Nov. 1, 1932. A. STEWART 1,885,153

CROSSING SIGNAL

Filed Nov. 10, 1930 3 Sheets-Sheet 1

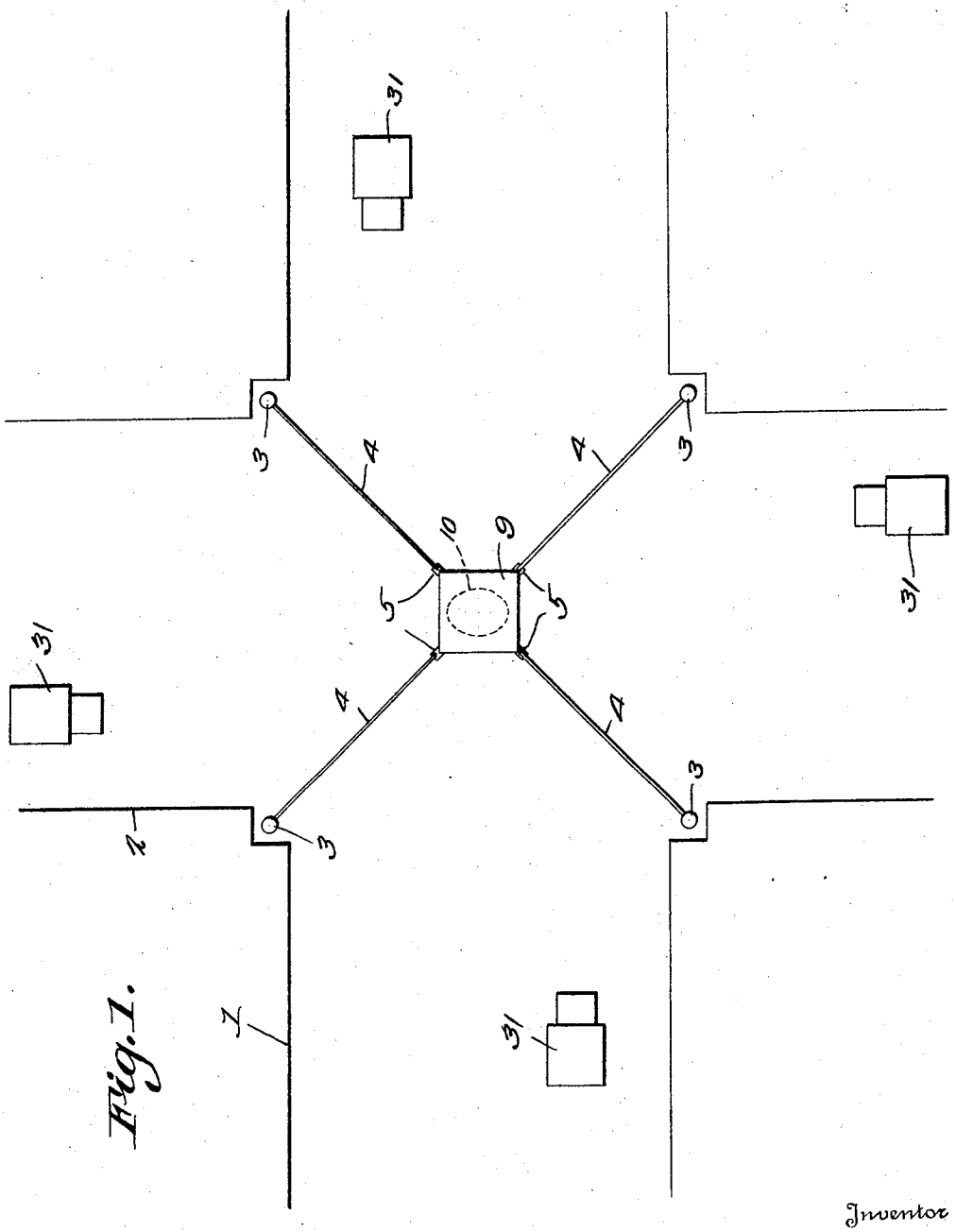

Fig. 1.

Inventor
Allan Stewart

By C. A. Snow & Co.
Attorneys.

Nov. 1, 1932. A. STEWART 1,885,153

CROSSING SIGNAL

Filed Nov. 10, 1930 3 Sheets-Sheet 2

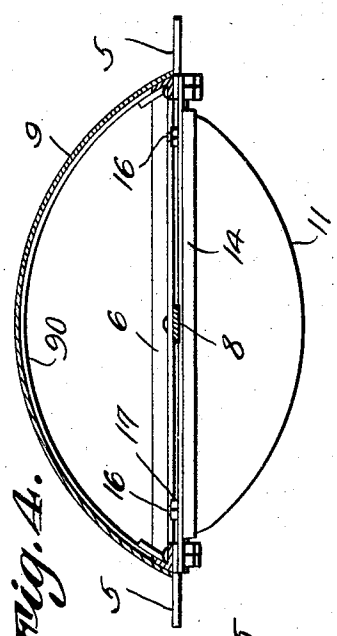

Fig. 4.

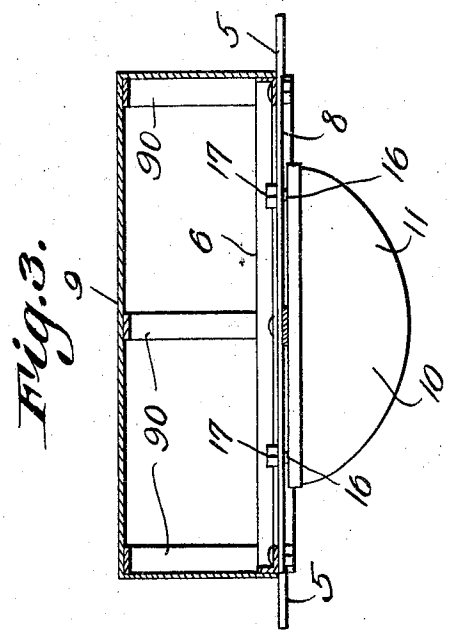

Fig. 3.

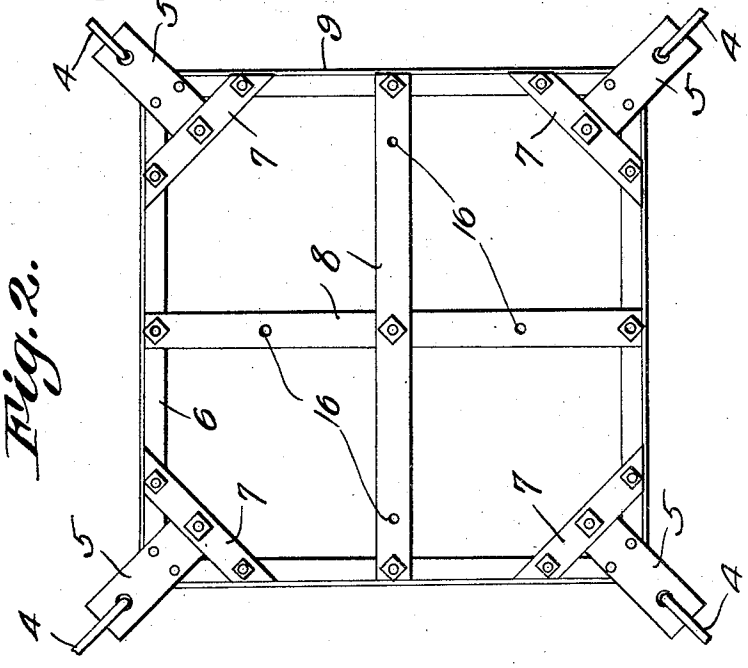

Fig. 2.

Inventor

Allan Stewart

By C. A. Snow & Co.

Attorneys.

Nov. 1, 1932. A. STEWART 1,885,153

CROSSING SIGNAL

Filed Nov. 10, 1930 3 Sheets-Sheet 3

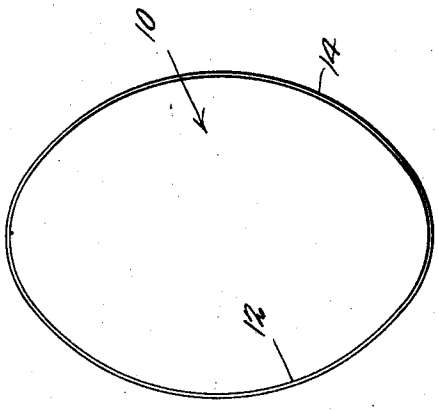

Fig. 6.

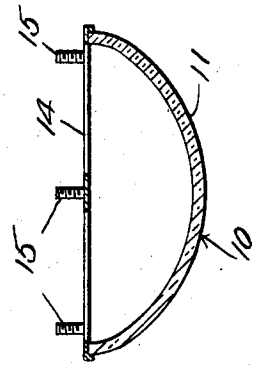

Fig. 7.

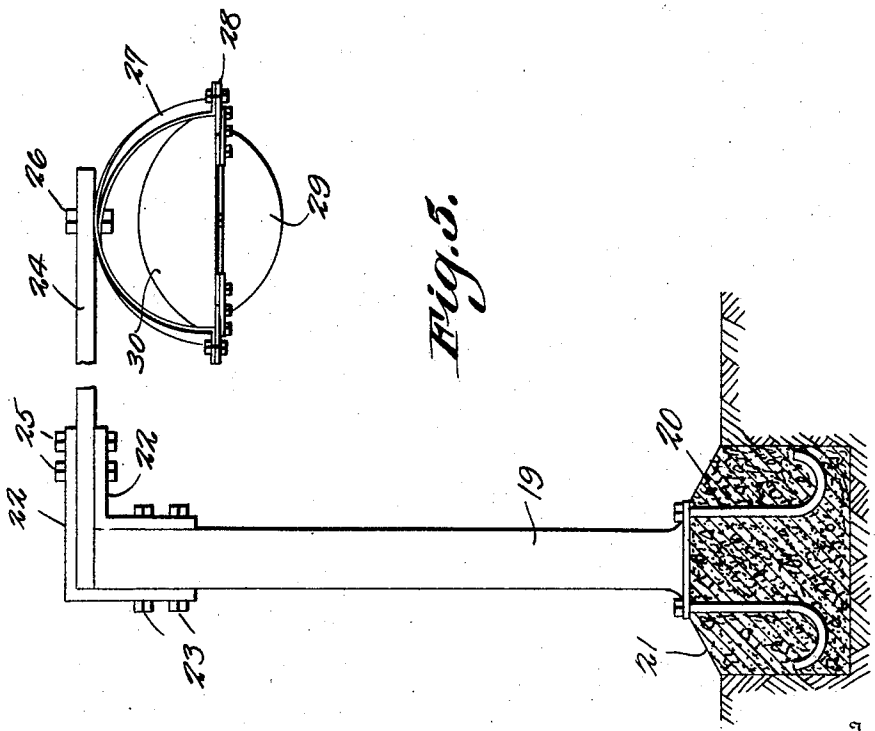

Fig. 5.

Inventor

Allan Stewart

By C. A. Snow & Co.

Attorneys.

Patented Nov. 1, 1932 1,885,153

UNITED STATES PATENT OFFICE

ALLAN STEWART, OF DEARBORN, MICHIGAN

CROSSING SIGNAL

Application filed November 10, 1930. Serial No. 494,784.

This invention aims to provide a simple but effective means whereby vehicles approaching each other at a highway intersection, or railroad trains approaching each other at a place where two railroads cross, may be advised, each of the coming of the other, by the reflection of each of the vehicles in a device prepared for that purpose. Another object of the invention is to so construct the reflector that it will produce a minimum amount of distortion and afford a peculiarly effective signal to the driver of one vehicle that another vehicle is approaching at right angles. Another object of the invention is to supply novel means for suspending the reflector.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinbefore described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:

Figure 1 shows in diagrammatic top plan a device constructed in accordance with the invention;

Figure 2 is a bottom plan of the frame which carries the reflector;

Figure 3 is a longitudinal section of the reflector frame and cover;

Figure 4 is a transverse sectional view of the reflector frame and cover;

Figure 5 is an elevation showing a modified means for carrying the reflector;

Figure 6 is a bottom plan of the reflector;

Figure 7 is a cross section of the reflector.

The device forming the subject matter of this application may be used at railroad crossings, at highway crossings, or at a place where a highway crosses a railway, but, in order to avoid needless repetition and unnecessary explanations, it will be presupposed that the structure is employed where two highways cross at right angles, that particular application of the device serving sufficiently to bring out and emphasize its usefulness in other connections.

The numeral 1 and the numeral 2 designate highways which cross at right angles. The reflector used in the invention may be mounted in any desired way at the place where the center lines of the highways 1 and 2 cross. As shown in Figure 1, but not of necessity, posts 3, are erected at the corners of the highways. Suspension elements 4 are connected to the posts 3, and are located high enough from the surface of the highways 1 and 2, so that a vehicle with any reasonable load can pass underneath them without striking them.

The inner ends of the suspension elements 4 are connected to ears 5 joined to the corners of a rectangular frame 6, and to braces 7 which extend across corners of the frame, as shown in Figure 2. The frame 6 includes rectangularly arranged cross pieces 8. As shown in Figures 3 and 4, a curved cover 9 is mounted on and about the frame 6, and is supported by the ears 5, but the cover 9 may be of any desired construction. The cover 9 is sustained from the frame 6 by curved braces 90.

The numeral 10 marks a reflector. The reflector, as shown in Figure 7, is elliptical in cross section, and as disclosed in Figure 6, and as marked by the numeral 12, the reflector is elliptical in outline also, the outer, convex, lower surface 11 of the member 10 being the reflecting surface. At its upper edge, the reflector 11 is connected to a metal rim 14 as shown in Figure 7. The rim 14 has studs 15 which extend upwardly through holes 16 in the cross pieces 8 (Figure 2). Nuts 17 are threaded on the upper ends of the studs 15

and engage the cross pieces 8 to hold the reflector in place, in depending position, on the frame 6, and beneath the box-like cover 9.

As shown in Figure 1 of the drawings, the reflector 11 is so arranged that the principal rectangular axes of the ellipse formed by the lower edge of the reflector coincides with the center lines of the highways 1 and 2.

The vehicles are marked by the numeral 31 in Figure 1, and it will be obvious that the driver of each vehicle, as he approaches the reflector 10, will see in the reflector an image of the vehicles approaching at right angles to the direction in which his car is traveling. Owing to the fact that the reflector 10 is elliptical in cross section, as shown at 11, in Figure 7, owing to the fact that the reflector 10 is elliptical in outline, as shown at 12 in Figure 6, and because the axes of the reflector are arranged in coincident relation to the center lines of the highways 1 and 2, the reflector will present an image which is less distorted and more effective than the image produced when a spherical reflector or a reflector of a type other than that shown in the drawings, is used.

The device is simple in construction but it affords an adequate and effective means whereby collisions at intersecting highways, at intersecting railroad crossings, or at the place where a highway crosses a railway, will be avoided.

It has been stated hereinbefore that any suitable means may be provided for suspending the reflector at the place where the center lines of the highways 1 and 2 cross. This remark is emphasized by Figure 5 of the drawings, wherein a modified form for suspending the reflector is shown.

In Figure 5, a vertical post 19 is securely anchored at 20 in a foundation 21. Angle members 22 are attached by securing elements 23 to opposite sides of the post 19, at the upper end of the post. The angle members have horizontal arms, between which is disposed the inner end of a horizontal bracket 24, the inner end of the bracket 24 being secured at 25 to the horizontal arms of the angle members 22. In the outer end of the bracket 24 there is a suspension bolt 26 carrying curved hangers 27 supporting a frame 28, like the frame 6 of Figure 2, on which the reflector 29 is mounted as hereinbefore described, the cover 30 being connected to the frame 28 and being of the curved form hereinbefore discussed and shown in Figure 4 of the drawings.

Having thus described the invention, what is claimed is:

In a device of the class described, a rectangular frame, cross pieces disposed at right angles to each other and having their outer ends connected to the intermediate portions of the sides of the frame, braces extending across the corners of the frame and having their ends connected to the sides of the frame, ears on the bottom of the frame and projecting outwardly in a diagonal direction at the corners of the frame, the inner ends of the ears being secured to the braces, supporting means assembled with the outer portions of the ears, a depending member carried by the cross pieces, and a cover for the depending member, the cover fitting around the frame and being supported on the ears, between the frame and the supporting means.

In testimony that I claim the foregoing as my own, I have hereto affixed by signature.

ALLAN STEWART.