United States Patent

Pedley

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[54] SAFETY RAILS AND THE LIKE

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[30] **Foreign Application Priority Data**

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[52] **U.S. Cl.** ..... **160/216**, 160/223, 160/225, 287/58 R

[51] **Int. Cl.** **E06b 9/02**

[58] **Field of Search** ..... 160/217, 216, 215, 218, 219, 160/220, 223, 224, 214, 225–228; 211/105.3; 287/58 R; 292/247

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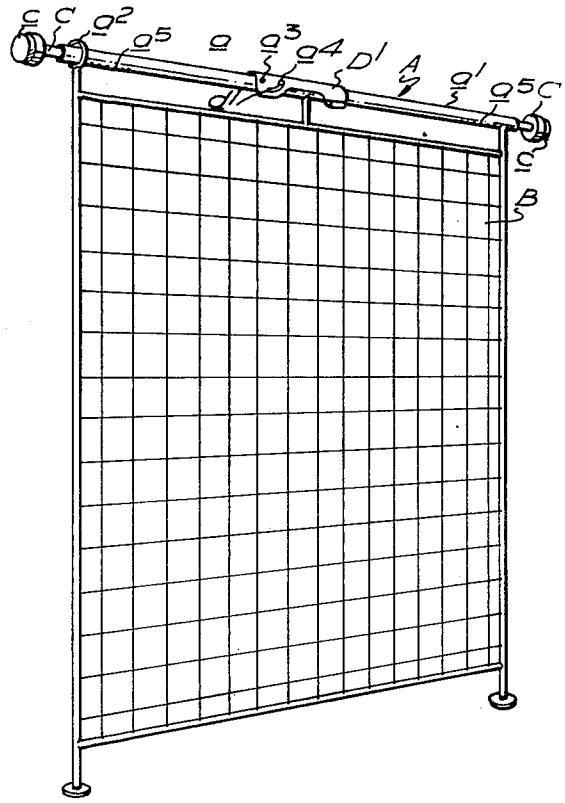
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Primary Examiner—Dennis L. Taylor
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[57] **ABSTRACT**

A safety rail, guard or barrier held in position between two parallel supports by two in-line tubular members connected together by a tube affixed by a pin to the stationary member of the pair, the pin moving in an arcuate slot in a handle pivoted by a pin to the movable member and moving in a slot in the tube on operation of the handle to expand or retract the members.

3 Claims, 4 Drawing Figures



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SHEET 1 OF 2

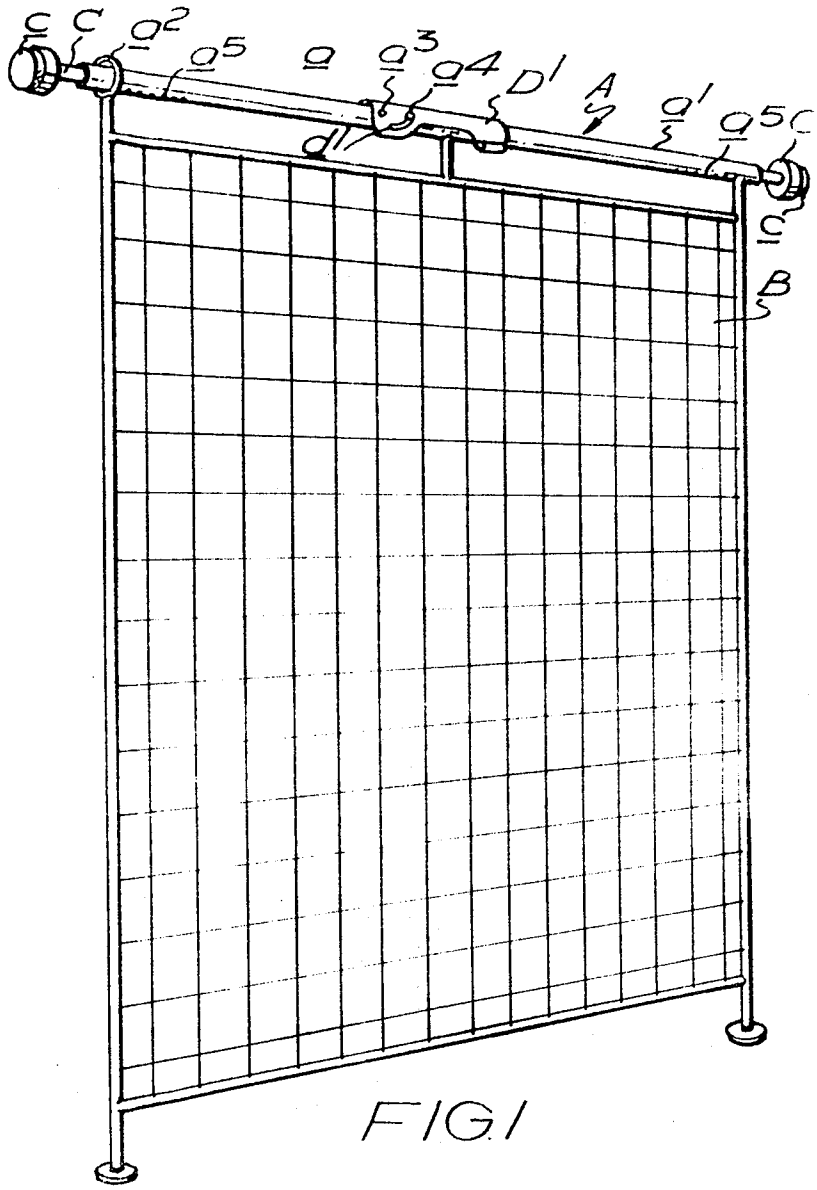


FIG 1

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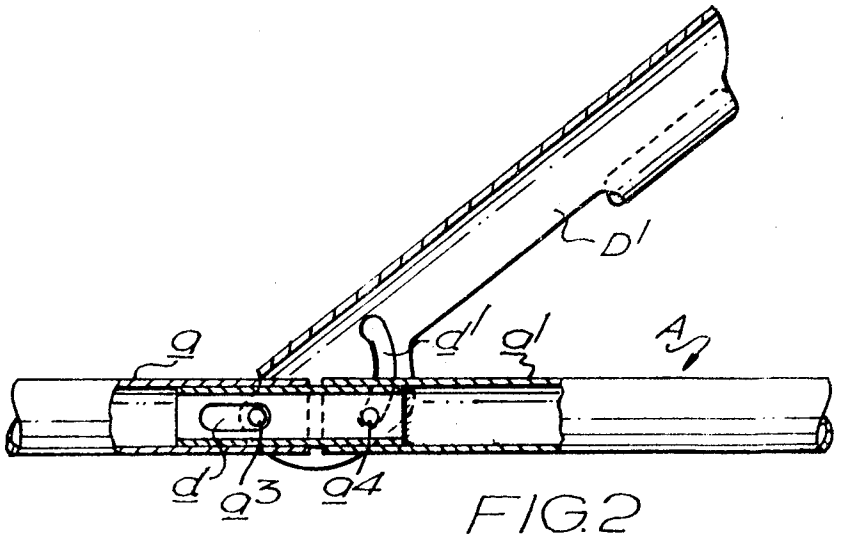


FIG. 2

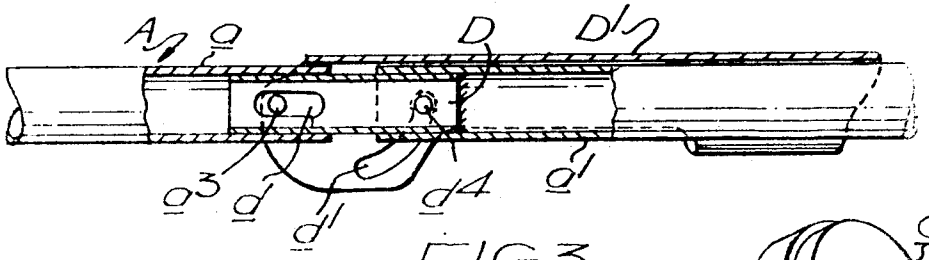


FIG 3

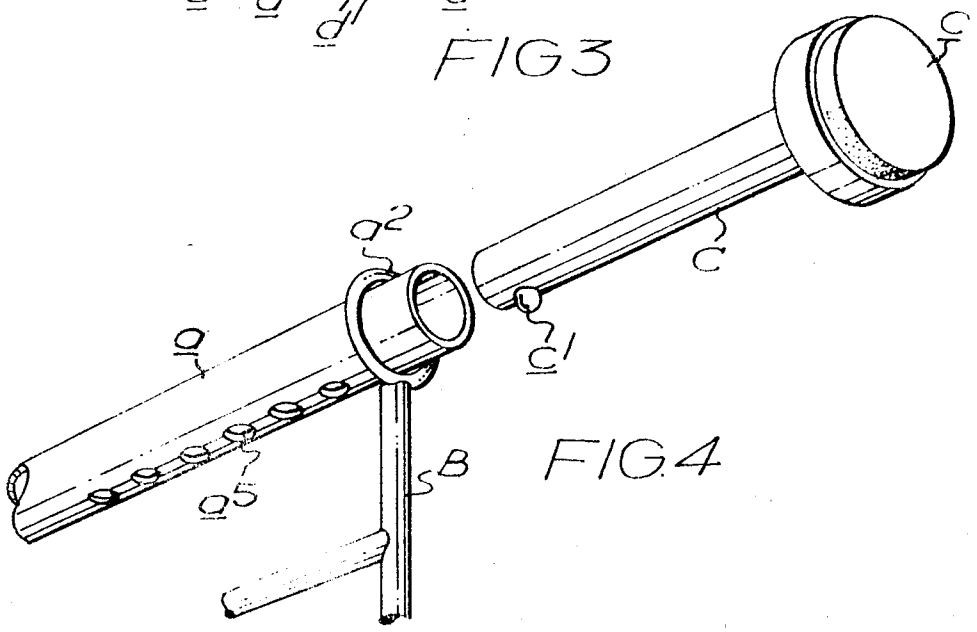


FIG. 4

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SAFETY RAILS AND THE LIKE

This invention relates to safety rails, guards or barriers of the type held in position between two parallel supports by two in-line tubular members one of which is affixed to the safety rail, guard or barrier and the other member being capable of longitudinal movement relatively to the safety rail, guard or barrier when operated by an arcuately slotted handle pivoted to one of the members.

It has been proposed to couple the two tubular members by a tube entering the bores in the two members, the tube being connected to the member affixed to the safety rail, guard or barrier by a pin forming a pivot for the slotted handle through the slots in which and through further longitudinal slots in the tube passes a second pin movement of the handle from a position at an angle to the two members to a position parallel with the members causing the free member to move outwards to lock the safety rails, guard or barrier between the parallel supports.

It has now been found that a more efficient locking of the two members can be obtained by pivoting the handle on the movable member and mounting the tube on the member affixed to the safety rail, guard or barrier on the pin moving in the arcuate slots in the handle.

According to the invention a safety rail, guard or barrier is held in position between two supports by two in-line tubular members of the type referred to in which the two tubular members are coupled together by a tube entering the bores in the two members, a handle being pivoted on a pin passing through the movable member and through the longitudinal slot in the tube and the tube being mounted on the second member by a pin passing through the member and through the arcuate slot in the handle, movement of the handle from a position at an angle to the two members into a position parallel to the two members causing the handle and the free member to move outwards to lock the safety rail, guard or barrier between the parallel supports.

The invention will be described with reference to the accompanying drawings:

FIG. 1 is a perspective view of a guard secured in position by two in line tubes in the locked position;

FIG. 2 is a side elevation partly in section showing the tubes in the released position;

FIG. 3 is a similar elevation showing the tubes in the locked position;

FIG. 4 is a perspective view of one end of a guard rail showing means for adjusting the length thereof.

A safety rail A for a guard or barrier B is locked between two parallel, preferably vertical supports (not shown) such as two walls the sides of window frames or other vertical pillars or supports by two in-line rails formed as tubular members a, a^1. The tubular member a^1 is affixed to the safety rail, guard or barrier B and the tubular member a passes through an eye ring a_2 or the like on the safety rail B, to have a longitudinal movement relatively thereto.

The two tubular members a, a^1 are coupled together by a tube D entering the bores in the two members. A handle D^1 is pivoted on the movable member a by a pin a^3 passing therethrough and through a longitudinal slot d in the tube D. The tube D is affixed to the member a^1 of safety rail, by a pin a^4 passing through the member a^1 and through an arcuate slot d^1 in the handle D^1.

When the handle D^1 is moved from a position at an angle to the two members a, a^1 (FIG. 2) to a position parallel therewith (FIG. 3) the handle D^1 and the free or movable member a is caused to move away from the member a^1 affixed to the safety rail B to lock the members a, a^1 between the supports, the member a sliding through the ring a^2.

The effective length of the two members a, a^1 may be adjusted by extension rods C formed with rubber or other buffers c to engage the vertical supports and with a peg or pip or spring or other pawl c^1 to engage one or other of a plurality of holes a^5 in the members a, a^1.

Tests have shown that the same locking pressure on the handle D^1 when mounted as hereinbefore described exerts a locking pressure on the two members a, a^1 up to 100 percent above the locking pressure exerted by the two members as previously mounted.

What I claim is:

1. A safety rail, guard or barrier held in position between two parallel supports by two in-line tubular members one of which is affixed to the safety rail and the other being capable of longitudinal movement relatively to the safety rail when operated by an arcuately slotted handle pivoted to one of the members the invention comprising two in-line tubular members, a tube by which the two members are coupled together, a handle, a pin pivoting the handle on the movable member and passing through a longitudinal slot in the tube, a pin connecting the tube to the stationary member and passing through an arcuate slot in the handle, movement of the handle from a position at an angle to the two members into a position parallel to the two members causing the handle and the free member to move outwards to lock the safety rail between the two parallel supports.

2. A safety rail guard or barrier as in claim 1 a ring affixed to the guard slides on the movable member as the handle is operated.

3. A safety rail, guard or barrier as in claim 1 in which the effective length of the safety rail is increased by extension rods, a peg on the rod to engage one of a plurality of holes in one of the members, and a buffer on the end of the rod for engaging one of the supports.

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