No. 708,551. Patented Sept. 9, 1902.

W. W. C. HILL.

FENCE BUILDER AND HAY DERRICK.

(Application filed June 5, 1901.)

(No Model.) 3 Sheets—Sheet 1.

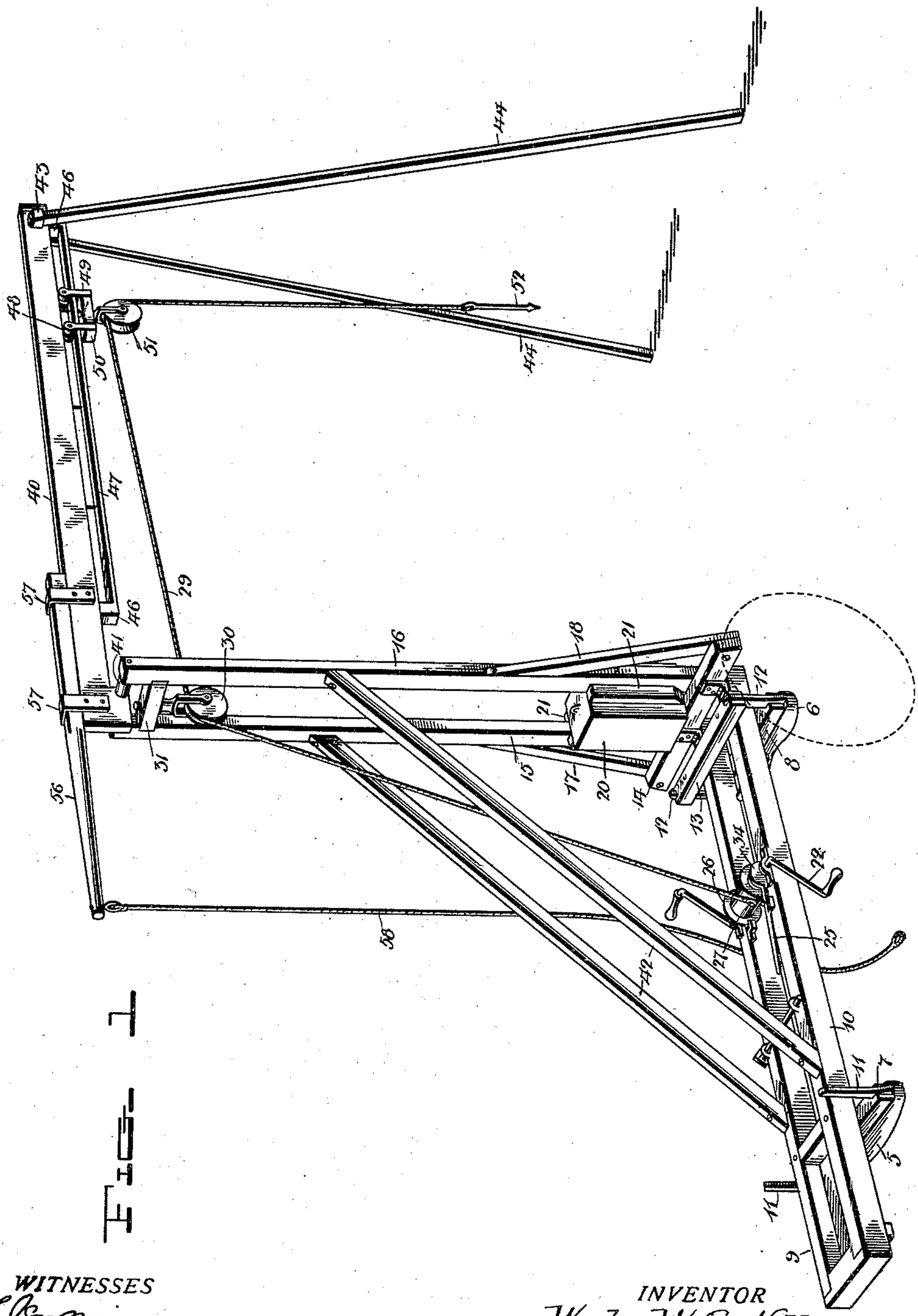

FIG. 1.

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FIG. 2

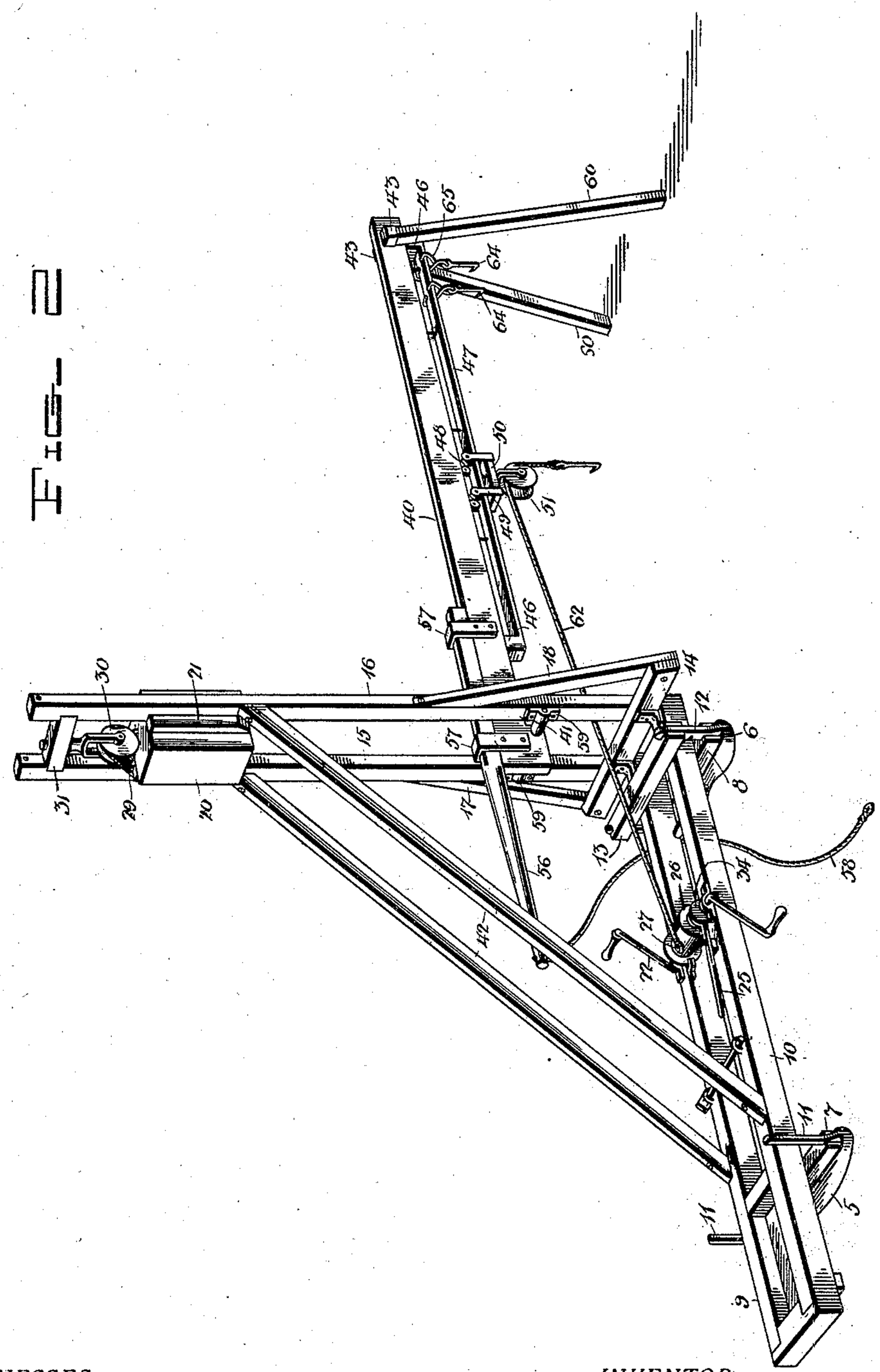

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Fig. 3

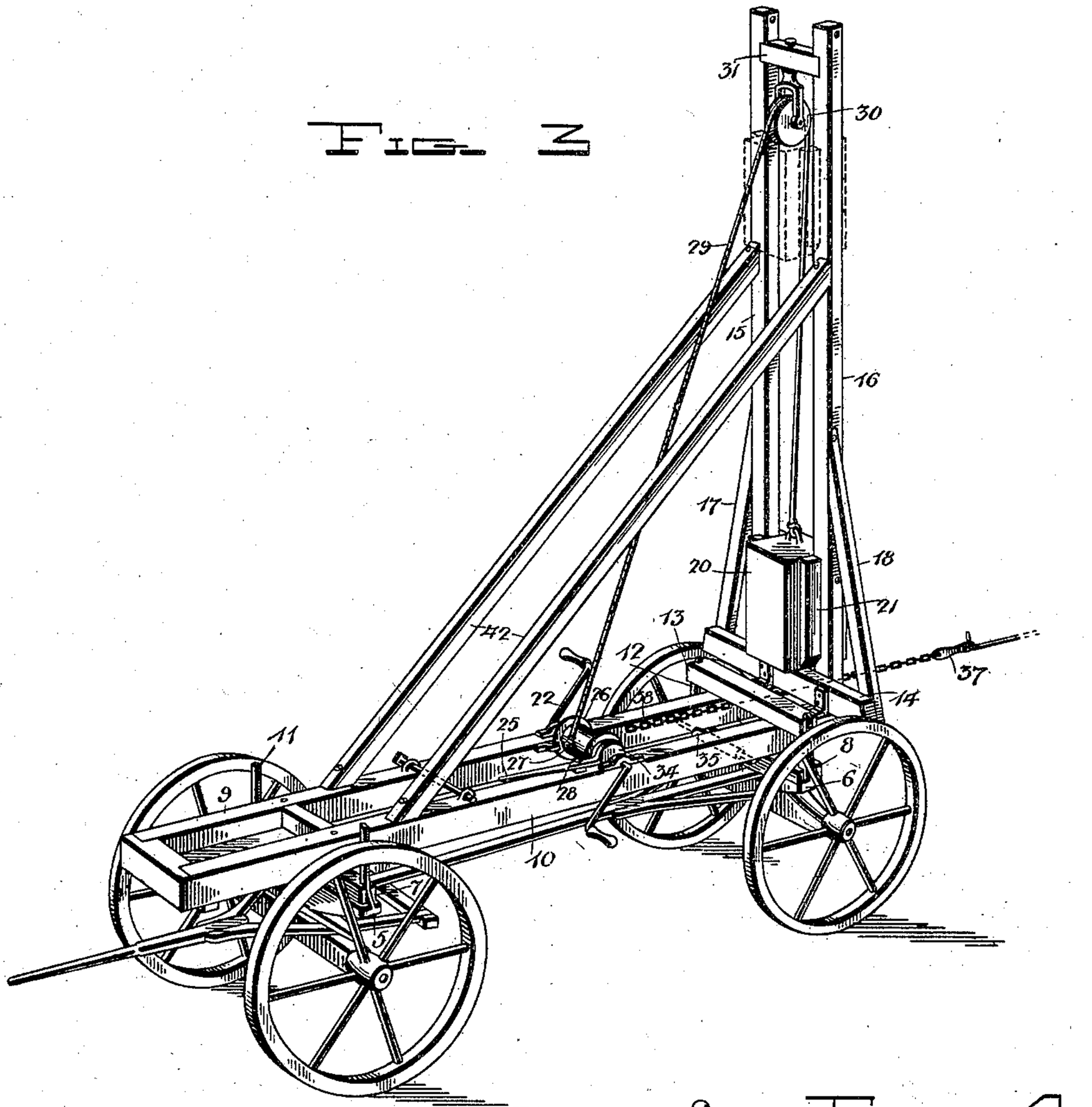
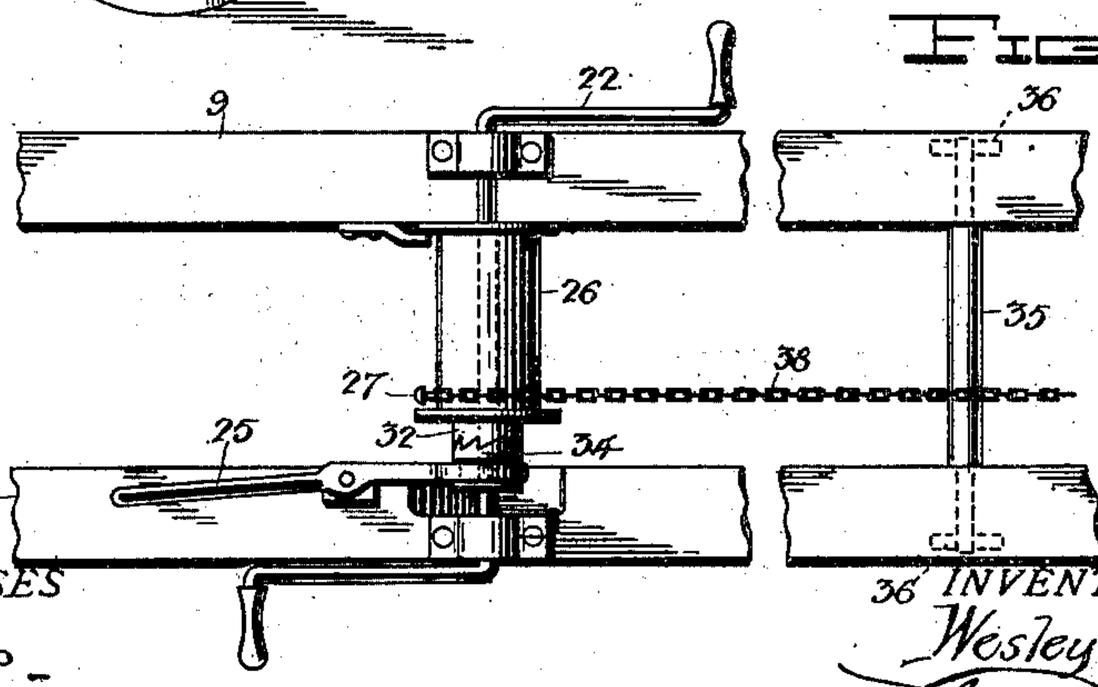


Fig. 4



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FENCE-BUILDER AND HAY-DERRICK.

SPECIFICATION forming part of Letters Patent No. 708,551, dated September 9, 1902.

Application filed June 5, 1901. Serial No. 63,264. (No model.)

To all whom it may concern:

Be it known that I, WESLEY W. C. HILL, a citizen of the United States, residing at Martinsville, in the county of Clark, State of Illinois, have invented certain new and useful Improvements in Fence-Builders and Hay-Derricks; 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.

This invention relates to combination-machines used upon the farm; and it has for its object to provide a machine which may be used as a hay-derrick for raising and transporting hay, which may be adjusted for use in scalding of hogs, which may be used for driving posts and the boring of wells, and which may be used for laying out and for stretching wire, and may be used for other purposes as will be understood from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing the machine set up for use as a hay-derrick. Fig. 2 is a perspective view showing the machine adjusted for use in scalding hogs. Fig. 3 is a perspective view showing the machine adjusted for use as a wire-tightener or fence-builder and for laying out wires and driving posts. Fig. 4 is a plan view showing a portion of the frame with the winding-drum and the clutch mechanism for engaging it with the crank-shaft.

Referring now to the drawings, the present invention comprises a common form of running-gear including the bolsters 5 and 6, on which are disposed the supplemental bolsters 7 and 8, to which are connected the sills 9 and 10 of the body of the machine, the ends of the supplemental bolsters being notched to receive the pins 11 and 12 of the bolsters, so that the supplemental bolsters are held in place and the sills of the body are held against displacement therefrom. Transversely of the sills and adjacent to their rear ends is a cross-beam 13, the ends of which are notched to receive the adjacent bolster-pins as a further means for holding the bolsters and sills in proper relation. At the rear ends of the sills is hinged a cross-piece 14, to which is fixed a mast comprising uprights 15 and 16, which are disposed parallel and against the outer face of which are fixed with braces 17 and 18, which are attached at their lower ends to the cross-piece forming the base of the mast. Disposed between the uprights of the mast is a driving-block 20 in contact with said uprights and upon the face of which are secured guide-strips 21, which prevent movement of the block out of its established relation with the uprights. This block projects partly beyond the cross-beam at the base of the mast, so that the machine may be positioned to receive a post between the uprights of the mast, and the block may be then raised and dropped onto the end of the post to drive it. It will of course be understood that in the digging of a well the block may be used in the same manner upon the drill. To thus raise and lower the block, a crank-shaft 22 is mounted in bearings on the sills of the body, and mounted loosely thereon is a winding-drum 26, having a radially-extended pin 27, which is adapted to engage the loop 28 at the end of a lifting-line 29, which is taken upwardly and over a pulley 30, engaged with a cross-piece 31 at the upper ends of the upright of the mast, the line being then taken downwardly and attached to a ring at the top of the driving-weight. The winding-drum has a clutch member 32 at one end, and splined upon the crank-shaft 33, on which the drum is loosely mounted, is a clutch member 34, having a peripheral groove, in which is engaged the strap at one end of a lever 25, which may be operated to shift the clutch member on the crank-shaft into and out of engagement with the clutch of the drum. If, then, the clutch be engaged and the crank-shaft be rotated, the winding-drum will be rotated to wind up the line and draw the driving-weight upwardly. When the weight has been raised to the proper height, the lever is operated to move the clutch member from engagement with the clutch on the drum, when there being nothing to hold the drum from rotation the lifting-line of the driving-weight will be permitted to unwind from the drum, and the weight will drop to

strike a fence-post or a drill-rod that may be disposed in proper position. When a suitable number of posts have been set by driving them and it is desired to string the wires preparatory to stapling them to the posts, a spool of wire is disposed upon the spindle 35, which is engaged in loops 36 upon the sills of the body of the machine, and by hitching a team to the machine and by fastening one end of the wire the machine may be moved along and the wire wound from the spool. After the wires have been paid out and it is desired to stretch them a wire-clamp 37, having a rope or chain 38 attached thereto, is engaged with its terminal loop over the pin of the winding-drum in substitution of the lifting-line of the driving-weight, and the drum may be then rotated to wind up the rope of chain and stretch the wire, it being understood, of course, that one end of the wire is secured to one end of the line of posts, while the wire-clamp is engaged with the other end of the wire.

With the above explanation it will be seen that the machine may be used for both the setting of posts and stringing and stretching the wires.

When the machine is to be used as a hay-derrick, the upper beam 40 is employed, and this upper beam is pivotally mounted at one end upon the transverse rod 41, engaged with the upper extreme ends of the uprights of the mast, it being understood that the mast has its cross-beam or base hinged to the sill of the body to permit of folding the mast down upon the body, and to prevent pivotal movement of the uprights on their hinges braces 42 are connected with the rear faces of the uprights and are stepped at their lower end upon the sills of the body of the apparatus. The outer end of the beam 40 is provided with the swiveled sockets 43, and in these sockets are engaged the tapered upper ends of supports or legs 44, which diverge downwardly and by resting upon the ground support the outer end of the beam. Secured to the under side of the beam at intervals by hangers 46 is a track 47, engaged with which are the rollers 48 at the upper ends of the arms 49 or hangers of a car 50, and this car 50 is provided with pulley 51. When hay is to be stacked or moved from one place to another for any other purpose, a lifting-line is employed which has a loop at one end which is engaged over the pin of the winding-drum, and this line is taken over the pulley on the mast and then outwardly and over the pulley on the carriage, from which latter it depends, and the depending end is provided with a spear 52 for engagement with the hay to be lifted. To permit of swinging the beam to its operative position, it is provided with an extension 56, which is slidably mounted in guides 57, and this extension is adapted to project beyond the rear end of the beam and has a line 58 attached thereto and having a loop at its end. The loop may be engaged with the pin on the winding-drum to permit of winding up the line to raise the beam.

When it is desired to use the machine in scalding hogs, it is not necessary that the beam 40 be as high as when handling hay, and in order that the beam may be supported at a lesser elevation during this operation bearings 59 are secured to the faces of the uprights of the mast, and the pin on which the beam is pivoted is removably engaged with the upper end of the mast and may be withdrawn and engaged with these bearings at the lower portion of the mast and engaged also with the bearing at the end of the beam. In this position of the beam shorter legs 60 are engaged with the sockets at the outer end of the beam. When the apparatus is used for this purpose, the hog to be scalded is suspended from a line 62, which is engaged with the winding-drum and taken directly over the pulley on the carriage, and the free end of the line is provided with a hook for engagement with the hog. By means of the winding-drum the line may be manipulated to lift the hog and dip it. For holding the hog then in position for scraping and cleaning a hook or a number of hooks 64 are provided and are pivotally engaged with clips 65, each consisting of a wire which is bent upon itself and crossed to form an eye with which the butt-end of the hook is engaged, the ends of the sides of the wire being bent toward each other and engaged with the track on the beam 40.

It will be understood that instead of using the winding-drum in the handling of hay the line may be taken down and around pulleys on the body of the machine and may have a singletree attached to it, so that a horse may be utilized. If it is desired to raise the hay with greater speed, the line may be passed through a pulley and have its end attached to the center of the front sill. A singletree may then be attached to the pulley, which will be loose upon the rope, and when a horse is hitched to the singletree he may raise the hay at a greater speed than if the singletree is attached to the free end of the rope.

When the machine is to be moved from place to place, the braces of the mast are disengaged from the sills and mast and the mast is folded rearwardly and downwardly to lie upon the body of the apparatus, the driving-weight being moved into such position as not to interfere with this folding of the mast upon the body. The extension of the beam 40 is pushed back to lie wholly upon the beam, and the beam is folded to lie upon the mast, the supporting-legs being disengaged from the beam and placed upon the body of the apparatus.

What is claimed is—

1. In a machine of the class described the combination with the sills of a mast hinged thereto and comprising spaced uprights having a pulley at their upper ends, a beam piv-

oted between the upper ends of the uprights, a pulley upon the beam, a lifting-line passed over the pulley on the mast and beam, a line attached to one end of the beam for moving the latter pivotally and a winding-drum mounted upon the sills and adapted for attachment of the lines thereto interchangeably.

2. In a machine of the class described the combination with the sills of a mast hinged thereto and comprising spaced uprights having a pulley at their upper ends, a beam pivoted between the upper ends of the uprights, a pulley upon the beam, a lifting-line passed over the pulley on the mast and beam, a line attached to one end of the beam for moving the latter pivotally, a winding-drum mounted upon the sills and adapted for attachment of the lines thereto interchangeably, the uprights of the mast being adapted to receive a driving-block therebetween below the pulley.

3. A machine of the class described comprising a body portion having a mast at one end thereof, a beam provided with a track, said mast being adapted for pivotal connection of the beam therewith at different elevations, supporting-legs adapted for interchangeable connection with the outer end of the beam to support it at different elevations, a carriage slidably engaged with the track and having a pulley, hooks slidably connected with the track, and a winding-drum on the body to receive a line engaged with the pulley.

4. In a machine of the class described, the combination with the body portion, of a mast hinged thereto for movement to recline thereon or stand erect, a beam pivoted to the mast to fold thereagainst and lifting mechanism connected with the beam.

5. In a machine of the class described the combination with the body portion, of a mast hinged thereto for movement to recline thereon or stand erect, a beam pivoted to the mast to fold thereagainst, lifting mechanism connected with the beam and braces removably connected with the mast and with the body.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, on the 23d day of April, 1901.

WESLEY W. C. HILL.

Witnesses:
ROBERT CRAIG,
JAMES MICHAEL.