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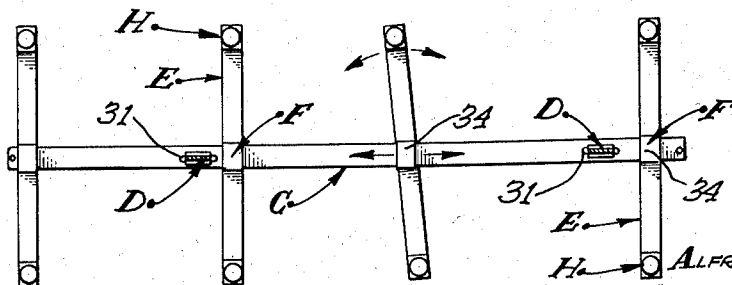
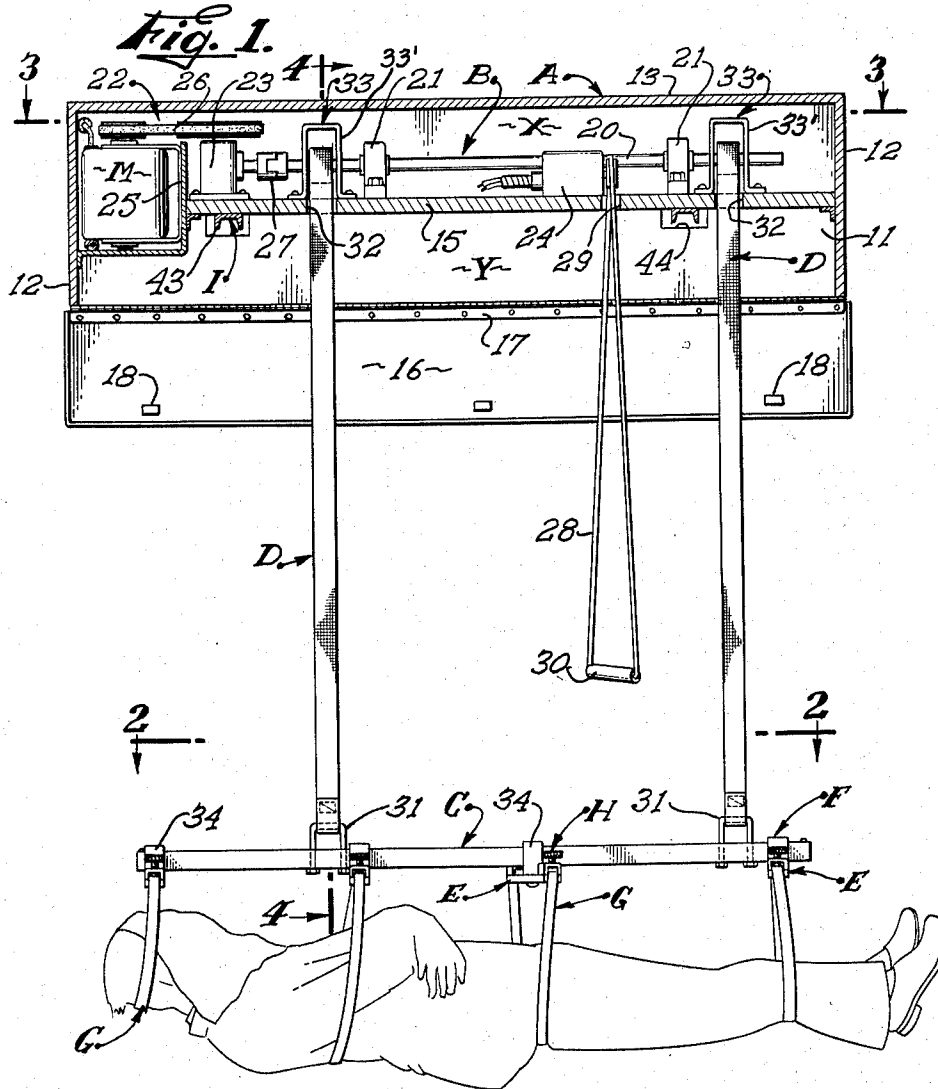
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2,918,718

BODY LIFT

Filed Jan. 4, 1957

2 Sheets-Sheet 1



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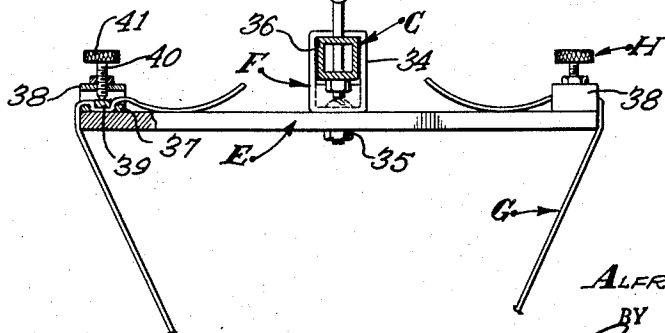
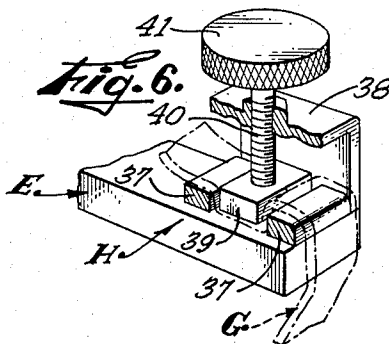
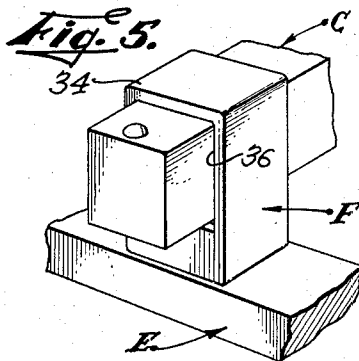
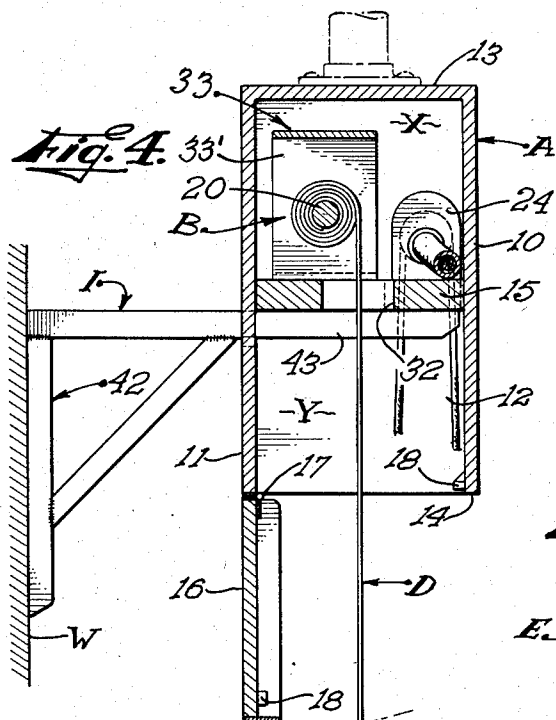
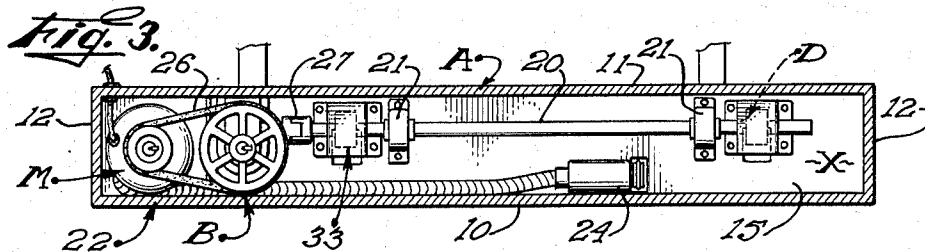
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2 Sheets-Sheet 2



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2,918,718

## BODY LIFT

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7 Claims. (Cl. 27—28)

This invention has to do with a body lift and is more particularly concerned with a lift or hoist adapted to elevate and lift a corpse from a mortician's dressing table, or the like, and to lower the corpse into position in a casket.

The handling of a corpse as for instance, the placement of a corpse in a casket is extremely difficult and ordinarily requires the service of two or more persons. It is extremely difficult to handle a corpse, dressed for burial, and to place it in a casket without disturbing the clothing and damaging the casket lining, which is normally extremely delicate and fragile. When a corpse is handled for the purpose set forth above, care must also be taken not to bend or flex the body or to disturb the relative positioning of the head.

It is frequently the job of one or more relatives, or close friends of the deceased, to direct and assist the dressing and the application of make-up on a corpse and to see the corpse placed in the casket. As a result of the above, it is extremely important, when a mechanical contrivance is employed to lift the corpse, that the contrivance or lift, be unobtrusive in appearance, quiet and smooth in operation, and, in general, such that it minimizes the impression on those present, that the deceased is being pitched around by a machine.

With the above in mind, it is a general object of the present invention to provide a body lift of the general character referred to which is neat and attractive in appearance and such that when it is not in use, all working parts or elements are hidden from view.

Another object of my invention is to provide a body lift adapted to engage and elevate a corpse, in a prone or horizontal position, without disturbing and varying the relative positioning of the various parts and portions of the corpse.

A further object of the present invention is to provide an electrically operated body lift that can be easily and advantageously operated by a single person.

Still further, it is an object of the invention to provide a body lift which is easy and economical of manufacture and which is highly effective and dependable in operation.

The various objects and features of my invention will be fully understood from the following detailed description of a typical preferred form and application of my invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a side view of the lift provided by the present invention, showing it engaged with and supporting a corpse, and showing certain parts of the lift in section to better illustrate the construction.

Fig. 2 is a plane view of a portion of the structure shown in Fig. 1 and taken as indicated by line 2—2 on Fig. 1. In Fig. 2 the corpse is removed from the construction.

Fig. 3 is a sectional plane view of a portion of my construction and taken as indicated by line 3—3 on Fig. 1.

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Fig. 4 is a transverse sectional view taken as indicated by line 4—4 on Fig. 1.

Fig. 5 is an enlarged detailed perspective view of a portion of my construction.

Fig. 6 is an enlarged perspective view of a portion of my lift and having portions broken away to better illustrate certain details of construction.

The construction provided by the present invention has to do with a body lift for use by morticians or the like, to engage and lift corpses readily for burial, as when they are being transferred from the mortician's dressing table to the caskets in which they are finally placed. The construction is shown as including generally, a housing A, a hoist mechanism B within the housing, an elongate horizontally disposed vertically shiftable carrier beam C, a plurality of lifting belts D carried by the hoist mechanisms and connected with the beam, a plurality of longitudinally spaced spreaders E extending transverse the longitudinal axis of the beam, coupling means F rotatably and shiftable coupling the spreaders to the beam, corpse engaging straps G for each spreader, and gripping means H on the spreaders adapted to releasably grip the straps.

The construction that I provide is shown as further including suitable mounting means I adapted to mount the housing in spaced relationship above the floor of the room in which the construction is located and so that the mortician's dressing table and the casket can be advantageously wheeled into and out of position below the construction.

The housing A is an elongate box-like structure, having flat, vertically disposed front, rear and end walls, 10, 11 and 12, a flat, horizontally disposed top 13, and an open bottom 14. The housing A is provided with a flat, horizontally disposed partition 15 intermediate its top 13 and bottom 14, dividing the interior of the housing into upper and lower compartments X and Y, and a closure 16 pivotally secured to the bottom edge of the rear wall 11 by a suitable hinge 17 and adapted to swing between a horizontally disposed position where the housing is closed and a vertical position as illustrated in the drawings, where the lower compartment Y is open.

In the particular case illustrated, suitable magnetic catches 18 are provided on the closure 16 and the interior of the front wall of the housing to normally releasably maintain the closure in the horizontal closed position.

The hoist mechanism B that I provide is shown as including an elongate horizontally disposed shaft 20 rotatably supported in the upper compartment X by a pair of longitudinally spaced pillow blocks 21 secured to the top side of the partition 15 so that the shaft extends longitudinally of the housing, and a suitable drive means 22 at one end of the housing and coupled with and driving the shaft.

The drive means 22 is shown as including a reversible electric motor M, mounted within the housing adjacent one end of the shaft, a reduction gear unit 23 between and operatively connecting the motor and the shaft and a manually operable drum switch 23 adapted to control the operation of the motor.

In the particular case illustrated, the motor M is mounted in a suitable well-like structure 25 in the partition 15, at one end of the housing. The reduction gear unit is shown fixed to the partition adjacent the well structure and is driven by the motor through a suitable belt and pulley drive 26. The reduction gear unit is preferably a self-locking worm and pinion type reduction gear and is shown as having its output shaft connected to the shaft 20 by means of a suitable universal joint 27.

The drum switch 24 adapted to control the motor M is a conventional drum switch secured to the top side of the partition 15 and is provided with a suitable loop-like operating cord 28 extending through a suitable open-

ing 29 in the partition to depend from the housing where it can be conveniently engaged by the operator. In practice, a suitable handle 30 is provided at the lower end of the cord 28.

The carrier beam C is a simple elongate horizontally disposed metal box-section, slightly less in longitudinal extent than the housing A and adapted to freely enter the lower compartment Y of the housing when the construction is not in use.

The lifting belts D carried by the hoist mechanism B and connected with the beam C, are shown as simple vertically disposed lengths of fabric webbing with their upper ends engaged around and suitably secured to the shaft 20 and their lower ends suitably secured to the beam C, as by means of U-bolt fasteners 31. The belts D are spaced longitudinally of the shaft and beam and are of equal length, with the result that the beam C, which is secured to the lower ends of the straps remains in a horizontal plane and parallel with the shaft at all times.

In the particular case illustrated, I have shown the mechanisms provided with two belts D, which belts are spaced longitudinally of the construction a sufficient distance so as to provide lengthwise stability to the beam and to overcome any tendency for the beam to teeter lengthwise when in use.

In the preferred carrying out of the invention, the belts D extend through suitable openings 32 in the partition 15 as they depend from the shaft 20.

Suitable belt guides 33 are provided to guide the belts as they are wound onto the shaft 20. The guides 33 are shown as simple U-shaped bracket-like members, formed of sheet metal, secured to the partition 15 to project upwardly therefrom. The legs 33' of the guides occur at opposite sides of the belts and are provided with axially aligned openings adapted to freely pass the shaft 20.

The longitudinally spaced spreaders E, extending transverse the longitudinal axis of the beam C, and with which the corpse engaging straps G are related, are simple elongate metal bars and are primarily adapted to hold the opposite ends of the straps G apart when the construction is in use, so that the straps do not tend to grip and disturb the position of the corpse when the corpse is elevated.

The coupling means F rotatably and shiftably coupling the spreaders E to the beam C are shown as including a block 34 pivotally secured to each spreader E, by means of a suitable screw type fastener 35. The blocks are secured to the spreaders at points spaced intermediate their ends and so that they project upwardly therefrom. Each block 34 is provided with a horizontally disposed opening 36 extending from one side thereof to the other, and shaped to slidably receive the beam.

With the above relationship of parts, it will be apparent that the blocks 34 and the spreaders E carried thereby, can be easily and quickly shifted longitudinally of the beam C so that the spreaders E and straps G can be suitably adjusted for handling corpses of varying longitudinal extent. It will also be apparent that should the straps G be misaligned beneath the corpse, the spreaders E are free to rotate relative to the blocks and beam to compensate for such misalignment and so that the belt will not tend to bind and twist the corpse, or its clothing.

The corpse engaging straps G related to the spreaders E are simple elongate lengths of fabric belting adapted to be placed beneath the corpse at predetermined points along its longitudinal extent and are adapted to be connected with the opposite ends of their related spreaders E to form what is, in effect, supporting slings when the corpse is to be elevated.

The gripping means H adapted to releasably grip the straps G, is shown as including a pair of longitudinally spaced pads 37 at each end of each spreader, a U-shaped

bracket 38 at each end of each spreader to overlie the pads and adapted to freely pass the end of the strap G related thereto, a pressure block 39 within each bracket and adapted to engage and hold the strap in pressure engagement on the spreader and between the pads and a screw actuator 40, with a hand engaging head 41 threadedly engaged in the bracket to engage and carry the pressure block and to shift the block into and out of engagement with the strap.

With the above relationship of parts, it will be apparent that when the corpse is ready for lifting, the ends of the straps G can be engaged through the brackets 38 on the ends of the spreaders, drawing snug, and then clamped tight therein by actuation of the screw actuator 40 and block 39.

With the construction set forth above, it will be apparent that when the construction is in use and the straps G are related to the corpse and to the spreaders in the manner set forth, the operator of the construction can easily and conveniently raise and lower the corpse as desired, by operation of the drum switch 24 and without disturbing the disposition of the corpse or its dress.

The mounting means I adapted to support the housing A is shown as including a pair of longitudinally spaced metal brackets 42 secured to a wall W and each having a laterally projecting supporting arm 43 adapted to project through a suitable opening 44 in the rear wall 11 of the housing to occur below and supportingly engage the partition 15 therein.

In practice, the mounting means can vary widely in form and construction. As for example, when it is desired to suspend the construction from a ceiling structure, suitable flanged pipe hangers, such as illustrated in phantom lines in Fig. 4 of the drawings, can be employed. Still further, if it is desired, the housing could be shiftably carried as by means of an overhead track and truck mechanism or by means of a suitably wheeled A-frame, or the like, without any way effecting the novelty of the present invention.

When my construction is not in use and it is desired to obscure the otherwise visible parts of the construction, the spreaders E are rotated relative to the blocks 34 to extend substantially parallel with the beam C and into that which I will refer to as a collapsed position. The straps G are then draped or hung over the beam and the spreaders, and the assemblage is elevated into the lower compartment Y. When the said assemblage is elevated in the manner set forth above, the operating cord 28 for the drum switch 24 is engaged with one of the parts of the assemblage and the closure 16 of the housing is pivoted to its horizontal closed position.

With the above relationship of parts, it will be apparent that when the construction that I provide is not in use, it is suitably housed, and the mechanism is obscured so that an unsightly and rather morbid contrivance is not visible to the bereaved who might be in the room in which the construction is located, either before or after a burial.

Having described only a typical preferred form and application of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art and fall within the scope of the following claims.

Having described my invention, I claim:

1. A body lift of the character referred to including, an elongate horizontally disposed shaft, drive means adapted to rotate the shaft, a support beam in a common vertical plane with the shaft and spaced below and parallel with the shaft, lifting belts fixed to and extending freely between the shaft and the beam and adapted to be wound onto and off of the shaft to raise and lower the beam, a plurality of longitudinal shiftable blocks carried by the beam, an elongate horizontally disposed spreader pivotally secured to each block and adapted to extend

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substantially transverse the longitudinal axis of the beam, a plurality of elongate straps positioned below the spreader and adapted to be engaged beneath a body positioned below the beam, and clamp means carried by the spreaders and adapted to slidably receive the belts for longitudinal shifting therethrough and operable to releasably engage and hold the straps related thereto in fixed position.

2. A body lift of the character referred to including, an elongate box-like housing having an open bottom and a partition establishing upper and lower compartments, mounting means supporting the housing in an elevated position, an elongate horizontally disposed shaft rotatably supported in the upper compartment, drive means in the upper compartment and adapted to rotate the shaft, a support beam spaced below the partition and extending parallel with the shaft and belts fixed to the shaft and depending through openings in the partition and connected with the beam, said belts being adapted to be wound onto or off of the shaft to raise and lower the beam, a plurality of longitudinally spaced spreaders carried by the beam to extend transverse thereof and a strap fixed to and extending between the ends of each spreader and adapted to be engaged below a portion of a body positioned below the beam and to carry the body when the beam is raised.

3. A body lift of the character referred to including, an elongate box-like housing having an open bottom and a partition establishing upper and lower compartments, mounting means supporting the housing in a fixed elevated position, an elongate horizontally disposed shaft rotatably supported in the upper compartment, reversible drive means in the upper compartment and adapted to rotate the shaft in opposite directions, a support beam spaced below the partition and extending parallel with the shaft, lifting belts fixed to and carried by the shaft and depending through openings in the partition and connected with the beam, said belts being adapted to be wound onto or off of the shaft to raise and lower the beam, a plurality of longitudinally spaced spreaders carried by the beam to extend transverse thereof and a strap releasably fixed to and extending between the ends of each spreader and adapted to be engaged below a portion of a body positioned below the beam and to carry the body when the beam is raised.

4. A body lift of the character referred to including, an elongate box-like housing having an open bottom and a partition establishing upper and lower compartments, mounting means supporting the housing in an elevated position, an elongate horizontally disposed shaft rotatably supported in the upper compartment, drive means in the upper compartment and adapted to rotate the shaft, a support beam spaced below the partition and extending parallel with the shaft, lifting belts fixed to and carried by the shaft and depending through openings in the partition and connected with the beam, said belts being adapted to be wound onto or off of the shaft to raise and lower the beam, a plurality of longitudinal shiftable blocks carried by the beam, an elongate horizontally disposed spreader pivotally secured to each block and adapted to extend substantially transverse the longitudinal axis of the beam, and a strap fixed to and extending between the ends of each spreader and adapted to be engaged below a portion of a body positioned below the beam and to carry the body when the beam is raised.

5. A body lift of the character referred to including, an elongate box-like housing having an open bottom and a partition establishing upper and lower compartments, mounting means supporting the housing in a fixed elevated position, an elongate horizontally disposed shaft rotatably supported in the upper compartment to extend longitudinally of the housing, electrically operated reversible drive means in the upper compartment and adapted to rotate the shaft in opposite directions, a support beam below the partition and extending parallel with

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the shaft, lifting belts fixed to and carried by the shaft and depending through openings in the partition and connected with the beam, said belts being adapted to be wound onto or off of the shaft to raise and lower the beam, a plurality of longitudinal shiftable blocks carried by the beam, an elongate horizontally disposed spreader pivotally secured to each block and adapted to extend substantially transverse the longitudinal axis of the beam, and a strap releasably secured to and extending between the ends of each spreader and adapted to be engaged below a portion of a body positioned below the beam and to carry the body when the beam is raised.

6. A body lift of the character referred to including, an elongate box-like housing having an open bottom and a partition establishing upper and lower compartments, mounting means supporting the housing in an elevated position, an elongate horizontally disposed shaft rotatably supported in the upper compartment, drive means in the upper compartment and adapted to rotate the shaft, a support beam spaced below the partition and extending parallel with the shaft, lifting belts fixed to and carried by the shaft and depending through openings in the partition and connected with the beam, said belts being adapted to be wound onto or off of the rotating shaft to raise and lower the beam, a plurality of longitudinal shiftable blocks carried by the beam, an elongate horizontally disposed spreader pivotally secured to each block and adapted to extend substantially transverse the longitudinal axis of the beam, a plurality of elongate straps positioned below the spreaders and adapted to be engaged beneath a body positioned below the beam, and clamp means at the ends of each spreader and adapted to releasably engage the ends of the strap related thereto, said lower compartment in the housing adapted to freely receive the beam, spreaders and straps when the construction is not in use.

7. A body lift of the character referred to including, an elongate box-like housing having an open bottom, a partition establishing upper and lower compartments and a pivoted closure adapted to overlie the bottom when the lift is not in use, mounting means supporting the housing in a fixed relative position, an elongate horizontally disposed shaft rotatably supported in the upper compartment to extend longitudinally of the housing, manually controlled electrically operated reversible drive means in the upper compartment adjacent one end of the shaft and adapted to rotate the shaft in opposite directions, a support beam spaced below the partition and extending parallel with the shaft, lifting belts fixed to and carried by the shaft and depending through openings in the partition and connected with the beam, said belts being adapted to be wound onto or off of the rotating shaft to raise and lower the beam, a plurality of longitudinal shiftable blocks carried by the beam, an elongate horizontally disposed spreader pivotally secured to each block to normally occur in working position where it extends substantially transverse the longitudinal axis of the beam, and shiftable to a collapsed position where it extends substantially parallel with the beam, a plurality of elongate straps positioned below the spreaders and adapted to be engaged beneath a body positioned below the beam, and manually operable releasable clamp means at the ends of each spreader and adapted to releasably engage the ends of the strap related thereto, the lower compartment in the housing being adapted to freely receive the beam, spreaders and straps, when the lift is not in use and the spreaders are in the collapsed position.

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