March 3, 1964 A. N. PAONE ETAL 3,123,196

RIBBON SPOOL COVER SUSPENSION MECHANISM

Filed Dec. 28, 1960 3 Sheets-Sheet 1

Fig. 2

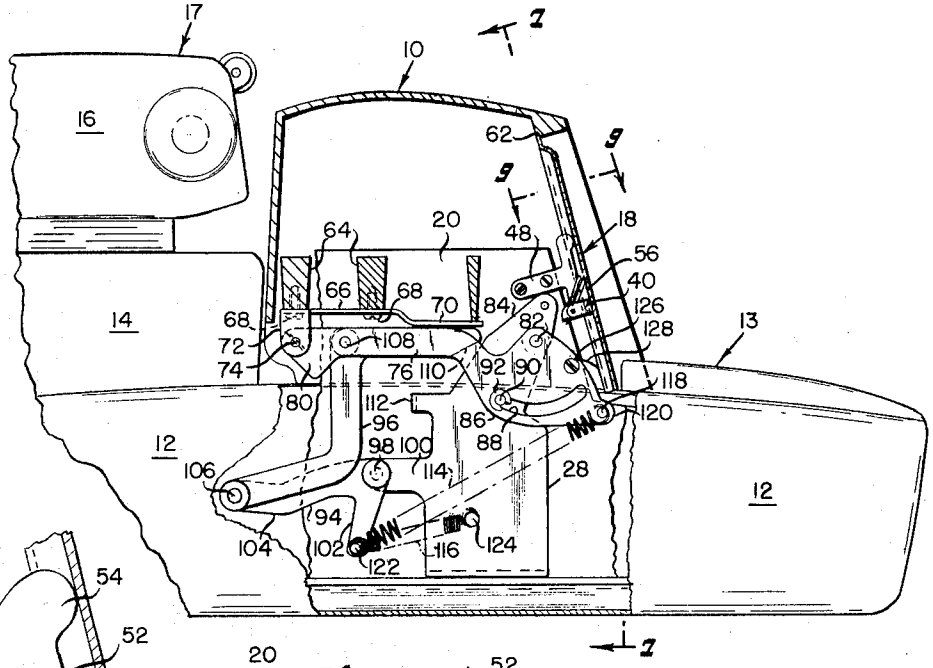

Fig. 1

Fig. 5

Fig. 6

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RIBBON SPOOL COVER SUSPENSION MECHANISM

Filed Dec. 28, 1960 3 Sheets-Sheet 2

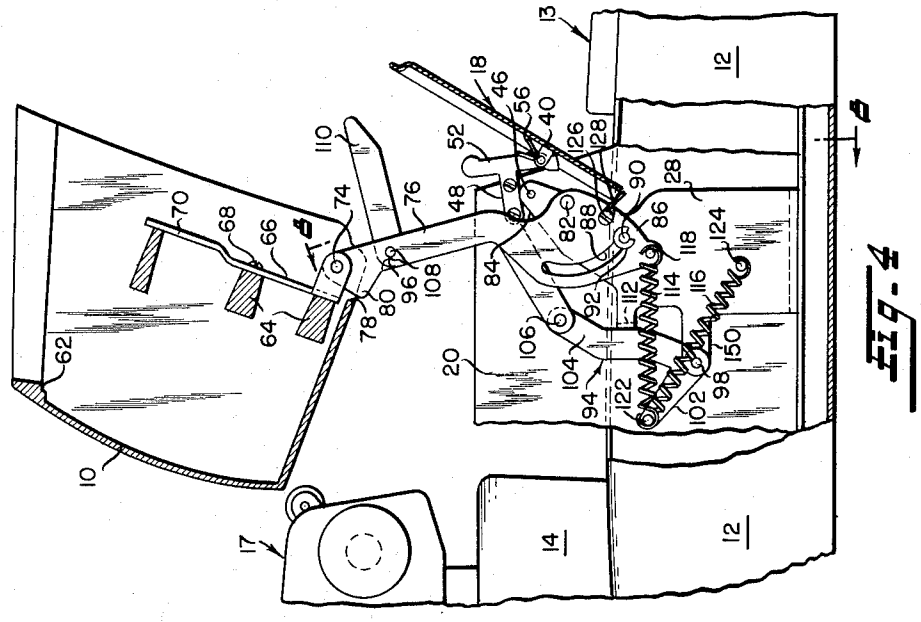

Fig. 4

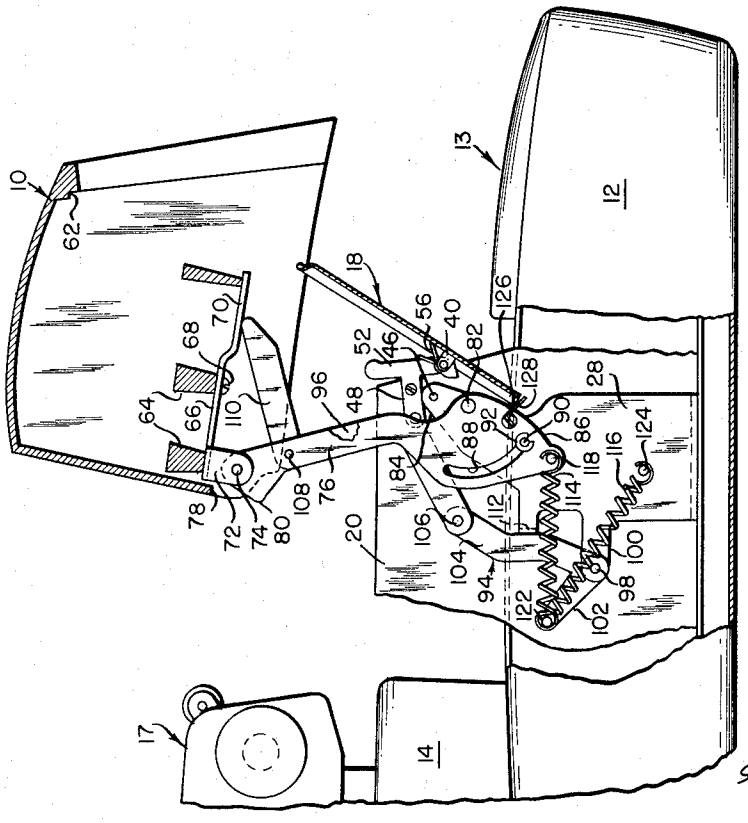

Fig. 3

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RIBBON SPOOL COVER SUSPENSION MECHANISM

Filed Dec. 28, 1960 3 Sheets-Sheet 3

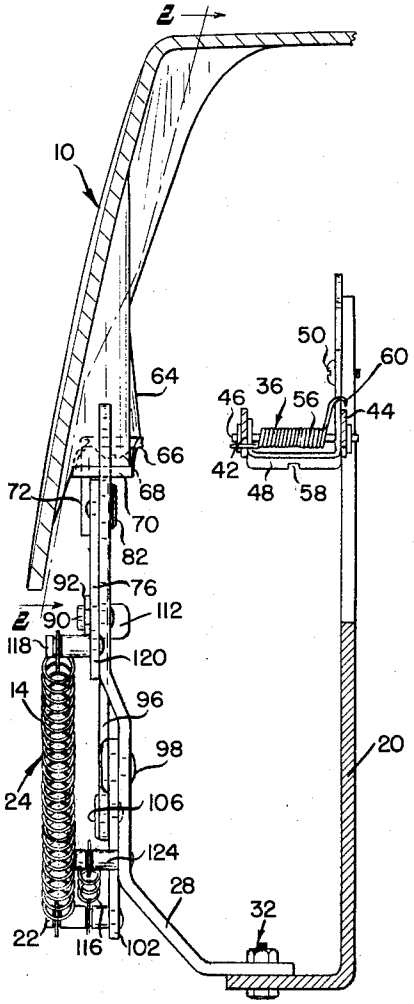

Fig. 1

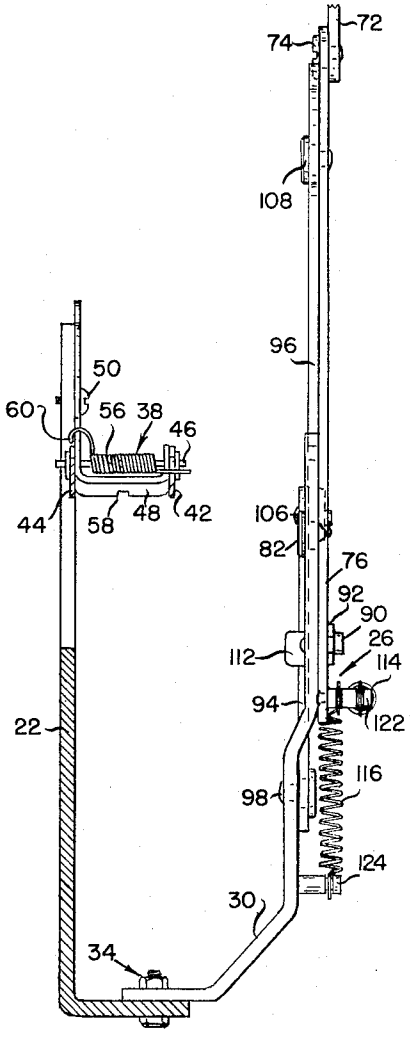

Fig. 8

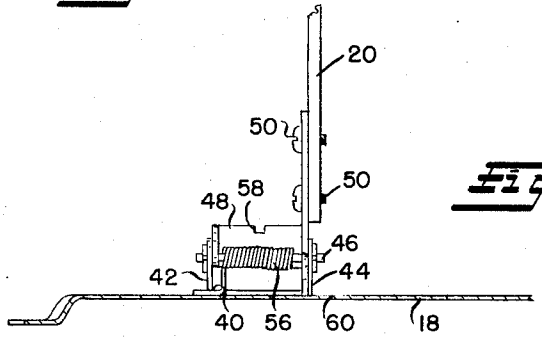

Fig. 9

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United States Patent Office 3,123,196 Patented Mar. 3, 1964

3,123,196

RIBBON SPOOL COVER SUSPENSION MECHANISM

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Filed Dec. 28, 1960, Ser. No. 78,980
10 Claims. (Cl. 197—136)

This invention relates to office machines, and, more specifically, to typewriters and typewriter casings wherein a portion of the casing is movably supported, whereby the operator may have access to the type basket and ribbon feed mechanisms.

In a conventional typewriter, the ribbon spools are located at the top of the machine forward of the paper carriage, one at either side of the type basket. An outer casing is provided to enclose the typewriter, thereby shielding its mechanisms and protecting them from dust and dirt while at the same time providing the machine with a pleasing appearance. In order to remove and replace the ribbon supply and take-up spools from within the casing, part of the outer casing must be capable of being quickly and easily moved by the typist. In conventional typewriters, the movable part of the typewriter casing has been the cover portion located forward of the carriage.

In recent years, carbon ribbon has become widely used as an ink supply means for typewriters. Because carbon ribbons may be used only once, it is desirable to mount a large supply of ribbon within the machine so that the typist can operate the machine for a sufficient length of time without stopping to replace the ribbon. To accomplish this, it is necessary to house within the casing two ribbon spools of substantially larger size than is necessary for ordinary inked fabric ribbons.

Because carbon ribbon is monochromatic and somewhat more expensive than the conventional fabric ribbon, it is desirable to provide a typewriter casing which is capable of housing both fabric ribbon and carbon ribbon feed mechanisms simultaneously. This would enable the typist to use the red or black on the conventional fabric ribbon, or carbon ribbon, as desired. An example of such a typewriter ribbon feed mechanism is disclosed in United States patent application Serial No. 74,199, filed December 6, 1960, by Floyd H. Canny et al. for Ribbon Mechanism.

It is often necessary for the typist to clean the faces of the type, and access to the type basket must be had for this purpose. Also, the typist must have access to the ribbon spools of both types of ribbon mechanisms in order to replace the ribbons. In order to accomplish this, it has been found desirable to provide for the removal of a substantially larger portion of the outer casing of the typewriter than has heretofore been necessary.

It is the primary object of this invention to provide a mechanism whereby a large portion of the outer casing of a typewriter may be quickly and easily moved to a position wherein the operator may have access to the spools of both carbon ribbon and fabric ribbon feed mechanisms and also to the faces of the type in the type basket.

A specific object of this invention is to provide a hinge mechanism whereby the cover portion of the outer casing of the typewriter may be moved from a closed position to an open position substantially rearward and above the typewriter keyboard so as to allow an increased area of access to the type basket and ribbon mechanisms over what would be possible using conventional hinge means.

Another object of this invention is to provide a cover hinge mechanism which will lie mostly in the vertical plane and occupy as little space transverse of the machine as possible.

Another object of this invention is to provide a cover

hinge mechanism which will allow the cover to be moved from a closed position to an open position wherein the cover lies sufficiently above and forward of the carriage and the mechanisms supported thereon so as not to interfere with the carriage should it be set in motion while the cover is in open position.

Another object of this invention is to provide a hinge mechanism for the cover portion of a typewriter casing which is of simple construction, that will occupy a minimum of space, and will allow the typist to open and close the cover in a simple manner without undue expenditure of effort.

A more specific object of this invention is to provide a hinge mechanism which will allow the cover portion of a typewriter casing to be opened by merely pulling on it in a direction toward the typist using only one hand, and to be closed by merely pushing it downwardly and away from the typist.

Another specific object of this invention is to provide a cover hinge mechanism that will resist torsional forces in the suspension mechanism causing it to bind, so as to allow the cover to be opened and closed by pushing or pulling at any point on the cover where the operator may obtain a grip.

Another object of this invention is to provide a simple and inexpensive way to move the face mask portion of the typewriter casing from a closed to an open position and return, automatically upon the opening of ribbon spool cover portion of the casing.

Other objects and advantages will be apparent from the following description taken in conjunction with the appended drawings, in which:

FIGURE 1 is a left side elevation of a typewriter embodying the present invention with the cover portion of the casing in the closed position;

FIGURE 2 is a partial left side elevation of the typewriter of FIGURE 1 with a portion of the casing broken away substantially on the line 2—2 of FIGURE 7 to show the cover lift mechansm of the present invention;

FIGURE 3 is a view similar to FIGURE 2 showing the left hand hinge mechanism and cover in the positions they occupy with the cover partially open;

FIGURE 4 is a view similar to FIGURES 2 and 3 showing the left hand hinge mechanism and cover in the positions they occupy with the cover fully open;

FIGURE 5 is an enlarged fragmentary side elevational view, partly in section, showing a portion of the cover face mask and associated parts of the typewriter of FIGURES 1 and 2 in closed position;

FIGURE 6 is a side elevational view, similar to FIGURE 3, showing the face mask of the typewriter in its open position;

FIGURE 7 is an enlarged fragmentary sectional view taken substantially on line 7—7 of FIGURE 2, showing the left hand hinge mechanism and the left hand face mask mounting means with the cover in its closed position;

FIGURE 8 is an enlarged fragmentary sectional view taken substantially on line 8—8 of FIGURE 4 showing the right hand hinge mechanism and the right hand face mask support means with the cover in open position; and

FIGURE 9 is a fragmentary sectional view taken on line 9—9 of FIGURE 2 showing the left hand face mask support means.

Referring particularly to FIGURE 1, the outer casing of the typewriter is shown to comprise three main sections. A first cover member 10 encloses the upper portion of the typewriter including the type basket and ribbon feed mechanism. In the closed position, first cover member 10 rests upon a pan 12 to the rear of the keyboard 13. Pan 12 houses the bottom portion of the machine, including at the end portion, the type bar actuating mechanism. A rear casing portion 14 encloses the upper rear and

upper side portions of the machine. Plates 16 are provided to enclose the ends of the typewriter carriage.

Referring to FIGURE 2, the first cover member 10 is not provided with the customary integral front wall, but rather is provided with a separate cover member such as face mask 18 which forms a panel closing the otherwise open front of the first cover member 10. Mask 18 is pivotally mounted at its opposite sides on two identical vertically extending side frame members 20 and 22 (FIGURES 2 and 8), one located on each side of the machine.

The first cover member 10 is mounted on frame members 20 and 22 by two substantially identical linkages such as hinge mechanisms 24 and 26, one located on each side of the machine and one being the mirror image of the other as viewed from the front of the machine as in FIGURES 7 and 8. As best seen in FIGURES 7 and 8, hinge pivot brackets 28 and 30 for the cover hinge mechanisms are attached by means of bolt and nut assemblies 32 and 34 to the typewriter frame members 20 and 22 respectively and provide supports for the hinge mechanisms. The second cover member or face pivot means 26 and 38 is also secured to frame members 20 and 22 respectively. The ribbon spool cover hinge mechanisms 24 and 26 and the face mask support means 36 and 38 for each side thus form convenient sub-assemblies which may be attached to the frame members 20 and 22 of the typewriter as desired.

FIGURES 5, 6 and 9 show the left hand face mask supporting means 36 in detail. A U-shaped bracket 40 is attached to the inner surface of the mask 18 and each of its ears 42 and 44 are provided with a mounting hole to receive a pivot pin 46. Pin 46 is held in a bracket 48 which is attached to frame members 20 by means of screws 50. Bracket 48 is provided with an upstanding extension 52 (FIGURE 5) which terminates in a heel portion 54. Heel 54 acts as a fixed limit stop to determine the extent mask 18 may be rotated in the counterclockwise direction (FIGURE 5). The coil portion of a torsion spring 56 is loosely journalled on pin 46 and one end is anchored around the upstanding extension 52 of bracket 48 and the other end 60 is L-shaped and bears against the interior face of mask 18 so as to constantly resiliently bias the mask 18 in a clockwise or opening direction about pivot pin 46 toward its open position as shown in FIGURE 6. When the first cover member 10 is in its closed or rest position, a lip 62 (FIGURE 2) provided along the top front and side edges of the front opening in the first cover member 10 overlaps the top and side edges of mask 18 to retain the mask 18 in its closed position against heel stop 54.

Referring now to FIGURES 2 and 7, lugs 64 are provided on the inner side surfaces of the ribbon spool first cover member 10 to which a cover support bracket 66 is attached on each side of first cover member 10 by means of screws 68. Each bracket 66 is provided with a narrow flat forward extension 70 at its forward end and a depending ear 72 at its rear end. The ears 72 are pivotally attached by means of studs 74 to the top of cover lift arm or first lever means 76 of the respective hinge mechanisms 24 and 26. When the cover hinge mechanisms 24 and 26 are in their open positions, first cover member 10 is held in the elevated positions shown in FIGURE 3, and may be rotated about pivot studs 74 between its semi-open position as shown in FIGURE 3, and its fully open position as shown in FIGURE 4, in which the rear edge 78 of cover 10 engages heel 80 of arm or first lever means 76 as a stop.

As best seen in FIGURES 2, 3 and 4, the hinge mechanisms 24 and 26 each comprise the cover lift arm or first lever means 76 which is pivoted at 82 to an upstanding extension 84 of the pivot bracket 28. At its lower end, arm or first lever means 76 is provided with a plate portion 86 in which a segmental slot 88 is cut. Slot 88 receives a stud 90 affixed to the bracket 28 and a C-ring 92 is secured on stud 90 to hold the plate portion 86 of the arm 76 slidably against the bracket 28.

The segmental slot 88 and the stud 90 with the C-ring 92 forms a guiding means and a limiting means to limit the motion of the first lever means 76. It operates to confine movement of the first lever means to paths normal to the axis of the pivot 82 to thereby prevent binding of the linkage incident to the lifting pressure being applied at points other than centrally of the cover member 10.

A toggle mechanism is provided between the upper end of lift arm or first lever means 76 and the bracket 28 to aid in the control of the movement of arm or first lever means 76 about its pivot 82. The toggle is composed of an L-shaped bell crank or second lever means 94 and a Z-shaped link 96 which cooperates to form the toggle linkage. Bell crank or second lever means 94 is pivoted at 98 to a rearward extension 100 on bracket 28 and is provided with a short lever arm 102 and a longer lever arm 104. One end of the link 96 is pivoted to the outer end of the long lever arm 104 of the bell crank or second lever means 94 by means of stud 106 and, short of its other end is similarly pivoted to lift arm or first lever means 76 at 108, leaving an extension 110 on the upper end of link 96 to cooperate with the extension 70 of bracket 66 attached to the inner side of the first cover member 10 to limit the clockwise rotation of the cover 10 as the hinge mechanism is opened and closed.

As best seen in FIGURES 3 and 4, the toggle comprising bell crank or second lever means 94 and link 96 is prevented from moving all the way to its lock position by means of a limit in the form of a bent ear 112 located midway of the rear edge of the bracket 28. Two coil type tension springs 114 and 116 are connected to studs on the toggle arms and to the other parts of the hinge mechanism so as to exert various biasing forces on the lift arm or first lever means 76 through the toggle.

Spring 114 is secured at one end to a spring stud 118 mounted on a heel 120 at the lower end of lift arm or first lever means 76, and, at the other end to the stud 122 mounted on lever arm 102 of bell crank or second lever means 94. Spring 114 serves two functions. In the rest position of FIGURE 2, it biases the toggle formed by the bell crank or second lever means 94 and link 96 to the rest position as shown in that figure. As the hinge mechanism is moved from the closed positions of FIGURE 2 to the open position of FIGURE 3, the bell crank or second lever means 94 pivots at 98, carrying the arm 102 together with its stud 122 upward in a clockwise direction around pivot 98. At the same time, lift arm or first lever means 76 pivots clockwise carrying stud 118 downward. As the spring studs 118 and 122 reach the point in their travel where they are aligned with the pivot 98, the spring 114 moves over center and, for the remainder of the movement of the hinge mechanism toward the open position, the tension of the spring 144 urges the toggle toward the lock position into contact with limit 112 as shown in FIGURE 3.

A second spring 116 is secured at one end to a spring stud 124 on bracket 28 and at the other end to the spring stud 122 on bell crank or second lever means 94. Spring 116 serves two purposes. As the hinge mechanism is moved from the closed position of FIGURE 2 to the open position of FIGURE 3, stud 122 will carry spring 116 around pivot 98 of bell crank or second lever means 94 causing a damping effect of spring 114. The damping effect of spring 116 retards the accelerated rise of the first cover member 10.

The secondary purpose of spring 116 is to provide tension on the bell crank or second lever means 94 at the stud 122. When the stud 122 passes pivot 98 counterclockwise, the tension of the spring 116 urges the toggle toward the closed position of FIGURE 2.

Located adjacent the forward edge of the bottom plate 86 of lift arm or first lever means 76 is a retaining screw 126 which secures a torsion spring or movable resilient

element **128** to the arm or first lever means **76**. (See FIGURES 2 through 6). The free end of spring or movable resilient element **128** engages the lower portion of face mask or second cover member **18** when first cover member **10** is closed, and, as the lift arms or first lever means **76** pivot from the position shown in FIGURE 2 to the open position of FIGURE 3, the springs or movable resilient elements **128** are carried clockwise about the fixed point **82**. When the first cover member **10** is again closed, lift arms or first lever means **76** carry the springs **128** into contact with the mask or second cover member **18**. Since spring or movable resilient element **128** is stronger than torsion spring **56** which biases face mask or second cover member **18** to its open position, mask or second cover member **18** is moved toward the closed position about point **46** when engaged by spring or movable resilient element **128**. A predetermined lead is established whereby the mask or second cover member **18** is returned to its closed position before the hinge mechanisms **24** and **26** fully return the first cover member **10** to its closed position. The closing of the mask or second cover member **18** before the closing of first cover member **10** insures that lip **62** of the cover is properly fitted over the edge of mask or second cover member **18**. During the final portion of the movement of the first cover member **10** to its closed position, after the mask or second cover member is closed, the torsion spring or movable resilient element **128** yields as shown in FIGURES 2 and 5, thereby preventing damage to the mask or second cover member **18** and hinge mechanisms **24** and **26**.

In the operation of the hinge mechanisms **24** and **26**, it is possible for first cover member **10** to occupy any one of three distinct positions. The closed position is shown in FIGURE 2. In this position, first cover member **10** retains mask or second cover member **18** in its closed position and first cover member **10** and mask or second cover member **18** combine to enclose the type basket and adjacent mechanisms. In the semi-open position, shown in FIGURE 3, the hinge mechanism is in its open position and the extension **70** bears against extension **110** to support first cover member **10** relative to arm or first lever menas **76**. In this position, first cover member **10** is supported in a position upward and forward of its rest position and substantially over the keyboard.

In the fully open position, shown in FIGURE 4, first cover member **10** has been pivoted counterclockwise relative to the lift arms or first lever means **76** and rests with its rear edge **78** limiting against heel **80** provided on the upper end of arm or first lever means **76**. In this position, the first cover member **10** stands above the type basket sufficiently forward of the carriage **17** and its associated mechanisms to provide adequate clearance should the carriage be set in motion while the cover is open.

In both the semi-open position of FIGURE 3 and fully open position of FIGURE 4, mask or second cover member **18** lies in its open position, tilted upwardly and forwardly of the machine. In the semi-open position shown in FIGURE 3, the relationship of the first cover member **10** to the mask or second cover member **18** provides the operator with a sufficiently large opening to see into the machine. To increase the size of the opening between the first cover member **10** and the mask or second cover member **18**, the operator has merely to pivot first cover member **10** rearwardly (counterclockwise in FIGURES 2, 3 and 4) about arm or first lever means **76**.

As the hinge mechanisms **24** and **26** are moved between their open and closed positions, the broad surface of the plate portions **86** of their lift arms or first lever means **76** slides against the adjacent faces of the brackets **28** and **30**. Lift arms or first lever means **76** are held closely against bracket **28** and **30** by the pivot studs **82** and pin-and-slot connections **88**, **90**. These elements cooperate to prevent the hinge mechanisms **24** and **26** from binding should a torsional force be established by the typist's attempt to close the cover **10** by pressing on only

one side of the first cover member **10**. It will be noted, on inspection of FIGURES 2, 3 and 4, that the slot **88** is of sufficient length to allow first cover member **10** to fully close against pan **12** in the closed position, and to allow arm **104** of bell crank or second lever means **94** to come to rest against stop **112** in the open position.

The hinge mechanisms **24** and **26**, first cover member **10**, face mask or second cover member **18**, and mask mounting means **36** and **38** cooperate to provide the typist a simple manner in which to gain access to the enclosed mechanisms. With the parts in the fully open position of FIGURE 4, the casing is opened sufficiently to allow large diameter carbon ribbon spools to be removed or replaced. The direction of access downward and away from the normal typing position is most convenient for the typist.

First cover member **10** is provided with the conventional cut-out portion or slot (not shown) in the center of its top surface to allow the typist un-obstructed vision of the printing point. Should it be desirable to open the casing, the typist merely grips the first cover member **10** with one hand in the slot, or in any other convenient manner, and pulls the cover upward and forward.

In the initial movement of the hinge mechanisms **24** and **26** from their closed positions to their open positions, both of their springs **114** and **116** resist the force applied by the typist. As the hinge mechanisms **24** and **26** continue to move, the stud **122** will move the springs **114** and **116** over the center of pivot stud **98**. For the remainder of the movement of the hinge mechanisms **24** and **26** to their open positions, the bias of both springs **114** and **116** helps the typist to complete the opening.

During the opening movement of the hinge mechanisms **24** and **26**, cover lift arm or first lever means **76** rocks clockwise, as seen in FIGURE 2, moving first cover member **10** upward and forward. This movement removes lip **62** on first cover member **10** from engagement with the edge of mask or second cover member **18** releasing the mask or second cover member **18** to the influence of the bias of springs **56**. At the same time, the bottom of arms or first lever means **76** carry closing springs or movable resilient elements **128** rearwardly, allowing springs **56** to pivot mask or second cover member **18** to its open position as shown in FIGURES 3, 4 and 6.

When lift arm or first lever means **76** attains its upright position as shown in FIGURES 3 and 4, the bell crank arm **104** rests against limit **112** of bracket **28**, and the extension **110** of Z-shaped link **96** cooperates with cover-mounted bracket **66** to support cover **10** in the semi-open position of FIGURE 3. To attain the fully open position of FIGURE 4, the typist merely lifts up on first cover member **10** to pivot the first cover member **10** counterclockwise about studs **74** until the lower rear edge **78** of the first cover member **10** rests against heel **80**.

As the first cover member **10** is raised to either of its open positions the springs or movable resilient elements **128** are carried downward and rearward by the clockwise pivotal movement of the plate portion **86** of lift arm **76** and the face mask or second cover member **18** is allowed to tilt clockwise, as shown in FIGURES 2, 3 and 4, to a position where the torsional effect of the spring **56** is exhausted as shown. Should stronger springs **56** be employed, the bottom edge of mask or second cover member **18** will be held against the upper portion of the springs or movable resilient elements **128** as may be seen upon inspection of FIGURE 6.

To close first cover member **10**, the typist rotates the cover back to its semi-open position of FIGURE 3, and then, placing a hand anywhere on the top surface of the first cover member **10**, merely presses downwardly and rearwardly. If the typist attempts to close the cover using only one hand, the pressure exerted to the left or right of center of the cover sets up a torsional force in the cover and its supporting mechanisms. Since the

hinge mechanisms on each side of the first cover member 10 operate independently, a torsional force tends to cause the hinge mechanism to bind. In the device of the present invention, binding is prevented by cooperation of the lift arm or first lever means 76 with the brackets 28 and 30. The broad surfaces of the plate portions 86 of lift arms or first lever means 76 cooperate with the equally broad surfaces of the extensions of brackets 28 and 30 to give each hinge mechanisms 24 and 26 a substantial resistance to forces exerted transversely of the machine. Further stability is gained from the pin-and-slot connections 88, 90 and the C-rings 92.

During the initial portion of the return movement of the hinge mechanisms 24 and 26 to their closed positions, springs 114 and 116 resist the pressure applied by the typist. As the return movement continues, first spring 116 and then spring 114 passes over the center of pivot stud 98, with the result that during the final portion of the closing movement the bias of both springs 114 and 116 tends to close the cover, thereby insuring that the cover will be fully returned to its rest position snugly against pan 12.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. In a typewriter, a casing enclosing the type bar actuating and ribbon feed mechanism thereof and including a ribbon feed mechanism cover comprising: a first cover member having spaced side walls interconnected by a top wall forming a front opening in said first cover member and a second cover member adapted to cooperate with said first cover member when said first and second cover members are in their closed positions to close said opening and form the front wall of said first cover member, means mounting said first cover member for pivotal movement from its closed position to an open position, means mounting said second cover member for forward pivotal movement from its closed position to an open position, and means for imparting opening and closing movements to one of said members incident to manually imparted opening and closing movements of the other of said cover members including means biasing said second cover member toward the open position and a resilient element fixed to the means mounting said first cover member in a position to engage and move said second cover member to the closed position against the bias of said biasing means incident to the forward pivotal movement of said mounting means as said first cover member is moved from the open to the closed position.

2. In combination with a ribbon spool cover member: a pair of like frame supported suspensions therefor, each said suspension comprising a fixed support, first and second lever means pivotally mounted on said support, a link pivotally interconnected to said first and second lever means and including generally horizontally extending cover member supporting portions, means establishing predetermined limits of motion of said lever means relative to said support, said cover member being pivotally fixed solely to said first lever means and normally also supported by said link, and tension spring means interconnecting said first and second lever means and movable with said lever means between said predetermined limit positions, said spring means being operative to bias said first and second lever means toward one of the limits of motion of said first and second lever means while in one of its said limit positions and operative to bias said first and second lever means toward the other limit of motion of said first and second lever means while in the other of its said limit positions.

3. In a typewriter, a casing having a ribbon spool cover member, means mounting said cover member for displacement between a normal closed position and an elevated open position and thereafter for rearward pivotal movement about a fixed pivot axis while in its elevated position, said means comprising a pair of lever means each pivoted adjacent its forward end to the typewriter frame and each pivoted adjacent its rearward end to said cover member, the pivot connection between the lever means and the cover member being the sole connection between said cover member and said mounting means, a pair of links pivoted intermediate their ends to said pair of lever means intermediate said end pivots, the links having forwardly extending portions underlying and normally gravitationally supporting the forward portions of said cover member, said cover member supporting link portions being free of connections with said cover member to permit said cover member to be pivoted backwardly therefrom, and means responsive to forward pivotal movement of said pair of lever means for pivoting said pair of links relative to said pair of lever means to elevate the forwardly extending cover member supporting portions of said pair of links including a pair of lever means each pivotally fixed to one of said links and to said typewriter frame.

4. A typewriter as defined in claim 3, wherein said responsive means includes means operative throughout a first portion of the travel of said lever means to bias said lever means towards their cover member closed positions and throughout a remaining portion of the travel of said lever means to bias said lever means toward their cover member open position.

5. In a typewriter: a casing, a first ribbon spool cover member, means mounting said first cover member for displacement between a normal closed position resting on said casing and an elevated open position wherein said cover member is disposed forwardly of said closed position, said mounting means including means permitting said first cover member to be pivoted rearwardly about a fixed pivot axis while in said open, elevated position, said cover member comprising a top wall and depending end walls and having an unobstructed front opening substantially coextensive in length with the distance between said end walls and coextensive in width with the height of said end walls, and a second front cover member positioned on said typewriter to close the front opening in said first cover member when said first cover member is in its closed position resting on said casing.

6. In a typewriter as defined in claim 5, a typewriter frame within said casing, and means pivotally mounting said first cover member at its opposite ends on said frame for movement between a rearwardly inclined normal position and a forwardly inclined open position.

7. In a typewriter as defined in claim 5, said first cover member mounting means including means for effecting movement of said second cover member between its said closed and open positions incident to the movement of said first cover member between its said normal and open positions respectively.

8. In a typewriter as defined in claim 5, including locking means for maintaining said second cover member in its closed position so long as said first cover member is in its normal closed position.

9. In a casing for an office machine, the combination of a first movable cover member, a second movable cover member, means mounting said first cover member for displacement between a closed position and an elevated open position, said means including means permitting said cover member to be pivoted about a fixed axis to a second open position while in said elevated open position, means mounting said second cover member for movement between a closed position and an open position, means biasing said second cover member toward the open position,

and a resilient element fixed to the means mounting said first cover member in a position to engage and move said second cover member to the closed position against the bias of said biasing means incident to movement of the first cover member between its elevated open position and its closed position.

10. In a typewriter, a casing enclosing said typewriter including a first movable cover member, means mounting said first cover member for displacement between a closed position and an elevated open position forwardly of said closed position, a second movable cover member, means mounting said second cover member for pivotal motion between a closed position and an open position, torsion spring means for biasing said second cover member towards its open position, and movable resilient elements carried by said first cover member mounting means engageable with said second cover member at least toward

the end of the path of closing motion of said first cover member to resiliently bias said second cover member to its closed position in opposition to the biasing force thereon of said torsion spring means incident to closing motion of said first cover member.

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