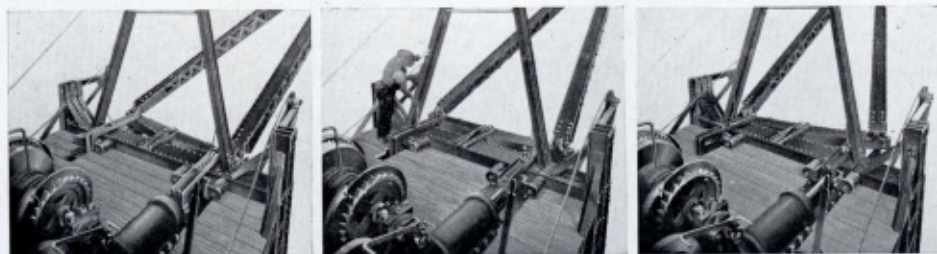


The worm gear is made of cast steel and the worm of a special alloy phosphur bronze, the result of extensive experiment to find a metal

at the four corners of the frame and thence down to the end castings on the transverse beams of the wheel-frames.



Clyde Swinging Boom mechanism showing boom swung to the right, locked in central position, and swung to the left.

combining the maximum of strength and wearing qualities.

A clutch connects this gearing with the forward drum shaft of the engine.



Clyde End Hook, for crotch lines, with renewable pin and cap.

Four cables, each winding in a separate groove, are secured to each of the winding drums on the cross-shafts.

Two of the cables on each drum pass over sheaves supported on brackets

The other four cables run under the sheaves on the lower side beams of the frames and thence to their end castings.

Thus, when the winding shaft is revolved in one direction, the upper cables are wound on the drum elevating the swinging frames, while the lower cables are unwound from the drums by the same operation.

When the movement is reversed, the upper cables pay out and the lower cables are wound up, lowering the wheel-frames to the track and drawing them to a vertical position.

The worm gearing automatically holds the winding shaft in position when the clutch connecting it with the engine is thrown out, and the wheel-frames are thereby held in a fixed position, either up or down.

When the wheel-frames are vertical and the wheels resting on the track ready to move, the ends of the beams running across the frames are held against spring stops secured to the longitudinal side beams of the main

