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Peterson

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[54] **LOG SKIDDER**

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[52] **U.S. Cl.** **214/85.5**, 254/166, 254/190

[51] **Int. Cl.** **B66f 19/00**

[58] **Field of Search** ..... 214/85.5, 523, DIG. 7; 254/166, 190

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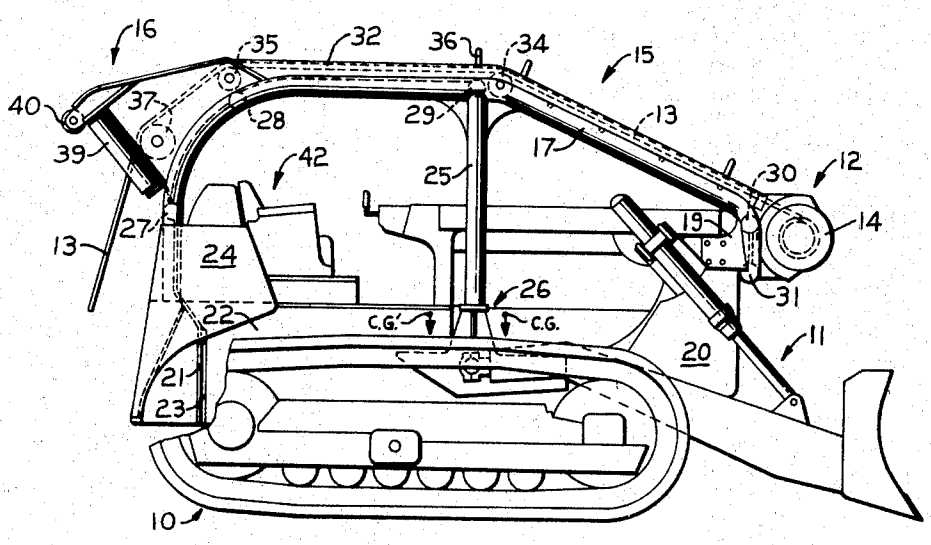
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[57] **ABSTRACT**

A track-type log skidder comprises a winch assembly mounted on a forward end thereof and a frame assembly extending from the winch assembly and terminating at a fairlead guide assembly positioned at a rearward end of the skidder. A cable carried by the winch assembly extends rearwardly through a cable track mounted on the frame assembly and through the fairlead guide assembly.

10 Claims, 3 Drawing Figures



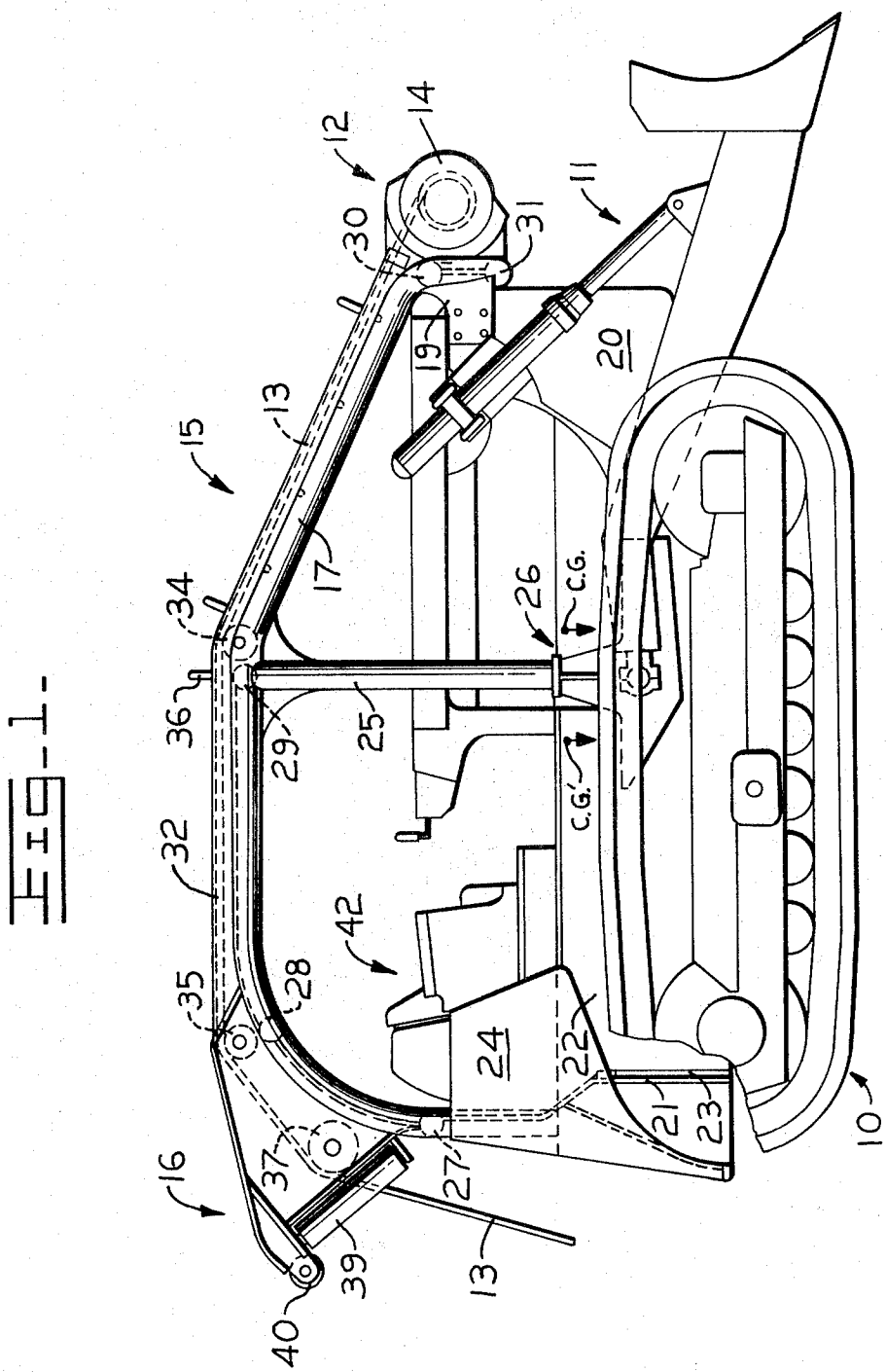
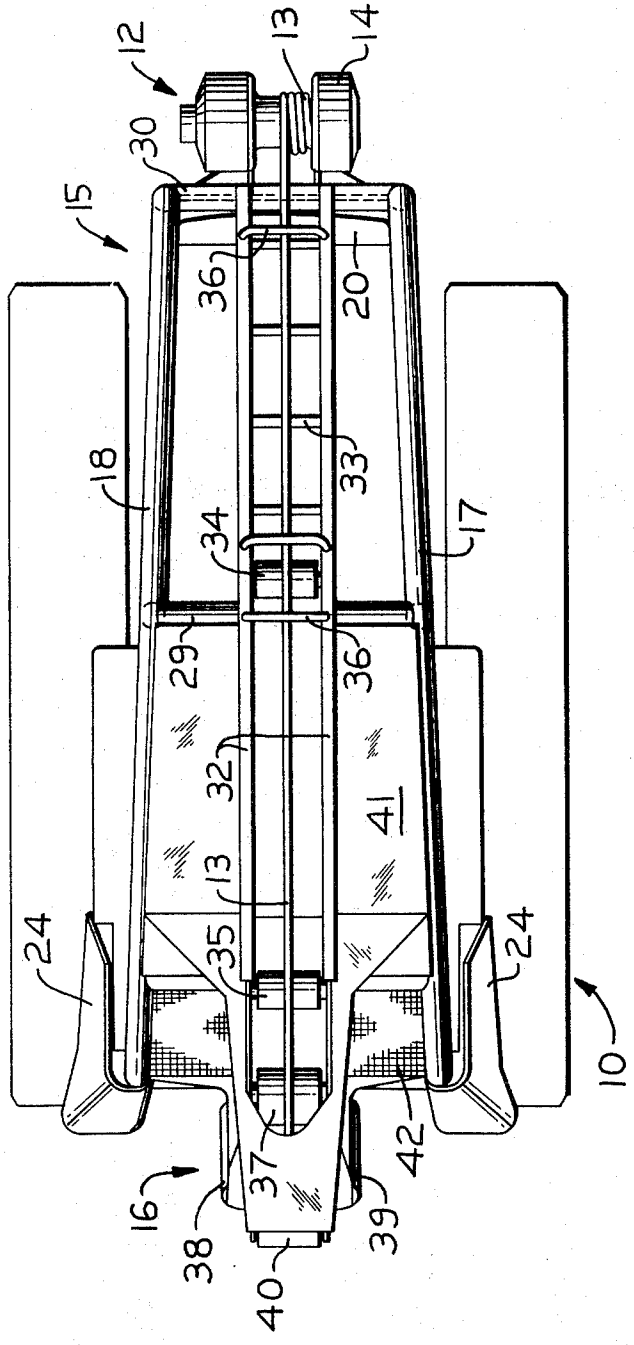


Fig-1-

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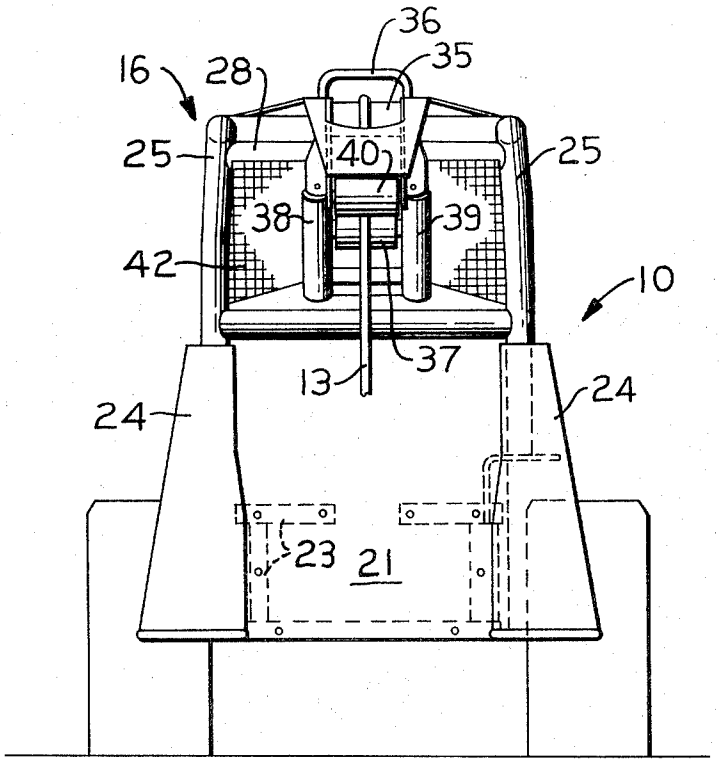
FIG. 2



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Fig. 3



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LOG SKIDDER

BACKGROUND OF THE INVENTION

This invention relates to a log skidder and more particularly relates to a track-type tractor adapted for use in log skidding operations.

Track type tractors are particularly useful in log skidding operations due to their inherent stability and ability to negotiate hilly terrain frequently encountered during such operations. Cable mounting apparatus and attendant structures attached to such tractors are normally bulky, costly to manufacture and do not always afford the high degrees of maneuverability, floatation and stability demanded during log skidding operations.

SUMMARY OF THE INVENTION

An object of this invention is to overcome the above, briefly described problems by providing a compact, economical and efficient log skidder providing high degrees of maneuverability, floatation and stability.

The log skidder comprises a tractor, preferably a track-type or crawler tractor, a winch assembly mounted on a forward end of the tractor, a frame assembly extending from the forward end of the tractor to a rearward end thereof, a fairlead guide assembly attached to the frame assembly at the rearward end of the tractor and a cable carried by the cable assembly and having a free end thereof extending rearwardly on the frame assembly and through the fairlead guide assembly.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a partially sectioned, side elevational view of a log skidder embodying this invention with a bulldozer assembly attached to a forward end thereof; and

FIGS. 2 and 3 are top plan and rear elevational views, respectively, of the log skidder with the bulldozer assembly removed therefrom.

DETAILED DESCRIPTION

The illustrated log skidder, disposed for movement along a longitudinal axis thereof, comprises a track-type tractor **10**, preferably having a conventional bulldozer assembly **11** mounted on a forward end thereof. A winch assembly **12** is also mounted on the forward end of the tractor and has a cable **13** wound on a cable drum **14**, rotatably mounted in the winch assembly in a conventional manner. Suitable actuating means (not shown) may be employed to selectively rotate the cable drum in either direction for paying-out or paying-in the cable.

A frame assembly **15** is mounted to extend over and vertically above the tractor from the winch assembly. The frame assembly terminates at a fairlead guide assembly **16** positioned at the rearward end of the tractor. The cable has a free end which extends rearwardly on the frame assembly and through the fairlead guide assembly. During a logging operation, the cable may be secured to a fallen log which is then transported to a removal site by the log skidder.

As more clearly shown in FIGS. **1** and **2**, the frame assembly comprises longitudinally extending and generally U-shaped tubular members **17** and **18** connected to the forward end of the tractor by side plates **19** (one shown in FIG. **1**), secured on a heavy duty nose guard **20**. The rearward end of the frame assembly is secured to a steel plate **21** which is bolted or otherwise suitably

secured to the rear of a housing **22** which houses a final drive assembly (not shown) for the endless tracks. Spacers **23** are positioned between plate **21** and housing **22** to provide suitable clearances for cover plates (not shown) at the rear of the housing.

Fenders **24** are secured to the frame assembly to fully protect housing **22**, the endless tracks, the fuel tank (not shown) and attendant structures. The frame assembly further comprises a pair of vertically disposed tubular members **25** (FIGS. **1** and **3**), positioned intermediate the ends of the tractor. Each member **25** is secured to a bracket **26**, attached to the tractor's main frame (not shown), which pivotally mounts a push arm of the bulldozer assembly thereon.

In addition, transversely disposed tubular members **27–31** are secured between longitudinal members **17** and **18** to provide an integrated frame assembly exhibiting high degrees of structural integrity and rollover protection. A track assembly for guiding cable movements comprises a pair of longitudinally disposed rails **32** secured on the frame assembly between members **17** and **18** and attached together by crossbars **33** (FIG. **2**). Horizontally disposed rollers **34** and **35** are rotatably mounted between rails **32** to further guide and support the overlying cable during its reel-in and reel-out functions.

A plurality of generally U-shaped bars **36** are secured between the rails in overlying relationship with respect to the cable to prevent it from being dislodged from the track assembly. Fairlead guide assembly **16** comprises a horizontally disposed roller **37**, further disposed vertically below roller **35** (FIG. **1**) to receive the cable therefrom. A pair of generally vertically disposed guide rollers **38** and **39** (FIG. **3**) cooperate with roller **37** and a second horizontally disposed roller **40** to form a box-like configuration to fully entrap the cable therebetween.

A cover plate **41** is preferably secured between members **17** and **18**, over an operator's cab **42**, to fully protect the operator during logging operations (FIG. **2**). A heavy wire mesh screen **42** is secured between the members, behind the operator, to provide full protection thereat and yet permit the operator to visually inspect work being performed behind the log skidder. If so desired, similar wire screening may be provided on each side of the operator's cab.

From the above description it can be seen that the gross weight of the log skidder is normally distributed to place the center of gravity c.g. (FIG. **1**) approximately at the longitudinal center of the vehicle and preferably, slightly forwardly thereof. During a logging operation wherein a heavy load is being pulled by the log skidder, such load will tend to shift the center of gravity to c.g.' which still remains approximately at the longitudinal center of the vehicle. Such a shifting will not effect the maneuverability, floatability, stability and general performance of the log skidder. In addition, frame assembly **16** provides full protection for the operator during such operations.

What is claimed is:

1. A log skidder disposed on a longitudinal axis thereof comprising a tractor, a winch assembly mounted on a forward end of said tractor and having a cable wrapped thereon, a frame assembly mounted on said tractor to extend over and vertically above said tractor from said winch assembly to a rearward end of said tractor, a track assembly secured on said frame as-

sembly to accommodate said cable thereon, including longitudinally spaced roller means and means on said track assembly for preventing said cable from jumping-out of said track assembly during cable pay-out or pay-in, a fairlead guide assembly attached to said frame assembly at the rearward end of said tractor, said fairlead guide assembly positioned on said tractor to receive and locate the free end of said cable rearwardly thereof, and a bulldozer assembly mounted on a forward end of said tractor.

2. The invention of claim **1** wherein said frame assembly comprises longitudinally extending tubular members connected to the forward and rearward ends of said tractor, said track assembly secured on said frame assembly between said tubular members.

3. The invention of claim **2** wherein said frame assembly further comprises a pair of vertically disposed members, positioned on opposite sides of said tractor longitudinally intermediate the forward and rearward ends thereof, secured to said tractor and said longitudinally extending members.

4. The invention of claim **2** wherein said frame assembly further comprises a plurality of transversely disposed members secured between said longitudinally extending members.

5. The invention of claim **2** wherein said track assembly comprises a pair of longitudinally extending rails having a plurality of longitudinally spaced and horizontally disposed rollers and crossbars secured therebetween in underlying and supporting relationship with said cable.

6. The invention of claim **5** wherein said track assembly further comprises a plurality of longitudinally spaced U-shaped bars secured between said rails in overlying relationship with respect to said cable.

7. The invention of claim **2** wherein said fairlead guide assembly comprises a pair of vertically disposed rollers and a pair of closely adjacent horizontally disposed rollers all forming a box-like configuration fully entrapping said cable therebetween.

8. The invention of claim **2** further comprising an operator's cab positioned at the rearward end of said tractor and a cover plate secured between said longitudinally extending members to fully cover said operator's cab.

9. The invention of claim **8** further comprising a screen secured between said longitudinally extending members to fully protect a rearside of said operator's cab.

10. The invention of claim **1** wherein the center of gravity of said log skidder is located approximately at the longitudinal center thereof.

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