No. 654,699. Patented July 31, 1900.

J. ABBEE.

APPARATUS FOR MOVING HOUSES.

(Application filed Apr. 11, 1900.)

(No Model.) 2 Sheets—Sheet 1.

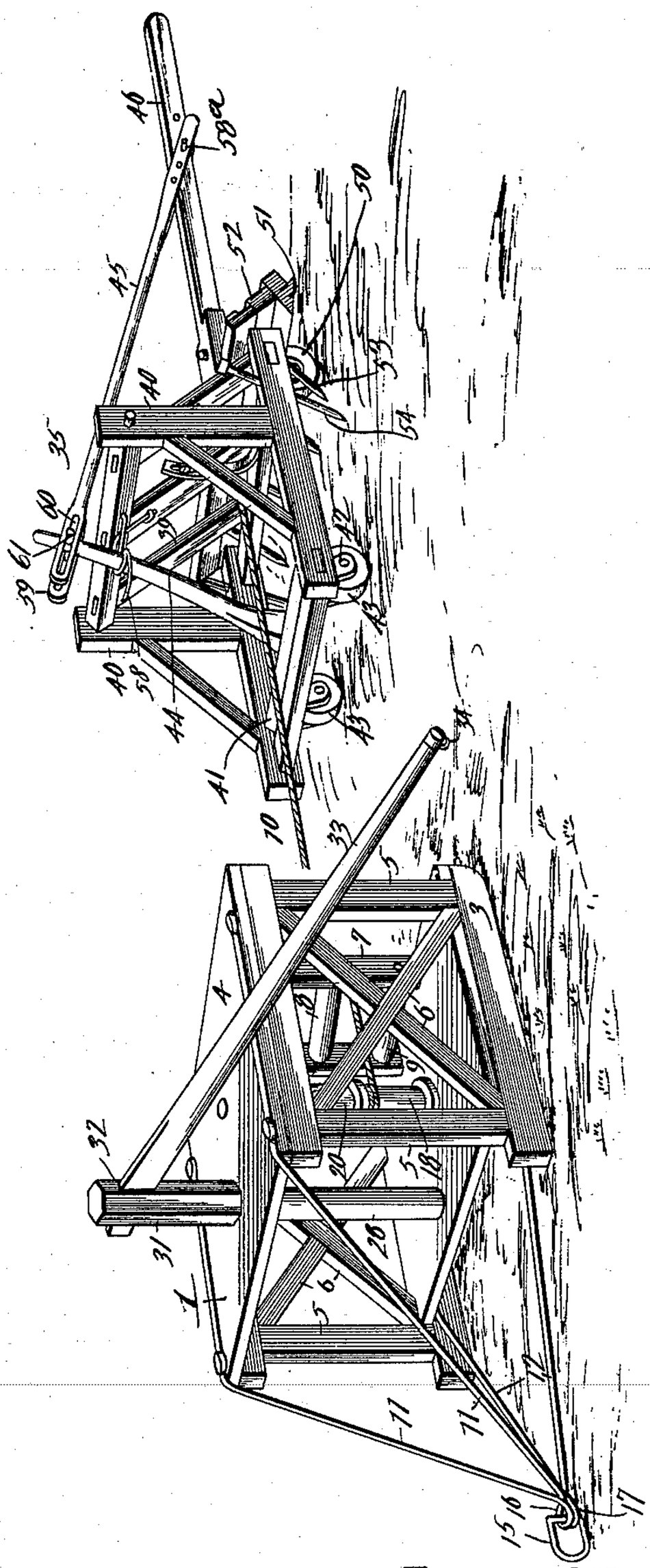

Fig. 1.

Witnesses
C. H. Walker.
H. J. Riley

Jerome Abbee Inventor
By his Attorneys,
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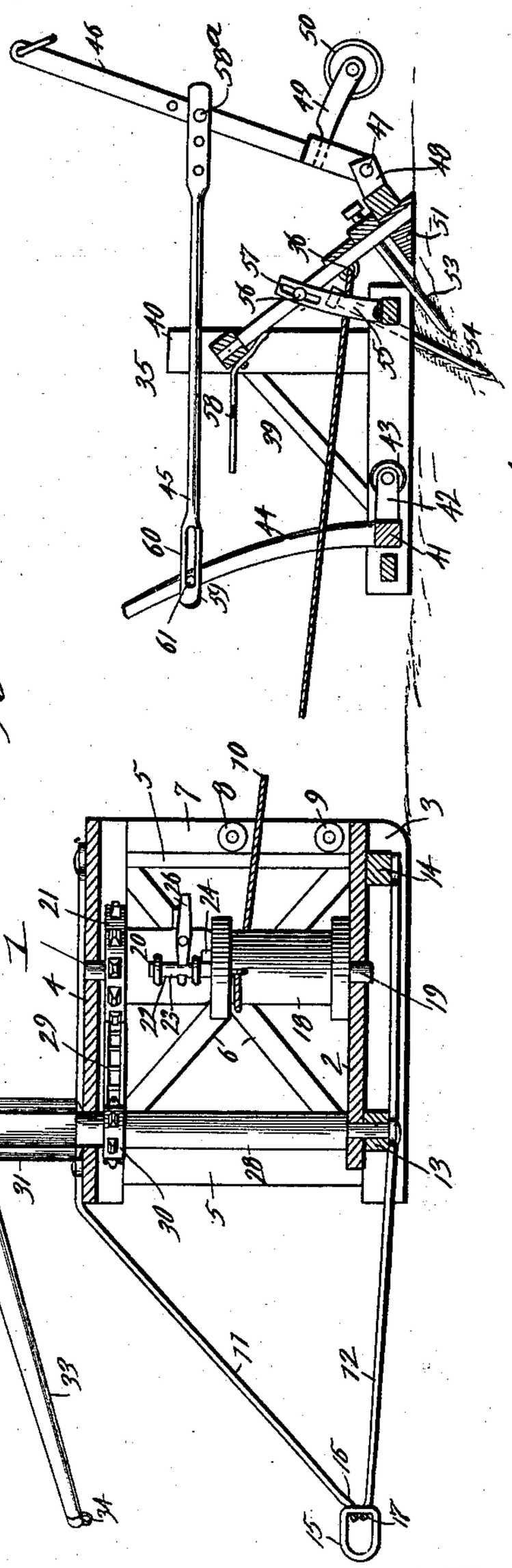

Fig. 2.

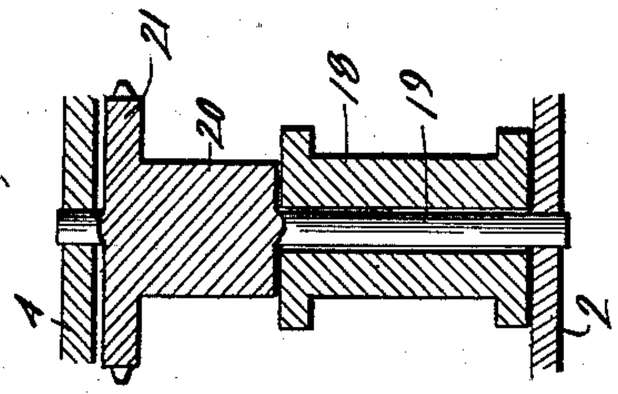

Fig. 3.

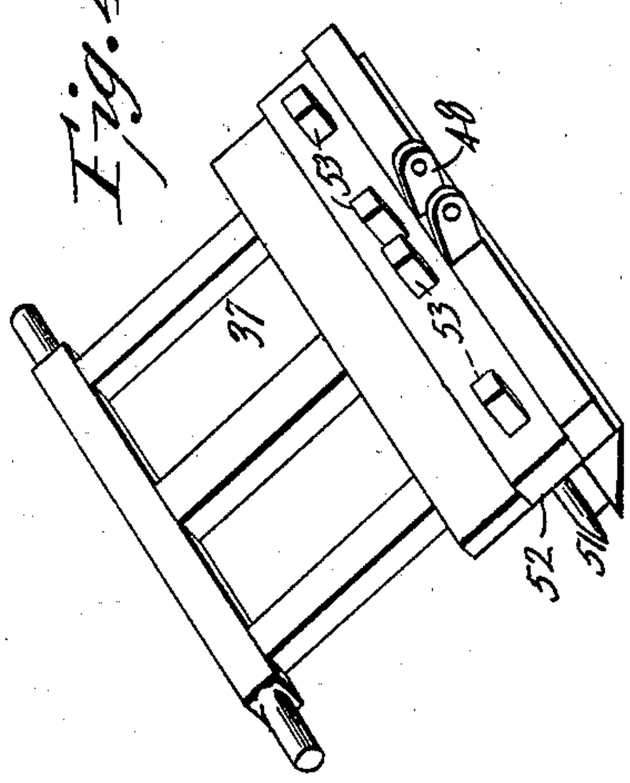

Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

JEROME ABBEE, OF RENO, NEVADA.

APPARATUS FOR MOVING HOUSES.

SPECIFICATION forming part of Letters Patent No. 654,699, dated July 31, 1900.

Application filed April 11, 1900. Serial No. 12,471. (No model.)

To all whom it may concern:

Be it known that I, JEROME ABBEE, a citizen of the United States, residing at Reno, in the county of Washoe and State of Nevada, have invented a new and useful Apparatus for Moving Houses, of which the following is a specification.

The invention relates to improvements in apparatus for moving houses.

The object of the present invention is to improve the construction of capstans and other apparatus for moving houses and other structures and to provide a simple and comparatively-inexpensive one of great strength and durability, adapted to be conveniently operated, and capable of being readily anchored at successive points and of having the anchoring devices easily withdrawn from the ground when it is necessary to advance the apparatus to another point.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of an apparatus constructed in accordance with this invention, the anchoring device being raised and arranged for forward movement. Fig. 2 is a longitudinal sectional view, the anchoring device being lowered and the anchors being embedded in the ground. Fig. 3 is a detail sectional view illustrating the construction of the spool or drum of the spool-shaft. Fig. 4 is a detail perspective view of the pivoted anchor-carrying frame.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a capstan-frame of substantially-rectangular form, comprising a bottom or platform 2, runners 3, supporting the same, and a horizontal top 4, which is supported by corner posts or uprights 5 and inclined braces 6, located at opposite sides of the capstan-frame and crossed opposite the center thereof, as clearly illustrated in Fig. 1 of the accompanying drawings. The horizontal top of the capstan-frame is further supported by front posts or uprights 7, provided with bearings and receiving the journals of a pair of horizontal guide-rolls 8 and 9, between which passes a rope or cable 10. The capstan-frame is provided at its back with rearwardly-converging draft-rods 11 and 12, united at their rear ends and extending from opposite sides of the frame at the top and bottom thereof. The lower draft-rods 12, which are extended beneath the bottom or platform 2 of the capstan-frame, are secured to front and rear transverse bars 13 and 14 and are preferably provided adjacent to the same with eyes for the reception of suitable fastening devices. The upper draft-rods 11 are extended over the top 4 and are secured to the same, as clearly illustrated in Fig. 1 of the accompanying drawings. The outer or rear ends of the draft-rods are connected with a link 15, the members of the upper and lower draft-rods being preferably constructed of a single piece of metal and bent to form eyes 16 and 17 to receive the link 15. The draft-rods may be connected with the house to be moved by any suitable means, and an enlarged hook may be used for connecting them with the sills of a house.

The rope or cable 10 is secured at its rear end to a spool or drum 18, arranged vertically and mounted on the lower portion of a spool-shaft 19, which has its upper portion 20 enlarged and provided with a horizontal sprocket-wheel 21. The enlarged upper portion 20 of the spool-shaft is squared and is provided with a clutch 22, consisting of a vertically-movable bolt 23, adapted to engage a projection or lug 24, which extends upward from the top of the spool or drum. The bolt or locking device, which is vertically movable, is mounted in suitable guides 25 and is provided with an opening through which extends an operating-lever 26, whereby the latter is connected with it. The operating-lever 26 is fulcrumed between its ends, its outer end forming a handle and its inner end being passed through the opening of the vertically-movable locking device. When the clutch is in position for engaging the lug of the spool or drum, the vertical spool-shaft will be rigidly connected with the said spool or drum, and when it is rotated by the means hereinafter described the spool or drum will also be rotated and will wind up the rope or cable, and thereby advance the capstan-frame and the house or other structure secured to it.

The spool-shaft is connected with a vertical operating-shaft 28 by a sprocket-chain 29, which is arranged on the large sprocket-wheel 21 of the spool-shaft and on a sprocket-pinion 30 of the vertical shaft 28. The vertical shaft 28, which is journaled in suitable bearings of the top and bottom of the capstan-frame, is extended above the same, its upper portion 31 being enlarged and provided with an opening 32 for the reception of a sweep-lever 33. The sprocket-gearing is arranged directly beneath the top of the capstan-frame, but any other form of gearing may be employed, if desired. The sweep or lever 33, which has its upper end fitted in the opening 32 of the vertical shaft or spindle 28, extends downward therefrom and is provided with a suitable clevis 34 to enable a horse or other animal to be hitched to it, and it is adapted when rotated to clear the capstan-frame. The capstan-frame moves forward with the house or other structure to be moved, and the rope or cable 10 extends forward to an anchoring device 35 and is secured at its front end at 36 to an inclined anchor-carrying frame 37. The anchoring device is provided with a supporting-frame 39, having a substantially-rectangular bottom portion and provided with braced uprights 40, between the upper portions of which is pivoted the anchor-carrying frame 37.

A rear axle or rock-shaft 41 is journaled in suitable bearings between the sides of the supporting-frame at the back thereof and is provided adjacent to the sides of the frame with a pair of arms 42, which are bifurcated for the reception of wheels 43 and which are adapted to extend downward to support the rear portion of the supporting-frame 39, as illustrated in Fig. 1 of the accompanying drawings, and also to be arranged in a horizontal position, as shown in Fig. 2, to permit the supporting-frame to rest directly upon the ground. The transverse rock-shaft or axle is provided with a central elongated upwardly-extending arm 44, which is connected by a rod or bar 45 with a combined tongue and lever 46. The combined tongue and lever 46 is pivoted at its rear end at 47 between a pair of forwardly-extending ears 48 of the bottom of the anchor-carrying frame, and it is provided adjacent to its rear end with a depending arm 49, having a caster-wheel 50, and swiveled at its upper end to the combined tongue and lever. The depending arm, with its caster-wheel, forms a fulcrum for the combined tongue and lever, and when it is desired to change the position of the parts from what is shown in Fig. 2 to that illustrated in Fig. 1 to adapt the anchoring device to be drawn forward the horse or other animal is unhitched from the sweep or lever 33 and is attached to the combined tongue and lever 46, which is drawn downward, thereby lifting the supporting-frame and withdrawing the anchors from the ground.

The inclined anchor-carrying frame, which is approximately rectangular, is composed of a series of longitudinal bars and transverse connecting-bars, and it is provided at its lower end with a bottom bar 51, which is approximately triangular in cross-section and which is adapted to fit flat against the ground when the parts are arranged as shown in Fig. 2. The transverse bar 52, adjacent to the bottom bar 51, is provided at intervals with perforations for the reception of inclined anchors 53, consisting of headed pins and adapted to be readily driven into the ground. The supporting-frame is provided at opposite sides with inclined openings for the reception of side anchors 54, which are driven into the ground when the supporting-frame is lowered. The inclined pivoted anchor-carrying frame, which is located at the front of the supporting-frame, has a limited movement independent of the same, and it is connected therewith by a slotted arm or bar 55, secured to the front portion of the supporting-frame and connected with the central portion of the pivoted frame by a fastening device 56, operating in the slot 57 of the arm or bar 55.

When the combined tongue and lever is swung downward to approximately a horizontal position, as shown in Fig. 1 of the accompanying drawings, the parts are locked in such position to relieve the draft-animal of strain and to prevent the supporting-frame from dropping should the traces slacken by means of a catch 58, consisting of a resilient rod extending rearward from the upper portion of the pivoted frame and arranged to be engaged by the elongated arm of the rear rock-shaft or axle. The resilient rod of which the catch is constructed is bent to form a shoulder to engage the elongated arm, and it is provided with an angularly-disposed outer portion adapted to permit the elongated arm of the axle or rock-shaft to engage it automatically. The catch operates automatically to lock the elongated arm of the axle or rock-shaft when the same is swung forward, but it must be released by hand when it is desired to lower the supporting-frame of the anchoring device.

By employing a separate anchoring device the operation of the apparatus is greatly facilitated, and it is adapted to be operated by one horse or mule, which can be alternately attached to the sweep or lever, and the tongue or lever and the anchoring device, by separating it from the capstan, is made sufficiently light to enable it to be conveniently hauled by one animal. After the anchoring device has been properly positioned the capstan-frame and the structure connected therewith are simultaneously advanced by the sweep-lever and its connection with the spool or drum, and sufficient leverage may be obtained through the length of the lever 33 and the relative size of the sprocket-wheels to enable the work to be performed by one horse; but more than one horse may be employed if found necessary or desirable.

It will be seen that the apparatus is exceedingly simple and comparatively inexpensive in construction, that the anchoring device is made light and portable, and that the clutch is easily operated to enable the spool or drum to rotate freely on the spool-shaft to allow the rope or cable to unwind when the anchoring device is being advanced. It will also be apparent that when the tongue or lever is swung downward the anchors are automatically withdrawn from the ground and that the parts are locked in an elevated position to relieve the draft-animal of strain and to prevent the supporting-frame from dropping back should the traces slacken.

In order to enable the parts to be readily adjusted so that the combined tongue and lever will properly elevate the supporting-frame and the anchor-carrying frame, the connecting-bar 45 has its front and rear ends bifurcated. Its front end is provided with a series of perforations, and the tongue or lever 46 is also provided with perforations adapted to receive a pin 58ª. The rear end 59 of the connecting-bar is bifurcated and slotted, the slots 60 extending longitudinally of the connecting-bar and receiving a transverse pin 61. These slots permit a limited movement of the tongue or lever independent of the rock-shaft.

What is claimed is—

1. An apparatus of the class described comprising a capstan-frame designed to be connected to the house or other structure to be moved, a drum or spool mounted on the capstan-frame, means for rotating the drum or spool, a rope or cable connected with the drum or spool, and a separate and independent anchoring-frame connected with the front or outer end of the rope or cable and adapted to be advanced independently of the capstan-frame, substantially as described.

2. An apparatus of the class described comprising a capstan-frame provided with means for winding up a rope or cable and designed to be secured to the house or other structure to be moved, a separate portable anchoring device comprising a supporting-frame, anchors, and a tongue connected with and adapted to withdraw the anchors from the ground when the anchoring device is to be advanced and a rope or cable connecting the anchoring device and the capstan-frame and adapted to permit the former to be advanced independently of the latter, substantially as described.

3. An apparatus of the class described comprising a capstan-frame designed to be connected with the structure to be moved, a vertical spool-shaft, a vertical drum or spool mounted on the spool-shaft at the lower portion thereof, a clutch for connecting the drum or spool with the spool-shaft and for releasing the former, a vertical shaft or spindle extended above the capstan-frame, gearing connecting the shaft or spindle with the spool-shaft, a sweep or lever connected with the upper portion of the shaft or spindle, a separate portable anchoring device provided with wheels and having anchors and a rope or cable extending from the anchoring device to the drum or spool and adapted to permit the said anchoring device to be advanced independently of the capstan-frame, substantially as described.

4. An apparatus of the class described comprising a capstan-frame provided with a drum and having means for operating the same and an anchoring device composed of a vertically-movable supporting-frame, a rock-shaft adapted to support the rear portion of the supporting-frame, an inclined anchor-carrying frame arranged at the front of the supporting-frame and pivoted to the top of the same, a combined tongue and lever connected with the bottom of the anchor-carrying frame and provided with an arm, and connections between the rock-shaft and the combined tongue and lever, substantially as described.

5. In an apparatus of the class described, the combination of the vertically-movable supporting-frame, an inclined anchor-carrying frame arranged at the front of the supporting-frame and pivotally connected at its top with the same and provided at its bottom with anchors, means for limiting the movement of the pivoted frame independent of the supporting-frame, and a combined tongue and lever connected with the bottom of the pivoted frame and provided with a depending arm, substantially as described.

6. In an apparatus of the class described, a portable anchoring device comprising a supporting-frame, a rock-shaft or axle adapted to support the rear portion of the said frame, an inclined anchor-carrying frame arranged at the front of the supporting-frame and pivotally connected at its top with the same, a tongue connected with the bottom of the pivoted frame and having an arm, and a catch for automatically locking the parts when the tongue is swung downward, substantially as described.

7. In an apparatus of the class described, a portable anchoring device comprising a vertically-movable supporting-frame, an inclined oscillating anchor-carrying frame arranged at the front of the supporting-frame and connected with the top thereof, a catch arranged at the top of the pivoted frame, an axle or rock-shaft adapted to support the rear portion of the supporting-frame and provided with an arm arranged to engage the said catch, a combined tongue and lever connected with the pivoted frame, and adjustable connections between the combined tongue and lever and the arm of the rock-shaft, substantially as described.

8. In an apparatus of the class described, a portable anchoring device comprising a supporting-frame, an inclined anchor-carrying frame connected with the top of the supporting-frame, a slotted arm secured to one of the frames, a pin mounted on the other frame and operating in the slot, a combined tongue and

lever connected with the inclined frame, and a rear rock-shaft or axle connected with the combined tongue and lever, substantially as described.

9. In an apparatus of the class described, a portable anchoring device comprising a supporting-frame, an inclined anchor-carrying frame, a rock-shaft supporting the rear portion of the supporting-frame and having an arm, a combined tongue and lever connected with the anchor-carrying frame, and the connecting-rod adjustably secured to the combined tongue and lever and having a slot-and-pin connection with the arm of the rock-shaft, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JEROME ABBEE.

Witnesses:
HENRY DOUGLAS,
L. D. FOLSOM.