Nov. 11, 1958 W. H. RUSCH 2,859,811

REMOVABLE GATE

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Fig. 1

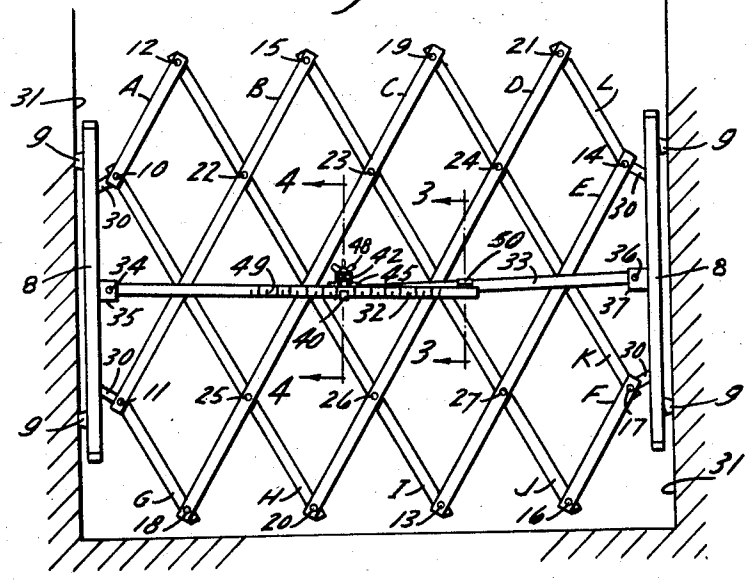



Fig. 2

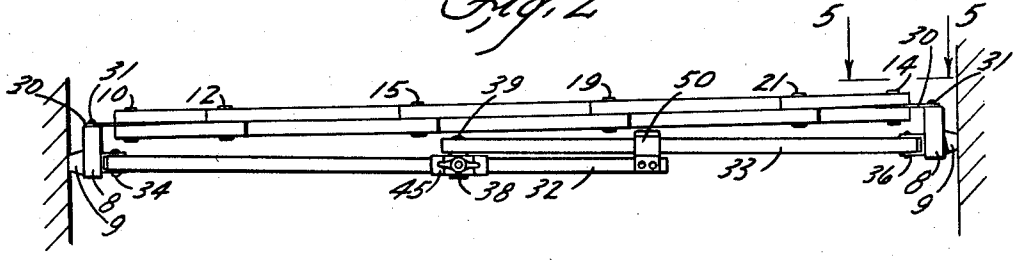



Fig. 4

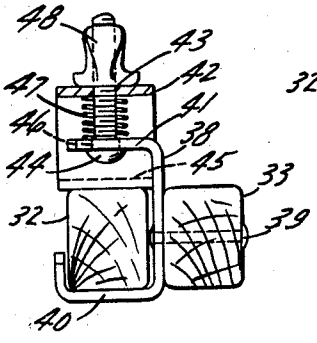



Fig. 3

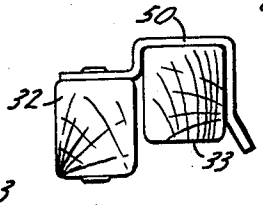
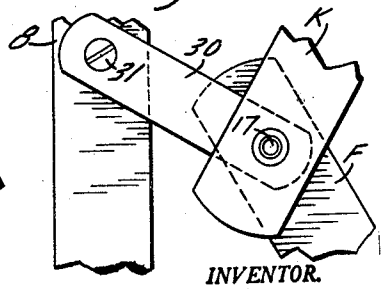



Fig. 5



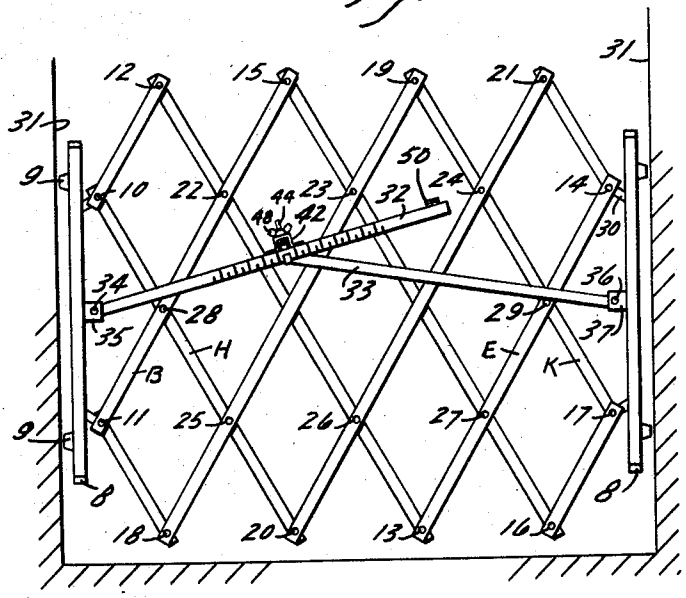

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Fig. 6



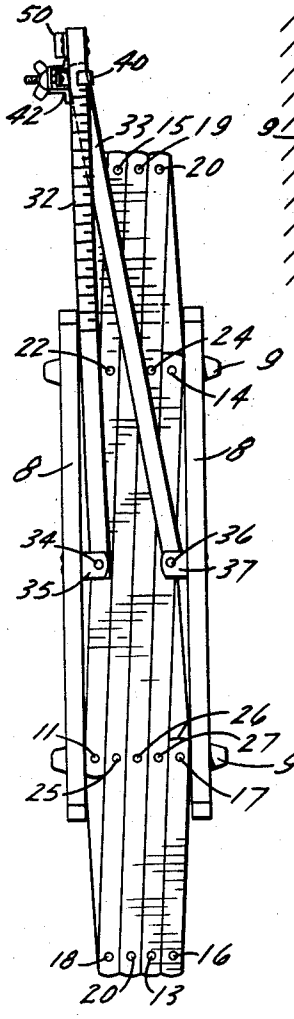




Fig. 7

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2,859,811

# REMOVABLE GATE

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Application August 10, 1956, Serial No. 603,265

1 Claim. (Cl. 160—136)

The invention relates to removable gates.

The object of the invention is to provide a removable gate which may be quickly installed between the jambs of a doorway or other opening or between posts at the head of a stairway either on the inside or outside of a dwelling to prevent babies, small children, or pets from getting out of a room or other enclosure.

Heretofore, gates of the type above described have for the most part been secured in position by screws or special features. A further object of this invention is to provide a collapsible gate structure that may be readily spread apart across the opening to be guarded with end members wedged in position by an adjustable toggle linkage locking means that may be preset to substantially the exact width of the opening so that proper fitting of the gate is assured. More particularly, one of the toggle members is pivotally connected to the other toggle member by a clamp mounted on said toggle member and adapted to be clamped at the desired point on the other toggle member to accommodate it to the door opening, a scale being provided on this other member for use in conjunction with the measurement of the door opening width to set the clamp in its operative position.

The invention further consists in the several features hereinafter set forth and more particularly defined by the claim at the conclusion hereof.

In the drawings:

Fig. 1 is a front elevation view of a gate embodying the invention;

Fig. 2 is a plan view of the gate;

Fig. 3 is a detailed vertical sectional view taken on the line 3—3 of Fig. 1;

Fig. 4 is a detailed vertical sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a detailed elevation view of certain of the parts;

Fig. 6 is a view similar to Fig. 1 showing the gate in released position;

Fig. 7 is an elevation view of the gate collapsed for shipment.

Referring to the drawings, the gate comprises a pair of end members 8, each having spaced pads 9 of rubber or other suitable yieldable and non-marring material and an expandable and contractable or foldable barrier carried by and between said members. As shown, the barrier is of the lazy tong type comprising sets of wooden bars or slats A, B, C, D, E, and F, operatively connected to similar bars or slats G, H, I, J, K, and L. The bars A and H are pivotally connected together at one of their ends by a pin 10. The bars B and G are pivotally connected together at one of their ends by a pin 11. The bar A is pivotally connected at its other end by a pin 12 to one end of the bar I whose other end is pivotally connected by a pin 13 to one end of the bar E whose other end is pivotally connected by a pin 14 to one end of the bar L. The bar B is pivotally connected at its other end by a pin 15 to one end of the bar J whose other end is



pivotally connected by a pin 16 to one end of the bar F whose other end is pivotally connected by a pin 17 to one end of the bar K. The bar G is pivotally connected at its other end by a pin 18 to one end of the bar C whose other end is pivotally connected by a pin 19 to the other end of the bar K. The other end of bar H is pivotally connected by a pin 20 to one end of the bar D whose other end is pivotally connected by a pin 21 to the other end of the bar L. The bars B and I, the bars C and J, and the bars K and D are respectively pivotally connected together intermediate their ends by pins 22, 23, and 24. The bars H and C, the bars I and D, and the bars J and E are respectively pivotally connected together intermediate their ends by pins 25, 26, and 27. The bars B and H and the bars K and E may also be respectively pivotally connected together by pins 28 and 29, see Fig. 6.

Each of the pins 10, 11, 14, and 17 are respectively mounted in the outer end of a metal link 30. The other end of each link 30 is pivotally connected by a screw 31 to a side of one of the end members 8.

With the above arrangement when the end members 8 are moved apart, the barrier members will move with them and relative to each other to different angular positions blocking the space between said members as shown in Fig. 1, or they may be moved toward each other as shown in Fig. 6 or may be moved further to the fully collapsed or folded position of the structure as shown in Fig. 7.

The pads 9 are adapted to be held in tight abutting engagement with the sides 31 of the opening to be blocked by an adjustable toggle linkage comprising a pair of link members or wooden bars 32 and 33. The bar 32 is pivotally connected at one end by a pin 34 to spaced arms of a metal hinge member 35 riveted or otherwise suitably secured to the inner side of one of the end members 8. The bar 33 is pivotally connected at one end by a pin 36 to spaced arms of a metal hinge member 37 riveted or otherwise suitably secured to the inner side of the other end member 8. The hinges 35 and 37 are disposed in the plane of the sets of pads 9. The other ends of the bars 32 and 33 are adjustably pivotally connected together by a clamping means pivotally carried by one of them and adapted to be held in clamping engagement with the other.

Referring to Figs. 1 and 4, the clamping means includes a metal base member 38 pivotally mounted intermediate its ends by a pin 39 against the inner side of the bar 33 adjacent its outer end. Member 38 has a stirrupped or hooked end 40 to engage and slidably fit over the under side of the bar 32 and an angled end 41 disposed above both bars and projecting over the bar 32. A U-shaped clamping head or jaw member 42, having a hole 43 in its transverse portion through which the shank of a clamping bolt 44 extends loosely, has legs provided with angled feet 45 to engage the top of the bar 32 and clamp the same between it and the hooked end 40. The sides of the legs of member 42 straddle the angled end 41. The clamping bolt 44 of the carriage type has a squared head portion loosely mounted in a square hole 46 in the angled end 41 though it is restrained against rotation relative thereto. A spring 47 is interposed between the angled end 41 and the head 42 and holds the bolt 44 in assembled relation with its anchoring member and the head 42 against an adjusting nut or wing nut 48 that is adjustably mounted on the threaded shank of the bolt 44.

The bar 32 is provided with a ruler or linear scale 49 graduated in inches and sixteenths of an inch so that the bars may be slid along relative to each other to bring the clamp to the desired scale designation. This is de-

termined before hand by measuring the width between uprights, such as door jambs, of the opening to be closed off by the gate. With this distance determined and the clamp set according to the scale designation corresponding to this width, the screw 48 is tightened up to bring the head 42 and the hook 40 into clamping engagement with the toggle bar 32. The gate is then placed in position in the opening to be closed with the end members 8 alined with the sides of the opening they are to engage. The toggle, then in a broken or folded condition, is then straightened out by pressing downwardly on the outer ends of the bars 32 and 33 so that they move from the released position shown in Fig. 6 to the clamped position shown in Fig. 1. As they straighten out, a hook 50 anchored to the outer end of the bar 32 engages over an intermediate portion of the bar 33 and limits further movement of the bars relative to each other. Under these conditions, the bars 32 and 33 are exerting an outward pressure on the end members 8 that acts to compress somewhat the pads 9 against the sides of the opening and thereby tightly holds the gate in its blocking position. Upward movement of the inner ends of the toggle bars 32 and 33 breaks them, that is, it causes them to swing upwardly relative to the end members 8 and releases these members from the sides of the opening.

For shipping purposes, the bars of the barrier are folded into abutting relation with each other, the bar 32 is swung up alongside of its carrying end member, and the clamp on the other bar 33 is slid up along the bar 32 to its hooked end as shown in Fig. 7.



I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claim.

What I claim as my invention is:

In a removable gate, the combination of a pair of end members having parts engageable with the sides of an opening to be closed, an expandible and contractible barrier carried by and extending between said members and a lengthwise adjustable toggle linkage means comprising a link pivotally carried by one of said end members, a link pivotally carried by the other of said end members and a clamping means including a base member freely pivotally connected intermediate its ends to one of said links and having a hooked lower end to receive and engage the lower side of the other link and having an angled upper end, a threaded clamping bolt mounted in said angled end, a clamping head mounted on said bolt and engageable with the upper side of said link, and a nut mounted on said bolt and engageable with said head to clamp the hook engaged link between said hooked end and said head independently of said pivoted connection of said base member.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| | | |
|---|---|---|
| 675,399 | McCormack | June 4, 1901 |
| 1,660,236 | Rush | Feb. 21, 1928 |
| 2,448,574 | Bothe | Sept. 7, 1948 |