July 8, 1958 J. M. JOHNSON 2,842,300

HAND OPERATED POLE CLIMBING AID

Filed Jan. 8, 1957

Fig. 1

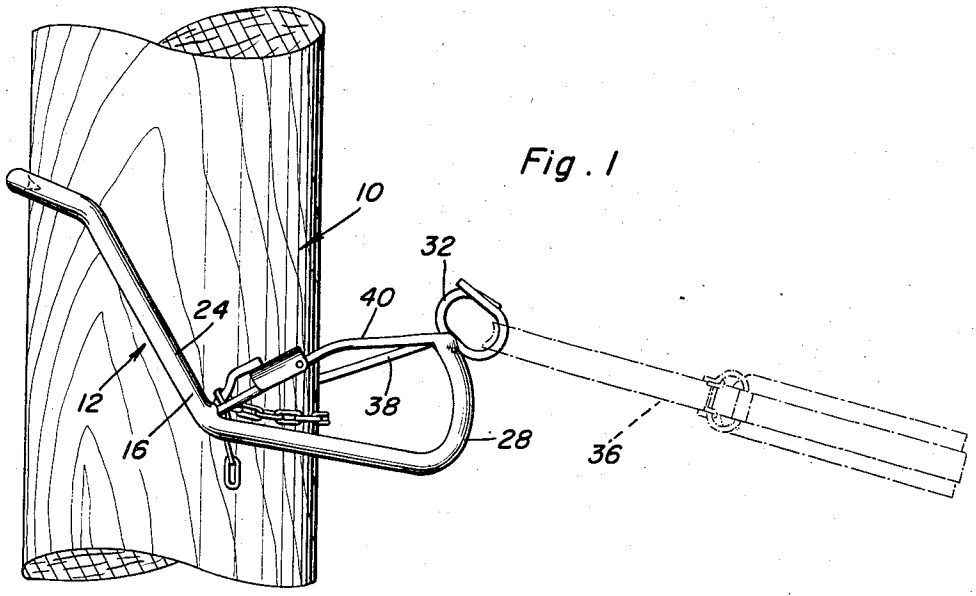


Fig. 2

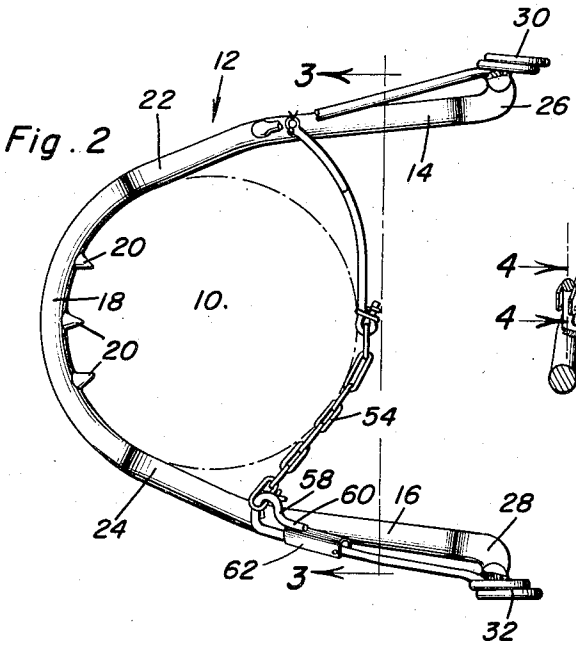


Fig. 3

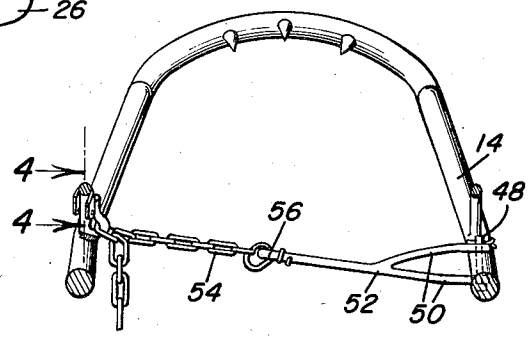
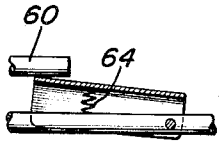


Fig. 4



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HAND OPERATED POLE CLIMBING AID

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2 Claims. (Cl. 227—24)

This invention relates to a pole climbing aid and more particularly to a safety device adapted to be used by a lineman or other person of similar occupation when climbing a pole.

Linemen or persons of other similar occupations who are required to climb poles upon which wires are strung, and in order to do so wear climbing spikes having spurs which penetrate the pole to normally prevent the feet from slipping, are often liable to accidents should the spikes become disengaged from the material of the pole. In order to prevent accidents, the present invention provides means for supporting the entire weight of the pole climber even though the spikes on the shoes become disengaged from the material of the pole.

A further object of the invention resides in the provision of an easily operable pole climbing aid which can be readily raised or lowered during ascent or descent of the pole in a convenient manner and which may be utilized to prevent accidents even if the pole climber becomes ill while climbing the pole.

A further object of the invention resides in the provision of a pole climbing aid that is adapted to be utilized equally well for various sizes of poles.

Still further objects and features of this invention reside in the provision of a pole climbing aid which is of simple construction, inexpensive to manufacture, and substantially foolproof in use.

These, together with the various ancillary objects and features of the invention which will become apparent as the following description proceeds, are attained by this pole climbing aid, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example only, wherein:

Figure 1 is a side elevational view of the pole climbing aid comprising the present invention;

Figure 2 is a plan view of the pole climbing aid;

Figure 3 is a sectional detail view taken on the plane of line 3—3 in Figure 2 illustrating in particular the construction of the swingable lever and chain utilized in the invention; and

Figure 4 is a detail sectional view as taken along the plane of line 4—4 in Figure 3 illustrating in particular the construction of the spring pressed hook.

With continuous reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 is used to generally designate a telephone or telegraph pole or the like in which the pole climbing aid generally designated by the reference numeral 12 is adapted to be utilized. The pole climbing aid 12 includes a pair of lever arms which extend divergently and are indicated at 14 and 16 which are interconnected by an arcuate central connecting portion 18 provided with teeth as at 20 of suitable shape such as the conical shape shown. The teeth are adatped to bite into the wood or other material from which the pole 10 is constructed it being recognized that the teeth may extend at different angles so as to firmly secure the pole climbing aid 12 to the pole

10 when the teeth are engaged with the material of the pole 10.

The lever arms 14 and 16 are provided with angulated portions 22 and 24 to vertically offset and raise the central connecting portion 18 from the ends of the lever arms 14 and 16 remote therefrom. These ends of the lever arms as indicated at 26 and 28 are upwardly arcuately curved and have welded or otherwise secured thereto eyelets 30 and 32 which are arranged so as to easily permit attachment of a safety belt indicated at 36 to the eyelets and to retain the safety belt in a secure manner.

Brace bars 38 and 40 are eiher integrally formed with the ends 26 and 28 or welded thereto and also welded to the lever arms 14 and 16 adjacent the junctions of the offset angulated portions 22 and 24 with the other portions of the lever arms.

Pivotally secured to the lever arm 14 by means of a pivot pin 48 extending through the furcations 50 of one end thereof is a link supporting arm 52 having a chain 54 secured to the end 56 thereof. This link supporting arm 52 keeps chain 54 from sagging and dragging against pole 10 while climber is ascending the same. The chain is adapted to be engaged within a clip 58. This makes a pivot point for fulcrum for lever arm 16. Pivot point for lever arm 14 is at pin 48. This clip includes a keeper 60 and a spring pressed retainer 62 normally urged by a spring 64 into engagement with retainer 62 to retain the chain in the clip 58. Hence, dependent upon the size of the pole 10 which is being climbed, one of the links of the chain 54 will be engaged with the keeper 60.

It is to be recognized that the angulated portions 22 and 24 provides means whereby upon rocking of the lever arms 14 and 16, there will be provided an opening of increased size whereby the pole climbing aid 12 may be easily raised or lowered. However, when any weight is applied upon the ends as at 26 and 28 of the lever arms 14 and 16 (26 and 28 being the hand grips that climber used to bring about the rocking motion necessary for ascending or descending pole), the teeth 20 will bite into the pole 10 securely because of lever rocking arms pivoting on clip 58 and pin 48, thus holding the pole climbing aid in position. This weight may be applied through eyelets 30 and 32 whereupon the handles formed by the end portions of the lever arms 14 and 16.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is dot desired to limit the invention to the exact construction and operation shown and described, and accordingly all suiable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A pole climbing aid comprising a yoke for encompassing a pole, said yoke including a pair of lever arms interconnected by a central connecting toothed portion, said lever arms having angulated portions upwardly offsetting said toothed portion from the ends of said lever arms remote from said toothed portion, and chain means secured to one of said lever arms and detachably secured to the other of said lever arms, said chain means including a link supporting arm pivoted at one end thereof to said one of said lever arms, a chain secured to the other end of said ling supporting arm, and a clip secured to said other lever arm detachably engaging said chain.

2. A pole climbing aid comprising a yoke for encompassing a pole, said yoke including a pair of arms interconnected by a central connecting toothed portion, said lever arms having angulated portions upwardly offsetting said toothed portion from the ends of said lever arms remote from said toothed portion, chain means secured to one of said lever arms and detachably secured to the

other of said lever arms, said chain means including a link supporting arm pivoted at one end thereof to said link supporting arm, a clip secured to said other lever arm detachably engaging said chain, said clip being spring pressed into a locked position, eyelets secured to said lever arms, and a safety belt engaging said eyelets.

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