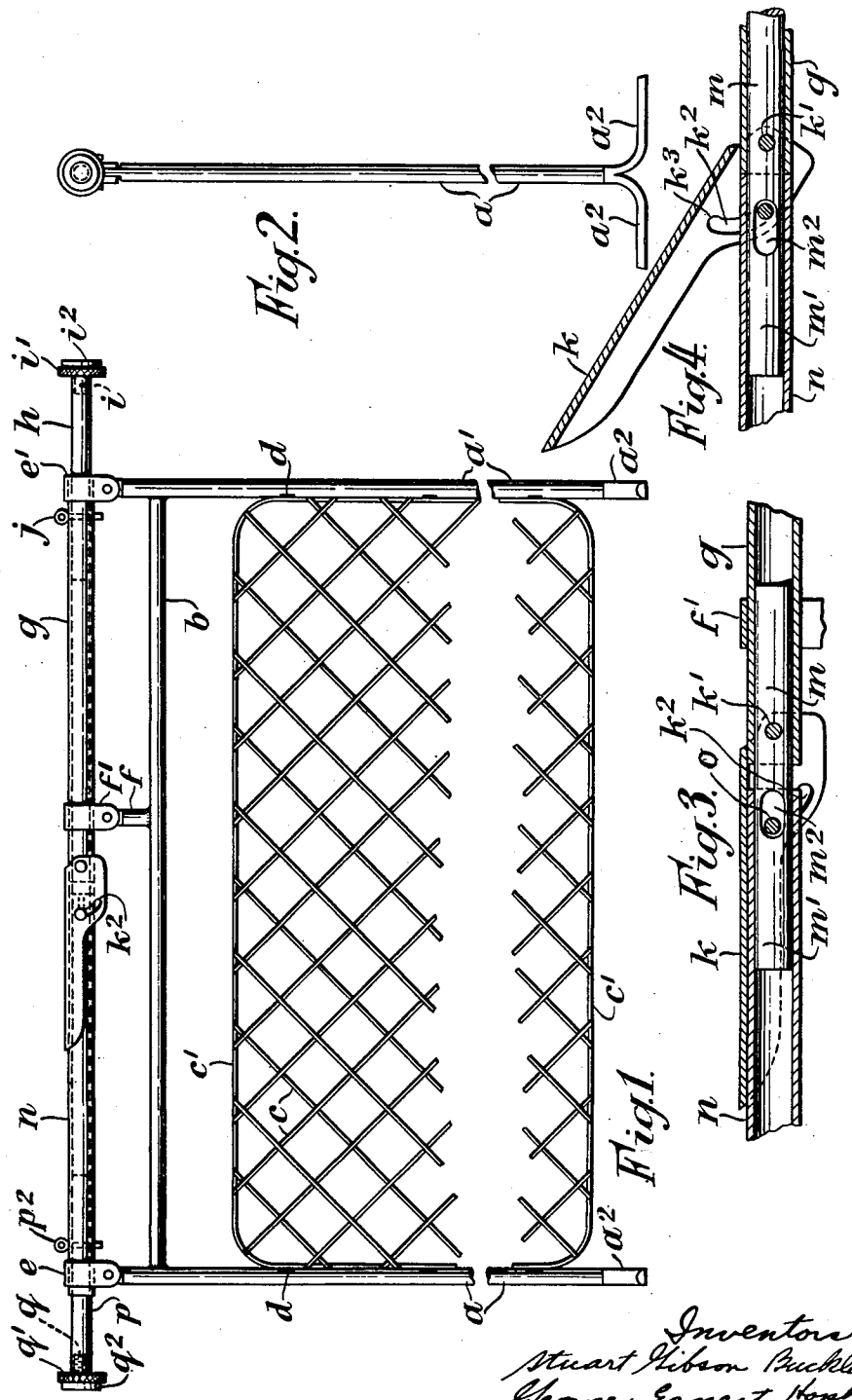
April 29, 1952 S. G. BUCKLAND ET AL 2,594,864

GATE OR THE LIKE

Filed July 19, 1949 2 SHEETS—SHEET 1



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GATE OR THE LIKE

Filed July 19, 1949 2 SHEETS—SHEET 2

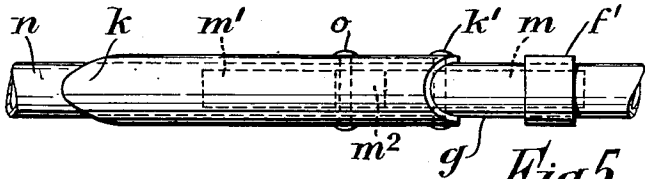
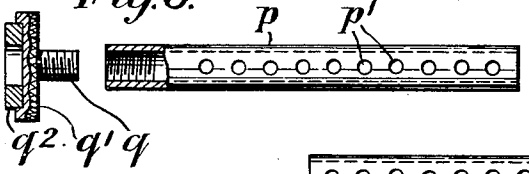


Fig.5.

Fig.6.



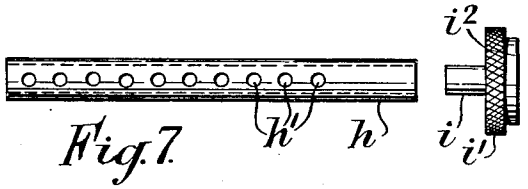


Fig.7.

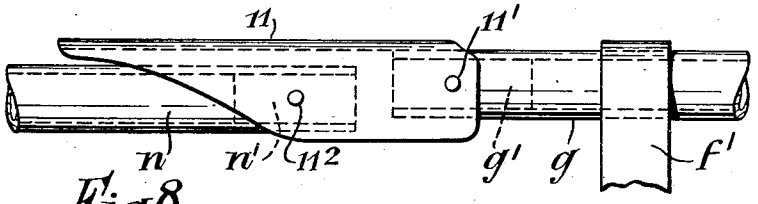


Fig.8.

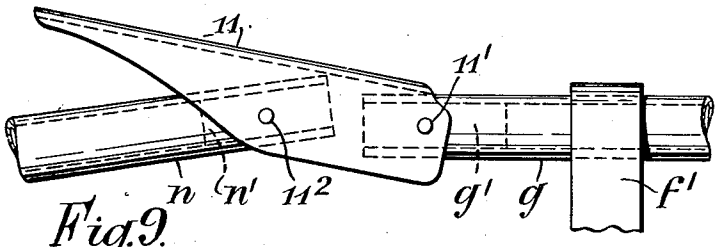
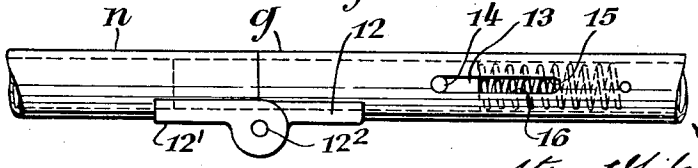


Fig.9.

Fig.10.



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GATE OR THE LIKE

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8 Claims. (Cl. 160—351)

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This invention relates to gates, or like closures such as a barrier suitable for fixing at the top or bottom of a stairway as a safety device for the prevention of accidents to young children, or in a doorway as a temporary or partial closure for a similar purpose.

One of the problems with gates or like closures hereinafter referred to generically as "gates" for such purpose is that of fixing or mounting the same, which at present entails permanent fixture at one side, for example to the wall or bannister post and at the other side the fixing of a post for the gate to close against. This means that such gates cannot easily be fixed by the householder and moreover entail some disfigurement or damage to the structure of the house. Also, such gate becomes a fixture and cannot readily be moved from one position to another.

The object of the present invention is a simple and improved construction of gate suitable for the aforesaid purpose and which can readily be set up by the householder and does not necessarily entail permanent fixing with resultant disfigurement or damage to the house structure.

According to the invention the improved gate or like closure is characterised by an upper member having quickly releasable means for fixing it in position by exerting end pressure against suitable abutments, such as against a wall at one side and the bannister post at the other side, or between the sides of a doorway.

In a preferred embodiment of the invention a gate or like closure comprises a frame including uprights at each side and releasable fixing means for securing the frame in position by exerting end pressure against suitable abutments comprising a laterally projecting abutment-engaging member adjacent each said upright, one at least of which abutment-engaging members is movable laterally relative to its adjacent upright and means for forcibly moving said movable abutment-engaging member in a direction away from the other abutment-engaging member and for securing it in such moved position to fasten the gate, and for withdrawing such movable abutment-engaging member for releasing the gate.

In the accompanying drawings:

Fig. 1 is a front elevation of one example of a "gate" made in accordance with the present invention.

Fig. 2 is an end elevation.

Figs. 3, 4 and 5 are detail views of the locking handle.

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Figs. 6 and 7 are detail views of other parts of the construction shown in Fig. 1.

Figs. 8 and 9 show an alternative construction.

Fig. 10 shows a further modified construction.

In the example of the invention shown in Figs. 1 to 7, the "gate" comprises a main frame consisting of two upright tubular members *a*, *a'* rigidly joined near their upper ends by a horizontal tubular member *b*, also about 26 inches long. At their lower ends the upright members are provided with feet a^2 giving a base spread about 3 inches on each side of the plane of the main members. The length of the upright members, including the feet is such that the horizontal member *b* is about 24 inches above the ground. Between the upright members is a wire mesh unit *c* having a surrounding wire border *c'* and diagonal wiring, such wire mesh unit being attached at intervals, by soldering *d*, to the uprights.

At the upper end of each upright is secured a ring-like socket *e*, *e'* respectively while attached to the horizontal member and slightly off-centre thereof, is a short upright *f* having at its upper end a third ring-like socket *f'*, all three sockets being coaxially in line. Permanently secured in the two sockets *c'* and *f'* which are closest to each other is a tube *g*. Slidably mounted in the outer end of the tube *g* is a shorter second tube *h* in the outer end of which is permanently secured the stem *i* of a disc-like cup *i'* carrying a rubber pad i^2. In the inner tube *h* are a series of through holes *h'* while in the outer tube near the end socket is a through hole for an eye pin *j* whereby the inner tube *h* may be secured in alternative positions according to the overhang required for the pad i^2 beyond the upright member *a'*. The inner end of the outer tube terminates approximately halfway between the end sockets *e*, *e'*, i. e. about the centre of the device and pivotally attached thereto is a pressed metal lever *k* of U cross section, while fixed in the end of the outer tube is a short rod *m*, secured in position by a pin *k'* which also forms the pivot for the lever. Slidably mounted on the projecting end *m'* of such rod and in the other socket is a second outer tube *n*, its endwise movement being effected and limited by a cross pin *o* in the inner end of the tube *n* and passing through a slot m^2 in the rod, the ends of such pin extending beyond the wall of the tube to engage arcuate cam slots k^2 in the lever. At its outer end, the tube *n* is pro-

vided with an inner tube p which is screw threaded to receive the threaded stem q of a disc-like cup q' with rubber pad q^2 similar to that at the outer end of the fixed tube. The inner tube p is adjustably located in the outer tube n by holes p' and eye pin p^2 in the same manner as above described for the fixed tube g. The cam-shaped slot is so shaped that, when the lever is raised as shown in Fig. 4, the sliding outer tube n is drawn towards the centre of the gate and so that as the lever is depressed as shown in Fig. 3 to lie along the sliding tube n such tube will be moved outwardly about $\frac{3}{8}$ inch. The ends of the cam-shaped grooves k^2 are formed with a slight notch k^3 (see Fig. 4) which engages the pin o and thus provides initial resistance to raising of the lever.

In use, the gate is placed for example in position in a doorway with lever k raised and the pads i^2, q^2 adjusted outwardly by withdrawing either or both of the eye pins j and p^2, drawing out the inner tubes and then re-inserting the pins in appropriate holes. This adjustment should as far as possible be effected equally at each side so that the frame will be more or less centralised, and so that the two pads are almost touching the adjacent jambs of the door frame. By depressing the lever k the outward movement of the slidable outer tube n causes both rubber pads i^2, q^2 to be pressed firmly against the jambs of the door thus securely locating the gate at its upper end. The feet a^2 at the lower ends of the upright, as they are resting on the ground, prevent such lower ends from swinging and consequently the device forms an effective barrier which may be used to prevent a small child from going through the doorway while the door may be left open so that a watch can be kept on the child, which also will not have the same feeling of being shut in as it would if the door were closed.

In a modification shown in Figs. 8 and 9, instead of the cam-slotted lever of the example above described, the lever 11 is constructed as a toggle link between the inner end of the fixed outer tube and the inner end of the sliding outer tube, leaving out the rod previously described as fixed in the inner end of the fixed outer tube for the location of the inner end of the sliding outer tube. The inner ends of the tubes may however be reinforced by the insertion of plugs g' and n' to strengthen the same for the pivots $11'$ and 11^2. The movement of the lever will be limited by the engagement of the inner end n' of the tube within the lever, as shown in Fig. 9. In such construction the sliding outer tube n will have a slight tilting as well as a sliding movement at the bracket e as the lever is raised and lowered. Such tilting movement being only small is easily permitted by the socket of the upright member and is in such direction that the lowering of the lever to secure the barrier will result in a downward pressure at the upright a, pressing the same against the floor and thus helping to secure it against the natural efforts of a child to pull or push the lower part of the barrier.

Obviously, other constructional modifications may be made without departing from the nature of the invention. For example as shown in Fig. 10 the ends of the tubes g and n may be connected by complementary hinge portions 12, 12' attached to the ends of the tubes with the hinge at one side and the hinge pin 12^2 in line with their ends. The ends of the tubes abut when the tubes are in line so as to relieve the hinge of stress due to end pressure. Within the tube g is a sliding bolt 13 having an operating knob 14 located in a slot

15. Behind the bolt is a compression spring 16. The outer end of the bolt is adapted normally to project as shown into the end of the tube n to hold the two tubes locked in alignment.

Instead of being completely removable from one site to another on release, the gate may be attachable to a bannister post at one side by a suitable hinge and suction pad or other construction so that it will open and close like a hinged gate when not locked in position.

What we claim is:

1. A gate comprising a rigid non-extensible obstructing framework, ground engaging members projecting laterally from the base of said framework and adapted to contact the ground on either side of the framework and strut-like pressure-exerting fixing means expandible in the plane of the framework mounted at the top of the said framework and adapted to be expanded to locate the top of said gate by exerting pressure on spaced abutments, said ground engaging members preventing rotation of said framework about said fixing means.

2. A gate comprising a rigid outer main frame, a wire mesh member carried by said main frame, laterally extending ground engaging feet supporting said main frame and contacting the ground on either side of the main frame, fixing means expandible in the plane of the frame mounted at the top of said frame and adapted to be expanded to locate the top of said gate by exerting pressure on spaced abutments, said laterally extending feet being adapted to prevent rotation of the gate about the fixing means when in position and to support the gate in an upright position when out of use.

3. A gate comprising a wire mesh structure, an outer rigid main frame supporting said wire mesh structure, said main frame comprising upright members having laterally extending feet and at least one horizontal member joining said vertical members, one fixed abutment-engaging member mounted at the top of one of said uprights and supported from a horizontal member, a second sliding abutment-engaging member mounted on the top of a second upright member and coupled to the fixed abutment-engaging member and manually operable cam means for positively moving said sliding member towards and away from said fixed member to provide a means for locating the top of said gate between spaced abutments, the feet of the frame preventing rotation of the framework about said abutment-engaging members.

4. A gate comprising a wire mesh structure, an outer rigid main frame supporting said wire mesh structure, said main frame consisting of upright members and at least one horizontal member, laterally extending, ground engaging feet contacting the ground on either side of the main frame supporting said main frame, and a linearly expandible pressure-exerting fixing means mounted at the top of said framework to engage against and exert pressure on spaced abutments when expanded.

5. A gate comprising a rigid obstructing framework, laterally extending, ground engaging members at the base of said framework adapted to contact the ground on either side thereof, a linearly expandible fixing means at the top of said framework for engaging spaced abutments, said fixing means comprising two equal diameter tubular members linearly disposed to one another, a guide rod entering the adjacent ends of such tubular members, a fixed pin in one of said

tubular members and a lever, formed with a cam groove to engage said pin, pivotally attached to the other member to provide longitudinal movement of said tubular members relative to one another.

6. A gate comprising a rigid obstructing framework, laterally extending, ground engaging feet at the base of said framework adapted to contact the ground on either side thereof, a stationary tube supported in clips attached to at least two members projecting upwardly from said framework, a second tube of equal diameter slidably supported in line with said first tube in a clip attached to an upward projection from said framework, a guide member entering the adjacent ends of said tubes, a stationary pin in the slidable tube, a lever, formed with a cam groove, pivotally mounted on the stationary tube, said stationary pin being engaged in said groove to provide longitudinal movement of said sliding tube.

7. A gate comprising a wire mesh obstructing member, a rigid frame supporting said wire mesh consisting of vertical members and at least one horizontal member above said wire mesh, laterally extending feet at the base of said frame, a stationary tubular member supported near one end by one of said vertical members and near its other end by a member extending upwardly from said horizontal member, a second tubular member slidably mounted at the top of a second vertical member and in line with said stationary tubular member, a guide member entering the adjacent ends of said tubular member, a fixed pin in said sliding member and a lever formed

with a cam groove pivotally attached to said stationary member, said pin being engaged in said cam groove, whereby the said tubular members may be moved towards and away from each other.

8. A gate comprising a rigid obstructing framework, ground engaging members projecting laterally from the base of said framework and adapted to contact the ground on either side thereof, snap-action strut-like laterally rigid pressure-exerting fixing means expansible in the plane of the framework mounted at the top of said framework, said fixing means being expansible to locate the top of said gate by exerting pressure on spaced abutments and said ground engaging members preventing rotation of said framework about said fixing means.

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GEORGE ERNEST HOPKINS.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
116,960	Howard	July 11, 1871
446,480	Stebbins	Feb. 17, 1891
527,273	Fowler	Oct. 9, 1894
533,152	Wheat	Jan. 29, 1895
1,668,140	Buchheit	May 1, 1928
1,763,034	Bunker	June 10, 1930
1,943,768	Melaas	Jan. 16, 1934
1,962,569	Miller	June 12, 1934
2,490,612	Ballard	Dec. 6, 1949