DEMONTABLE WINCH FRAME

Inventor: Wilbert L. Haberthier, P.O. Box 503, Limon, Colo. 80828

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ABSTRACT
A demountable frame for a portable winch having a mounting plate for permanent attachment to a base, spindle bearing means integral with one end of the mounting plate, a motor having a spindle with a drum mounted thereon, a mounting stand for the source of power and the spindle, wherein the integral mounting stand, motor and spindle are removably mounted to the mounting plate by a combination of bolted pins disposed in a plurality of sleeves.

3 Claims, 4 Drawing Figures
DEMONTABLE WINCH FRAME

Small motor driven winches find many applications in industrial, agricultural and sporting fields. For example, a sportsman may have several uses for a winch such as pulling a boat onto a trailer, pulling the trailer out of the water, hoisting heavy game, etc. If such multiple uses are found, it is expensive to fit every use with a complete winch, including motor, drum and cable. Inasmuch as the latter elements are the most expensive, it would be thrifty and convenient if one such combination of elements could serve all purposes and could simply be changed from one mount to another which was located more or less permanently in its location of use.

Hence, it is the primary object of the present invention to provide a frame and mounting device for a winch which allows the winch to be easily demounted and transported to a new mounting.

This object and other features of the invention will become apparent upon a reading of the detailed description of a preferred form of the invention taken in conjunction with the accompanying drawings in which:

FIG. 1 is a side elevational view of the demountable frame of the present invention.
FIG. 2 is a top plan view of the demountable frame with phantom lines showing the position of the winch motor as it is removed from the mounting plate.
FIG. 3 is an end elevational view.
FIG. 4 is a top plan view of the supporting plate.
FIG. 4 illustrates the mounting plate 5 of which there can be many for each winch. The mounting plate 5 is intended to be more or less permanently mounted by screws or other means and holes 6 in the bottom of the plate 5.

Integral with the plate 5 is an upturned end 7 of the plate having an aperture 8 therein, forming a bearing for the end of the winch spindle 9.

The mounting plate is provided with three sleeves 11, 12 and 13, each of which is attached by welding or similarly to the top of the plate. Two of the sleeves 11 and 12 are mutually parallel and perpendicular to the end bearing plate 7. The third sleeve 13 is similarly attached at the end opposite the bearing plate 7 and disposed normally to the other two sleeves 11 and 12.

A motor support plate 15 carries the source of power for the winch, an electric motor 17, whose elongated drive shaft has already been identified as the spindle 9.

Along the bottom edge of the motor support plate 15 are attached two sleeves 21 and 22 which are spaced apart a distance in which to receive the sleeve 13 which is attached to the plate. Welded or otherwise connected to each of the sleeves 21 and 22 are a pair of long threaded pins 26 and 28 which are disposed parallel to the spindle 9 and adapted to slide somewhat snugly through the sleeves 11 and 12 attached to the mounting plate 5. The threaded ends of the bolt pins 11 and 12 pass through aligned holes 32 and 33 in the lower portion of the upturned end 7 of the bearing plate 5.

When the pins 26 and 28 are properly in place within the respective sleeves 11 and 12, the sleeves 21, 13 and 22 are in aligned position and can receive a pin or bolt 36 to complete the interconnection between the winch elements and the mounting plate 5.

In well known fashion, a drum 40 is carried by the spindle 9. Cable 42 is wound on the drum. Optionally, an additional pulley 46 can be detachably mounted on the end of the spindle outward of the bearing plate 7. The pulley must be removed from the spindle prior to demounting the winch from its mounting plate.

1. A demountable frame for a portable winch comprising in combination:
   a mounting plate having integral bearing means for supporting one extremity of a winch spindle, said plate further including a plurality of attached sleeves disposed parallel to the plane of the plate;
   a source of power having an elongated spindle;
   a winch drum mounted on said spindle for rotation therewith;
   support means for said source of power, including at least one attached sleeve and a support plate having secured to the bottom edge thereof a pair of spaced apart sleeves and wherein the pin means includes a pair of elongated pins attached respectively to the said two spaced apart sleeves and disposed in parallel relation to the spindle, and
   pin means interconnecting the plate sleeves and the support means sleeves so as to fixedly mount the winch drum and power source onto said mounting plate, and including a third pin which is removably disposed in said spaced apart sleeves attached to the support plate and passes through one of said sleeves disposed on the mounting plate, the latter of which is in alignment with the said spaced apart sleeves and is disposed therebetween.

2. The combination of claim 1 wherein said pair of pins which are parallel to the spindle respectively pass through two of the said sleeves secured to the mounting plate and further include means fastening the ends of said two pins to the bearing means integral with the supporting plate for supporting one extremity of the winch spindle.

3. The combination of claim 2 and further including a demountable pulley attached to the end of the said spindle on the outside of the integral bearing means.

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