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Partition wall fastening unit

The present invention relates to a partition wall fastening unit for fixing a partition wall between a ceiling and a floor of a building construction, comprising a vertically movable pressing bed and actuating means for effecting such vertical movement of said pressing bed and including a threaded bolt.

It is not uncommon to build buildings or houses of which each floor is completely without partition or with very little partition, because it is convenient for meeting the specific request of residents or tenants concerning the layout of the space thereof following their specific objects to use the space thereof. Further, this will readily allow remodeling of the layout, such request is inclined to frequently happen afterwards.

In the prior art, panel type partition walls are fitted to either ceilings or floors or walls by fitting parts which are bolted with insert beds which are from the beginning embedded in slabs forming structural parts of buildings or houses. This means that the selection of layout is extremely limited, when the panel type partition wall in the prior art is utilized, because such a wall can be fitted only at the place where insert beds have been embedded from the beginning.

When a remodeling is requested for a layout, it becomes necessary to embed insert beds at different places following the revised layout. This means that the insert beds which were from the beginning embedded will have to be given up. Thus ugly spots will usually remain on the surface of ceiling, floor and wall, after spending a considerable amount of money. Further, cases may occur that some of the specific layouts will be difficult to implement in the event that some of the specific places do not allow insert beds to be embedded due to the unexpected existence of some type of obstacles such as stones at the same specific place. In addition, it is to be noted that workmen will have to adopt an uncomfortable posture during the period in which they carry out this type of work.

As an improvement, a method which utilizes air pressure has been proposed. A pair of frames consisting of an upper and a lower frame and containing an airtight bag made of a resilient material is mounted on top of a partition wall. The resilient airtight bag pushes the upper frame against the under surface of a ceiling, when it is inflated with the air blown into the bag. Since this method relies predominantly on the air pressure in the bag, however, it is not necessarily reliable due to the inherently unavoidable deterioration of the resilient material which forms the bag. Further, it is very possible that this type of partition wall will cause a variety of unexpected accidents.

From US—A—1 709 419 or FR—A—1 164 454, a device had become known, in order to automatically tighten the slit between the lower end of a door and the floor when the door is closed. At the lower end and within a casing affixed to the door, a horizontally movable sliding member has been provided, which is connected by links with sealing means, which is movable within and guided by the casing. The slidable member is connected with a pin projecting through a hole to the outside of the casing. This pin engages with a fixed actuating means when the door is closed. Hereby the pin acts on the sliding member, which is slid horizontally, while the sealing member is moved downwards vertically. These devices, however, are only intended and suited for closing the slit below the lower end of the door and the floor for preventing a draught.

From US—A—3 292 321, a partition wall had become known in which the upper border of the partition wall consists of an upper cross rail which is vertically slidably mounted between the outer panels of the partition wall. The upper cross rail bears on its upper side a strip of a resilient elastomeric material which comes into engagement with the ceiling when the upper cross rail is pressed upwardly by spring means. In order to bring the cross rail and the resilient strip out of contact with the ceiling and in order to loosen the partition wall thereby the cross rail may be pulled downwards with the aid of a linkage which is controlled by a toggle. This construction however, merely substantially allows to install those partition walls within rooms wherein the difference between the height of the ceiling and the upper end of the cross rail in its lowered position is small and does not substantially differ within the room.

From FR—A—2 239 574 another partition wall construction had become known, in which also an upper cross-rail had been provided, which is slidably mounted in vertical direction with respect to the remaining partition wall. Furthermore, the upper cross rail is supported by a lifting jack of the type of a scissor. This construction, however, is relatively complicated and expensive. Accordingly, every method available in the prior art is not satisfactory from the viewpoints of the various requirements such as conveniency in application and removal of the partition walls, less expensive cost for application work and flexibility in meeting a variety of required layouts.

According to the present invention there is provided a partition wall fastening unit for fixing a partition wall between a ceiling and a floor of a building construction, comprising a vertically movable pressing bed and actuating means for effecting such vertical movement of said pressing bed and including a threaded bolt, characterized by said actuating means further

comprising, a horizontally-sliding bed, a bracket provided on the sliding bed and having a threaded bore formed therein, vertical guiding means with which a sliding portion of the pressing bed is held in engagement a through bore provided in said vertical guiding means or in a second bracket fixed relative to said vertical guiding means, said threaded bolt extending through said through bore and being threadably received in said threaded bore, rotation of the bolt inducing a horizontal movement of said sliding bed, and means for converting horizontal movement of said sliding bed into vertical movement of said pressing bed.

In the following, the invention will be described in more detail with reference to the accompanying drawings, in which:

Fig. 1 is a plan view of a preferred embodiment of the partition wall fastening unit in accordance with the present invention;

Fig. 2 is a sectional view of the partition wall fastening unit shown in Fig. 1 taken on the chain line X—X shown in Fig. 1;

Fig. 3 is a sectional view of the partition wall fastening unit shown in Fig. 1 taken on the chain line Y—Y shown in Fig. 1;

Fig. 4 is a sectional view of the partition wall fastening unit shown in Fig. 1 taken on the chain line Z—Z shown in Fig. 1;

Fig. 5 is a sectional view of the partition wall fastening unit showing the view in an operated position;

Fig. 6 is a vertical sectional view showing a position in which the partition wall fastening unit as well as a sound-proof cover is mounted in a recess defined on top of a partition wall standing on a floor and below a ceiling;

Fig. 7 is a vertical sectional view showing a position in which the partition wall fastening unit as well as a sound-proof cover is applied to a partition wall to fasten the latter between a ceiling and a floor;

Fig. 8 is a sectional view of a modification of the sound-proof cover to be utilized in combination with the partition wall fastening unit;

Fig. 9 is a partly sectional view of another embodiment of the partition wall fastening unit is accordance with the present invention;

Fig. 10 is a partly sectional view of a modification of the drive mechanism to be comprised with the partition wall fastening unit in accordance with the present invention;

Fig. 11 is a partly sectional view showing another modification of the drive mechanism to be comprised with the partition wall fastening unit in accordance with the present invention;

Fig. 12 is a cross sectional view of another preferred embodiment of a fastening unit according to the present invention;

Fig. 13 is a plan view of another preferred embodiment of a fastening unit according to the present invention;

Figs. 14—16 are cross sectional views of the unit shown in Fig. 13; and

Figs. 17 and 18 are cross sectional views of modified forms of a partition wall fastening unit of the present invention.

Referring to Figs. 1 through 4 of the drawings which show a preferred embodiment of a partition wall fastening unit in accordance with the present invention, reference numeral 1 is a lower frame having a U-shape cross section defining a cover, and 2 an upper frame having a U-shape cross section and accommodated in the lower frame 1. A sliding bed 3 and a pressing bed 4 are disposed between the upper frame 2 and the lower frame 1. The upper frame 2 is allowed to vertically move up and down, and the sliding bed 3 is allowed to move horizontally. The pressing bed 4 and the sliding bed 3 are connected to each other by a plurality of links 5, allowing the sliding bed 3 to push the pressing bed 4 upward, when the sliding bed 3 is horizontally moved to the left along the bottom surface of the lower frame 1. The number of links may be arbitrarily determined in dependence on the magnitude of pressure to be applicable between a ceiling and the partition wall fastening unit. The pressing bed 4 has sliding portions 4a and 4b which are held in engaging guide portions 1a and 1b of the lower frame 1, respectively. When the pressing bed 4 is moved in an upward direction, the sliding portion 4a is engaged with the guide portion 1a. When the pressing bed 4 is moved in a downward direction, the sliding portion 4b is engaged with the guide portion 1b. Indicated as 8 is a bracket rigidly fitted on one end of the sliding bed 3 by some suitable means such as welding, and with an opening for screw 9 penetrating the sliding bed 3 from side to side. It is of course possible to make the bracket 8 and the sliding bed 3 integral. Indicated as 10 is a bracket arranged at one end of the lower frame 1. An opening 11 formed in the bracket 10 allows a bolt 12 to reach an opening 9 formed in the bracket 8 where the bolt 12 is screwed into the bracket 8. A bolt stopper 13 is located between the bracket 8 and the bracket 10. Indicated as 14 is a recess in which the head of the bolt 12 is held. Indicated as 15 is a plurality of spring supporting rods. The upper end of each spring supporting rod 15 is rigidly fitted to the lower surface of the upper frame 2 by some suitable means such as welding, and the lower end of each spring supporting rod 15 suspends the pressing bed 4. Since compression springs 16 are arranged along the spring supporting rod 15 between the lower surface of the upper frame 2 and the upper surface of the pressing bed 4, the pressing bed 4 urges the compression springs 16 upward for thereby raising the upper frame 2 to fix the partition wall between the ceiling and the floor. Indicated as 17 is a spacer placed between the upper surface of the upper frame 2 and the ceiling 19. Indicated as 18 is a hole formed in the side wall of the lower frame 1 for inspection of the inside thereof.

Fig. 5 is a sectional view of the partition wall fastening unit showing a state in which the

pressing bed 4 is raised to cause the upper frame 2 to urge the ceiling 19 through the spacer 17.

Described below is a process to reach the position shown in Fig. 5 from the position shown in Fig. 2. When the bolt 12 is rotated clockwise by means of a tool such as a wrench (not shown in the drawings), the bracket 8 as well as the sliding bed 3 is pulled towards the bracket 10. Then, the sliding portion 4a of the pressing bed 4 is engaged to the guide portion 1a of the lower frame 1, and the links 5 which are clockwise rotated by the action of the sliding portion 4a push up the pressing bed 4. Since the number of the links 5 is more than one, the upper surface of the pressing bed 4 is kept parallel with the upper surface of the lower frame 1. Even in the case where the lower surface of the ceiling 19 is not parallel with the upper surface of the lower frame 1, the upper surface of the upper frame 2 is kept parallel with the lower surface of the ceiling 19 by assistance of the compression springs 16. In other words, the difference in distance between the lower surface of the ceiling 19 and the upper surface of the upper frame 2 is adjusted by the corresponding difference in deformation of the compression springs 16. As a result, even in the case where the lower surface of the ceiling 19 is not parallel with the upper surface of the lower frame 1, the uppper surface of the upper frame 2 is urged uniformly against the lower surface of the ceiling 19. In addition, it is possible to adjust the compression pressure between the lower surface of the ceiling 19 and the upper surface of the upper frame 2 by selection of the strength and number of the compression springs 16. Further, when the sliding bed 3 is fitted at a position where the pressing bed 4 does not urge the upper frame 2, it is possible to float it with a constant pressure applied therein. In this case, since it makes a flexible construction, it can absorb any strain such as expansion or contraction due to earthquakes or ageing.

The following description discusses the practical application of the partition wall fastening unit.

Fig. 6 is a vertical sectional view showing a position in which the partition wall fastening unit as well as a sound-proof cover is mounted in a recess defined on top of a partition wall standing on a floor and below a ceiling. Referring to Fig. 6 of the drawings, indicated as 20 is the surface of a floor, and a partition wall 21 includes a front panel 22 and a rear panel 23 holding a core 24 between the two panels. Indicated as 25 is a recess defined on top of the partition wall 21, and the partition wall fastening unit is placed in the recess 25. Indicated as 26 is a sound-proof cover which is placed on the spacer 17 which is further placed on the upper surface of the upper frame 2. The other spacer 27 is placed between the lower surface of the ceiling 19 and the upper surface of the sound-proof cover 26. It is possible to form the spacer 27 either in one body as shown in Fig. 6 or in a pair of split bodies each of which is placed on either end of the sound-proof cover 26. The other set of spacers 28 and 29 are arranged between the sound-proof cover 26 and the front and rear panels 22 and 23 respectively. Indicated as 30 is another spacer which is disposed between the bottom of the partition wall 21 and the floor 20.

When the partition wall is put into application, the partition wall 21 is mounted with the partition wall fastening unit placed in the recess on top of the wall 21 and with the sound-proof cover 26 disposed between the fastening unit and the ceiling. As described above with reference to Figs. 1 and 5, a rotation of the bolt 12 causes the sliding bed 3 to slide whereby the pressing bed 4 is moved upwards to raise the upper frame 2 until the upper frame 2 contacts with the ceiling 19 and urges the sound-proof cover 26 and the spacer 27 against the ceiling 19. The final position is as shown in Fig. 7.

The sound-proof cover 26 may be substituted by a frame attached with magnet M, as shown in Fig. 8, arranged on the upper frame 2.

The above-mentioned operation is continued until the partitioning is completed for the entire floor to implement a specific layout in houses or buildings.

The final unit completing a linear series of partitioning is a modified one with a recess from which the operation is possible for rotation of the bolt 12. The recess is closed after the application work is completed for the partition wall fastening units.

The process for removing the partition wall 21 will be described below. Referring to Fig. 5, counter clockwise rotation of the bolt 12 causes the bracket 8 and the sliding bed 3 to move away from the bracket 10 against the pressure of the compression spring 16. In this action, the bolt stopper 13 is effective to prevent the bolt 12 from coming out of the bolt hole 11. The rightward slide of the sliding bed 3 causes the sliding portion 4b to be engaged with the guide portion 1b of the lower frame 1, whereby the links 5 rotate in the direction of the arrow B shown in Fig. 5, and allows the pressing bed 4 to slide downwards along the flank of the lower frame 1. This releases the pressure between the upper frame 2 and the ceiling 19, allowing an easy removal of the partition wall 21.

Fig. 9 is a sectional view of another embodiment of a partition wall fastening unit in accordance with the present invention. Referring to Fig. 9, a combination of rollers 3A and connecting rods 3B substituting the sliding bed 3 is connected with the pressing bed 4 by a pair of links 5. A drive means similar to that which is utilized for the embodiment shown in Figs. 1 through 7 (not shown in Fig. 9) slides the combination of the rollers 3A and the connecting rods 3B from side to side in the direction of

the arrow C, causing the pressing bed 4 to move upward and downward, resulting in the same final effects as those attained in the embodiment shown in Figs. 1 through 7. As is utilized in this embodiment, the pressing bed 4 may be directly mounted with the spacer 17 rather than through the upper frame 2 and the compression springs 16 arranged around the spring supporting rods 15, causing simplicity in construction and economization in production cost.

Fig. 10 is a fragmentary, sectional view of a modification of the drive mechanism for the partition wall fastening unit in accordance with the present invention. Referring to Fig. 10, a rotation of a worm gear 31 causes a rotation of a worm wheel 32 and further a rotation of a bolt 12, which slides the sliding bed 3 from side to side in the direction of the arrow C and causes the links 5 to move the pressing bed upward and downward. This enables a manual operation from the position facing the front or back of the partition wall rather than from the position facing the edge of the partition wall, eliminating the recess which is indispensable for the embodiment shown in Figs. 1 through 7.

Fig. 11 is a partly sectional view showing another modification of the drive mechanism forming part of the partition wall fastening unit in accordance with the present invention. Referring to Fig. 11, a recess is defined in the bracket 10 in which a rotatable nut 36 having a cross-shaped recess 37 is disposed. The bolt 12 screwed with the nut 36 which is driven by means of a tool to be fitted with the cross-shaped recess 37, is allowed to move the sliding bed 3 back and forth, resulting in the same effects as for the embodiment shown in Figs. 1 through 7.

Fig. 12 shows another preferred embodiment of a partition wall fastening unit according to the present invention with the unit being shown as being applied to a window frame. In Fig. 12, the fastening unit is mounted between a ceiling 52 and a window frame assembly 54 and comprises a sliding bed 56 which is slidably disposed on an upper frame 54a of window frame assembly 54. The sliding bed 56 is at its left end provided with a head 58 having formed therein a threaded bore 58a extending in a horizontal direction. A portion of a bolt 60 is screwed into the threaded bore 58a of the head 58 to slidably move the sliding bed 56 rightward or leftward. The bolt 60 extends through a bore 62a of a flange 62 as a guide means secured to the upper frame 54a at an extreme end thereof. Connected to an intermediate portion of the bolt is a stopper 66 which prevents excessive leftward movement of the bolt 60. A pair of links 68 each in the form of a plate are connected between the sliding bed 56 and a pressing bed 70 which has a vertical portion or a sliding portion 70a adapted to be slidably guided by the flange 62 during raising and lowering movement of the pressing bed 70. The fastening unit 50 thus arranged operates in the same manner as previously described with reference to previous embodiments to fixedly support the window frame assembly 54 to the ceiling 52.

Figs. 13 to 16 show another preferred embodiment of a fastening unit according to the present invention, with the same reference numerals indicating the same component parts as shown in Fig. 12. The fastening unit disclosed in Figs. 13 to 16 is similar in construction as that shown in Fig. 12 except that the unit is also provided with a compression spring 72 to resiliently support the partition wall or window frame assembly against the ceiling. As best shown in Figs. 14 to 16, the sliding bed 56 has first and second vertical portions 56a and 56b spaced from one another, between which the head 58′ is slidably disposed on the sliding bed 56. The compression spring 72 is disposed on the bolt 60 at a position between the vertical portion 56b and the head 58′ to urge the head 58′ rightward as viewed in Figs. 13 to 16. With this arrangement, when the bolt 60 is turned from a position shown in Fig. 14 to a position shown in Fig. 15, the head 58′ is pulled leftward against rhe force of the compression spring 72 so that the sliding bed 56 is moved leftward by the action of the spring 72. This raises the pressing bed 70 upward, thereby resiliently supporting the partition wall of window frame assembly (not shown) to the ceiling. Fig. 16 shows a state in which the pressing bed 70 is positioned in its uppermost location.

It will now be apparent from the foregoing description that in accordance with the present invention the partition wall fastening unit can be readily put into practical application to fasten a partition wall between a ceiling and a floor with the durable and satisfactory performance without requiring any prior work applicable to houses or buildings, and can be easily removed without any ugly appearance remaining on any part of houses or buildings. Further, it will be apparent from the foregoing description that the partition wall fastening unit in accordance with the present invention allows a wide variety of layout with a less expense for application and removal.

Although the above description is concentrated on the case where the partition wall fastening unit is mounted in the recess 25 defined on top of the partition wall 21, the partition wall fastening unit may be fitted in a recess defined at the bottom of the partition wall 21. It is also possible to apply 2 sets of the partition wall fastening units to be fitted both on top of and at the bottom of the partition wall 21. Further, although the above description is concentrated on the case where the partition wall fastening unit is mounted in a recess 25 defined in the partition wall 21, the partition wall fastening unit may be manufactured integrally with the partition wall 21.

While the present invention has been particularly shown and described with reference to

preferred embodiments thereof, it will be understood that various changes and modifications may be made without departing from the scope of the present invention.

For example, the connecting links connected between the sliding bed and the pressing bed may be replaced by inclined sliding surfaces 84 and 86 for example which may be inherently formed on the pressing bed 70 and the sliding bed 56 respectively. See Fig. 18. These sliding surfaces 84 and 86 are arranged such that these surfaces engage each other and slide on each other when the sliding bed 56 is being moved relative to the pressing bed 70 by rotating the threaded bolt 60.

According to another embodiment as shown in Fig. 17 corresponding inclined sliding surfaces 83 and 85 respectively may be formed on blocks 80 and 82 respectively which may be mounted to the pressing bed 70 and the sliding bed 56 respectively. Also in this case the sliding surfaces engage each other and slide upon each other when the sliding bed 56 is moved relative to the pressing bed 70 by rotating the threaded bolt 60.

Claims

1. A partition wall fastening unit for fixing a partition wall between a ceiling and a floor of a building construction, comprising a vertically movable pressing bed (4, 70) and actuating means for effecting such vertical movement of said pressing bed (4, 70) and including a threaded bolt (12, 60) characterised by said actuating means further comprising, a horizontally-sliding bed (3, 56), a bracket (8, 58) provided on the sliding bed (3, 56) and having a threaded bore (9, 58a) formed therein, vertical guiding means (1a, 1b; 62) with which a sliding portion (4a, 4b; 70a) of the pressing bed (4, 70) is held in engagement, a through bore (11, 62a) provided in said vertical guiding means or in a second bracket (10) fixed relative to said vertical guiding means, said threaded bolt (12, 60) extending through said through bore (11, 62a) and being threadably received in said threaded bore (9, 58a), rotation of the bolt inducing a horizontal movement of said sliding bed (3, 56), and means (5, 68, 80, 82) for converting horizontal movement of said sliding bed (3, 56) into vertical movement of said pressing bed (4, 70).

2. A partition wall fastening unit according to claim 1 characterized in that said means for converting horizontal movement of said sliding bed (3, 56) into vertical movement of said pressing bed (4, 70) comprises links (5, 68).

3. A partition wall fastening unit according to claim 1, characterized in that said means for converting horizontal movement of said sliding bed (3, 56) into vertical movement of said pressing bed (4, 70) comprises first inclined sliding surfaces (83, 84) provided on the pressing bed (70) and second corresponding inclined sliding surfaces (85, 86) provided on the sliding bed (56), which engage and slide on each other on a relative movement of the sliding bed (56) with respect to the pressing bed (70).

4. A partition wall fastening unit according to claim 3 characterized in that the first and second sliding surfaces (83, 84) are provided on first and second blocks (80, 82) respectively, which are mounted on the pressing bed (70) and the sliding bed (56) respectively.

5. A partition wall fastening unit according to any one of the claims 1 to 4 characterized in that the sliding bed (3, 56) has first and second vertical portions (56a, 56b) spaced from one another, that the bracket (8, 58) is slidably mounted between the first and second vertical portion on the sliding bed and that spring means (72) are provided between the bracket (58—) and that vertical portion (56b) facing said threaded bolt (60).

6. A partition wall fastening unit according to any one of the claims 1 to 5 characterized in that a spacer (17) has been attached to an upper surface of said pressing bed (4, 70).

7. A partition wall fastening unit according to any one of the claims 1 to 5 characterized in that a frame (2) is provided which is supported by spring means (16) on the pressing bed (4).

8. A partition wall fastening unit according to claim 7 characterized in that a spacer (17) has been attached to an upper surface of the frame (2).

Revendications

1. Dispositif de fixation d'une cloison séparatrice, pour fixer une cloison séparatrice entre un plafond et un plancher d'un ouvrage de construction, comportant un bloc de pression (4; 70) mobile verticalement et un mécanisme d'actionnement pour assurer un tel déplacement vertical dudit bloc de pression (4; 70) et incluant un boulon fileté (12; 60), dispositif caractérisé par le fait que ledit mécanisme d'actionnement comprend en outre un bloc coulissant horizontalement (3; 56), une console (8; 58) montée sur ledit bloc coulissant (3; 56) et percée d'un trou taraudé (9; 58), des moyens de guidage vertical (1a, 1b; 62), avec lesquels une partie coulissante (4a, 4b; 70a) dudit bloc de pression (4; 70) est maintenue en contact, un trou traversant (11; 62a) ménagé dans lesdits moyens de guidage vertical ou dans une seconde console (10) stationnaire par rapport auxdits moyens de guidage vertical, ledit boulon fileté (12; 60) s'étendant dans ledit trou traversant (11; 62a) et étant vissé dans ledit trou taraudé (9; 58a), une rotation dudit boulon provoquant un déplacement horizontal dudit bloc coulissant (3; 56) ainsi que des moyens (5, 68, 80, 82) pour transformer le mouvement horizontal dudit bloc coulissant (3; 56) en un mouvement vertical dudit bloc de pression (4; 70).

2. Dispositif de fixation d'une cloison sépara-

trice selon la revendication 1, caractérisé par le fait que les moyens pour transformer le mouvement horizontal du bloc coulissant (3; 56) en un mouvement vertical du bloc de pression (4; 70) consistent en des biellettes (5, 68).

3. Dispositif de fixation d'une cloison séparatrice selon la revendication 1, caractérisé par le fait que les moyens pour transformer un mouvement horizontal du bloc coulissant (3; 56) en un mouvement vertical du block de pression (4; 70) consistent en des premières surfaces inclinées de glissement (83, 84) ménagées sur ledit bloc de pression (70) et en des secondes surfaces inclinées correspondantes de glissement (85, 86) ménagées sur ledit block coulissant (56), qui viennent au contact les unes des autres et glissent les unes sur les autres lorsque ledit bloc coulissant (56) est déplacé par rapport audit bloc de pression (70).

4. Dispositif de fixation d'une cloison séparatrice selon la revendication 3, caractérisé par le fait que les première et seconde surfaces de glissement (83, 84) sont ménagées sur des premier et second blocs (80, 82), respectivement, qui sont montés sur le bloc de pression (70) et sur le bloc coulissant (56), respectivement.

5. Dispositif de fixation d'une cloison séparatrice selon l'une quelconque des revendications 1 à 4, caractérisé par le fait que le bloc coulissant (3; 56) présente des première et seconde régions verticales (56a, 56b) distantes l'une de l'autre; par le fait que les consoles (8, 58) sont montées coulissantes entre les première et seconde régions verticales sur ledit bloc coulissant; et par le fait qu'un organe élastique (72) est disposé entre la console (58) et la région verticale (56b) orientée vers le boulon fileté (60).

6. Dispositif de fixation d'une cloison séparatrice selon l'une quelconque des revendications 1 à 5, caractérisé par le fait qu'un organe d'espacement (17) a été fixé à une face supérieure de bloc de pression (4; 70).

7. Dispositif de fixation d'une cloison séparatrice selon l'une quelconque des revendications 1 à 5, caractérisé par le fait qu'il comporte un cadre (2) qui est supporté par des moyens élastiques (16) sur le bloc de pression (4).

8. Dispositif de fixation d'une cloison séparatrice selon la revendication 7, caractérisé par le fait qu'un organe d'espacement (17) a été fixé à une face supérieure du cadre (2).

Patentansprüche

1. Trennwandbefestigungsteil zum Befestigen einer Trennwand zwischen einer Decke und einem Boden eines Bauwerks, das ein vertikal bewegliches Preßbett (4, 70) une eine Betätigungseinrichtung zum Bewirken einer solchen vertikalen Bewegung dieses Preßbetts (4, 70) aufweist, die einen Schraubenbolzen (12, 60) enthält, dadurch gekennzeichnet, daß diese Betätigungseinrichtung ferner aufweist ein horizontal gleitbewegliches Bett (3, 56), einen Träger (8, 58), der an dem Gleitbett (3, 56) vorgesehen ist, und eine darin ausgebildete Gewindebohrung (9, 58a) hat, vertikale Führungsmittel (1a, 1b; 62), mit denen ein Gleitteil (4a, 4b; 70a) des Preßbetts (4, 70) in Eingriff gehalten ist, eine Durchgangsbohrung (11, 62a), die in der vertikalen Führungseinrichtung oder in einem zweiten Lager (10) vorgesehen ist, das relativ zu der vertikalen Führungseinrichtung festgelegt ist, wobei der Schraubenbolzen (12, 60) durch die Durchgangsbohrung (11, 62a) geht, und mittels Gewindeeingriff in der Gewindebohrung (9, 58a) aufgenommen ist, und wobei die Drehbewegung des Schraubenbolzens (12, 16) eine horizontale Bewegung dieses Gleitbetts (3, 56) bewirkt, und eine Einrichtung (5, 68, 80, 82) zum Umwandeln der Horizontalbewegung dieses Gleitbetts (3, 56) in eine vertikale Bewegung dieses Preßbetts (4, 70).

2. Trennwandbefestigungsteil nach Anspruch 1, dadurch gekennzeichnet, daß die Einrichtung zum Umwandeln der Horizontalbewegung dieses Gleitbetts (3, 56) in eine Vertikalbewegung dieses Preßbetts (4, 70) Verbindungsteile (5, 68) aufweist.

3. Trennwandbefestigungsteil nach Anspruch 1, dadurch gekennzeichnet, daß die Einrichtung zum Umwandeln der Horizontalbewegung dieses Gleitbetts (3, 56) in eine Vertikalbewegung dieses Preßbetts (4, 70) erste geneigte Gleitflächen (83, 84), die auf dem Preßbett (70) vorgesehen sind, und zweite zugeordnete geneigte Gleitflächen (85, 86) aufweist, die an dem Gleitbett (56) vorgesehen sind, und die bei einer Relativbewegung des Gleitbetts (56) bezüglich des Preßbetts (70) miteinander zusammenarbeiten und aufeinander gleiten.

4. Trennwandbefestigungsteil nach Anspruch 3, dadurch gekennzeichnet, daß die ersten und zweiten Gleitflächen (83, 84) auf ersten und zweiten Blöcken (80, 82) jeweils vorgesehen sind, die auf dem Preßbett (70) und dem Gleitbett (56) jeweils angebracht sind.

5. Trennwandbefestigungsteil nach einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, daß das Gleitbett (3, 56) erste und zweite vertikale Abschnitte (56a, 56b) hat, die voneinander einen Abstand haben, daß der Träger (8, 58) gleitbeweglich zwischen dem ersten und dem zweiten vertikalen Abschnitt auf dem Gleitbett angebracht ist und daß Federeinrichtungen (72) zwischen dem Träger (58) und dem vertikalen Abschnitt (56b) vorgesehen sind, der diesem Schraubenbolzen (60) zugekehrt ist.

6. Trennwandbefestigungsteil nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß ein Distanzstück (17) an der oberen Fläche dieses Preßbetts (4, 70) angebracht worden ist.

7. Trennwandbefestigungsteil nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß ein Gestell (2) vorgesehen ist, das

durch Federeinrichtungen (16) auf dem Preßbett (4) abgestützt ist.

8. Trennwandbefestigungsteil nach Anspruch 7, dadurch gekennzeichnet, daß ein Distanzstück (17) an der oberen Fläche des Gestells (2) angebracht worden ist.

Fig. 1

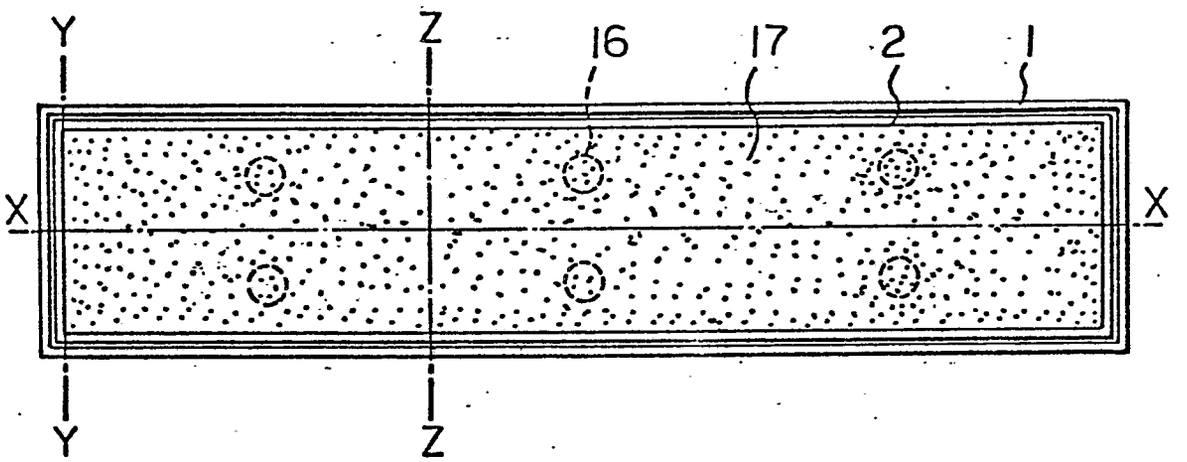


Fig. 2

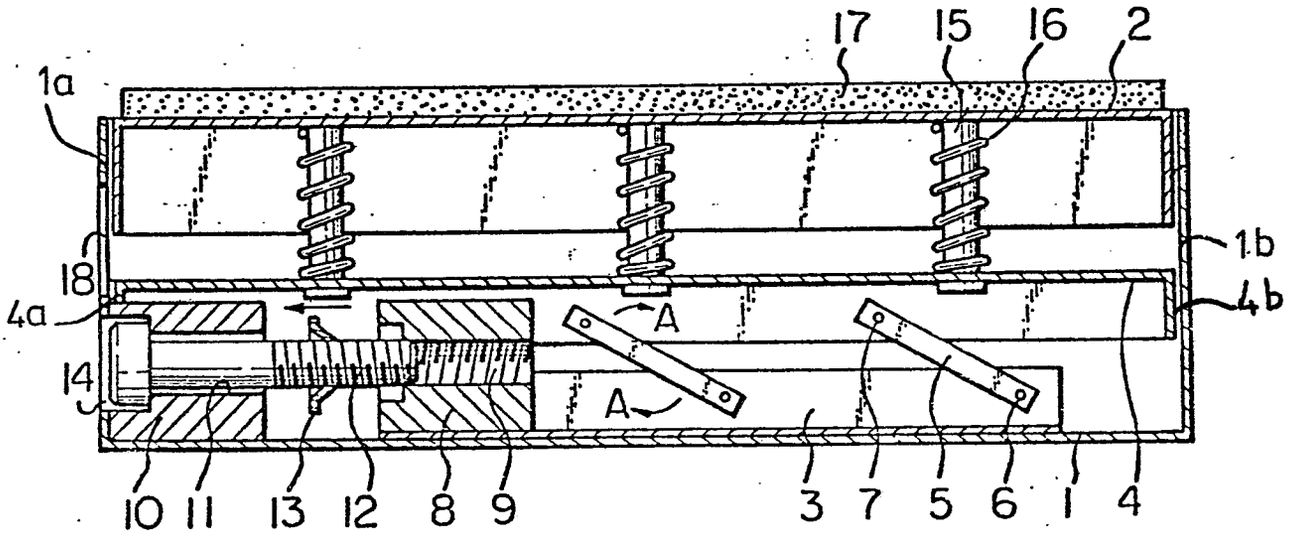


Fig. 3

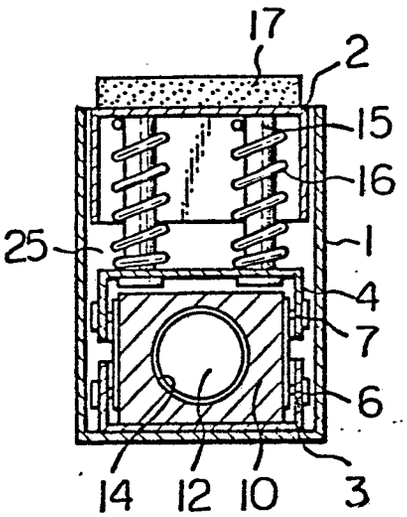
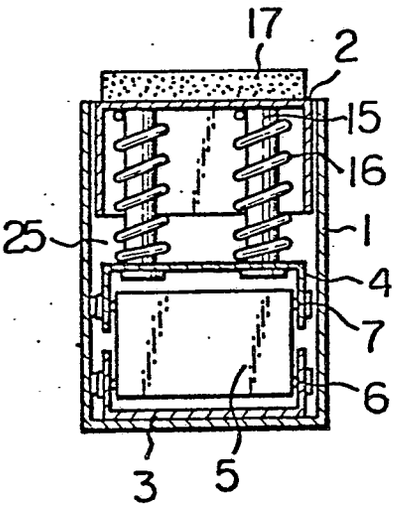


Fig. 4



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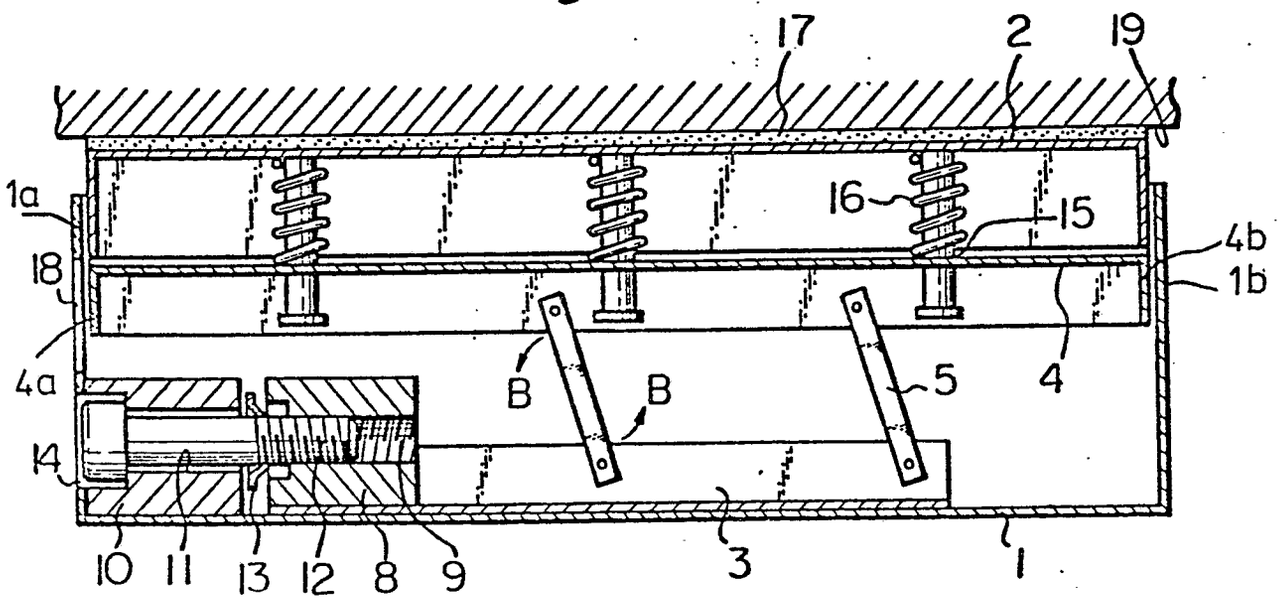


Fig. 6

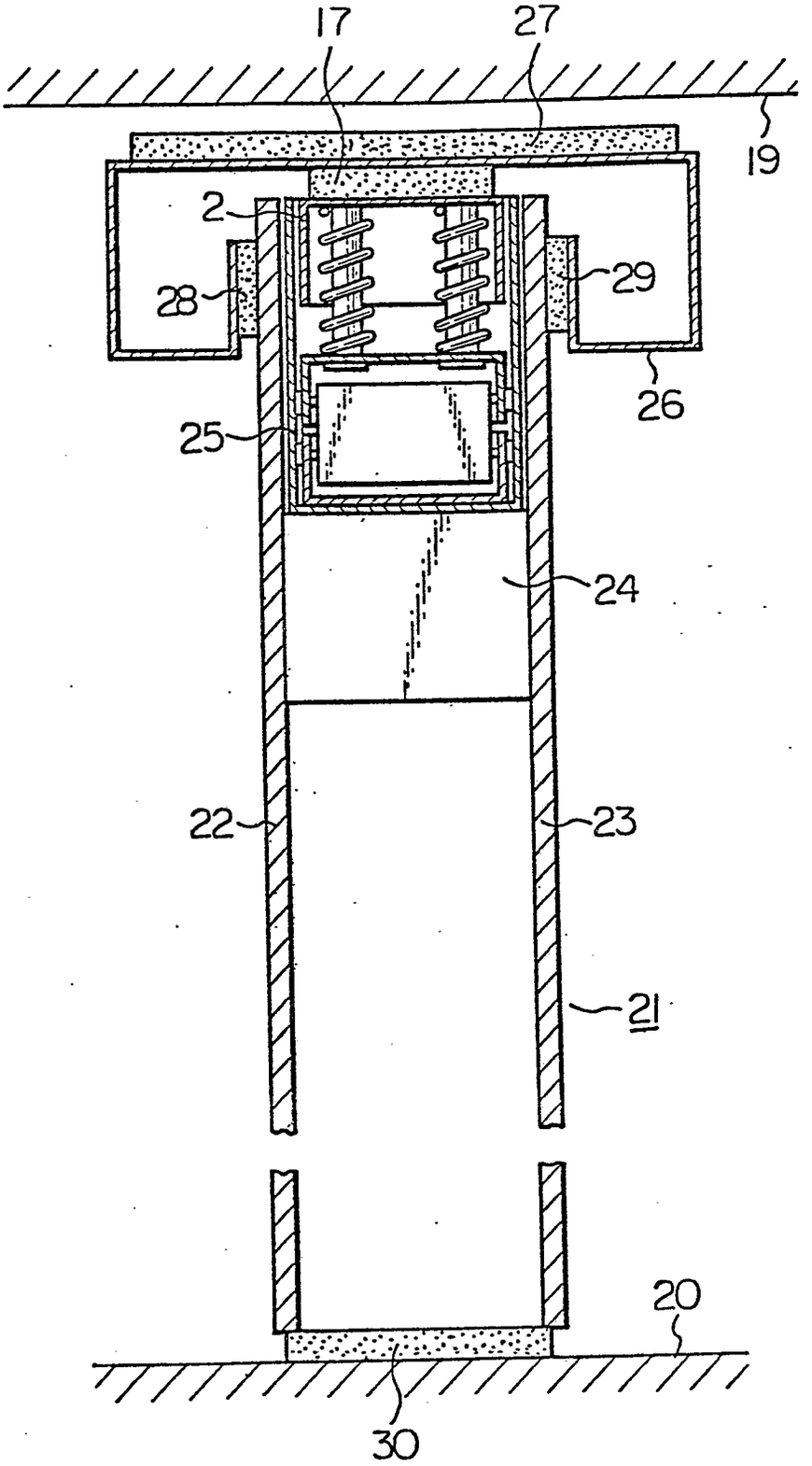


Fig. 7

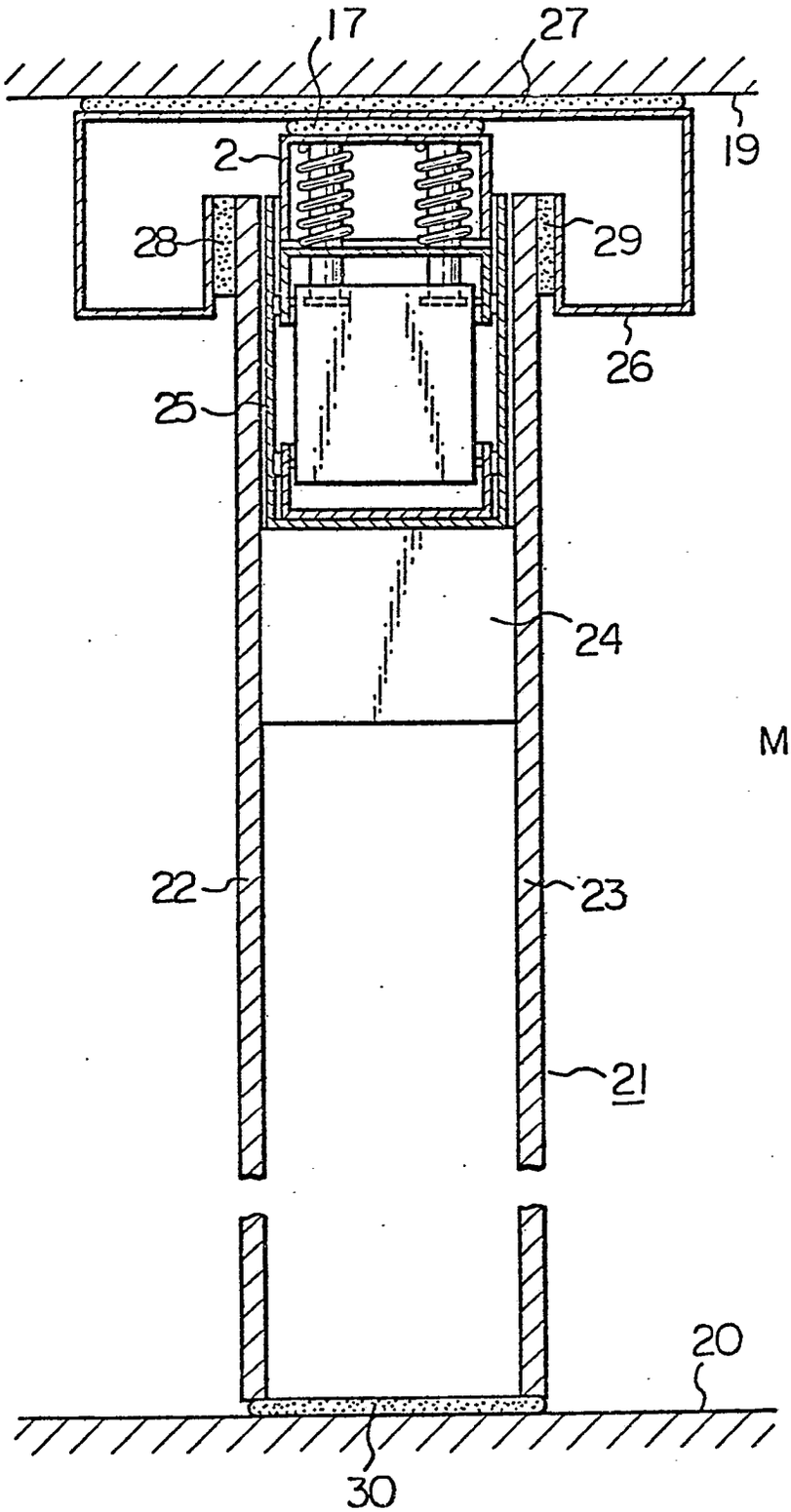


Fig. 8

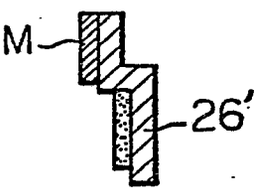


Fig. 11

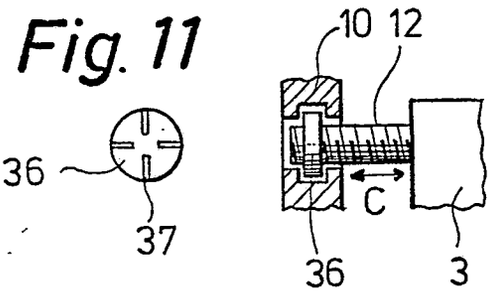


Fig. 9

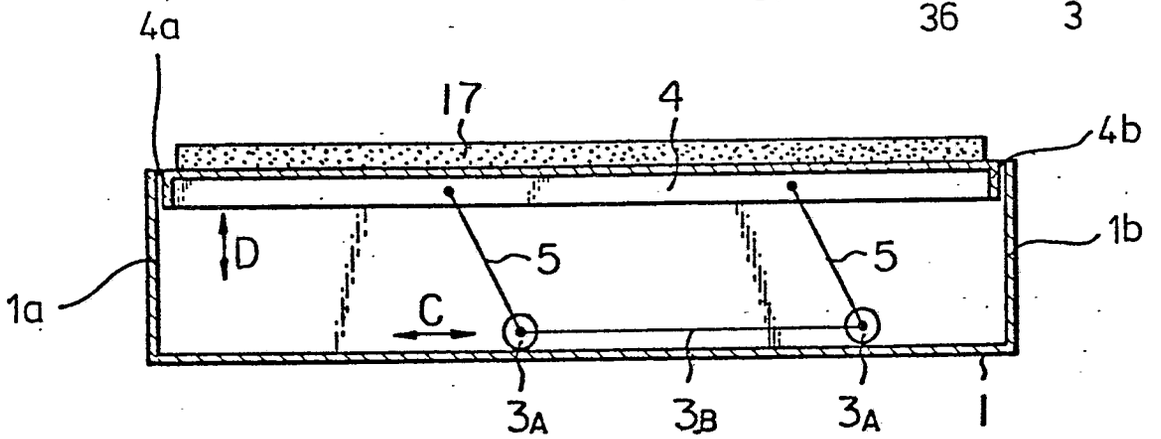


Fig. 10

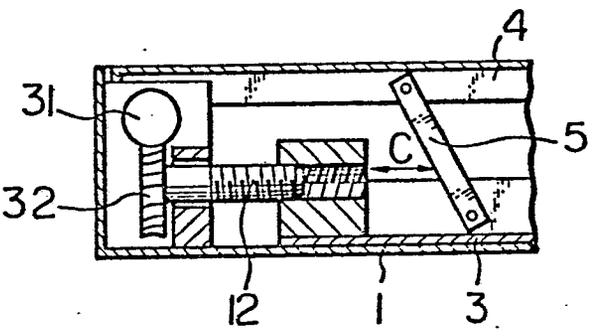


Fig. 12

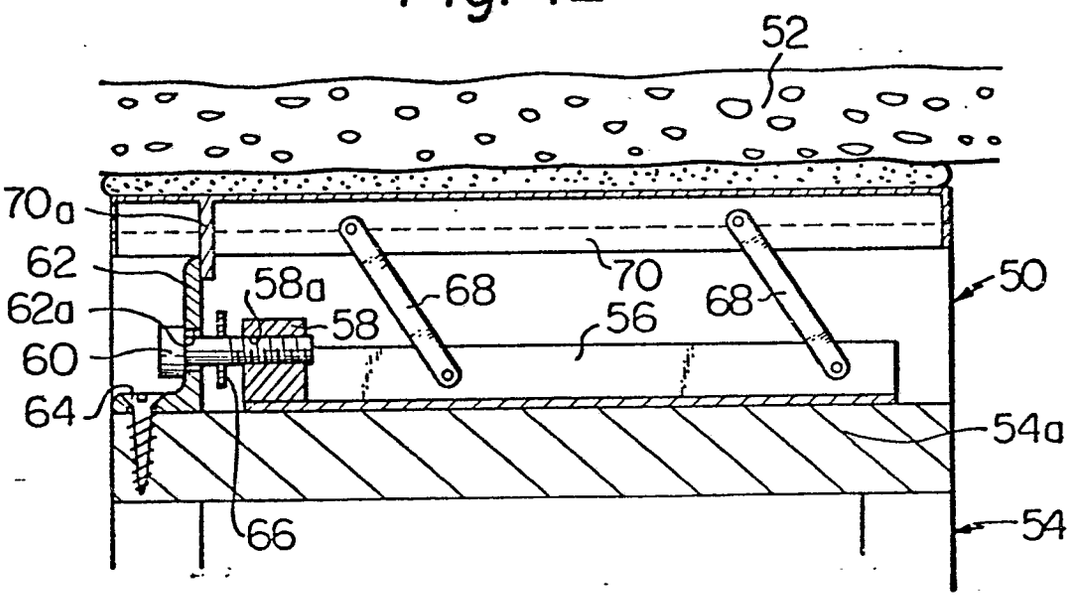


Fig. 13

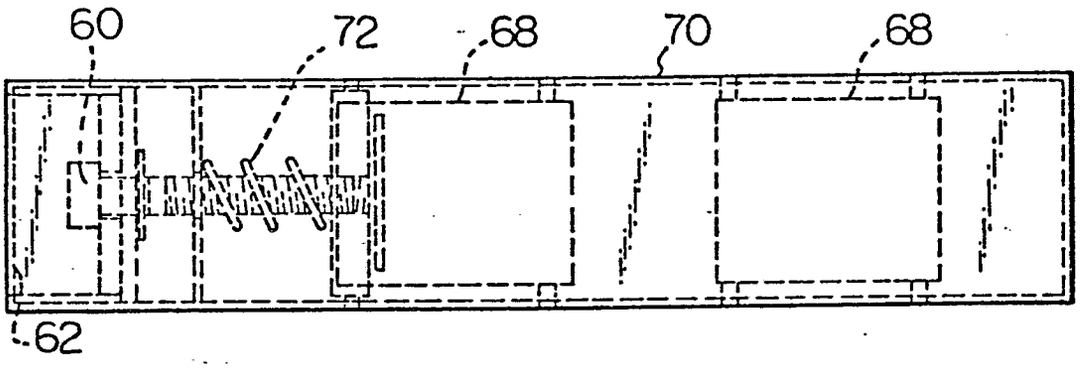


Fig. 14

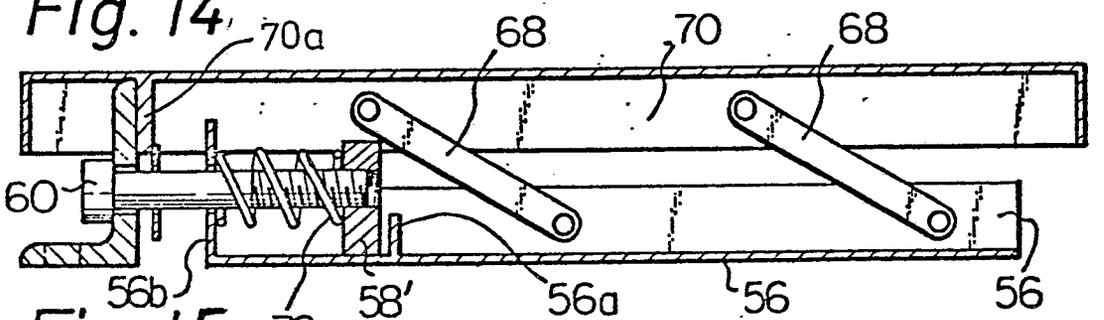


Fig. 15

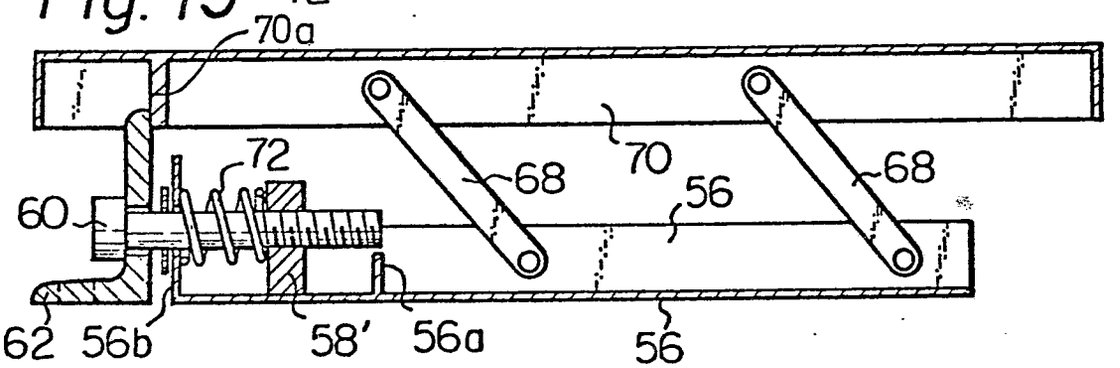


Fig. 16

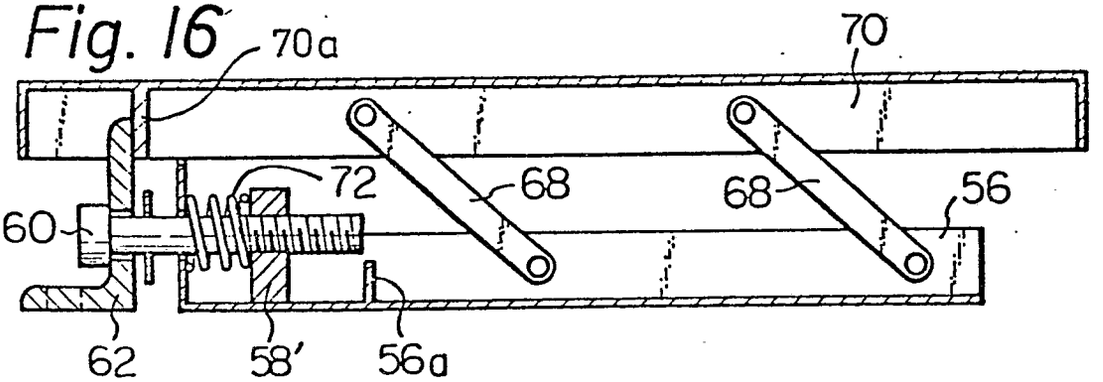
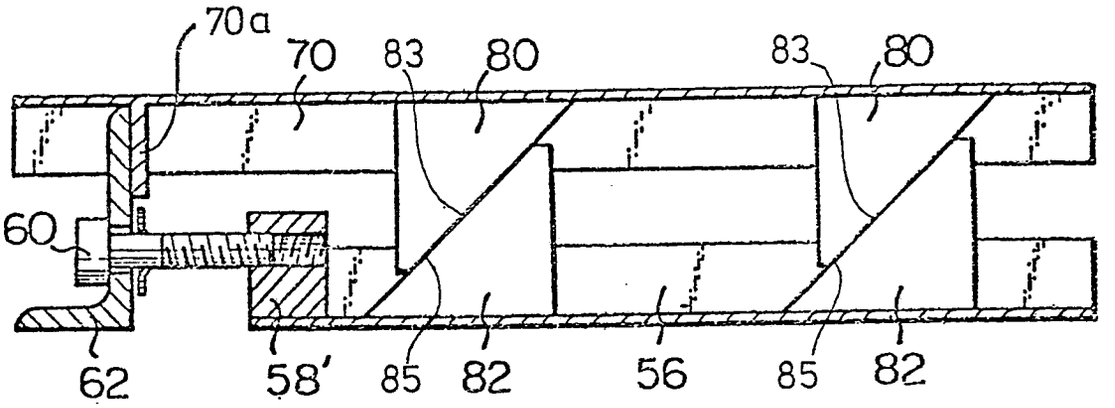


Fig. 17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70
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80
83
80
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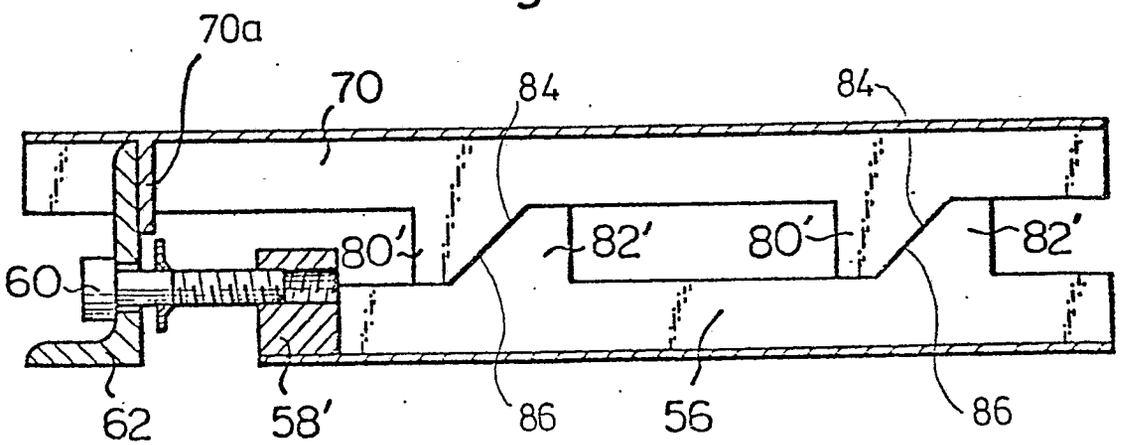
62
58'
85
82
56
85
82

Fig. 18


70a
70
84
84
80'
82'
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58'
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56
86