After the French failed to build a Canal on the Isthmus of Panama, the United States began their construction efforts in 1904. Construction of the Canal included three distinct construction divisions: the Atlantic Division which worked from Limón Bay to Gatún; the Central Division which ran from Gatún to Pedro Miguel; and the Pacific Division which worked from Pedro Miguel to the Panama Bay. The varying differences in topography and terrain required specialized equipment and engineering ingenuity to complete the task.

Excavating the Panama Canal involved the removal of over 300 million yards of rock and dirt. For this, the Americans purchased 102 new, railroad-mounted steam shovels. In 1907, the construction fleet also included 560 drills, more than 50 cranes, 20 dredges, giant hydraulic rock crushers, cement mixers, and pneumatic power drills; nearly all of which were manufactured to include the latest technology developed in the United States.

Keystone View Company

*Old Dredge Abandoned by the French on Chagres River, Bohio, Panama Canal Zone*

1907
Stereograph
2013.2.92
Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries
Gift of Bill Angrick
http://ufdc.ufl.edu/AA00015213/00001

The obsolete French paddle wheel dredges were no match for the enormous digging capacity of the American steam shovels which replaced them. The paddlers faced an unpleasant ending as they lay rusting away, submerged in murky water.

W.A. Fishbaugh

*I.C.C. 1201 Bucyrus Steam Shovel with Workers*

Gelatin silver print
2004.027.803
Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries
Gift of Pat Bjorneby
http://ufdc.ufl.edu/PCMI010035/00001
The large gantry cranes were utilized to lift and move heavy loads over a wide expanse. This type of crane was normally mounted on rail trucks and was capable of being moved or repositioned as needed.

**Ernest Hallen (American, 1875-1947)**


1915

Gelatin silver print

2003.064.005.001

Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries

Gift of J.E. Dorn Thomas

http://ufdc.ufl.edu/PCMI008651/00001

Berm cranes in operation removing spoil and shaping the west bank.

**Vibert and Dixon**

*View of west wall showing concrete spans 80 ft. Long, Pedro Miguel Locks*

From *Pictorial Panama Canal*

2004.027.784

Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries

Gift of Pat Bjorneby

http://ufdc.ufl.edu/AA00019304/00001/7x

A Bucyrus steam shovel is on standby, below the lock’s west wall, awaiting the return of the spoil train. Construction debris is then loaded onto flat cars and hauled to a disposal site.
Ernest Hallen (American, 1875-1947)

517 1/2 - K. Upper Locks, Gatun, Showing 208 1/2 ft. of East Side Wall Completed. April 1, 1910

Gelatin silver print
2013.8.100
Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries
Gift of Dusty Graham and Ann Lafferty
http://ufdc.ufl.edu/AA00017879/00001

Bucyrus International and TWH Collectibles

Bucyrus Steam Shovel Model
1:48 scale replica
2007
Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries
Gift of the Panama Canal Museum

At the time of its debut, the Bucyrus 95-ton steam shovel was marketed as the most powerful ever built. Being able to mass-produce such a capable machine afforded Bucyrus the rights to 77 of the 102 steam shovels used in the construction of the Panama Canal.

Michael Howell

Digging the Canal
1/87 scale modeling
July 2014

The construction of a canal with locks required the excavation of more than 170,000,000 cubic yards of material over the 30,000,000 cubic yards excavated by the French. The large steam shovels proved to be the most essential piece of equipment in canal construction.

Michael Howell

Dam and Floodgate Construction: Miraflores Locks
1/87 scale modeling
July 2014

The Miraflores Locks consist of two flights that can raise or lower a ship 54 feet.

Isthmian Canal Commission

Plate 111 [reproduction]
From Annual report of the Isthmian Canal Commission and the Panama Canal for the fiscal year ended 1914
1914
Panama Canal Museum Collection, Special & Area Studies Collections, George A. Smathers Libraries
Gift of the Panama Canal Museum
http://ufdc.ufl.edu/UF00097363/00005/43x