

and soft places the machine may be plated between the side sills, on the bottom of the cross beams, thus affording a bearing surface the full area of the frame.

The frame is regularly built 24 feet to 30 feet long, depending on size of engine and equipment. Width is nine feet.

The engine and boiler are mounted on the rear end of the frame securely bolted down to the frame beams properly spaced to receive it.

All gears on Clyde engines are steel with machine cut teeth.

The boom is "A" type, usually consisting of wood timber legs, and is supported on the front end in position to furnish proper lead for the cables. Iron or steel pockets afford a seat for the lower end of the boom legs. The boom cap is cast steel with ears for attaching the blocks and supporting cable. Structural steel boom legs may be furnished, if desired.

The top of the boom is guyed sideways with cables running from ratchet drums attached to the frame near the boom feet, running through blocks at the sides of the boom cap and from these to stump or tree. These guying drums provide storage for the guying cables and means for quickly taking up the slack.

Clyde "Rapid" Ground Skidders are built regularly with

several sizes of engines and with varying number of drums to suit the conditions where intended for use.

The single line machine for using horse outhaul is equipped with a two drum engine. The rear drum carries the skidding line and the forward drum carries the spotting line for moving the machine. Both drums may be used for skidding if it is not necessary to move frequently.

The regular two-line ground skidder has a three drum engine. The middle and rear drums on this machine are used for skidding and the front drum for spotting. Where two lines are used for skidding, two skidding blocks are hung at the peak of the boom so that the lines may be run out in different directions and always lead fairly on the drums. This form contemplates using horses to take the skidding lines back.

The design of the engine on the single line standard machine for cable outhaul also embodies three drums, but one of the drums is geared for a higher speed so that the skidding line is taken out at a speed of one thousand feet or more per minute. On this type there is an additional drum conveniently located for carrying a small setting cable to be used for taking out the outhaul cable when making a set. This small setting line

