

N^o 9710



A.D. 1913

Date of Application, 25th Apr., 1913

Complete Specification Left, 18th Oct., 1913—Accepted, 5th Feb., 1914

PROVISIONAL SPECIFICATION.

Improvements in Stockless Anchors and in Housings therefor.

I, AXEL FILIP WALDEMAR STAHLBERGER, of 2, Taylor Street, Whitecrock, Clydebank, in the County of Dumbarton, North Britain, Engineer and Naval Architect, do hereby declare the nature of this invention to be as follows:—

The invention relates to anchors of the stockless type and has for its object
5 to improve their construction in such manner that enhanced strength and greater gripping power is attained, while the shank is of proportionately less length—rendering the anchor more easy of housing. The invention further relates to an improved form of housing for the anchor.

The shank of an anchor made according to the invention is bifurcated, or,
10 more properly, triangulated, the apex of the triangle being adapted to receive the cable shackle or a link. The shank may be adapted to receive the usual two, either interconnected or independent, fluke members, but preferably it is adapted to receive three independently pivoted—one upon either side as usual and
15 the third between the bifurcated arms of the shank. The fluke members may be of usual type, or the canting or heel flukes upon them may be of such a length that they act not only for that purpose but also as gripping flukes. The usual gripping flukes may be of ordinary form; but where there are three, while the two outer are preferably splayed, the central fluke is normal to its pivot. The fluke pivots may be formed on or secured in the shank, and the
20 fluke members be secured upon them in any convenient manner.

In carrying out this part of the invention according to an illustrative example, the head of the shank is rounded to receive the usual shackle, while two inwardly projecting parts are provided, which, while they retain the shackle when it is
25 in place, permit of the passage of its eye between them so that it may be entered into position. Thus practically a universal joint is formed between the shackle and the shank, and should the anchor hold by one fluke, there is not that stress thrown upon the shackle which there is when the shackle is secured in the usual manner by the passage of its pin through the shank.

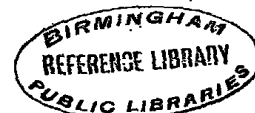
Furthermore under these conditions owing to the triangulation of the shank
30 there is no bending moment in the shank arms which are only subjected to direct stress under any circumstances. Thus the shackle connection and the fluke member joints work always under the most favourable conditions.

The lower ends of the bifurcated arms are enlarged to receive a spindle upon
35 which the three fluke members are pivoted—one between the arms and one on either side. The fluke members are secured in position by any convenient means.

Alternatively, the fluke members may be pivoted upon pivots formed integrally with the shank.

It will be apparent that with the triangulated shank hereinbefore described
40 and with the widely spread fluke members it involves, the overall length of the shank may be relatively considerably less than in the case of shanks of ordinary form.

[Price 8d.]



Stahlberger's Improvements in Stockless Anchors and in Housings therefor.

Thus the improved anchor lends itself to the adaptation of an improved housing.

This improved housing which is secured in and is externally flush with the ships structure embodies at its upper part a hawse hole for passing the cable; beneath this it is of triangular form conforming in outline to the proportions of the anchor and in section to suit the run of the chain. Its upper part is enclosed by a cover part preferably integral with its sides and curved upwards at its lower part to permit of the free housing and unhousing of the flukes. A davit pivoted upon it at one side of its lower part may be provided to assist in housing.

Dated this Twenty-fourth day of April, 1913.

EDMUND HUNT & Co.,
Chartered Patent Agents,
121, West George Street, Glasgow,
Applicant's Agents.

COMPLETE SPECIFICATION.

Improvements in Stockless Anchors and in Housings therefor.

I, AXEL FILIP WALDEMAR STAHLBERGER, formerly of 2, Taylor Street, Whitecrook, Clydebank, in the County of Dumbarton, North Britain, now of 63, Kilbowie Road, Clydebank, aforesaid, Engineer and Naval Architect, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to anchors of the stockless type, having a bifurcated shank and a plurality of flukes, and has for its object to improve their construction in such manner that enhanced strength and greater gripping power, and consequently less weight in the ships anchor equipment, is attained, while the shank is of proportionately less length—rendering the anchor more easy of housing. The invention further relates to an improved form of housing for the anchor.

In carrying out the invention the shank is of known bifurcated, or, more properly, triangulated form, the apex being adapted to receive the cable shackle or a link.

According to the invention, the triangulated shank is adapted to receive three main gripping fluke members, all of substantially equal length, and either independently or conjointly pivoted one on either side outside the shank, and the third between the bifurcated arms of the shank. The fluke members may be of usual type, or the canting or heel flukes upon them may be of such a length that they act not only for that purpose but also as gripping flukes. The usual gripping flukes may be of ordinary form, but while the two outer are preferably splayed, the central fluke is normal to its pivot. The fluke pivots may be formed on or secured in the shank, and the fluke members be secured upon them in any convenient manner. The head of the shank is preferably rounded to receive the usual shackle, while two inwardly projecting parts are provided, which, while they retain the shackle when it is in place, permit of the passage of its eye between them, so that it may be entered into position. Thus practically a universal joint is formed between the shackle and the shank, and should the anchor hold by one fluke, there is not that stress thrown upon the shackle which there is when the shackle is secured in the usual manner by the passage of its pin through the shank. Alternatively, a cross bolt may be used to keep the shackle in position.

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Furthermore under these conditions owing to the triangulation of the shank, there is no bending moment in the shank arms which are only subjected to direct stress under any circumstances. Thus the shackle connection and the fluke member joints work always under the most favourable conditions.

5 The lower ends of the bifurcated arms are enlarged to receive a spindle upon which the three fluke members are pivoted—one between the arms and one on either side. The fluke members are secured in position by any convenient means.

10 Alternatively, the fluke members may be pivoted upon pivots formed integrally with the shank.

It will be apparent that with the triangulated shank hereinbefore described and with the widely spread fluke members it involves, the overall length of the shank may be relatively considerably less than in the case of shanks of ordinary form.

15 Thus the improved anchor lends itself to the adaptation of an improved housing.

This improved housing which is secured in and is externally flush with the ships structure embodies at its upper part a hawse hole for passing the cable, beneath this it is of triangular form, conforming in outline to the proportions
20 of the anchor and in section to suit the run of the chain and the stowage of the anchor. Its upper part is enclosed by a cover part preferably integral with its sides and curved upwards at its outboard part to permit of the free housing and unhousing of the flukes. A davit pivoted upon it at one side of its outboard part may be provided to assist in shipping the anchor.

25 In order that the invention and the manner of performing the same may be properly understood, there are hereunto appended five sheets of explanatory drawings illustrating in Figures 1 and 2, Sheets 1 and 2, in front and in sectional side elevation respectively, one example of the improved anchor, in like views in Figures 3 and 4, Sheets 3 and 4, a second example, and in plan and in sectional
30 elevation in Figures 5 and 6, Sheet 5, an example of the improved housing.

In the example shown in Figures 1 and 2, the main gripping fluke members A B C—the central one B of which is normal to its pivot and the outer A, C splayed—are all of substantially equal length and mounted freely and independently upon bushings on a spindle D passing through enlarged
35 parts E on the lower ends of the bifurcated arms F of the shank. The spindle and with it the fluke members are held in place by nuts G upon the screwed ends of the spindle, the nuts being locked by rivets or other means.

The fluke members are provided with webs H extended to act as tripping blades additional to the usual tripping blades I the sides of which are undercut
40 to coact with tapered faces J on the shank parts E for limiting their angular travel.

The head K of the shank is rounded to receive the usual shackle L, while two inwardly projecting parts M are provided, which, while they retain the shackle when it is in place, permit of the passage of the thinnest part of it between
45 them, so that it may be entered into position.

The example shown in Figures 3 and 4 differs from that just described, in that the main gripping fluke members A B C are interconnected by a channel bar N within which their hubs fit, and are secured by rivets P. The inner faces of this channel bar coact with the taper faces J as limiting stops, and there are
50 secured to the outer walls of the bar N, it may be by the bolts P, (or they may be formed integrally with it) any convenient form of tripping flukes such for example as the angle plates R.

The improved housing shown in Figures 5 and 6 has a base Q of triangular form conforming to the anchor in plan, and about the main part of its perimeter
55 is flush with the ship's structure. The upper part is enclosed by an integrally formed cover U in which there is a hawse hole S for passing the cable with which is combined a hornlike upstanding part T forming a fairlead and riding bit.

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The cover part is curved upwards at its outboard part to permit of the free entry of anchor, while the base is curved downwards to the same end and further depressed towards one side V of the mouth to form a chain run. The outboard part of the chain run may be swelled out above the mouth to form a fairlead and riding bit. This swelled portion may be adapted to take the anchor davit pivot W. 5

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

—1— In an anchor having a bifurcated or triangulated shank and a plurality of flukes, three main gripping flukes members, one between the bifurcations of the shank, and one at either side of the shank, the fluke members being all of substantially equal length and either conjointly or independently pivoted, as described. 10

—2— In the anchor forming the subject-matter of the foregoing claim hereof, a bifurcated shank rounded at its upper end to receive the usual shackle or link; and, coacting with the rounded part for the purpose set forth, two inward projections on the arms of the shank. 15

—3— The improved anchor substantially as hereinbefore described with reference to Figures 1 and 2 of the accompanying drawings. 20

—4— The improved anchor substantially as hereinbefore described with reference to Figures 3 and 4 of the accompanying drawings.

—5— For use with the anchor forming the subject-matter of the foregoing claims hereof, a housing having a base triangular in plan and substantially flush with the ship's structure, and a cover-part in which is a hawse hole and it may be a fairlead, the base and cover part being curved to permit of the easy housing and dropping of the anchor and to provide a chain run and a suitable shape for riding. 25

—6— For use with the anchor forming the subject-matter of Claims 1 to 5 hereof; the improved housing substantially as hereinbefore described with reference to Figures 5 and 6 of the accompanying drawings. 30

Dated this Seventeenth day of October, 1913.

EDMUND HUNT & Co.,
Chartered Patent Agents,
121, West George Street, Glasgow, 35
Applicant's Agents.

ERRATUM.

SPECIFICATION No. 9710, A.D. 1913.

Page 4, line 11, for " flukes members " read " fluke members "

PATENT OFFICE,

June 5th, 1916.

SHEET 1.

SHEET 2.

SHEET 3.

FIG. 1.

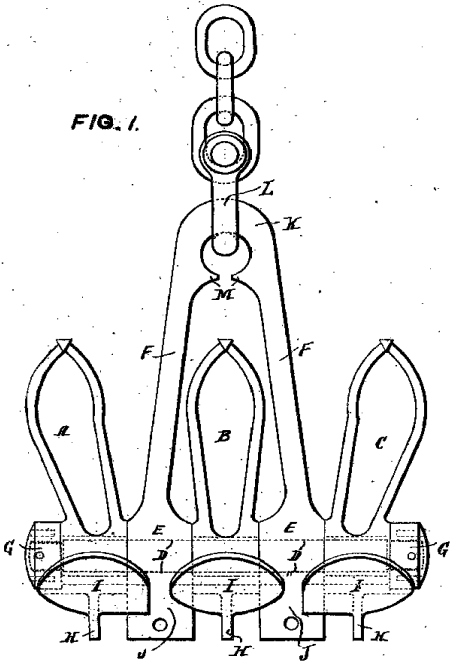


FIG. 2.

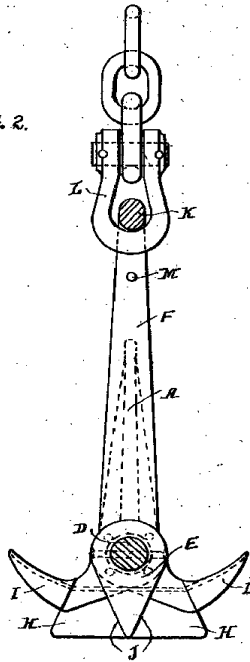
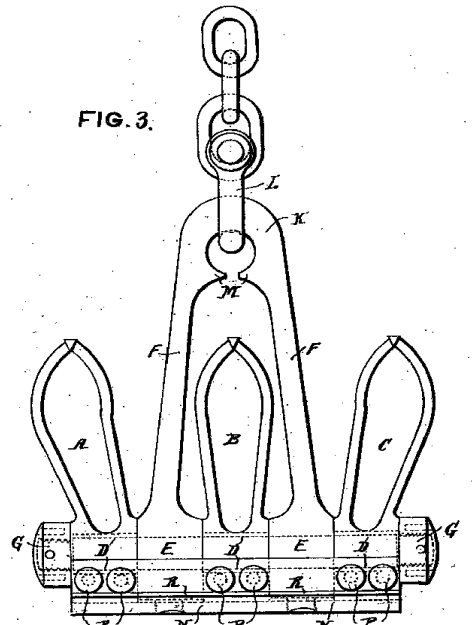


FIG. 3.



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FIG. 1.

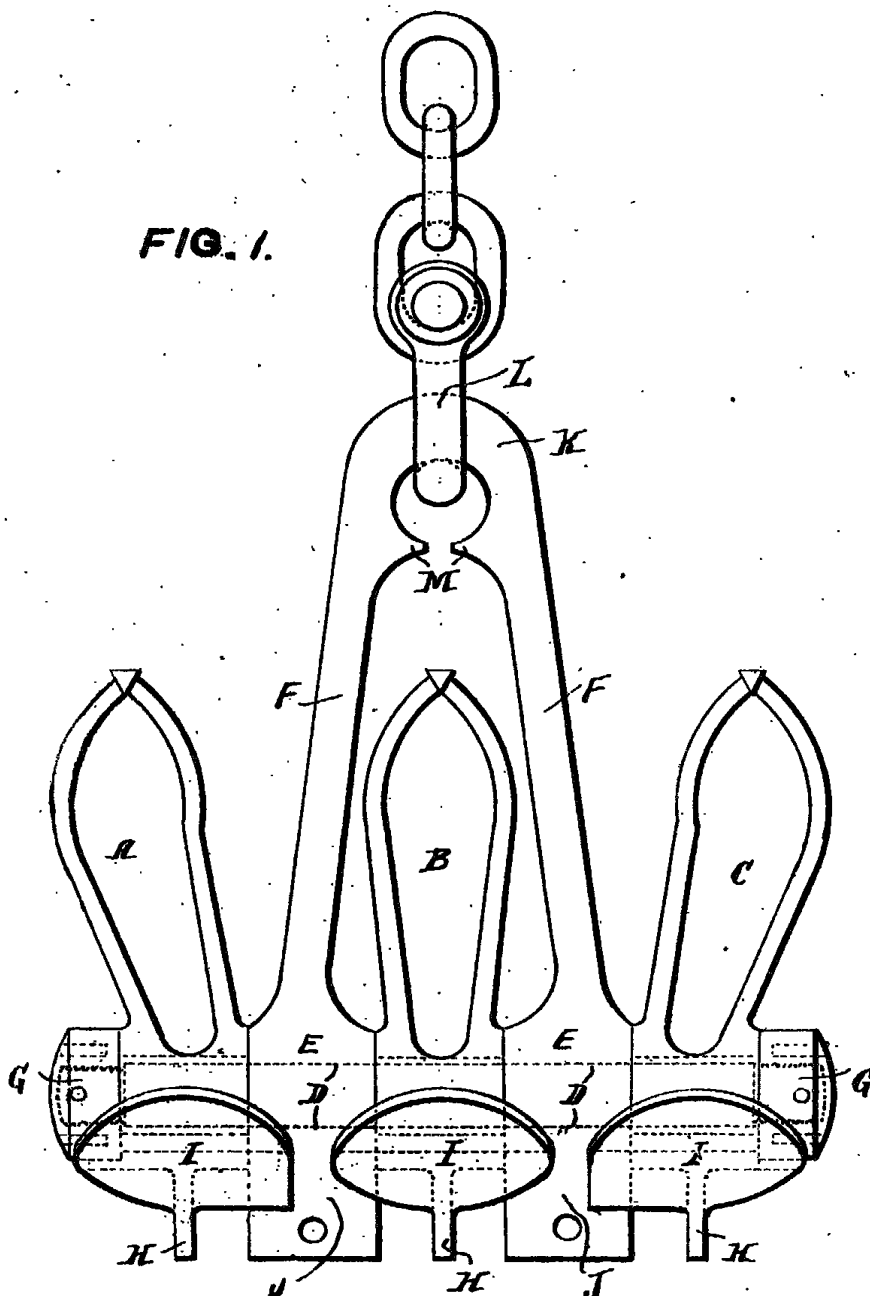
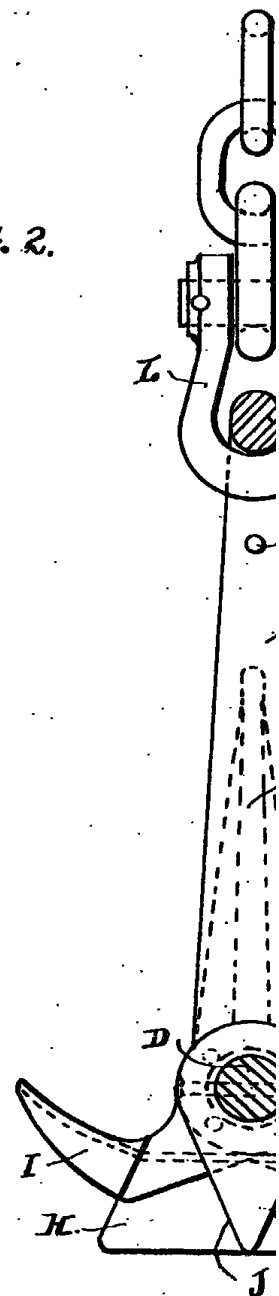


FIG. 2.



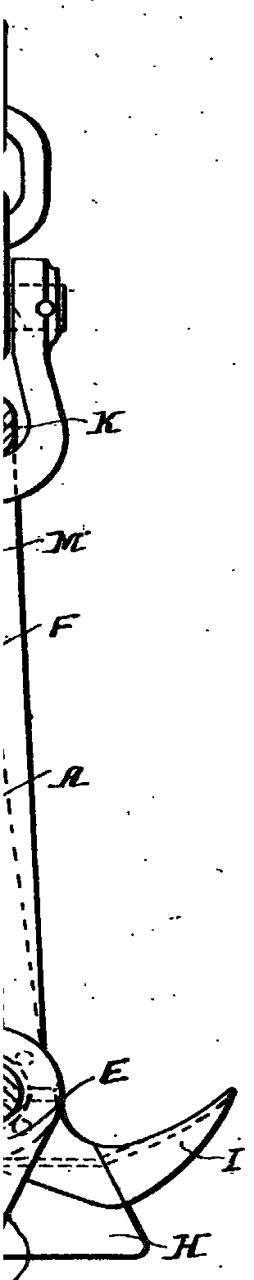
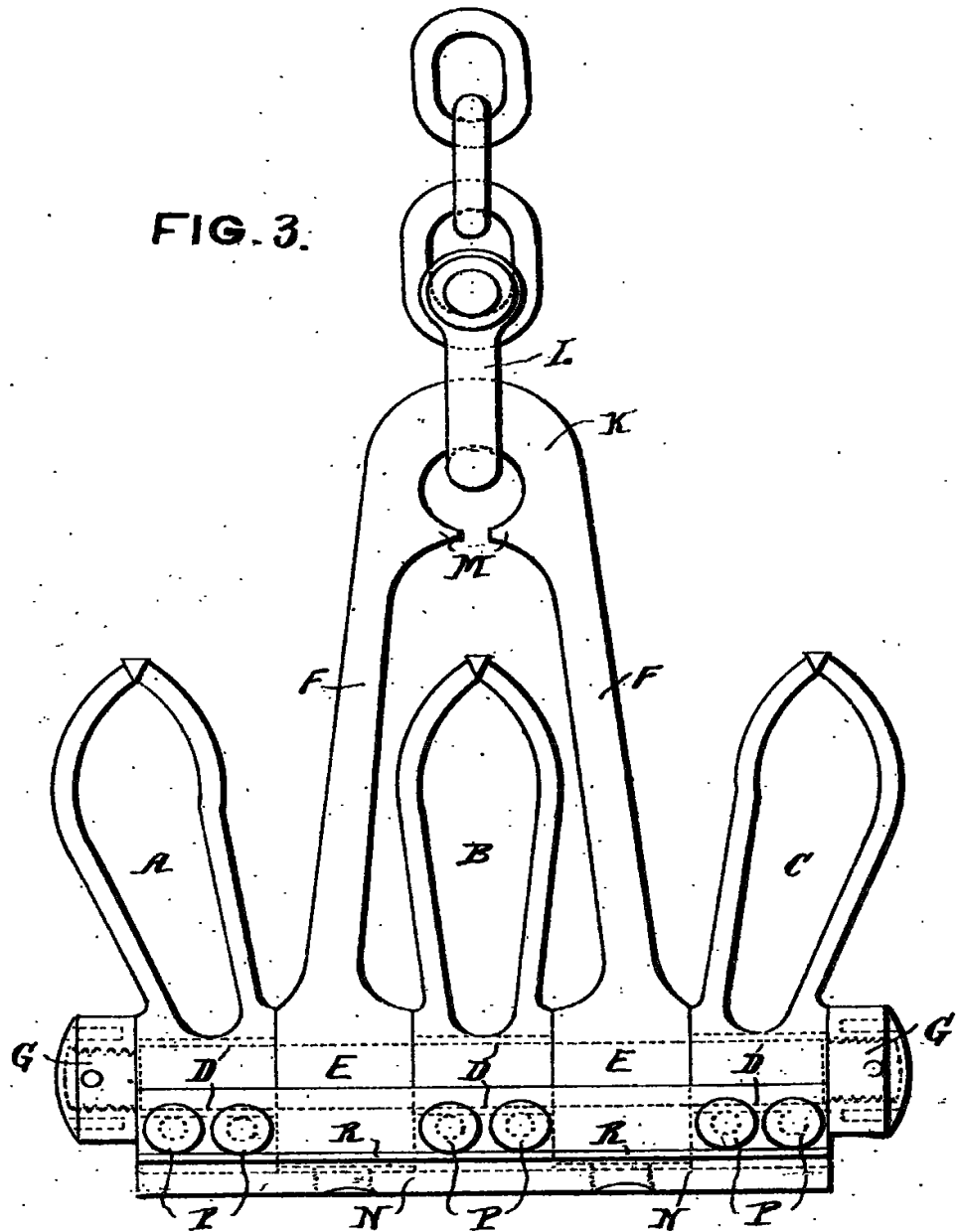


FIG. 3.



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SHEET 4.

SHEET 5.

FIG. 4.

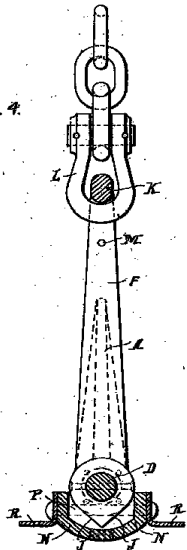


FIG. 5.

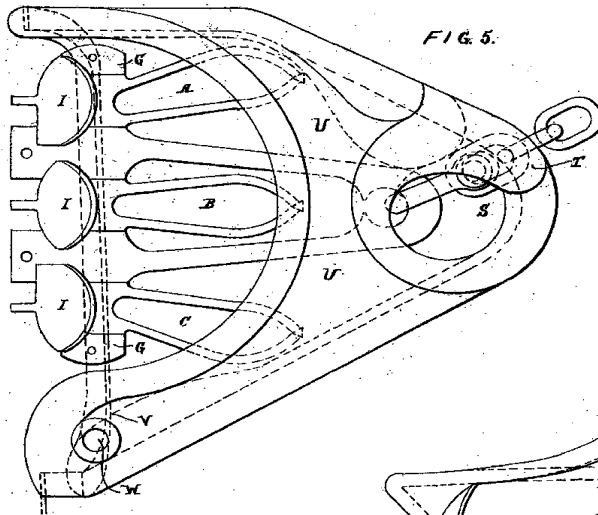
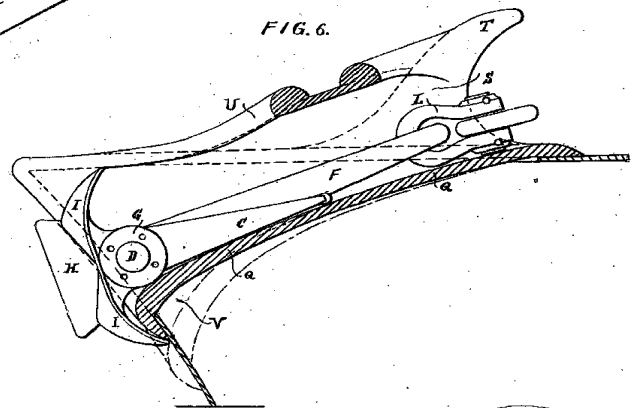


FIG. 6.



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FIG. 4.

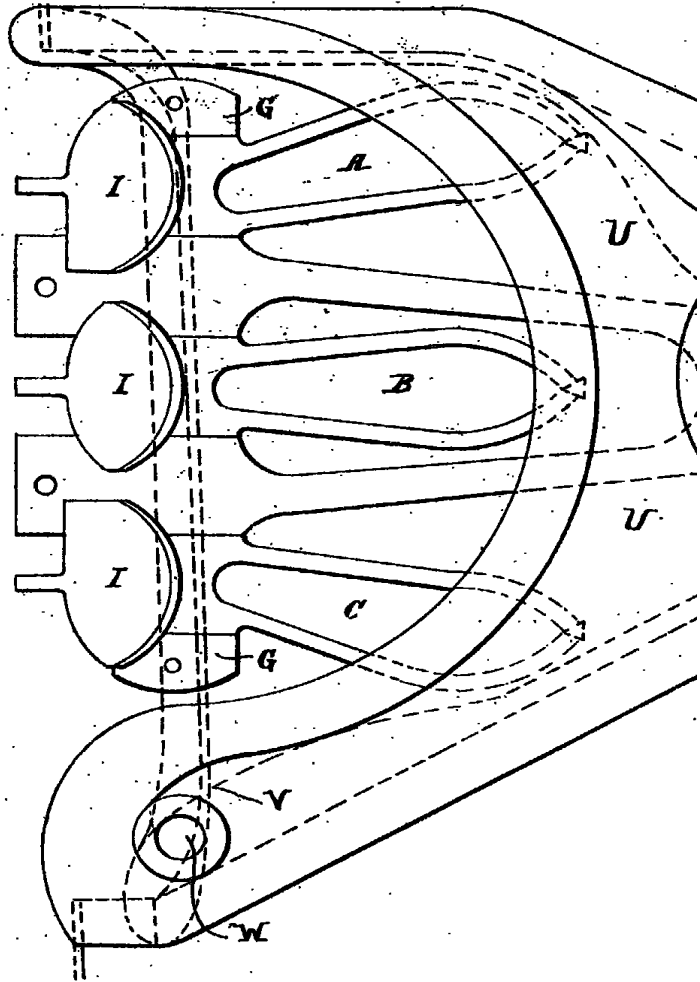
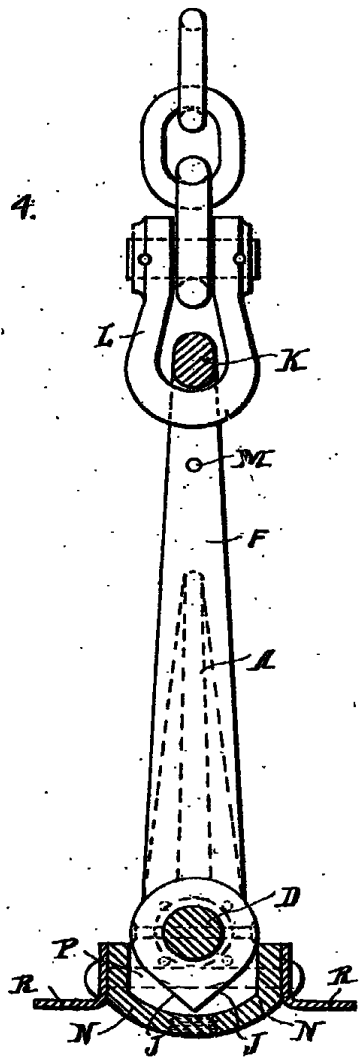


FIG. 5.

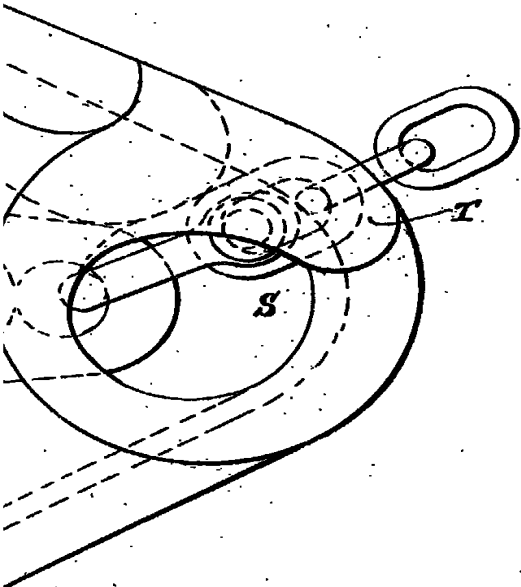
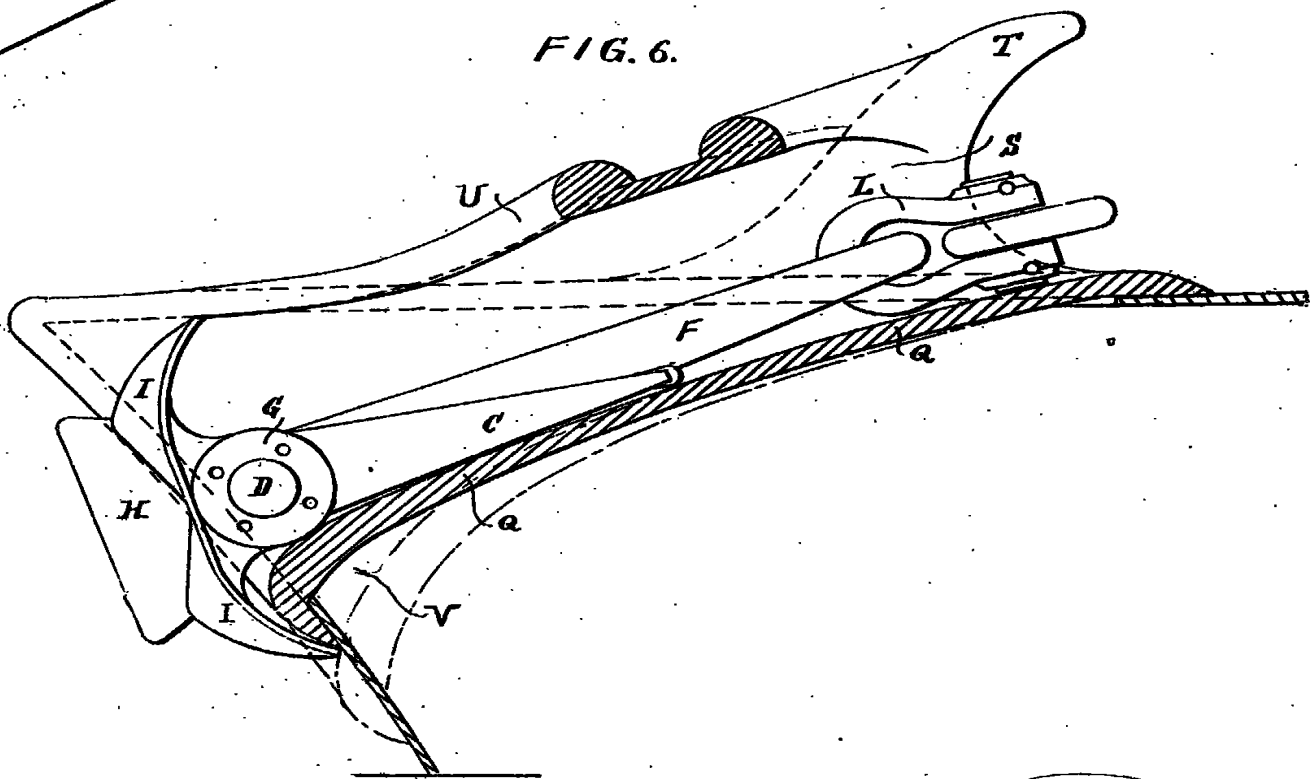


FIG. 6.



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