Sept. 14, 1965 J. VINTAN 3,205,529

GUIDE FOR SLIDING DOORS

Filed Nov. 12, 1963

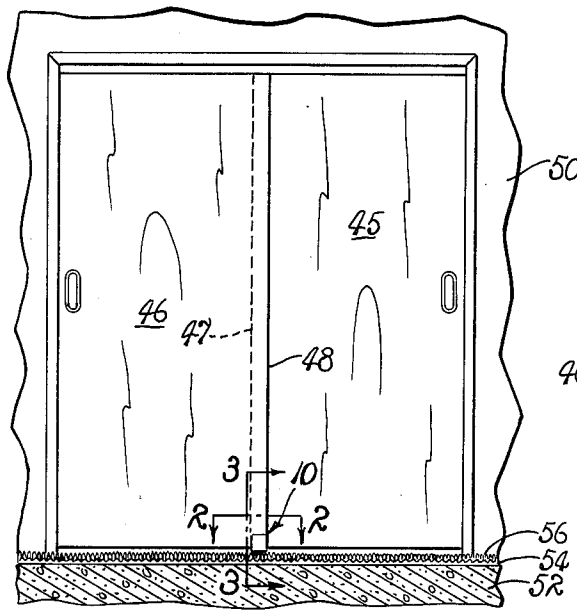


FIG. 1.

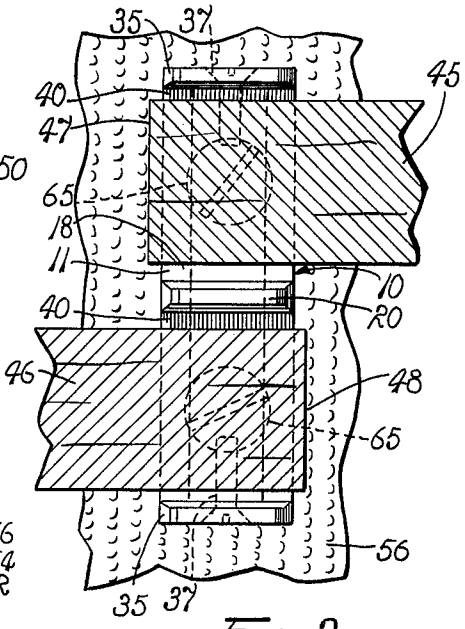


FIG. 2.

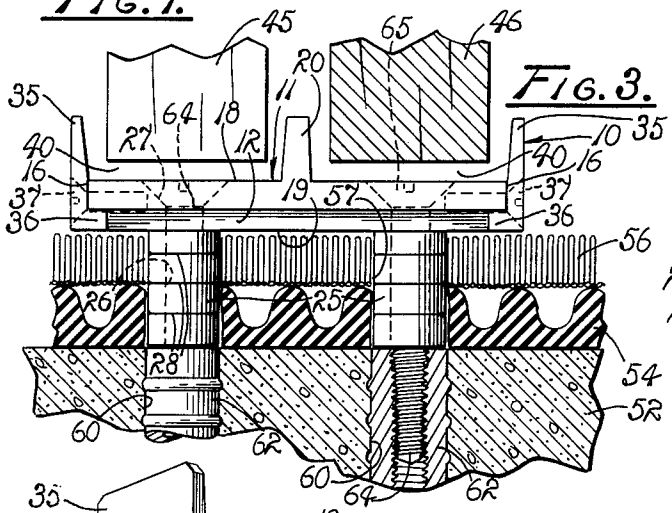


FIG. 3.

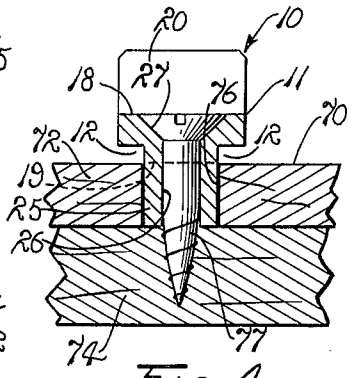


FIG. 4.

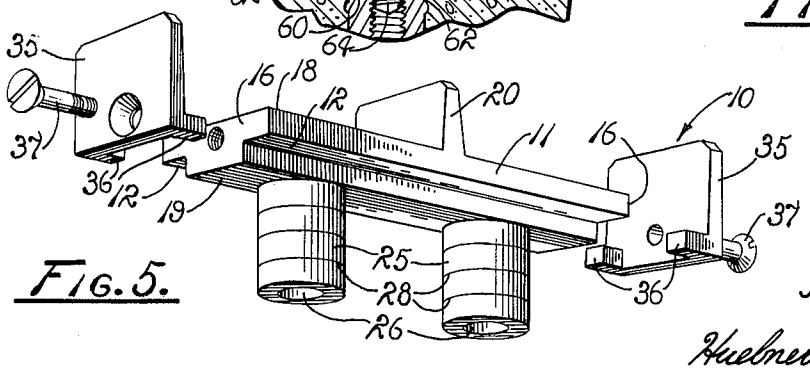


FIG. 5.

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United States Patent Office 3,205,529
Patented Sept. 14, 1965

3,205,529

GUIDE FOR SLIDING DOORS

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Filed Nov. 12, 1963, Ser. No. 322,961
6 Claims. (Cl. 16—90)

The present invention relates to a guide for sliding doors and more particularly to such a guide which is adapted to be quickly and easily installed over a carpeted floor surface or mounted directly on a floor in precise predetermined position prior to installing the doors and during such installation of the doors permits their ingress and egress transversely of the guide without disturbing the mounting of the guide on the floor.

Pairs of conventional sliding doors are normally hung from an upper roller track and provide a floor track to maintain the doors in the desired vertical attitude. Since the lower edges of the doors are usually disposed in closely spaced relation to the floor surface, such tracks are difficult to install. If the track is first secured to the floor surface, it is difficult subsequently to install the doors. Such procedure is difficult and frequently causes doors to be permanently deformed or damaged to such an extent that they do not slide freely through the tracks. such tracks are sometimes fitted to the lower edge of the doors before securing the track to the floor. This is usually accomplished by swinging one of the doors transversely outwardly of the other door and fitting one track over the bottom edge of the displaced door in a position to clear the opposite door when returned to its vertical position. The track is then slid toward the other door to receive the same in the opposite door track. Inasmuch as the doors continually cover the tracks, outboard brackets must be provided in order to secure the tracks to the floor. Such outboard brackets are unsightly and constitute a hazard. Futhermore, such tracks are particularly difficult to install on floors on which carpet has been laid before installation of the sliding doors. Because of the resiliency of the carpet, the tracks are difficult to maintain in the desired elevational position relative to the lower edges of the doors and to mount with sufficient rigidity. Thus, installation of conventional lower tracks for sliding doors is tedious and time-consuming. Further, such conventional tracks are not adaptable to all floor surfaces and are difficult frequently to maintain in precise operating position.

Therefore, it is a broad object of the present invention to provide an improved guide for sliding doors.

Another object is to provide such an improved guide for sliding doors which is quickly and easily installed over carpeted floor surfaces in precise operating position.

Another object is to provide such a guide for sliding doors which is easily adapted for direct installation on a floor even though the floor has a surface covering of some type.

Another object is to provide a lower guide for sliding doors which may be elevationally adjusted prior to installation.

Another object is to provide a guide for sliding doors which permits free entry of the doors into the guide tracks without forcing or deforming the doors.

Another object is to provide a guide for sliding doors providing track portions continuously covered by the sliding doors.

Another object is to provide a guide for sliding doors which does not require outboard mounting brackets.

Another object is to provide a guide for sliding doors which is capable of being installed with a minimum of time and labor.

Other objects and advantages of the present invention will subsequently become more clearly apparent in the following description in the specification.

In the drawing:

FIG. 1 is a front elevation of a pair of sliding doors having the guide of the present invention installed in operating relation thereto.

FIG. 2 is a fragmentary somewhat enlarged horizontal section through the doors above the guide taken on line 2—2 of FIG. 1.

FIG. 3 is a somewhat enlarged fragmentary transverse vertical section through the doors, guide and a carpeted floor surface taken on line 3—3 of FIG. 1.

FIG. 4 is a transverse vertical section through the guide shown mounted directly on a floor surface.

FIG. 5 is an enlarged perspective view of the guide having end plate portions disposed in exploded relation to the guide for illustrative convenience.

Referring more particularly to the drawing, a guide for sliding doors embodying the principles of the present invention is generally indicated by the reference numeral **10**. The guide is preferably formed of a hard plastic or metallic material. As best shown in FIG. 5, the guide provides an elongated substantially T-shaped base **11** having a pair of opposite side groves **12** extended between opposite ends **16**. The base also includes upper and lower surfaces **18** and **19**, respectively, and an upstanding center rib **20** extended from the upper surface intermediate the ends of the base.

A pair of integral cylindrical support legs **25** are extended in depending relation from the lower surface **19** of the base **11** in spaced substantially parallel relation individually substantially midway between the center rib and their respective end **16** of the base. Each of the support legs has a concentric axial bore **26** therethrough having an enlarged frusto-conical counterbore **27** in the upper surface **18** of the base. The support legs further include a plurality of equally axially spaced circumscribing scoring grooves **28** about the periphery thereof marking the legs into graduated segments. A pair of opposite side plates **35** are individually mounted on the opposite ends **16** of the base **11** in substantially parallel relation and have inwardly extended lower ears **36** receivable into the side grooves **12** thereof to prevent rotation of the plates. The side plates are individually constrained in such position by a pair of mounting bolts **37** extended therethrough into the ends of the base. The side plates, upper surface **18** of the base and the center rib **20** thereby define a pair of door receiving tracks **40**.

As shown in FIGS. 1, 2 and 3, the guide **10** of the present invention is shown associated with a pair of inner and outer sliding doors **45** and **46**, respectively, having overlapping inner side edge portions **47** and **48**. The doors are mounted for sliding movement in an opening wall **50** extending upwardly from a floor **52**.

As best shown in FIG. 3, a pad **54** and an overlying carpet **56** are supported on the floor **52** which, in this illustrative environment, is composed of a cementitious material. The pad and carpet have a pair of holes **57** punched therethrough to receive the support legs **25** of the guide **10**. A pair of drilled holes **60** are also formed in the floor individually to receive lead anchors **62** which screw-threadably receive a pair of elongated screws **64** extended through the bores **26** in the support legs **25** and having tapered flat head portions **65** nested in the counterbores **27**.

In FIG. 4, the guide **10** is shown adapted to be mounted directly on a floor **70** having a hardwood finish floor **72** and a sub floor **74**. In such installation, the legs **25** are cut off at the first groove graduation **28** with the legs then being received within a counterbore **76** in the finish floor **72** so that the lower surface **19** of the base **11** of

the guide is disposed against the upper surface of the finish floor. An elongated wood screw **77** is extended through each of the bores **26** in the support legs and screw-threaded directly into the sub floor **74**.

Operation

The installation and operation of the described embodiment of the subject invention is believed to be clearly apparent and is briefly summarized at this point. The guide is adapted to be installed in operating relation to the sliding doors **45** and **46** of FIG. 1 even after the carpet **56** and pad **54** are laid on the floor **52**. The doors are swung transversely oppositely outwardly so as to clear the area in which the guide is to be installed. The carpet is then marked through the bores **26** and the holes **57** punched through the carpet and through the pad. The holes **60** are then drilled in the floor **52** and the screw anchors **66** inserted. The thickness of the carpet and pad is then measured and the support legs **25** are cut along their respective graduation grooves **28** corresponding in axial length with the thickness of the carpet and pad. The legs are then inserted into the holes **47** of the carpet and pad so as to rest on the upper ends of the screw anchors **62** in coplanar relation with the upper surface of the floor **52**. The screws **64** are then extended through the bores **26** in the support legs **25** and into the screw anchors for tightening the support legs and guide rigidly against the floor with the base **11** of the guide rested lightly against the carpet **56**, as shown in FIG. 3. The side bolts **37** are removed to disassemble the side plates **35** from the ends **16** of the base **11** so that the guide is in condition transversely to receive the doors into the tracks **40**. Also, the tracks are individually disposed in precisely aligned relation with the sliding paths of the doors.

After such installation of the guide **10**, the doors **45** and **46** are swung inwardly to their normally substantially vertical positions within the tracks **40** of the guide. The side plates **35** are mounted on the opposite ends **16** of the base by their respective threaded bolts **37** to constrain transverse outward movement of the doors.

As shown in FIG. 4, the guide **10** of the present invention is adapted to be directly mounted on the hardwood floor surface **70** by first drilling the counterbores **76** through the finish floor **72** to a depth corresponding to the axially spaced length of the first or uppermost graduation groove **28** in the support legs **25**. The support legs are then severed along such grooves and inserted into the counterbores **76** in the same position relative to the floor as the guide **10** in FIG. 3 is disposed relative to the carpeted floor. In such position, the screws **77** are inserted through the bores **26** in the support legs and tightened into the sub floor **74** rigidly to hold the guide in position to align the tracks **40** with the sliding paths of the doors **45** and **46**. The doors are positioned within the tracks, as before, and the side plates **35** assembled to capture the doors in such position.

In view of the foregoing, it is readily apparent that the structure of the present invention has provided an improved guide for sliding doors which is quickly and easily adapted for installation on carpeted floor surfaces or to being installed directly on a floor such as hardwood, cement, tile, or the like. Such installation is accomplished with substantially no prying or wedging of the doors by providing the removable side plates **35** which permit the doors to be freely swung transversely inwardly into the door tracks in the guide.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and apparatus.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A guide for sliding doors adapted to be mounted on a floor having a carpet thereon of a predetermined thickness, comprising a base having at least a pair of upstanding spaced substantially parallel side members defining a door track therebetween, fastener means disposed within the track for mounting said base upon the floor, holding means releasably connecting one of said side members to the base with said side members being removable from the base independently of said fastener means to permit initial transverse movement of a sliding door into said track, integral support means disposed in depending relation from the base adapted for extension through such a carpet for supporting the base on the floor having a plurality of graduated scoring grooves to faciliate removal of predetermined portions thereof so that the support means correspond in length to said predetermined thickness of the carpet elevationally position the base and track between the carpet and the door.

2. A guide for sliding doors adapted to be mounted on a floor having a carpet thereon, comprising a base, a pair of upstanding spaced substantially parallel side members, holding means releasably connecting said side members to the base, an integral divider rib on the base disposed in upstanding position between the side members defining a pair of door tracks on the base on opposite sides thereof, fastener means connecting said base to the floor, said side members being removable from the base independently of said fastener means to permit initial transverse movement of a pair of sliding doors individually into said tracks, and a pair of integral support legs disposed in depending relation from the base adapted for extension through said carpet for supporting the base on the floor.

3. A guide for sliding doors adapted to be mounted on a floor having a carpet thereon of a predetermined thickness, comprising a base, fastener means for connecting the base to the floor, a pair of upstanding spaced substantially parallel side members having integral ears embracing the base to orient said side plates in said upstanding positions, holding means releasably connecting said side members to the base, an integral divider rib disposed in upstanding position intermediate the side members defining a pair of door tracks on the base, said holding means permitting said side members to be removed from the base independently of said fastener means to permit initial transverse movement of a pair of sliding doors individually into said tracks, and a pair of integral support legs disposed in depending relation from the base adapted for extension through said carpet for supporting the base on the floor having a plurality of graduated scoring grooves to facilitate removal of predetermined portions thereof so that the support legs can be cut to correspond in length to said predetermined thickness of the carpet precisely elevationally to position the base and track between the carpet and such doors.

4. A guide for sliding doors adapted to be mounted on a floor having a carpet thereon of a predetermined thickness with the doors having inner transversely overlapped portions when in a closed position, comprising a base, fastener members for connecting the base to the floor, a pair of upstanding spaced substantially parallel side members having integral ears adapted to embrace the base to orient the same in said upstanding positions on the base, holding means releasably connecting said side plates to the base, an integral divider rib disposed in upstanding position intermediate the side members and substantially parallel thereto defining a pair of door tracks on the base, a pair of integral support legs disposed in depending relation from the base adapted for extension through said carpet for supporting the base on the floor beneath said overlapped portions of the doors and having a plurality of graduated scoring grooves to facilitate removal of predetermined portions thereof so that the

support legs correspond in length to said predetermined thickness of the carpet precisely elevationally to position the base and tracks between the carpet and such doors, said fastener members individually extended through the base, the support legs and into said floor having head portions continually covered by such doors when positioned in the tracks with said holding means permitting said side members to be removed from the base independently of said fastener members to permit transverse movement of a pair of such sliding doors individually into said tracks while said fastener members maintain the base on the floor.

5. A guide comprising an elongated base having opposite ends and oppositely spaced substantially parallel side grooves extended between the ends, said base providing an integral substantially upright center rib positioned transversely on the base and an elongated cylindrical support leg disposed in depending relation from the base providing an axial bore therethrough and through the base; fastener means extended through the bore; a plate individually disposed in predetermined upright position at one of said ends of the base in spaced substantially parallel relation to said center rib defining therewith a door guiding track transversely of the base, said plate including lower spaced integral ears individually exendible into said opposite side grooves of the base restricting rotary movement of the plate but permitting longitudinal endward movement of the plate on the base transversely outwardly from said track; and holding means releasably constraining said plate in said predetermined upright position on the base permitting complete removal of the plate from the base independently of any manipulation of said fastener means for the base.

6. A guide for a pair of sliding doors adapted to be mounted on a floor prior to installation of the doors with the doors having continuously transversely overlapped portions contiguous with the guide when installed; comprising an elongated base having opposite ends and oppositely spaced substantially parallel side grooves extended between the ends, said base providing an integral substantially upright center rib positioned transversely on

the base and a pair of elongated cylindrical support legs disposed in depending relation from the base supporting the base in elevated position on the floor with each of the legs providing an axial bore therethrough and the bores extending through the base beneath said overlapped portions of the doors; fastener means individually extended through the bores in the base and support legs and into the floor providing head portions continually covered by said overlapping portions of the doors; a pair of plates individually disposed in predetermined upright positions at said opposite ends of the base in equally spaced substantially parallel relation to said center rib thereby defining therewith a pair of door guiding tracks transversely of the base, said plates individually including lower spaced integral ears individually extendible into said opposite side grooves of the base restricting rotary movement of the plates but permitting longitudinal endward movement of the plates on the base transversely outwardly from their respective tracks; and holding means releasably constraining said plates in said predetermined upright positions on the base and permitting complete removal of the plates from the base independently of any manipulation of said fastener means for the base to permit initial transverse movement of the doors individually into said tracks.

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