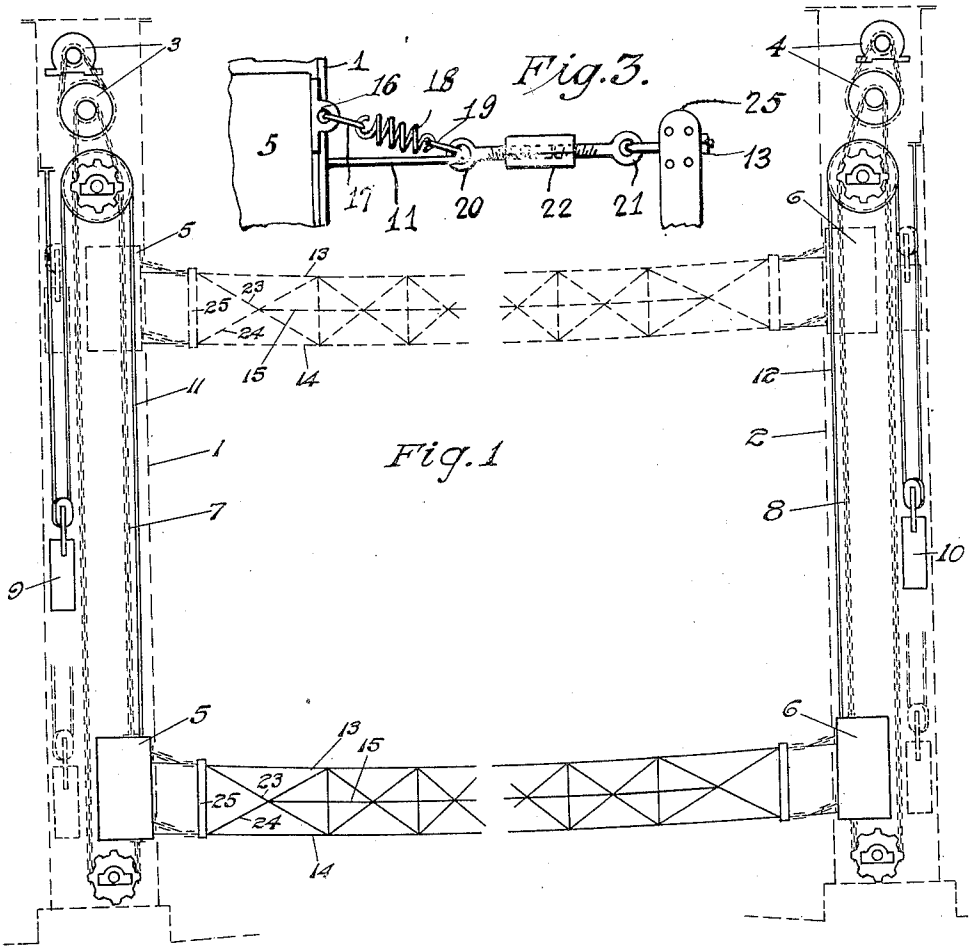
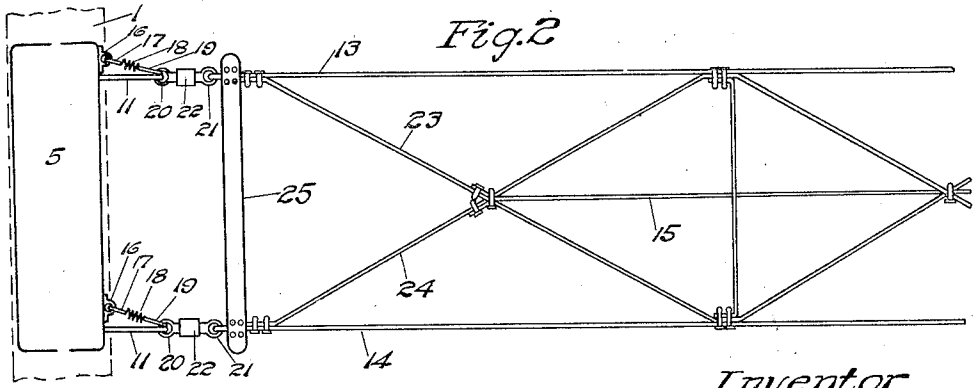
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YIELDING BARRIER FOR STOPPING VEHICLES

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YIELDING BARRIER FOR STOPPING VEHICLES.

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My invention relates to improvements in yielding barriers for stopping vehicles, and has for its principal object the provision of a means to support a yielding barrier between two standards tautly yet economically.

A second object of my invention is the provision of devices by means of which the tension in the several parts of a yielding barrier network may be equalized when stretched between its standards or columns.

A third object of my invention is the provision of devices in yielding barriers which will distribute the tension induced in any one part or strand of the roadway portion of the yielding barrier due to the barrier being struck by a vehicle, over the several parts or strands of the roadway portion of the yielding barrier where said strands enter the standard or column.

These objects are attained by the arrangement of parts as shown in the accompanying drawings, in which,

Fig. 1 is an elevational view of the invention shown in connection with the standards and mechanism which support the yielding barrier.

Fig. 2 is a detail elevation of one end of the invention proper shown in connection with its adjacent part.

Fig. 3 is a detailed view of the auxiliary supporting arrangement for supporting the yielding barrier embodied in the invention.

The type of yielding barrier device to which the present invention is attached is shown in Fig. 1 to consist of two standards or columns 1 and 2, said standards having operating motors and reduction gears 3 and 4 connected to carriages 5 and 6 by means of chain members 7 and 8. Said carriages 5 and 6 are counterbalanced by means of counterweights 9 and 10 through cable members 11 and 12. Cable members 11 and 12 are connected directly or indirectly through carriages 5 and 6 to the ends of the roadway portion of a yielding barrier stretched across the roadway. Referring now to Fig. 2, the roadway portion of the yielding barrier consists of top cable 13 and bottom cable 14 with intermediate cable or cables 15. I choose to show top and bottom cables 13 and 14 to be connected through carriages 5 and 6, yet intermediate cable or cables 15 may also be connected through carriage 5 and carriage 6 without departing from the spirit of the invention.

Again in Fig. 3 is shown the auxiliary cable supporting device which includes members 16 secured to the carriages 5 and 6, by suitable means. To each of the members 16 is secured an end of a link 17 having its opposite end fixed to an end of a spring member 18. To the opposite end of the spring member is fixed an end of a link member 19 having its opposite end fixed to part 20 of a turn-buckle 22. To the part 22 is fixed the reserve cable 11. It is readily seen that said auxiliary supporting devices made up of the parts above indicated will serve as a means of maintaining tautness in the cable to which they are attached independent of the tension induced in said cable by means of its connection through carriages 5 and 6, and cable members 11 and 12 to gravity counterweights 9 and 10. This feature of my invention permits of having a taut cable or taut cables in the roadway portion of the yielding barrier without the use of excessively heavy counterweights.

By the provision of the turn-buckles consisting of parts 20, 21 and 22 it is possible by adjusting these parts to take up the slack in the various cables embodying the yielding barrier and to make the tension on all the cables equal.

In Fig. 2 are shown diagonal cables 23 and 24 and rigid spacer bar 25. The object of these parts is to produce a bridling effect within the network of cables which make up the roadway portion of the barrier, such that when the roadway portion of the yielding barrier is struck by a moving vehicle with an irregular front thus causing one cable only to be placed in tension then the several cables composing the network will be withdrawn from within or through the carriages 5 and 6 practically as a unit. It is to be un-

derstood that the auxiliary cable supporting devices are to be made only strong enough to support the network tautly across the roadway while the tension adjusting devices are to be made as strong as the main cables of the roadway portion of the yielding barrier. Thus when the yielding barrier is struck by a moving vehicle, members 18 will break and allow the full tension of the network cables to be transmitted to the cable members 11 and 12. With the present type of yielding barrier it is practically impossible to make the several cables which pass into or through the carriages withdraw equally unless the front of the vehicle is a plane surface big enough to engage all the cables simultaneously which condition rarely exists in actual practice.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the class described comprising a flexible network including a pluralty of horizontally disposed flexible members; rigid upright members at the ends of said network; and diagonal members connecting the ends of said rigid members with one or more of said flexible members.

2. A device of the class described comprising a flexible network including a plurality of horizontally disposed flexible members; rigid upright members at the ends of said network; and diagonal members connecting the tops and bottoms of said rigid members with the bottom and top flexible members respectively.

3. A device of the class described comprising a flexible network including two vertically spaced horizontally disposed flexible members constituting the top and bottom of said network; rigid upright members at the ends of said network; diagonal members connecting the tops and bottoms of said rigid members with the bottom and top horizontal flexible members respectively; and a third intermediate horizontal flexible member extending between the intersections of said diagonal members.

4. A device of the class described including a barrier comprising upper and lower horizontally disposed cable members and diagonally disposed cable members attached to said first named cable members, adjustable members at the end of said barrier, and cable members attached to the adjustable members for supporting the barrier across a roadway.

5. A device of the class described including a barrier comprising upper and lower horizontally disposed cable members and diagonally disposed cable members attached to said first named cable members, adjustable members at the end of said barrier, cable members attached to the adjustable members for supporting the barrier across a roadway, and auxiliary means for supporting said barrier across said roadway.

6. A device of the class described including a barrier comprising upper and lower horizontally disposed cable members and diagonally disposed cable members attached to said first named cable members, adjustable members at the end of said barrier, cable members attached to the adjustable members for supporting the barrier across a roadway, and spring members serving as auxiliary means for supporting the barrier across said roadway, said spring members being adapted to break when an impact is received by the barrier.

7. A device of the class described including a barrier, members having means of attachment to the barrier and adapted to support the barrier across a roadway for stopping a vehicle on said roadway, and spring members serving as auxiliary means for supporting the barrier across the roadway, said spring members being adapted to break when an impact is received by the barrier.

8. A flexible barrier construction comprising columns at opposite sides of the roadway; a flexible network extending across the roadway; means in said columns for supporting and vertically moving said network; and auxiliary means for attaching the ends of said network directly to elements connected with said columns.

9. A flexible barrier construction comprising columns at opposite sides of the roadway; a flexible network extending across the roadway; means in said columns for supporting and vertically moving said network; and auxiliary yielding means for supporting the ends of said network directly to elements connected with said columns.

10. A flexible barrier construction comprising columns at opposite sides of the roadway; a flexible network extending across the roadway; means in said columns for supporting and vertically moving said network; and auxiliary adjustable and yieldable means for supporting the ends of said network directly to elements connected with said columns.

11. A flexible barrier construction comprising columns at opposite sides of the roadway; a flexible network extending across the roadway; means in said columns for supporting and vertically moving said network; and auxiliary means including a turn

buckle, and a resilient breakable element for supporting each end of said network directly to elements connected with said columns.

12. A flexible barrier construction comprising columns at opposite sides of the roadway; a flexible network extending across the roadway; rigid upright members at the ends of said network; reserve cables operating in said columns and connected with said rigid upright members; means for moving said reserve members vertically in said columns; and auxiliary means for supporting each of said rigid members directly to elements connected with the corresponding column, including a turn buckle, and a resilient breakable link.

EMERSON D. SAWYER.