

HORSE DRAWN TURNSTYLE MARINE RAILWAY HAULING MACHINERY

Chas. J. Colonna's Marine Railway 1875

BERKLEY - NORFOLK, VIRGINIA

The railway was powered by one or two horses as needed, depending on the load being drydocked. The horses were harnessed to a cross arm which was attached to a vertical shaft or "kingpost" which was supported in a vertical position. As the horses walked in a circle around the kingpost the force that they exerted through the cross arm caused the vertical shaft to turn; this force was transferred to a horizontal shaft by means of a pair of bevel gears, one of which was fixed to the lower end of the vertical shaft and which mated with a corresponding gear which was fixed to one end of the horizontal shaft. At a point approximately midway of this shaft, a spur gear was fixed which in turn engaged a larger spur gear which was fixed to a shaft along with a chain sprocket and positioned to the rear of the main shaft. It was this sprocket which gripped the railway cradle hauling chain and as the shaft turned drew the cradle, with vessel resting on its blocks, up the inclined plane of the tracks and out of the water. To the other end of the horizontal shaft was fixed a brake drum with a manually operated brake band with screw clamping arrangement. This brake was not only used to secure the cradle in its up-hauled position but also aided in controlling the travel speed of the cradle as it rolled backward pulled by gravity into the water as this railway did not have a down-haul chain. This entire mechanism was located between the tracks at the inshore end.

Note

It was discovered long after the paintings were done that Charles J. Colonna's 1st Shipyard was named "Chas. J. Colonna's Marine Railway" and not Colonna Marine Railway as shown in the painting. Therefore the correction.