A. M. SEMRAN & K. S. FORBES.

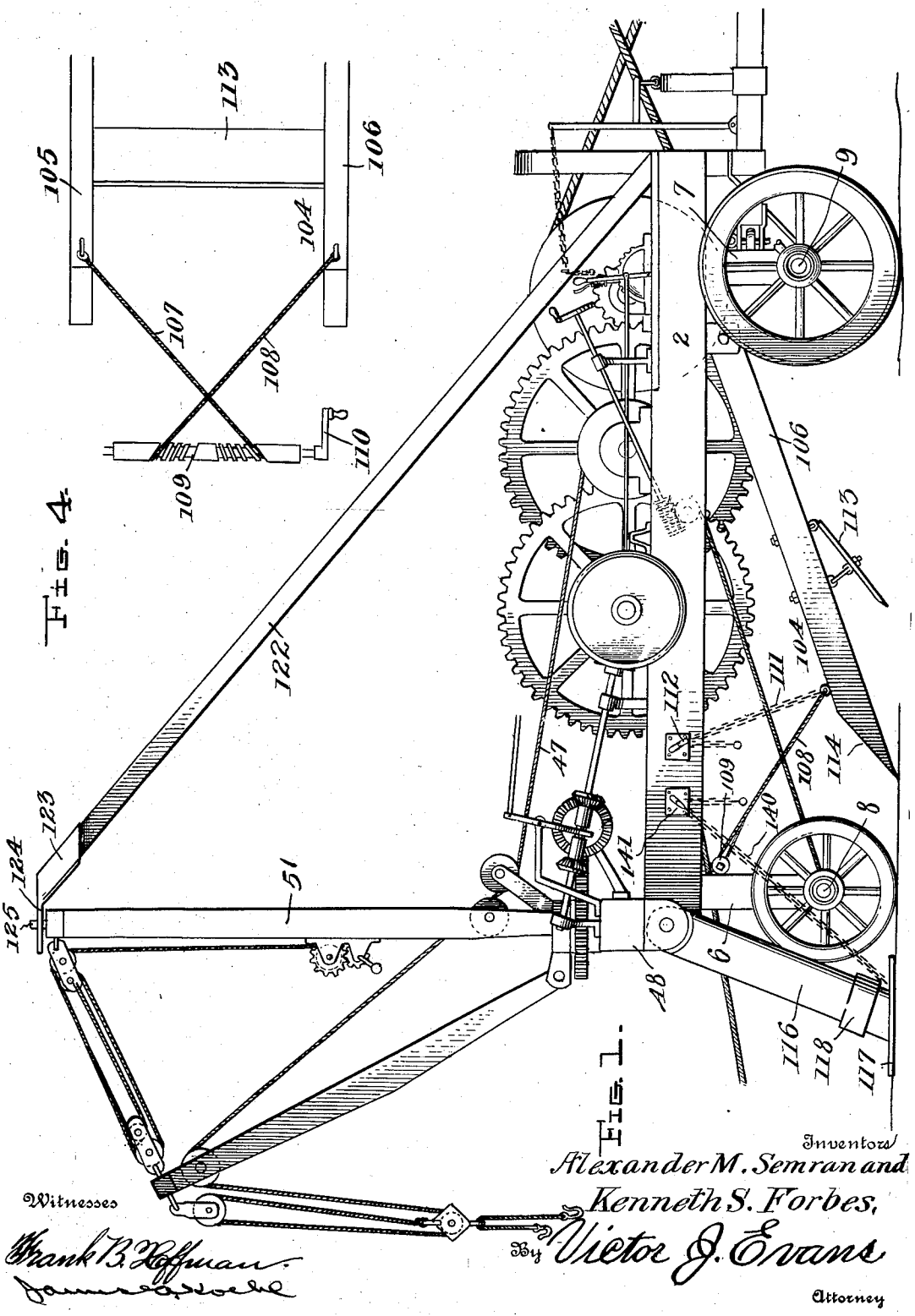
SELF ANCHORING STUMP PULLING AND HOISTING APPARATUS.

APPLICATION FILED APR. 23, 1909.

1,027,286.

Patented May 21, 1912.

3 SHEETS—SHEET 1.



Witnesses

Frank B. Hoffman

James A. Scarle

Inventors

Alexander M. Semran and

Kenneth S. Forbes,

By Victor J. Evans

Attorney

A. M. SEMRAN & K. S. FORBES.

SELF ANCHORING STUMP PULLING AND HOISTING APPARATUS.

APPLICATION FILED APR. 23, 1909.

1,027,286.

Patented May 21, 1912.

3 SHEETS—SHEET 2.

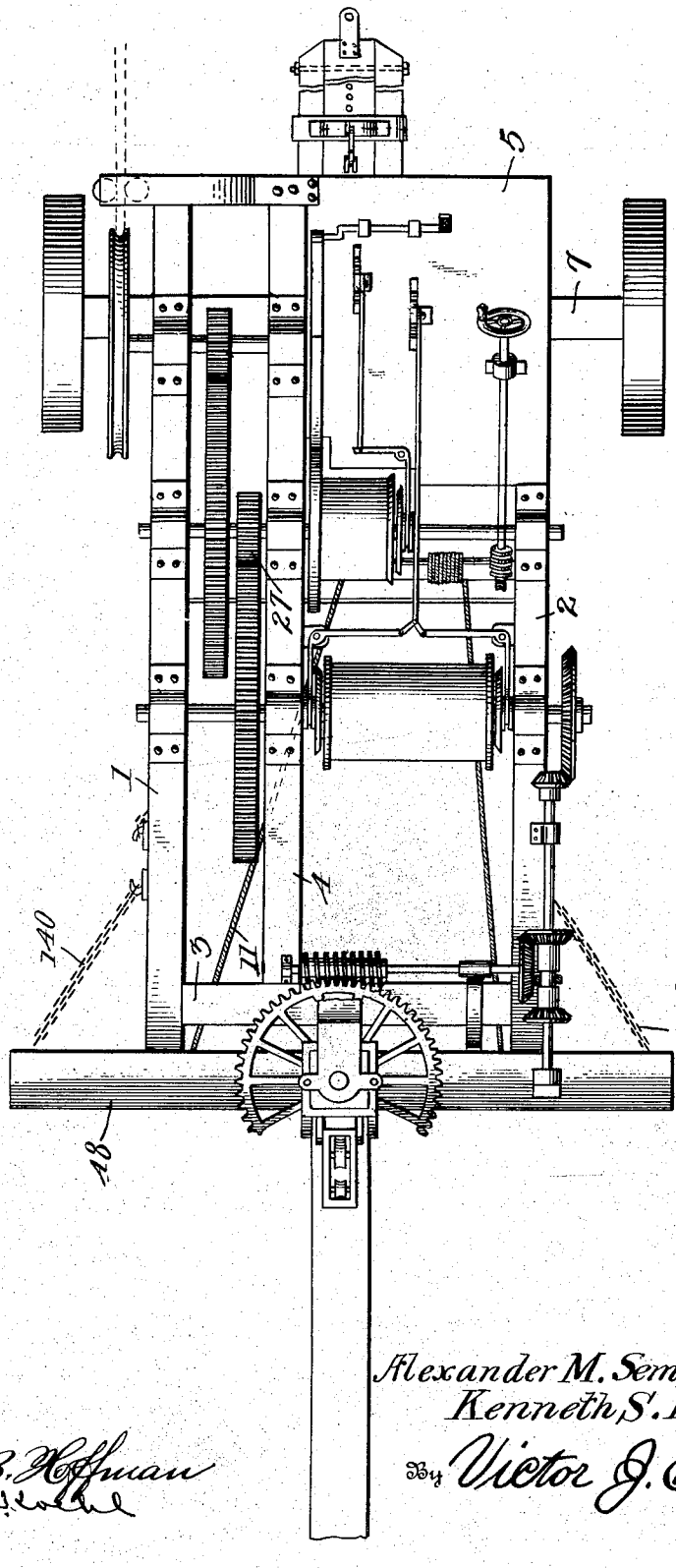


FIG. 2.

Witnesses

Frank B. Hoffman

James A. Lockhart

Inventors

Alexander M. Semran and

Kenneth S. Forbes.

By Victor J. Evans

Attorney

A. M. SEMRAN & K. S. FORBES.

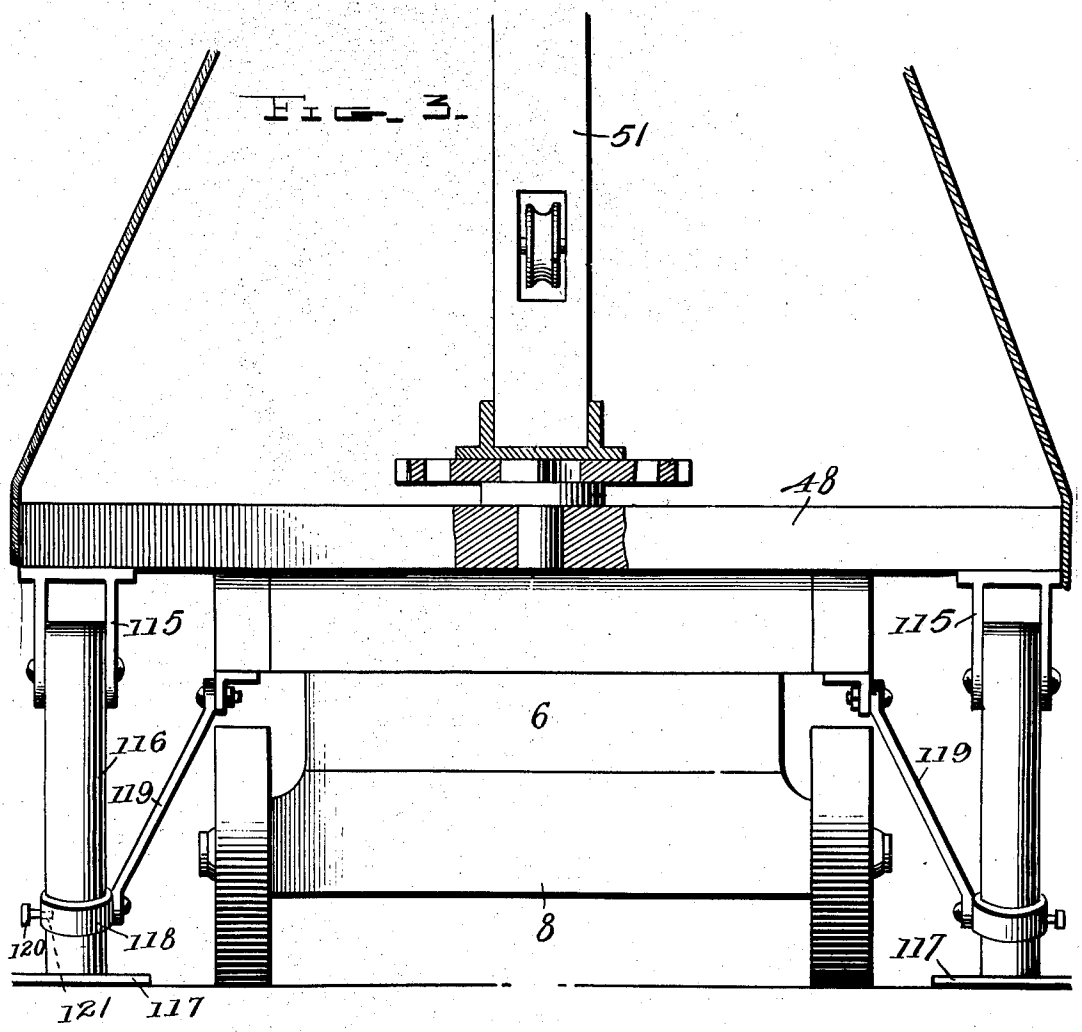
SELF ANCHORING STUMP PULLING AND HOISTING APPARATUS.

APPLICATION FILED APR. 23, 1909.

1,027,286. Patented May 21, 1912.

3 SHEETS—SHEET 3.

Fig. 3.



Witnesses

Frank B. Hoffman.

James A. Koehl

Inventors

Alexander M. Semran and

Kenneth S. Forbes.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

ALEXANDER M. SEMRAN AND KENNETH S. FORBES, OF ODESSA, MINNESOTA.

SELF-ANCHORING STUMP PULLING AND HOISTING APPARATUS.

1,027,286. Specification of Letters Patent. Patented May 21, 1912.

Application filed April 23, 1909. Serial No. 491,696.

To all whom it may concern:

Be it known that we, ALEXANDER M. SEMRAN and KENNETH S. FORBES, citizens of the United States, residing at Odessa, in the county of Bigstone and State of Minnesota, have invented new and useful Improvements in Self-Anchoring Stump Pulling and Hoisting Apparatus, of which the following is a specification.

This invention relates to self-anchoring stump pulling and hoisting apparatus, and has for an object to provide a novel form of anchor adapted to be actuated when the apparatus is moved forward and to be embedded in the ground to the extent that the apparatus can be effectively held in the desired position, and to further provide effective means for adjusting the anchors when they have been withdrawn from the ground and to raise the said anchor so that it will be entirely out of the way when the machine is propelled.

Other objects and advantages will be apparent as the nature of the invention is better set forth, and it will be understood that changes within the scope of the claims may be resorted to without departing from the spirit of the invention.

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 side elevation of our improved stump pulling and hoisting apparatus. Fig. 2 is a top plan view. Fig. 3 is a detail front elevation with parts in section and with parts removed to more clearly illustrate the construction and arrangement of various parts. Fig. 4 is a diagrammatic view of the anchor showing the adjusting means therefor.

In the drawings, there is shown a stump puller and hoisting apparatus embodying a frame comprising longitudinally extending side bars 1 and 2 and connecting cross bars 3. The frame is also provided with a longitudinally extending bar 4 disposed in juxtaposition to the bar 1 and in suitable spaced relation therefrom as clearly illustrated in Fig. 2 of the drawings. The frame is provided at the rear end thereof with a platform 5 upon which the operator of the apparatus can stand when the apparatus is in use. The said frame is provided with front and rear bolsters 6 and 7, the former provided with a wheeled axle 8, the wheels thereon being disposed directly beneath the longitudinal bars 1 and 2. The bolster 7 is similar in construction to the bolster 6 and carries a wheeled axle 9, the wheels of which extend outwardly beyond the sides of the frame as shown in Fig. 2 of the drawings to more effectively steady the machine or apparatus as is obvious.

An anchor 104 is provided for the apparatus and it embodies members 105 and 106 pivoted at their upper ends beneath the bars 1 and 2 of the frame and are thus free to swing angularly as will be understood. The members 105 and 106 are provided with cables 107 and 108 engaged with a screw or worm 109 carried by the frame of the apparatus and provided with a crank handle 110 so that the screw or worm 109 can be revolved to adjust the anchor members 105 and 106. In order that the said members can be held in their adjusted positions we connect with the same chains 111 the links of which being adapted to secure supporting hooks 112 upon the longitudinal side bars of the frame. The anchor members 105 and 106 have pivotally connected thereto a transversely disposed anchor plate 113 disposed rearwardly of the pointed ends 114 of the members 105 and 106.

It will be seen that when it is desired to extract a stump, the machine or apparatus described may be propelled in any suitable manner so that it can be properly positioned with respect to the stump to be extracted, and by first adjusting the links of the chains 111 with the hooks 112 the forward pointed ends 114 of the members 105 and 106 can be effectively embedded in the ground to the extent that the entire apparatus will be held stationary and in its proper position relative to the stump to be extracted, and the machine will be prevented from movement toward the stump during the pulling operation. To provide more effective means for holding the machine against movement when it has been moved into its operative position we provide at the ends of the transverse member 48 brackets 115 to which are pivotally connected the upper ends of members or legs 116 provided with spuds or ground engaging elements 117. The members or legs 116 are provided with sliding collars 118 to which the lower ends of brace arms 119 are connected, the upper ends of said brace arms being connected pivotally to the longitudinal bars of the frame. When it is desired to move the members or

legs 116 out of engagement with the ground they are swung upwardly as will be understood and may be held in their adjusted positions by providing the bands 118 with removable pins or the like 120 to be engaged in apertures 121 formed in said members or legs.

As a brace for the crane hereinbefore described we provide the frame of the apparatus with a beam or member 122 having a cap member 123 provided with a forwardly extending plate 124 which receives a vertically extending pivot pin 125 at the upper end of the mast 51.

To limit the forward movement of the legs or members 116 we connect therewith chains or similar connections 140 adapted to be adjustably connected to hooks 141 upon the longitudinal side members of the frame.

We claim:—

1. In a stump puller, a portable frame, a pivotally mounted main anchor beneath the frame, operating mechanism for moving the anchor to an elevated position, means for holding the anchor against pivotal movement in one direction, spuds pivotally supported by the frame and located in advance of the effective anchoring end of the main anchor, and a supplemental anchoring member pivotally supported by said main anchor and embodying a relatively wide plate extending transversely beneath the frame and disposed above the plane of the effective anchoring end of the main anchor.

2. In a stump puller, a portable frame, a pivotally mounted main anchor pivoted adjacent to the rear of the frame, and extending downwardly in the direction of the front of the frame, operating mechanism for moving the anchor to an elevated position, means for holding the anchor against pivotal movement in one direction, spuds pivotally supported by the frame and located in advance of the effective anchoring end of the main anchor, and a supplemental anchoring member pivotally supported by said main anchor and embodying a relatively wide plate extending transversely beneath the frame and disposed above the plane of the effective anchoring end of the main anchor.

3. In a stump puller, a portable frame including longitudinal side bars, companion main anchors pivoted at their rear ends beneath the side bars of the frame and extending downwardly in the direction of the front of the frame, operating mechanism for simultaneously moving the companion anchoring members to inoperative positions, a supplemental anchor connecting the companion main anchors with each other and pivotally mounted on the main anchors and disposed above the plane of the effective anchoring ends of the main anchors, and spuds pivotally supported upon the frame and located at points in advance of the main anchors.

In testimony whereof we affix our signatures in presence of two witnesses.

ALEXANDER M. SEMRAN.
KENNETH S. FORBES.

Witnesses:
H. W. KOLLITZ,
H. H. HAFNER.