

[54] **HOISTING APPARATUS**
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214/77, 74/531
[51] **Int. Cl.**.....**B66c 23/04**
[58] **Field of Search**.....**212/8, 55, 59; 74/531; 188/67,**
188/189; 214/75 H, 77

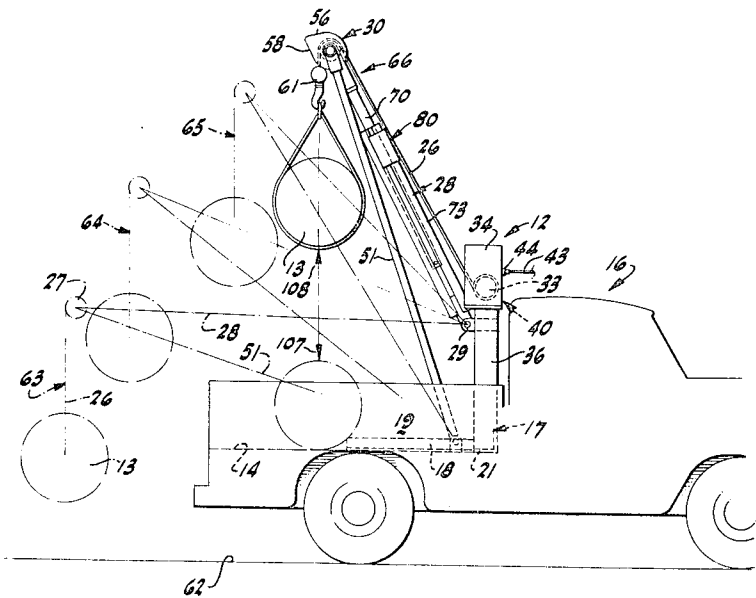
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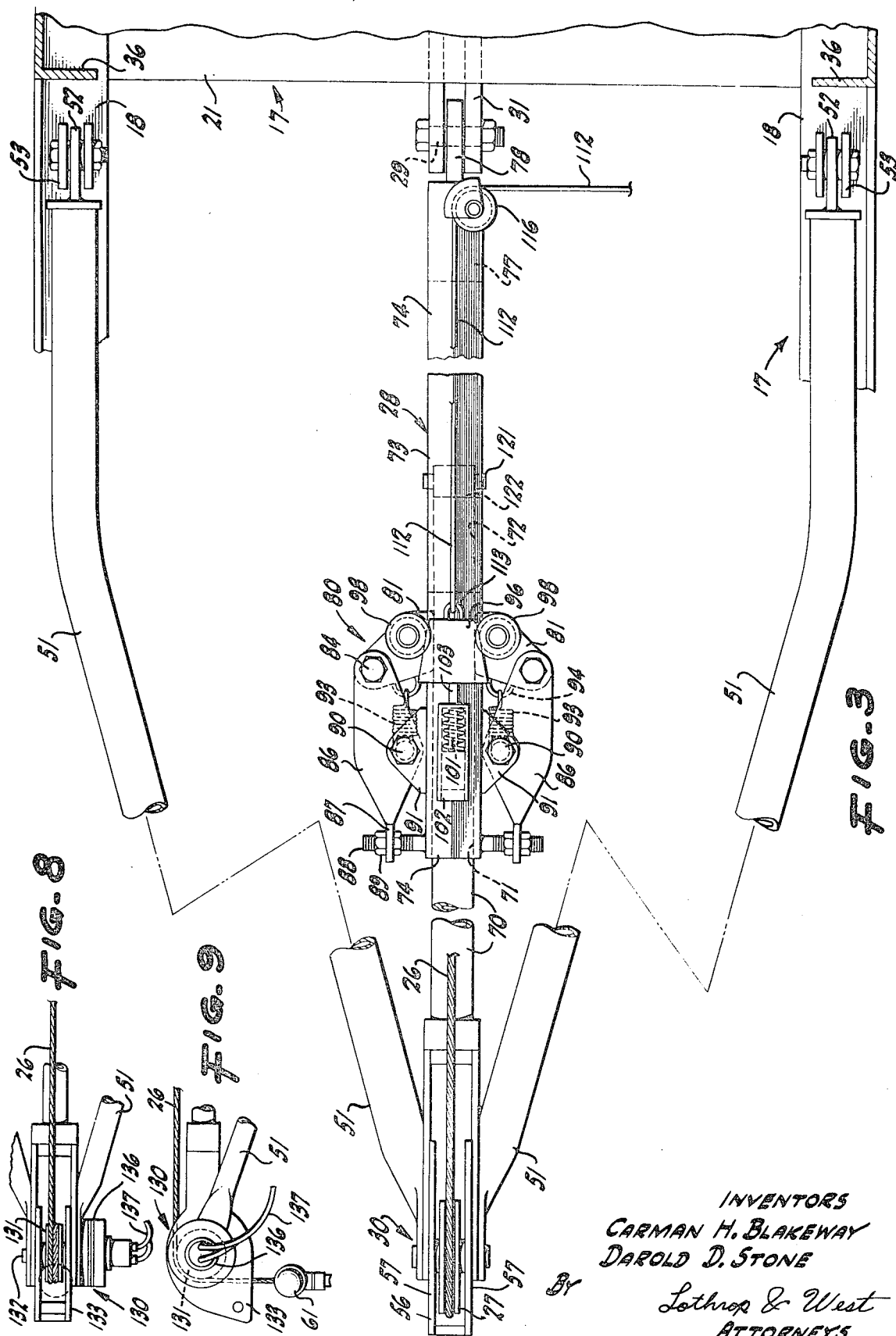
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[57] **ABSTRACT**

A telescoping boom is pivotally mounted at one end on a base framework, the other end of the boom carrying a sheave over which is led a cable connected at one end to a power winch. The other end of the cable carries a hook, or the like for attachment to a load. A remotely operated clamping mechanism on the boom controls the lifting and lowering of the load in conjunction with operation of the winch, the clamping mechanism selectively serving to grip or release a translatable portion of the boom at the appropriate juncture, as determined by the operator and depending upon the attitude of the boom and the horizontal location of the load.

5 Claims, 12 Drawing Figures





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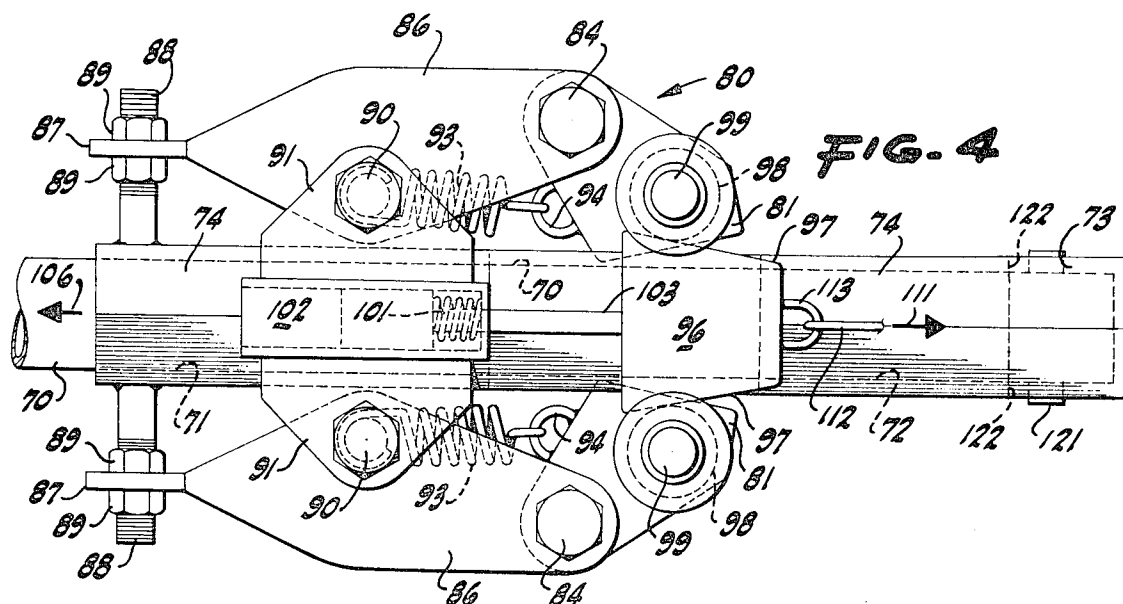
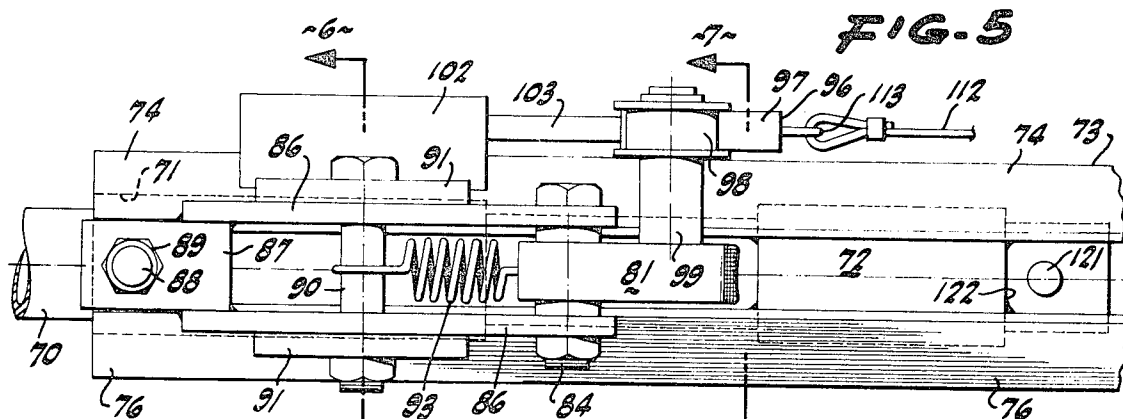
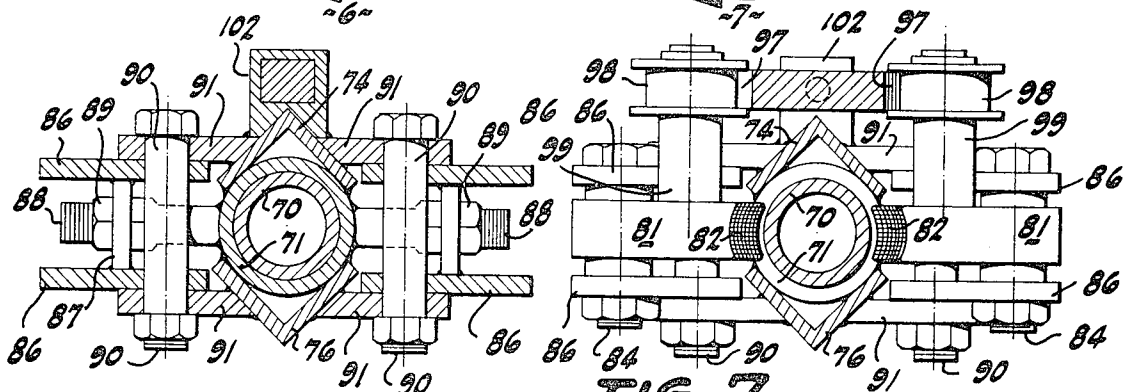


FIG. 6

FIG. 7

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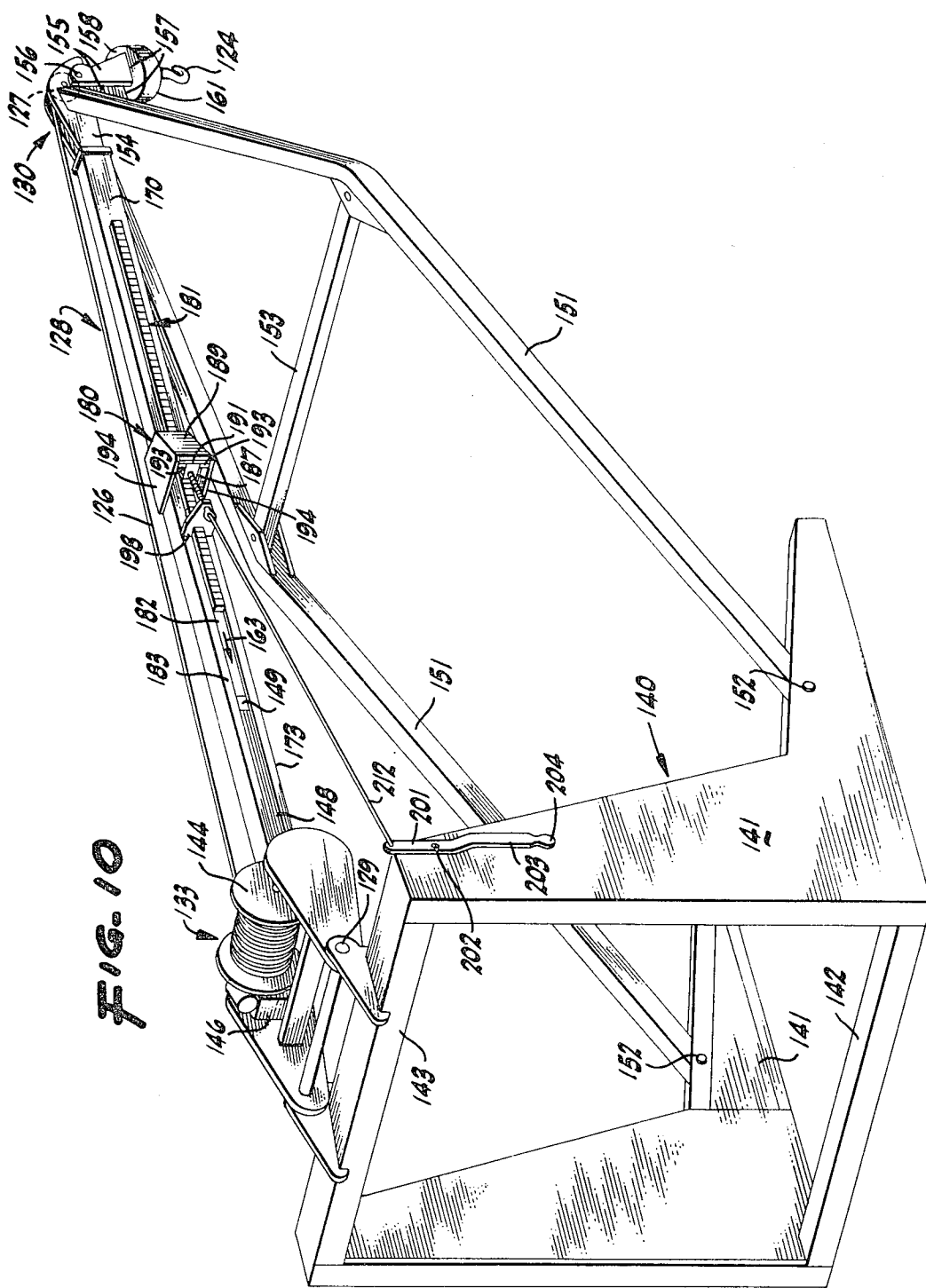


FIG. 10

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FIG-11

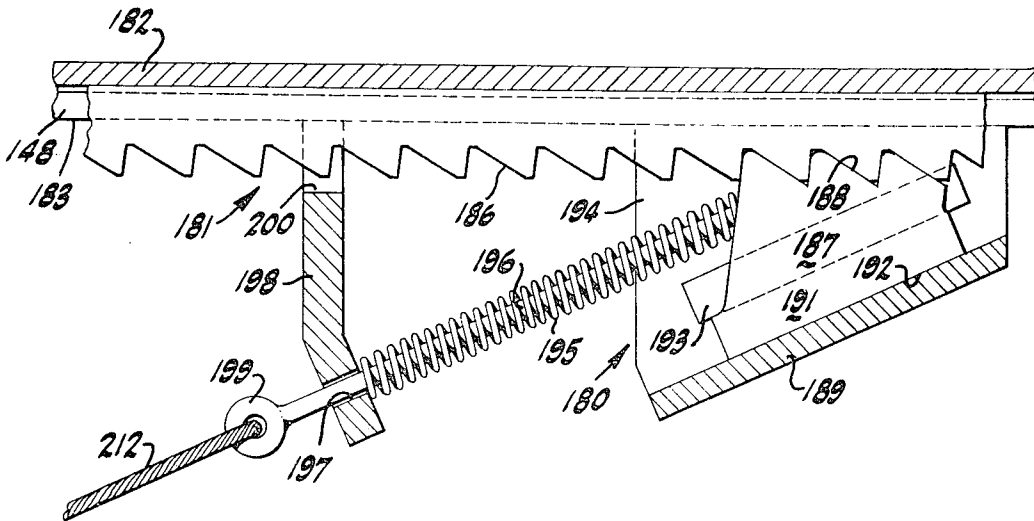
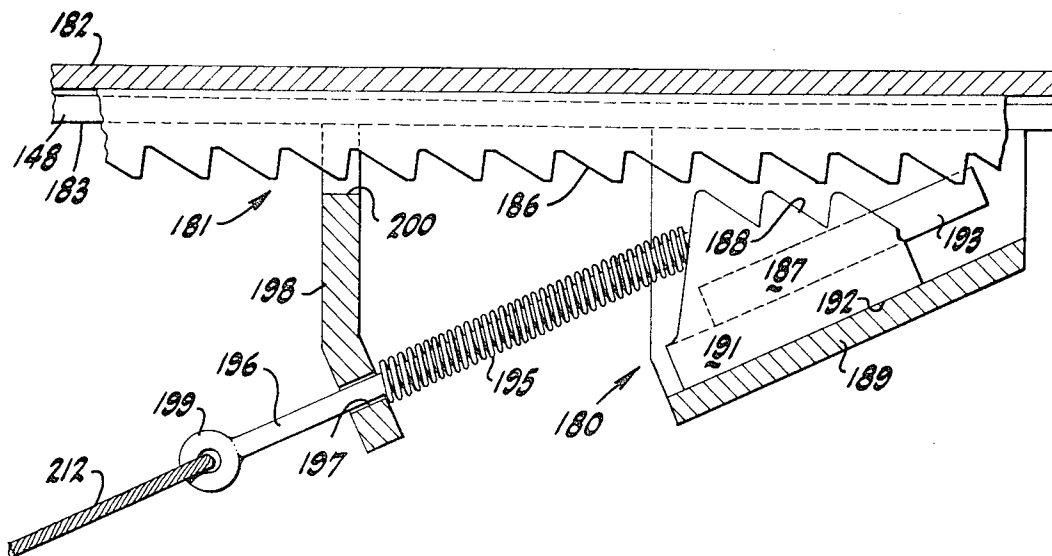


FIG-12

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HOISTING APPARATUS

The invention relates to improvements in hoisting mechanisms of the controlled, telescoping boom variety.

Hoisting mechanisms of the telescoping kind used to load and unload heavy objects from a truck, trailer, dock, platform, and the like, have long been known and used, one example being the type disclosed in Blackman et al. U.S. Pat. No. 2,633,999 dated Apr. 7, 1953.

One of the difficulties encountered in these earlier hoisting devices, however, has been the necessity of having manually to pin and subsequently unpin the two relatively movable boom portions each time lifting and lowering is effected, thereby requiring additional time and effort on the part of the operator and creating a certain exposure to risk of harm from a sudden drop in the load.

It is therefore an object of the invention to provide a hoisting apparatus which has a remotely operated release mechanism, thereby rendering the operation of the device safe, convenient and expeditious.

It is another object of the invention to provide a hoisting apparatus which is relatively economical both with respect to original acquisition cost as well as to maintenance expense.

It is yet another object of the invention to provide a hoisting apparatus which can be self-contained, and relatively compact in size, yet is capable of precisely handling loads of considerable bulk and weight for extended periods of time.

It is a further object of the invention to provide a hoisting apparatus which is not only efficient but also versatile in that it can be used in a wide variety of circumstances and under many different load-handling requirements.

It is still a further object of the invention to provide a generally improved hoisting apparatus.

Other objects, together with the foregoing, are attained in the embodiment described in the following description and illustrated in the accompanying drawings, in which:

FIG. 1 is a side elevational view, showing the hoisting apparatus installed in a typical environment, namely, on the bed of a pickup truck, and with the boom in a lowered position;

FIG. 2 is a view comparable to that of FIG. 1, but showing, in broken line, successive intermediate elevated positions, and, in full line, the boom in an elevated position;

FIG. 3 is a fragmentary top plan view, to an enlarged scale, taken in the direction indicated by the arrows 3—3 in FIG. 1;

FIG. 4 is a fragmentary top plan view, to a more enlarged scale, of the boom-gripping mechanism;

FIG. 5 is a side elevational view of FIG. 4;

FIG. 6 is a transverse sectional view of the gripping mechanism, the plane of the section being indicated by the line 6—6 in FIG. 5;

FIG. 7 is a transverse sectional view, the plane of the section being indicated by the line 7—7 in FIG. 5;

FIG. 8 is a fragmentary top plan view of a modified form of the boom sheave mechanism shown in FIG. 3;

FIG. 9 is a side elevational view of FIG. 8;

FIG. 10 is a perspective view of a modified form of hoist apparatus;

FIG. 11 is a fragmentary top plan view to an enlarged scale of the pawl and linear ratchet mechanism of FIG. 10, portions being broken away to reveal interior details; and,

FIG. 12 is comparable to FIG. 11 but with the pawl in open position.

While the hoisting apparatus of the invention is susceptible of numerous physical embodiments, depending upon the environment and requirements of use, substantial numbers of the herein shown and described embodiments have been made, tested and used, and all have performed in an eminently satisfactory manner.

The hoisting apparatus of the invention, generally designated by the reference numeral 12, finds widespread use in lifting and lowering loads of many kinds and under a wide variety of circumstances, for example, lifting and lowering a fuel drum 13, to and from the bed 14 of a pickup truck 16.

Preferably, the hoisting apparatus 12 includes as a base an appropriately arranged framework 17 removably mounted on

the truck bed 14. The framework 17 includes a horizontal, spaced pair of strong, fore and aft channel members 18 supported on and attached to each side of the truck bed 14 adjacent the vertical sidewalls 19. A transverse angle iron 21 spans the forward ends of the channel members 18, thereby affording even greater strength and rigidity to the framework structure 17.

Handling of the load 13 is effected by any suitable rigging, such as a drum sling 22, ring 23 and hook 24, as appears most clearly in FIGS. 1 and 2.

The rigging hook 24 is connected, in the usual fashion, to a wire cable 26 led over a rotatable sheave 27 forming position 63 of a sheave assembly 30 located on the after end of a boom, generally designated by the reference numeral 28.

The boom 28 is pivotally mounted at its forward end, adjacent the truck cab, on a transverse, horizontal pin 29 carried by a bracket 31 attached to the framework 17, thereby enabling the boom to move in a vertical plane substantially coincident, in the particular environment shown, with the median vertical plane of the truck bed.

The wire cable 26 extends forwardly from the sheave 27 and is wound on a suitable power-driven winch 33 carried in a transverse winch housing 34 spanning a vertical, spaced pair of upstanding corner posts 36 located at the forward end of the framework 17.

The winch mechanism, generally designated by the reference numeral 40 includes not only an electrical motor, but also reduction gearing between the motor and the winch and if desired, a battery which is separate from and in addition to the customary battery incorporated in the electrical system of the truck vehicle.

The present invention provides yet a further feature of safety and convenience, namely, a remote control switch 41 with a thumb-operated switch button 42 (see FIG. 1). The switch 41 is connected by a conductor 43 to an outlet 44 connected to the winch mechanism, thereby enabling the operator to control the movement of the winch 33 and the cable 26 from any desired location, even from inside the cab of the truck, such as might be desirable in the event of inclement weather.

The effective strength of the boom and the lateral stability of the boom is augmented by a pair of vertically angularly movable legs 51 pivotally mounted at their forward ends adjacent the cab on horizontal pins 52 (see FIG. 3) carried by brackets 53 mounted on the fore and aft rails 18 of the framework 17. The after ends of the boom supporting legs 51 converge toward each other and are secured to the sheave assembly 30 and the after end of the boom 28 in any appropriate manner.

Inclusive of the sheave assembly mechanism 30 is a sheave guard 56 comprising a spaced pair of strong vertical plates 57 located on opposite sides of the sheave 27. The sheave guard 56 includes a lower edge portion 58 which serves as a limit stop when abutted by a stop member 61, such as a sphere of heavy metal, attached to the wire cable 26 in the vicinity of the rigging hook 24, the heavy sphere also serving as a hook stabilizing, or inertial, member.

In order to lift the barrel 13 from its location on the ground 62, as appears in FIG. 1, to the elevated positions shown in FIG. 2, the operator presses on the thumb button 42, thereby taking up on the cable 26 and lifting vertically the load 13.

No movement of the boom 28 or the legs 51 takes place until the upwardly moving ball 61 abuts the limit stop portion 58 of the sheave guard 56, the position of the parts at this juncture being as indicated by reference numeral 63 in FIG. 2.

Thereafter, continued tautening of the cable 26 results in lifting the sheave assembly 30 along with the after ends of the boom 28, the legs 51 and the load 13, into the intermediate position indicated, for example, by the reference numeral 64 in FIG. 2.

By further taking up on the cable 26, by movement of the winch 33, the boom 28 moves through the position 65 and into the elevated position 66.

It will be especially noted, at this time, that during the upward movement of the hoist in the manner just described, the length of the boom 28 varies (viz, shortens) whereas the legs 51, being of fixed length, determine the arc followed by the sheave, and the depending load, as it is swung upwardly.

Variation in boom length is achieved by making the boom of a selectively telescoping nature.

The telescoping after, or movable, portion 70 of the boom 28 is preferably constructed of sturdy tubing. The movable portion 70 of the boom is slidably disposed within axially spaced sleeves 71 and 72, also of tubular construction, located adjacent the after end and forming a portion of the forward, or base, or axially fixed portion 73 of the boom 28.

The fixed, base portion 73 of the boom includes not only the sleeves 71 and 72, but also a pair of facing upper and lower angle irons 74 and 76, respectively, welded to the tops and bottoms of the sleeves 71 and 72. The forward end of the boom includes a cylindrical member 77 located between and secured to the forward ends of the angle irons 74 and 76 (see FIG. 3). Projecting forwardly from the front end of the cylindrical member 77 is a thick vertical plate 78 drilled to receive the transverse, horizontal pivot pin 29, the boom 28 moving in a vertical plane about the pin 29 as a pivot.

In sum, the telescoping boom 28 comprises the after boom portion 70, which is axially translatable and carries the sheave assembly on its distal end, and the forward boom portion 73 which is pivotable in a vertical plane along with the portion 70, but is axially immovable.

In lowered position of the boom 28, as in FIG. 1, the boom is extended and is substantially equal in length to the supporting legs 51. However, in elevated attitude as in FIG. 2, the boom is retracted.

When the hoist is elevated, the weight of the boom 28 and the legs 51, as well as the weight of the load 13, tends to urge the components downwardly and, unless checked, the hoist and load would return to the FIG. 1 attitude as soon as the cable is paid out from the winch. It is therefore necessary at this juncture to restrain, temporarily, movement of the boom until the drum is lowered.

In order temporarily to immobilize the boom 28 in its elevated position, as in FIG. 2, we have provided a clamping mechanism, generally designated by the reference numeral 80.

The clamping mechanism 80 is preferably located adjacent the after ends of the angle irons 74 and 76 in the vicinity of the tubular guide sleeves 71 and 72, which encompass the forward portion of the slidable boom member 70.

The gripping mechanism 80 comprises a pair of opposed jaws 81, each including an inner, arcuate, roughened surface 82 (see FIG. 7) arranged selectively to engage and disengage the adjacent outer surface of the slidable boom portion 70 in the exposed zone between the two sleeves 71 and 72.

The jaws 81 are pivotally mounted on a pair of pins 84, each pin being carried by a spaced pair of horizontal plates 86 on opposite sides of the gripping mechanism.

The plates 86 are tapered toward their after ends (see FIG. 3) and are there welded to a pair of vertical flanges 87, each having a central opening to receive a corresponding threaded stud 88 laterally outstanding in opposite directions from the after sleeve 71 (see FIG. 6). Straddling each of the flanges 87 is a pair of nuts 89 threaded on the stud 88. By suitable manipulation of the nuts 89, the plates 86 can be angularly shifted about the pivot pins 90 carried by two spaced pair of ears 91 carried by and laterally outstanding in opposite directions from each inclined surface of the angle irons members 74 and 76.

The plates 86 act, in other words, as bellcranks, so that when it is necessary or convenient, to shift the jaw pivot pins 84 toward or away from the movable boom portion 70 it is only necessary to adjust the respective adjustment nuts 89.

A pair of tension springs 93, anchored at one end on the pivot pins 90 and at the other end on eyes 94 secured to the after edge of the jaws 81, is effective to bias the pair of jaw

teeth 82 inwardly into clamping engagement with the adjacent outer walls of the slidable portion 70 of the boom.

FIG. 3 clearly illustrates the position of the jaws 81 when the teeth are gripping the telescoping portion 70 of the boom, whereas FIGS. 4-7 show the attitude of the jaws when they are in open position.

Selective control of the jaw position is afforded by a wedge member 96 having oppositely tapered, forwardly converging, sidewalls 97 in engagement with a corresponding pair of rollers 98 rotatably mounted on the upper ends of vertical studs 99 upstanding from the jaws 81.

Biasing the cam wedge 96 in a rearward direction is a compression spring 101 within a housing 102 and acting on the after end of a rod 103 connected to the wedge 96.

In the absence of a countervailing force, the spring 101 urges the cam 96 rearwardly a sufficient distance such that the jaw rollers 98 are no longer biased outwardly, thereby allowing the jaw springs 93 to urge the jaws inwardly into gripping engagement with the slidable boom member 70, as appears most clearly in FIG. 3.

With the jaws in closed position, as just described, any tendency of the slidable boom portion 70 to translate rearwardly in the direction of the arrow 106 (see FIG. 4) is effectively overcome.

Consequently, by locking the jaws when the boom 28 is in the upwardly inclined attitude 66 shown in FIG. 2, the downward urgency of gravity acting upon the boom 28 and the legs 51 tending to lower and extend the boom is obviated. The operator, therefore, is now able to lower or raise the load 13 in the vertical line indicated by the arrows 107 and 108, respectively, merely by appropriately paying out or reeling in the cable 26. Should it be desired, for example, to lower the drum 13 from the full line position shown in FIG. 2 to the position directly beneath on the truck bed 14, it is only necessary to press the appropriate thumb button 42 on the remote control switch 41 (see FIG. 1) so as to pay out sufficient cable 26 from the winch 33.

To pick up the drum 13 from the truck bed in the direction of the arrow 108 the cable is reeled in.

Then, in order to lower the drum to the ground, passing successively through the positions 66 to 65 to 64 to 63 (as shown in FIG. 2), the jaws 81 are opened so as to allow the boom member 70 to project outwardly while the cable is paid out at a suitable, measured rate, thereby lowering the boom. During lowering, the stop member 61 abuts against and is blocked by the limiting lower edges 58 of the sheave guard structure 56.

The jaws 81 are opened at the appropriate juncture by moving the wedge 96 forwardly, in the direction of the arrow 111 (see FIG. 4).

Forward movement of the wedge 96 is effected by pulling on a lanyard 112 attached to an eye 113 on the front end of the wedge 96. The lanyard 112 extends forwardly and is led over a pulley 116 suitably positioned on the forward end of the boom so that the lanyard handle 117 (see FIG. 1) is conveniently located with respect to the remote control electrical switch 41.

By appropriate conjoint manipulation of the switch 41 of the lanyard 112, the hoist operator can expeditiously lower the drum to the lowermost position 63 of the boom. At this juncture, further extension of the boom member 70 is obviated as a result of the abutment of a limit stop cross pin 121 (see FIGS. 3, 4 and 5) with the adjacent leading edge 122 of the forward sleeve 72. Substantially concurrently, or in advance of the abutment of the pin against the sleeve, the lanyard handle 117 is released, the wedge 96 thereby retracting under urgency of the spring 93 and allowing the jaws 81 to return to boom-clamping position.

Upon reaching the position 63 (see FIG. 2) the boom attitude remains fixed in the substantially horizontal position shown, and in order to lower the drum 13 to ground, as in FIG. 1, it is only necessary for the operator to cause the winch to pay out sufficient cable to traverse the few remaining feet to the ground.

In lifting the load from the ground, swinging it forwardly and depositing it on the truck bed, the above-described steps are performed in reverse order.

FIGS. 8 and 9 illustrate a modified form of sheave assembly 130 comprising a sheave 131 mounted on a shaft 132 journaled in a sheave housing 133. A winch 33, as before, pays out and reels in cable 26 as controlled by the operator. In the modification shown in FIGS. 8 and 9, however, accurate control over the rotation of the sheave 131 is afforded by a magnetic brake 136 connected to the shaft 132 and remotely controlled by the operator by means of electrical conductors 137 extending from the brake 136 to the operator's control switch and to a suitable power source (not shown). By affording selective braking capabilities, the operator need not await abutment between the stop member 61 and the sheave guard, but instead, can even more quickly and conveniently, coordinate the movements of the hoist components and the placement of the load.

FIGS. 10-12 illustrate a modified form of hoist apparatus comprising a framework, generally designated by the reference numeral 140, including a spaced pair of L-shaped subframes 141 connected by a lower transverse member 142 and an upper crossmember 143 having pivotally mounted thereon for rotation about a transverse, horizontal axle 129, a winch assembly, generally designated by the reference numeral 133.

The winch assembly 133 includes a drum 144 rotated by suitable driving mechanism 146 and remotely controllable by an appropriate switch (not shown) located conveniently with respect to the operator's position when the device is being maneuvered. The winch assembly 133 also forms the base structure on which the rearwardly extending boom 128 is mounted. The boom and the winch, in other words, move upwardly and downwardly in unison.

As before, the boom 128 comprises a forward base portion 173, which springs in a vertical direction, and an after, telescoping portion 170, which moves axially in a fore and aft direction in response to movement of the wire cable 126 wound about the drum 144 and extending rearwardly where it is led over a pulley 127, or sheave, rotatably mounted in a pulley assembly 130.

As appears most clearly in FIG. 10, the forward base portion 173 of the boom 128 is of a C-shaped cross section with an elongated slot 148 along one side. Slidably disposed within the base portion 173 is the telescoping after portion 170, which is rectangular in cross section, the forward end of the telescoping portion 170 being shown in FIG. 10 and indicated by the reference numeral 149.

The after end of the boom 128 is supported by a pair of legs 151 pivotally mounted on pins 152 supported on the leg portions of the L-shaped subframes 141. The legs 151 extend rearwardly and are cross connected by a beam member 153. Aft of the beam 153 the legs converge and are fastened to the opposite walls 154 of the pulley assembly 130.

Included in the pulley assembly 130 is a pair of vertical limit stop members 155 depending from transverse, horizontal axles 156 projecting outwardly from opposite sides of the pulley walls 154. The limit stops 155 hang freely vertically and thus always present a pair of horizontal lower edges 157 against which the upper horizontal surface 158 of a weight member 161 can abut when the drum 144 fully winds the cable 126.

In the uppermost position of the weight 161, as shown in FIG. 10, the boom 128 can be inclined upwardly by further taking in on the wire cable 126. With the boom 128 in the approximately horizontal position shown in FIG. 10, and with the weight member 161 abutting the limit stop member 155, as shown, the hoist components are in about the location indicated by the reference numeral 63 in FIG. 2; and lifting of the boom 128 from the position 63 is effected by rotating the drum 144 in a direction such as to shorten the effective length of the cable (the distance between the drum 144 and the pulley 127).

By shortening the length of the cable 126, the after, telescoping portion 170 of the boom 128 is urged forwardly in the direction of the arrow 163, this force being effective to lift and incline the legs 151 through intermediate elevated locations, such as those designated successively by the reference numerals 64 and 65 and into position 66 (see FIG. 2).

As previously noted, the legs 151 remain at a constant length and thus determine the radius of the arc through which the pulley assembly 130 and the depending load moves. Concurrently, the boom 128 telescopes, retracting when swinging upwardly and projecting when swinging downwardly. Accompanying the boom in its arcuate movement is the winch assembly 133 to which the forward end of the boom 128 is affixed, as previously indicated.

Selective telescoping movement of the boom 128 is afforded by a boom-gripping mechanism, generally designated by the reference numeral 180, comprising a linear ratchet 181 longitudinally mounted on a vertical side 182 of the after, telescoping portion 170 of the boom 128, the linear ratchet projecting laterally through the elongated slot 148 in the corresponding side 183 of the forward, fixed portion 173 of the boom 128. The ratchet, in other words, moves fore and aft in the slot 148 of the base portion 173 in unison with the telescoping portion 170 to which the ratchet is affixed.

The linear ratchet 181 includes a plurality of rearwardly inclined teeth 186 engageable with a wedge-shaped dog 187 (see FIGS. 11 and 12), or pawl, provided with matching, oppositely inclined teeth 188 arranged for wedging engagement with the linear ratchet 181.

Wedging of the dog 187 is effected by a camming plate 189 inclined in a rearwardly converging direction. Bearing against the camming plate 189 is a slide 191 from which the pawl teeth 188 project toward the ratchet. The outer face 192 of the slide plate 191 is held in sliding contact with the camming plate 189 by reason of a pair of elongated guide blocks 193 mounted on a generally triangular mounting plate structure 194 secured to the fixed portion 173 of the boom 128 (see FIG. 10).

The slide plate 191, in other words, includes a pair of vertical flanges, one at the top and one at the bottom, which slide in the corresponding top and bottom tracks defined on the one side by the camming plate 189 and on the other side by the upper and lower guide blocks 193 mounted on the upper and the lower triangular mounting plates 194.

Urging the dog 187, or pawl, rearwardly into engagement with the ratchet 181 is a compression spring 195 encompassing a rod 196 affixed at its after end to the dog 187 and extending forwardly, in substantially parallel relation to the camming plate 189 and the guide block 193. The rod is supported in and extends through an opening 197 in an angled bracket member 198 mounted on the side 183 of the fixed boom portion 173. A recess 200 in the bracket 198 affords clearance for the translatable ratchet 181.

The rod 196 terminates in an eye 199, to which is fastened a lanyard 212 extending forwardly to a lever 201 (see FIG. 10) pivotally mounted on a pin 202 carried on the outer side of the L-shaped subframe 141. An outwardly offset lower portion 203 of the lever is shaped to afford a handle 204 conveniently located with respect to the operator of the hoisting apparatus.

As previously explained, the boom is lifted from the position 63, through the positions 64 and 65 and into the elevated position 66 (see FIG. 2) by taking in on the cable 126 with the weight member 161 jammed against the limit stop 155. As the boom rises, the after, telescoping portion 170 of the boom translates forwardly, the teeth 186 of the ratchet 181 partially engaging the teeth 188 of the dog 187 and urging the dog 187 in a forward direction against the rearward bias of the compression spring 195.

As the dog 187 is urged forwardly by the movement of the ratchet 181, the guide block 193 tends to urge the dog laterally in a direction away from the ratchet, the result being that the teeth 188 of the dog 187 tends to disengage from the teeth 186 of the ratchet 181. Assisting in this tendency is the

slope of the teeth **186** which affords a substantial component tending to urge the dog **187** in a path parallel to the inclination of the camming plate **189**.

The overall effect is comparable to that of a free-running pawl and ratchet, with the linear ratched moving in a forward direction substantially uninterrupted by the pawl which freely clicks as a slight contact occurs between the tips of the respective teeth.

As soon as the boom attains the desired attitude, the operator brings the drum to a halt, and concurrently, the compression spring **195** biases the pawl rearwardly into gripping engagement with the ratchet, thereby preventing rearward movement of the telescoping portion **170** of the boom **128**. As a consequence, the boom is locked in the desired angular position, at which juncture the load can be vertically lowered by paying out on the cable **126**.

In the reverse of the foregoing operation, i.e., lowering the boom from an elevated attitude, the cable is first taken in until the weight member **161** engages the lower edge **157** of the limit stop **155**. Then, by slightly taking up an additional amount on the cable, the pawl is freed. At this instant, the operator grasps the handle **204** and moves the lever **201** in a direction such as to pull forwardly on the lanyard **212**, thereby completely disengaging the pawl **187** from the ratchet **181**, as appears most clearly in FIG. 12.

Then, while holding the pawl **187** in this open position, the cable is payed out, thereby allowing the boom to lower as the after, telescoping portion **170** of the boom extends outwardly. Upon reaching the desired angular location of the boom, such as the position **63** in FIG. 2, the handle **204** is released, thereby releasing the lanyard **212** and allowing the spring **195** to urge the pawl into gripping relation with the ratchet. Since the ratchet is thereby locked, the boom is fixed in position and the operator can lower the load vertically to the ground by paying out on the cable.

It can therefore be seen that we have provided a versatile, safe and efficient hoisting apparatus which can readily be controlled by a single operator located in one convenient position.

What is claimed is:

1. A hoisting apparatus, comprising:

- a. a rigid frame adapted to be mounted adjacent the forward end of a truck bed, said frame including an upwardly extending portion and a rearwardly extending portion;
- b. an elongated extensible boom pivotally mounted at one end to said frame for angular movement in a vertical plane, said boom including a first, axially fixed member pivotally secured to said upwardly extending portion and a second, axially movable member mounted on said first

member for axial movement with respect thereto;

- c. a supporting arm pivotally secured at one end thereon said rearwardly extending portion at a point which is immediately above the level of the bottom of said frame and substantially below the level of the pivot of said boom, said supporting arm being pivotally connected at its other end to said second member;
- d. a winch mounted on said hoisting apparatus in a position adjacent the point of pivotal securement of said first member;
- e. a sheave mounted directly on and adjacent the outer end of said second member;
- f. a cable carried on said winch and trained over said sheave, said cable terminating in a load-supporting end;
- g. means on said cable for abutting the outer end portion of said boom when said cable is drawn toward said winch to thereby raise and retract said boom toward said frame;
- h. releasable gripping means carried by said first and second boom members and operable while said load-supporting end of said cable is moved vertically for selectively locking together said first and second members to prevent axial movement of said second member, said gripping means being self-locking in a boom extending direction and being self-releasable in a boom shortening direction in that release of the gripping means is initiated by retraction of said second boom member and said gripping means is maintained out of engagement with said second member by control means disposed at a position remote from said gripping means and connected thereto for selectively operating said gripping means from said remote position.

2. A hoisting apparatus as in claim 1 wherein said winch is power driven and remotely controlled.

3. A hoisting apparatus as in claim 1 wherein said extensible boom comprises a first member and a second member telescopically arranged relative to said first member for axial movement between a first position and a second position.

4. A hoisting apparatus as in claim 3 including a ratchet on said first member; a pawl carried on said second member selectively engageable with said ratchet for immobilizing said first member relative to said second member at a predetermined boom length; and means for selectively effecting engagement between said pawl and said ratchet.

5. A hoisting apparatus as in claim 4 further including a spring effective to bias said pawl into engagement with said ratchet; and means for remotely urging said pawl away from engagement with said ratchet.

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