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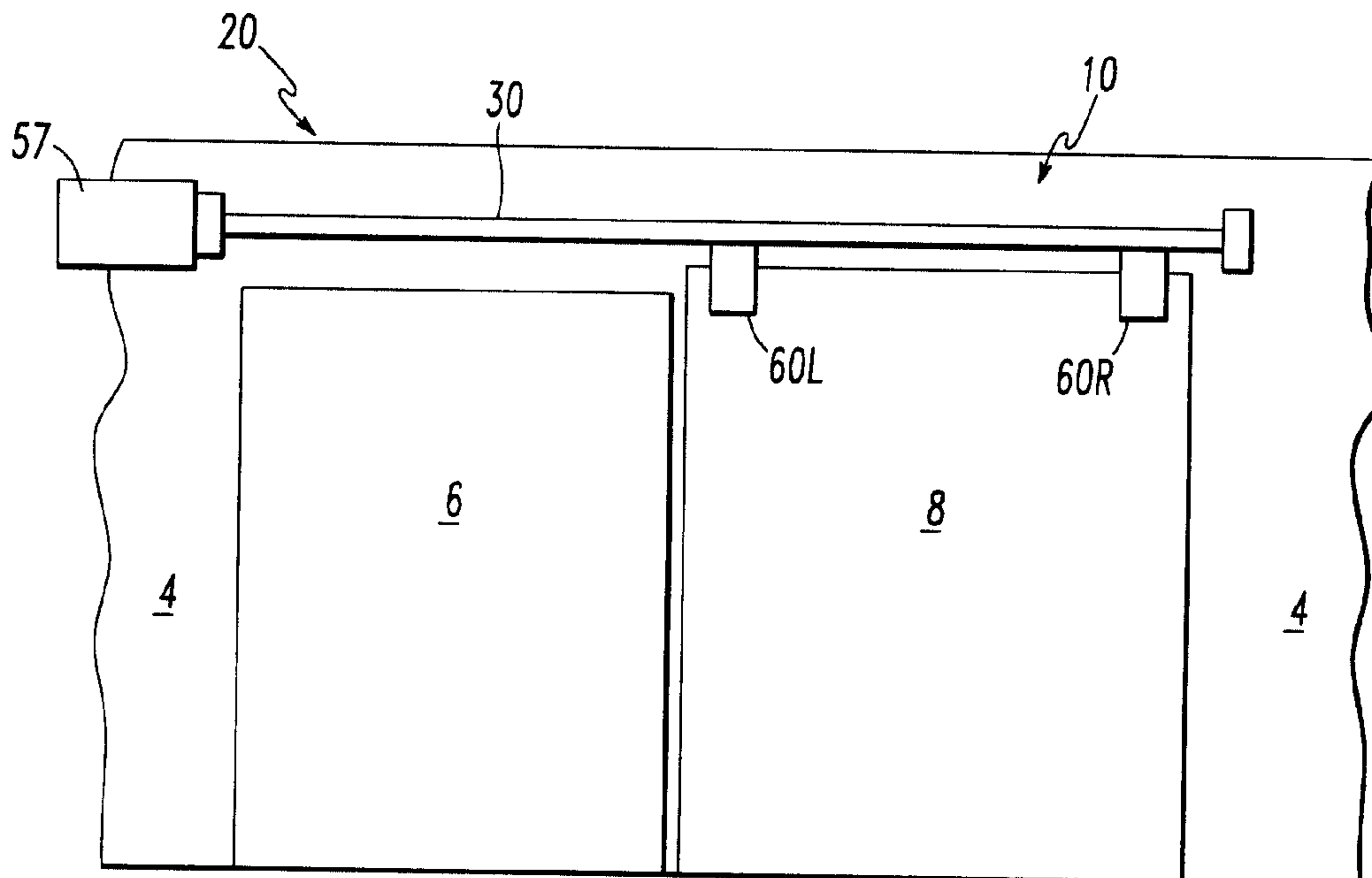
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(54) Titre : DISPOSITIF EN COFFRET POUR FERMETURE DE PORTE RABATTABLE

(54) Title: ENCASED OVERHEAD DOOR OPERATOR



(57) Abrégé/Abstract:

Door support and drive mechanism for a door mounted either over or in a door opening in a transit vehicle or other structure. It includes a tube which has a longitudinal slot. The mechanism also has mounting means attached to the tube for mounting it to the structure over the door opening, so that the tube is substantially horizontal and the slot is along a lower portion of the tube. It includes at least one door hanger which has an upper portion movably disposed within the tube and a depending portion passing through the slot, the depending portion being for attachment of the door. It has a drive nut attached to the door hanger. A drive screw is positioned in

ABSTRACT

Door support and drive mechanism for a door mounted either over or in a door opening in a transit vehicle or other structure. It includes a tube which has a longitudinal slot. The mechanism also has mounting means attached to the tube for mounting it to the structure over the door opening, so that the tube is substantially horizontal and the slot is along a lower portion of the tube. It includes at least one door hanger which has an upper portion movably disposed within the tube and a depending portion passing through the slot, the depending portion being for attachment of the door. It has a drive nut attached to the door hanger. A drive screw is positioned in the tube, engaging a threaded inner portion of the drive nut. The drive screw is connectable to a rotary power means to be rotated thereby. Rotation of the drive screw causes longitudinal movement of the drive nut and the hanger to which the drive nut is attached, so that the door is moved longitudinally.

ENCASED OVERHEAD DOOR OPERATOR

CROSS-REFERENCE TO RELATED APPLICATIONS

The invention described in this patent application is closely related to U.S. Patent No 6,032,412 issued on March 7, 2000 for a "TRANSIT VEHICLE DOOR". It is also related to U.S. Patent No 6,134,838 issued on October 24, 2000 for a "DOOR DRIVE AND LOCK FOR A MASS TRANSIT VEHICLE".

FIELD OF THE INVENTION

The present invention relates, in general, to motorized sliding doors and, more particularly, the instant invention relates to a suspension and drive mechanism for transit vehicle doors.

BACKGROUND OF THE INVENTION

Overhead sliding door operators presently on the market consist of two basic systems.

(1) They have a load bearing system which supports the weight of the door panel or panels and allows movement of the door. This is normally accomplished by using a precision shaft and linear bearings, or rollers, supported in a C-shaped, bent or extruded, member. Doors are generally supported by door hangers which are free to move along horizontal rods or tracks.

(2) Door operators also have mechanisms for moving the doors. A belt and pulley system, for example, may be used to move the doors. Alternatively, overhead door operators may employ a helical drive member which engages a drive nut attached

