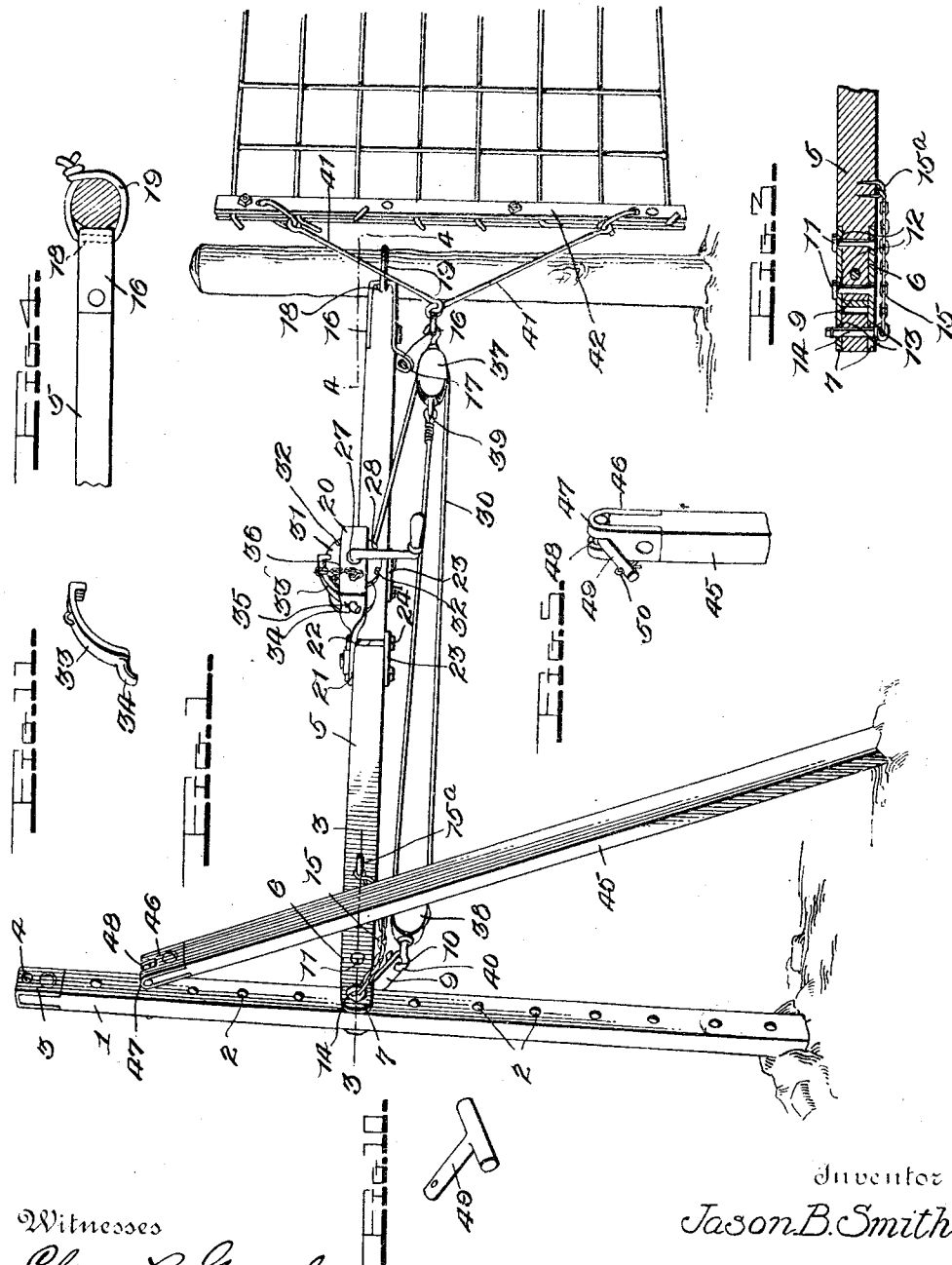


J. E. SMITH.
 COMBINED WIRE STRETCHER AND HOISTING DEVICE.
 APPLICATION FILED JAN. 27, 1912.

1,034,844.

Patented Aug. 6, 1912

2 SHEETS-SHEET 1



Witnesses

Chas. L. Griebauer.
 Evelyn M. Mland

by

BY

Inventor
 Jason B. Smith.

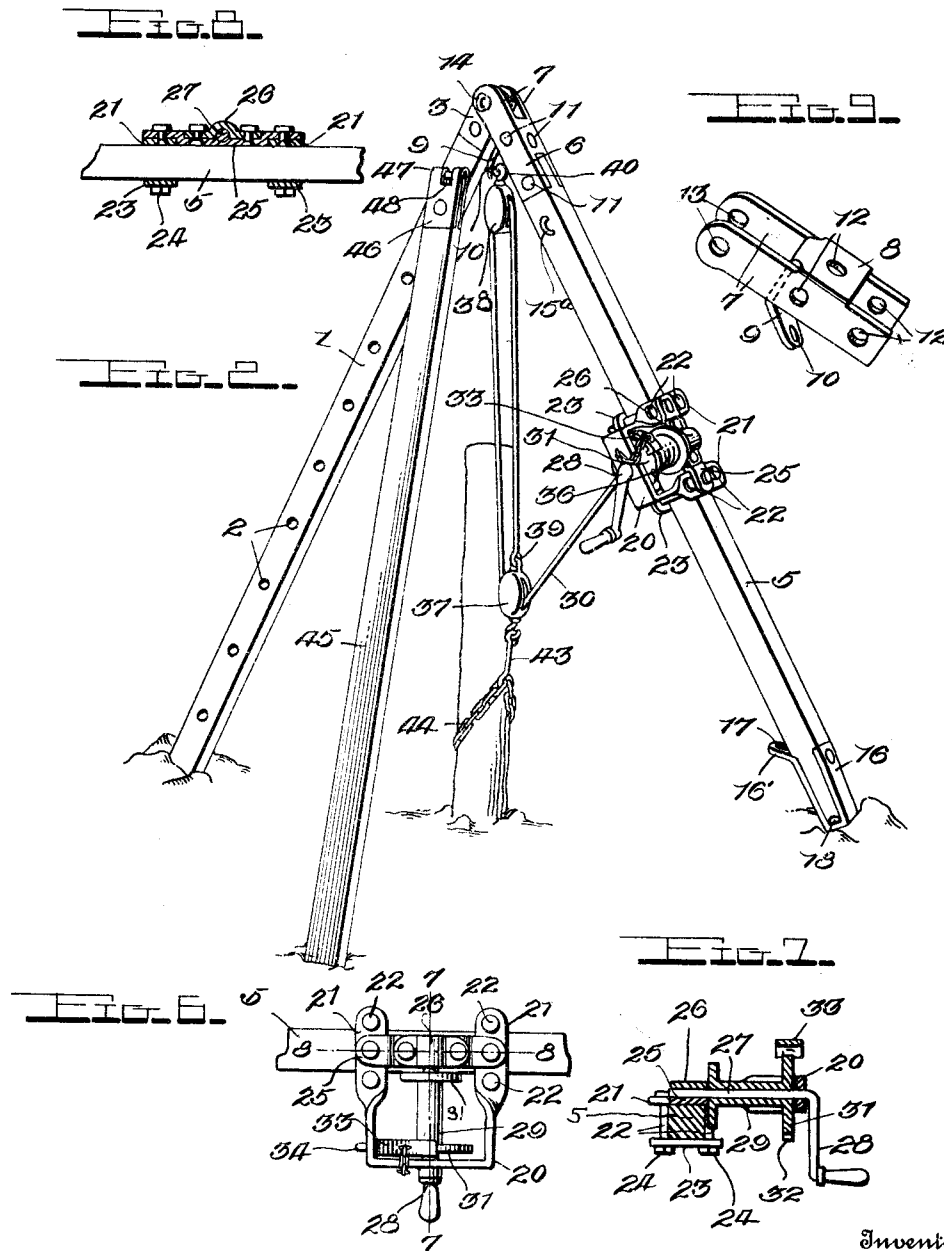
J. E. Howard
 Attorney

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Witnesses

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UNITED STATES PATENT OFFICE.

JASON B. SMITH, OF VERDEN, OKLAHOMA.

COMBINED WIRE-STRETCHER AND HOISTING DEVICE.

1,034,844.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed January 27, 1912. Serial No. 673,839.

To all whom it may concern:

Be it known that I, JASON B. SMITH, citizen of the United States, residing at Verden, in the county of Grady and State of Oklahoma, have invented certain new and useful Improvements in Combined Wire-Stretchers and Hoisting Devices, of which the following is a specification.

This invention relates to improvements in combined wire stretchers, and hoisting devices.

One object of the invention is to provide a device of this character having an improved construction and arrangement of supporting and bracing bars and means for detachably and adjustably connecting the same together whereby said bars may be readily arranged to form either a wire stretcher or a hoisting device.

Another object is to provide a combined wire stretcher and hoisting device having an improved construction and arrangement of windlass which may be operated to wind the stretching and hoisting cable for stretching the wires of a fence on either side of the posts and for hoisting or extracting posts or stumps.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 is a perspective view showing the invention arranged in position for stretching a wire fence; Fig. 2 is a similar view showing the device arranged for hoisting purposes or for extracting posts or stumps; Fig. 3 is a detail horizontal section through the standard and main bracing bar of the device when arranged as a wire stretcher taken on the line 3—3 of Fig. 1; Fig. 4 is a horizontal sectional view through one of the fence posts taken on the line 4—4 of Fig. 1 and showing the manner in which the engaging end of the main brace bar may be secured to the post; Fig. 5 is a detail perspective view of the upper end of the supplemental bracing post showing the means whereby the upper end of said bracing post is adjustably secured to the standard or main supporting post of the device; Fig. 6 is a plan view of the windlass and the adjacent portion of the main brace bar to which the same is attached; Fig. 7 is a cross sectional view

through said main brace bar and the windlass, taken on the line 7—7 of Fig. 6; Fig. 8 is a similar view taken on the line 8—8 of Fig. 6; Fig. 9 is a detail perspective view of the metal connecting member for one end of the main bracing bar whereby the same is detachably and adjustably secured to the standard or supporting post of the device; Fig. 10 is a detail perspective view of the attaching member for pivotally and adjustably connecting the upper end of the supplemental bracing bar with the standard or supporting post of the device; and, Fig. 11 is a detail perspective view of the pawl for holding the windlass against retrograde movement.

My improved wire stretcher and hoisting device comprises a main supporting post or standard 1 which may be of any suitable length and is preferably in the form of a bar of wood. In the standard 1 are formed a plurality of bolt holes 2 which are spaced a suitable distance apart and extend from the bottom to the top of the standard as shown. On the upper end of the post or standard is arranged a metal clip 3 which forms a binding for this end of the standard and also serves as a bearing or connection for another part of the device hereinafter described. The clip 3 is provided near its outer end with aligned bolt holes 4 which register with a bolt hole in the upper end of the standard.

In connection with the post or standard 1, I provide a main bracing and windlass supporting bar 5, said bar being also preferably formed of wood. On the inner and upper end of the bar 5 is secured a metal connecting member 6 by means of which the bar 5 is attached to the standard 1. The connecting member 6 is preferably formed of heavy sheet metal cut or stamped out and bent to form parallel side plates 7 which are connected intermediate their ends and at one edge by an integral web or back plate 8, said plate being extended at one end to form a tongue 9 which is bent inwardly between the side plates 7 and at right angles to the plate 8 and has its extremity bent back at an angle and provided with an aperture 10 for a purpose hereinafter described. The plate 8 when thus arranged connects the side plates 7 together and spaces the same apart in parallel relation as is clearly indicated in Fig. 9 of the drawing. The con-

necting member 6 when thus constructed is engaged with the one end of the bar 5, said end of the bar 5 being inserted between the inner portions of the side plates 7 and into engagement with the plate 8 and tongue 9; said inner portions of the side plates 7 being preferably set into the end of the bar so that their outer surfaces are flush with the adjacent outer surfaces of the bar as shown in Fig. 2 of the drawings. When thus arranged the member 6 is secured to the end of the bar 5 by rivets 11 or other suitable fastening devices which are engaged with rivet holes 12 formed in the plates 7 and 8 of the member.

In the outer ends of the side plates 7 which project beyond the end of the bar 5 are formed bolt holes 13 through which and through the bolt hole 4 in the clip 3 or through the bolt holes 2 of the standard is adapted to be inserted a pivot bolt or pin 14 whereby the connecting bar 6 is pivotally attached to the end of the standard 1 to form a brace as shown in Fig. 1, or to form one member of a tripod or hoisting frame as shown in Fig. 2 of the drawings. The bolt or pin 14 is preferably provided on one end with an eye with which is connected one end of a short chain 15 the opposite end of which is connected with an eye or staple 15^a in one side of the bar 5 whereby the pin is attached to the bar and thus prevented from being lost or mislaid.

On the opposite end of the bar 5 is secured a metal clip 16. The clip 16 embraces the end of the bar and is preferably set into said end to form a flush engagement with the adjacent surfaces of the bar as shown. One end of the clip 16 is extended and bent outwardly at an angle from the adjacent side of the bar to form an ear 16' which is provided with a hole 17 for a purpose hereinafter described. In the end of the bar to which the clip 16 is secured is formed a transverse groove or notch 18 which, together with the portion of the clip which engages the end of the bar forms a passage with which is adapted to be engaged a fastening cable or wire 19 whereby this end of the bar 5 is firmly secured to one of the fence posts or other suitable object for forming a support and stop or abutment for this end of the bracing bar 5 when arranged for stretching the wires of a fence as clearly shown in Figs. 1 and 4 of the drawings.

Secured to the bar 5 intermediate of its ends is a windlass supporting frame 20. The frame 20 is of rectangular form and is preferably constructed from a flat metal bar having its ends bent at right angles and twisted to form flat bar engaging members 21. The bar engaging members 21 of the frame are engaged with the outer edge and project a slight distance beyond the opposite sides of the bar as clearly shown in Fig.

6 of the drawings. With the projecting ends of the bar engaging members of the frame 20 are engaged clamping bolts 22 the opposite ends of which are engaged with clamping plates 23 arranged on the opposite sides of the bar as shown. The threaded ends of the bolts 22 are provided with clamping nuts 24 which, when screwed up on the bolts, draw the members 21 of the frame and the plates 23 into tight clamping engagement with the bar and thereby secure the windlass supporting frame in adjustable engagement with the bar 5.

Arranged between the bar engaging members 21 of the frame 20 and having its ends offset and riveted to said members is a bearing plate 25. Secured to the outer side of the plate 25 between the offset ends thereof is an outer bearing plate 26 between which and the inner plate 25 is revolvably mounted the inner end of a winding drum shaft 27 the outer end of which is revolvably mounted in the outer portion of the frame 20. On the outer end of the shaft 27 is a crank handle 28 whereby the shaft is operated to revolve the winding drum 29 fixed thereon in the proper direction for winding up the wire stretching and hoisting cable 30 which is secured at its inner end to said drum. The drum 29 has on its ends cable retaining flanges 31. The flange on the outer end of the drum has formed therein a plurality of notches 32 with one of which is adapted to be engaged a locking pawl 33. The pawl 33 has its outer end reduced and bent to form a curved or irregular shank 34 which is adapted to be detachably engaged with pivot holes 35 in the ends of the frame 20 whereby the pawl may be reversed and connected with either end of the frame for engagement with opposite sides of the notched flange of the drum, thus permitting the windlass to be employed for stretching a fence on either the right or left hand side of the posts, it being understood that when the parts are adjusted for stretching the wires of the fence on the right hand side of the post that the windlass must project from this side of the bar 5 and when stretching the wire on the left hand side of the post, the bar 5 and windlass must be reversed or turned over to project the windlass from the left hand side of the bar, this changing or reversing of the windlass necessitating the reversing of the pawl in the manner described. In order to prevent the pawl from being lost or mislaid, I preferably attach the same to the frame 20 by a short chain or other flexible connection 36.

The cable 30 is engaged with pulleys 37 and 38 and has its outer end secured to the pulley 37 as shown at 39. The pulley 38 is provided with a hook 40 whereby the

same is connected with the hole 10 in the tongue 9 of the connecting member 6 on the brace bar 5 and when the device is arranged for stretching the wires of a fence as shown in Fig. 1 of the drawings, the pulley 37 is connected with the links 41 of a wire clamp 42, said clamp being here shown in the form of a pair of bars which are adapted to be bolted or otherwise rigidly clamped to the ends of the fence wires whereby the fence will be uniformly stretched across its entire width. When the device is employed for hoisting, putting posts, stumps and the like, as shown in Fig. 2 of the drawings wherein the bar 5 serves as one of the supporting members or legs of the hoisting frame, the pulley 37 is connected by a link 43 with a chain 44 which is applied to the post or other object to be hoisted as clearly shown in Fig. 2 of the drawings. When the parts are arranged for stretching the wires of a fence as shown in Fig. 1 or to form a hoisting device as shown in Fig. 2, the cable is wound on the windlass and the necessary force or pull thus applied to the cable for stretching the fence wires or for hoisting purposes as the case may be.

In order to more firmly brace the standard 1 when the device is arranged for stretching the wires of a fence as shown in Fig. 1 and to form the third member of the tripod or hoisting frame as shown in Fig. 2, I provide a supplemental brace bar 45 on the upper end of which is secured a clip 46 the outer portion of which projects beyond the end of the bar to form a bearing loop 47 having therein a slot 48. In the bearing loop 47 is pivotally mounted a T-shaped brace connecting pin 49 the outer end of which is adapted to be engaged with one of the bolt holes 2 in the standard 1 thereby adjustably securing the upper end of the brace bar 45 to the standard, the lower or outer end of the bar being engaged with the ground at a suitable distance from the base or lower end of the standard as clearly shown in Figs. 1 and 2 of the drawings. The pin 49 when engaged with the holes 2 in the standard is secured against casual disengagement therefrom by a cotter pin or other suitable fastening 50 which is engaged with the free end of the pin as shown in Fig. 5 of the drawings. It will thus be seen that the holes 2 in the standard 1 serve the double function of providing an adjustable connection for the bar 5 when employed as a brace for stretching the wires of a fence and for receiving the connecting pin 49 of the supplemental brace bar 45 whereby the latter is adjustably connected to the standard 1 as clearly shown in Figs. 1 and 2 of the drawings. When the device is not in use the hook on the pulley 37 may be engaged with the

aperture 17 in the ear 16 and the pulley and this end of the cable thus supported.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed.

Having thus described my invention, what I claim is:

1. In a combined wire stretcher and hoisting device, a main supporting standard, a brace and windlass supporting bar having a detachable and adjustable connection with said standard whereby said bar may be employed as a brace or as one leg of a hoisting frame, a windlass secured to said bar, a combined wire stretching and hoisting cable operated by said windlass, and a supplemental brace bar having an adjustable connection with said supporting standard.

2. In a combined wire stretcher and hoisting device, a main supporting standard, a brace and windlass supporting bar having a detachable and adjustable connection with said standard whereby said bar may be employed as a brace or as one leg of a hoisting frame, a windlass supporting frame secured to said bar, a cable winding drum revolvably mounted in said frame, said drum having in one end, pawl receiving notches, a reversible pawl having a detachable connection with said frame whereby the pawl may be engaged with said winding drum when the windlass is in reverse positions, an operating handle connected with said winding drum, a combined stretching and hoisting cable adapted to be wound on said drum, pulleys arranged on said cable, one of said pulleys being adapted to be connected with one end of said brace bar and the other pulley to the object to be stretched or hoisted, and a supplemental bracing bar having an adjustable connection with said standard.

3. In a combined wire stretching and hoisting device, a main supporting standard having therein a plurality of bolt holes, a brace and windlass supporting bar having a detachable connection at one end with the bolt holes in said standard, a clip secured to the opposite end of said bar, said clip having thereon an apertured ear, a flexible tying element adapted to be engaged with said clip whereby this end of the bar is secured to a fixed support, a windlass secured to said bar, a combined stretching and hoisting cable operatively connected to said bar and adapted to be wound on said windlass, a supplemental bracing bar having on one end a clip, an attaching bolt pivotally

secured to the end of the bar by said clip
and adapted to be engaged with the bolt
holes in said standard whereby said bar is
adjustably connected to the standard, and
5 means to hold said bolt in detachable en-
gagement with the bolt holes of the
standard.

In testimony whereof I affix my signature
in presence of two witnesses.

JASON B. SMITH.

Witnesses:

OTIS N. LAY,
CHAS. A. ACTON.