateral end portions relatively to its intermediate portion to form front walls for said ribbon spool caps, the top edge of said apron being thus depressed at said intermediate portion to conduce to exposing the printing line, said apron forming substantially the sole connection between said ribbon spool caps.

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