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ADJUSTABLE ROAD GUARD

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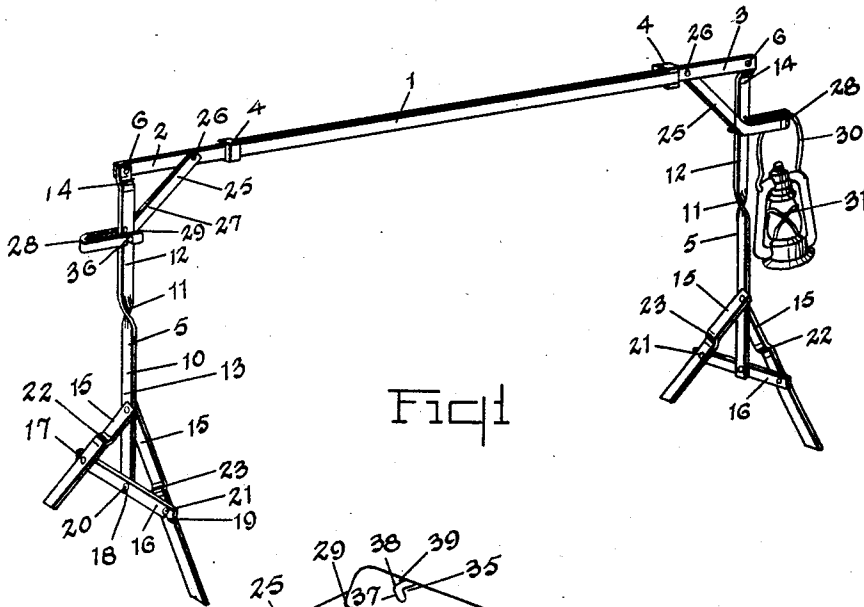


Fig 1

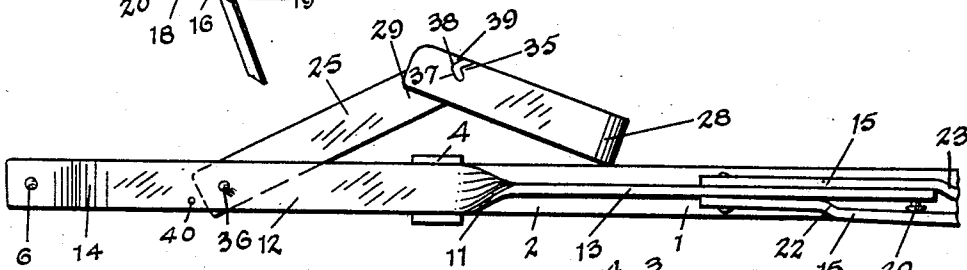


Fig 2

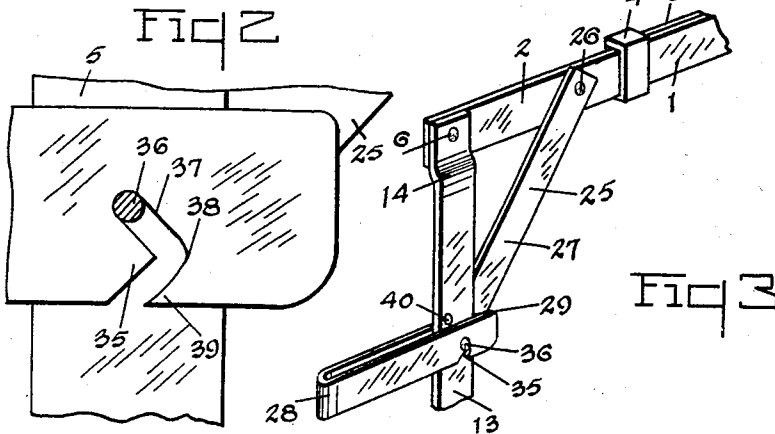


Fig 3

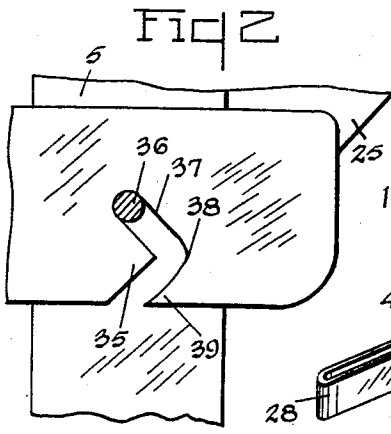


Fig 4

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ADJUSTABLE ROAD GUARD

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My invention has for its object to provide a collapsible and adjustable road guard that is exceedingly simple in its structure and readily adjustable as to its length, and one that may be readily erected and its parts easily secured in their erected positions. The invention particularly provides an adjustable crossbar and standards for forming a road guard, means being provided for supporting a lantern or other signalling device, such as a flag, which also forms an interlocking brace between the crossbar and the standards. The road guard is also so formed that its parts are readily foldable or collapsible, thus rendering the structure easily portable, and yet wherein the parts may be readily secured in position in order to erect the road guard and form thereby a road barrier that may be used in connection with roads of different widths or may be used as a barrier, or guard, for a portion of the width of the road.

The invention may be contained in road guards that vary in their details of construction and, to illustrate a practical application of the invention, I have selected a road guard embodying the invention as an example of such structures and shall describe the road guard selected hereinafter. The road guard selected for purposes of illustration is shown in the accompanying drawing.

Fig. 1 is a perspective view of the road guard. Fig. 2 is an enlarged view of one end of the road guard when collapsed. Fig. 3 is a perspective view of one end of the road guard. Fig. 4 is an enlarged view showing a locking slot formed in the end braces to prevent disconnection of the braces and consequent collapsing of the road guard in the ordinary handling of the road guard when erected.

In the particular form of construction selected as an example of the various structures that embody my invention, the parts are so connected together that the structure may be readily collapsed when it is desired to transport the structure, suitable interlocking means being provided for interlocking the parts when the structure is to be erected. The road guard is provided with a crossbar 1 that is preferably formed of two bars 2 and 3 that

are slidably connected, one relative to the other, by means of collars 4 that are connected to one end of each of the bars and so as to enclose the other. The crossbar 1 may be adjusted as to its length by sliding the bars 2 and 3 relative to each other, the collars 4 operating to maintain them in their parallel relation to each other. The adjustable crossbar 1 is supported by a pair of standards 5, that are pivotally connected by means of the pins 6 to the ends of the crossbar 1, that is, they are connected to one end of each of the bars 2 and 3 by means of the pivot pins 6.

The standards 5 are each provided with an upright flat metal bar 10 having central portion 11 turned so as to locate parts of the flat metal bar at right angles to each other and so as to dispose the upper portion 12 of the bar 10 in the plane of the crossbar 1 and the lower portion 13 at right angles thereto. This provides a bearing surface as between each standard 5 and the crossbar 1 at their points of connection at the pin 6. Also, the upper end of the upright bar 10 is offset substantially the thickness of the bars, of which the barrier is formed as at 14 in order to permit the folding of the bar 10 to substantially within the plane of the bar 1 and to afford the desired clearance for that purpose. A pair of bars 15 is pivotally connected to the portion 13 of the bar 10. They extend diagonally from the point of connection of the bars 15 with the upright bar 10 to form diagonally disposed legs for the support of the barrier to afford a wide supporting base. In order to provide for the foldability of the standard of the bars 15 a crossbar 16 is pivotally connected to one of the bars 15 by means of the pin 17 and slots 18 and 19 are formed in the lower edge of the bar 16. Also, pins 20 and 21 are located one in the lower end of the upright bar 10 and the other in one of the bars 15, whereby the crossbar 16 may engage the lower end of the upright bar 10 and the bars 15 to rigidly hold the bars 15 in their inclined positions relative to the upright bar 10. The bars 15 are also preferably provided with offset portions as at 22 and 23 so as to locate the pins 17, 20, and 21 in substantially the same plane

or in a straight line to enable the use of a straight bar 16 for interlocking the bars 15 and the bar 10.

The standards 5 are secured relative to the crossbar 1 by means of a pair of braces 25 that are formed of flat metal bars that are pivotally connected to the parts 2 and 3 of the crossbar 1 by means of the pivot pins 26. The braces 25 have portions 27 that are diagonally disposed with reference to the upright bars 10 and the crossbar 1, when the parts are erected, and a looped portion 28 having the open end 29. The ends of the braces 25 terminate substantially at the inside edges of the upright bars 10 and the looped portions 28 extend substantially at right angles to the upright bars 10. The looped portions 28 enclose the upright bars 10 and are so bent as to clamp and frictionally engage the upright bars 10 at points near the open ends of the looped portions 28. Preferably, the braces 25 are formed of elastic material and thus the upright bars are elastically clamped between the parts of the looped portions 28. Also, the looped portions 28 extend outwardly so as to protrude from the upright bars 10 and afford a lantern support for lanterns of the type commonly used by construction engineers for the purpose of indicating the position of the barrier at night. The handle 30 of the lantern 31 may be inserted in the looped portions 28 in advance of the location of the looped portions about the upright bars 10 and, consequently, will be enclosed within the looped portions.

The braces 25 thus afford a means, together with the standards 5, for rigidly securing the parts of the road barrier in their erected positions and to securely lock the parts in these positions. The ends of the looped portions near the open ends 29 of the loops are provided with slots 35 and the upright bars 10 are provided with pins 36 that are engaged by the braces 25 when the pins are located in the slots 35 by the proper movement of the braces 25 and a swinging movement of the standards 5. The slots 35 are so formed that in the ordinary use, particularly in handling of the barrier, the braces cannot be withdrawn from the engaging relation established between the slots 35 and the pins 36.

In the ordinary use or handling of the barrier by the laborer, the barrier will be frequently picked up by the looped portions 28 which form not only convenient lantern supports but also convenient handles. The pin 36 will not be disengaged from the slot 35 and, furthermore, when the barrier is erected and it is desired to extend the barrier and the parts 2 and 3 are drawn lengthwise, one relative to the other, the slots 35 will likewise not be disengaged from the pins 36 and, consequently, one of the standards may be al-

lowed to rest upon the ground while the other end of the barrier may be raised and drawn outward or pushed inward, the slots 35 being so formed that neither of the braces 25 will be disengaged.

The slots 35 are formed V-shaped, the apex of the V pointing inwardly with respect to the barrier, that is, pointing towards the open ends of the looped portions 28. The V-shaped slots have the portions 37 and 38 located inclined relative to the edges of the looped portions 28. The slots 35 open at the lower edges of the looped portions 28 so that the normal weight of the braces 25 operate to normally locate the pins 36 in the upper ends of the slots and, consequently, in engaging relation with respect to the braces. Thus, although the outer ends of the looped portions may be raised when the looped portions are used as handles for carrying or manipulating the barrier, yet the pins 36 in each case will be engaged by the projecting portion 39 that forms an engaging nose for preventing the end of the brace 25 from being disconnected from the pin 36. Likewise, when the barrier is extended by pulling upon one of the projecting looped portions 28, the looped portion 28 that is thus lifted will be caught by its associated nose 39 of the slot 35 and, consequently, the end of the barrier may be lifted since pivotal movements of the braces about the pin 26 will be prevented by the interlocking of the pin 36 in its associated slot 35 and when that end of the barrier is pulled from the other end, the other brace 25 cannot be released from its connection with the other standard as would be the case where an ordinary slot extending at right angles to the edge of the brace which would, by reason of the inclination that would be produced as between the standard and the crossbar, produce such an angular relation between each of the slots and the pins as to cause the brace to snap away from the pin. In the particular construction shown, the pin will be caught in the angle of the V-shaped slot and locked therein by the outwardly projecting nose 39.

In order to connect the braces 25 with the uprights 5 it is necessary first to insert the upright bars 10 within the open ends 29 of the looped portions 28 and then to swing the uprights outward until the pins 36 may be located in the lower ends of the loops 35, whereupon the uprights are swung inward to locate the pins in the angle of the V-shaped loops and again to swing the uprights outward to locate the pins 36 in the upper ends of the slots 35. When in the latter position, the upright bars 10 are located substantially at right angles to the crossbar 1. This affords an exceedingly efficient interlock as between the braces and the uprights and, consequently, a secure interlock for locking the barriers in their erected positions. If desired, holes 40 may be formed in the uprights

10 at points in close proximity to the upper edges of the looped portions 28 of the braces 25 so as to prevent the disengagement between the slots 35 and the pins 36 when a padlock is inserted in a hole 40. Consequently, the lantern 31 may be located in one of the looped portions 28 and a padlock inserted in the opening 40 and locked. This will not only prevent the removal of the lantern but will also prevent collapsing of the barrier and render it exceedingly inconvenient for the transportation of the barrier in case it is intended to remove the barrier without authority to do so.

I claim:

1. A road guard having an adjustable crossbar, a pair of standards pivotally connected to the ends of the crossbar, a pair of brace members pivotally connected to the cross bar and at points near the end of the bar, the brace members having open-ended looped parts, the standards having portions fitting between the inner sides of the open-end portions of the looped parts, the closed looped ends protruding from the outer sides of the standards.

2. A road guard having an adjustable crossbar, a pair of standards pivotally connected to the ends of the crossbar, a pair of brace members pivotally connected to the crossbar and at points near the end of the bar, the brace members having open-ended looped parts, the standards having portions fitting between the inner sides of the open-end portions of the looped parts, the ends of the braces and the standards having inter-engaging parts for locking the standards relative to the crossbar to prevent angular movement of the standards relative to the crossbar.

3. A road guard having a crossbar and a pair of standards pivotally connected to the ends of the crossbar, a pair of brace members connected to the crossbar and to the standards and pivotally connected to the crossbars, the standards having pins and the braces having V-shaped slots extending from the lower edges of the braces, the parts of the slots inclined to the edges of the brace member.

4. A road guard comprising in combination with crossbar, a pair of standards pivotally connected to the ends of the crossbar, the standards each comprising a vertical bar and a pair of bars pivotally connected to the vertical bar and a crossbar pivotally connected to one of the pair of bars and having a pair of slots, the upright bar and the other of the said pair of bars having pins adapted to be engaged in the slots of the crossbar to secure the upright bar and the pair of bars in position relative to each other to form a base for the support of the barrier.

5. A road guard having an adjustable crossbar, a pair of standards pivotally con-

nected to the ends of the crossbar, the standards each comprising a vertical bar and a pair of bars pivotally connected to the vertical bar and a cross bar pivotally connected to one of the pair of bars and having a pair of slots, the upright bar and the other of the said pair of bars having pins adapted to be engaged in the slots of the crossbar to secure the upright bar and the pair of bars in position relative to each other to form a base for the support of the barrier, and a brace pivotally connected to the crossbar and having a looped portion for frictionally clamping the upright bar, the looped portion having an angular slot extending from the lower edge of the brace and the upright member having the pin engaged in the slot of the brace.

6. A road guard having a cross-bar and a pair of standards connected to the ends of the cross-bar, a pair of brace members pivotally connected to the cross-bar, the standards having pins and the braces having angular slots extending from the lower edge of the braces, the parts of the slots inclined to the edges of the brace member.

7. A road guard having an adjustable cross-bar, a pair of standards pivotally connected to the ends of the cross-bars, a pair of brace members pivotally connected to the cross-bar, the brace members having angular slots and the standards having pins adapted to be engaged in the slots, the lower ends of the slots extending in a line inclined to the edges of the brace member to form teeth at the mouth of the slots to prevent disengagement of the braces from the pins.

In witness whereof I have hereunto signed my name to this specification.

SANFORD M. McCURDY.