



Heartland Science



Ohio's Legacy of Discovery & Innovation



Construction

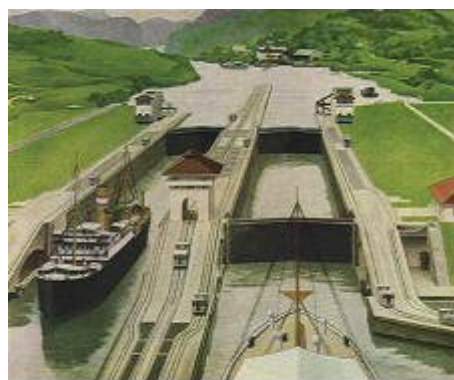
From Malls to Memorials

Moving the Earth

Edward Huber in 1884 founded a factory that developed world-renowned steam shovels and other earth-moving equipment in Marion, Ohio. The Marion Power Shovel Company's powerful machines -- steam shovels, dipper and elevator dredges, ballast unloaders, railroad ditchers, log loaders, and other machinery -- helped build the Panama Canal, Boulder dam, highways, bridges, tunnels, pipelines, and thousands of other ambitious construction projects. Marion's steam shovels also dug coal that fueled electric power plants and factories. In the 1960s, NASA called on Marion to build the world's biggest land vehicles for transporting fully assembled Saturn V rockets.



Steam shovels were invented in the 1830s and had been used in construction and mining since the 1840s. However, Marion engineer Henry M. Barnhart introduced improvements in design that made steam shovels more efficient and reliable. They are earth-moving machines with a hinged bucket on the end of a long boom. The operator digs by scooping up material into the bucket. Steam shovels got that name because the first ones were operated by steam. Today's machines have diesel engines and are sometimes called power shovels.



Marion, now owned by Bucyrus International, supplied 24 of the steam shovels used in the digging of the Panama Canal. In May of 1912, one of Marion's 3.8 cubic meter (five cubic yard) machines, set a world record by moving 4,247 cubic meters (5,554 cubic yards) of material.