Aug. 9, 1938. W. A. DOBSON 2,126,315

TYPEWRITING MACHINE

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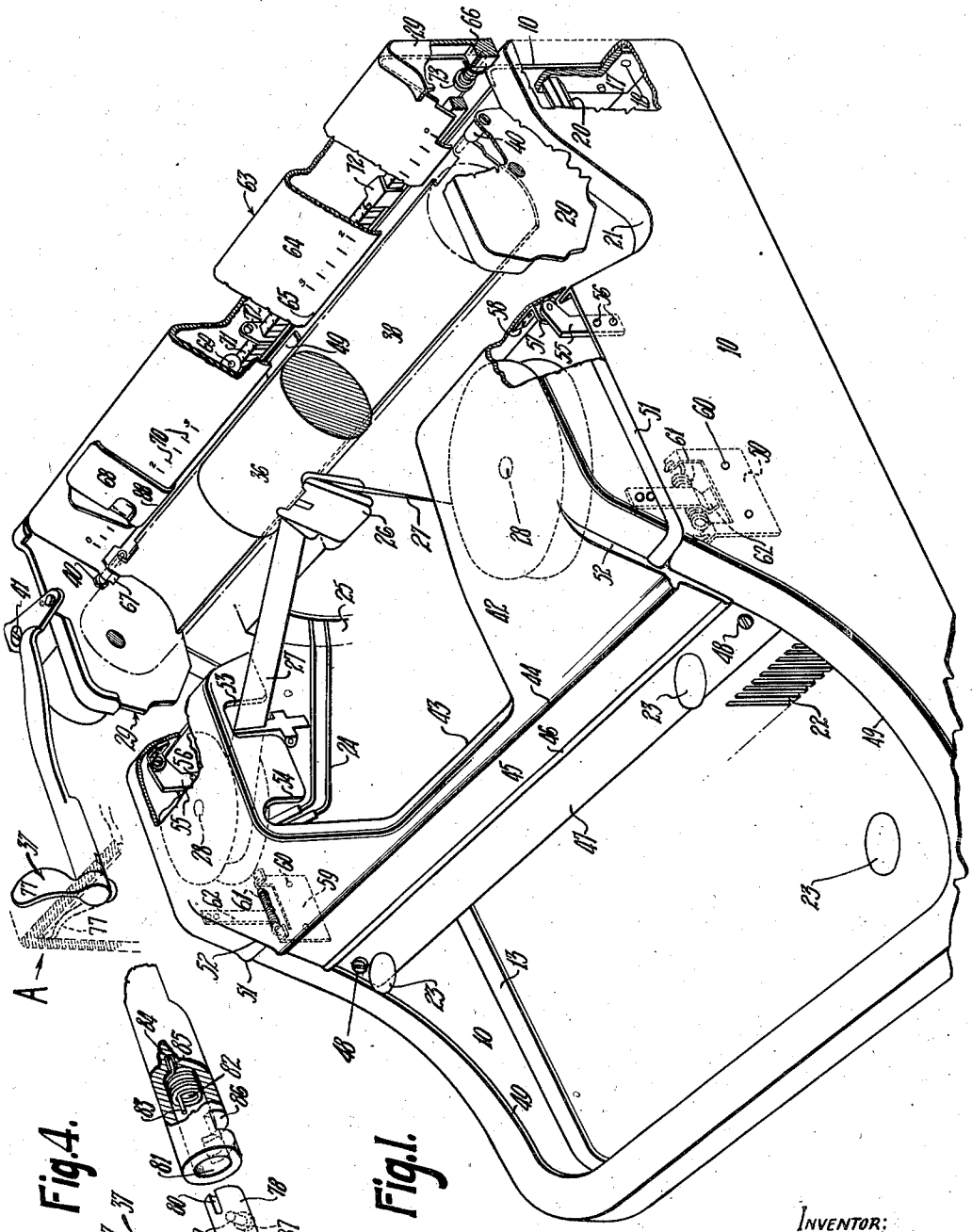


Fig. 1.

Fig. 4.

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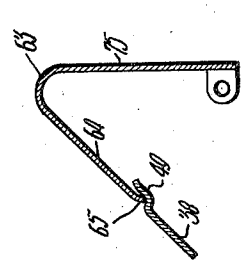


Fig.5.

Fig.2.

Fig.3.

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TYPEWRITING MACHINE

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Application November 14, 1935, Serial No. 49,682

19 Claims. (Cl. 197—186)

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

The features of the invention, among others, are: To provide a typewriter of the portable type in which, in the central position of the carriage, the ends of the carriage and the sides of the mask lie in the same planes respectively; and to provide such a combined paper-shelf and dust-guard on the rear wall of the carriage that the plane of the rear wall is in the same vertical plane as the rear wall of the improved mask, and, in the central position of the carriage, that said plane is coextensive transversely with that of the rear wall of the mask, to exclude dust and to improve the ornamental appearance, to provide an improved mask for typewriters having a single-unit-one-piece cover overlying both ribbon-spools and a front cover projecting forwardly of the sides of the mask, to provide clearance for the type-bars and give an ornamental appearance, by the device of rear hinges mounted on the upper side walls of the mask, and of such a construction and so positioned that, when the cover is lifted to the vertical position to expose the ribbon-spools, there is no interference with any part of the carriage. The invention, furthermore, includes improved finger-lifts, and a hinged rear paper-shelf with a hanging back apron which excludes dust and improves the ornamental appearance of the machine. Other objects and advantages will appear.

It is understood that hinged mask top covers for the ribbon-spools are old in the art, as shown in Patent No. 1,890,564, to Dowd.

A feature of the invention is a top cover for masks for typewriters, so hinged at the rear as to require a minimum clearance between it and the carriage of the typewriter, the parts of the hinge being especially formed and positioned for this purpose. Moreover, the top cover is designed to improve the ornamental appearance.

Another feature is the forward front extension of the top cover projecting beyond the sides of the mask to provide clearance for the type-bars and improve the ornamental appearance.

Another feature of the invention is the provision of a rear paper-shelf extending rearwardly and upwardly from the platen and having a hanging apron in the rear to form an enclosure for carriage stop mechanism. This combined paper-shelf and hanging back apron is hinged on the carriage. The hanging back apron is in substantially the same vertical plane, and is substantially flush with, the rear wall of the main mask. The combined paper-shelf and hanging back apron forms a mask concealing the carriage-controlling mechanism. The carriage side plates, as shown in Figures 1 and 2, reach rearwardly for enough to constitute, together with the combined paper-shelf and rear apron, a mechanism-concealing enclosure.

Another feature is the improved resiliently held anti-scratching side-edge guide for the paper-shelf.

Another feature is a finger-piece so mounted on a line-space lever that it turns against spring pressure into the inoperative position for encasement of the typewriter and of improved construction to eliminate scratchy or nail-breaking surfaces.

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.

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. As will be apparent from an inspection of the drawings, particularly Figures 1 and 2, the tongues 67 frictionally contact portions of the upper part of the paper deflector or apron construction and tend to hold the combined paper-shelf and dust guard in the normally closed position. 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 uper 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 con-

tour 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 paper-shelf having a rear wall forming a carriage back cover and hinged at the lower end of said rear wall on said carriage.

2. In a typewriter, in combination a frame, a carriage mounted thereon, a platen, a curved deflector-plate beneath said platen, a folded paper-shelf hinged at its rear on said carriage, and extensions from the front lower edge of the shelf at both ends which rest on the curved deflector-plate and support the paper-shelf thereon.

3. In a typewriter, in combination a frame, a carriage mounted thereon, a platen, a curved deflector-plate beneath said platen, a paper-shelf hinged on said carriage, extensions from the lower edge of the shelf at both ends which rest on the curved deflector-plate and support the paper-shelf thereon, and an extension from the rear edge of the paper-deflector which supports the lower edge of the paper-shelf and closes the transverse slot between the shelf and the deflector where it is interposed.

4. In a typewriter, in combination a frame, a carriage mounted thereon, a mask supported on said frame, having a lower portion that encases the sides, rear and extreme front portion of the frame, said frame having rearward extensions coextensive with the rearward projection of the cariage over the frame, the rear vertical wall of said mask being mounted on the rear ends of said extensions, and a hinged rear paper-shelf having a hanging back apron in substantially the same vertical plane as that of the rear wall of the mask.

5. In a typewriter, in combination a frame, a carriage mounted thereon, a mask supported on said frame, having a lower portion adapted to encase the sides, rear and extreme front portion of the frame, said frame having rearward extensions coextensive with the rearward projection of the carriage over the frame, the rear vertical wall of said mask being mounted on the rear ends of said extensions, and a hinged rear paper-shelf having a hanging back apron in substantially the same vertical plane as that of the rear wall of the mask, the lower edge of said apron being substantially contiguous throughout with the upper edge of said rear wall, whereby a substantially continuous perpendicular rear wall is presented for the prevention of the admission of dust at the rear of the typewriter into the frame or the working parts.

6. In a typewriter, the combination of a main frame, a mask for said main frame, a carriage overlying said frame and mask, a platen on the carriage, a paper-shelf directed upwardly and rearwardly from the bottom of the platen, an upward extension of said paper-shelf in the form of a back apron covering the rear of said carriage and contiguous thereto, and a pivotal support upon said carriage, upon which said apron is hinged, said apron extending from said hinge upwardly to serve as a mask for the rear of the carriage.

7. In a typewriting machine, in combination, a main frame, a mask thereon, a carriage surmounting said main frame and said mask, a platen on said carriage, a paper-shelf on said carriage immediately in rear of said platen and directed upwardly and rearwardly, and a rear wall forming a back cover for the carriage and hinged thereto and masking the rear or paper-shelf portion of the carriage, and merging into the top of said paper-shelf.

8. In a typewriter, in combination, a main frame, a mask thereon, a carriage mounted on said main frame above said mask, a platen on said carriage, a curved deflector-plate beneath said platen and directed upwardly and rearwardly therefrom, and a longitudinally folded plate hinged on said carriage to form an upward continuation of said paper-shelf and merging into a hanging rear wall, said wall being hinged at its lower rear portion to said carriage and normally resting against the upper edge of said deflector-plate.

9. In a typewriter, in combination, a main frame, a mask thereon, a carriage mounted on said main frame above said mask, a platen on said carriage, a curved deflector-plate beneath said platen and directed upwardly and rearwardly therefrom, a longitudinally folded plate hinged on said carriage to form an upward continuation of said paper-shelf and merging into a hanging rear wall, said wall being hinged at its lower rear portion to said carriage and normally resting against the upper edge of said deflector-plate, and fingers extending downwardly from the forward edge of said folded plate to lie upon the upper portion of said curved deflector-plate for holding the paper-shelf thereon.

10. In a typewriter, in combination, a frame, a carriage mounted thereon, a platen, a curved deflector-plate beneath said platen, a paper-

shelf hinged on said carriage to move from a normal position to a displaced position or vice versa, and an extension from the lower edge of the shelf normally fitting a part of the carriage and in such relation thereto as to normally locate said paper-shelf in union with the deflector plate.

11. In a typewriter, a frame, a letter-feeding carriage, a revoluble platen and feed rolls associated therewith, carriage-controlling mechanism at the rear of the carriage, and a paper-shelf provided to aid in presenting the work to the platen and its associated feed rolls, the shelf extending rearwardly from the platen and merging with a carriage-rear-wall to form a mask for said carriage-controlling mechanism located at the rear of the platen.

12. In a typewriter, a frame, a letter-feeding carriage, a revoluble platen and feed rolls associated therewith, carriage-controlling mechanism at the rear of the carriage, and a paper-shelf provided to aid in presenting the work to the platen and its associated feed rolls, the shelf extending rearwardly from the platen and merging with a carriage-rear-wall to form a mask for said carriage-controlling mechanism at the rear of the platen, said merged paper-shelf and rear-wall being mounted for pivotal displacement relative to the carriage, to permit access to the said carriage-controlling mechanism.

13. In a typewriter, a frame, a letter-feeding carriage, a revoluble platen and feed rolls associated therewith, carriage-controlling mechanism at the rear of the carriage, and a paper-shelf provided to said in presenting the work to the platen and its associated feed rolls, the shelf extending rearwardly from the platen and merging with a carriage-rear-wall to form a mask for said carriage-controlling mechanism at the rear of the platen, said merged paper-shelf and rear-wall being mounted for pivotal displacement relative to the carriage, to permit access to the said carriage-controlling mechanism.

14. In a typewriter, a frame, a carriage having end plates and carriage-stop-mechanism mounted thereon, a paper-shelf extending rearwardly from the platen, and a back-apron integral with the paper-shelf and extending downwardly at the rear thereof to form together with the carriage end plates a rear enclosure for the carriage-stop-mechanism.

15. In a typewriter, a frame, and a carriage mounted thereon having an enclosure at its rear-end to conceal carriage-stop-mechanism, said enclosure constructed of parts including a one piece paper-shelf and carriage-rear-wall, at least one part pivotally mounted for displacement, to gain access to the said carriage-stop-mechanism.

16. In a typewriter, having a main frame and a main rear-wall supported thereby, a paper-carriage including a rear-wall and mounted upon rails for letter-feeding movements, said walls jointly concealing operating parts at the rear of the typewriter including carriage-stop-mechanism, and said carriage-rear-wall rising upwardly, and a paper-shelf continuing from the upper part of said carriage-rear-wall forwardly and downwardly toward the introductory side of a platen.

17. In a typewriter having a main frame, carriage-controlling mechanism associated therewith, a main rear-wall supported by the main frame, a paper-carriage mounted for letter-feeding movements upon said main frame, a platen, a paper apron in close proximity thereto, a paper-shelf normally extending rearwardly from the apron and ending in a downwardly extending apron to substantially meet the main rear-wall, said paper-shelf and downwardly extending apron being mounted for displacement toward the rear to permit access to the carriage-controlling mechanism.

18. In combination, with a frame, and a letter-feeding carriage, having side plates, a revoluble platen mechanism at the rear of the carriage, a paper-shelf extending rearwardly from the proximity of the platen and merging with a carriage-rear-wall, said side plates extending rearwardly at least far enough to substantially meet the carriage-rear-wall, and said side plates, paper-shelf and merging rear-wall forming a concealing pocket.

19. In a typewriter, a frame, a rear wall therefor, a carriage mounted on the frame for transverse movement thereon, having an enclosure at the rear to conceal carriage-stop-mechanism, said enclosure comprising a rear wall having a lower edge which substantially matches the rear wall of the frame to present a substantially continuous rear wall for the frame and carriage.

WILLIAM A. DOBSON.

CERTIFICATE OF CORRECTION.

Patent No. 2,126,315. August 9, 1938.

WILLIAM A. DOBSON.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 3, first column, line 75, claim 4, for "cariage" read carriage; page 4, first column, line 35, claim 13, for the word "said" read aid; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 27th day of September, A. D. 1938.

Henry Van Arsdale

(Seal) Acting Commissioner of Patents.