gravity with 40 feet vertical steel boom on is so low that it will negotiate a grade of more than 60 per cent without tipping. The illustration herewith shows the machine in actual test on a measured grade of 57.6 per cent.

The engines are double cylinder, link motion, steel cut gears, mounted on steel bed. Two drums are used on regular equipment, one for skidding and one for outhaul, or both drums for skidding, using horses for outhaul. Other forms or combinations of drums may be used if required.

Two auxiliary drums for side guying cables are connected in front with sliding pinion, which is thrown out of mesh when not in use for tightening guy lines.

A vertical boiler for 150 pounds pressure, asbestos covered, and of proper size to furnish ample steam capacity, is mounted at the rear of the engine.

The boom or spar is composed of two structural steel legs resting on diagonally opposite corners of the frame and held in position by two guying rods leading from the top to the other two corners of the frame.

A flexible hanger for carrying the skidding and guying blocks is attached to the top of the spar. This arrangement absorbs the shock of the cables in operation so that the boom and machine are relieved of vibration.

The Clyde Traction Skidder is built in several sizes and may be adapted for use with engine for operating as a cableway skidder, if desired.

It is usually equipped with perpendicular "A" frame boom or spar, or may be used with head tree.

This form is not supplied with storage drum for main trolley cable nor equipped with loading engine.