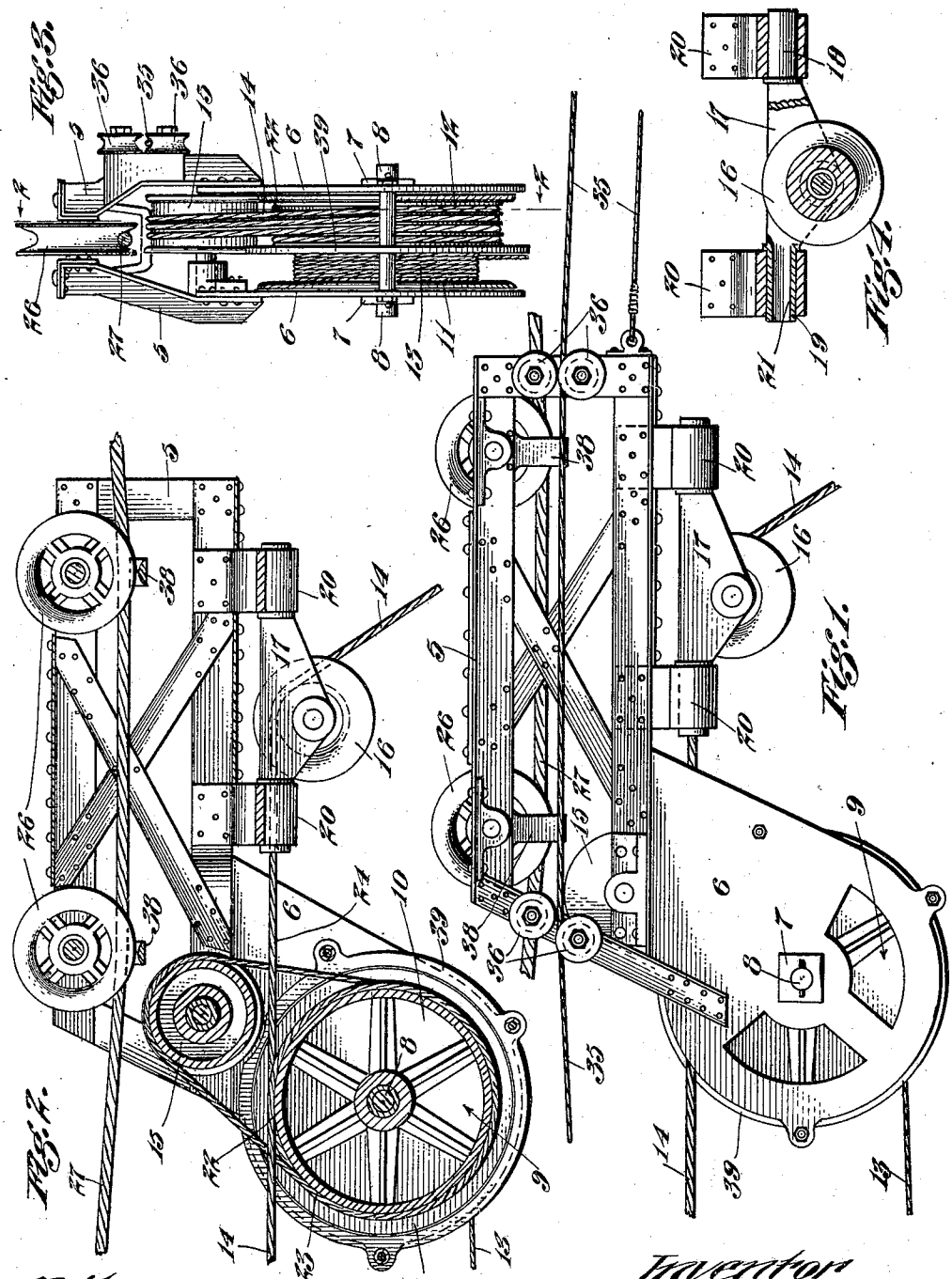
No. 876,874. PATENTED JAN. 14, 1908.

J. A. HAUSFELDER.

SLACK PULLING SKIDDING DEVICE.

APPLICATION FILED JAN. 17, 1907.

2 SHEETS—SHEET 1.



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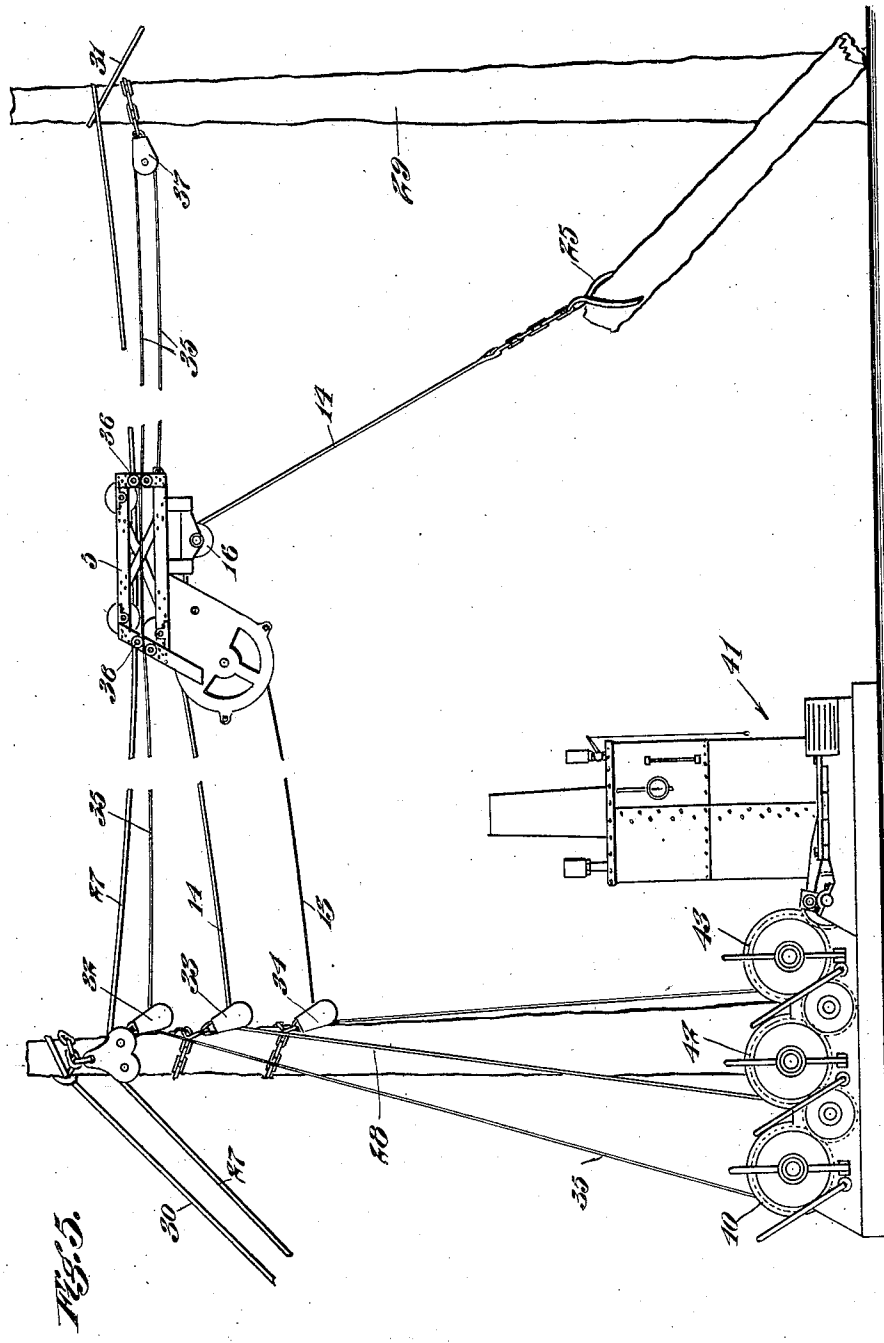


FIG. 5.

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JOSEPH A. HAUSFELDER, OF LOS ANGELES, CALIFORNIA.

SLACK-PULLING SKIDDING DEVICE.

No. 876,874. Specification of Letters Patent. Patented Jan. 14, 1908.

Application filed January 17, 1907. Serial No. 352,843.

To all whom it may concern:

Be it known that I, JOSEPH A. HAUSFELDER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Slack-Pulling Skidding Devices, of which the following is a specification.

It is one of the objects of my invention to provide a device which will automatically pull its own slack. To provide a device which can be run for a considerable distance into the neighboring territory for the purpose of logging. To provide a device which will pick up logs or other material at a considerable distance from the carriage. To provide a device which is lighter and therefore easier to handle than the devices now in use. To provide a device which will always give the same pulling power on the hooking rope.

I accomplish these objects by means of the device described herein and shown in the accompanying drawings, in which:—

Figure 1.— is a side elevation of my improved slack pulling skidding carriage. Fig. 2.— is a vertical longitudinal section on the line 2—2 of Fig. 3 looking in the direction indicated by the arrows. Fig. 3.— is a front elevation. Fig. 4.— is a longitudinal section of the hooking sheave. Fig. 5.— is a diagrammatic view of the carriage and its operative mechanism.

5 designates the frame which is preferably built up of steel angles and channels. Riveted to and extending below frame 5 are side plates 6 which carry bearings 7 for pin 8. On pin 8 is mounted a double drum 9 divided by flange 10 into two compartments 11 and 12. Compartment 11 is narrower in width than compartment 12 and is designed to receive cable 13, known as the slack pulling cable. Compartment 12 is grooved to receive the skidding cable 14 which is of about twice the diameter of the slack pulling cable. Mounted above drum 9 on frame 5 is an auxiliary drum 15 which is of smaller diameter than the main drum. Mounted to the rear of drum 9 on the frame is the hooking sheave 16, the construction of which is more fully shown in Fig. 4. The sheave is mounted in frame 17, which frame has trunnions 18 and 19. Bearings 20 are provided around these trunnions and are riveted or secured in any suitable manner to the frame 5. Trunnion 19 is hollow, having a bore 21 which is preferably about twice the diameter of the skidding cable. The skidding cable first comes in contact with the drum 9 at the point 22, passing around the drum until it comes to a point 23 where it leaves the drum to pass onto and around drum 15. On coming off of drum 15 it passes into a groove on drum 9 adjacent to the one into which it first passed and passes around drum 9 in that groove. It will be seen that as many grooves may be provided in drum 9 as is necessary and practicable and that the skidding cable 14 may be passed around drum 9 and over drum 15 until all the grooves in drum 9 are occupied. When this is done cable 14 is led off from drum 9 rearwardly as at 24 to sheave 16, passing through bore 21 in trunnion 19 before passing onto the sheave. Beyond the sheave, cable 14 is provided with hooks 25 for the purpose of grasping the logs or other material to be skidded. By this construction of the hooking sheave it will be seen that the cable leaves the sheave to pass onto the main drum at, or very close to, the center on which the sheave swings, so that however much the cable may be pulled off to one side, it will always be in the same position on passing onto the main drum.

Frame 5 is provided with traveling sheaves 26 mounted in the top of said frame and adapted to receive main cable 27 which is designed to carry the carriage and any load which the carriage may pick up. Cable 27 is usually suspended on two trees, 28, known as head spar, and 29, known as a tail tree. These trees are guyed in any suitable manner as by cables 30 and 31, which cables as at 31 may be merely a continuation of the main cable which has been wrapped around the tree. On the head spar are hung three blocks, 32, 33, and 34 through which pass respectively the out haul cable 35, the skidding cable 14, and the slack pulling cable 13. Out haul cable 35 is supported by sheaves 36 which are attached to the side of the frame 5 as shown in Figs. 1 and 3, from thence it passes to the tail tree, through block 37 attached to the tail tree, and back to the carriage where it is fastened to the rear end of frame 5. Guards 38 are provided for the traveling sheaves 26 for the purpose of keeping the sheaves on the main cable 27 in case of any tendency of the sheaves to raise off the cable. A guard 39 is provided between the two compartments in drum 9 for the purpose of preventing slack pulling cable 13

from running over into compartment 12 of the drum.

The operation of my device is as follows:— When it is desired to send the carriage from the head spar toward the tail tree, which is usually situated some thousand feet or more from the head spar, power is applied to drum 40 of hoist 41 and out haul cable 35 is pulled in, thereby pulling the carriage out towards the tail tree along the main cable. When the carriage has arrived at the locality where the logging is to be done drum 40 is held by means of a brake or other suitable means, thereby preventing the carriage from returning toward the head spar. Cable 14 is then paid out from drum 42 on the hoist until enough free line has been obtained below hooking sheave 16 to reach to the ground and to any particular log which it is desired to pick up. At the same time that cable 14 is paid out from drum 42, cable 13 is wound up on drum 43, thereby revolving drum 9 on the carriage to pull cable 14 toward the carriage, cable 13 being wound around drum 9 in an opposite direction to which cable 14 is wound around the same drum. When a sufficient length of the skidding cable has been pulled down from the carriage, hooks 25 are attached to any designated log or logs and drum 42 on the hoist is operated to pull cable 14 in, drum 43 being operated at the same time to pay out on cable 13. When the log or other object has been hauled in sufficiently close to the carriage out haul cable 35 is paid out and the skidding cable and slack pulling cable are both wound in, thereby causing the carriage to move along the main cable towards the head spar. When the log has reached the vicinity of the head spar it is released from the hook 25 and may then be loaded onto railway cars for transportation or taken directly to a saw mill.

It will be seen from this construction that I have provided a carriage which does not have to carry any extensive amount of cable with the exception of the slack pulling cable which is comparatively small in diameter and weight, further, that I have provided an arrangement with which it is possible to cover a large amount of territory laterally from the main cable for the reason that a large amount of skidding cable may be paid out from the carriage as the skidding cable is carried on the hoist drum where a large amount is not cumbersome. Also that I have provided an arrangement whereby the various cables are kept in place on the various sheaves and drums even though the pull on the carriage is off to one side of the main cable.

Having described my invention, what I claim is:—

1. In combination, a traveling carriage, two traveling-drum parts on said carriage, an out-haul rope connected to said carriage, two stationary drums, a rope connecting each of said stationary drums with one of said traveling-drum parts to operate inversely, one of said ropes being extended beyond its traveling-drum part for connection with an object to be hauled, and a stationary drum connected to said out-haul rope.

2. In combination, a traveling carriage, two traveling-drum parts on said carriage, a supplemental-drum mounted in said carriage in alinement with one of said drum parts; two stationary drums, a rope connecting each of said stationary drums with one of said traveling-drum parts to operate inversely, one of said ropes being wound around its traveling-drum part and the supplemental drum, and extended beyond the carriage for connection with an object to be hauled.

In witness that I claim the foregoing I have hereunto subscribed my name this 4th day of January, 1907.

JOE. A. HAUSFELDER.

Witnesses:
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