



and rear ends curved up for sliding along the cars.

The regular length of the frame for standard flat cars and short length logging cars is thirty feet. The width should be from six to ten inches less that the distance between the spuds, or stakes on the cars, and is usually eight feet. This may be seven feet nine inches, seven feet six inches or still narrower if necessary. Length may be increased also in case bunks are unusually far apart on the cars, such as equipment for double length logs.

The boom may be the Clyde quarter swing type or rigid, as preferred. Wood timbers are used regularly for the boom legs with steel boom head, or cap, and steel foot connections. The boom is supported with a stationary guy running from the peak back to the top of a steel A frame. This A frame is supported with two guying cables running to the two rear corners of the loader frame. The A frame also carries an idler sheave at the apex for leading the loading line fairly to the drum when the boom is swung to

The Clyde "Rapid" is one of the earliest types of steam power machines for loading and handling logs. It is portable and is shifted from one car to another with its own power by means of a cable from the front drum of the engine leading under and back of the machine to a draw-bar on one of the cars in the rear. By winding up this cable the machine slides over the top of the cars.

This style of machine is specially desirable where the requirements do not warrant the investment for a self-propelling machine, or when the logs to be loaded are widely scattered a considerable distance along the track, and for picking up logs along the main line which have fallen off in transit. The machine is carried along readily with the regular train at any speed practical for the locomotive, and is arranged so that the boom may be lowered to pass easily under bridges, wires, or other overhead obstructions.

The frame is structural steel throughout, thoroughly braced and hot riveted. The side beams are fifteen-inch steel I-beams with front



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