

Aug. 29, 1961

R. J. HAFNER
CHILD'S GATE

2,998,063

Filed June 10, 1959

2 Sheets-Sheet 1

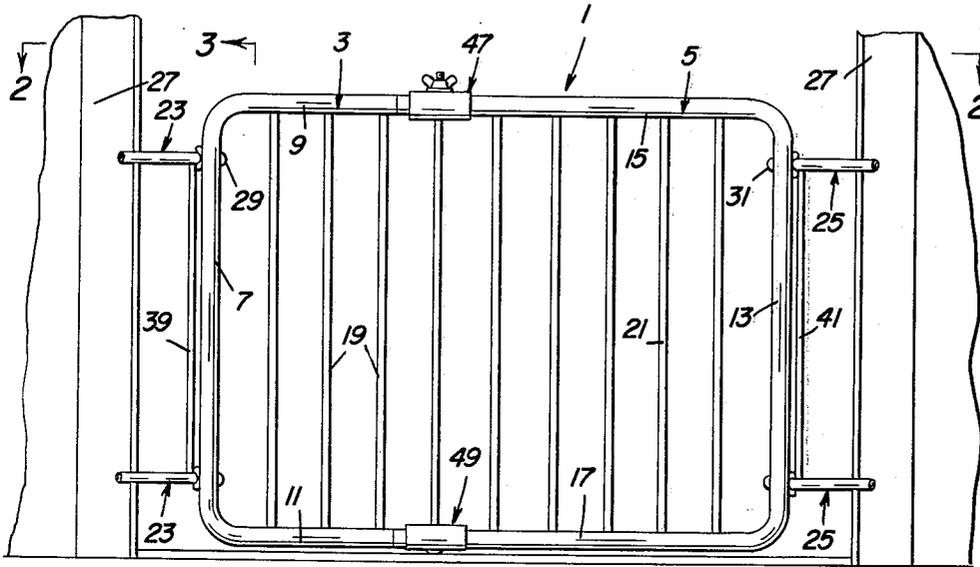


Fig. 1

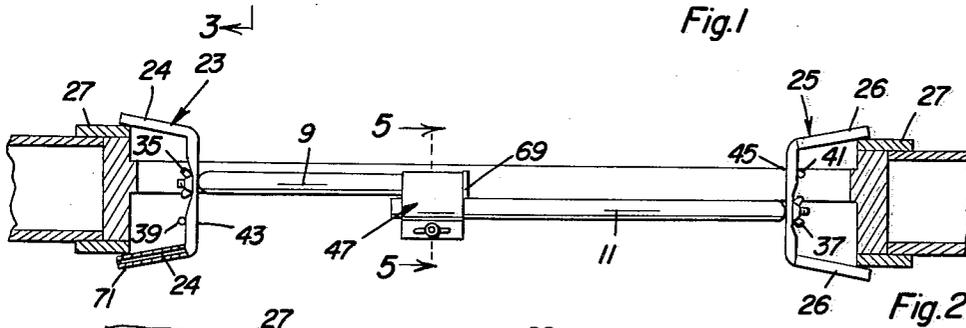


Fig. 2

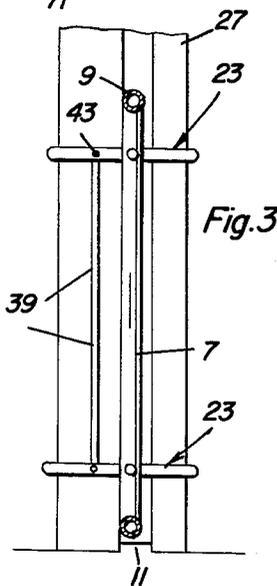


Fig. 3

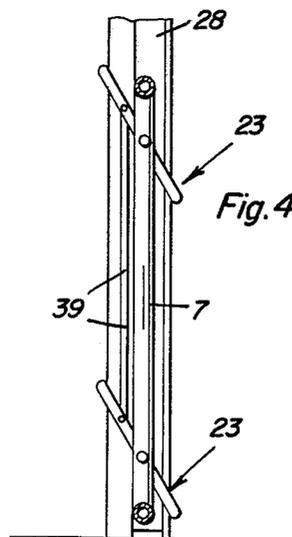


Fig. 4

Robert J. Hafner
INVENTOR.

BY *Clarence A. O'Brien*
and Harvey B. Jacobson
Attorneys

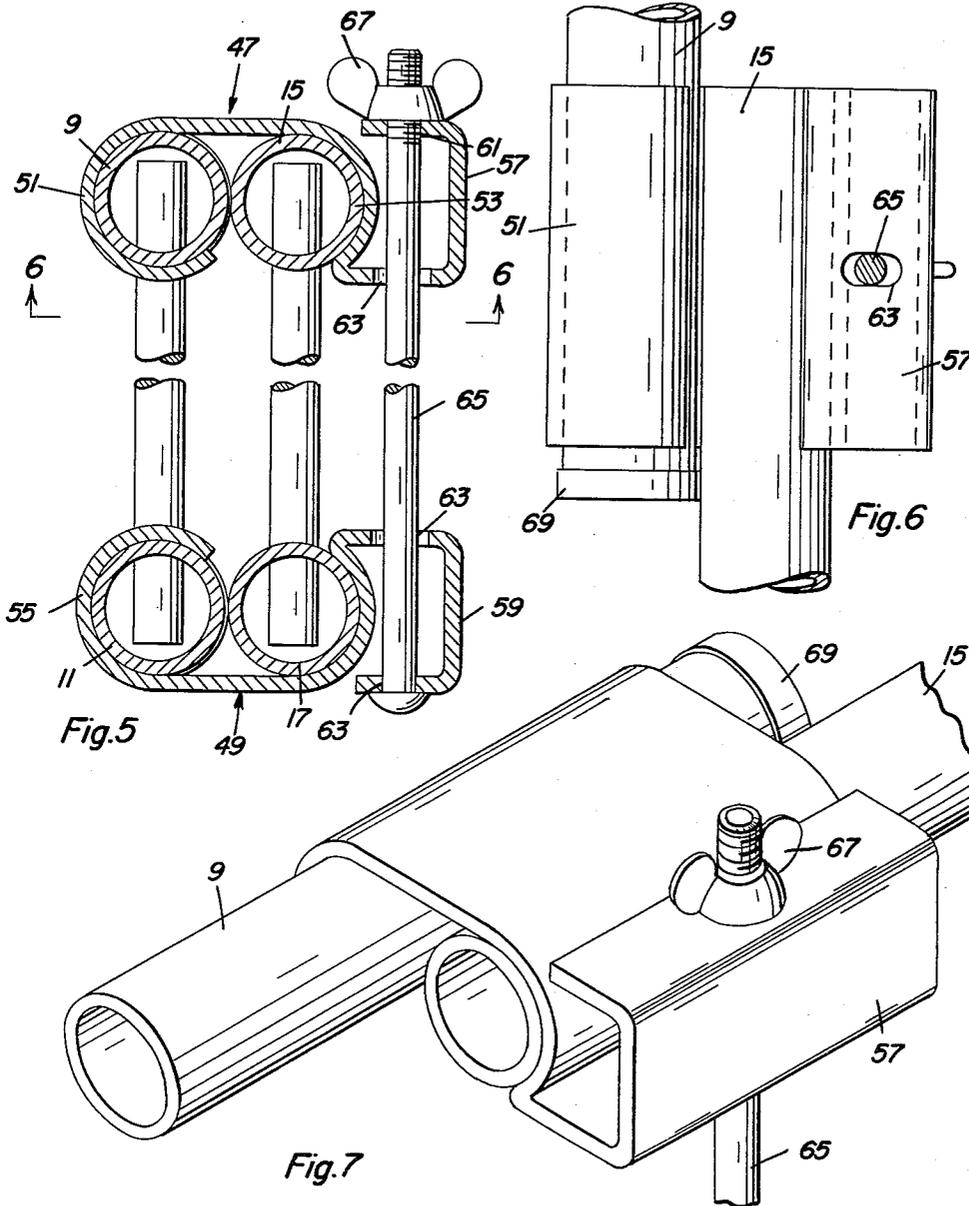
Aug. 29, 1961

R. J. HAFNER
CHILD'S GATE

2,998,063

Filed June 10, 1959

2 Sheets-Sheet 2



Robert J. Hafner
INVENTOR.

BY *Clarence A. O'Brien*
and Harvey E. Jacobson
Attorneys

1

2,998,063

CHILD'S GATE

Robert J. Hafner, 960 34th St., West Palm Beach, Fla.

Filed June 10, 1959, Ser. No. 819,269

5 Claims. (Cl. 160-216)

This invention relates to improvements in a gate for use in doorways of homes and the like to confine young children in a room.

The primary object of the invention is to provide a lightweight, strong gate readily portable from room to room and attachable to the sides of door frames in secure position without the use of screws or any other attaching means on the sides of the door frames.

Another object is to provide a gate according to the foregoing which is readily extensible for use in doorways of different widths and contractile for collapsing to store in a small space when not in use.

Still another object is to provide grip means on the ends of the gate adjustable from the top of the gate to straddle and grip the sides of door frames having sides of different widths, whereby to secure the gate in place to door frames of varying widths.

Still another object is to provide in a gate according to the foregoing gate sections of tubular material for lightness in weight and strength and clamp means especially adapted for slidably connecting said gate sections together so that the gate may be easily extended and contracted and the gate sections clamped together in extended or contracted positions of the gate.

Yet another object is to provide a gate according to the foregoing which is absolutely safe to use, will not mar the sides of door frames and is very inexpensive to manufacture.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a fragmentary view in side elevation of a gate according to this invention secured to the frame of a door way;

FIGURE 2 is a view in horizontal section taken on the line 2-2 of FIGURE 1;

FIGURE 3 is a view in vertical cross-section taken on the line 3-3 of FIGURE 1;

FIGURE 4 is a view similar to FIGURE 3 but showing the means on the ends of the gate for gripping a door frame positioned to grip a narrower door frame than that shown in FIGURES 1, 2 and 3;

FIGURE 5 is an enlarged view in vertical section taken on the line 5-5 of FIGURE 2 and partly broken away;

FIGURE 6 is a fragmentary view in horizontal section taken on the line 6-6 of FIGURE 5, and

FIGURE 7 is an enlarged fragmentary perspective view of a portion of the gate and clamp means.

Referring to the drawings by numerals, the gate of this invention and which is designated generally by the numeral 1 comprises a pair of substantially C-shaped side-by-side gate sections 3, 5 of tubular metal, such as aluminum, the section 3 being shorter than the section 5 for a purpose presently clear. The section 3 includes an upright outer end 7, top and bottom horizontal arms 9, 11, and the section 5 also includes an upright outer end 13 and top and bottom horizontal arms 15, 17. Upright hollow rods 19 connect the arms 9, 11 of the gate section 3, and similar rods 21 connect the arms 15, 17 of the gate section 5. The top arms 9, 15 and the bottom arms 11, 17 overlap. The rods 19, 21 are prefer-

2

ably formed of aluminum, and as will be seen the ends 7, 13 form the ends of the gate.

Pairs of upper and lower forked grips 23, 25 are provided at opposite ends of the gate 1 for straddling the sides 27 of a door frame and gripping said sides in response to extension of gate 1. The pairs of grips 23, 25 are substantially U-shaped, extend laterally outwardly from the ends 7, 9 of the gate sections 3, 5 with outwardly flaring side arms 24, 26 for straddling and wedging over the sides 27 of a door frame. The pairs of grips 23, 25 are pivoted to the outer ends 7, 9 of the gate sections 3, 5 by horizontal transverse bolts 29, 31 with tightening wing nuts 35, 37 thereon, whereby said grips 23, 25 are rotatably tiltable, as shown in FIGURE 4, into different angular positions to cause said pairs of grips 23, 25 to grip the sides 27 of door frames, said grips 23, 25 being tiltable about horizontal axes from a substantially level horizontal position, as shown in FIGURES 1 to 3 to grip door frame sides 27 which are narrower, as shown in FIGURE 4, than the door frame sides 27 shown in FIGURES 1 to 3. A pair of upright handle rods 39, 41 are pivotally connected as at 43, 45 to the pairs of grips 23, 25 respectively, so that each pair of grips 23, 25 is adjustable in unison from the top of the gate 1.

The clamp means for slidably connecting the gate sections 3, 5 comprises a pair of upper and lower strap metal clamps 47, 49 extending transversely over the top arms 9, 15 and under the bottom arms 11, 17 respectively. The clamp 47 is formed with hooked arcuate ends 51, 53 curving downwardly around the top arms 9, 15, whereas the clamp 49 is provided with similar hooked ends 55 curving upwardly around the bottom arms 11, 17 the arrangement being such that said arms are slidable in the clamps for extension and contraction of the gate 1 and the pair of clamps 47, 49 may be drawn toward each other to clampingly engage the arms 9, 15 and the arms 11, 17 to clamp the gate sections 3, 5 in adjusted position when the gate 1 is extended or contracted. The clamps 47, 49 are provided with substantially C-shaped flanges 57, 59 on corresponding ends thereof having vertically aligned apertures 61, 63 therein through which an upright bolt 65 extends with a tightening wing nut 67 on its upper end above the upper clamp 47, and whereby the pair of clamps 47, 49 can be drawn toward each other into clamping relation to the top arms 9, 15 and the bottom arms 11, 17 of the gate sections 3, 5. The pair of grips 23 may be tilted on the end 7 of the gate section 3 into substantially the plane of the gate section 3 so that said gate section 3 may be slid, together with said grips 23 behind the gate section 5 to completely contract or collapse the gate 1 for storage purposes or carrying.

Headed plugs, such as indicated at 69, may be driven into the ends of the arms 9, 11 to retain the clamps 47, 49 on the gate section 3, and the same means may be provided for retaining the clamps 47, 49 on the top and bottom arms 15, 17 of the gate section 5. As will be seen, the clamps 47 are interchangeable when inverted.

The use and operation of the gate 1 will be readily understood. The grips 23, 25 may be placed in straddling relation to the doorway sides 27 of wide types and wedged into gripping relation to such sides, for instance in horizontal level position, by extension of the gate 1 after which the sections 3, 5 may be clamped together by means of the clamps 47, 49 in a manner which will be clear. With door frames 28 of narrower widths the pairs of grips 23, 25 may be tilted by means of the rods 39, 41 for straddling gripping relation to such narrower door frame sides and the top wing nuts 35, 37, that is of the upper ones of the grips 23, 25 tightened to hold said grips in proper position. Preferably the sides 24, 26

and the grips 23, 25 are dipped in latex, as indicated at 71, to prevent such grips from marring door frame sides. As will be understood the sides 24, 26 may be formed of slightly resilient material for better gripping action. It is to be noted that the apertures 63 in the flanges 57, 59 are elongated to prevent the bolt 65 in said clamps from binding. Also it is to be noted particularly that tightening and loosening of the clamps 47, 49 and tilting and tightening or loosening of the grips 23, 25 may be accomplished at the top of the gate 1 so that no stooping is required in attaching or detaching the gate.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A portable gate for use in a doorway comprising a pair of similarly constructed complementary sections having upright outer ends, means slidably connecting said sections together for extension and contraction of the gate for use in doorways of different widths, pairs of upper and lower forked grips at opposite outer ends of the gate for straddling and gripping door frame sides to secure the gate to such sides, means pivotally mounting said grips on said ends for vertical tilting about horizontal axes to grip door frame sides of different widths, and a pair of upright handle rods pivoted to said pairs of grips, respectively, and linking the same for tilting the grips in each pair in unison and operative from the top of the gate, means for mounting said grips comprising bolts extending through median portions of said grips and ends and having tightening wing nuts thereon for retaining the grips in tilted position.

2. The combination of claim 1 and wherein the means slidably connecting said sections comprises top overlapping arms on said sections, bottom overlapping arms on said sections, upper and lower clamps slidably receiving said top and bottom arms respectively and movable toward each other to clampingly engage said top arms and clampingly engage said bottom arms, and means linking and connecting said clamps together and opera-

tive from the top of the gate to move the clamps toward each other.

3. The combination of claim 2, said means connecting said pair of clamps comprising an upright rod having end portions extending slidably through the respective clamps and having a tightening wing nut thereon at the top and cooperable with the upper clamp.

4. A readily applicable and removable barrier-type gate for use across a doorway opening comprising a horizontally extensible and contractible gate construction designed and adapted to span the opening and provided at at least one end with a vertical end member, means cooperable with said end member for securely but detachably connecting the same with an adjacent part of a door frame, said means comprising normally horizontal upper and lower U-shaped grips, each grip having outwardly diverging arms and a bight portion connecting the arms, the bight portion contacting said member, clamping and pivoting means securing the same in place, said grips being capable of movement to assume inclined positions, and a vertical rod interposed between the respective grips and having its upper and lower ends pivotally joined to the bight portions, said rod being disposed in general parallelism with the cooperating portion of the end member and serving not only to link the grips together but functioning as a handle for handling the grips.

5. The structure defined in claim 4 and wherein said gate comprises a pair of similarly constructed companion sections having overlapping top and bottom arms, an upper clamp slidably cooperable with the top arms, a lower clamp slidably cooperable with the bottom arms, said clamps having flanged portions projecting laterally beyond a central portion of the gate, and an upright rod having end portions extending slidably through the flanged portions and having an upper exposed screw-threaded end provided with a wing nut cooperable with the clamp.

References Cited in the file of this patent

UNITED STATES PATENTS

683,307	Linck	Sept. 24, 1901
2,490,612	Ballard	Dec. 6, 1949
2,581,857	Harrison	Jan. 8, 1952

FOREIGN PATENTS

124,042	Sweden	Feb. 15, 1949
---------	--------	---------------