

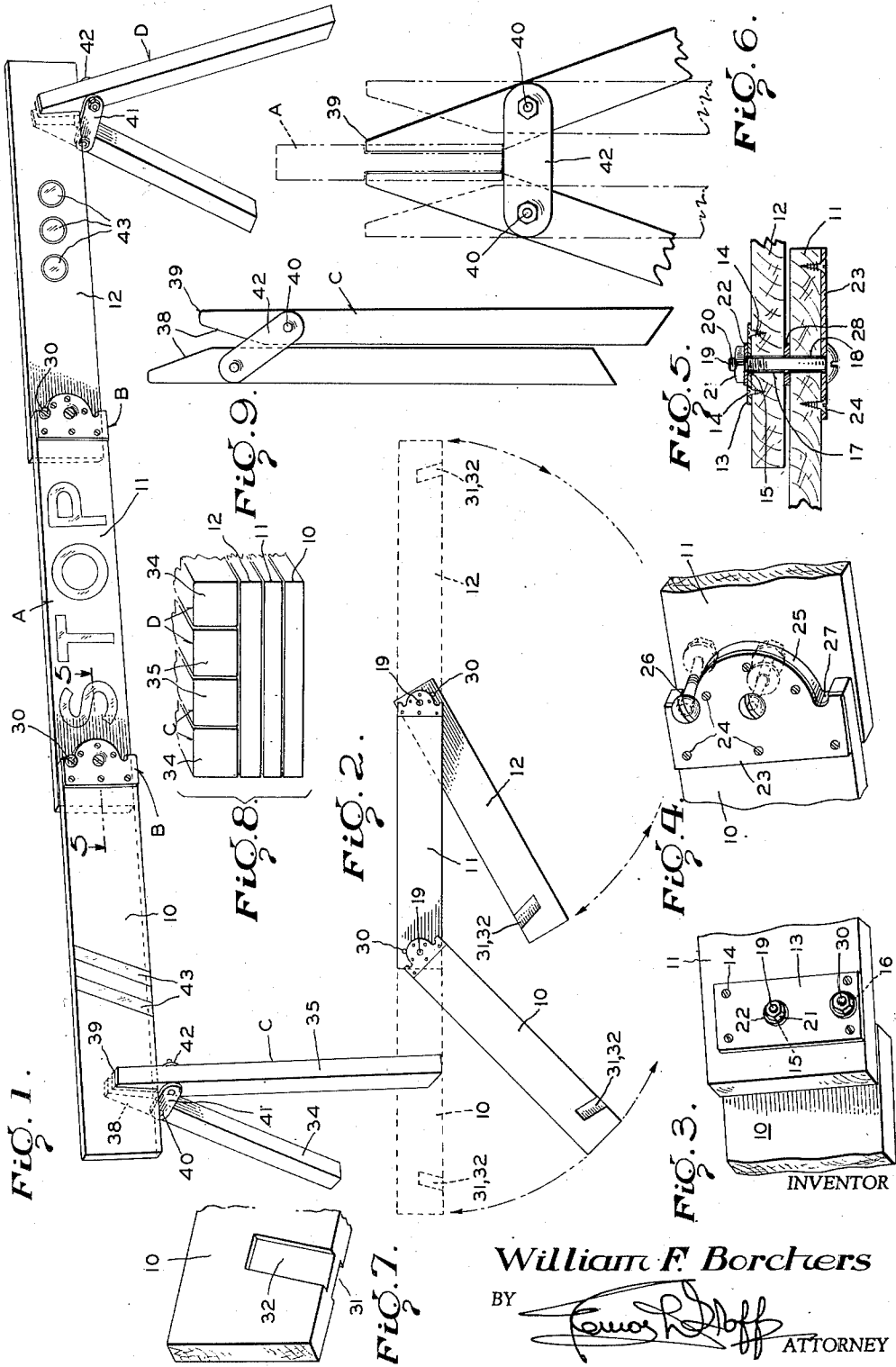
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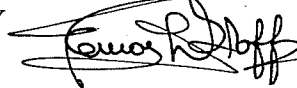
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ROADWAY BARRIER

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2,793,003

ROADWAY BARRIER

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3 Claims. (Cl. 256-64)

The present invention relates generally to a trestle and more particularly to a trestle for use as a roadway barrier.

An object of this invention is to provide a novel knock-down roadway barrier that may be easily and quickly erected at the scene of an emergency for use by law enforcement officers, firemen, disaster and other emergency workers as a temporary highway barricading or road-blocking device.

Another object is to provide a foldable trestle for use as a road barrier adapted to be carried conveniently as a standard item of auxiliary equipment in the trunk or other storage space of a conventional motor vehicle.

A further object is to provide a simple, light weight, compact and readily portable roadway signal barrier with reflective means thereon capable of establishing an effective temporary warning or caution signal in either daylight or darkness.

A further object is to construct a road barrier from light weight material, such as wood with a minimum of metal component parts, said barrier being adapted to collapse from an inadvertent collision therewith to avoid accident or injury resulting from such collision.

With these and other objects in view, the invention consists in the construction, arrangement and combination of parts hereinafter described and particularly pointed out in the claims, it being understood that I do not intend to limit myself to the exact details of construction.

In the drawing like parts throughout the several views are given like numerals and are thus identified in the following detailed description:

Fig. 1 is an assembled perspective rear view of my road barrier as it appears when erected for use;

Fig. 2 is a diagrammatic plan view showing the manner of folding of the elongated barrier member;

Fig. 3 is an enlarged front side view of a portion of the barrier member at one side of the folding joint;

Fig. 4 is an enlarged rear view of the opposite side of the folding joint of Fig. 3;

Fig. 5 is an enlarged longitudinal cross-section view on section line 5-5 of Fig. 1;

Fig. 6 is a front elevational view of the barrier legs shown in solid lines for unfolded or erect position and in dotted, folded or non-erect position.

Fig. 7 is an enlarged perspective of the leg engaging end of the barrier member.

Fig. 8 is an end elevational view of the component parts of the invention completely collapsed and stacked to form a neat, solid package for storage.

Fig. 9 is a view in elevation of one of the supports folded for storage.

Referring in detail to the drawings and first with particular reference to Figure 1, the device comprises a trestle having a main portion A formed with a plurality of joints B and a pair of foldable supports C and D positioned at each end of the main portion A to maintain the same in horizontal erect position for use.

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The main portion A of the trestle, or more specifically of my novel roadway barrier comprises a plurality of end lapped, preferably light weight, wooden planks or boards 10, 11 and 12, all coupled together by a novel form of knee-joint B. These joints comprise a plate 13, preferably of metal, which is secured to one end of each respective plank by screws 14. Each of these plates 13 are formed with a pair of openings 15 and 16. The opening 15 is located substantially in the center of the plate and aligns with correspondingly aligned openings 17 and 18 in the lapped plank ends of the main horizontal portion A. Extending through the aligned openings 15, 17 and 18 is a pivot means, such as a bolt 19 with a threaded end 20 for a securing nut 21 and washer 22. The washer 22 seats against the outer surface of a joint plate 13 secured to the opposite side of one of the lapped ends of one of the planks, by screws 14.

Each oppositely extending end of each section or plank 10 and 11 at knee-joint B is formed with notches 26 and 27 connected by a rounded half-circular edge 25 and the knee-joint plate 23 along one edge is formed in an identical pattern to this end of the section or plank, to thereby reinforce the notched and rounded edge portions. The pivot bolt 19 has a spacing washer 28 mounted around its shank between the inner lapped faces of each of the respective lapped plank portions, see Figure 5. This permits free frictionless swivel action between the plank members for folding the main horizontal member A together as generally illustrated in Figure 2.

In order to provide rigidity to the barrier member A when erecting the same, one of the adjacent lapped inner faces of one plank is formed with an opening near the upper longitudinal edge thereof for a joint stop means, such as the headed bolt 30. This bolt extends through joint plate 13 and the plank 11, for example, so that the head of the bolt overlaps the thickness of the plank 10 and the joint plate 23 when the planks are aligned for barrier erection with the bolt shank in notch 26, see Figure 4. Thus the bolt 30 of each knee-joint serves as a stop to retain the main barrier member and the several parts or planks thereof aligned as a continuous rigid member. Because the stops are turned so as to be at the top of the member A, the weight of the planks themselves in cooperation with the stop means 30 tend to hold the same extended and unfolded by the gravitational forces of their own respective weights. However, when the horizontal barrier member A is to be folded, a slight push upward will break the knee-joint by releasing the stop 30 from the joint notch to permit folding the planks back upon each other in laminated relation, see Figure 2.

The free end of each terminal section or plank, namely 10 and 12, is formed with key formations, such as opposed diagonal grooves or slots 31 and 32 on each side for reception of the clamping jaws of the supporting means C and D of the trestle. These formations provide for lateral stability of the assembled device. The supports C and D comprise legs 34 and 35 cut from a standard pattern piece to facilitate mass production. The mitered edges 38 of the legs 34 and 35 constitute clamping jaws extending to a reduced end 39 toward the opposite longitudinal edge of the leg. The legs are pivoted together between plates 41 and 42 by bolts 40. Spreading movement of the legs 34 and 35 provides a clamping action by the edges 38 which serve as jaws, to thereby grip the horizontal barrier member C therebetween. Also, the weight of the horizontal member A on the links 41 and 42, although slight tends to spread the legs apart, to thereby promote the clamping action of the jaws 38. The clamping jaws are readily released by squeezing the legs together as shown in the dotted line positions thereof in Figure 6.

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Either side of members 10, 11, and 12 and the surfaces of the legs that are likely to face approaching motor vehicular traffic may be painted or otherwise covered with a reflective coating and/or studded with retrodirective reflectors 43, to render the device effective in darkness as well as in daylight.

By way of conclusion it should be noted that with the exception of certain light metal stampings, bolts, nuts, rivets and screws, the barrier is made of light weight, comparatively thin, soft, clear fir or pine wood; as opposed to some of the prior art heavy, cumbersome devices made of 2" x 4" and 2" x 8" lumber; or of heavy sheet metal with bulky metal castings, which are misguidedly used by some agencies in several instances. An uncontrolled or recklessly driven vehicle moving at an excessive speed may be reasonably assumed to do one or more of three things of comparatively minor consequence to my novel barrier:

1. The present barrier will be fractured or disintegrated into harmless splinters upon impact;

2. The present barrier will be carried along momentarily by the momentum of the vehicle and ultimately brushed aside; or

3. Due to the unique construction of the leg assemblies, and the principle of utilizing gravity rather than any mechanical locking scheme to hold the horizontal cross member in a firm and proper position, the legs would collapse upon impact and the barrier would be thrown away from the oncoming vehicle.

As illustrated in Figure 8 of the drawing, when the device is not in use it may be folded and stacked into substantially parallel relation. This permits the component parts of the device to be stored in a comparatively small space or be readily packaged for shipment.

Without further description it is believed that the structure herein described and illustrated and their respective cooperative functions and organization are sufficiently clear to be understood by others skilled in the art. However, it is to be expressly understood that this description and disclosure is for example only and is not intended as a limitation in specific structural features and reference is to be had to the appended claims to determine the scope of the invention.

I claim:

1. A roadway barrier comprising a horizontal elongated member including a plurality of relatively narrow selections of substantial depth and whose adjacent ends are disposed in lapped relation and pivotally connected by knee-joints operative to preclude downward pivotal action of the joints, the endmost sections in said member each being provided with a pair of laterally opposed grooves which open through the outer faces and lower edge of the section adjacent the free end thereof and which grooves are inclined inwardly from said free end, a support for each end of said member comprising a pair of legs having mitered upper ends freely engaged within the respective grooves, at least one plate connecting said

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legs together and having opposite ends pivotally connected thereto, and the upper edges of said plates being disposed adjacent the lower edges of said endmost sections in the assembled position of the support with the said upper ends of the legs seated in said grooves for the purpose set forth.

2. A roadway barrier according to claim 1, wherein each of said knee joints is provided by a pivot bolt extending through lapped ends of a pair of said sections intermediate the opposite edges thereof, a bolt extending through one of said sections adjacent the upper edge thereof in substantial vertical alinement with said first bolt and having a head spaced therefrom a distance substantially equal to the thickness of the other section, said other section leaving its free end on an arc concentric with said pivot bolt, and said other section being provided with a notch adjacent each end of said arc for selectively receiving said second bolt in the assembled and folded position of the sections respectively.

3. A roadway barrier comprising a horizontal elongated member including a plurality of relatively narrow sections of substantial depth and whose adjacent ends are disposed in lapped relation and pivotally connected by knee-joints operative to preclude downward pivotal action of the joints, the endmost sections in said member each being provided with a key formation opening through the outer faces and lower edge of the section adjacent the free end thereof, a support for each end of said member comprising a pair of legs having mitered upper ends freely engaged with the sides of the member adjacent one of said key formations, at least one plate connecting said legs together and having opposite ends pivotally connected thereto, and the upper edge of said plate being disposed adjacent the lower edges of each of the endmost sections in the assembled position and operatively associated with the respective key formations at each end.

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