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GARAGE DOOR TRACK

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This invention relates to garage door tracks of the type used in connection with doors which are disposed vertically when in a closed position and are moved upwardly and then horizontally towards the rear of the garage when in an opened position.

One object of the invention is to provide a track having a vertical section and a horizontal section, the said sections being secured to a bracket which is mounted against a vertical beam at a side of the garage doorway and with which the track sections are so connected that they will be firmly held in place in operative relation to each other.

Another object of the invention is to provide a bracket having at its lower end a plate to which is secured a transversely extending tongue of the vertical track section, thus forming a socket to receive and engage projecting downwardly from the lower end of a downwardly curved end portion of the horizontal track section and thus cause the companion track sections to be securely held in registering engagement with each other and allow wheels or rollers of a door to move freely along the track from one section to the other.

Another object of the invention is to provide track sections having a slip-joint connection which allows the two track sections to be very easily mounted in end to end engagement with each other where they will be held without the use of bolts which would tend to prevent free movement of rollers of a door from moving freely along the track.

Another object of the invention is to provide a track having an upper horizontal section supported by an arm projecting from the upper end of a vertical standard or bar of the bracket and secured by a bolt which also serves as an axle for a pulley about which is trained a load-cable by means of which the door is shifted upwardly to a raised and horizontally extending opened position above the doorway of the garage.

Another object of the invention is to provide an improved track and supporting bracket which may be formed of angle metal and will be strong but of light weight.

The invention is illustrated in the accompanying drawings wherein:

Figure 1 is a perspective view showing the improved track and its supporting bracket mounted in position for use.

Figure 2 is a fragmentary view in elevation of the upper and lower track sections and the slip joint connection for holding the said track sections in end to end engagement with each other.

Figure 3 is a view similar to Figure 2 showing the upper track section out of engagement with the lower track section.

Figure 4 is a view looking from the right of Figure 2.

Figure 5 is a transverse sectional view taken along the line 5-5 of Figure 2.

The door 1 represents a garage door of the type formed of a suitable number of sections 2 which are connected with each other by hinges 3. Such a door is disposed vertically in closing relation to a garage doorway when closed and is shifted upwardly and inwardly to the rear of the garage to a horizontal position above the doorway when in the opened position. The usual rollers are provided at opposite sides of the door sections for engaging in tracks at opposite sides of the doorway and it is these tracks and their supporting brackets which constitute the subject matter of this invention. The tracks are of duplicate construction and, therefore, only the track and companion brackets at one side of the doorway has been shown in the accompanying drawings.

The improved track has a vertical section 4 and a companion horizontal section 5 which extends longitudinally in the garage above the top of the doorway and has its forward portion 5' curved downwardly and of such length that it will rest upon the lower section in end to end engagement therewith. The metal from which the track sections are formed are provided with marginal flanges, thus forming a channeled track along which rollers of the door sections may travel without slipping out of engagement with the track. The lower end of the vertical track section may be secured in any manner desired.

In order to support the upper end of the vertical track section and the forward portion of the horizontal track section and hold them in end to end engagement with each other there has been provided a bracket indicated in general by the numeral 6. This bracket has a standard 7 formed of angle metal and secured flat against a beam 8 at a side of the garage doorway by screws 9 which pass through slots 10 formed transversely of the standard so that the standard may be adjusted when installed and brackets at opposite sides of the doorway disposed perpendicular and parallel to the side edges of the door and also parallel to each other. The side flange 7' of the standard projects from the beam 8 inwardly of the garage and plates 11 and 12 are welded or otherwise firmly secured to side faces of its upper and lower end portions with portions projecting from the outer side edge of the flange. The plate 11 is of greater length than
the plate 12 and forms an upper arm for the bracket.

A tongue is cut from the upper portion of the vertical section transversely thereof and is bent so that it is offset outwardly from the track section and distance corresponding to the thickness from which the standard is formed. This tongue overlaps the portion of the lower plate which projects from the standard in overlapping relation to the track section and is welded otherwise firmly secured to the plate, thus forming a socket 13 which is open at upper and lower ends and forms a portion of a slip joint. A metal strip is firmly mounted against the lower end of the downwardly curved forward portion of the horizontal track section 5 and forms a tongue 14 which projects downwardly a sufficient distance to pass through the socket 13 when the horizontal track section is applied to the vertical track section and hold their mating ends in register thereby with each other.

A bar of angle metal 15 is welded to the horizontally extending upper track section and projects forwardly therefrom across the upper end of its downwardly curved portion 5'. This bar is of the same thickness as that used for the standard and the front end portion of its upstanding flange 15' disposed in overlapping engagement with the arm or plate 11 and in abutting engagement with the edge face of the upper end portion of the flange 1' of the standard. A bolt 16 is passed through the flange 15' and through the arm 11 and firmly secures the bar to the arm as well as serving as an axle for a pulley 17 about which is trained a load cable 18. This cable is connected to the door in the usual manner and after being trained about the pulley 17 is extended rearwardly of the bar 15 and then trained about a pulley 19 and brought forwardly and secured to the bar 15 by a bolt 20 or in any other desired manner. The yoke 21 in which the pulley 18 is rotatably mounted is connected with the front end of a spring 22 which exerts forward pull upon the yoke 21 and thus causes the door to be moved upwardly from its closed position when released and then rearwardly to its horizontally disposed opened position above the doorway. The bar 15 firmly braces the upper vertical section 3 against longitudinal movement and also secures the tongue 14 in a position shifting outwardly or a position disposed from its front end at rest upon the upper end of the vertical track section 4 and the tongue 14 serves to brace the lower end of the upper track section from transverse movement out of a position in which it rests upon the lower track section in register relation thereon.

From the foregoing description of the construction of my improved device, the operation thereof and the method of assembly will be readily understood, and it will be seen that I have provided a comparatively simple, inexpensive and efficient means for carrying out the various objects of the invention.

While I have particularly described the elements best adapted to perform the functions set forth, it is apparent that various changes in form, proportion and in the minor details of construction may be resorted to, without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described the invention, what is claimed is:

1. A garage door track comprising a vertical section, a horizontal section having a forward portion extending downwardly and at its lower end resting upon the upper end of the vertical section, a bracket having a portion adapted to be secured to a support and provided with an outstanding flange, a plate secured to said flange and projecting outwardly therefrom, said plate having its projecting portion disposed in overlapping engagement with the vertical track section, a tongue carried by the upper end portion of the vertical track section and extending transversely thereof and secured in overlapping engagement with said plate and together therewith defining a socket in said plate and in said socket to hold the abutting ends of the said track sections in alignment.

2. A garage door track comprising a vertical track section, a horizontal track section having a forward portion curving downwardly and at its lower end resting upon the upper end of the vertical track section, a bracket adapted to be secured to a support, the horizontal section having thereon a portion extending downwardly and at its lower end resting upon the upper end of the vertical section, a bracket having its projecting portion disposed in overlapping engagement with the vertical track section, a tongue carried by the upper end portion of the vertical track section and extending downwardly therefrom and engaged in said socket to hold the abutting ends of the said track sections in alignment.

3. A garage door track comprising a vertical track section, a horizontal track section having a forward portion curving downwardly and at its lower end resting upon the upper end of the vertical track section, a vertical bracket extending upwardly to engage in the horizontal section and adapted to be secured to a support, means permanently secured to the bracket and to the vertical track section for permanently securing the vertical track section to the bracket and overlapping the vertical track section and having a portion in spaced relation to the track section to form a socket therebetween open at its top, a strip carried by the lower end portion of the downwardly curved forward portion of the horizontal track section and projecting downwardly therefrom and engaged in said socket to hold the abutting ends of the track sections in alignment, a second bracket permanently secured to the horizontal track section and extending forwardly beyond the downwardly curving portion of the horizontal track section, and means for detachably securing together the upper end of the first bracket and the forward end of the second bracket.

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REFERENCES CITED

The following references are of record in the file of this patent:

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