

(No Model.)

C. H. McLELLAN.
LIFE SAVING APPARATUS.

No. 315,315.

Patented Apr. 7, 1885.

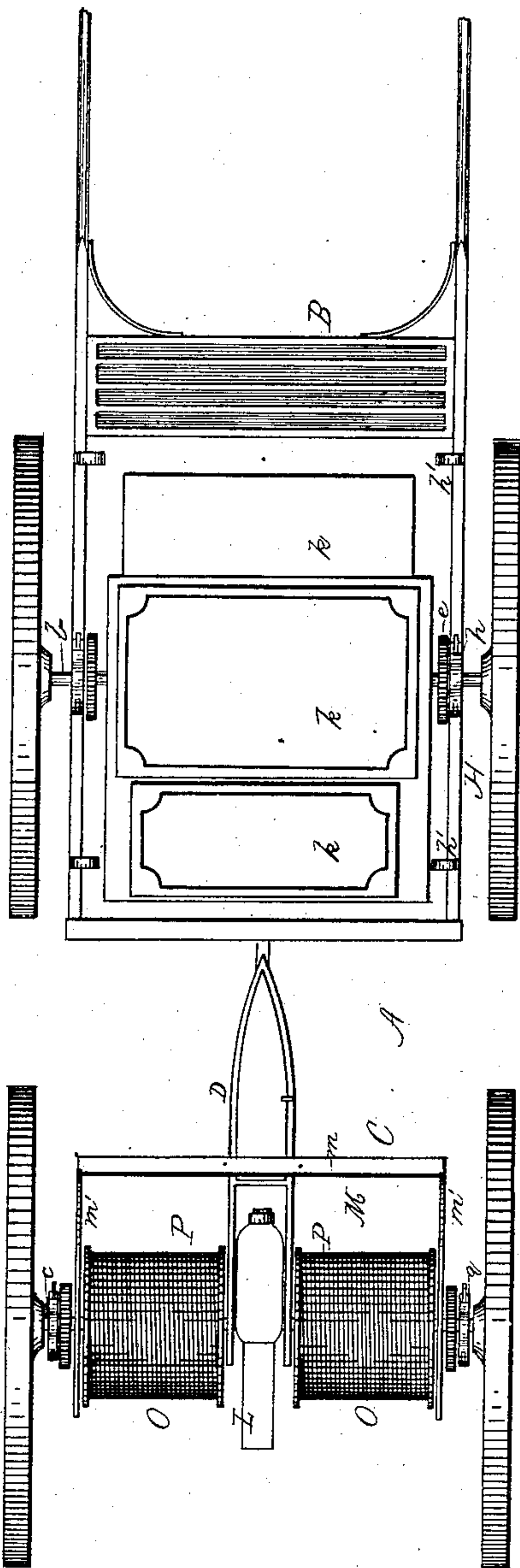


Fig. 1

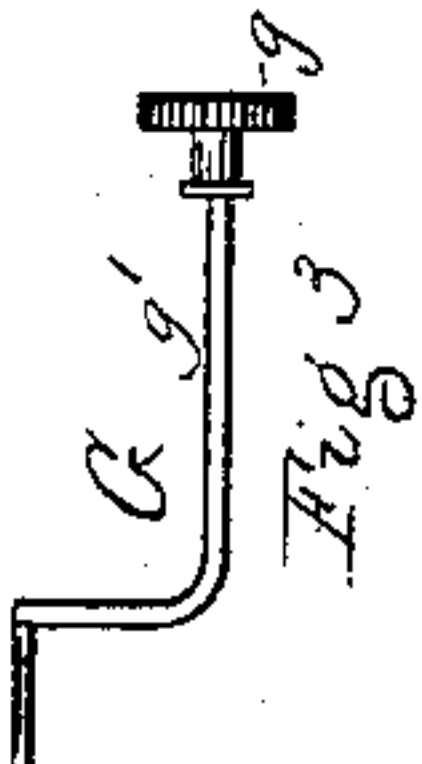


Fig. 2

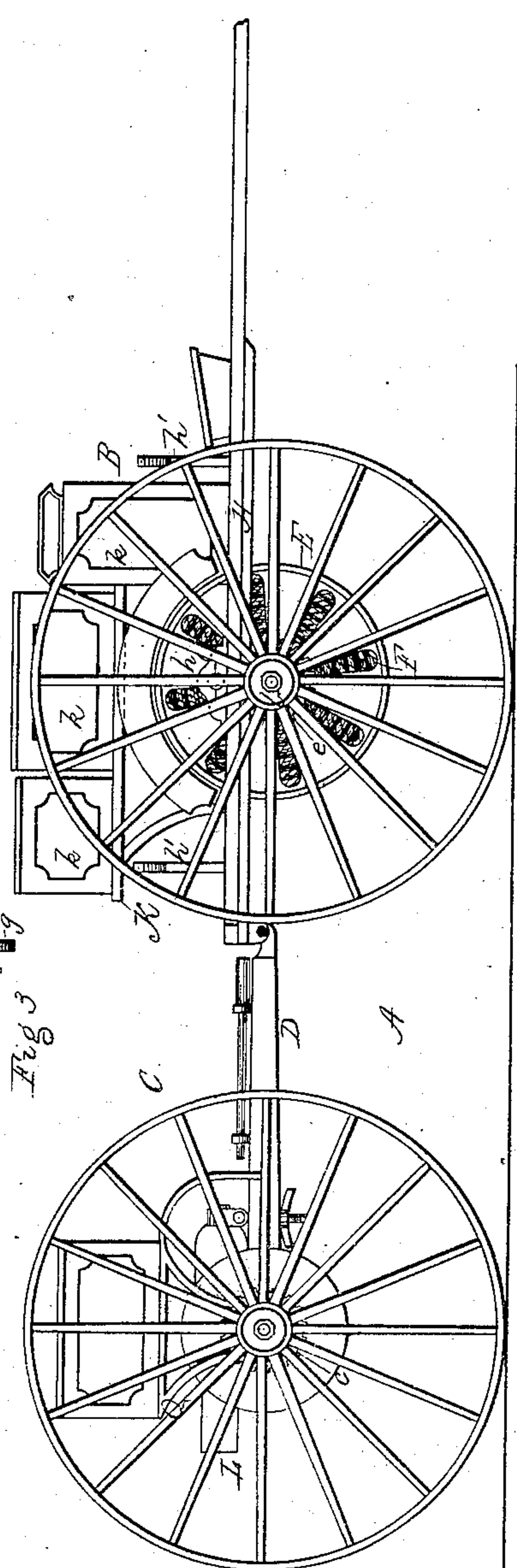


Fig. 3

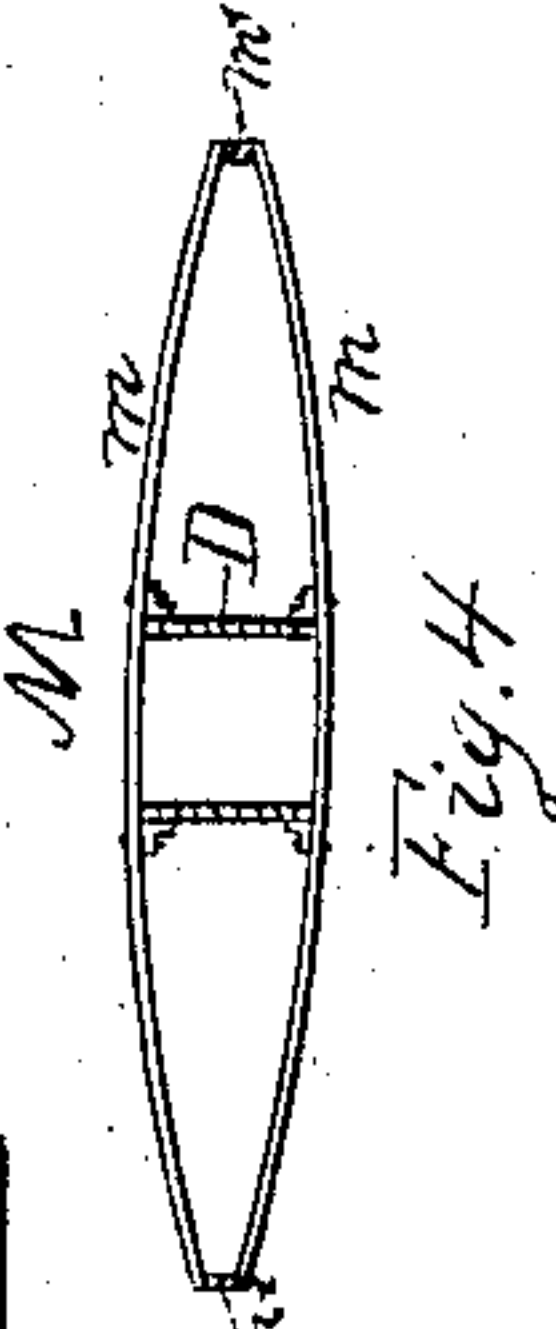


Fig. 4

WITNESSES:

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CHARLES HUGH McLELLAN, OF TOM'S RIVER, NEW JERSEY.

LIFE-SAVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 315,315, dated April 7, 1885.

Application filed October 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. McLELLAN, of the United States Revenue Marine Service, a citizen of the United States, residing at Tom's River, Ocean county, New Jersey, have invented certain new and useful Improvements in Life-Saving Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a side elevation of the apparatus, and Fig. 2 a plan view of same. Fig. 3 is a plan of winding-crank, and Fig. 4 is a detail in section of a portion of the apparatus.

My invention has for its object to provide an improved construction of life-saving apparatus for use in coast service in rendering assistance to wrecked vessels, whereby valuable time may be saved, labor reduced, and the efficiency of the service generally enhanced.

My improvements consist, essentially, in the peculiar construction and combinations of parts, hereinafter fully set forth and claimed, comprised in the apparatus and embracing the vehicle by means of which the appliances are transported from the station to the place of use, and the instrumentalities for obtaining connection with and affording assistance to wrecked vessels.

Prior to my invention the vehicle used for transporting the gun, hawser, lines, &c., from the station to the point of use on the coast consisted of an ordinary two-wheeled "push-cart," the body of which was made the receptacle for the gun, tackle, &c., and from which said gun had to be lifted before firing. The dragging of a two-wheeled vehicle heavily laden over a sandy beach was difficult and often slow. The lifting of the gun is an arduous exertion, which frequently inflicted injury on the men of the service, and the advantageous use of the gun was much impaired by reason of the fact that, as it had no suitable support, it had to be fired lying on the beach above the water-line, thus preventing due sighting, the best trajectory for the projectile, and the closest possible approach to the wreck. Hence, with the old-time arrangements mentioned, there was unnecessary or preventable delay in reaching the scene of disaster, great labor in transporting the life-saving paraphernalia

thereto, severe exertion in lifting the gun out of the vehicle, and imperfect firing of the latter, besides other defects of a lesser nature not necessary to be here particularized.

To remedy the foregoing-mentioned defects and disadvantages, I construct the transporting-vehicle in two separable sections, each of which has two wheels, whereby the load carried is distributed over four wheels, rendering transportation more easy and rapid than heretofore.

On one of the sections of the vehicle I mount the gun, which can and is intended to be fired while in position on its carriage, without requiring to be lifted therefrom, as heretofore, and which, being elevated, can be sighted and fired to better advantage than heretofore. Said gun can also be brought nearer to the wrecked vessel than was heretofore possible, as its carriage may, if necessary, be run out into the water as far as safety will permit.

On the axle of the carriage-section which supports the gun I mount two reels, which carry the whip-line, and on the axle of the other or front section I mount a reel on which is wound the hawser, said latter section also supporting boxes in which are stowed extra shot-lines, medicines, &c. Said front section also supports a tripod used in manipulating the hawser, and a staff for the signaling-flags used in conveying instructions to the persons on the vessel with which connection is to be made by the lines, &c.

Referring to the accompanying drawings, A represents the carriage, made in two sections, a front and a rear section, marked B and C, respectively, whose axles *b* and *c* are connected by a perch or trail, D, having its forward end detachably secured to the sills H on the front axle, *b*, its other end being fixedly attached to the rear axle, *c*. On said front axle is mounted a reel, E, which carries the hawser F. One end or head of said reel is provided with a gear-wheel, *e*, with which engages a pinion, *g*, on the end of a removable crank, G.

To wind the reel, the shaft *g'* of the crank is fitted in a sectional box or bearing, *h*, supported on the sill H of the carriage, said shaft, when inserted in its bearing, passing between the spokes of the carriage-wheel.

Supported on the sills H are forks *h'* *h'*, for holding the hawser-tripod, the flag-staff, &c.

Over the front axle, and supported on the sill H, is a frame, K, sustaining boxes *k k k*, containing extra shot-lines, medicines, &c.

On the axle of the rear section of the carriage is mounted the gun L, its muzzle pointing backwardly, and its breech resting over the upper end of the trail D. To brace said axle and prevent its springing from recoil, I provide a truss, M, consisting of the cross-bars *m m* and two arms, *m' m'*, whose rear ends are connected to said axle just inside of the hubs of the supporting-wheels, the cross-bars *m m* being secured at their middles to the trail D. Said cross-bars are joined at each end to the arms *m' m'*, and are bowed at the middle so as to cross, one over and the other under, the trail, as shown in Fig. 4 of the drawings. The recoil of the gun produces a draft on the arms, which is transferred to the ends of the axle and so counteracts the strain of recoil at its middle. This construction also makes the supporting-wheels act as media for resisting recoil as well as the trail, the lower end of the latter having a broad shoe, N, which rests upon the sand or beach when the gun is fired. On the rear axle are mounted two reels, O O, one on either side of the gun, and carrying the two parts of the whip-line P. Said reels each have heads with gear-wheels, and are adapted and designed to be wound independently of each other by the crank-pinion *g*, the same as the hawser-reel, the rear sills, Q, having each a bearing or box, *q*, for the shaft of said crank G.

In practice, the carriage A, with all its parts duly connected and fully equipped, is kept at the life-saving station ready for instant use. As soon as an occasion arises for such use, said carriage is run with all possible dispatch to a point on the beach or shore as close as possible to the scene of the wreck, being drawn either by men or by horses. Should there be difficulty in the way of the speedy transportation of the whole carriage, such as a rough or a soft beach, a head wind, or inadequate traction power, the sections of the carriage may be detached from each other and the rear section run ahead, as it contains materials for saving life in case of emergency, to be followed by the front section. Supposing the whole carriage to arrive at the scene of the wreck. Its sections are there separated and placed in the proper places for each, the rear section, with the gun pointed at the vessel needing assistance, being run down into the water, if necessary, to get near enough to the said vessel, and in line with the best route for the shot with the vessel, having reference to the direction of the wind and the movement of the shore-current. The front section may be run back on the shore and stationed at the best possible point. The projectile, with the shot-line attached, being duly inserted in the gun, the latter is sighted and fired. When the shot-line reaches the vessel fired at, the parties on such vessel secure said line, and by aid

thereof draw out the whip-line, which runs freely from the reels O O, and fasten its block to the mast. The savers on shore, having attached the hawser to one part of the whip-line, now draw said hawser out to the vessel, the inner end of said hawser being attached to the sand-anchor, which is provided for the purpose. The saving-carriage is then run along the hawser until the rescue has been effected. In case the rear section of the carriage is run on ahead, as already suggested, it may be used without waiting for the arrival of the front section, as it has a shot-line and projectile, and the whip-line may be used for the conveyance to the vessel in distress of a breeches-buoy, by the aid of which persons may be landed from the vessel if the latter be going to pieces, or if for other reasons it is not safe to await the arrival of the front section with the hawser, &c.

The separability of the carriage-sections not only renders it more easy to draw the entire carriage to the scene of the wreck and permits one section to be run on ahead of the other, when occasion demands, but it also facilitates speedy operations at the point of use by reason of the fact that each section carries different parts, which are used at various points of the scene of the wreck, and which had heretofore to be carried to such points. For example, the gun is fired and the whip-line carried from one point while the hawser is run out from another point. The separated wheeled sections can be run to these different points with more facility than the parts which they carry could be carried or lifted bodily, as heretofore, and hence much valuable time on occasions when minutes are precious can be saved by reason of the separable wheeled sections in getting connection with a wrecked vessel after arrival at the scene, as well as in getting to said scene, and, as already mentioned, the sections, when separated, are capable of and intended for conjoint use—for example, the whip-line on one section serving as the medium for drawing out the hawser on the other section.

It should be here remarked that, as will be plainly seen from the proportions illustrated in the drawings, the gun is necessarily made quite light, being small, owing to the peculiar requirements of the life-saving service, which would render a heavy gun rather impracticable for the purposes of the case. It may also be added that the projectile used is necessarily quite heavy, so that the conditions are quite different from those in which a heavy gun is used with a light projectile.

Owing to the lightness of the gun and the relative great weight of the projectile, there is a much greater tendency to produce a springing of the axle than there would be if the relations of the gun and projectile in the matter of weight were reversed; hence, a necessity arises for providing special means peculiar to this case to prevent the springing of the axle,

and these means consist of the truss M, already described.

What I claim as my invention is as follows:

5 1. A life-saving carriage or vehicle made in two separable sections, mounted on wheels, and connected by a detachable perch or trail, the rear section of said carriage having a gun mounted on its axle with reels on either side thereof for a line journaled on said axle, substantially as shown and described.

10 2. In a life-saving apparatus, a carriage or vehicle composed of two separable sections, each section being mounted upon wheels, and each carrying a portion of the life-saving appliances, one the gun and whip-line, the other the hawser, said sections, when separated, being capable of and designed for conjoint use, substantially as and for the purpose described.

15 20 3. A carriage or vehicle for use in life-saving service, composed of two detachable sections mounted on wheels, the front section

having a hawser-reel on its axle, with boxes supported above the same, and the rear section having a gun for firing the shot-line, with reels for the whip-line, substantially as shown and described. 25

4. In combination with the axle of a life-saving gun-carriage, section C, and the truss M, comprising the cross-bars *m m* and arms *m' m'*, the said cross-bars being placed one over and the other under the trail, for preventing springing of the axle from the recoil of the gun, substantially as shown, and for the purpose set forth. 30

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of October, 1884. 35

CHARLES HUGH McLELLAN.

Witnesses:

CHAS. McCLEES,

JAS. P. COWPERTHWAIT.