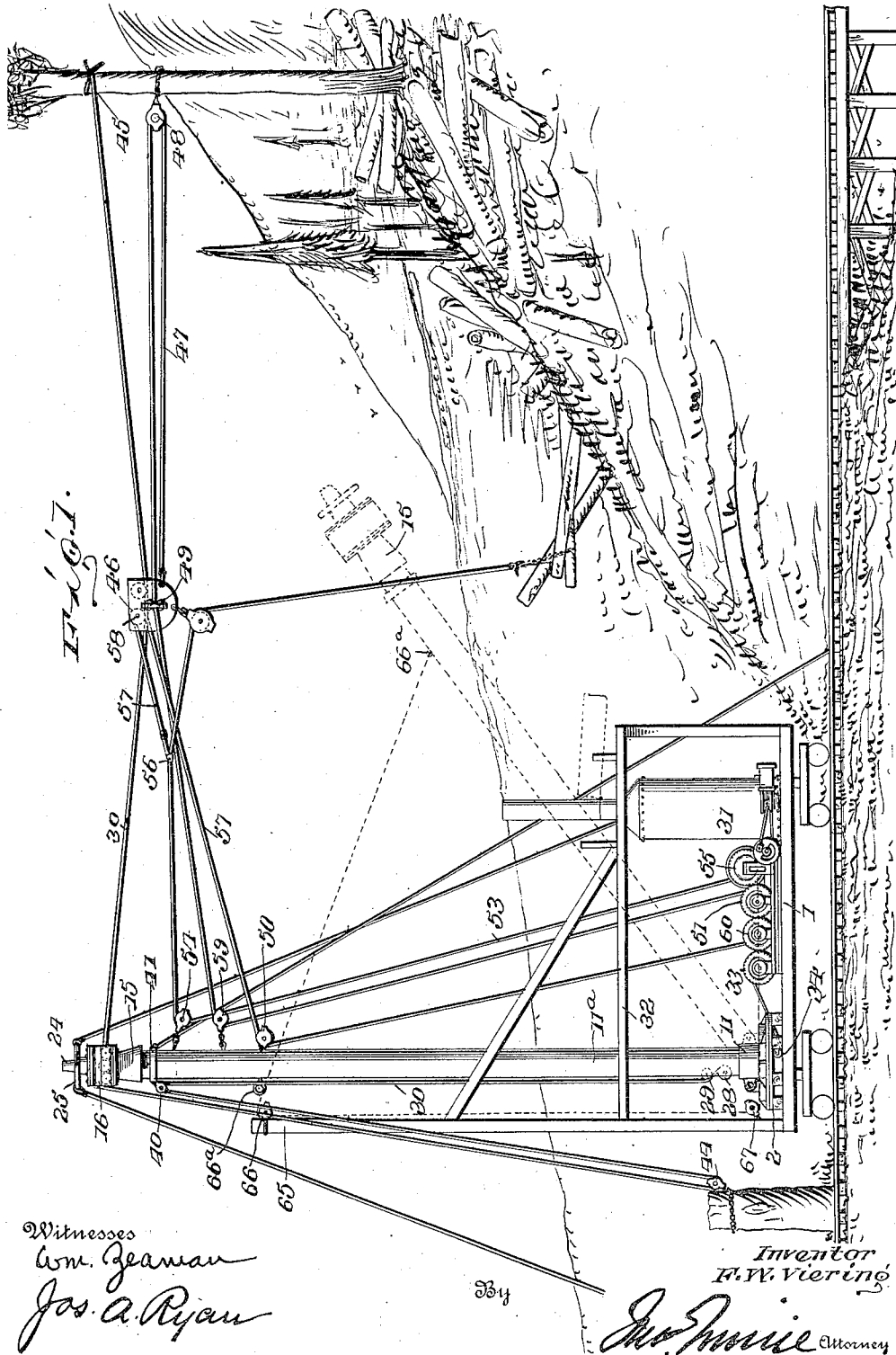


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 APPARATUS FOR TRANSPORTING LOGS.
 APPLICATION FILED SEPT. 11, 1911.

1,015,103.

Patented Jan. 16, 1912.

2 SHEETS—SHEET 1.

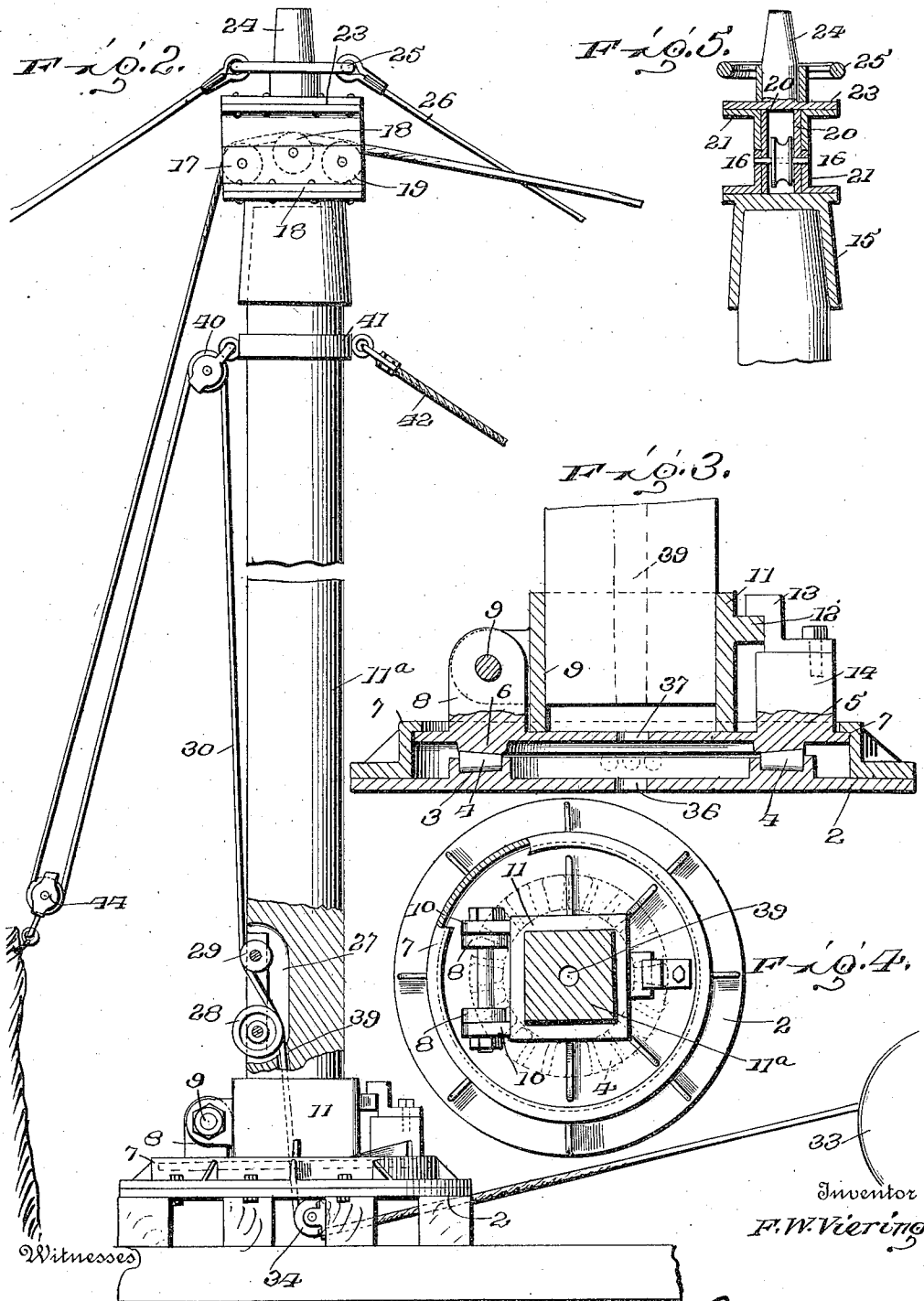


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APPARATUS FOR TRANSPORTING LOGS.

1,015,103.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed September 11, 1911. Serial No. 648,706.

REISSUED

To all whom it may concern:

Be it known that I, FREDERICK W. VIERING, citizen of the United States, residing at Davis, in the county of Tucker and State of West Virginia, have invented certain new and useful Improvements in Apparatus for Transporting Logs; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in an apparatus for transporting logs.

The object of the invention is to provide means for quickly setting up the apparatus for operation, and providing simple, economical and convenient mechanism for effectually transporting logs from the point of felling of the trees to a point of storage.

The invention also comprehends improvements in the specific details of construction and arrangement of parts, which will be hereinafter described and particularly pointed out in the claims.

In the drawings: Figure 1 is a side elevation of my improved apparatus. Fig. 2 is a side elevation of the mast. Fig. 3 is an enlarged detail vertical section of the lower end of the mast, and its support. Fig. 4 is a detail horizontal section of the same. Fig. 5 is a detail enlarged section of the upper end of the mast.

1 indicates a car with which my improvement is preferably associated, although it is to be distinctly understood that a car is not absolutely essential in carrying out the invention.

Mounted on the car is a base 2, provided with an annular track 3, supporting a plurality of anti-friction rollers 4. Fitting over the base 2, is a plate 5, provided on its underside with a track 6, with which the anti-friction rollers 4, engage. The plate 5, is held in relative position with the base 2, by an overhanging annular flange plate 7, the inner lip of which fits over the outer edge of said plate, as clearly shown in the drawings. Extending upwardly from the plate 5, are two ears 8—8, which are pivoted at 9—9, to two outwardly projecting ears 10—10, on a base collar 11, secured to the bottom of a mast or spar 11^a. Projecting

from the opposite side of the base collar 11, is a lug 12, which is engaged by a detachable overhanging flange 13, bolted to a lug 14, extending up from the plate 5. The mast or spar 11^a, is rigidly secured in the base collar 11, and extends upwardly therefrom. The upper end of the mast 11^a, receives a fixed cap 15 and riveted or otherwise secured thereto are two spaced apart side members 16—16, forming a housing for a series of pulleys 17, 18 and 19. The middle pulley 18, is slightly higher than the pulleys 17 and 19, to cause the cable to more readily track in the grooves and to equalize the strain. Each member 16, comprises a side plate 20, and two angle irons 21, bolted to said plates to provide a substantial and rigid structure. Fitting on the upper surface of the two members 16, 16 is a plate 23, provided with a trunnion 24, on which is loosely mounted a flanged collar 25 for receiving the guy ropes 26. This construction provides a convenient and efficient swivel connection at the top of the mast, whereby the latter may be turned to suit the location of the logs to be hauled. Near the bottom the mast is formed with a slot 27, in which are mounted two pulleys 28 and 29, over which pass the main cable 30.

Located on the car is a hoisting engine 31, of any convenient type, and surrounding said hoisting engine is a suitable frame 32.

The mast is raised in a vertical position as shown in Fig. 1, and the main cable, is unwound from the main drum 33. The cable passes around a guide pulley 34 located under the base 2, and extends up through an opening 36, in the latter, and also through an opening 37, in the plate 5, and an opening 39 in the bottom of the mast, said latter opening communicating with the slot 27. The cable now passes over the rear of pulley 28, and thence over the front of pulley 27 and up the outside of the mast and around a pulley 40, swiveled to a ring 41, on said mast. The ring 41, is suitably braced, as by a guy cable 43, shown in Fig. 2. The main cable, after passing around the pulley 40, is passed around a pulley 44, swiveled to a tree stump, or other convenient support adjacent the car. The rope then passes over the pulleys 17, 18 and 19, and its end is securely fastened to a post or other support 45 in line with the logs to be transported toward the car. The main cable supports a carriage 46, having guide rollers which

travel on said cable. The carriage is fastened to one end of a receding cable 47, which passes over a swiveled pulley 48, secured to the post 45. The receding cable then passes between two guide rollers 49, on the side of the carriage and then over a swiveled pulley 50 on the mast, and thence to one of the drums 51, of the hoisting engine.

The hoisting cable 53 passes over a pulley swiveled to the bottom of the carriage, and thence passes over a swiveled pulley 54, on the mast, and then to one of the drums 55 of the hoisting engine. Swiveled to the hoisting cable at 56 is a slack pulling cable 57, which passes over a guide pulley 58, within the carriage and is thence guided over a swiveled pulley 59, to one of the drums 60, of the hoisting engine.

In operation, the car is transported to the appropriate location, and the mast is raised and the parts connected as described. The cable 47, is drawn to bring the carriage adjacent the logs to be moved, then the hoisting rope 53 is slackened, and the slackening rope is wound on its drum until the end of the hoisting rope is in convenient reach of the logs. The logs are fastened, and the hoisting drum is operated to raise the logs the desired height, then the slack rope 57 is freed, the receiving rope is slackened and the hoisting rope is wound on its drum. Then when the log reaches the desired point, it is lowered and released.

By my novel arrangement of parts, the main cable can be quickly and conveniently attached to any post or tree within a radius of the operating plant, the cable being stored on the drum to be fed out as circumstances may require. The arrangement of the mast is such as will accommodate the adjusting and placement of the cables, so that a wide field of timber land may be cleared by one setting of the car and its mast.

To transport the apparatus, guy wires are removed and the flange 13, is also removed, and the mast is rocked on the pivots 9—9, as shown in dotted lines in Fig. 1.

To elevate the mast, I provide a standard 65, on the end of the car, and secure thereto a pulley 66. The hoisting cable is now passed over a guide pulley 67, thence over the pulley 66, and is attached to a ring 66^a, on the mast. Now by operating the drum the mast may be raised to its vertical position.

What I claim is:

1. In combination, a mast formed with an opening in its bottom which communicates with an open slot, a rotatable base for supporting the mast, said base having openings which communicate with the opening in the lower end of the mast, a pulley located in the base to guide a cable through the openings, a pulley secured on the mast above the

slot therein, a cap including a housing secured on top of the mast, a support remote from the mast, a swiveled pulley mounted on the support, a cable passing through the opening and open slot and around the pulleys, a swiveled guy cable holder secured on top of the housing, and means for bracing the mast.

2. In combination, a stationary support, a rotating base mounted on the stationary plate means for guiding the rotating base on the plate, a mast hinged to the rotating base, means for holding the mast in locked vertical position on the rotating base, a cable guide, under the plate, said mast having an opening in its lower end, a pulley in the opening, a cap on the mast, pulleys mounted in the cap, a cable passing over the guide and the pulleys, means for controlling the cable, and a guy cable support swiveled at the top of the mast.

3. In combination, a car, a hoisting engine including a series of drums mounted on the car, a stationary base mounted on the car, said base having an opening, a revolving plate located above the stationary plate, said plate having an opening, a flange on the base for guiding and holding the plate in position, anti-friction rollers between the plate and the base, a base collar hinged to the plate, a detachable latch for securing the base collar in locked position, rollers on the mast near the bottom of the latter, a swiveled roller near the top of the mast, a swiveled roller mounted remote from the car, a housing on top of the mast, a series of rollers in the housing, a stationary support remote from the car, a cable passing from one of the drums through the openings and over the aforesaid rollers, guy ropes for the mast, a carriage mounted on the cable, and cables coöperating with the other drums of the hoisting engine and the carriage to lift and transport logs.

4. In combination, a mast formed with an opening at its bottom, a base collar secured to said mast, a plate on which the base collar is hinged, means for locking the base collar and mast in vertical position, a base on which the plate revolves, a flange on the base to hold and guide the plate in position, a cap on the mast, said cap having a housing in which is mounted guide rollers, a trunnion projecting from the housing, and a guide loosely mounted on the trunnion.

5. In combination, a base formed with an opening, a plate mounted above the base and formed with an opening, anti-friction rollers between the base and the plate, a mast hinged to the plate, a locking device for holding the mast in vertical position, a cap on top of the mast, said cap comprising two spaced apart members, a cup portion, and a trunnion, rollers mounted between the two spaced apart members, one of said roll-

ers being higher than others, a guy cable support loosely mounted on the trunnion, and rollers on the mast to guide a cable to the rollers in the housing.

5 6. In combination, a mast formed with an opening in its bottom which communicates with an open slot, a rotatable base for supporting the mast, said base comprising a lower stationary member formed with an opening and an upper rotating member 10 formed with an opening, a pivotal connection between the mast and the rotating member, locking means for holding the mast in vertical position on the rotating member, the opening in the stationary and 15 rotating members of the base and the opening in the mast communicating, a pulley under the base to guide a cable through said openings, a pulley secured on the mast above 20 the slot therein, a cap including a housing secured on top of the mast, a swiveled guy cable holder secured on top of the housing, and means for bracing the mast.

7. In a mast, the combination of a rotatable support, a cap fitted on the upper end of the mast, two spaced apart plates on the cap, two angle irons fitting against and secured to each of said plates, a horizontal plate having a vertical trunnion secured to the top of the angle irons, a guy cable support loosely mounted on the trunnion and rollers mounted between the plates.

8. In combination a car, a hoisting engine mounted on the car including drums, a rotatable base mounted on the car, said base having openings, a mast hinged to the rotating base, means for locking the mast in vertical position, said mast having an open slot and an opening communicating with the open slot and the openings in the base, a guide pulley mounted below the base, guide pulleys mounted in the open slot, a cap secured to the top of the mast including spaced apart reinforced members and a trunnion, 45 guide rollers mounted between the members, a guy cable support loosely mounted on the trunnion, a guide pulley swiveled to the mast below the cap, means remote from the mast for guiding a cable to the guide pulleys 50 on the cap, a cable passing from one of the drums around the guide pulleys, and through the openings, a support remote from the car on which the cable is secured, a carriage on the cable, and cables extending from the carriage to the remaining drums of the hoisting engine whereby to operate said carriage and raise and lower logs.

9. In combination, a stationary base, a track thereon, a rotatable plate above the base, a flange secured to the stationary base 60 and overlapping the rotatable plate to hold the latter in relation to the said base, anti-friction rollers between the plate and base, said base and said plate having openings, a guide pulley mounted under the base, ears 65 extending from the plate, a base ring having ears and a lug, pivots connecting the ears together, a detachable flange on the plate to engage the lug to hold the base ring in vertical position, a mast mounted in the 70 base ring, said mast having an open slot and an opening which communicates with the open slot and the openings in the plate and base, a cap on the mast and means co-operating with the openings and the guide 75 roller for guiding a cable to the top of the mast.

10. In combination, a frame, a rotating base mounted on the frame including a hinged section and means for locking the 80 hinged section in position, a mast mounted on the rotating base, said mast having an opening in its lower end and a communicating slot, pulleys mounted below the rotating base, pulleys mounted on the mast, guide 85 pulleys mounted near the top of the mast, a support remote from the mast, a swiveled pulley mounted on the support, a cable passing through the opening in the mast and around the pulleys, means securing the free 90 end of the cable, means for tightening the cable, a carriage mounted on the cable track and means on the frame and mast for controlling the movement of the carriage on the cable track.

11. In combination, a revolving base, a mast mounted on the revolving base, said mast having an opening at its lower end, a cap comprising a housing on the top of the mast, a series of pulleys mounted in the 100 housing, pulleys, one of which is swiveled at a point remote from the mast, a cable passing through the opening in the mast and around the pulleys, means securing the free end of the cable means for adjusting the 105 cable and a swiveled guy cable support loosely mounted on the cap.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FREDERICK W. VIERING.

Witnesses:

JNO. IMRIE,

J. D. YOAKLEY.