

B. H. VOLLANS.
LOG CRADLE.

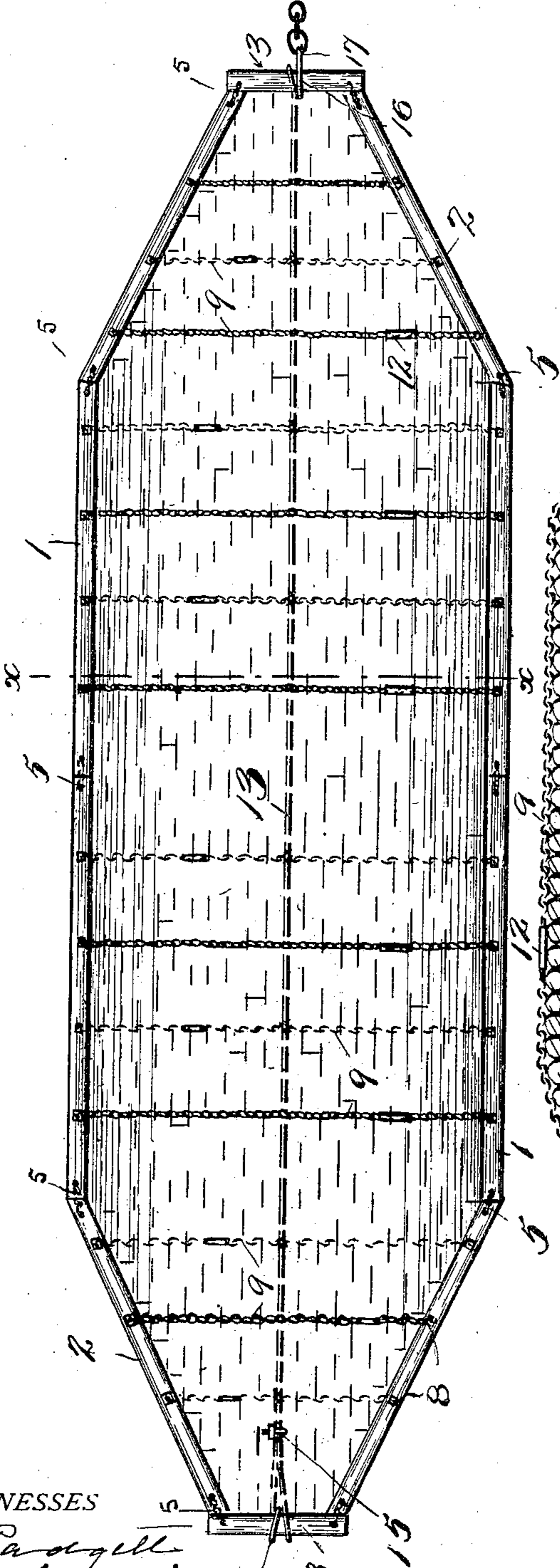
APPLICATION FILED JAN. 30, 1911.

999,277.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

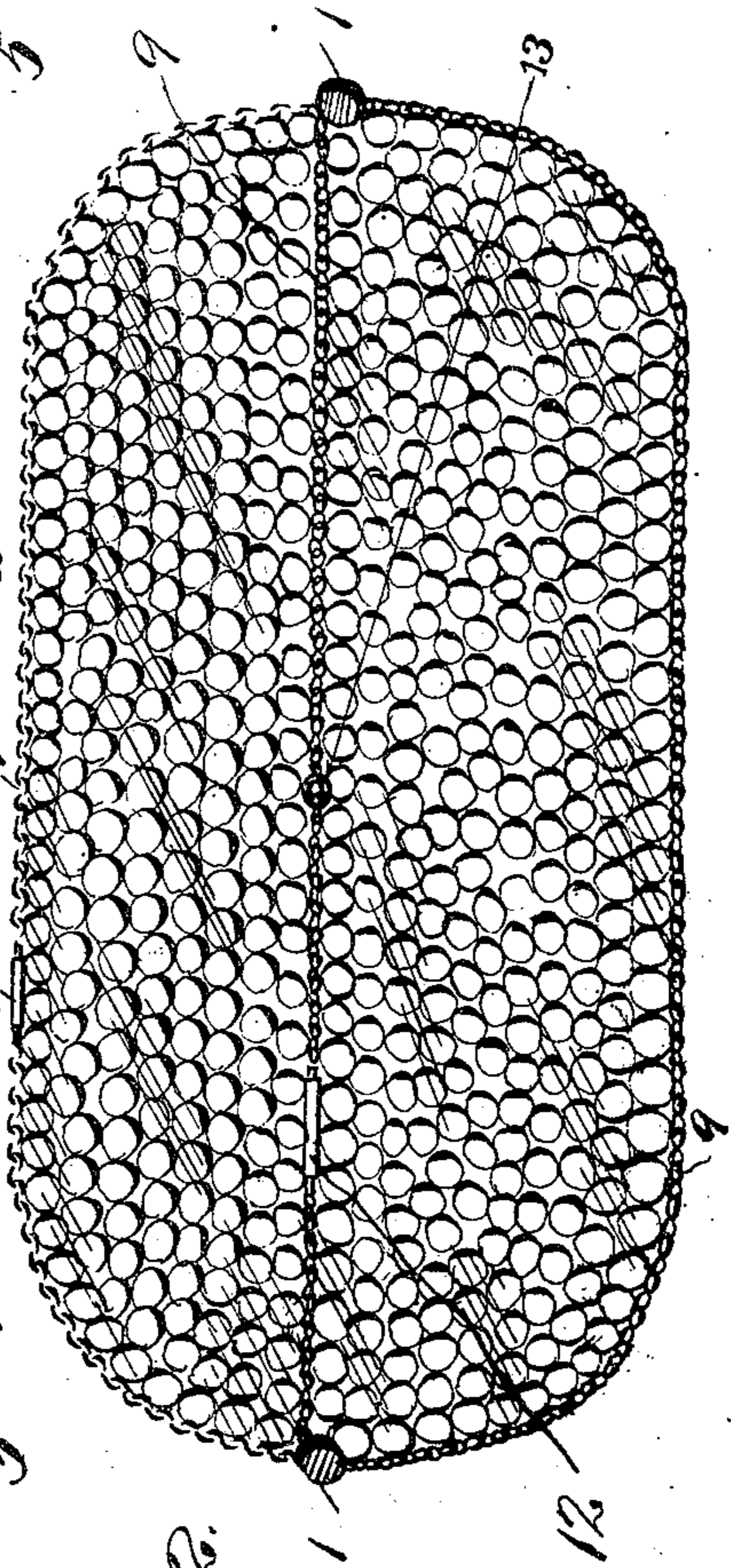
FIG. 1.



WITNESSES

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FIG. 2.



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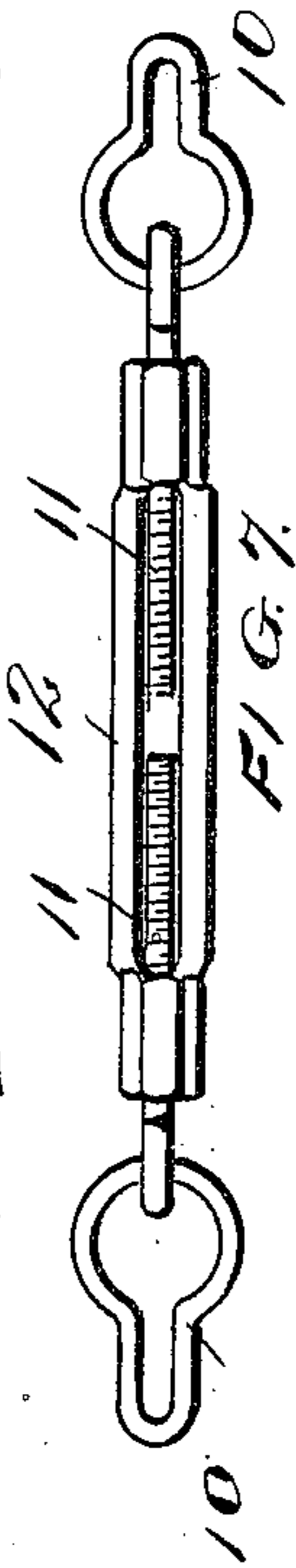
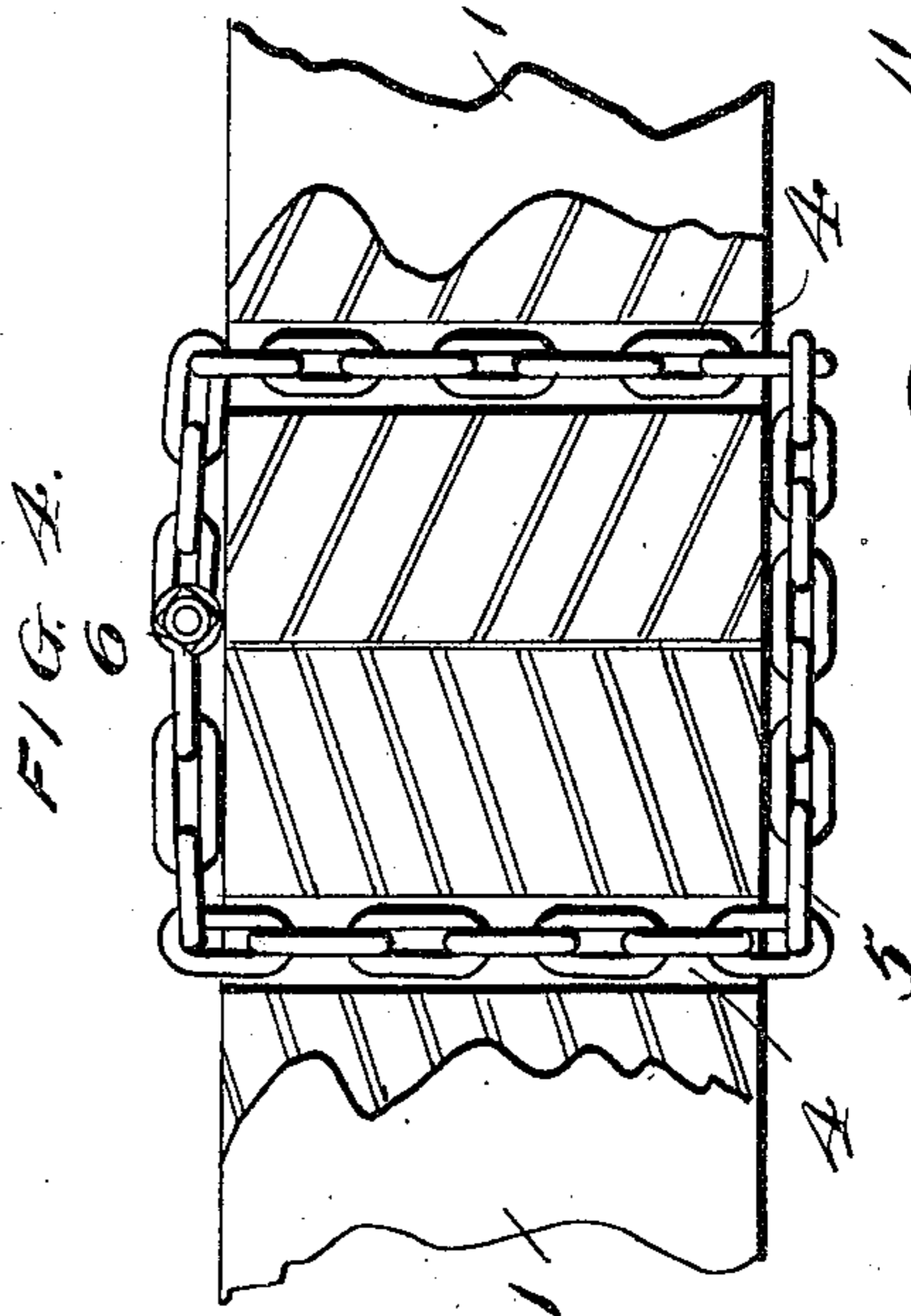
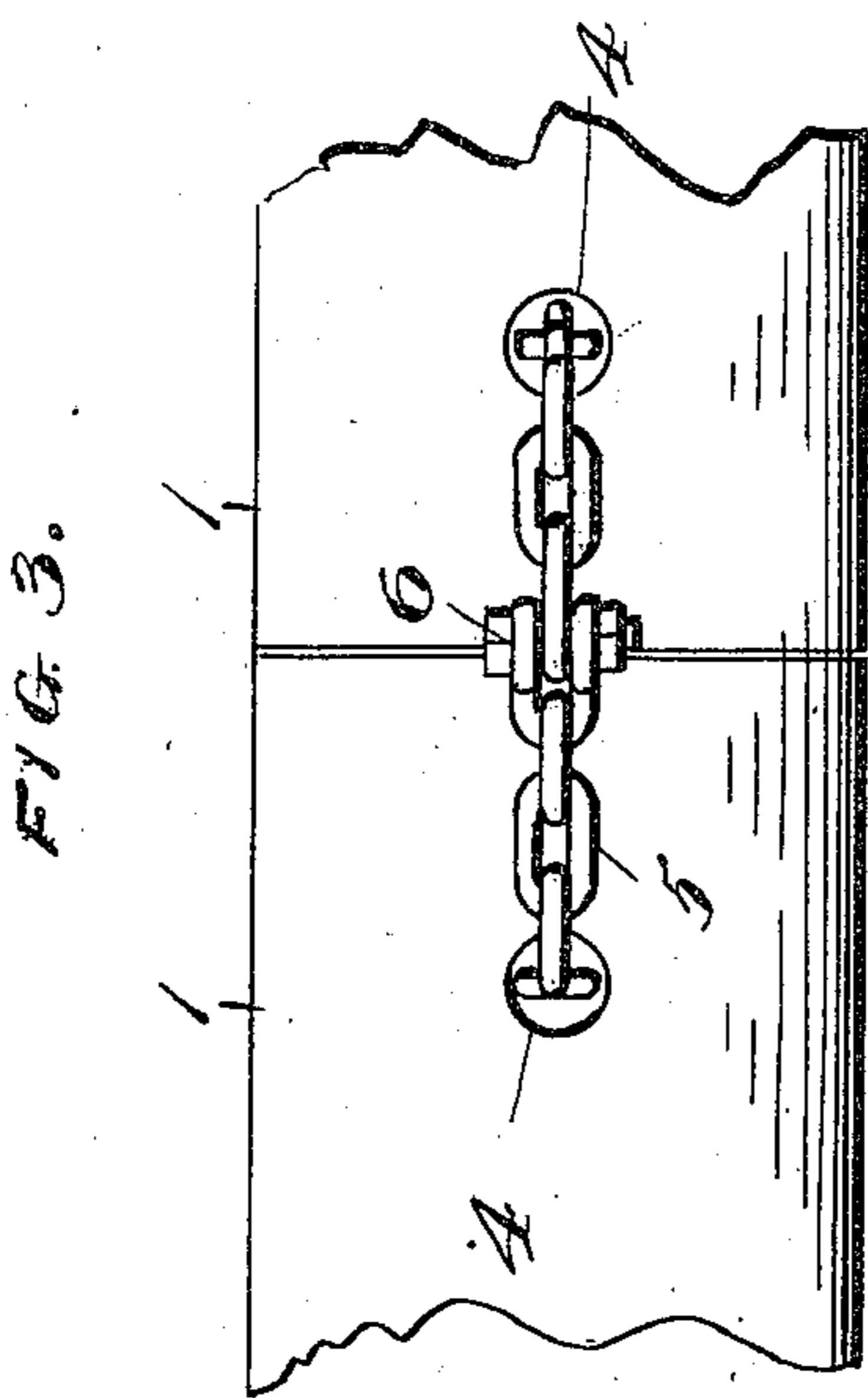
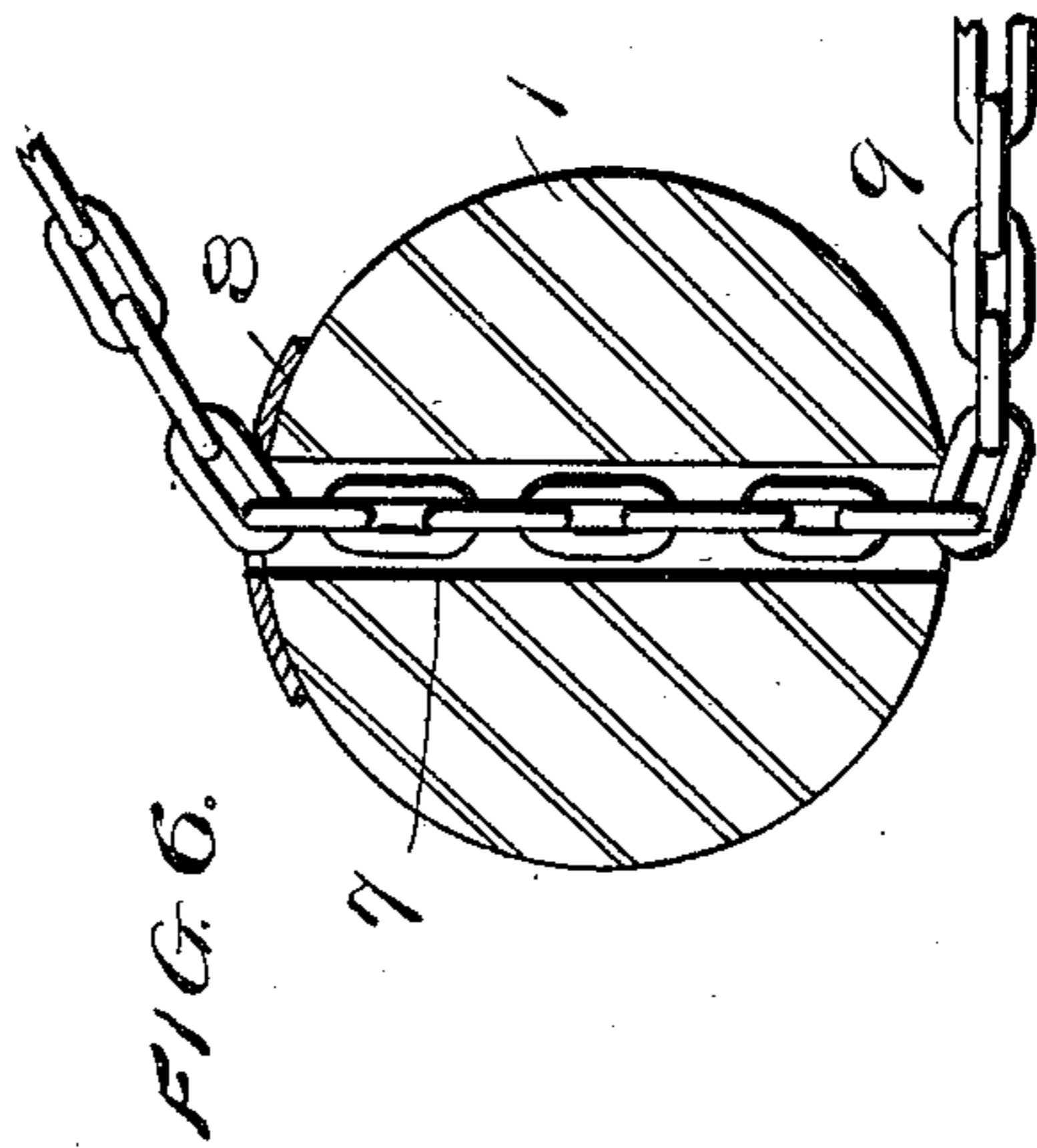
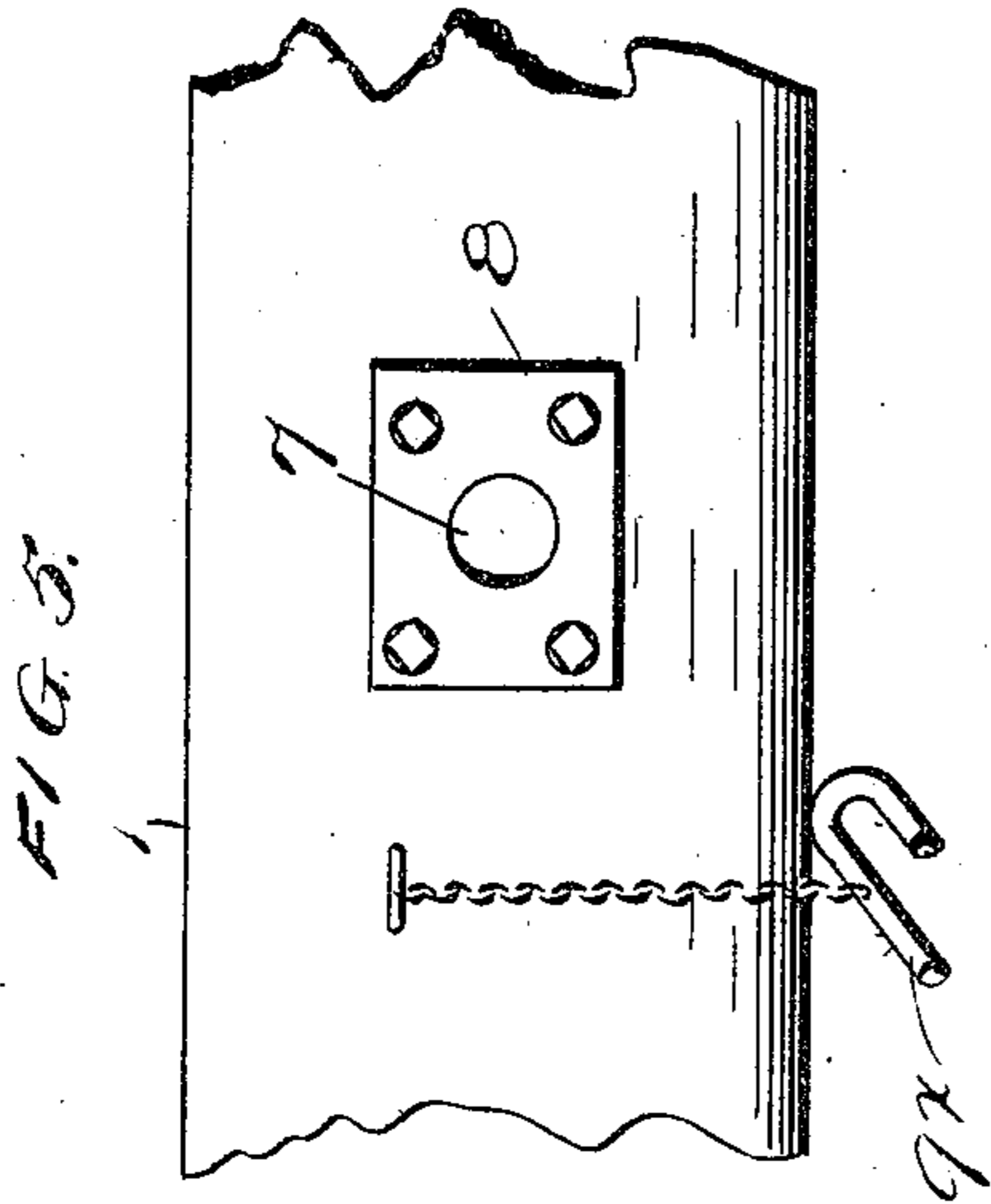
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2 SHEETS—SHEET 2.



WITNESSES

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LOG-CRADLE.

999,277.

Specification of Letters Patent.

Patented Aug. 1, 1911.

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To all whom it may concern:

Be it known that I, BERT H. VOLLANS, a citizen of the United States, residing at Everett, county of Snohomish, State of Washington, have invented a new and useful Improvement in Log-Cradles, of which the following is a specification.

My invention relates to log cradles for transporting logs by water, and has for one of its objects to provide a cradle that may be varied in size so as to adapt it for the carrying of logs in such quantities as may be desired, and holding them secure against displacement during transit.

Another object is to provide a cradle of simple and inexpensive construction that may be quickly loaded and unloaded.

These objects are attained by a cradle composed of a flexible floating frame adapted to inclose the logs, and fastening means passing through the longitudinal members of the frame and encircling the logs.

In the drawings accompanying herewith I have illustrated my invention embodied in the form which is now preferred by me, the associated parts being represented in a simple form.

Figure 1 is a top view of the cradle as it appears when loaded with logs, the logs being represented in dotted lines. Fig. 2 is a sectional view on line $x-x$ of Fig. 1. Fig. 3 is a detail view showing the flexible chain connection between the longitudinal members of the cradle frame. Fig. 4 is a sectional view similar to Fig. 3 but at right angles thereto. Fig. 5 is a plan view of a part of one of the frame members, showing the construction used to receive the chains that encircle the logs when the cradle is loaded. Fig. 6 is a cross section of one of the frame members similar to Fig. 5 but at right angles thereto. Fig. 7 represents a detail view of one of the turnbuckles or binding devices connected to the free ends of the log-securing chains.

Similar letters refer to similar parts throughout the several views.

Numeral 1 designates the side members, 2 the inclined ends, and 3 the connecting end members, the whole forming, when joined as hereinafter described, a cradle of the general outline of a boat that can be easily towed when loaded; the contiguous or abutting ends of all the log members forming

the cradle are provided with vertical openings 4 through which pass the connecting chains 5, to unite the members securely and permit an accommodating movement between them, the ends of the chains being connected by clevis 6.

The logs forming the side and end members of the cradle are provided with vertical openings 7 which at their entrance are protected by the wear plates 8; log-securing chains 9 pass through said openings on one side of the frame to and through corresponding openings on the opposite side of the frame; and being suspended from the two sides take the form of letter U during the loading of the cradle; the chains have their free ends engaged in the rings 10, connected to the screws 11 mounted in the open frame 12, forming a turnbuckle or right-handed and left-handed screw for tightening the chains upon the logs.

To hold chains 9 in their proper positions while the cradle is being loaded, hooks or fasteners 9* are provided which are attached to the side members of the cradle near the openings 7 through which chains 9 pass.

For the purpose of drawing or towing the cradle when loaded, tow-line 13 enters the forward or bow end of the cradle and passes practically through the center of the load longitudinally and the end 14 is secured to connecting member 3 at the stern of the cradle by the screw-binding loop 15; the other end of the tow-line is looped around connecting member 3 at the bow end, as shown at 16, leaving the free end 17 to be connected to a towing-cable.

In operation, the floating cradle frame, with chains passing through the vertical openings 7 in the side and end members of the frame, is secured to a dock or similar structure; the chains are drawn rather taut so as to receive the logs and are held in position by hooks 9*; the logs are floated in open water to the cradle and rolled onto the chains. In assembling the logs in the cradle they are arranged longitudinally side by side as loaded, breaking joint with each other; some of the layers are shorter than others in order to form tapering ends to the cradle when the log-securing chains are tightened. As the loading proceeds the chains are lowered by means of hooks or fasteners 9* until the load is half completed, when every alternate chain is passed trans-

versely over the logs and tightened by means of a turnbuckle. Tow-line 13 is then laid crosswise of the log-securing chains and at every point of intersection the tow-line and chains are securely shackled so as to hold them firmly together at all times; thereafter, the load is completed in like manner when all the remaining chains are passed transversely over the top of the load and tightened upon the logs by means of a turnbuckle as shown. From this it will be seen that one-half of the number of log-securing chains encircles the lower half of the load, and one-half encircles the entire load.

The form of cradle and manner of loading as herein shown and described secure compactness and stability and distribute the towing strain throughout the load.

Without in any manner affecting the other parts of the cradle or detracting from its stability and efficiency, the side members 1 may be increased or decreased in number thereby enabling the shipper to adapt the cradle to any quantity of logs to be shipped.

The construction of a cradle as herein described enables it to be stored in a very small space when not in use; insures lightness of weight to provide easy handling while possessing the necessary strength and stability to resist the action of a heavy sea.

What I claim is—

1. A log cradle comprising an open frame made of jointed sections flexibly united by chains passing through the ends of each section, a tow-line connected to the frame, a series of chains carried by the frame members and adapted to encircle the logs, and turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, substantially as described.

2. A log cradle comprising an open frame of jointed sections flexibly united by chains passing through the ends of each section, encircling chains set at frequent intervals and passing through each section, fastenings for retaining the chains in position, turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, and a tow-line connected to the frame, substantially as described.

3. A log cradle comprising an open frame of jointed sections flexibly united by chains passing through the ends of each section, a series of chains carried by the frame members and adapted to encircle the logs, turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, and a tow-line flexibly secured to

the frame and to each transverse binding chain it crosses, substantially as described.

4. A log cradle comprising an open frame of jointed sections flexibly united by chains passing through the ends of each section, encircling chains set at frequent intervals and passing through each section, fastenings for retaining the chains in position, turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, and a tow-line fixedly secured to the frame and to each transverse binding chain it crosses, substantially as described.

5. A log cradle comprising an open frame of jointed sections flexibly united by chains passing through the ends of each section, a tow-line connected to the frame, a series of chains carried by the frame members a portion adapted to encircle the lower half of the contents of the cradle and the remaining chains adapted to encircle the entire contents of the cradle, and turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, substantially as described.

6. A log cradle comprising an open frame made of jointed sections flexibly united by chains passing through the ends of each section, encircling chains set at frequent intervals and passing through each section a portion adapted to encircle the lower half of the contents of the cradle and the remaining chains adapted to encircle the entire contents of the cradle, fastenings for retaining the chains in position, turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, and a tow-line connected to the frame, substantially as described.

7. A log cradle comprising an open frame made of jointed sections flexibly united by chains passing through the ends of each section, encircling chains set at frequent intervals and passing through each section a portion adapted to encircle the lower half of the contents of the cradle and the remaining chains adapted to encircle the entire contents of the cradle, turnbuckles attached to the ends of the chains whereby the chains may be tightened upon the logs, and a tow-line passing through the center of the load and attached to the central transverse chains and the frame, substantially as described.

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Witnesses:

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