Lombard Log Hauler

near roads, using an ejector in cab with suction hose of suitable length and size. Where possible, it is better to have tanks near roads and high enough to fill machines by gravity through large hoses, which will save time. These tanks are to be filled by some separate device.

Table 1. Specifications for Lombard Steam log hauler

Length:	30 ft. overall
Width:	8 ft. 2 in. overall
Height:	9 ft. (about) overall
Lowest Point:	12 in. (about)
Speed:	5 miles per hour, maximum
Weight:	19 tons, shipping weight uncased
Engine:	2-cylinder, double-acting horizontal, reversible type, 9-in. bore and 10-in. stroke 90 horsepower at 175 lbs. steam pressure 250 R.P.M. equals 4⁷⁄₁₀ mph Crank pins set at 90° to one another Valve, balance D type, eccentric driven, link motion Cylinders equipped with automatic relief valves
Lubricator:	Hills-McCanna pump lubricator
Engine Control:	Throttle lever in cab Hand reverse lever in cab
Boiler:	Horizontal locomotive type with forced draft 200 lbs. working pressure 80 tubes 1¾ in. diameter, 107 in. long Fire Box, length inside 52 in., width inside 29 in., height above grates 41 in. Rocking Grates Grate area, about 10½ sq. ft. Distance from top of grates to bottom of ash pan 16 in. Stay bolts 1⅛ in. in diameter Fusible plug ¾ in. outside type Prismatic water column Water fed to boiler by two Hancock injectors, type C-17½ Boiler covered with 1½ in. and 2 in. asbestos lagging and sheet iron jacket All steam pipes covered
Water tank:	Saddle type, Capacity 425 gals.
Fuel Capacity:	Coal, 1½ tons Wood, ⅞ cord, when using extension rack
Gear Ratio:	Between engine and driving member sprocket, 5.92 to 1
Drive:	Gear and sprocket chain combination Chain is roller thimble type 7,300 lbs. working strength
Differential:	Bevel gear type, all special nickel steel gears
Sprockets:	Special Manganese steel
Bearings:	All heavy duty bearings, Bronze with compression hard grease cups
Frame:	Seven inch, 19¾ lbs. steel channel and well braced
Draw Bar:	All steel construction with springs
Springs:	Between frame and driving members
Driving Members:	Two 6 ft. 4 in. centers. Steel construction with traction surface of 16 in. x 53 in. each Total traction surface, 1,696 sq. in. Each member has 29 lags and two roller chains Present type of links, ⁵⁄₁₆ in. x 1½ in. steel, put together with ¾ in. rivets
Cab:	Width, 6 ft. 9 in.; length, 4 ft. 8 in.; height in center, 7 ft. 4 in.
Center of Driving Equipment:	Members to Center of Steering Members: 15 ft. 8 in. Full set of tools, steam hose to use in removing ice or snow from machine, 22 ft. of 2 in. heavy armored suction hose with strainer.

WATER TANK — The tank is filled by means of an ejector located at rear of tank in cab. After putting hose in water hole, open cover on tank, open gate valve next to tank, then turn on steam to ejector slowly until it takes water. When through, close steam valve, close gate valve, take hose from water hole and hold in a position to drain, and turn on a little steam to blow out any water that may remain to keep from freezing.

BLOWER — There is a blower pipe and valve in cab to assist in starting fire.

GRATES — There are seven grates, hitched up in two sections, which can be operated by lever in cab.

Another form of horse powered treadway. Most major agricultural implement companies produced horse-powers to run various equipment.

Oliver Lombard produced log haulers that remained in operation from almost 1900 until World War II. As we will develop in a later chapter, Lombard always felt slighted by Holts invention of the tracklaying tractor.