Oct. 2, 1928. 1,686,016

J. LINDBURG

TYPEWRITING MACHINE

Filed April 30, 1925 2 Sheets-Sheet 1

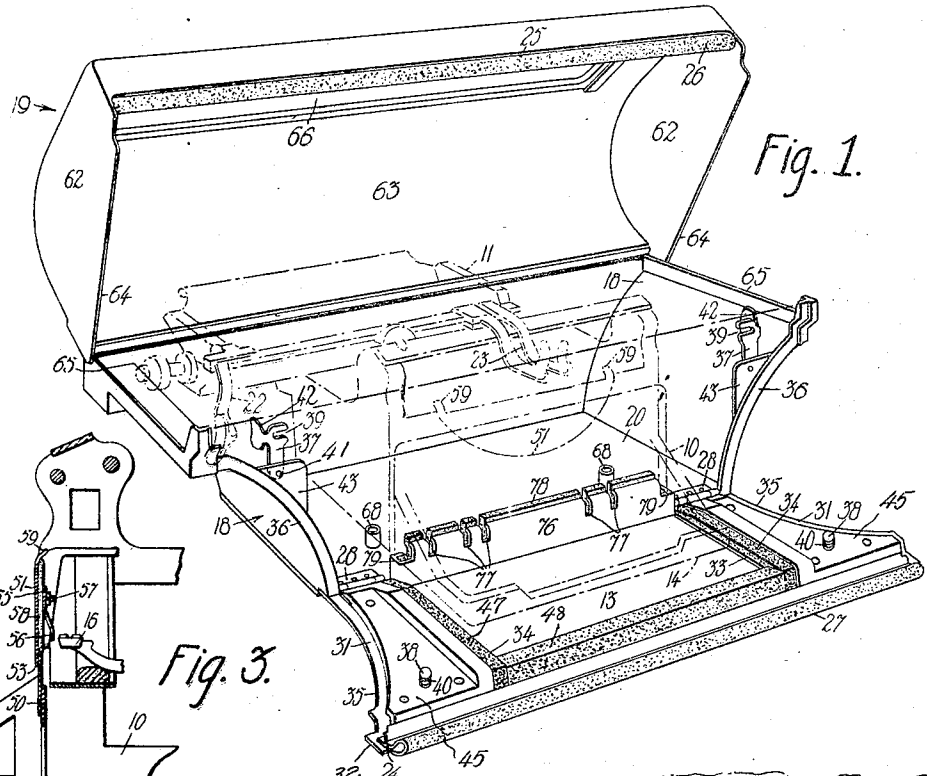


Fig. 1.

Fig. 3.

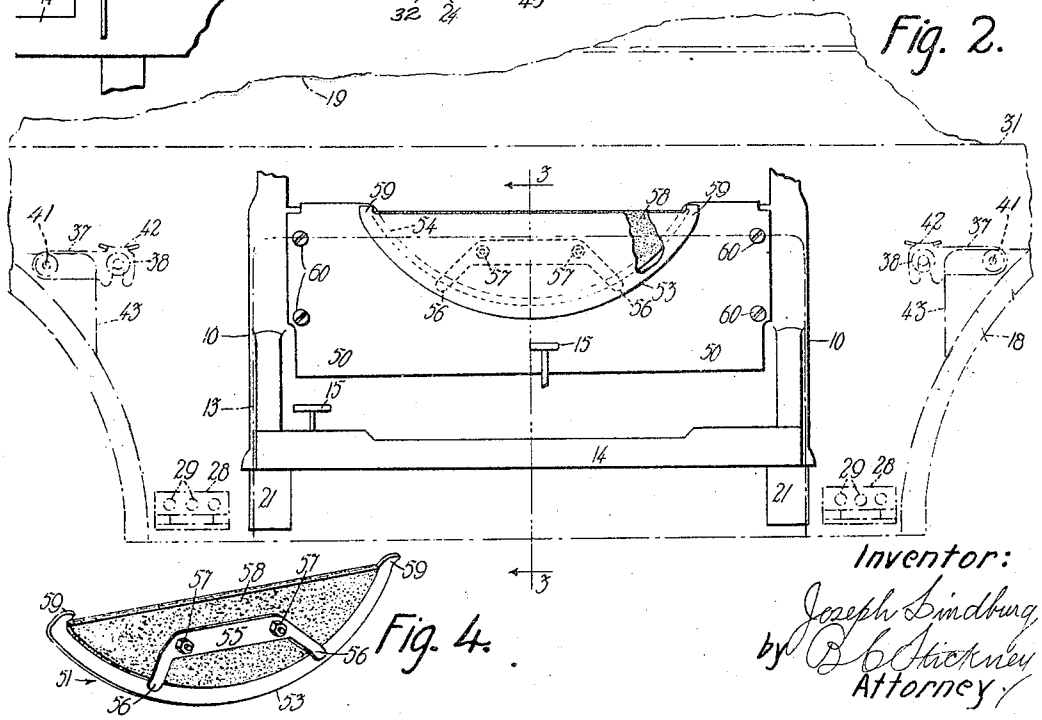


Fig. 2.

Fig. 4.

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Filed April 30, 1925 2 Sheets-Sheet 2

Fig. 6.

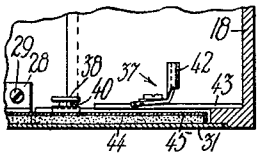


Fig. 7.

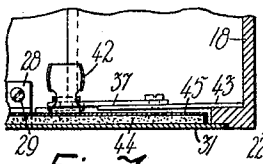


Fig. 5.

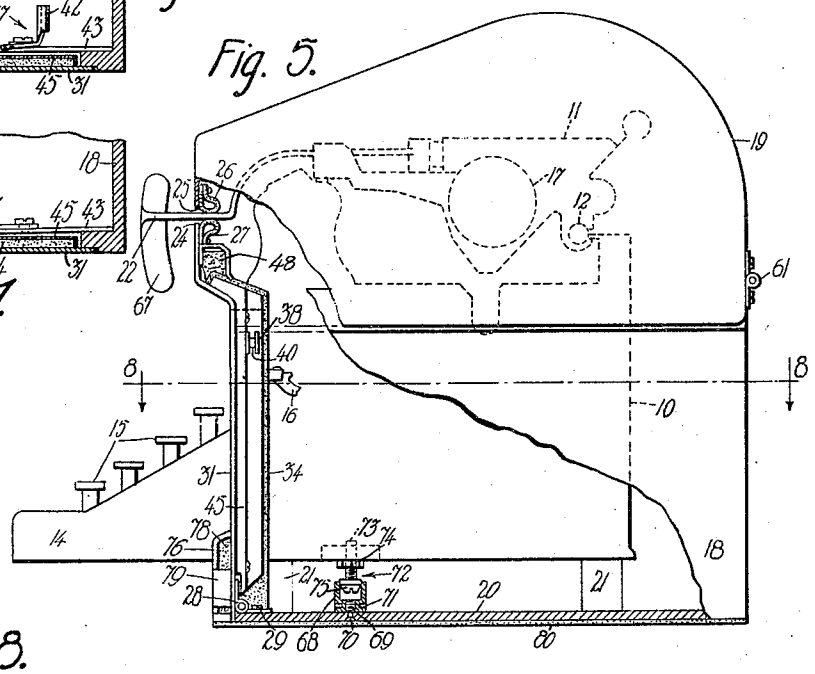
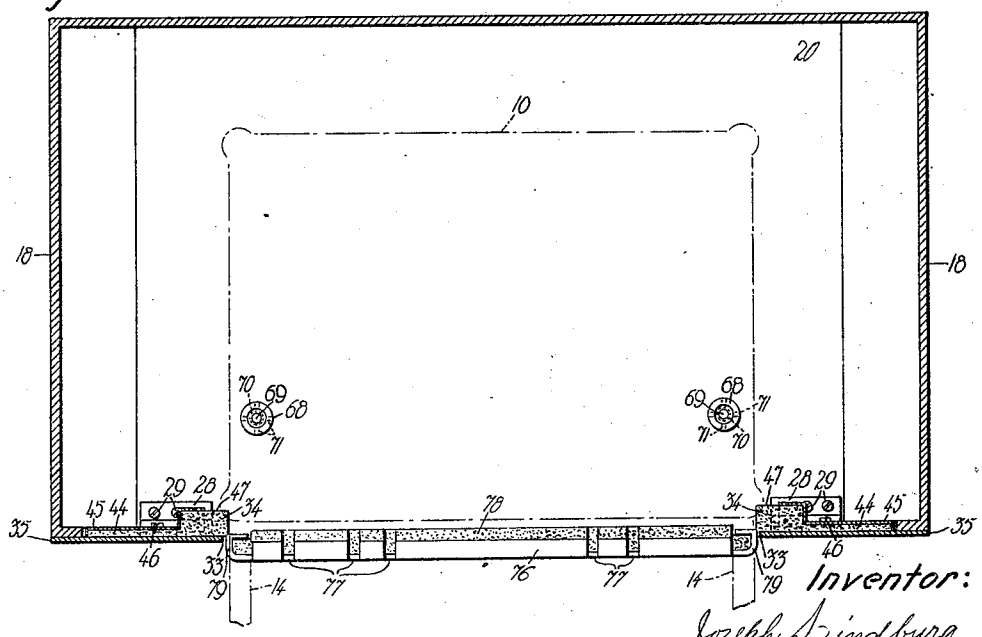


Fig. 8.



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UNITED STATES PATENT OFFICE.

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TYPEWRITING MACHINE.

Application filed April 30, 1925 Serial No. 26,903.

This invention relates to improvements in sound-proof cabinets for typewriting machines, such, for example, as shown in the application of George W. Campbell, Serial No. 510,726, filed October 27, 1921 (now patent No. 1,566,372, dated December 22, 1925), in which the body part of the cabinet is made of a single die-casting, the front wall of said body part having a hole therein through which the keyboard section of the machine protrudes. In order to place the machine into said cabinet, it is necessary to raise the cover and then lower the machine keyboard first into the cabinet. After the machine is partly lowered, the keyboard section is thrust through said opening. Inexperienced operators are apt to find it awkward to place the machine into said cabinet in this manner. Moreover it is necessary, in order to clean the floor, to remove the machine from said cabinet.

A feature of the present invention relates to means to enable the machine to be easily inserted into the sound-proof cabinet. To this end the front wall of the cabinet is hinged at its bottom edge to the cabinet floor, so that it may be swung outwardly from the top to lie substantially level, thus permitting the machine to be readily inserted or removed from the cabinet. After the machine has been placed in the cabinet, it is merely necessary to swing the front wall upwardly to its closed position, where it may be locked by suitable finger-pieces on the inside of the cabinet.

One feature of the invention relates to locking levers mounted on the walls of said cabinet, each having a finger-piece. Each lever is also provided with a bifurcated end to embrace a headed stud on the front plate. The bifurcated end is slightly inclined or cam-shaped to engage behind the head of said stud to draw the front plate inwardly tight against suitable flanges at the front edges of the side walls of the cabinet to thus tightly close or seal the cabinet.

In order to swing open the front wall, which is hinged at its bottom edge, it will be first necessary to move the carriage of the machine to the end of its travel. The handle which extends downwardly from the line-space lever will be cleared when swinging the front wall. This general arrangement of parts eliminates the necessity of removing the line-space lever previous to swinging down the front wall.

Another feature of the invention relates to means for locating the machine in the cabinet. To this end there are provided on the floor of said cabinet cup-shaped locators in which suitable studs or dowels attached to the frame of the machine may be inserted. Said locators are also effective to prevent accidental displacement of the machine within the cabinet, when the front plate is swung to its closed position; said front plate being provided with strips of sound-deadening material, such as felt, to seal the opening at the forward corner post of the machine frame, and through which opening the keyboard section of the machine extends.

Still another feature of the invention relates to novel means for holding a detachable plate on the front plate of the machine to close the arcuate opening in said front plate, which detachable plate may be removed, when it is desirable to clean the types of the type-bars which types are arranged in an arc at said opening.

The base of the typewriter is usually cast in a single piece, and the holes in the lower ledge thereof that receive the rubber feet are cored. These rough sand-pitted cored holes materially assist in retaining the assembled feet in place. In the coring of the holes, their relative locations will vary, and when it is required to assemble a machine within a sound-deadening casing, where clearance space is limited and an accurate setting of the machine is required, the locations of the sockets that receive the rubber feet are transferred to the floor of the casing from each machine, because interchangeability between the feet of the machine and the casing-sockets cannot always be depended upon. Furthermore, the heavy machine resting upon four rubber pads anchored to the base by shallow enclosing sockets, promotes vibrations in the machine during the tabulating and automatic carriage-return operations.

In the present invention the feet of the machine rest upon the floor of the casing and become cushioning elements only, and the machine is accurately and mechanically

located within the casing by a dowel at each side frame of the base threaded into machine-located holes, and each dowel sets into a socket that is accurately located upon the base-board by a templet setting, and, under such production methods, the interchangeability of machines to a casing can be maintained and the fixed metal dowels of the machine retained in fixed metal sockets in the enclosing casing, promoting a greater rigidity for the typewriter when assembled within the casing. The parts are machined to accuracy, instead of depending upon casting the parts in place.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a perspective view of the sound-deadening casing applied to an Underwood standard typewriting machine.

Figure 2 is a front view of the Underwood typewriting machine in the sound-deadening casing showing a shutter plate attached to the machine.

Figure 3 is a cross-sectional view in elevation through the line 3—3 of Figure 2.

Figure 4 is a perspective view of the shutter plate.

Figure 5 is an end view in elevation of the sound-deadening casing showing the keyboard extension protruding through the casing.

Figure 6 is a detail showing the front wall clamping member in its open position.

Figure 7 is a detail showing the front wall clamping member in its closed position.

Figure 8 is a plan view in cross-section through the line 8—8 of Figure 5.

In the present invention there is provided a sound-deadening casing for the purpose of confining the noise arising from the operation of typewriting machines, and the invention is particularly illustrated in connection with an Underwood standard typewriter. Said machine comprises a frame 10, a carriage 11 borne by said frame and arranged for letter-space travel upon rails 12 fast to the frame. In order to render the machine operable from the outside of the casing, there is provided at the front thereof an opening 13 through which the keyboard 14 protrudes, so that the keys 15 may be manually operated to cause the type-bar heads 16 to strike a platen 17 revolubly mounted on the carriage.

The casing comprises a body part 18 and a cover 19, rockably mounted at the rear of the casing. The body part comprises a walled-in floor or base 20 forming an integral part thereof which supports the feet 21 of the machine.

In order to render the carriage operable from the outside of the casing without necessitating the opening of the cover, and at the same time preventing the passage of sound waves to the outside of the casing, there is provided a carriage-return lever 22 and a carriage-release lever 23, both levers extending to the exterior of the casing through an opening formed by the edge 24 of the body part and the edge 25 of the cover at the front of the casing. Said opening is provided with suitable sealing means which may comprise a tubular strip 26 fast to the cover and a similar strip 27 fast to the casing. The two strips abut against each other to seal the opening and at the same time present a yieldable surface to the carriage-control levers, so that the same may be moved therealong with the carriage.

One of the features of this invention relates to means for facilitating the insertion of the machine in the casing and the removal therefrom, so that both the machine and the casing may be cleaned or for any other reason. To this end, the front wall of the casing is swingable forwardly and downwardly on hinges 28 which are fast to the floor 20 by means of screws 29 and to the front wall by means of screws 30.

After placing the machine in the casing as shown in Figure 1 in which the front wall is shown in its open position lying in a horizontal position substantially in the same plane as the floor of the casing, the front wall is swung upwardly and is closed as shown in Figure 5. The front wall comprises side plates 31 rigidly connected by a cross-bar 32 forming an integral part thereof, and the whole straddles the keyboard projection, around which the edges 33 of the opening are closely fitted by means of a felt strip 34 fast to the edges of the front wall.

When the front wall is placed in its upstanding position, so that the outer edges 35 bear closely upon the edges 36 of the body portion, the front wall may be secured to the casing by means of hooks 37 rockably mounted on studs 41 fast to the casing. Said hooks are provided with bifurcated ends 39 engaging grooves 40 in studs 38 fast to the front wall. The hooks are operated by means of finger-pieces 42 forming an integral part thereof and are slightly bent inwardly to cam the front wall tightly against the edges 36 of the body part. In order to further increase the resiliency of the hooks and thus prevent their being accidentally released due to the vibration of the machine, there are provided ears 43 extending inwardly from the edges 36 and the hooks are swingably mounted thereon. Said ears are comparatively thin and flexible so that when the hooks are pressed into engagement with the studs the ears will yield. The front wall is provided with a felt lining 44 at the ends thereof, and, in order to secure the lining thereto, there is provided a plate 45 which may be secured by means of

screws 46. The felt lining overextends the plate to form a border 47 around the opening, which border bears on the frame of the machine. As a continuation of said border 47, there is provided a felt strip 48 at the top of the opening, said strip being glued or otherwise secured to the cross-plate of the front wall.

In order that the keyboard opening in the front wall may clear the keyboard extension, the opening is made high enough to clear the corner 49 of the keyboard extension, but, in so doing, due to the construction of the Underwood machine, the sound would leak to the exterior of the casing. In this invention there is provided a cover 51 which has an arcuate lower edge 53 overlapping the arcuate edge 54 of the plate 50. Said cover 51 is resiliently mounted upon the plate 50 by means of a flat spring 55. The spring 55 has two downwardly-extending prongs 56 engaging the plate 50 at the rear thereof and is secured to the cover by means of screws 57 which incidently serve as means for holding a felt lining 58 fast to the plate. The felt lining overlaps the arcuate opening in the front plate 50 so as to form a soundproof joint, and the cover 51 is provided with inwardly-extending ears 59 to locate the plate relatively to the frame of the machine. The front plate 50 is secured to the machine in the regular manner by means of screws 60.

The cover of the casing is mounted on hinges 61 and comprises two end plates 62 forming an integral part of an arcuate top 63, the end plates being designed so that the edges 64 overlap the flanges 65 of the body part. In order to render the worksheet visible, the cover is also provided with a glass-sealed window 66 which is placed in the line of vision of the operative.

Referring more particularly to Figure 1, it will be noted that in order to swing the front wall it will be first necessary to move the carriage to the end of its travel as shown in said Figure 1. Then, due to the peculiar shape of the lever 22 which has a downwardly-extending prong 67, the prong will clear the tubular strip 27 of the front wall.

The machine is located in the casing against accidental shifting, and, to this end, there is provided a cup-shaped locating device 68 fast to the floor of the casing. As shown in Figure 5 the locating device is fastened by screwing the same on a threaded stud 69 which is riveted to the floor at 70. The locating device 68 is provided with wrench-holes 71, so that the same may be easily separated from the casing.

Co-operating with the locating device there is provided a dowel 72 secured to the side frame of the machine by screwing its threaded end 73 into threaded holes in the frame and adjustably secured thereto by means of a lock-nut 74 or any other locking means. To facilitate the introduction of the dowel into the locating device, the head 75 thereof is tapered at the end as shown in Figure 5.

To further prevent the emission of noise to the exterior of the casing, there is provided a comb plate 76 under the keyboard of the machine. Said plate may form an integral part of the floor and is provided with slots 77 for clearing the keys of the machine. The plate is lined with a layer of felt 78 which is secured thereto by means of the edges 79 which are folded over the felt. This comb-plate, with its several slots registering with the lower keys of the keyboard, also greatly assists in the positioning of the machine within the casing as the machine is lowered therein in upright position after the front wall has been swung downward to the position shown in Figure 1.

In order to prevent damaging the table upon which the casing stands, a sheet of felt 80 is secured to the floor 20, said felt incidentally forming a sound-deadening connection between the casing and the table.

It will be noted that the casing includes a walled-in floor with a hinged cover and a front wall hinged to the floor to swing over the keyboard of the machine to assume a plane level with the floor; that, with the cover raised and the front wall lowered, the machine may be lowered directly into the casing without interference; that, after lowering the machine into the casing, the weight of the machine is sustained by the rubber feet, and the feet do not become machine-anchoring elements; that the machine is positioned relatively to the casing by dowels on the machine engaging within sockets fixed to the floor of the casing; that the dowels are adjustable up or down and have a free up-and-down movement within the sockets, so as not to interfere with the cushioning effect of the rubber feet; and that the anchorage of the machine by metal interlocks promotes a more rigid control for the machine than where the rubber feet of the machine are set within locating sockets, as heretofore.

It will be observed from an inspection of Figures 1, 2 and 8 that the floor of the casing is only slightly larger than the bottom of the body of the typewriter, and that the side walls flare outwardly and upwardly, so that the upper portion of the casing, including the cover, provides ample room to accommodate the extreme left and right hand movements of the carriage. This reduced bottom construction makes the casing more compact, and effects a considerable saving in the amount of surface required to support the casing.

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. A sound-deadening casing for a typewriting machine, including a floor-section and rear and side walls and a hinged cover therefor, said casing also including a member hinged to said casing so as to occupy either of two positions, in one of which it is cumbent and lies substantially level with said floor-section, whereby said machine may be lowered in upright position into the casing without obstruction, said member having the form of an open frame loosely surrounding the projecting keyboard-extension of the typewriter when in cumbent position, said member being also swingable upwardly and rearwardly to upright position independently of the keyboard-extension, and forming a front wall for the casing and means to hold it releasably in its upright position.

2. A sound-deadening casing for a typewriting machine, including a floor-section and rear and side walls and a hinged cover therefor, said casing also including a member hinged to said casing so as to occupy either of two positions, in one of which it is cumbent and lies substantially level with said floor-section, whereby said machine may be lowered in upright position into the casing without obstruction, said member having the form of an open frame surrounding the projecting keyboard-extension of the typewriter when in cumbent position, said member being also swingable upwardly and rearwardly to upright position independently of the keyboard-extension, and forming a front wall for the casing, and means to hold it releasably in its upright position, said member when in upright position forming the sole front section of the casing and extending from the front edge of one side wall to the front edge of the other side wall so as to open completely the front of said casing when it is swung forwardly and downwardly, to afford easy access to the encased machine.

3. In a sound-deadening casing for enclosing a typewriting machine having the keyboard extension thereof projecting outside the casing and an arcuate opening in front of the type-bar-basket of the machine, in combination, a floor-section, rear and side walls, a cover-section, a front wall hinged to the floor and having an opening to clear the keyboard extension in its swinging movement, a felt lining border around the opening to bear against the frame of the machine, and means for closing the arcuate opening in the front plate of the machine that is detachable therefrom to give access to the type-bar-basket through the opening in the front wall.

4. In a sound-deadening casing for a typewriting machine having a frame, a keyboard-extension projecting therefrom, and a plate fast to the frame and having an arcuate opening in front of the type-bar-basket of the machine, in combination, a body-part, a cover, a swingably mounted front wall having an opening for the keyboard-extension, a felt lining border around the opening and bearing on the frame, and means for closing the arcuate opening in the front plate of the machine, said means including a detachable cover having a lower arcuate edge overlapping the edge of the arcuate opening in said plate, and means for locating and holding the cover on the plate, said last-mentioned means including a flat spring fast to the cover, the spring being provided with prongs to engage the rear of said plate.

5. In a sound-deadening casing for a typewriting machine having a frame, a keyboard-extension projecting therefrom, and a plate fast to the frame and having an arcuate opening in front of the type-bar-basket of the machine, in combination, a body-part, a cover, a swingably mounted front wall having an opening for the keyboard-extension, a felt lining border around the opening and bearing on the frame, and means for closing the arcuate opening in the front plate of the machine, said means including a detachable cover having a lower arcuate edge overlapping the edge of the arcuate opening in said plate, and means for locating and holding the cover on the plate, said last-mentioned means including a flat spring fast to the cover, the spring being provided with prongs to engage the rear of said plate, said cover being provided with a felt lining overlapping the arcuate opening in the plate.

6. A sound-deadening casing for a typewriting machine, including a floor-section, rear and side walls, a hinged cover-section, and a front wall hinged to the floor-section so as to be movable downwardly into the plane of the latter to permit the machine, after the cover has been tilted rearwardly, to be lowered, in upright position, into the casing without obstruction, said front wall having an aperture to permit it to clear the keyboard-extension of the machine when the latter is in position in the casing as the wall is swung from its lowered to its closed position, and a comb-section fixed to the forward edge of the floor-section and arranged to assist in positioning the machine within the casing and bridge the space between the floor of the casing and the bottom of the keyboard.

7. A sound-deadening casing for a typewriting machine, including a floor-section, rear and side walls, a hinged cover-section and a front wall hinged to the floor of the casing so as to be capable of being swung downwardly into the plane of the floor,

thereby permitting the machine, after the cover has been tilted rearwardly, to be lowered into or raised from the casing in upright position, without obstruction, said front wall having an aperture which underlies the keyboard-extension when the machine is in position in the casing and said wall is in lowered position, said aperture permitting the front wall to clear the keyboard-extension as the wall is raised to closed position, and resilient means arranged to hold the front wall in closed position against the body of the casing.

8. A sound-deadening casing for a typewriting machine, including a floor-section, rear and side walls, a hinged cover-section and a front wall hinged to the floor of the casing so as to be capable of being swung downwardly into the plane of the floor, thereby permitting the machine, after the cover has been tilted rearwardly, to be lowered into or raised from the casing in upright position, without obstruction, said front wall having an aperture which underlies the keyboard-extension when the machine is in position in the casing and said wall is in lowered position, said aperture permitting the front wall to clear the keyboard-extension as the wall is raised to closed position, and resilient means arranged to hold the front wall in closed position against the body of the casing, said means including hook-members mounted on flexible ears projecting from the side walls of the casing and cooperating with studs mounted on the inside of the front wall.

9. A sound-deadening casing for a typewriting machine, including a floor-section, rear, front and side walls and a cover-section hinged to the rear wall, said side walls flaring outwardly and upwardly from the floor to form, with the cover-section, an enlarged upper construction to accommodate the carriage in its extreme left and right hand movements, said front wall being hinged to the floor to permit it to be swung forwardly and downwardly to be substantially level with the latter so that the machine may be lowered in upright position into the casing without obstruction, said wall being apertured to clear the keyboard-extension as it is raised to closed position in front of the casing and arranged to clear the carriage-return lever when the carriage has been moved to extreme left position, said front wall extending from the front edge of one side wall to that of the other, so as to open completely the front of said casing when said wall is swung forwardly and downwardly to afford easy access to the encased machine.

10. A sound-deadening casing for a typewriting machine, including a floor-section, rear and side walls, a cover-section and a front wall hinged to the floor-section so as to be movable forward and downward to be substantially level with the floor-section to permit the lowering of the machine in upright position into the casing, said front wall having an aperture so as to straddle the keyboard-extension and clear the latter as it is raised to closed position, the interior surfaces of the edges defining said aperture being lined with a sound-dampening lining arranged to rest against the front surface of the body of the machine when the wall is swung upwardly and rearwardly to closed position.

11. A detachable cover for the arcuate opening above the type-bar basket of a typewriting machine, including a plate curved at one edge to correspond with the curvature of the basket, and a flat spring attached to the plate and extending approximately to the curved edge thereof and arranged to clamp the front plate of the machine between itself and said first-mentioned plate.

12. In a sound-deadening casing for a typewriting machine having a frame, a keyboard-extension projecting therefrom, and a plate fast to the frame, there being an arcuate opening in front of the type-bar basket of the machine and above said plate, said casing having a floor-section, rear and side walls and a cover-section, a frontal construction including a front wall hinged to the floor of the casing so as to enable it to be swung downward to permit the machine to be lowered into or raised from the casing in upright position, said wall having an aperture to permit it to clear the keyboard-extension as it is swung to open or closed position, and a cover for said arcuate opening to prevent the escape of sound through said opening.

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