The present invention relates generally to hearses and more particularly to an improved dual-functioning means for restraining a casket from longitudinal movement on a casket-table and for initiating movement of the casket along the table when it is desired to unload it from the hearse.

At the present time the majority of caskets used are manufactured of metal and are relatively heavy so that after a casket rests on a casket-table of a hearse for a period of time the casket, which ordinarily has a rough-finished bottom, acquires a "set" on the rollers and skids of the casket-table. This makes it necessary to apply some force to reposition the casket along the rollers of the casket-table preparatory to unloading from the hearse. Prior to my invention, since most caskets are provided with carrying-bars or handles only on the sides, it was necessary for the funeral director or hearse attendant to reach around to both sides of the end of the casket to grasp the carrying-bars thereof so as to be able to pull the casket to overcome its inertia and dislodge it from its set position on the rollers and skids on the casket-table and move it toward the door of the hearse. It was difficult and awkward for the funeral director or hearse attendant to reach the side carrying-bars from his standing position at the rear of the hearse and frequently, when the side bars were reached and the casket was pulled, it would roll out at a suddenly accelerated speed so that the funeral director or hearse attendant, who necessarily was in off-balance position, had to move with considerable agility and adroitness to prevent the casket from falling from the casket-table and hearse.

Herefore, the casket has been restrained from longitudinal movement on the casket-table during transit by bier pins which were inserted in holes in suitable bier pin plates at the rearward and head ends of the casket-table. Some examples of bier pin arrangements of this type are disclosed by the following patents: Parcell, Patent No. 1,637,219; Schofield Patent No. 2,132,543; and Breeden, Patent No. 2,206,762. Although arrangements of this type served to more or less prevent longitudinal movement of the casket during transit, they contributed nothing to the solution of the problem of overcoming the inertia of the casket preparatory to removing it from the hearse. Actually, the more efficiently such an arrangement performed to maintain a casket immobile during transit, more enhanced was the possibility of the casket acquiring a set position on the rollers and skids of the casket-table and, therefore, resulting in more force being required to initiate movement of the casket along the table.

It is, accordingly, the primary object of my invention to provide a combination casket stay and mover which functions, in cooperation with a conventional bier pin at the rearward end of the casket-table, to restrain the casket from longitudinal movement and also functions to impart initial movement to the casket bodily of the casket-table after the bier pin at the rearward end of the casket-table has been removed preparatory to unloading the casket from the rear of the hearse.

It is a more specific object of my invention to provide a device as set forth in the statement of object above wherein a power driven abutment is provided for engaging the head end of a casket in a hearse and restrain it from movement between the abutment and a conventional bier pin in engagement with the rearward end of the casket; and also to impart initial movement to the casket along the rollers and skids of the casket-table preparatory to unloading after the conventional bier pin has been removed.

The above and other objects will become more apparent after referring to the following specification and attached drawings in which:

FIGURE 1 is a plan view of a hearse casket-table, with a casket shown in chain lines thereon, having the device of the invention incorporated therein;

FIGURE 2 is an enlarged plan view, with some parts broken away for clarity, of the device of the invention;

FIGURE 3 is a side elevational view of FIGURE 2; and

FIGURE 4 is a cross-sectional view taken substantially along the line IV—IV of FIGURE 2.

Referring more particularly to the drawing, reference numeral 2 indicates generally a hearse casket-table, 4 normally closed by a door 6. A casket-table 8, which is provided with a plurality of transversely extending rollers 10 spaced along the length thereof and a plurality of longitudinally extending skids or runners 12 interposed among the rollers, is fixedly mounted on the floor of the hearse. A longitudinally extending bier pin plate 14 having holes or sockets 16 spaced therealong is centrally disposed in the table 8 adjacent its rearward end 18. The sockets 16 are adapted to detachably receive a bier pin 20 to engage the rearward end of a casket resting on the table 8.

The structure thus far described is conventional and is not claimed as my invention, the details of which shall now be described.

A housing 22 having a longitudinal flange 24 extending along opposite sides thereof is mounted in the table 8 extending axially from a point adjacent its forward end 26 to a point inward of the forward end and substantially aligned with the bier pin plate 14. The housing 22 is mounted in the table by means of screws 25 which pass through the flanges 24 and are threaded into the upper surface of the table 8, as best shown in FIGURES 2 and 4. The bottom portion of the housing extends below the lower surface of the table 8 whilst the upper surface thereof projects upwardly above the flanges 24 to a level slightly below the horizontal plane containing the upper circumferential portions of the rollers 10. A slot 28 extends longitudinally along the upper surface of housing 22 for a purpose which will become apparent.

A screw shaft 30 having unthreaded end portions 32 is disposed within the housing 22 with its unthreaded end portions journaled in the ends of the housing. One end 32' of the screw shaft is movably retained and is attached to the drive shaft 34 of a reversible motor-gear reducer unit 36 by means of a coupling 38. The motor-gear reducer unit may be either electrically or pressure fluid operated, as desired. As best shown in FIGURES 2 and 4, the screw shaft 30 is laterally offset from the vertical plane containing the slot 28.

A carriage 40 having a laterally extending portion 42 is threaded on the screw shaft 30 for movement therealong within the housing 22 when the screw shaft is rotated by
the motor-gear reducer unit 36. Laterally extending keys 41 are formed on opposite sides of the carriage which fit in and slide along corresponding ways 43 formed in the sides of the housing 22. Keys 41 serve to stabilize and prevent binding of the carriage as it travels along the housing.

The laterally extending portion 42 of the carriage 40 is provided with a vertically extending socket 44 directly below the slot 28 for detachably receiving the reduced-diameter, cylindrical shank portion 46 of a bier pin 48. The shank of the bier pin 48 projects upwardly through the slot 28 and terminates in an enlarged diameter body portion 50 which is slidably disposed on the upper surface of the housing 22 astride the slot 28. An abutment plate 52 having a transverse dimension wider than the body of the bier pin 48 is provided on the bier pin normally facing the rearward end 18 of the casket-table. The abutment extends in opposite directions from the bier pin substantially normal to the axis of the housing 22 and has on its outer surface a face 54 of resilient material such as sponge rubber or the like adapted to engage the outer surface of a casket silently and without marring the same.

It will be noted that the shank portion 46 of the bier pin 48 is rotatable in the socket 44 and slot 28 to permit the abutment plate 52 to be automatically oriented properly to accommodate the end of a casket which may be disposed on the casket-table in an askew position.

As best shown in FIGURES 3 and 4, one end 56 of the housing 22 may be made in two parts to form a bearing for one end of the screw shaft 30 so as to facilitate insertion of the screw shaft into the housing during assembly of the apparatus. The two parts of the end 56 are secured together by means of screws 58.

A control 60 is connected with the motor-gear reducer unit 36 by means of a cable 61 and is mounted inside the hearse in close proximity to the rear opening 4 so that the motor-gear reducer unit can be readily operated from the rear of the hearse.

In operation, a casket C is placed on the casket-table through the rear opening 4 of the hearse in the conventional manner. When the casket is so loaded, it is moved along the rollers 10 until its forward end engages the resilient face 54 of the abutment 52. Then, while the casket is held in close engagement with the abutment, a bier pin 20 is placed in one of the sockets 16 of the bier pin plate 14 to tightly engage the rearward end of the casket. Thus, the casket is restrained from longitudinal movement by the abutment 52 and the bier pin 20.

When it is desired to unload the casket from the hearse, the bier pin 20 at the rearward end of the casket is removed from the bier pin plate 14. Then, the control 60 is operated to actuate the motor-gear reducer 36 to rotate the screw shaft 30 and cause the abutment 52 to push the casket toward the rear door opening 4 of the hearse a sufficient distance so that attendants or pallbearers on either side of the door opening can easily reach the side carrying bars of the casket to lift it from the hearse.

Although I have shown but one embodiment of my invention, it will be apparent that other adaptations and modifications may be made without departing from the scope of the following claims.

I claim:

1. In a hearse casket-table having a forward end and a rearward end, a substantially centrally disposed bier pin plate fixedly mounted on said table extending axially therefrom along from a point adjacent said rearward end to a point inward of said rearward end, said bier pin plate having a plurality of holes spaced along the length thereof, said bier pin plate being disposed with a portion of its circumferential surface projecting to a predetermined uniform level above said table in which the improvement comprises an elongated housing substantially centrally disposed in said table extending axially therefrom from a point adjacent said forward end to a point inward of said forward end, the upper surface of said housing being below said predetermined level, said housing having a slot extending longitudinally along the upper surface thereof, a screw shaft having unthreaded end portions disposed in said housing extending longitudinally thereof below the level of said slot with its unthreaded end portions journaled in opposite ends of said housing, reversible power drive means connected with said screw shaft for rotating the same, a casket fixedly mounted to said screw shaft for movement therealong in said housing when said shaft is rotated, a bier pin carried by said casket, said bier pin projecting upwardly from said casket through said slot for movement along said slot when said carriage moves along said shaft, and an abutment on the portion of said bier pin projecting above said slot on the side thereof facing inwardly of the forward end of said table, said abutment extending beyond opposite sides of said bier pin substantially normal to the vertical plane containing said bier pin and substantially normal to the horizontal plane containing said housing.

2. Apparatus as defined by claim 1 in which said bier pin is formed with a substantially cylindrical bottom portion and said carriage is provided with a substantially cylindrical socket in which the bottom portion of said bier pin is rotatably fitted.

3. Apparatus as defined by claim 1 in which laterally projecting keys are formed on opposite sides of said carriage, and the inferior opposed lateral walls of said housing have longitudinally extending ways therein for receiving said keys.

4. Apparatus as defined by claim 1 in which said drive means comprises a reversible motor operatively connected with one end of said screw shaft.

5. Apparatus as defined by claim 4 including remote control means for said motor disposed adjacent the rearward end of said table.

6. Apparatus as defined by claim 2 in which said screw shaft is disposed to one side of the vertical plane containing said slot, and said carriage is formed with a portion thereof extending laterally into the vertical plane containing said slot, said cylindrical socket being formed in the laterally extending portion of said carriage.

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