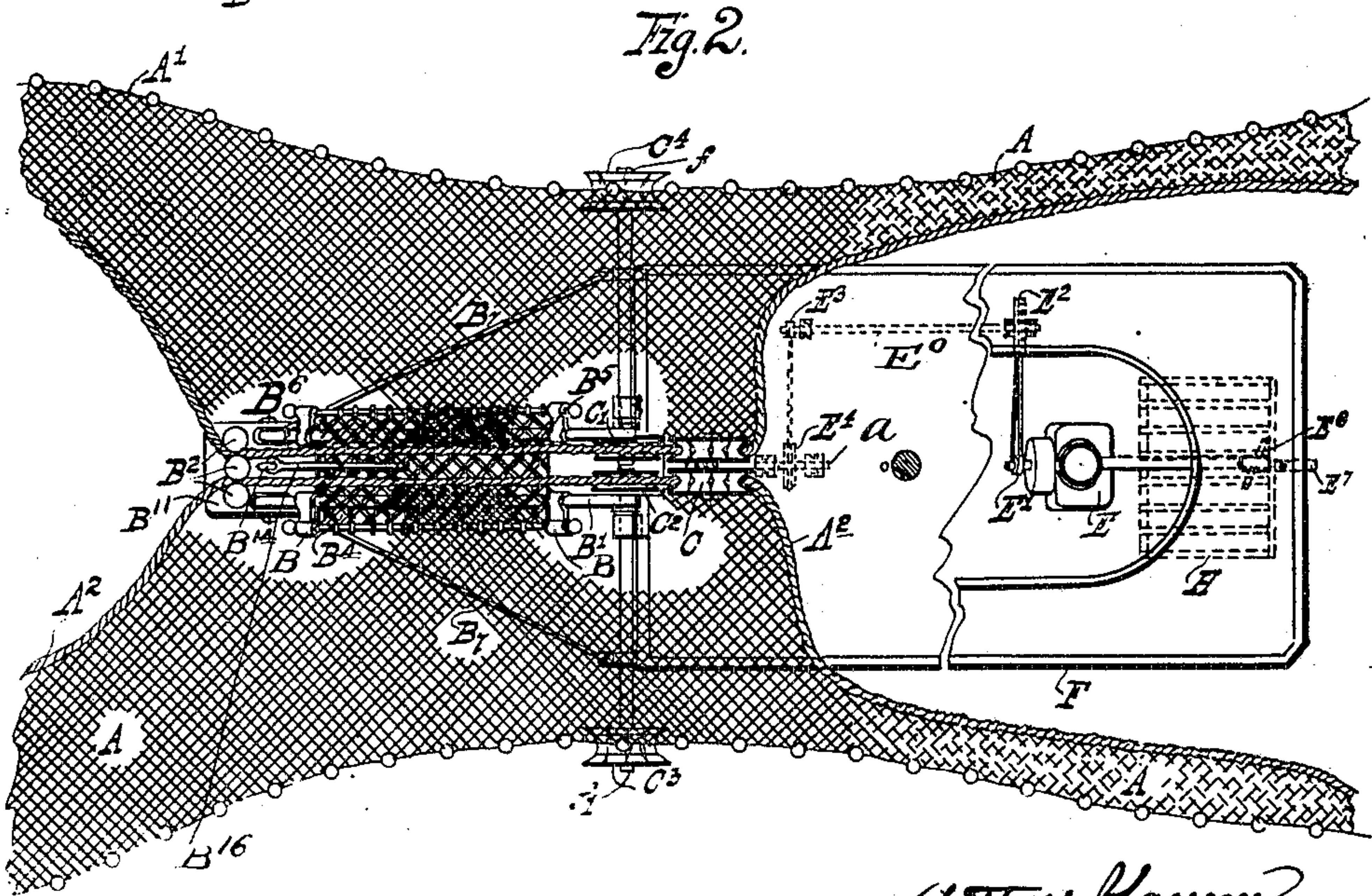
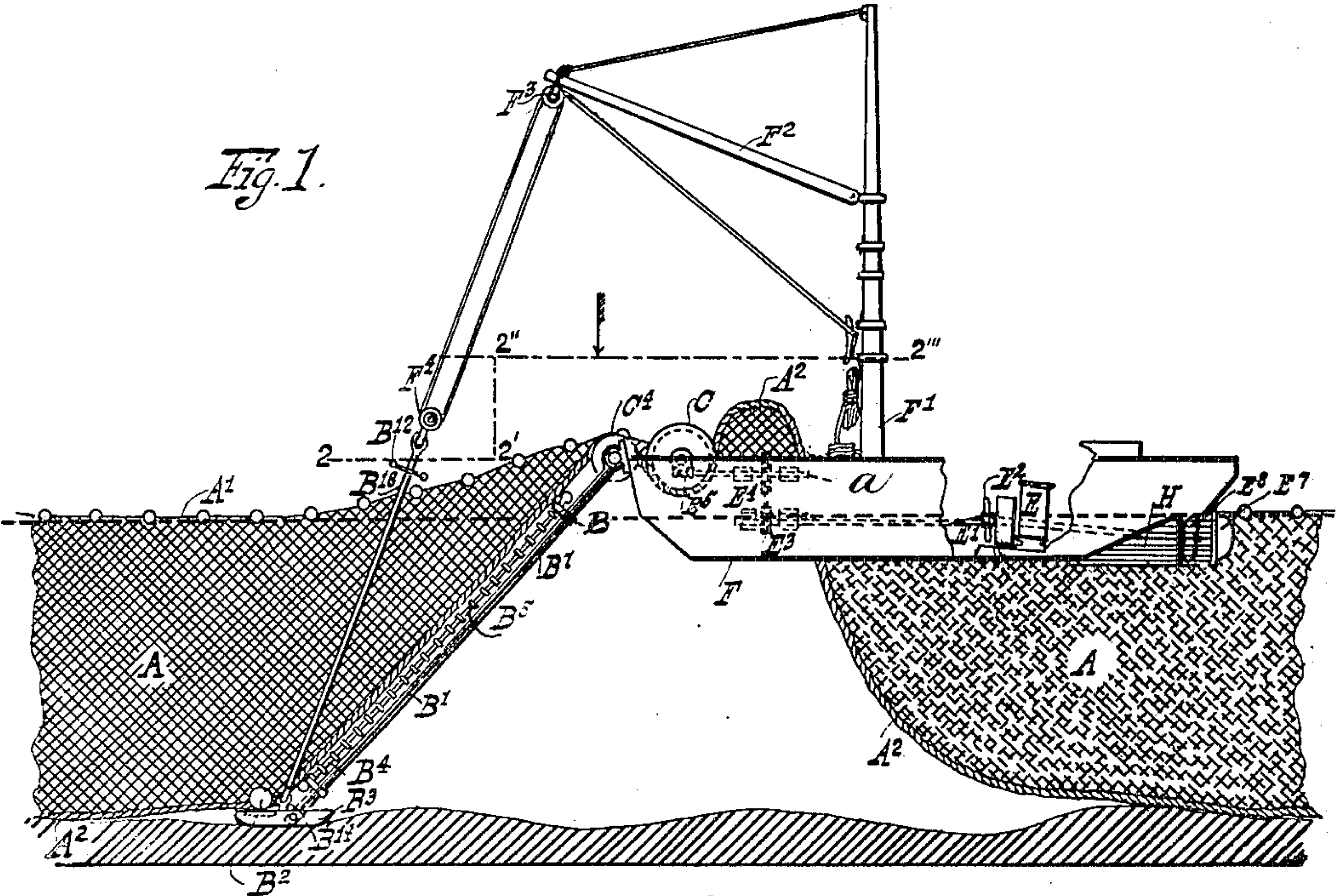


No. 837,173.

PATENTED NOV. 27, 1906.

A. YANCEY.
SEINING APPARATUS.
APPLICATION FILED JAN. 28, 1905.

2 SHEETS—SHEET 1



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Witnesses

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2 SHEETS—SHEET 2.

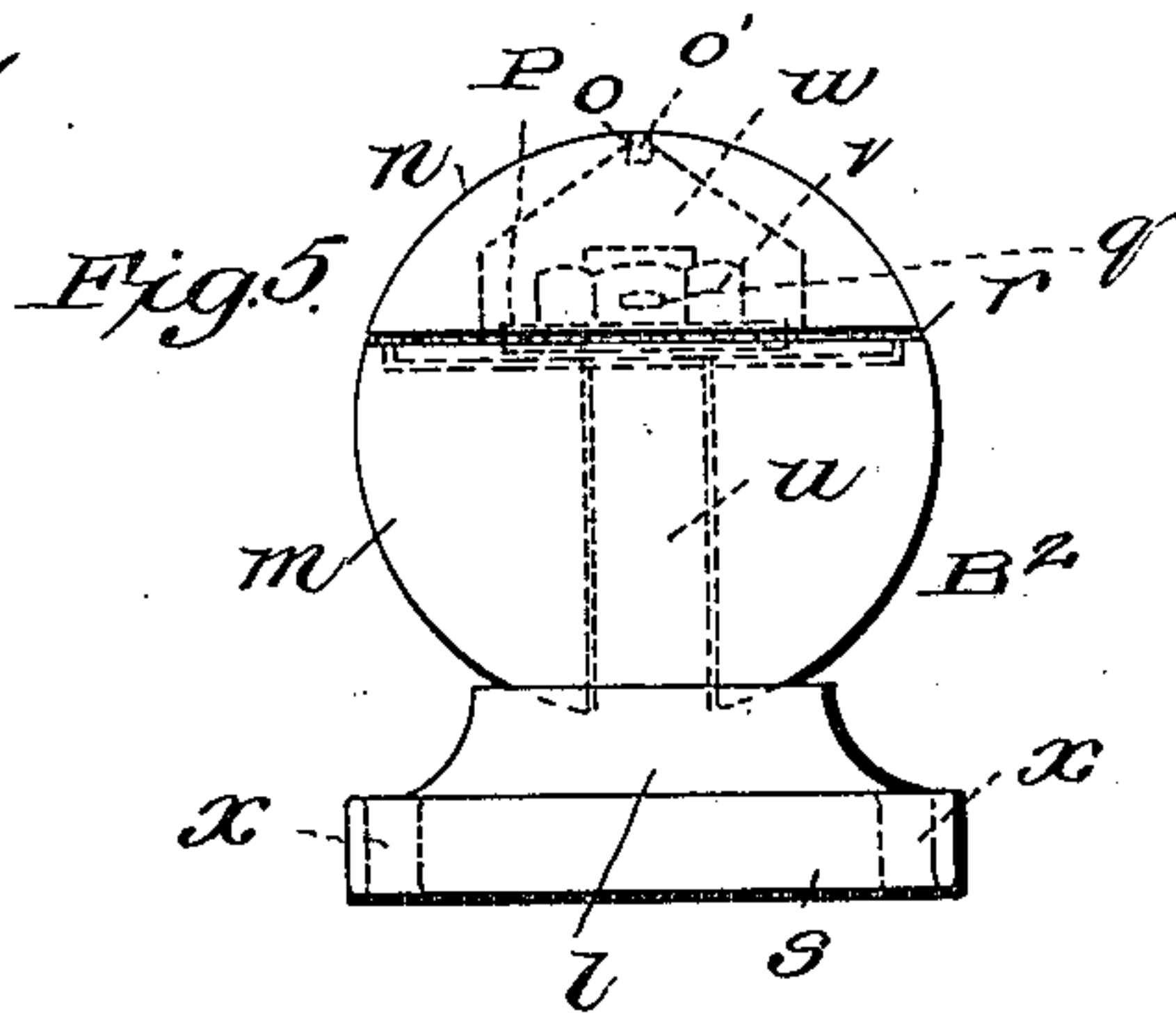
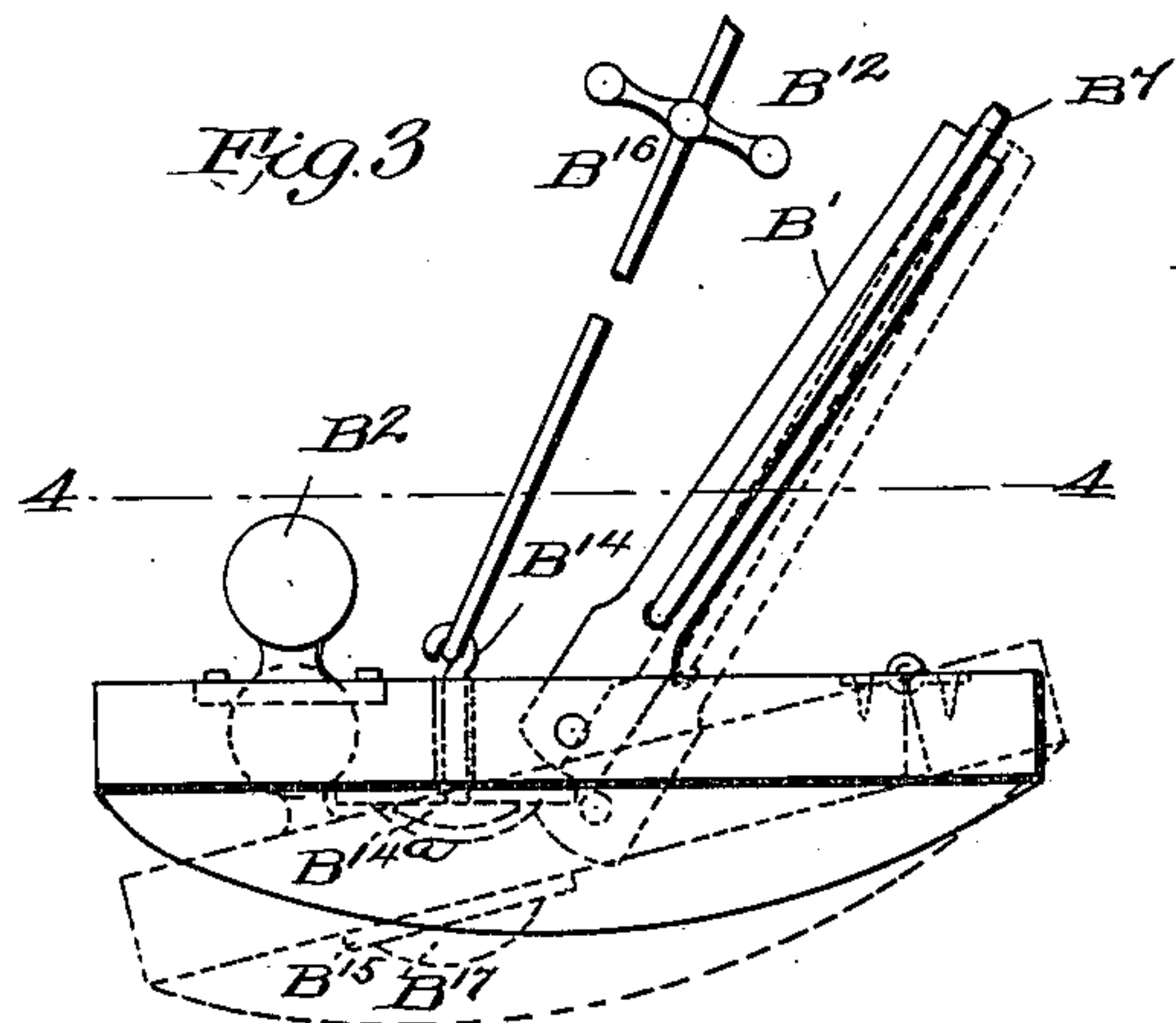


Fig. 6.

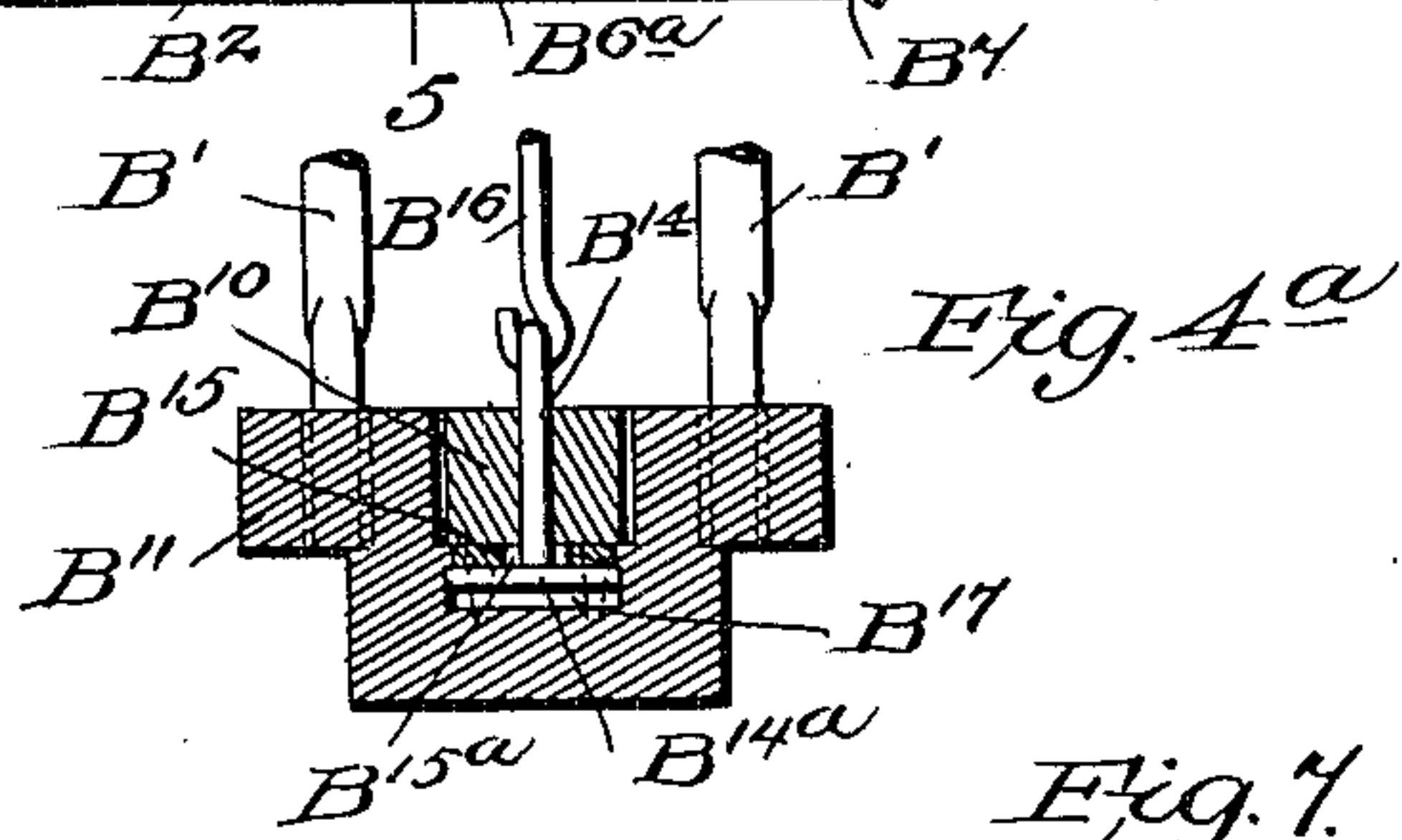
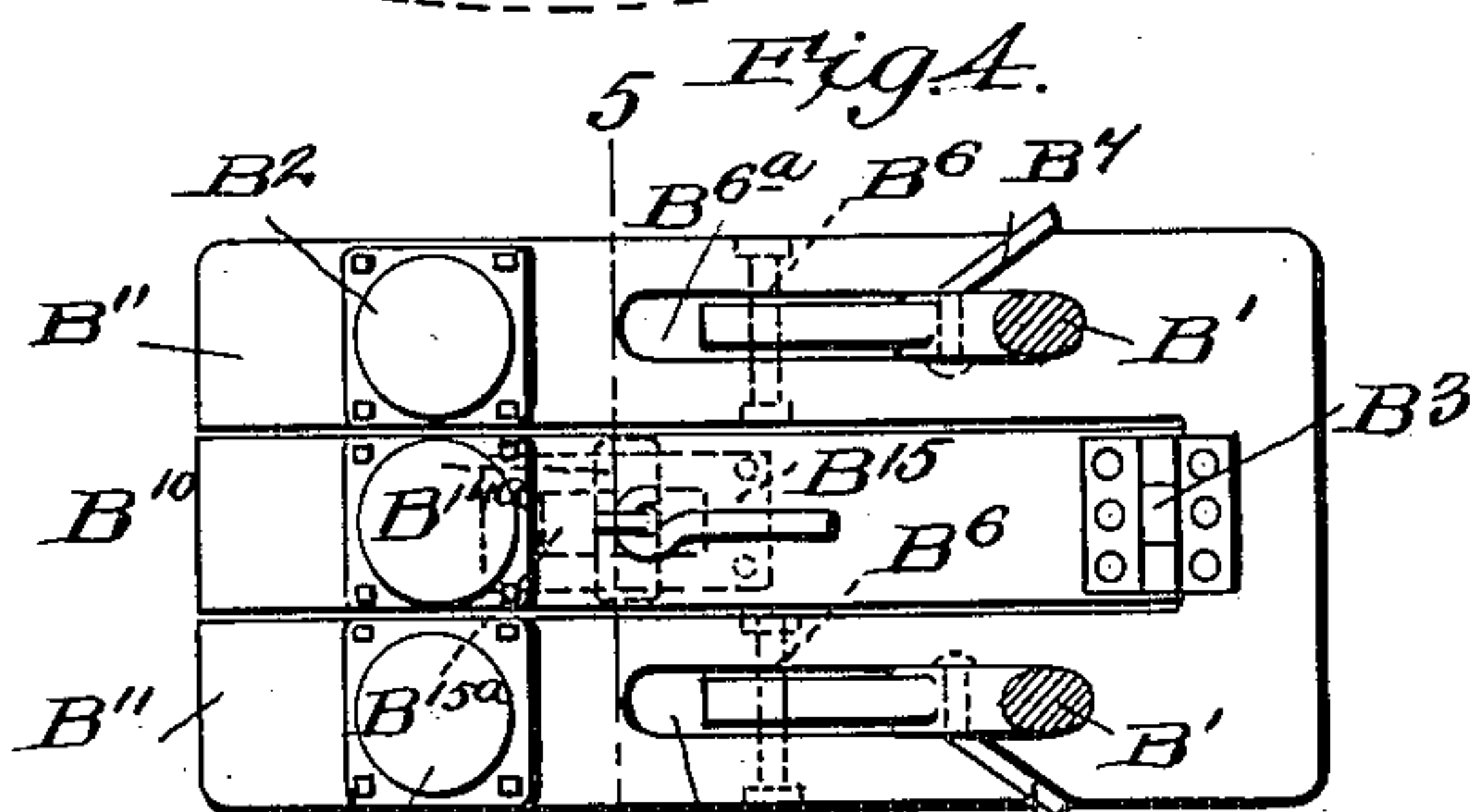
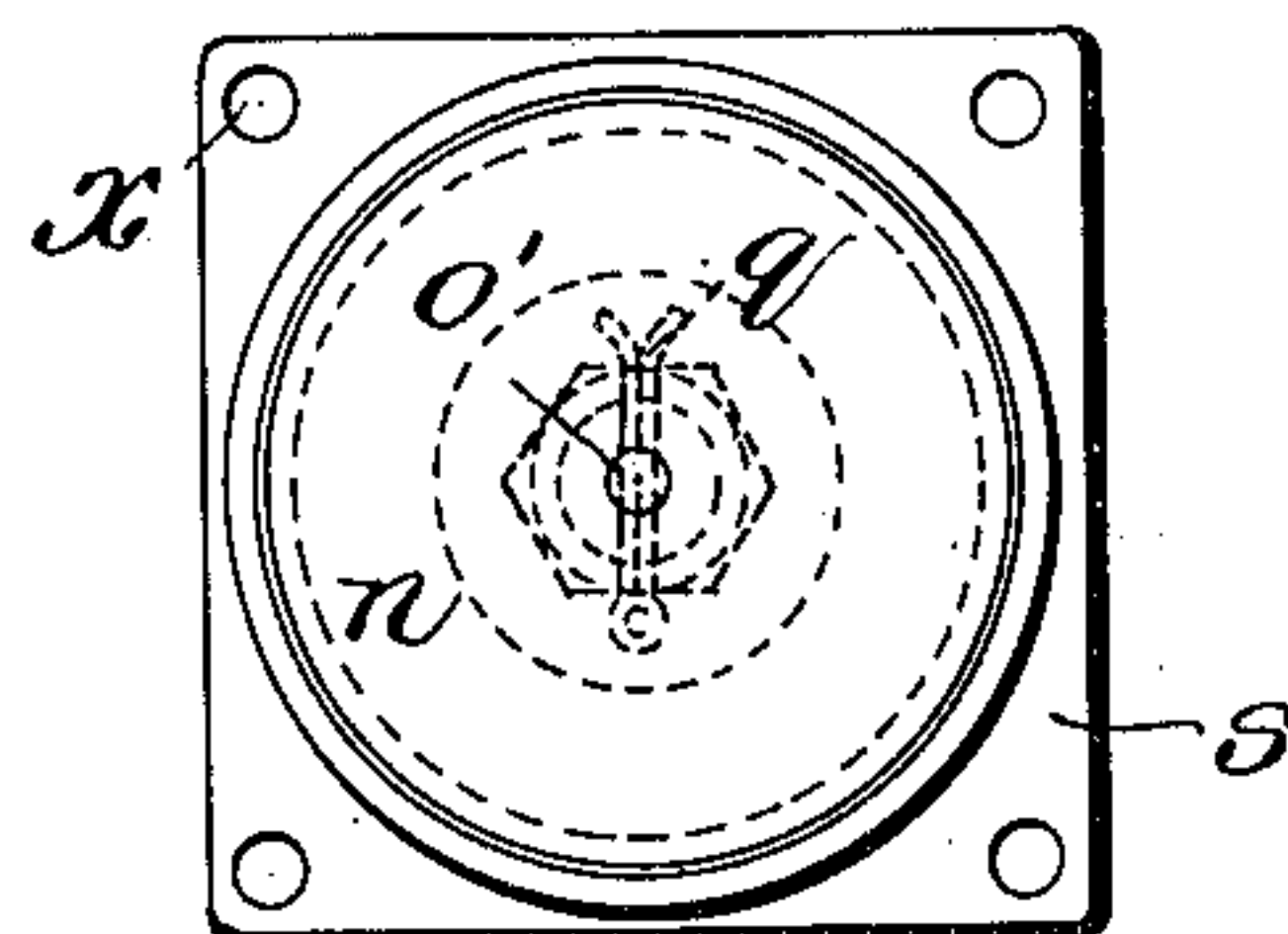


Fig. 7.

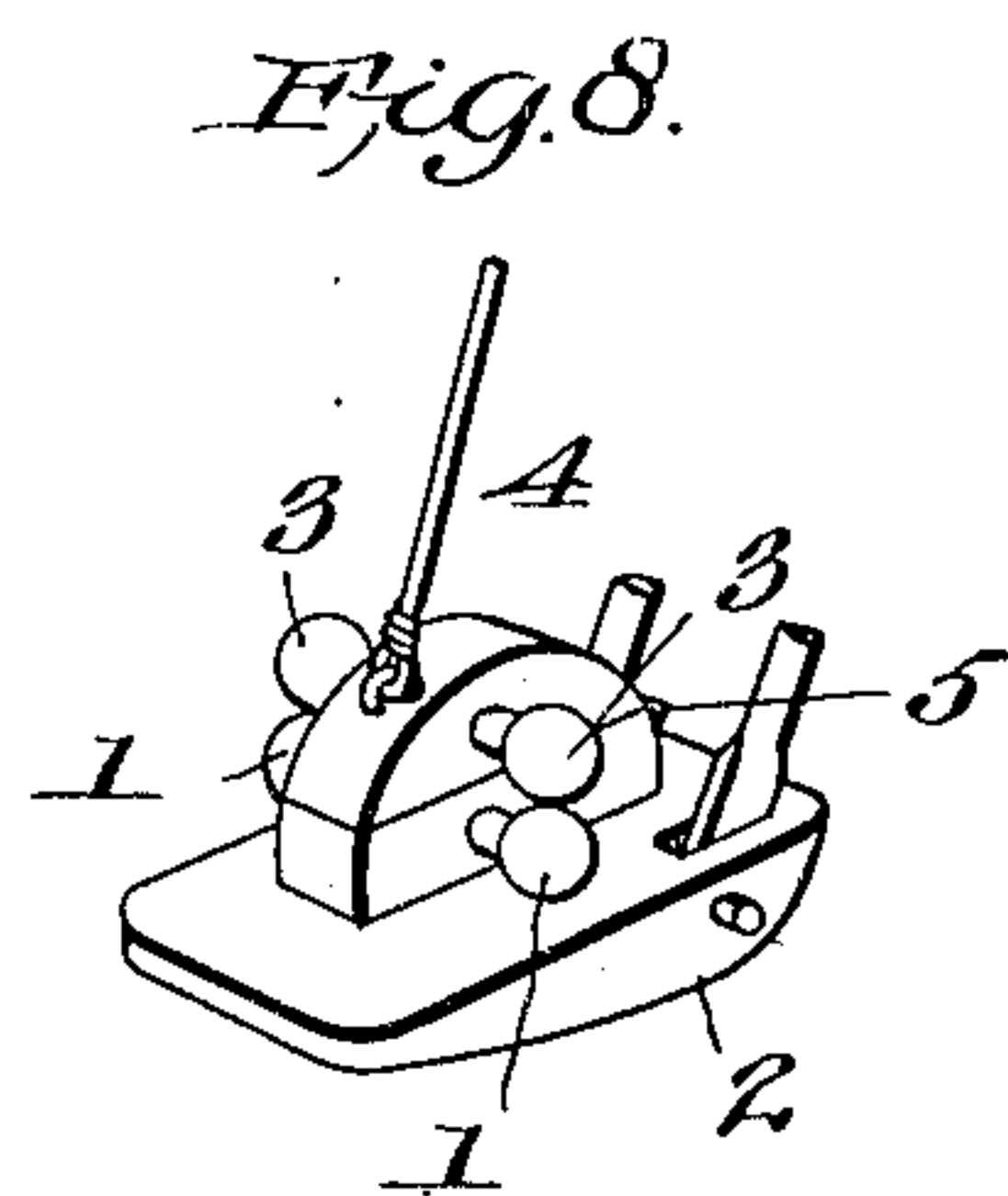
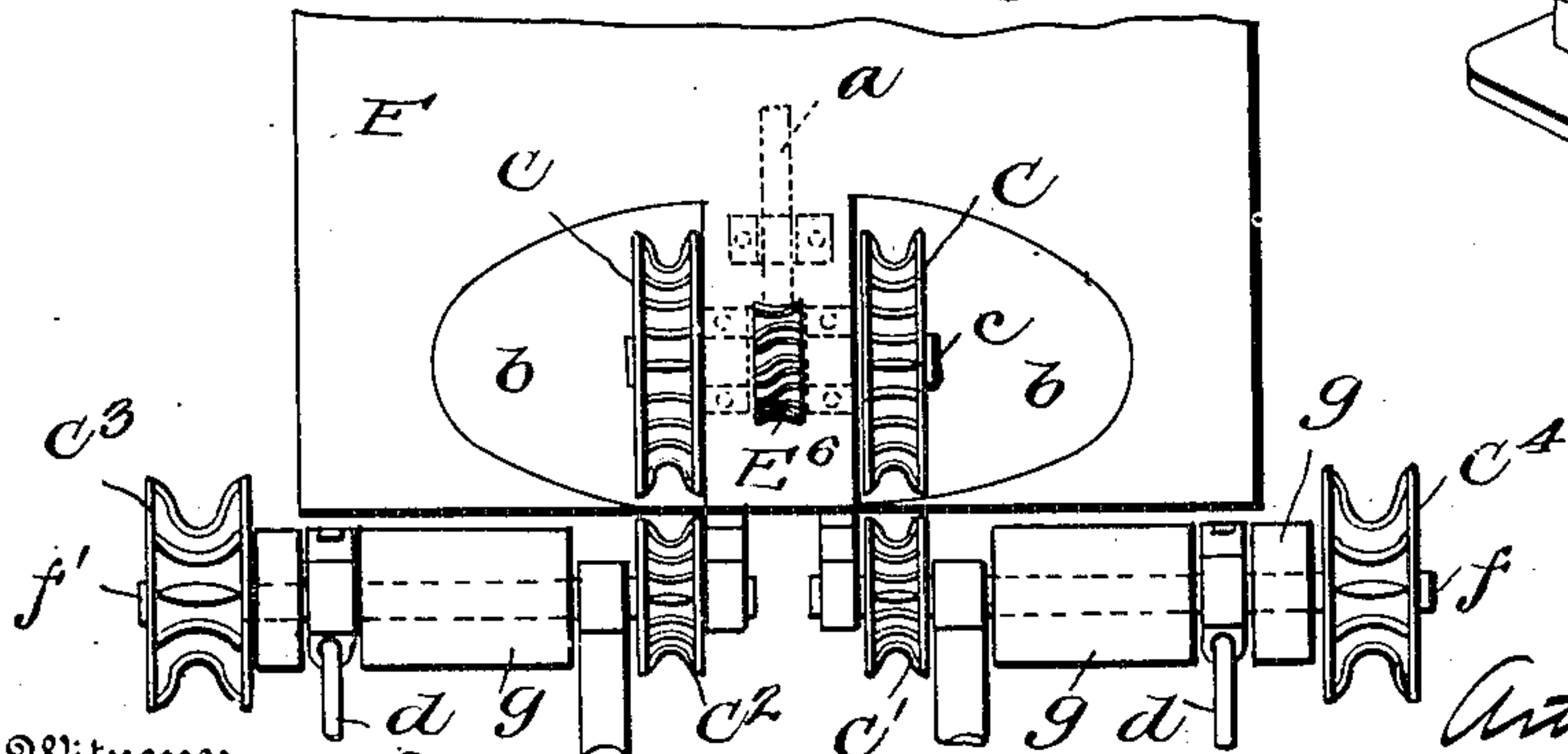


Fig. 8.

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SEINING APPARATUS.

No. 837,173.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed January 28, 1905. Serial No. 243,089.

To all whom it may concern:

Be it known that I, ARTHUR YANCEY, a citizen of the United States, residing at Dermott, in the county of Chicot and State of Arkansas, have invented certain new and useful Improvements in Seining Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in seining apparatus.

The invention is particularly applicable for use in catching shrimp, but may be equally as well used for catching other fish. In the following I therefore refer to shrimp as a matter of brevity, it being understood that the term is intended to embrace other classes of fish.

Broadly speaking, the invention consists of power-actuated hauling means associated with apparatus for closing the bottom of the seine and guiding the hauled-in wings thereof during hauling, the hauled-in wings of the seine being neatly deposited on a suitable support or recast, as desired.

To more fully describe the invention, reference is had to the accompanying drawings, illustrating an application of the invention, in which like characters designate the same parts in the several views, and in which—

Figure 1 is a side elevation showing my improved apparatus represented as closing the seine, the front wing of the seine being removed for clearer illustration. Fig. 2 is a sectional plan view along the line 2 2' 2'' 2''' of Fig. 1. Fig. 3 is a detail view, in side elevation, showing in full lines the closing device with rollers locked in its closed position to guide the lead-lines and by the dotted lines in the open position to release the lead-lines. Fig. 4 is a sectional plan view taken along the line 4 4, Fig. 3, of the closing device in its operative position. Fig. 4^a is a transverse section on line 5 5 of Fig. 4. Fig. 5 is an enlarged detail view in elevation, showing one of the closing-rollers and the manner of mounting same. Fig. 6 shows the same in plan. Fig. 7 is a fragmentary view at the forward end of the tender, showing the operating-windlass and seine-guiding means in plan; and Fig. 8 is a detailed view showing a

slight change in the disposition of the rollers of the closing means.

A designates the body portion, netting, or web of the seine proper provided with the cork-lines A' and lead-lines A².

B' represents a pair of spaced depending arms pivotally connected to the support or tender F at their upper ends and at their lower ends pivotally connected to a sled-block B³, and for this purpose the sled-block is slotted, as at B^{3a}, Fig. 4, to receive the lower ends of the depending arms and secure same thereto by pins B⁶, Fig. 4.

In order to form a closure for the opening between the wings of the net adjacent the depending arms, I provide a pair of rods B⁴, disposed parallel to the rods B' and secured thereto by suitable brackets B B⁵, designating suitable cross-netting carried by the parallel rods B⁴.

B' represents stay-rods connecting the lower ends of the rods B' with the support F at d.

At the forward end of the sled-block B³ are a plurality of guiding-rollers B², and these rollers may be disposed relatively to each other in horizontal planes, or in vertical planes, as shown in Fig. 8. In the drawings, referring to Figs. 3 and 4, these guiding-rollers are shown as lying in horizontal planes, and for the purpose of adjusting them relatively to each other to retain the lead-lines therebetween or to release same therefrom the sled-shoe is formed of a pair of spaced arms B¹¹, carrying two of the rollers at their outer ends, and pivoted between said arms, as at B⁹, is a third arm B¹⁰, carrying one of said rollers B².

B¹² represents handles on an operating-rod B¹⁶, connected at its lower end to a pin B¹⁴, having a locking-button B^{14a} cooperating with a plate B¹⁵, secured to the central sled-block and slotted, as at B^{15a}, that portion of the arm B¹⁰ beneath the plate B¹⁵ being hollowed out, as at B¹⁷, to contain the locking-button B^{14a} when the parts are interlocked. (See Figs. 3 and 4.)

C represents a pair of grooved wheels mounted on the axis c, journaled in suitable bearings b, Fig. 7, the peripheral faces of said wheels being notched or grooved transversely to form a gripping-surface and constituting a windlass for hauling the seine.

This windlass C is driven by any suitable means operatively connected with a source of power. For instance, in Figs. 1 and 2 is illustrated a motor E, (which may be the motor for propelling the boat also,) connected by belting E' to the pulley E² on shaft E⁰, carrying pulley E³, connected by belting to pulley E⁴ on shaft a, carrying worm E⁵, co-operating with the worm-wheel E⁶ on the shaft c.

Forward of the grooved wheels C of the windlass are mounted the similarly-notched smaller grooved wheels C' C², carried by the independently-mounted shafts f f', respectively, which latter at their outer ends carry the notched grooved pulleys C⁴ C³. The rollers g, Fig. 7, may be disposed between the guiding-wheels C' C⁴ and C² C³, respectively, to support the body portion of the net while being hauled.

A suitable method of mounting the closing-rollers for the lead-lines of the seine is shown in Figs. 5 and 6, and while this particular arrangement is not essential it may be described in detail for the purpose of illustration.

The rollers B² are preferably spherical and may be formed of two members m and n, the inner member being apertured to receive a spindle u, projecting from the concave seat l, formed on the base s, provided with bolt-holes x for securing same to the sled-block. These rollers are so disposed adjacent each other that they almost touch each other at points on their peripheral surface lying in radii normal to the axes of the said rollers. For instance, if the rollers revolve on vertical axes their points of tangency will lie in a horizontal plane or in a line encircling the roller, which line is described by the ends of the radii normal to the axis. The advantage of this distinction also in having the rollers of spherical form is that there is no friction on the web transverse to the line of passage through the rollers, which friction twists and jams the web in other forms of rollers, these disadvantageous features being avoided, and the lead-lines of the seine will be guided to the closing device by one roller revolving in one direction and will be guided from the closing device by an opposed roller revolving in another direction.

The upper end of the spindle u projects beyond the member m and is screw-threaded to receive a nut v, held in place by a cotter-pin q, P being a washer interposed between the nut v and the member m. The upper member n is recessed out, as at w, to receive the nut v and at the same time afford a chamber to hold a suitable lubricant, o designating an opening communicating with said chamber for introducing the lubricating-oil, and it is obvious that this opening may be closed by a plug or stopper o'.

It is obvious that the two sections n and m

may be screw-threaded to form a joiner, or other joiner may be made by soldering, as at r. The tender or float F may be propelled in any suitable way. In the drawings, for the purpose of illustration only, the motor E drives an ordinary propeller E⁸, an ordinary rudder E⁷ being shown.

H represents a fender for the propeller to prevent possible contact with the seine when recast. The tender is also provided with a mast F' and gaff F² suitably stayed. A tackle arrangement having the blocks F³ and F⁴ forms a connection between the upper end of the rod B¹⁶ and the gaff, whereby the depending arms and closing means may be elevated and lowered.

In operation the lead-lines, as shown in Figs. 1 and 2, pass between the closing-rollers B² and upwardly adjacent the depending arms B', thence reeving over the guide-wheel C' C² and beneath the grooved wheels C of the power-actuated windlass, the barrier-netting B⁵ forming a closure for the spaced ends of the net.

The windlass C is continuously operated by the actuating mechanism, and the lead-lines therebeneath are normally out of contact with the grooved wheels C, so that it will be manifest by raising upwardly on the net at the rear of the windlass the notched surfaces of the wheels C will grip the lead-lines and haul in the net. At the same time the lead-lines reeving over the wheels C' C² will impart rotary motion to the wheels C⁴ C³ and feed in the cork-lines, and, the body of the net resting on the loosely-mounted rollers g, the hauling of same is facilitated.

It will be obvious that either of the wings of the net may be hauled independently of the other by simply lifting up that particular lead-line, while the two wings may be operated conjointly by raising both lead-lines.

It will also be obvious that if the tender or float F remains stationary by operating the windlass C the entire net will be moved toward the float as the same is being hauled, while, on the other hand, the float may be moved along the net, in which operation the pivoted sled-block B³ will guide the lower end of the depending arms along the bed of the water, the net being wound in as the tender is moved therealong, and, as shown in Figs. 1 and 2, it may be recast, if desired, during the operation.

To effect the release of the lead-lines from the closing means in the construction illustrated, it will only be necessary to turn the rod B¹⁶ by means of the handles B¹², which will operate the swiveled pin B¹⁴ and bring the button B^{14a} in alinement with the slot B¹⁵, when the arms B¹¹ will fall by their own weight, augmented by the depending arms B'.

It is obvious that the advantages attained by the particular form and mounting of the

spherical rollers may also be attained by other arrangements. For instance, where spherical rollers are used it is not essential that the three rollers be disposed side by side in a horizontal plane, as instead of using three rollers I may employ four, two on each side with one disposed above the other, as shown in Fig. 8, wherein 1 designates the lower pair of rollers, carried by the sled-block 2, and 3 the upper pair of rollers, carried by the vertically-movable member 4, hinged, as at 5, to the sled-block.

The principal object in having the rollers spherical, in addition to avoiding the use of an unprotected pivot or axle, whereby the netting is invariably caught and hung during operation, is that no matter how the lead-lines may be curled in the web or net or no matter in what direction the seine may have drifted the operating-rollers being spherical will always be positioned to properly receive and guide the lines, which would not be the case with other forms of rollers.

It will also be observed that by mounting the closing means or rollers directly on the depending arms carried by the float I am enabled to employ actuating means of high power for hauling the seine without elevating the closing means, which could hardly be accomplished successfully where a closing means was simply anchored on the bed of the stream, as in such classes of devices the closing means would ride its anchor upon the application of a great amount of power and could not, therefore, be made to operate effectively. Thus it will be seen that by the present construction and coöperation of the depending arms and closing means with the hauling mechanism I am enabled to haul and land the seine by actuating means of high power at the same time that the wings of the seine are being brought together, the barrier-netting carried by the spaced depending arms preventing the escape of the shrimp, and this barrier-netting is of considerable importance, especially where the seine is being hauled toward the float, as shrimp always follow the moving wings of the seine.

While the drawings and foregoing description describe a practical application of the invention, it will be understood that I do not limit myself to all the specific details of the apparatus as shown and described, as many modifications might be made without departing from the spirit of the invention.

What I claim is—

1. In seining apparatus, the combination of means for closing the wings of the seine while being hauled, and mechanism operatively associated with the seine to mechanically haul and land the wings thereof.

2. In seining apparatus, the combination of means for automatically bringing together the lead-lines of the seine for closing the wings thereof while being hauled, and mechanism

operatively associated with the seine to mechanically haul and land the wings thereof, substantially as described.

3. In seining apparatus, the combination of means for bringing together the lead-lines of the seine and closing the end thereof while the same is being hauled, of mechanism engaging the lead-lines of the seine for hauling in and landing the wings thereof, substantially as described.

4. In seining apparatus, the combination of means for closing the wings of the seine while being hauled, a windlass adapted to engage the lead-lines of the seine for hauling in and landing the wings thereof, and means for actuating said windlass, substantially as described.

5. In seining apparatus, the combination of a power-actuated windlass comprising a pair of peripherally-grooved wheels, means for guiding the lead-lines of the seine into engagement with said grooved wheels, and means for bringing together the lead-lines and closing the end of the seine while being hauled, the whole constructed and operating to mechanically haul and land the seine and bring together the wings of the seine in the water prior to landing substantially as described.

6. In seining apparatus, the combination with power-actuated means adapted to haul and land the wings of the net conjointly or independently, and means for bringing together and guiding the lead-lines while being hauled and landed, substantially as described.

7. In seining apparatus, the combination of a power-actuated windlass normally operating continuously, means for leading the lead-lines of the seine normally in proximity to said windlass and into engagement therewith when the seine is to be hauled and landed, and means for bringing together the lead-lines and closing the end of the seine while being hauled and landed, substantially as described.

8. In seining apparatus, the combination of a power-actuated windlass, guiding-wheels forward thereof, said wheels and windlass coacting to engage and haul and land the seine while being hauled, and means for bringing together the lead-lines and closing the end of the seine while being hauled substantially as described.

9. In seining apparatus, the combination of a power-actuated windlass, guiding-wheels forward thereof, the lead-lines of the seine reeving over said guide-wheels and beneath said windlass, and means for bringing together the lead-lines and closing the end of the seine while being hauled, the whole constructed and operating to mechanically haul and land the seine and bring together the wings of the seine in the water prior to landing substantially as described.

10. In seining apparatus, the combination of guiding-wheels for the lead-lines and co-operating guiding-wheels for the cork-lines substantially as described.

5 11. In seining apparatus, the combination of guiding-wheels for the lead-lines and co-operating guiding-wheels for the cork-lines, and interposed independently-operating rollers for guiding the netting substantially as described.

10 12. In seining apparatus, the combination of power-actuated means adapted to engage the lead-lines of the seine, wheels guiding the lead-lines to said power-actuated means, 15 guide-wheels for the cork-lines driven by said first-mentioned guide-wheels, and means for bringing together the lead-lines and closing the end of the seine while being hauled substantially as described.

20 13. In seining apparatus, the combination with a suitable support, of spaced depending arms carried thereby, a guard or barrier extending longitudinally of said arms, means carried by said arms for bringing together 25 the lead-lines of the seine forward of said guard, and power-actuated means for hauling the seine substantially as described.

30 14. In seining apparatus, the combination with a suitable support, of spaced depending arms carried thereby, a guard comprising netting extending longitudinally of said arms, means carried by said arms for bringing together the lead-lines of the seine forward of said guard, and power-actuated means for 35 hauling the seine substantially as described.

40 15. In seining apparatus, the combination with a support, of power-actuated means carried thereby for hauling the seine, and means for controlling the lead-lines, while being hauled, consisting of guide-rollers, approxi- 45 mating tangency on radii normal to the axes of the said rollers.

50 16. In seining apparatus, the combination with a support, of power-actuated means carried thereby for hauling the seine, and means carried by said support for bringing together the lead-lines for closing the wings of the seine while being hauled, comprising a plu- 55 rality of rollers vertically adjustable relatively to each other substantially as described.

17. In seining apparatus, the combination with a support, of power-actuated means car-

ried thereby for hauling the seine, and means carried by said support for bringing together 55 the lead-lines for closing the wings of the seine while being hauled, comprising a plurality of rollers of spherical form located adjacent each other substantially as described.

18. In seining apparatus, the combination 60 with a support, of power-actuated means carried thereby for hauling the seine, and means carried by said support for bringing together the lead-lines for closing the wings of the seine while being hauled, comprising a plu- 65 rality of spherical rollers vertically adjustable relatively to each other substantially as described.

19. In seining apparatus, the combination 70 with a support, of power-actuated means carried thereby for hauling the seine, a support depending from said main support, a closing device carried by said depending support, comprising a pair of separable members ad- 75 justable relatively to each other and rollers carried by said adjustable members and located in proximity to each other, locking means for said adjustable members, and means for unlocking said locking means to 80 release the lead-lines substantially as described.

20. In seining apparatus, the combination with a support, of a plurality of suitably-mounted rollers adapted to be secured 85 against movement relative to said support and to receive the lead-lines of a seine in substantially all directions of its horizontal plane and direct same upwardly toward the surface 90 of the water.

21. In seining apparatus, the combination 90 with a support, of means carried by said support for bringing together the lead-lines of a seine to close the wings thereof while being hauled, comprising a plurality of rollers co- 95 operating with said lead-lines.

22. In seining apparatus, the combination 100 with a sled-block, of a pivoted member thereon, closing-rollers carried by said block and said pivoted member, and means for locking said pivoted member in position.

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

ARTHUR YANCEY.

Witnesses:

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