

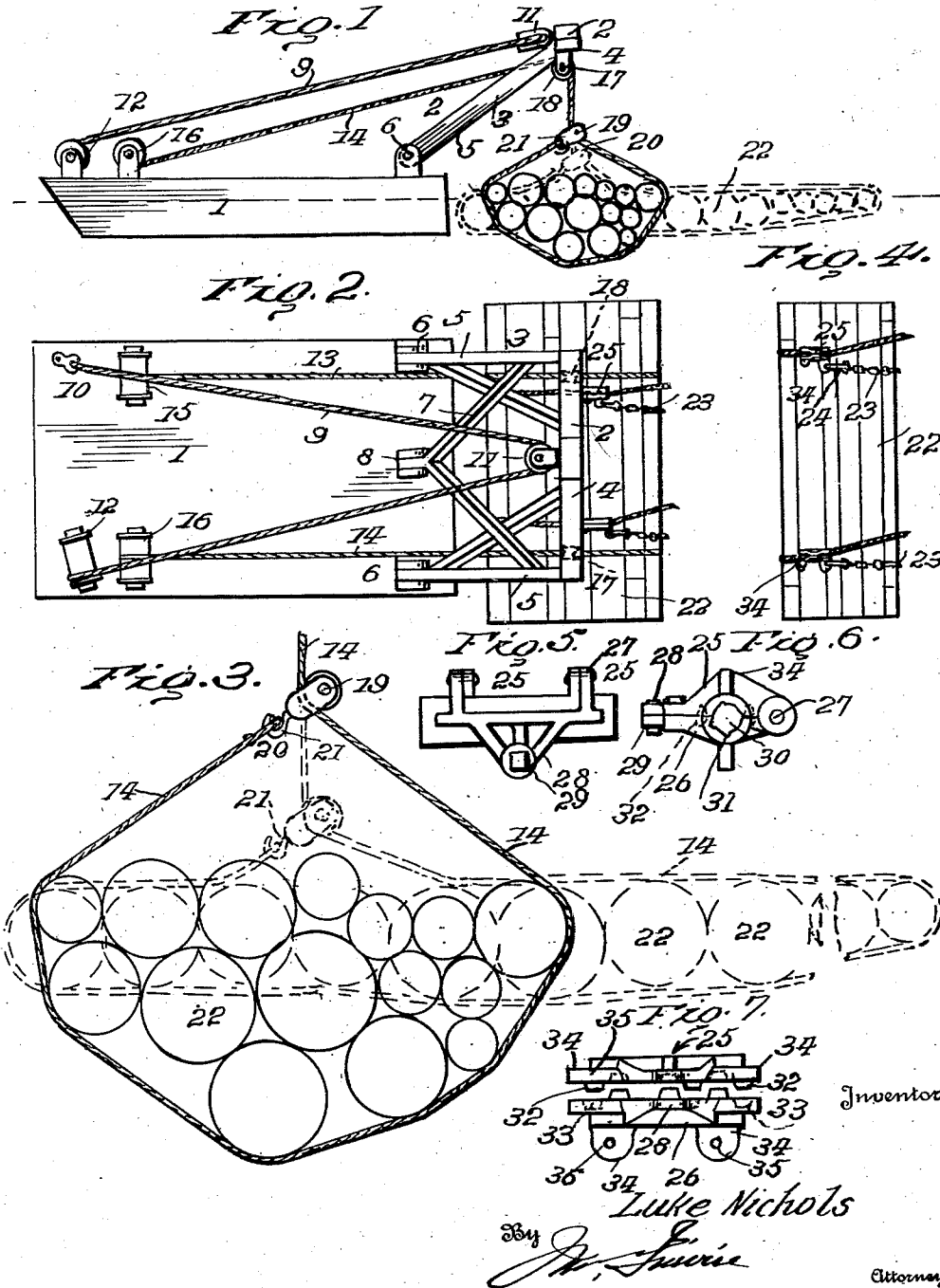
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L. NICHOLS

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LOG BUNDLING APPARATUS

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LOG BUNDLING APPARATUS

Luke Nichols, Hood River, Oreg.

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1 Claim. (Cl. 9—15)

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This invention is directed to an improvement in log-bundling apparatus, wherein logs floating in a stream may be gathered into bundle form and held in that form for tying together for convenient subsequent handling.

The invention contemplates the use of a floating support having a controllable boom with a cable operating through and beyond the free end of the boom, with the cable beyond the boom capable of being arranged in loop form. The cable in extended form is carried around a series of logs floating in the water and its free end returned and connected slidably to the cable between the logs and boom. The end of the cable on the support is then taken up by suitable power, drawing the logs in bundle formation. The boom is then raised by power, the bundle of logs raised, and suitable tying means arranged about the log bundle to maintain this form for further handling of the logs.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation illustrating the construction and operation of the improvement.

Figure 2 is a plan of the gathering apparatus, logs being shown as in the bundle form at the completion of the operation of the apparatus.

Figure 3 is an enlarged end elevation of the logs in bundle form, the initial relation of the logs and one of the bundling cables being shown in initial gathering position in dotted lines.

Figure 4 is a plan view of a completed log bundle.

Figure 5 is a plan of a clamp for final securing of the bundled logs.

Figure 6 is an end view of the same.

Figure 7 is a side view of the same, the clamp parts being shown partly open.

The improved apparatus comprises a base 1, here shown as a floating platform or barge-like body, which while probably the most universally used base, is not to be understood as precluding the use of any appropriate base, whether floating or not.

A boom 2 is swingingly supported at one end of the base or float, and for effective operation of the logs this boom is made of considerable strength, including a U-shaped frame 3, the cross bar 4 of which constitutes the free end of the boom and the side bars 5 of which are mounted at 6 for swinging connection to the float 1. The frame 3 is substantially braced at 7, the braces including a center leg swingingly mounted on the float 1 at 8.

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A boom operating cable 9 is anchored at 10 on the float, passes through a sheave 11 on the cross bar 4 of boom-frame 3, and leads to any suitable power means 12 on the drum to permit the free end of the boom to be raised and lowered at will. The boom is of a length to permit the cross bar to be lowered into a position at some distance from the proximate end of the float or raised to position the cross bar 4 some distance above the float.

Bundling cables 13 and 14, lead from power winding means 15, 16, on the float, pass over sheaves 17 and 18 secured to the boom adjacent the respective ends of the cross bar 4. These cables 13 and 14 continue beyond sheaves 17 and 18, each passing through a snatch block 19, with its free end provided with an eye 20, to be connected at will to a hook 21 on the snatch block.

In use the float is moved adjacent the group of logs, as 22, to be bundled, and after moving these logs into a more or less orderly row, the eye-carried ends of the respective cables are carried over the row of logs, around the end log and passed beneath the logs, until the eye ends of the cables 13 and 14 are connected to the hooks 21 of their respective snatch blocks 19. These cables are thus looped around the logs to be bundled.

Either before or after the carrying of the cables about the floating logs, the boom is lowered to carry its free end at the maximum distance in advance of the float. The cables 13 and 14 are then drawn by the power winding means 15 and 16, finally drawing the logs in bundle form shown in Fig. 1 in full lines. The boom may then be raised by the power means 12, raising the log bundle so that it may be conveniently tied into more or less permanent bundle form.

The tie is preferably in the form of a cable 23 of appropriate length, having a finger hook 24 permanently secured at one end. A clamp, shown more particularly in Figs. 5, 6, and 7, is provided to secure the tie cable, preferably applied near each end of the completed bundle, in position about the log bundle to hold same in bundle form during towing or other handling.

The clamp includes two clamping jaws 25 and 26, hingedly connected at 27 and having contacting ears 28 to be brought together when the jaws are closed and formed to receive a bolt 29 to hold the jaws in clamping relation. The meeting faces of the jaws are together formed with a cable-receiving bore 30, half in each face, the bore wall being formed with rifling formation 31 to grip the cable, and each face, beyond the

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bore is formed with relative offset projections 32 to seat in recesses 33 in the other jaw to guide and hold the jaws in accurate alignment in closing. One of the jaws has outstanding projections 34 at each end, formed with openings 35 to receive the hook 24 of the tie. The clamp is also formed with an opening 36 to receive the end of a towing cable.

After the log bundle has been formed, as in Figure 3, a tie cable 23 is passed around the bundle near each end. A clamp is provided for each cable, the hook 24 is received in end opening 35 at one end of the clamp, and the other end of the cable, after being passed around the logs, is passed into the bore 30 of the clamp, the jaws of course, being open. The jaws are then closed to slightly grip the cable, and the free end of the cable drawn tightly about the logs and through the clamp. The clamp jaws are then tightly closed and secured by bolt 29. The cables 13 and 14 are then disconnected from the logs and the logs in bundle form are then free.

The control of the boom as described tends to hold the loop ends of the cables sufficiently far from the float to prevent the logs contacting the float when forming the bundle. There is but comparatively little weight on the boom while forming the bundle, as the logs are largely supported by the water at this time.

The device produces a simple means for quickly and easily forming a number of unconnected float logs into a compact bundle for tying, and may be operated with minimum labor and without requiring particularly skilled help.

What is claimed is:

A means for bundling and fixing in bundles logs floating in a body of water, said means comprising a floating base, a boom including a support-

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ing bar extending transverse the base, means on the base for raising and lowering the boom, bundling cables guided through the free ends of the boom and depending from the boom in materially spaced relation, a snatch block on each bundling cable, a terminal member on each bundling cable to be connected to the snatch block whereby the spaced cables may be carried around a series of logs floating on the water and drawn by the cables into a substantially rounded bundle like form and bundle tying cables to be passed around the bundle form resulting from the operation of the bundling cables and without disconnecting the latter to tie the bundle into a compact inseparable mass which may be floated on the water as a unit, the logs remaining more or less supported by the water during the bundling and tying operation and the bundling cables being released from log holding function after application of the tying cables.

LUKE NICHOLS.

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