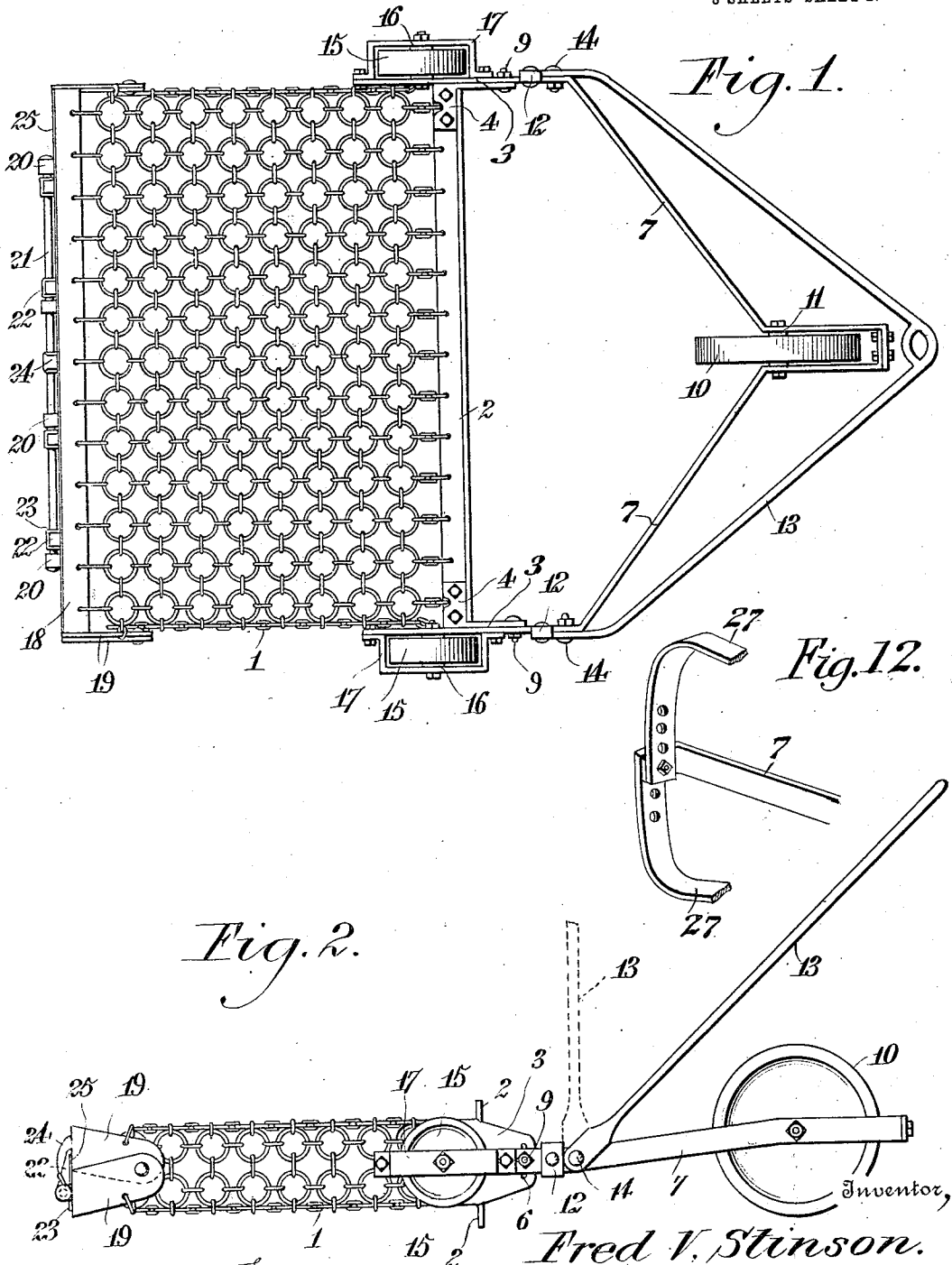


1,104,154.

Patented July 21, 1914.

3 SHEETS-SHEET 1.



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1,104,154.

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3 SHEETS—SHEET 2.

Fig. 3.

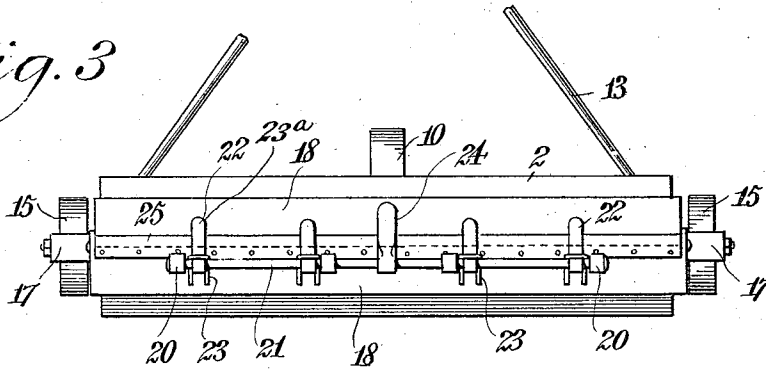


Fig. 4.

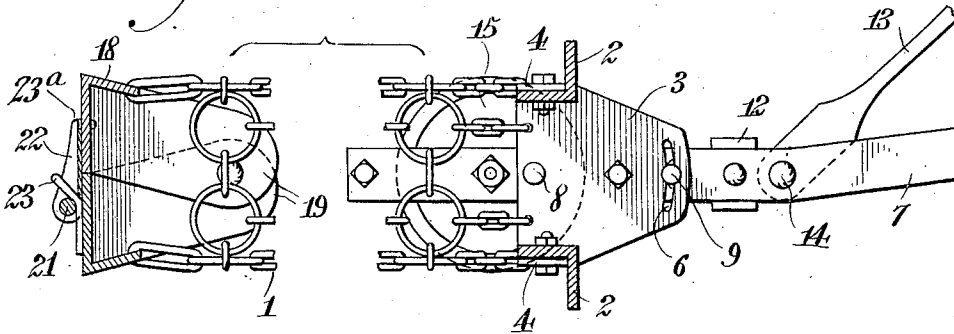
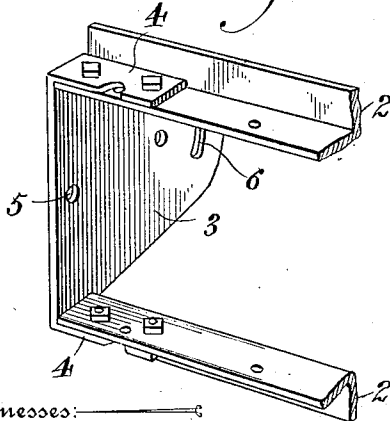
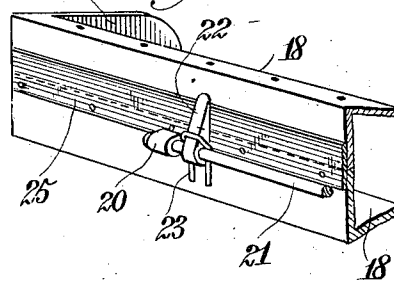


Fig. 5.



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Fig. 6.



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1,104,154.

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3 SHEETS-SHEET 3.

Fig. 7.

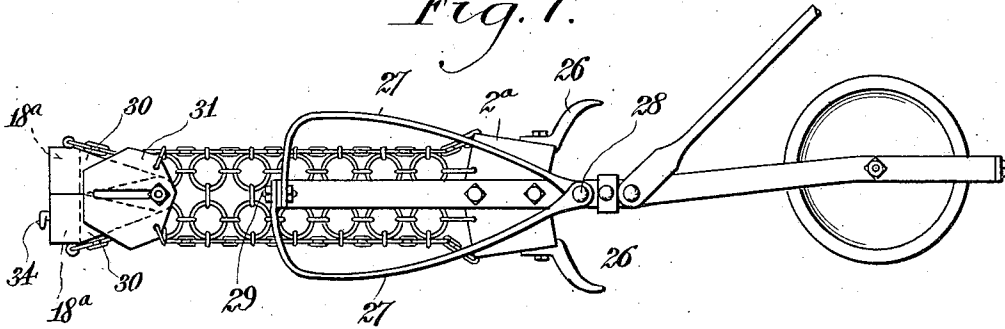


Fig. 8.

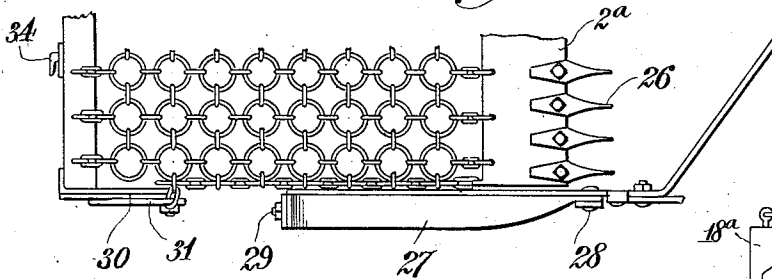


Fig. 11.

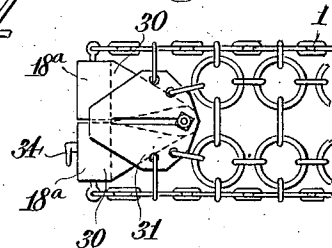


Fig. 9.

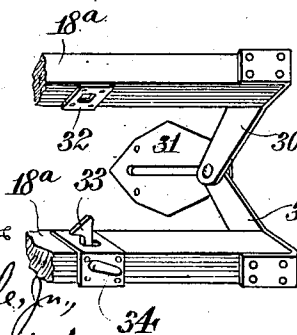
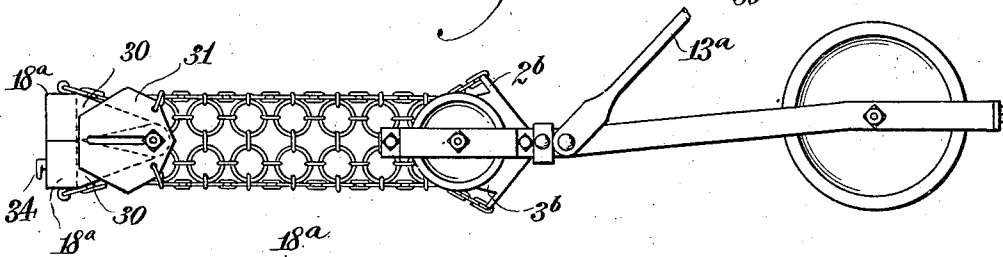


Fig. 10.

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UNITED STATES PATENT OFFICE.

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DRAG.

1,104,154.

Specification of Letters Patent.

Patented July 21, 1914.

Application filed August 15, 1913. Serial No. 784,964.

To all whom it may concern:

Be it known that I, FREDERICK V. STINSON, a citizen of the United States, residing at Rockport, in the county of Knox and State of Maine, have invented new and useful Improvements in Drags, of which the following is a specification.

The primary purpose of this invention is the provision of a device for gathering scallops, but which may be used with equal advantage for gathering bivalves, mollusks, crustacea and other forms of marine life, the device being of such a nature as to be drawn over the bed of water without sinking to any great depth in the bottom thereof as to prevent collection of the desired marine product.

The invention provides a device which is reversible and which while collecting the desired product will clear itself of mud, slime or like matter, the device also being of such formation as to enable it to be turned to be moved in an opposite direction without requiring the lifting of the same from the water.

The invention also has for its object to provide a bag which will admit of the scallops or other marine product readily entering the same and from which the product may be easily and quickly discharged, said bag having a mouth and a discharge, the latter being at the end remote from the mouth and comprising movable jaws which are normally held closed by positive means which when released admit of the jaws separating to deliver the product.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claims.

Referring to the drawings, forming a part of the specification, Figure 1 is a top plan view of a drag embodying the invention. Fig. 2 is a side view, the full lines showing the position of the bail when lowered and the dotted lines indicating the bail when elevated. Fig. 3 is a rear view. Fig. 4 is a longitudinal section, showing the parts on a larger scale, the intermediate portion of the bag or receptacle for catching the product being broken away. Fig. 5 is a detail view in perspective, showing more clearly the connection between the mouth bars and

side plates. Fig. 6 is a detail perspective view of a portion of the jaws for closing the discharge of the bag. Fig. 7 is a side view of a modification showing the supporting wheels replaced by runners. Fig. 8 is a top plan view of a side portion of the drag, illustrated in Fig. 7. Fig. 9 is a side view of a further modification. Fig. 10 is a detail view of an end portion of the rear bars or jaws of the modification shown in Figs. 7, 8 and 9. Fig. 11 is a modification, showing a different way of connecting the bag to the side plates. Fig. 12 is a detail view showing more clearly the manner of adjustably connecting the rear ends of the runners with the side bars.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The numeral 1 designate a bag or receptacle for receiving the scallops, bivalves, crustacea, or other marine product. This bag may be of any capacity and is preferably formed of a plurality of rings which are connected by means of suitable links. The rings and links are of a size to prevent the escape of the scallops or like product when received in the bag, but which will admit of mud, slime and the like passing freely from the bag. The bag or receptacle has a mouth at its front or receiving end and an opening at its rear or discharge end, both ends of the bag being reinforced and stiffened by means of bars which preferably are of L shape in cross section, the horizontal wings being pierced at intervals to receive the links or other connecting means forming points of attachment of the bag therewith. The mouth bars 2 are spaced apart and are connected at their ends to side plates 3, which are formed with inwardly extending lugs 4, centrally disposed openings 5 near their rear edges and arcuate slots 6 near their front edges, said slots being concentric with the openings 5. The bars 2 are bolted or otherwise secured to the lugs 4. Bars 7 have their rear ends pivotally connected to the plates 3 by means of bolts or other suitable fastenings 8, which pass through the openings 5 of such plates and registering openings formed in the bars 7. Bolts 9 passing through openings in the rear portions of the bar 7 and through the arcuate slots 6 serve to secure the bars 7 to

the side plates 3 in an adjusted position within the range of said slots 6. The front portions of the bars 7 converge, thence extend parallel and have their front ends bent inwardly and overlapped and bolted or otherwise secured. A supporting wheel 10 is mounted upon a bolt or axle 11 connecting the rear parts of the parallel portions of the bar 7. Short bars 12 are secured to the rear portions of the bars 7 and constitute stops to limit the upward swinging of a bail 13, which is pivotally connected to the bars 7 by bolts or fastenings 14. The short bars 12 have their end portions bent so as to extend over and engage with the upper and lower edges of the bars 7, whereby the short bars are prevented from turning on the fastenings connecting them with the bar 7. Other supporting wheels 15 are located near the rear ends of the bar 7 and are mounted upon axles 16 which are supported in the bars 7 and in keepers 17 spanning the wheels 15 and secured at their ends to the bars 7. It is to be understood that the wheels 15 may be dispensed with, but it is preferred to utilize the same since they prevent the lower mouth bar from sinking too far in the mud or slime forming the bottom of the body of water in which the drag may be used.

The bars 18 forming the jaws for closing the discharge of the bag or receptacle 1 have their end portions bent, as indicated at 19, and pivotally connected. Stud 20 are fitted to one of the bars 18 and support a rod 21. A plurality of catches 22 are mounted upon the rod 21 and are adapted to engage openings 23^a formed in the opposite bar so as to hold the two jaws closed. Springs 23 cooperate with the catches 22 to hold them in engagement with the openings 23^a. The rod 21 has a handle 24 secured thereto by means of which said rod may be turned to release the catches 22 from the openings 23^a when it is desired to discharge the contents from the bag or receptacle. The handle 24 lies close against the bars 18 so as to be out of the way when the jaws are closed. A strip 25 is attached to one of the bars to overlap the joint formed between the jaws when closed. This strip may be of any yieldable material such as leather or canvas.

When using the drag a rope or like connection is attached to the bail 13 and the drag is lowered into the water until it rests upon the bottom, after which the drag is advanced in the manner well understood in the art of dredging oysters, marine mollusks and other life. The construction is such that the drag may be reversed by pulling upward upon the bail and drawing in the opposite direction, the bag or receptacle flexing to admit of one part moving upon the other. Since both sides are alike it makes no difference which one is in contact with

the bottom. The product enters the mouth of the bag or receptacle between the front bars 2 and is discharged from the rear end of the bag between the jaws 18 after the latter have been released by moving the rod 21 to disengage the catches 22 from the openings 23^a. The relative inclination of the mouth of the bag may be changed by adjusting the bars 7 with reference to the side plates 3, the side bars being secured by tightening the bolts or fastenings 9 after the required adjustment has been effected.

The mouth bars or front jaws may be variously formed and as shown in Figs. 7 and 8 the bars 2^a are flat and are provided along their front edges with teeth 26 which may be of any design or construction, so long as they serve to gather in the marine product to be collected, the teeth 26 are preferably separate from the bars 2^a and may be bolted or otherwise secured thereto and are arranged to flare toward their extremities thereby forming an extended mouth to facilitate the gathering in of the product.

It is contemplated to support the front end of the bag or receptacle either upon wheels or runners. Figs. 7 and 8 show runners as the supporting means, said runners being indicated at 27 and consisting of longitudinally curved bars which are pivotally connected at their front ends as indicated at 28 to the bars 7 which have adjustable connections at their rear ends with the rear extremities of the bars 7 whereby provision is had for raising or lowering the mouth of the bag or receptacle as may be required. The rear ends of the runners 27 are formed with a plurality of openings 27^a and are adapted to overlap and are adjustably connected to each other and to the bent ends of the bars 7 by means of bolts 29. The runners 27 are of a length to prevent the receptacle becoming entangled therewith. In this construction the side plates are dispensed with, the end portions of the bars 2^a being bent and arranged to overlap, the overlapped portions being secured to each other and to the bars 7.

In the construction shown in Fig. 9 the mouth bars 2^b are of angle formation and have their wings, arranged at an acute angle, the front wings inclining rearwardly so as to materially assist the mouth of the receptacle in gliding over the bed of the water when the drag is in operation. The side plates 3^b are of different formation and the bars 7 are connected thereto in a manner so as not to admit of relative adjustment. The bail 13^a is shown as constructed of a rod which after being doubled upon itself is given a partial twist at the fold to form an eye to which the draft, rope, cable or chain may be attached.

The rear jaws or bars may be constructed of metal or wood. Figs. 9 and 10 show the

rear bars or jaws 18^a as constructed of wood, arms 30 being secured to the ends thereof and having pivotal and sliding connection with plates 31. The jaws 18^a are held closed by means of plates 32 and spring actuated catches 33, the plates 32 having openings and being secured to one of the bars 18^a and the catches 33 being secured to the other one of such bars 18^a. When the bars or jaws 18^a are closed the projecting ends of the catches 33 enter the openings of the plates 32 and engage the latter and hold the jaws fast. Hand pieces 34 are connected with the catches 33 and provide convenient means for operating such catches when it is required to release the bars to discharge the product accumulated in the drag when moving the same over the bed of the water.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

It is proposed to connect the bag 1 to the front and rear side plates and jaws in any convenient, substantial and effective manner. Fig. 11 shows the sides of the bag attached

to the rear side plates 31 in a way to obtain the best results.

Having thus described the invention what is claimed as new, is:—

1. In a drag of the character described, the combination of a receptacle, mouth bars having connection with the receptacle, side plates having the ends of the mouth bars secured thereto and held spaced apart thereby, side bars adjustably connected with the side plates, runners adjustably connected with the side bars and adapted to trail upon the bottom and fix the position of the mouth of the receptacle, and a bail having pivotal connection with the side bars.

2. A drag comprising a receptacle, mouth bars connected with opposite portions of the receptacle, side plates having ends of the mouth bars connected thereto, side bars pivotally connected with the plates and relatively adjustable with reference thereto, means for securing the side bars to the plates in the adjusted position, and a bail having pivotal connection with the said side bars.

3. In combination with a drag, and side bars connected therewith, oppositely disposed runners pivotally connected at one end with the side bars and having adjustable connection at the opposite end with each other and with the side bars.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK V. STINSON.

Witnesses:

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JOSHUA N. TIBBETTS.