

Nov. 16, 1965

J. V. WARMAN

3,218,068

EXERCISING BAR TO BE ATTACHABLY CONNECTED TO UPRIGHT STANDARDS

Filed July 31, 1962

3 Sheets-Sheet 1

Fig. 1

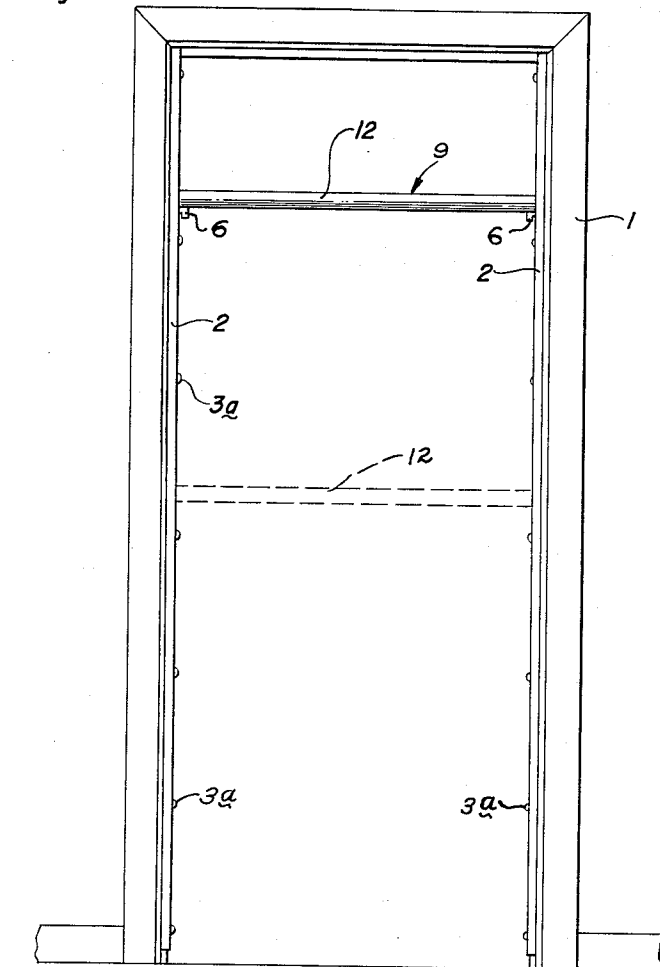


Fig. 2

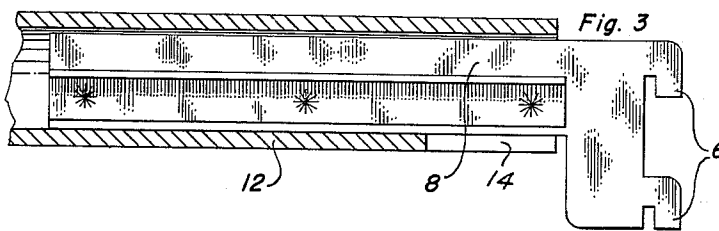
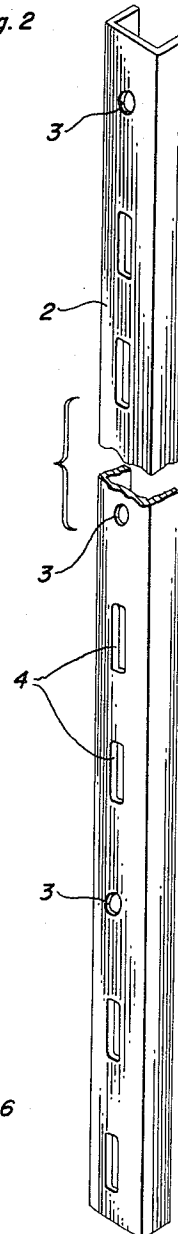
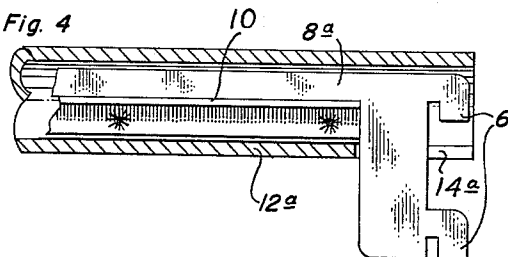


Fig. 4



James V. Warman
INVENTOR.

BY

Wayland D. Keith
His Agent

Nov. 16, 1965

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Fig. 6

Fig. 5

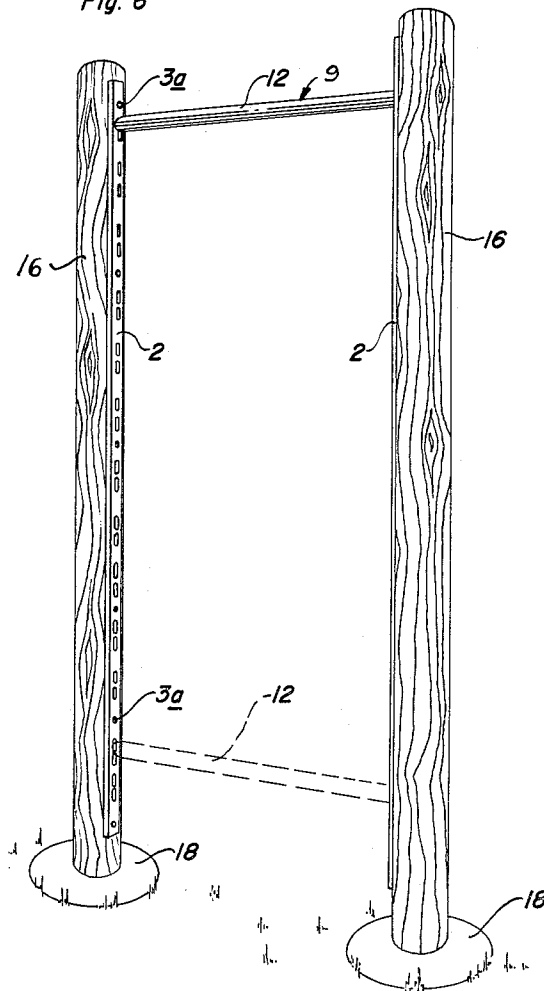
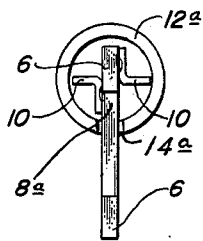
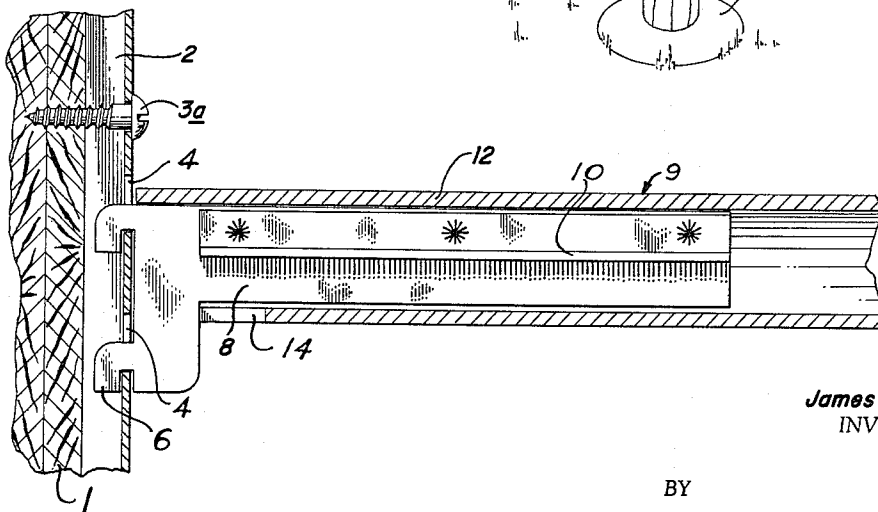


Fig. 7



James V. Warman
INVENTOR.

BY

Wayland D. Keith
His Agent

Nov. 16, 1965

J. V. WARMAN

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Fig. 8

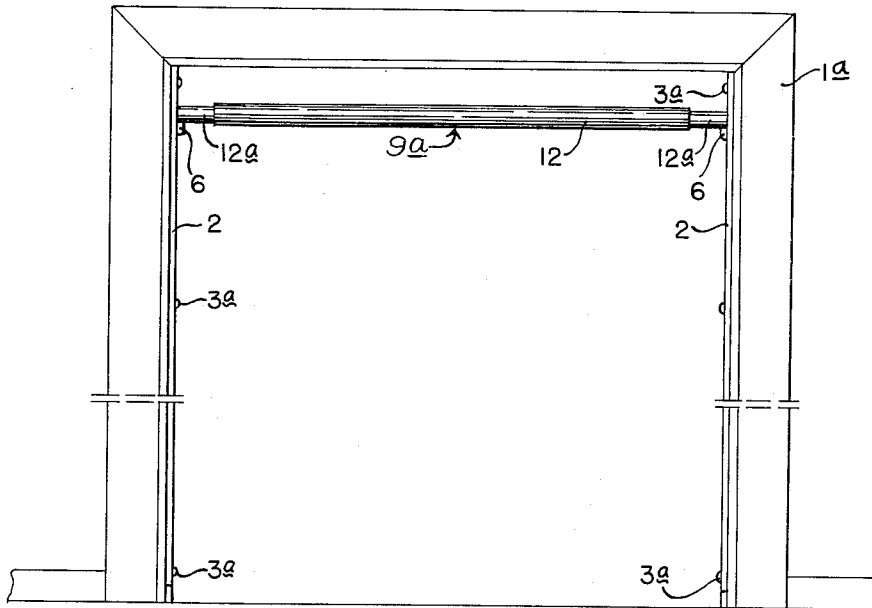
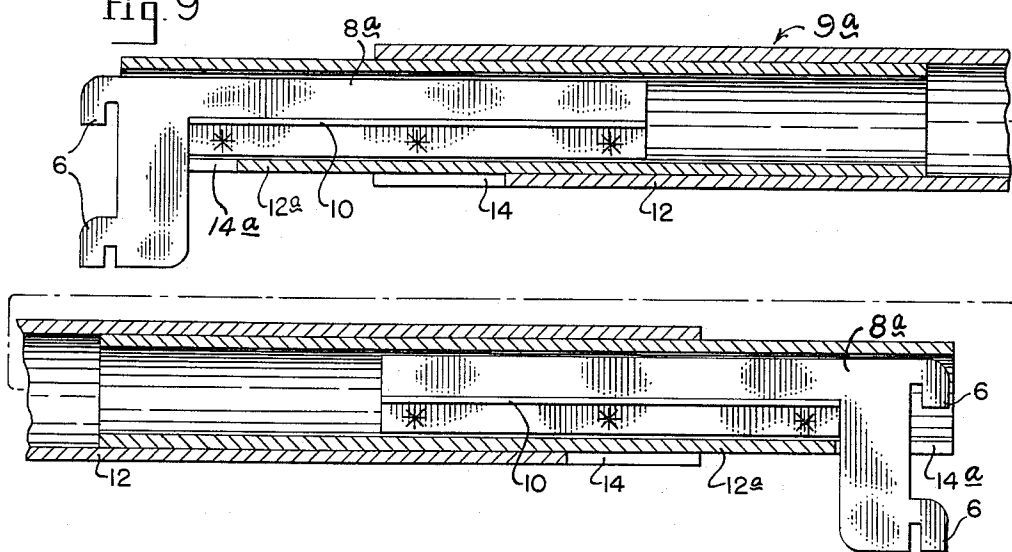


Fig. 9



JAMES V. WARMAN
INVENTOR.

BY

Wayland D. Keith
HIS AGENT

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3,218,068

EXERCISING BAR TO BE ATTACHABLY CONNECTED TO UPRIGHT STANDARDS

James V. Warman, Wichita Falls, Tex.

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3 Claims. (Cl. 272-62)

This invention relates to improvements in exercising bars, and more particularly to an exercising bar to be attachably connected to upright standards, which bars may be readily adjusted to the desired height and which may be removed when not in use.

Various exercising bars have been proposed heretofore, but these, for the most part, did not lend themselves readily adjustable to height and width between upright standards, nor were they readily removable without the necessity of using tools.

An object of this invention is to provide an attachable, adjustable horizontal exercising bar which may be readily attached between a pair of upright standards, whether indoors or out of doors, and which may be readily removed when the bar is not in use.

Another object of the invention is to provide a horizontal exercising bar and fittings therefor which may be installed in a doorway or between upright standards in such manner that the utility of the door is not impaired when the bar is not in use.

Another object of the invention is to provide a horizontal exercising bar which may be attachably connected to vertical support members, which exercising bar is neat in appearance, low in the cost of manufacture, and easy to install and remove.

With these objects in mind and others which will become manifest as the description proceeds, reference is to be had to the accompanying drawings in which like reference characters designate like parts in the several views thereof, in which:

FIG. 1 is an elevational view, in full outline, of a doorway showing the device installed therein and showing the device installed therein in an alternate position in dashed outline;

FIG. 2 is an enlarged perspective view of the apertured side rails for mounting horizontal bar, with parts being broken away and with parts shortened and shown in section to bring out the details of construction;

FIG. 3 is an enlarged fragmentary, elevational view of the exercising bar with parts broken away and with parts in section, and showing an attachment hook fitted therein with the hook in extended position;

FIG. 4 is a view similar to FIG. 3, but showing a smaller tubular member adapted to telescope into the larger tubular member, as shown in FIGS. 3 and 7, but with the attachment hook in telescoped condition;

FIG. 5 is an end elevational view of the exercising bar removed from the support standards and showing the attachment hook fitted therein;

FIG. 6 is a perspective view of the device installed on a pair of upstanding posts or support standards;

FIG. 7 is a fragmentary, longitudinal sectional view taken through an end portion of the exercising bar, and showing the hooks thereof engaged with an apertured side rail, with the side rail being mounted on an upright standard with parts thereof being shown in section;

FIG. 8 is an elevational view similar to FIG. 1, but showing a modified form of the invention, showing com-

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plementary tubular members in extended relation for wider doorways, and having parts broken away and parts shortened to bring out the details of construction; and

FIG. 9 is an enlarged fragmentary view partly in section and partly in elevation of the end portions of the device as shown in FIG. 8, with parts being broken away and with parts shortened to better show the construction, and showing one end portion in extended position ready for engagement with one of the apertured side rails.

With more detailed reference to the drawings, the numeral 1 designates a door frame having an upright, apertured, channel side rail 2 on each inner face thereof, so that the side rails will be substantially parallel. The apertured side rails 2 have holes 3 formed therein along the length thereof for attachment of the apertured side rails to the inner upright facings of door frame 1 as by screws 3a which screws form fastening means.

The side rails 2 each has pairs of spaced apart apertures 4 therein, as will best be seen in FIG. 2, to receive complementary hooks 6 on slidable support member 8. The slidable support member 8 and hooks 6 are formed from a plate as by stamping, and have substantial strength when maintained in edgewise relation to the application of the load. The hooks 6 pass through holes 3 in the respective side rails to engage the thickness of the metal of apertured side rails 2 so that the hook portion will substantially complementarily fit therein in secured relation, as will best be seen in FIG. 7.

The form of the invention as shown in FIGS. 1, 6 and 7 shows a support assembly designated generally at 9, with a tubular member 12 of a length slightly less than the width between the apertured side rails 2, either in a door frame 1 or between upright posts or standards 16. This form of the invention may be made to fit between uniformly standard door frames or accurately spaced apart upright standards or posts. The support members 8 are telescoped in sliding relation, one in each end of tubular member 12, so the tubular member 12 may be inserted between side rails 2 in close fitting relation, then the support members 8, having hooks 6 thereon may be moved outward to engage apertures 4 in the manner best shown in FIG. 7. The tubular member 12 will be slightly shorter than the spacing between side rails 2, however, it is not advisable to extend the support members 8 out from the ends of tubular member 12 and undue amount, as distortion of the unencased portions of the members 8 might occur.

Each member 8 has a pair of downturned hooks 6 formed on the outer extremity thereof, which hooks are of a size and shape to engage in a pair of complementary apertures 4 in upright standards 2. The notch of each hook 6 is of a width to snugly receive the thickness of the metal of upright standard 2, and the extending portion of each hook is approximately the thickness of the depth of the channel which forms the standard 2, which structure adds to the strength and stability of the device.

The inner end of each member 8 has a pair of opposed, laterally extending angles 10, spot welded or otherwise secured thereto longitudinally thereof, one on each side thereof, as will best be seen in FIG. 5. These angles slide into the tubular member 12 in such manner as to prevent twisting or turning of the members 8 within the tubular member 12.

The tubular member 12 has each end slotted, as indicated at 14, to slidably receive the hooks 6 within the

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length of tubular member 12 when the hooks are in one position, as will best be seen in FIG. 4.

It is preferable to have the apertured side rails 2 extend from the floor through substantially the full length of the door frame 1. In this manner the exercising bar 12 may be installed at any desired level to accommodate the particular exercise being taken, that is, it may be installed at or near the top of the door so a swing may be supported therefrom, or it may be installed intermediate the height of the door, as indicated in dashed outline in FIG. 1, so that a child may spin thereon, or it may be installed near the bottom thereof to support a see-saw or the like thereon.

The double hook arrangement 6, which engages complementary pairs of slotted apertures 4, prevents twisting movement of the support member 8 and holds the plate of support member in vertical alignment so as to withstand a relatively heavy load, as the support member extends into each end of tubular member 12 a substantial distance.

The apertured side rails 2 may be attached to upright posts or standards 16 by screws 3a to enable outdoor exercising. The posts may be inset in concrete 18, or the like within the ground, to maintain the posts in vertical position. By having the posts installed in this manner, it enables an adult to use the bar for chinning and for various other acrobatic exercise, or the tubular member 12 may be moved to the lowermost position, as indicated in dashed outline in FIG. 6, to accommodate a see-saw or the like for small children.

The form of the invention as shown in FIGS. 8 and 9 has a support assembly designated generally by the numeral 9a, which is adapted to extend between apertured side rails 2 on door frame 1a, however, the present form of the invention has a wider range of adaptability to openings of varying widths than the forms thereof shown in FIGS. 1 and 6. The tubular member 12 is adapted to receive a tubular member 12a, such as shown in FIGS. 4, 8 and 9, in each end thereof in complementary sliding relation so that the range of adjustability is greatly increased over the form of the invention as shown in FIGS. 1 and 6. Each tubular member 12a is of a length to extend into tubular member 12 a sufficient distance to insure strength and stability of support member 8a. The tubular members 12a each has the outer end thereof slotted, as indicated at 14a to receive a hook 6 in telescoping relation, so the hook member 6 will be within the confines of the outer ends of tubular members 12a in substantially the same manner as the hook 6 is received in tubular member 12, in the aforementioned form of the invention. Support members 8a are fitted within and extend into each small tubular member 12a in close fitting relation, and are braced against lateral distortion by lateral ribs of angle 10.

Having thus clearly shown and described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A horizontal bar exercising device for quick attachment between and detachment from a pair of upright standards, which device comprises:

- (a) channel members,
 - (1) the legs of each said channel member being in opposed, contact relation with the respective upright standards,
- (b) fastening means securing said channel members to the respective upright standards,
- (c) each said channel member having pairs of spaced apart, elongated, complementary apertures formed in the respective web portions thereof,
 - (1) said pairs of spaced apart apertures being in said respective web portions of said channels being at spaced intervals along the length thereof,
- (d) a horizontal tubular member substantially the length of the distance between the inwardly facing

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web portions of said channel members and extending therebetween,

- (1) said tubular member having a slot formed in each end thereof,
- (e) a sliding member telescoped into each end of said horizontal tubular member,
- (f) a pair of elongated hooks on the outer end of each said sliding member,
 - (1) which pairs of hooks complementally engage selected pairs of said elongated apertures in each said channel member,
 - (2) each pair of elongated hooks adapted to be received in said respective slots in the ends of said horizontal tubular member, when said hooks are in one position.
2. A horizontal bar exercising device for quick attachment between and detachment from a pair of upright standards, which device comprises:
 - (a) channel members,
 - (1) the legs of each said channel member being in opposed, contact relation with the respective upright standards,
 - (2) said channel members having spaced apart, elongated apertures formed therein along the length thereof,
 - (b) fastening means securing each said channel member to the respective upright standard,
 - (c) a horizontal tubular member extending between the inwardly facing web portions of said channel members,
 - (d) a sliding member telescoped into each end of said horizontal tubular member,
 - (1) each said sliding member having an elongated hook thereon,
 - (2) each hook being adapted to extend outwardly on an outer end of said sliding member,
 - (3) each hook being adapted to complementally engage a selected elongated aperture in each said channel member,
 - (e) each sliding member being a flat bar, and
 - (1) laterally extending ribs secured on a portion of the length of said flat bar so the extremities of the ribs will fit into close proximity with the interior of said tubular member to prevent twisting of said slidable members.
3. A horizontal bar exercising device for quick attachment between and detachment from a pair of upright standards, which device comprises:
 - (a) channel members,
 - (1) the legs of each said channel member being in contact relation with the respective upright standard,
 - (2) each said channel member being complementally apertured in the respective web portions thereof at spaced intervals along the length thereof,
 - (b) fastening means securing each said channel member to the respective upright standard in opposed relation,
 - (c) a first horizontal tubular member positioned between the inwardly facing web portions of said channel members,
 - (1) second horizontal tubular members, one fitted in each end of said first tubular member,
 - (2) each said horizontal tubular member having the outer end thereof slotted,
 - (d) a sliding member telescoped into the outer end of each of said second horizontal tubular members,
 - (e) the outer end of each said sliding member having an elongated hook thereon which extends outwardly therefrom,
 - (1) each hook adapted to complementally engage a selected aperture in the web portion of each said channel member,

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- (2) each hook adapted to complementally engage a slot in the end of said tubular member when in one position, and
- (f) said second tubular members having the respective outer ends thereof notched a distance equal to at least the outwardly extending portion of said elongated hook when the sliding member is telescoped into said tubular member.

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RICHARD C. PINKHAM, *Primary Examiner.*