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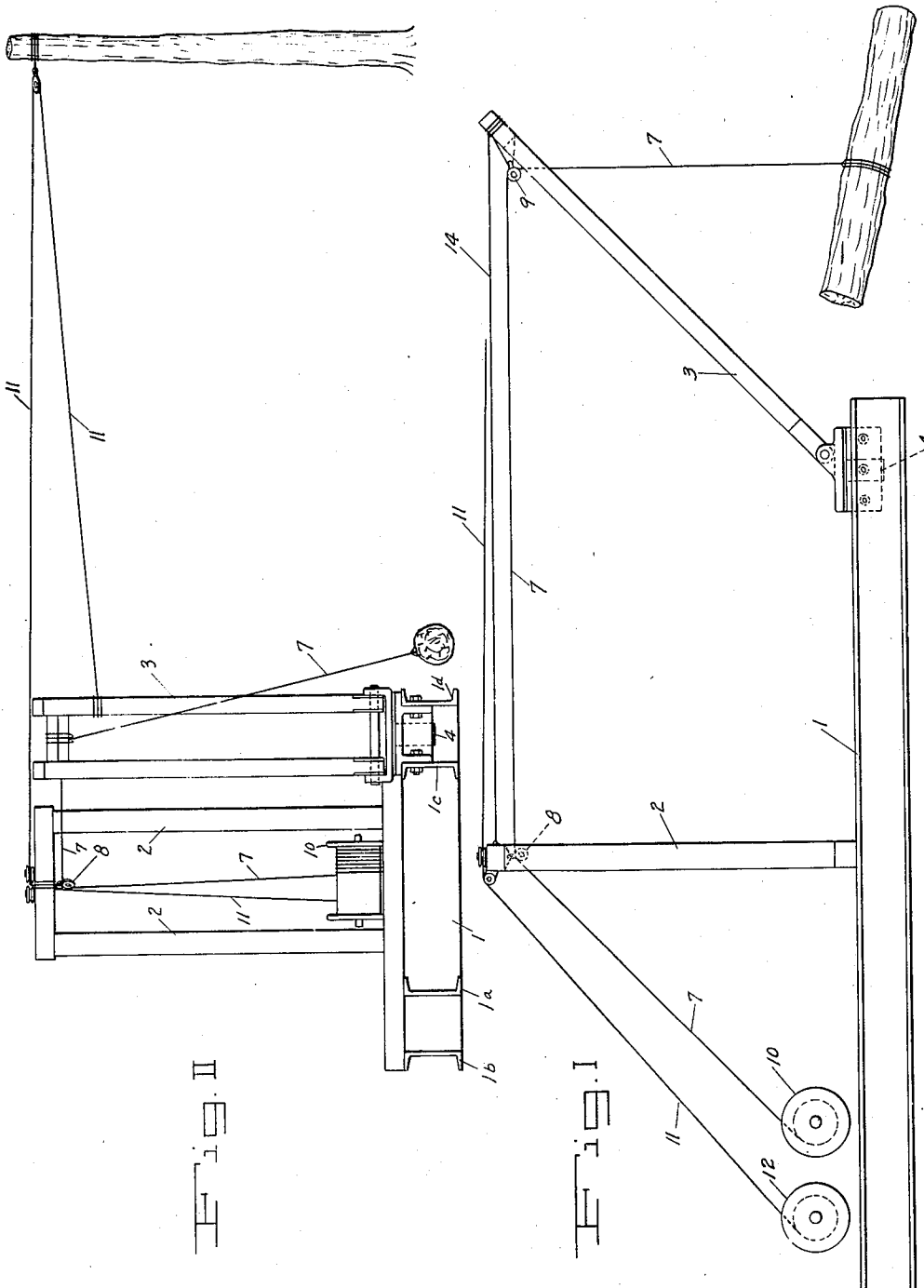
E. WONSYLD

2,213,540

TRANSFER DERRICK

Filed Oct. 24, 1939

2 Sheets-Sheet 1



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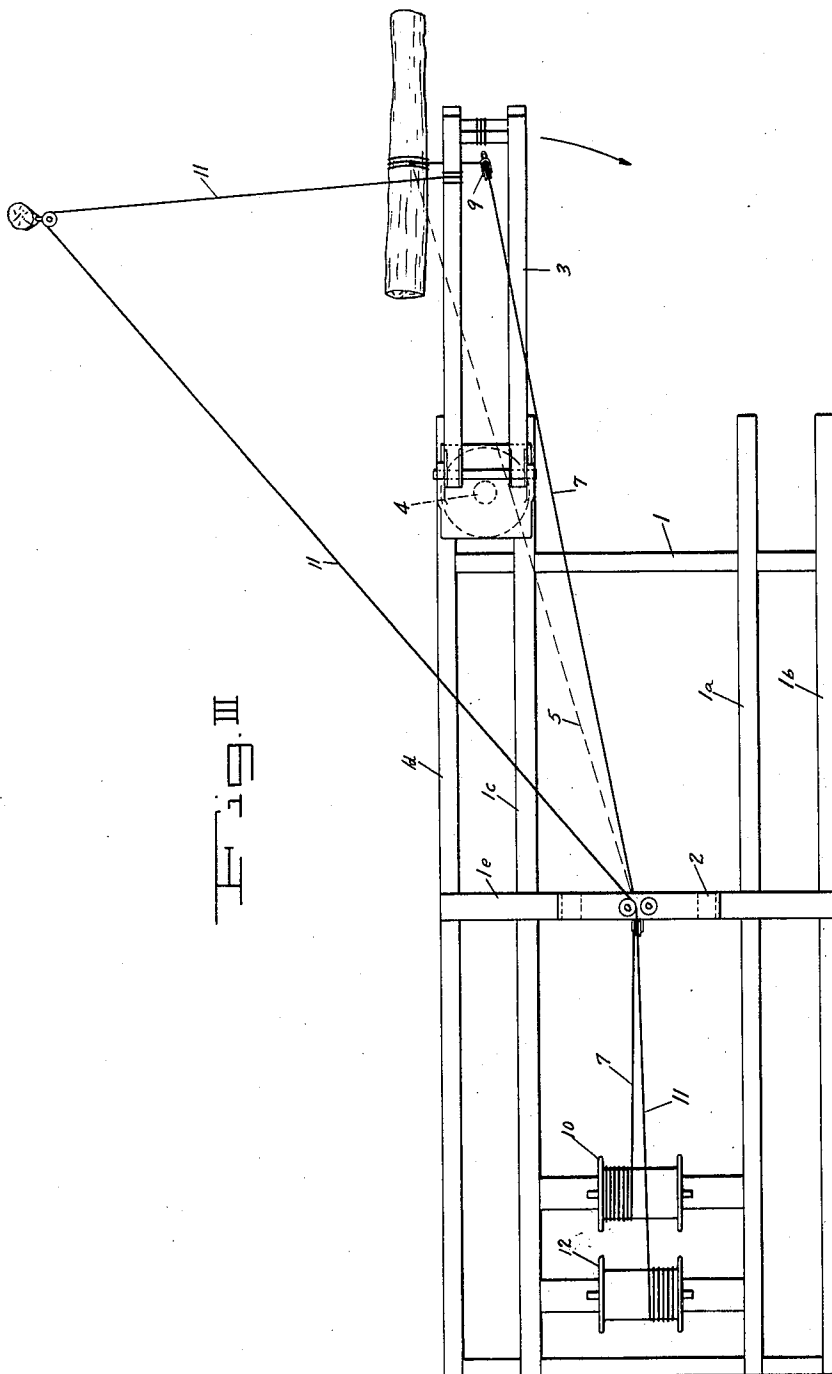
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III. 结论

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2,213,540

TRANSFER DERRICK

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4 Claims. (Cl. 212—50)

This invention relates to a boom derrick for picking up a load at one point and swinging it laterally to another point, such as picking up a log and putting it on a railway car or a truck.

5 The boom derrick, comprising a mast with a boom, usually pivotally mounted on the mast itself near its base, is old. Such hoisting apparatus connotes gear for swinging the load after it is lifted, usually a hoisting drum independently operable with often a third drum for swinging the boom back to pick up position.

10 An object of the present invention is a derrick that will handle the heaviest loads, within its designed capacity, with a two drum hoist and wherein the weight of the load acts as the motive power to swing from pick-up to dropping position, with the return of the unloaded boom only being necessary by power.

15 This and other objects that will be apparent to those skilled in the art will appear from the following description, the novel structures and combinations of structures to accomplish the objects being particularly pointed out in the claims.

20 Drawings accompany and serve as a part of the disclosure hereof, being of that kind of derrick, according to the present invention, that is particularly adapted to logging operations.

In the drawings—

25 Fig. I is a side view in elevation of the embodiment selected to illustrate the principle of the present invention;

Fig. II is a front view, in elevation of the structure shown in Fig. I; and

30 Fig. III is a top or plan view of Fig. I.

The drawings are described in detail as follows:

1 is a base member, which designation includes the parts indicated by 1a, 1b, 1c and 1e. 2 is a mast which will usually be equipped with guy lines attached to the top but which are not shown. It may be a gallows frame, an A frame or a simple mast, the particular form being a matter of choice.

3 is a heel pivoted boom member and 4 is the heel pivot mounting made rigid with the base 1. It is shown as adjustably mounted with respect to the base of the mast 2 so that it can be operatively mounted at different distances ahead of the mast 2, as may be desirable. I prefer that it shall always be somewhat ahead of a transverse line drawn through the base of the mast such as the axial line of the element 1e.

55 It will be seen at once that a line from the load to the top of the mast, projected, such as the line 5, dotted, in Fig. III, must fall inside the pivot

4, as shown in this figure or the load will tend to swing in the wrong direction instead of in the direction of the arrow as shown in this figure. It is also seen that moving the pivot nearer to the element 1e will change this characteristic.

5 The drawings are diagrammatic especially with respect to the length of the boom which will ordinarily be longer in proportion to the boom 3 and the forward projection of the base 1.

10 A hoisting line 7 is operatively threaded through suitable supports such as the sheaves 8 and 9, respectively at the top of the mast 2 and at the outer end of the boom 3, as shown in Fig. III. This line is made effectively operative by the hoisting drum 10. The stay line 14 ties the outer end of the boom 3 to the top of the mast 2.

15 A return line 11 is made operative by the hoisting drum 12 and serves equally well to return the boom to pick up position as shown in Fig. III to snub the boom to the proper point where the load is dropped. Both drums 11 and 12 will be equipped with power means for winding and with brakes for control as is customary. The lines 7 and 11 are "live" lines in the terminology used in the art.

20 I have therefore made a derrick that will have every advantage of one equipped with three drum hoisting machines besides being much easier to handle since when the load is lifted the line 11 is always a tight line.

25 Having fully disclosed my invention and the principles involved in its operation so that those skilled in the hoisting art can make and use it, what I claim as new and desire to secure by Letters Patent, is—

30 1. A derrick of the mast and boom type, comprising a base member, a mast mounted thereon, a boom heel pivoted to the base at a point at one side of the bottom of the mast, a stay means from the upper portion of the mast to the outer end of the boom and a hoisting line operatively threaded through the upper end of the mast and the outer end of the boom and means for selectively pivoting the heel of the boom laterally on either side of the base of the mast whereby the swinging tendency of the boom is reversible.

35 2. A loading derrick comprising a mast, a base upon which the mast is erected, a boom pivoted to the base diagonally ahead of the bottom of the mast, a live hoisting line through the top of the mast and the outer end of the boom, a stay line from the top of the mast to the outer end of the boom and a live return line on the outside of the boom, whereby the load line tends to lift a load to the boom and swing it across the front

of the mast and the return line controls the swinging tendency.

3. A loading derrick, comprising a base, a vertical mast on said base, a boom heel-pivoted on said base diagonally ahead of the bottom of the mast, a stay line from the top of the mast to the outer end of the boom that supports it at an acute angle with the base, a live load line through the top of the mast and the upper end of the boom angularly to the axis of the boom and a controllable live return line arranged angularly to the axis of the boom on the opposite side thereof that

controls the tendency of the load line to swing a lifted load.

4. The combination as claimed in claim 3 and including a heel mounting for the boom spaced diagonally from the bottom of the mast opposite-ly angular to the first named mounting whereby the characteristics of the derrick are reversible by shifting the bottom of the boom from the first to the last named mounting and moving the return line to the opposite side of the boom.

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