

April 17, 1934.

L. B. STREETER

1,955,259

POLE TYPE PORTABLE TRANSFORMER HOIST

Filed Aug. 16, 1933

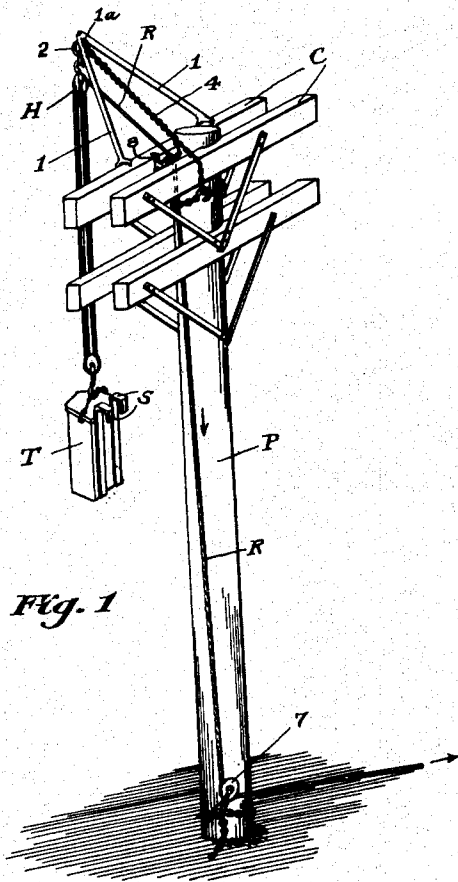


Fig. 1

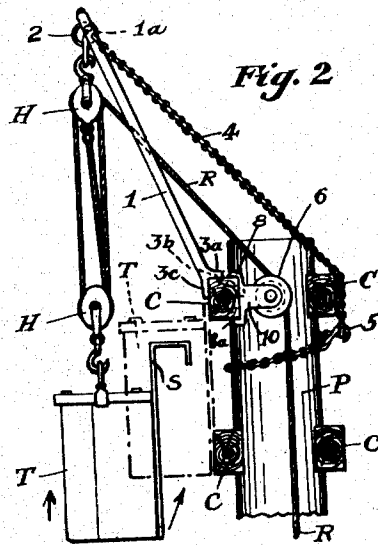


Fig. 2

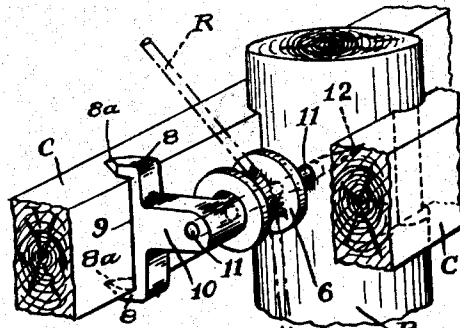


Fig. 3

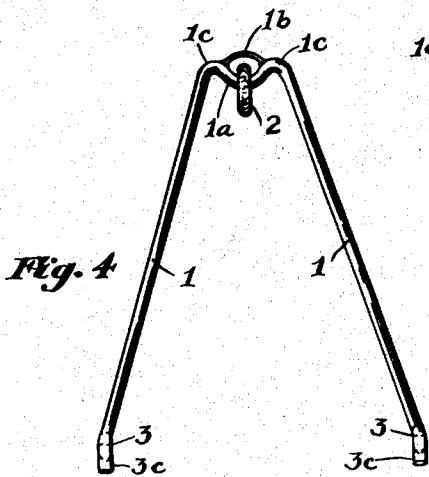


Fig. 4

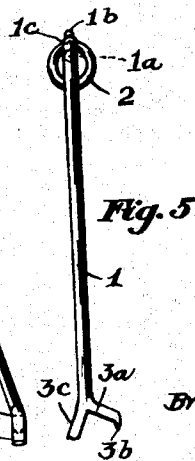


Fig. 5

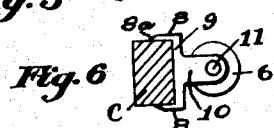


Fig. 6

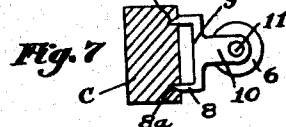


Fig. 7

Inventor,

Lisle B. Streeter.

By Henry L. Cheney,  
Att'y.

# UNITED STATES PATENT OFFICE

1,955,259

## POLE-TYPE PORTABLE TRANSFORMER HOIST

Lisle B. Streeter, Farmington, Maine

Application August 16, 1933, Serial No. 685,396

5 Claims. (Cl. 254-139)

The invention hereinafter to be described relates to hoisting apparatus, dealing particularly with a portable rig which may be easily and quickly installed on a line pole equipped with cross-arms.

The primary object of the present invention is to elevate transformers from the ground to the cross-arms where they are to be permanently secured. It is obvious, however, that the apparatus might be used for other hoisting purposes where its application seems feasible.

The difficulty which has heretofore beset the lineman in raising these heavy pieces of electrical devices has been due to the fact that there has not been available a strong, light weight and efficient contrivance which could accomplish the purpose satisfactorily.

Apparatus to fulfill the requirements called for in this work must be capable of being quickly installed, have sufficient overhang to insure the transformer clearing the cross-arms as it is being hoisted, be strongly guyed for safety and have facilities to carry away the hoisting line so that interference with the tackle and the object being raised will be avoided.

These characteristics are embodied in my invention, to obtain a clearer understanding of which reference should be had to the description found in the following specification and to the accompanying drawing disclosing an embodiment which, at the present time, I consider preferable to other possible forms in which the invention might be carried out.

In the drawing—  
Fig. 1 represents a perspective view of a line pole with cross-arms equipped with my invention;

Fig. 2 is a side elevation of the device, drawn to a somewhat enlarged scale;

Fig. 3 is a perspective of the rope guide sheave with attaching elements;

Fig. 4 and Fig. 5 are front and side elevations, respectively, of the shear legs, and

Fig. 6 and Fig. 7 show two different methods of applying the cross-arm attaching element for supporting the rope guide sheave.

Similar reference characters are employed to identify like parts in all views of the drawing.

Referring to the drawing, P represents a line pole and C the cross-arms to which telephone, electric light or telegraph wires are attached (the wires not being shown).

The main element in the hoisting rig is the shears, consisting of two shear legs 1 inclined toward each other and joined at the top by a

downwardly bent portion 1a on which operates the hoisting ring 2. To confine the ring and provide against its displacement from the shears a light tie-bar 1b is welded to the top bends 1c.

The bifurcated feet 3 of the shear legs are made to straddle the outer, top corner of the cross-arm when in position thereon.

As a precautionary measure and to insure against slipping of the shear legs on the cross-arm I preferably equip the upper portion 3a with a spur or claw 3b which embeds itself in the cross-arm and holds the shear legs from spreading. The parts 3c abut on the outer face of the cross-arm and prevent inward movement of the shear legs.

The upper end of a guy chain 4 is secured on the hoisting ring 2, passes downwardly over the opposite cross-arm, makes one bite around the line pole and is secured on itself by a claw hook 5.

The hoisting tackle H is suspended from the ring 2 and the lead rope R passes downwardly between the shear legs and over a rope guide sheave 6, thence to the lead-off sheave or snatch-block 7 from which it is led away by either man, beast or motor vehicle power to perform the hoisting operation.

As the sheave 6 requires to be strongly secured I provide structure illustrated in Fig. 3 for the purpose. It comprises a channel shape member having legs 8, a web portion 9 and a back extension 10 in which is fixed the gudgeon pin 11 on which the sheave 6 is mounted and revolves. The free end of the gudgeon pin is tapering to form a spike 12.

It will be observed that the legs 8 are sharply pointed at 8a. This is for the purpose of employing them as indenting elements when mounted upon extra deep cross-arms, this particular application being shown in Fig. 7.

In the smaller, standard size cross-arms the portions 8 of the channel shape member bear on the top and bottom faces, respectively, of the cross-arm and the spike portion 12 is driven into the pole P. Thus when a strain or tension is placed on the rope R the sheave 6 has support on both its sides as it revolves on the gudgeon 11.

The shear legs 1 are set at such an angle of inclination as will permit of the holding straps S of the transformer T easily clearing the cross-arms as the transformer is being raised into position. When the bent-over ends of the straps reach an elevation slightly above the upper cross-arm the lineman simply pulls the transformer toward the pole, the hoisting rope tension is re-

laxed and the device descends into its position on the cross-arms, as shown in dot and dash lines in Fig. 2.

From the foregoing description it is believed that the advantages embodied in my improved portable hoisting rig will be apparent.

Strongly constructed to insure safety to the workmen using it, requiring no bolts or extra paraphernalia to attach it to the cross-arms, and made so that each individual part is not heavy or cumbersome and so designed that it may be installed in hoisting position in a few minutes of time, the device will commend itself to those requiring apparatus of this character.

What I claim is:

1. A portable hoisting apparatus adapted for use on line poles comprising in combination with a hoisting tackle, a two-leg shears, a hoisting ring operatively mounted on the top end of said shears, means to secure said ring against displacement from said shears, a bifurcated foot on each leg of said shears, a claw on one of the branches of each of said feet, a guy chain adapted to hold said shears in any predetermined angle of inclination from vertical, and means to position the lead rope from said hoisting tackle out of the path of the body being hoisted.

2. A portable hoisting apparatus adapted for use on the cross-arms of line poles for elevating transformers and the like, comprising in combination with a hoisting tackle, a shears having two legs joined at their top ends, a bifurcated foot on the lower end of each of said legs, a claw on the upper branch of each of said feet adapted to embed itself in the cross-arm to prevent spreading of the shear legs, a hoisting ring on the upper end of said shears, means to position and maintain said shears at any predetermined angle of inclination with respect to said cross-arms, a hoisting rope guide sheave, and means to secure said sheave in operative position on said pole and said cross-arms.

3. A hoisting apparatus adapted to be mounted on the cross-arm of a line pole comprising in combination with a hoisting tackle, an A shape, two-leg shears having at the apex a downwardly curved portion, a hoisting ring adapted to seat on said curved portion, a bar extending above said ring and secured to the two legs of said shears, adapted to hold said ring against removal from said shears, a forked foot on each of the legs of said shears, said feet adapted to contact with the top and outer faces of said cross-arm, means on

each of said feet whereby spreading of the legs of said shears is prevented, guying means to hold said shears inclined from said cross-arm, a gudgeon adapted to be driven into said line pole, adjacent said cross-arm, and a rope guide and positioning sheave to lead the hoisting rope from said hoisting tackle out of the path of the body being elevated.

4. A portable hoisting apparatus adapted for use in elevating transformers and the like to the cross-arms of line poles, comprising in combination with a hoisting tackle, a two-leg shears having bifurcated feet engageable with the cross-arm at its upper, outer corner, the upper branches of the feet acting to support the weight of the shears and the downwardly extending ones to hold the feet against inward movement thereof, cross-arm-indenting means on said feet to hold said legs against spreading, relatively, a hoisting ring non-detachably mounted on the upper end of said shears, a rope-guiding and leading-off sheave, a gudgeon on which said sheave is revolubly mounted, a spike-like end on said gudgeon adapted to be driven into said pole adjacent said cross-arm, a channel member having legs straddling the upper and lower faces of said cross-arm, and a rearward extension projecting from the web portion of said channel member adapted to receive and support the opposite end of said gudgeon.

5. A portable hoisting apparatus adapted for use on the cross-arms of line poles, comprising a two-leg shears, a non-detachable hoisting ring on the upper end of said shears, a forked foot on each leg of said shears, the horizontal portion contacting with the top of the cross-arm and the depending portion abutting on the front face thereof, a gudgeon having a pointed end adapted to be driven into the line pole adjacent said cross-arm, a rope-guiding and positioning sheave rotatively mounted on said gudgeon, a channel member having two legs adapted to straddle, respectively, the top and bottom faces of said cross-arm when made to the smaller standard dimensions, an indenting element on the end of each of said channel legs adapted to seat in the adjacent face of said cross-arm when supplied in the larger standard size, said elements being for the purpose of holding said channel member against movement on said cross-arm, and an outwardly extending portion on said channel member for supporting the opposite end of said gudgeon.

LISLE B. STREETER.

55

130

60

135

65

140

70

145

75

150