May 14, 1929. G. W. CAMPBELL 1,712,648

TYPEWRITING MACHINE CASING

Original Filed Oct. 27, 1921 2 Sheets-Sheet 1

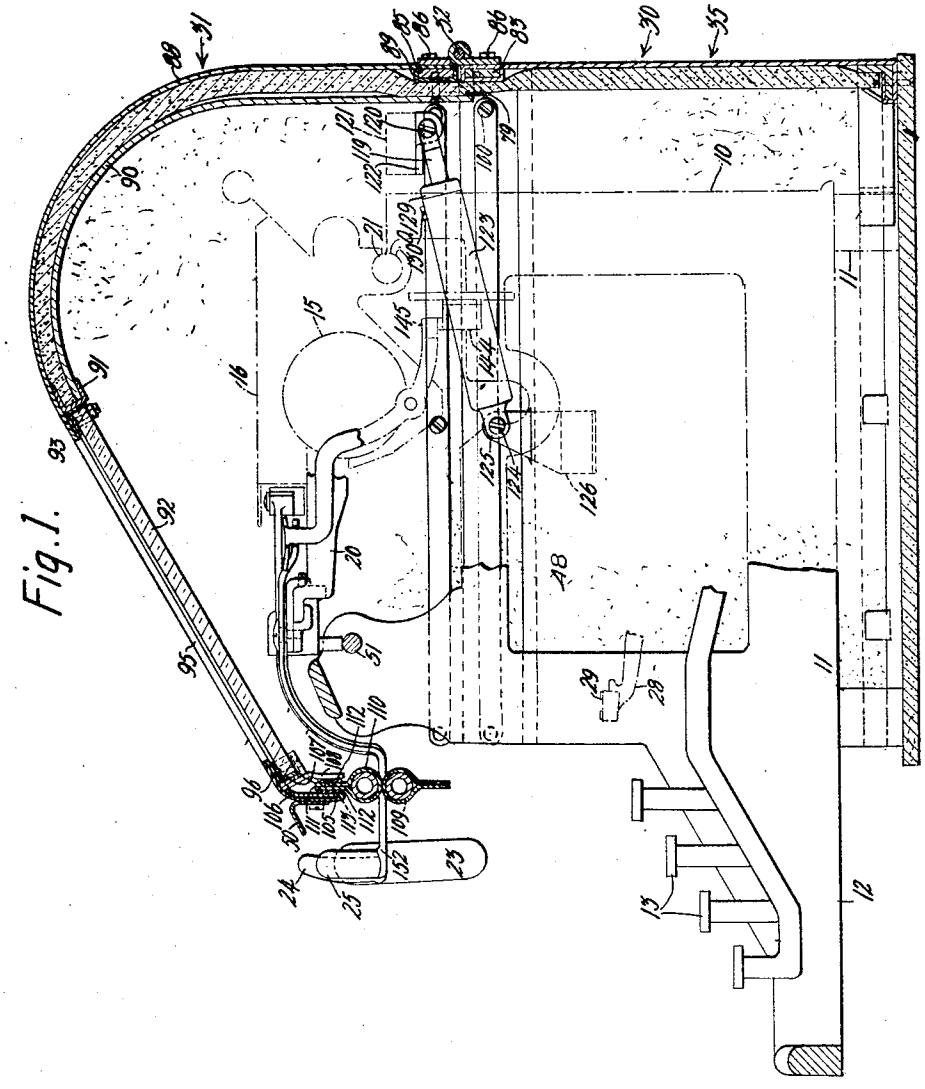


Fig. 1.

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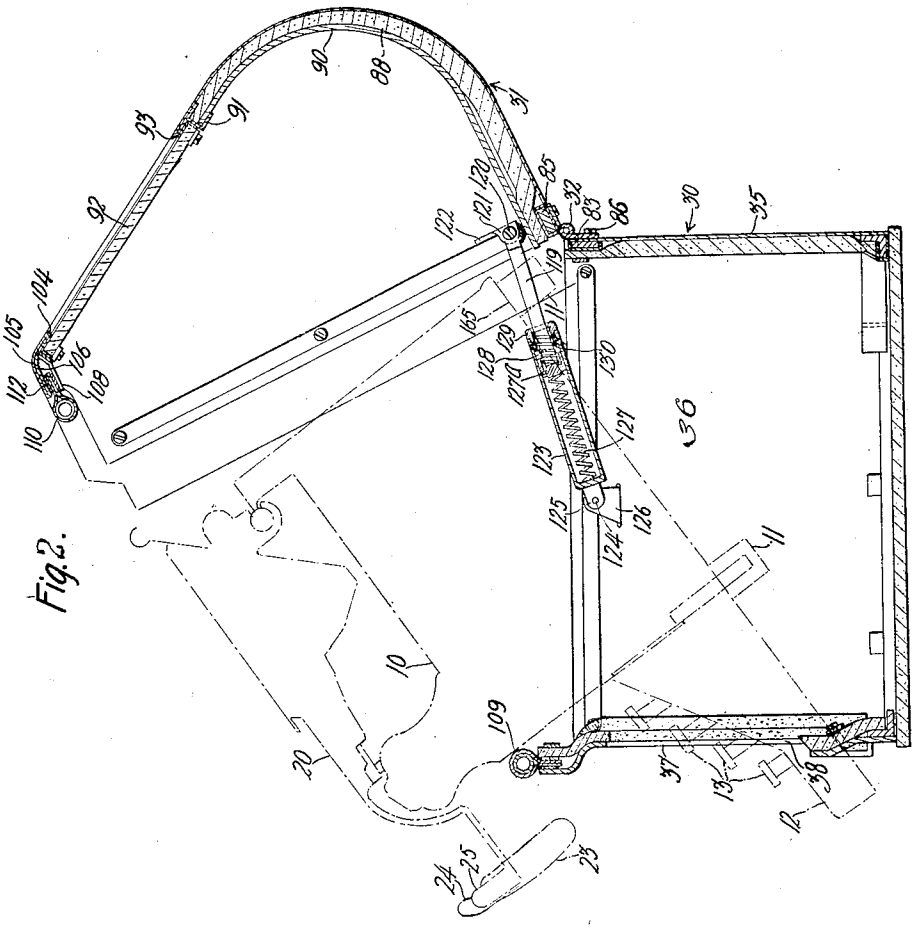


Fig. 2.

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UNITED STATES PATENT OFFICE.

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TYPEWRITER-MACHINE CASING.

Original application filed October 27, 1921, Serial No. 510,725. Divided and this application filed November 13, 1925. Serial No. 68,797.

The present invention relates to sound-deadening casings for typewriting machines; that is to say, to casings in which the machine may be operated with a minimum of noise.

A feature of the invention resides in a spring device for assisting in opening the cover of the casing, which spring is concealed to prevent injury thereto; and in the provision of a buffer in connection with this spring device to avoid shocks and strains on the casing in the cover-opening operation.

The cover-opening device is so constructed as to form a single unit which may readily be attached to a sound-deadening casing without necessitating redesigning or reconstruction thereof. The unit is efficient, yet simple and inexpensive. The unit has a housing, shell or cylinder, in which a piston reciprocates. One end of said piston is engaged by an overbalancing or cover-opening spring, while the other end of the piston engages a buffer-spring, both springs being enclosed by the housing. The action of these springs is such as to bring the cover to a poise at the desired point of opening with the cover standing up.

This is a division of my application, Serial No. 510,725, filed October 27, 1921 (now Patent No. 1,566,270, dated December 22, 1925).

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a view in cross-sectional side elevation of the machine in operative position in the casing.

Figure 2 is a view in side elevation, showing the manner in which the machine is inserted in the casing.

The Underwood standard typewriting machine comprises a main frame 10, supported by feet 11 upon a base, and is provided with a forward extension 12, in which are positioned banks of keys 13, for operating type-bars 28, to cause types 29 carried thereby to print against a platen 15, journaled in the end walls 16 of a platen-frame. The platen-frame forms part of a carriage 20, mounted for letter-feeding movement upon a front rail 51 and a rear rail 21, fixed to the main frame 10. The carriage is provided with various forwardly-extending levers or arms, such as a line-space-lever 23, a carriage-return-arm 24, and a carriage-release-lever 25.

For deadening the sounds occurring in the typing operation, there is provided a sound-deadening casing or hood, comprising a body-part 30, and a cover-part 31, hinged to the body-part at 32. The body-part comprises a rear wall 35, side walls 36 and a front wall 37. To permit of operation of the type-keys from outside of the casing, the front wall 37 has a substantially rectangular opening 38, through which passes the forward extension 12 of the machine, so as to expose the banks of keys 13. The body-portion of the casing is somewhat wider at its base than is the machine, and is flared upwardly and laterally to the full width of the cover-portion; in which latter, the carriage has its throw between extreme positions.

The rear, and side, upper, edges of the casing-body are re-enforced by bars 83; and, as shown in the drawings, the sheet-metal of the casing is bent over and down around these re-enforcing bars for attachment thereto. The lower rear edge of the casing-cover-portion 31 is also provided with a re-enforcing bar 85, around which the sheet-metal of the casing is turned in the same manner and for the same purpose. The hinges 32 are secured to the casing-body and cover by means of screws 86, which pass through the wings of the hinges and through the sheet-metal of the casing, and are threaded into the re-enforcing bars 83 and 85.

The casing-cover, at its rear, and for a distance over the top thereof, has a sound-proof lining-member 88 which is held in place at its lower edge by screws 89 which pass therethrough and which thread into the re-enforcing bar 85. The cover-portion, at the rear thereof, and where it reaches over the typewriter-carriage, is provided with a smooth interior facing-piece 90, so that the paper on the typewriter-carriage may not be caught and twisted or crumpled by contact with the felt. The screws 89, which serve to hold the lining-member 88, at the lower edge thereof, also serve to hold the lower-edge of the facing-piece 90. The facing-piece 90 extends slightly below the top edge of the body-portion to prevent the

paper from being caught between the body and cover. A U-shaped metal strip 91, in the top of the casing-cover, see Figure 1, clamps and holds the upper forward ends of the cover-lining and facing-pieces 88 and 90. This clamping-strip 91 extends entirely across the top of the cover and is suitably secured to the latter.

In the cover, there is a transparent window-pane 92. At the top edge of the window, the sheet-metal of the cover is crimped to form a supporting ledge 93 for the window-glass. The cover is continued downward and forward at 95, on both sides of the window, and is similarly crimped at the side and front edges of the window, to complete the supporting ledge or setting for the glass. To the offset or flange 107, at the window-seat front, are attached clips 108, between which and the turned-over part 106, the upper of two cushions is adapted to be set. These cushions are shown as tubes 109 of rubber or other yieldable, flexible material, each supported in the fold of a strip 110 of flexible material, such as felt, the ends 111 of the strips 110 being brought together between two metal strips 112. Screws 113 passing through the metal strips 112 and the ends of the felt cushion-strips 110 hold the parts of the cushion together. The upper and lower cushions 109 are normally in contact to prevent escape of sound except where various operating levers and arms project between the cushions from the inside to the outside of the casing; the cushions being resilient to permit of actuation, and movement with the carriage, of these various levers and operating arms.

The cover is held open, and is assisted in its opening movement, see Figure 2, by two devices, one at each side of the casing, and each comprising a rod 119, pivoted at 120 to a bracket 121, secured to the inside of the cover end plate, the brackets 121 having offsets 122 which pass through cuts in the cover lining-members 97. The rods 119 slide in cylinders or housing shells 123, which, see Figure 2, have ears 125 pivoted at 124 to brackets 126. The brackets 126 are secured to the side plates of the casing-body and project through cuts in the end lining-members 48 of the casing-body. Within the cylinders 123, the rods 119 are provided with collars or pistons 127^a, against each of which bears the end of a coiled spring 127; the other end of which spring has bearing upon the lower forward end of the cylinder. When the cover is closed, the spring 127 is compressed. As the cover is lifted, the pressure of the spring on the pistons 127^a tends to throw the cover upward and backward; and, therefore, to assist in the quick opening thereof. As a buffer, and to prevent strains and shocks on the parts by too violent an opening of the heavy cover, there is also, within each of the cylinders 123, a spring 128. The buffer springs 128 lie between the pistons 127^a and caps 129 on the upper rear ends of the cylinders. As shown in Figure 2, the caps 129 are shouldered to rest against the ends of the cylinders and have annular flanges 130 which fit within the cylinders. Set-screws 130^a hold the caps in place on the cylinders. The annular flanges on the caps are of such size as to provide a chamber between the same and the plungers or rods 119, for the buffer springs 128; and the pistons 127^a are also preferably cup-shaped to receive the buffer springs 128. As contra-distinguished from the lifting springs 127, the buffer springs 128 are not under compression when the cover is closed. As the rods or plungers 119 move backward with the pistons 127^a in the opening of the cover, however, the springs 128 are compressed, and thus act as buffers. When the cover reaches the position shown at Figure 2, it is poised upon its hinge 32, and the pistons 127^a act as stops to prevent substantial movement of the cover beyond this position. The cover may be opened and closed by means of a handle 50, screwed to the front piece 105 thereof, near the projecting typewriter-keyboard.

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

Having thus described my invention, I claim:

1. In a sound-proof cabinet for a typewriting machine, having a body-portion and a work-viewing cover, lifting units for the cover including springs connecting said body-portion to said cover said springs mounted in cylinders or housing shells, pistons in said shells against which the springs operate, rods upon said pistons extending from said shells to form therewith extensible links, said links pivotally connecting the cover and body near the hinge, and buffer springs within said shells to co-operate with said pistons to check the opening movement of the cover to avoid strain and shock on the parts so as to bring the cover to a position of poise in convenient open position to afford access to the typewriting machine.

2. In a sound-proof cabinet for a typewriting machine, having a body-portion and a work-viewing cover, a lifting spring connecting said body-portion to said cover, said lifting spring effective upon said cover until it opens about to a position of poise upon its hinge, and a buffer spring to check the opening movement of the cover at about its poised position to avoid strain and shock on the parts so as to bring the cover to a position of poise in convenient open position to afford access to the typewriting machine.

3. Mechanism as set forth in claim 2, in

which the lifting spring and the buffer spring are contained in a cylinder, a piston placed between said springs in said cylinder, and a rod for said piston extending from said cylinder to form therewith an extensible link, said link pivotally connecting said cover to said body.

4. In a cabinet having a body-portion and a cover, a longitudinally extensible arm connected between the body-portion and the cover, a spring confined in said arm to assist in opening the cover, and a buffer-spring co-operating therewith to avoid strain and shock on the parts in the cover-opening operation, so as to bring the cover to a position of poise in a convenient position to afford access to the interior.

5. In a cabinet having a body-portion and a cover, a cover-opening unit including a housing-cylinder and a piston-rod having a piston reciprocating in the cylinder, one end of the cylinder being connected with one of the cabinet-members and the piston-rod with the other cabinet-member, a spring in one end of the cylinder engaging the piston and operating thereon, tending to open the cover of the cabinet, and a second spring in said cylinder in the opposite end thereof surrounding the piston-rod and operating as a buffer to avoid strain and shock on the parts, and co-operating with the first spring to bring the cover to a position of poise in a convenient open position to afford access to the interior.

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