Dec. 27, 1955 H. L. FINCHER 2,728,462

WIRE LIFT

Filed Nov. 17, 1952

Fig. 1

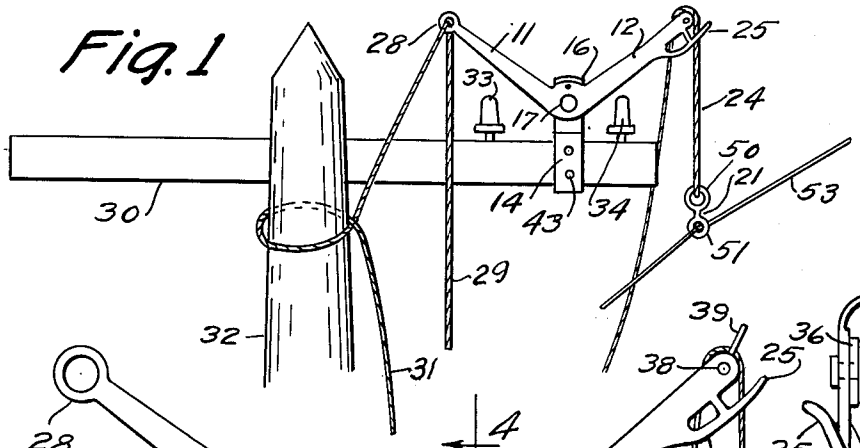


Fig. 2

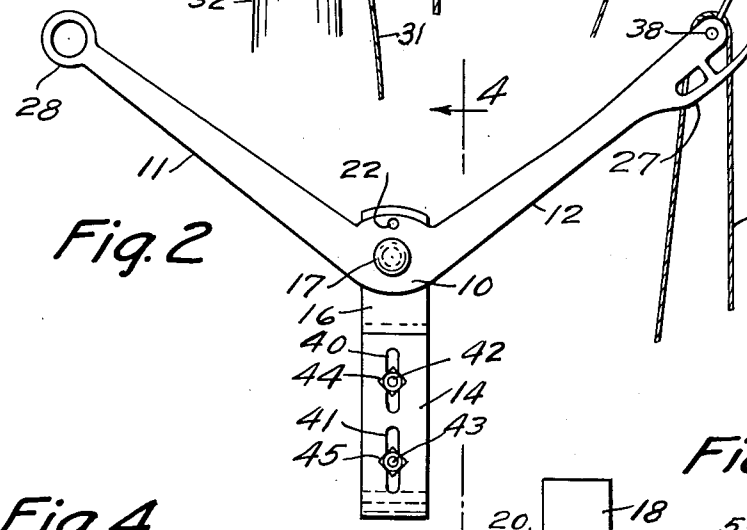


Fig. 3

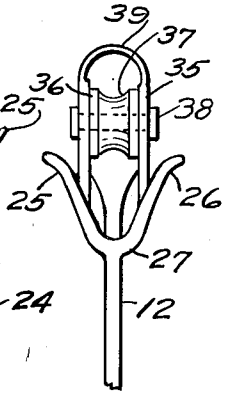


Fig. 4

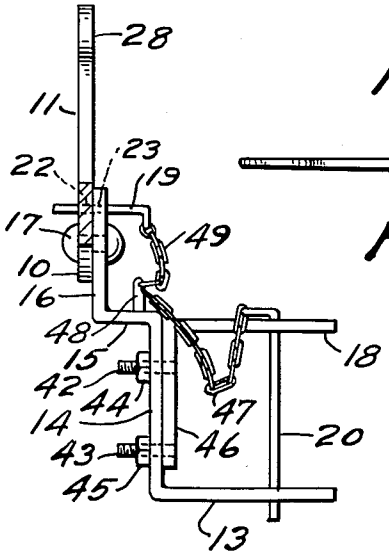


Fig. 5

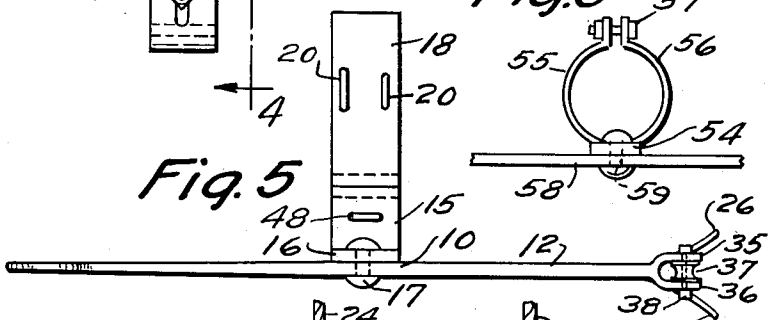


Fig. 8

Fig. 6

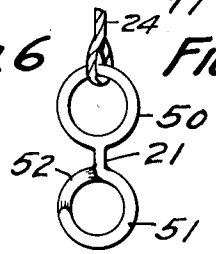
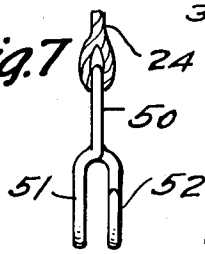


Fig. 7



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WIRE LIFT

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3 Claims. (Cl. 212—8)

This invention relates to wire lifting or elevating devices, such as hoists, for use by linemen in stringing telephone, telegraph, and power or high tension lines on poles, and in particular a lever in the form of a bell-crank pivotally mounted on a clamp adapted to be secured to a cross arm of a pole whereby with the clamp positioned so that one end of the lever extends beyond the end of the cross arm a wire suspended by the extended end of the lever is drawn upwardly to a position above the cross arm and between the first and second insulator pins thereof as the opposite end of the lever is pulled downwardly through an angle of 90° with a rope or the like.

The purpose of this invention is to provide a mechanical lift for raising wires from the ground or from a low pole to a higher pole whereby, without changing the position of the lift, the wires are carried over the end of the cross arm and positioned to be deposited on the cross arm between the insulator pins thereon.

Various types of lever assemblies have been used on poles for lifting wires and for holding the wires in position as they are fastened to insulators on cross arms of the poles, however it is still difficult to lift the wire over the end of a cross arm and, at the same time, drop the wire in position between the pins of the cross arm.

With this thought in mind this invention contemplates a clamp or bracket having an upwardly extended arm on one side and an L-shaped lever having rope attaching means at the ends pivotally mounted on the arm of the clamp and having a safety catch on the extended end for retaining a wire in position as the lever is actuated.

The object of this invention is, therefore, to provide means for forming a wire lift whereby with the lift secured in position on a cross arm of a pole a wire may readily be raised and positioned on the cross arm.

Another object of the invention is to provide a mechanical lift for mounting wires on cross arms of telephone, telegraph and high tension line poles and the like in which the lift is adapted to be temporarily secured to a cross arm or pole without changing the cross arm or pole.

A further object of the invention is to provide a lift for positioning wires on cross arms or poles in which the lift may readily be secured to the cross arm by a lineman on a pole.

A still further object of the invention is to provide a wire lift for raising and positioning wires on cross arms of poles in which the lift is of a simple and economical construction.

With these and other objects and advantages in view the invention embodies a lever having upwardly diverging arms with an eye in the end of one arm and a pulley in combination with a safety catch on the other, and an adjustable bracket forming a clamp adapted to be mounted on a cross arm of a telegraph pole or the like and on which the lever is pivotally mounted.

Other features and advantages of the invention will

appear from the following description taken in connection with the drawing, wherein:

Figure 1 is an elevational view showing the position of the wire lift lever on the cross arm of a pole, the proportionate size of the lever and bracket in relation to the pole and cross arm being exaggerated for the purpose of illustration.

Figure 2 is a front elevational view of the lever and bracket, the parts being shown on an enlarged scale.

Figure 3 is an end elevational view of the end of the lever in which the pulley is mounted, the parts being shown on a still further enlarged scale.

Figure 4 is a section through the lift taken on line 4—4 of Figure 2.

Figure 5 is a plan view of the lift with the pin retaining chains omitted.

Figure 6 is a side elevational view of a hook for attaching a wire to a rope at one end of the lift.

Figure 7 is an edge view of the hook shown in Figure 6.

Figure 8 is a detail illustrating a modification wherein the lever is pivotally mounted on a clamp adapted to be secured to a pole.

Referring now to the drawing wherein like reference characters denote corresponding parts the improved wire lift of this invention includes a lever **10** including upwardly extended arms **11** and **12**, a bracket having a base **13** with a plate **14** extended upwardly from one side, with a flange **15** at the upper edge of the plate and an arm **16** on which the lever **10** is pivotally mounted with a pin **17**, extended upwardly from the edge of the flange, a coacting angle **18** adjustably mounted on the plate **14** of the bracket, latching pins **19** and **20**, and a hook **21**.

The central portion of the lever **10** is provided with an opening **22** through which the pin **19** extends and with the pin positioned in an opening **23** in the arm **16**, with the openings **22** and **23** in registering relation, the lever is latched in the position shown in Figure 2 whereby a wire held in the hook **21** on the end of a rope **24** may be raised by a man on the ground below, pulling on the rope **24**, until the wire is positioned to rest in the arms **25** and **26** of the safety latch or catch **27**.

The arm **11** of the lever **10** is provided with an eye **28** in which a rope **29** is attached and with the rope **29** extended to the ground a man on the ground may pull on the rope **29** until pressure on the pin **19** is relieved at which time a man on the pole removes the pin and the man on the ground, pulling on the rope **29** turns the lever counter-clockwise through an angle of substantially 90° until the opposite end of the lever with the wire in the cacth **27** is positioned above the cross arm, as indicated by the numeral **30**.

With the parts in this position the man on the pole takes over, and with the short rope **31** which is also attached to the eye **28**, and which has been wrapped around the pole **32** with a single loop, as shown in Figure 1, the man on the pole actuates the lever to lower the arm **12** slowly whereby the wire is let down until it rests upon the cross arm. The wire may then be attached to one of the insulators, as indicated by the numerals **33** and **34**.

The extended end of the arm **12** of the lever **10** is bifurcated providing sections **35** and **36** and a pulley **37** is positioned between the sections **35** and **36**. The pulley **37** is journaled on a pin **38**, and a bail or guard **39** extends from the sections **35** and **36** upwardly over the pulley to prevent the rope working off of the pulley.

The plate **14** of the bracket is provided with elongated slots **40** and **41** through which studs **42** and **43** extend and the studs are provided with lock nuts **44** and **45**. The studs are secured in the vertically disposed leg **46** of the angle **18** and with the angle mounted in this manner the distance of the angle from the base **13** of the bracket may be adjusted to compensate for cross arms of different sizes.

The pins **20** are positioned in openings in the angle and base and are located to rest against the side of the cross arm for securing the bracket to the cross arm. The pins **20** are chained to the bracket to prevent loss thereof with chains **47** and the chains are held in an eye **48** in which a chain **49**, which is secured to the pin **19**, is also positioned.

The hook **21** is formed with a ring **50**, which is formed at the center of a strand of wire or the like, and the ends are formed to provide oppositely positioned hooks **51** and **52** through which a wire **53** may readily be threaded. By this means the wire is readily inserted in the hook and is also readily removed therefrom. It will be understood that a hook of any suitable design may be used.

In the modification illustrated in Figure 8 an arm **54** similar to the arm **16**, extends upwardly from a C clamp having arms **55** and **56** and the arms are clamped around a post with a bolt **57**. A lever **58**, similar to the lever **10**, is pivotally mounted on the arm **54** by a pin **59**, and with the lever mounted in this manner the wire lift is adapted to be used on a three wire power line.

The parts of the wire lift of this invention may be made of steel or other metal, or the parts may be made of plastic or other insulating material, or they may be made of metal and coated with insulating material, or the parts may be insulated by other means.

With the parts arranged in this manner a wire may readily be raised by a person on the ground until the wire rests in the safety catch **27**, then elevated by pulling on the rope **29** until the wire is above the cross arm, and then lowered on the cross arm by an electrician on the pole.

The improved wire lift may readily be installed on a cross arm and secured by the pin **20**, and it may also be readily removed and positioned on another cross arm or the like.

It will be understood that other modifications, within the scope of the appended claims, may be made in the design and arrangement of the parts without departing from the spirit of the invention.

What is claimed is:

1. In a wire lift, the combination which comprises a substantially L-shaped lever, a bracket having an upwardly extended arm, means adapted to temporarily mount said bracket on a cross arm of a pole with the arm extended upwardly, means for pivotally mounting the L-shaped lever on the arm of the bracket with arms of the lever extended upwardly in diverging relation, a pulley journaled in the extended end of one of the arms of the lever, a rope trained over said pulley, arcuate arms extended from the sides of said arm of the lever and positioned below said pulley, and ropes secured to and depending from the extended end of the opposite arm of said lever.

2. In a wire lift, the combination which comprises a bracket for use on a telegraph pole having a cross arm, a substantially L-shaped lever, means pivotally mounting said lever on said bracket with arms thereof extended upwardly and outwardly, a pulley journaled in the extended end of one of said arms, said arm in which the pulley is mounted having a safety catch positioned below the pulley and adapted to receive a wire, a rope trained over said pulley, and ropes secured to and extended from the end of the opposite arm of said lever.

3. In a wire lift, the combination which comprises a bracket for use on a telegraph pole having a cross arm, means for adjusting the size of the bracket, a substantially L-shaped lever having outwardly diverging arms, means pivotally mounting said lever on the bracket with the arms extended upwardly, a latch pin extended through the lever and bracket for retaining the lever in an operative position, a pulely journaled in an extended end of one of the arms of the lever, said arm of the lever in which the pulley is positioned being provided with arcuate arms positioned below the pulley for retaining a wire in said arm as the lever is actuated to carry the wire over said cross arm, and ropes secured to and depending from the extended end of the opposite arm of the lever.

References Cited in the file of this patent

UNITED STATES PATENTS

1,235,999	Neeley	Aug. 7, 1917
1,319,964	Morgan	Oct. 28, 1919
2,213,604	Linnert	Sept. 3, 1940
2,428,186	Warwick	Sept. 30, 1947
2,553,779	McLain	May 22, 1951
2,665,012	McLain et al.	Jan. 5, 1954