

Army Ships -- The Ghost Fleet

Revision 7 April 2008

Coast Artillery Corps
Army Mine Planter Service



The great old Coast Artillery Batteries one occasionally sees along the coast today were part of a defensive system that included minefields. These were not the "horned monsters" usually seen in movies, but bottom laid mines controlled from shore through control panels linked to the mines by cables. Enemies attempting to enter strategic coastal areas would face the guns and also a minefield that was exploded by intelligence, not sensors. The distinct advantage was that controllers could watch sweeping efforts and ignore this activity, then detonate the mine when a major target was in the kill zone. These mines could choose targets with much more accuracy than self detonating types.

From the Civil War until much later these mines were called "torpedoes" as in Farragut's "Damn the torpedoes" and even the coast defenses were termed the "torpedo service." Chester Arthur's second State of the Union presented in writing 4 December 1882 contained this interesting comment "appropriations be made for high-power *rifled cannon* for the torpedo service and for other harbor defenses" indicating the artillery was perhaps considered secondary to the mines.

The mines were an integral part of the defenses along with the big guns and submarine detection gear. They were controlled from panels within the batteries and could be fired selectively as a target under observation entered a mine's kill zone. One of the concerns in the recapture of Corregidor was its mine control panel that had been captured by the Japanese who had probably maintained the defensive field. Its control center's recapture was a fairly high priority for the Airborne troops in the recapture of the fortress island. We had laid an extensive mine field supporting the Manila Bay defenses and had to be certain it would not be used against our forces.

The mines were planted and maintained by the Army Mine Planter Service and its vessels operating under the Coast Artillery Corps. In January 1920 the War Department authorized addition of a mine casing below the Coast Artillery Corps crossed guns as a special insignia for the service. The actual vessels planting and maintaining these fields were the Army *mine planters* which also had the ability to lay the control cables and junction boxes. Another type vessel was responsible for maintaining the junction boxes and other underwater electronics. Mine planters had to raise and maintain or occasionally relocate the mines.



This explains why a number of small cable layers of the post war years have their origins as mine planters. Two, *Trapper* and *Niles*, are covered elsewhere on these pages.

The *Lt. Col. Ellery W. Niles* was unique. She was built as an individual ship, apparently not a part of a production, and described as the most beautiful ship the Army ever built. The photo at left of the *Niles* launch was a gift of Joseph Neely. It is captioned by hand "June 22, 1937, Launching Mine Layer, Pusey & Jones Co., Wilmington, Del." Signed "Ros Ammon" apparently at the time of the event. The tiny bow sheaves seen here are apparently typical of the Army mine planters.

I knew this ship thirty one years later as the R/V *F. V. Hunt*, then a vessel owned by Marine Acoustical Services of Miami, Florida, operating under contract to the Navy. She now rests off the Florida Keys and is a well known dive site.

Another photo of the *Lt. Col. Ellery W. Niles* and good general discussion of the mine fields in coast defense may be seen on Submarine Mine Defense of San Francisco Bay, a page of the California Military Museum. I found the same Army Signal Corps photo of *Niles* among the records of the Transportation Corps at the National Archives. I was struck at that time how little changed the ship was when I knew her in the late sixties. The ship pictured in that old photo was immediately recognizable. Take away the big masts and add Radar and LORAN -- that is about all.

The *Maj. Gen. Arthur Murray*, later to become *Trapper*, was part of a production of a small fleet these vessels after war broke out in Europe to replace First World War vintage vessels. Even their origin might seem strange. They were built at Point Pleasant, West Virginia -- the Mountain State. For the rather weird and interesting story of how the *Maj. Gen. Arthur Murray* became first a Navy and then a Coast Guard cable layer with some background on this entire group look at "*Trapper*." Half of the West Virginia constructed group went with *Murray* to become Navy ACMs.

The vessels were manned by Warrant Officers of the Army Mine Planter Service who wore a distinctive uniform. The Master and Mates wore a fowl anchor insignia on a circle above sleeve rings, all in dark brown. The Chief Engineer and engineering officers wore a three bladed propeller insignia above the same rings. For diagrams and a bit more history of the service see PERSCOM's Warrant Officer Insignia of Rank page. In fact, the Army Warrant Officer and the Corp's official brown color is traced back to the Mine Planter Service. The official history of the Warrant Officer Corps states:

The rank and grade of warrant officer was introduced in the Act of July 1918, which established the Army Mine Planter Service in the Coastal Artillery Corps and directed that warrant officers serve as masters, mates, chief engineers, and assistant engineers of each vessel. Three varying levels of pay were authorized.

An indication of how these vessels were manned is given in the "Green Book," the *United States Army in World War II, The War in the Pacific, The Fall of the Philippines* [Louis Morton]. In Table 2--Strength and Composition of U.S. Army Troops in Philippine Islands, 31 July 1941 the strength of the USAMP *Harrison* is given as forty enlisted and seven officers.

The ships were not the only ones having connections with ocean research or cable laying beyond their time as mine planters. Their personnel also continued in such roles. One, Ernest W. Eickelberg, "served as executive officer of the Survey ships *Pathfinder*, *Lydonia*, and *Surveyor*, and commanding officer of the *Explorer* and *Guide* in Alaska" as a member of the Coast and Geodetic Survey. During the First World War he had served aboard the mine planter *Graham*. As with BG Albert J. Myer, his interest and capabilities appear to have spanned a wide range.

I know of only one minefield that faced an actual invader. The defensive fields in the Philippines are probably the only Coast Artillery Corps mines that were within range of an enemy ship in combat conditions. The 91st Coast Artillery - A Short History by George Munson is on line and has brief sections dealing with the mine responsibilities. "Battery A had three primary duties: maintain the mine equipment and cables, lay and operate mine fields, and man Battery Martin (two 155mm 6PF guns)" though there is no mention of a ship. He notes the new commander, an expert in the mines "quickly discovered that the two controlled mine fields were defective" due to marine borers shorting the control cables.

The mine planter *Col. George F. E. Harrison* was stationed in the Philippines and there is a mention of a contract vessel, the *Neptune*. There would have been the usual fleet of Junction Box Boats and other small craft. Selma Harrison Calmes, the daughter of a Commanding Officer of the *Col. George F. E. Harrison*, mentions the vessel in her article titled Lost Corregidor - The Home Front Life Before WW2. She gives some detail of the mine planter and life of people in the mine service. Her father, First Lieutenant Harry John Harrison, is noted as meeting his wife in 1937 as they sailed to the Philippines aboard USAT *Republic*. It appears he commanded the ship 1937-1940 and left the Philippines in 1940. She comments:

"Someone within the War Department must have had a wry sense of humour as his next assignment on Corregidor was as commander of the US Army Mineplanter (USAMP) *Harrison*, within the 59th CA. This was commissioned in 1919 and was named for General George Harrison, the first American governor of the Philippines. The mineplanter maintained the minefield in the North Channel of Manila Bay (the Navy maintained the South Channel minefields, from their base in Cavite), adding to the defenses of the much better-known "big guns" of Corregidor. (More on the mineplanter and the minefields will come later.) It docked at the North Dock, where the water taxis dock today."

Other mentions note the *Harrison* and her commander of the same name were often in Manila as Dr. Calmes' father was able to continue seeing his future wife while she was in college there and is noted as being there when their daughter was born on Corregidor. The Corregidor Historic Society's page contains many other descriptions of life on the island for those interested in the subject.

The end of the Army Mine Planter Service came with the 1954 Warrant Officer Personnel Act. The need for coastal defenses and their mines had been overcome by events and technology. At least some of the little ships went on to other work. The origin of the existing Warrant Officer Corps in the Service probably accounts for the Mine Planter Service's better representation on the web than the other ship operating organizations seem to have.

The table and information in notes immediately following are based almost entirely on Grover's list and mentions of these ships in *U.S. Army Ships and Watercraft of World War II*, "Minecraft" with some additional references found. Despite a great deal of research Grover notes the record is not entirely clear on the earlier ships. My relatively brief independent survey bears this out. One, *Cyrus W. Field*, is clearly listed as a mine planter in National Archives and Records Administration, 391.2.6 "Records of U.S. Army mine planters" yet appears nowhere else. There are references to that ship being a Signal Corps cable ship associated to some extent with the mine service. I've also found conflict in records that as yet I cannot conclusively resolve. One confusion source seems to be the manner in which small Army vessels moved in and out of primary roles and even government service.

As an example a ship noted as *Col. Card* that was roughly the size of the mine planters was built for the Quartermaster Corps by Fabricated Shipbuilding apparently along with the 1919 layers. This ship apparently was a small transport on the East Coast, despite being built as a Junior Mine Planter, until bought by Michigan in 1923 as a ferry. The ship was rebuilt to make it a larger car ferry over the years and so used until sold back to the Army in 1940. In 1942 the Army had the ship back on the East Coast as the *Brig. General William E. Horton*. By 1947 the ship was perhaps under Michigan ownership again as it apparently had a local name. A number of the mine layers have similar in-out-in service histories with multiple name changes.

(2/11/04) Les Bagley, ferry historian, is doing research on these ships and writes:

You have it listed as originally the "*Col Bard*." The proper name of the vessel was the "*Colonel Card*" (with a "C"). She, along with the *Col. Pond*, were built by Fabricated Ship in Milwaukee in 1919, and in 1923 were sold to the State of Michigan, and modified (several times) to become the Michigan State Ferries *Mackinaw City* (US223692) and *Saint Ignace* (US223693). They were sold as surplus following WWI to become ferries, and later reclaimed by the government in 1940 in the buildup for WWII. That's when they became the *Brig. Gen. William E. Horton* and the *Brig. Gen. Arthur W. Yates*. Later, in 1947, after the war ended, they reverted to their "civilian" names again, though they never returned to the Great Lakes. They were apparently both scrapped in 1954.

Both *Col. Bard* and *Col. Pond* appear to have been built to serve as Junior Mine Planter (JMP). As with a number of these Army vessels they apparently were multiple use or diverted for other primary use. Along with the in-out-in service histories and multiple name changes I have found a number of cases where these vessels were tasked for other uses or served as general purpose vessels when mine work was slow.

A web page titled Fort Tilden's Mine Casemate has details on one of the installations with photos and copies of an article and an Army manual. The page is high density graphic that may load slowly. It is well worth a close look for how one of these installations appeared. One of the publications is illustrated with a photo of the *Col. Alfred A. Maybach*, a distribution box boat and a mine yawl.

Records are scarce and incomplete. Any information filling out or correcting the list is welcome.

Ship	Built
<i>Col. George Armistead</i>	1904
<i>Cyrus W. Field</i>	1904?
<i>Col. Henry J. Hunt</i>	1904
<i>Gen. Henry Knox</i>	1904
<i>Maj. Samuel Ringgold</i>	1904
<i>Gen. Royal T. Frank *</i>	1909
<i>Joseph Henry *</i> (See comment about role below at <i>Random Recollections</i>)	1909
<i>Gen. Samuel M. Mills</i> ²	1909
<i>Gen. E. O. C. Ord *</i>	1909
<i>Gen. John M. Schofield *</i>	1909

According to Fulton Quintus Cincinnatus Gardner's *Random Recollections* (see below) the *Gen. William M. Graham* was the first "combined mine planter and cable ship" -- the model for later mine planters. I believe this helps explain the 1917 - 1919 break as the *Graham* being the prototype for the 1919 production.

<i>Gen. William M. Graham *</i>	1917
<i>Col. George F. E. Harrison *</i>	1919
<i>Gen. Absalom Baird *</i>	



Gen. Absalom Baird - photo provided by Nick Tiberio with the following:

My father, First Sergeant Nicholas Tiberio, Sr., was with the 242d Coast Artillery. This unit protected the eastern end of Long Island Sound. Ft. H.G. Wright, Ft. Terry, & Ft. Michael, being located on Fisher's Island, Gull Island, and Plum Island.

<i>Gen. J. Franklin Bell / Brig. Gen. John J. Hayden *</i>	1919
<i>Brig. Gen. Edmund Kirby</i> ¹	1919
<i>Gen. Wallace F. Randolph</i> ¹	1919

<i>Gen. John P. Story</i> ¹	1919
<i>Col. Albert Todd</i> ¹	1919
<i>Col. Garland N. Whistler</i> ¹	1919
<i>Col. John V. White</i> ¹	1919
<i>Lt. Col. Ellery W. Niles</i> *	1937



Unidentified Army Mine Planter of 1942-1943 series (U. S. Army Signal Corps photo)

<i>Brig. Gen. Henry L. Abbott</i> *	1942
<i>Col. George Armistead</i> *	1942
<i>Col. Henry J. Hunt</i> *	1942
<i>Gen. Henry Knox</i> *	1942
<i>Gen. Samuel M. Mills</i> *	1942
<i>Maj. Gen. Arthur Murray</i> * ²	1942
<i>Maj. Gen. Wallace F. Randolph</i> *	1942
<i>Maj. Samuel Ringgold</i> *	1942
<i>Col. John Story</i> *	1942
<i>1st Lt. William G. Sylvester</i> *	1942
<i>Maj. Gen. Erasmus Weaver</i> *	1942
<i>Col. Charles W. Bundy</i> *	1943
<i>Brig. Gen. Royal T. Frank</i> *	1943
<i>Col. Alfred A. Maybach</i> *	1943
<i>Col. George Ricker</i> *	1943
<i>Col. Horace F. Spurgin</i> *	1943

* In Army service at outbreak of war.

¹ Six of the 1919 mine layers became Coast Guard buoy tenders between 1923-1927. They are listed at HyperWar as the *Lupine* class. USCG site has them as *Speedwell* class and also as mine sweepers - a probable error. The six: *Todd* = *Lotus* WAGL-229; *Whistler* = *Spruce* WAGL-246; *Kirby* = *Ilex* WAGL-222; *Story* = *Acacia* WAGL-200 (sunk by gunfire from the German submarine U-161 south of Haiti March 15, 1942); *Randolph* = *Lupine* WAGL-230; *White* = *Speedwell* WAGL-245

² Became Coast Guard cable ships. *Mills* of 1909 became the *Pequot* (WARC-58) though there is an apparent discrepancy in *Pequot's* DANFS entry: "*Pequot*, built for the Coast Guard by American Brown Boveri Electrical Corp., Camden, N.J. in 1921, commissioned as a special craft 29 April 1922 at Camden." The "built" here probably refers to a modification from mine planter during the year before *Pequot* was placed in service for the Coast Guard. The fact an "Electrical" company did this work and those modifications might be required in going from mine control cable capability to general cable work. The *Murray* of 1942 became the Coast Guard Cable layer *Yamacraw* (WARC-333) after service with Navy as *Trapper* (ACM-9), an auxiliary mine vessel. She later returned to Navy service as *Yamacraw* (ARC-5).

The *Cyrus W. Field* is not in Grover or other sources as a mine planter, but is mentioned in NARA Records (below) from 1908-1920. Grover does mention her under Communication Ships, "The Signal Corps acquired other cable layers at an early date, the tiny *Cyrus W. Field* in 1904 for work on the East Coast," without mention of being among the 1904 planters. Her inclusion here is based on the NARA placement with Mine Planters.

The Forts

The World War II mine planters appear to have moved to some extent during the war even though some were closely associated with one fortification. The following indicates at least a period of association with a particular defense area. *Mills* and *Spurgin* were in Sausalito, California associated with San Francisco defenses at one point as seen in a photo together. *Niles* was also in the area, mentioned at Fort Scott. *Ringgold* was in the Canal Zone at least after the war. I know of no definitive list of movements or assignments covering all the ships.

Frank and *Sylvester* were associated with Fort Miles on Cape Henlopen, Delaware. See this Fort Miles page, "Principle Armament - Mine Field," for a photo of the *Frank* showing the small bow sheaves and an Army crew in uniform. The page gives an excellent of the composition of such an establishment at the end of the war--the sunset of coastal fortifications and Army marine mine fields. Fire control was plotted by tower observations. Those towers are still located along the Delaware and New Jersey coast.

One of the beaches that is an easy day trip for my grandchildren is overlooked by one of those towers. Cape Henlopen State Park is an interesting place for a visit for historical, natural and recreational activities. It is a good coastal birding site and has an environment many do not associate with our coast, pine barrens.

I will try to find some other links to forts that are now becoming attractions and that have active historical organizations.

Joseph Henry

Random Recollections by Fulton Quintus Cincinnatus Gardner contains interesting information on mines and mine planters in the chapter titled "Officer in Charge of the Torpedo Depot" -- particularly with respect to the problem with cables. I am particularly interested in his mention of the ship *Joseph Henry*, listed above as a mine planter, as being a Signal Corps Cable Ship. In this account that ship and the Western Union cable ship *Western Union* became models for the first "combined mine planter and cable ship" noted as being the *Gen. William M. Graham*. I am hoping to determine the exact status of the *Joseph Henry*, a ship with an unusual name for the mine planters in not having a rank prefix, that may have not been a planter at all or only in a secondary role. It is also entirely possible a ship designated a cable layer planted mines.

Aris Bilalis, a ship researcher in Greece, was asking if I knew dates for some of the Signal Corps cable ships. *Joseph Henry* came into the exchange. Then it clicked. *Joseph Henry* was known to have ended up in Greece as a cable ship. Aris suddenly came back with the fact that *Thales o Milisios*, the ship's new name, wasn't among those fading away at all:

When I read your mail I understood why the name "Joseph Henry" seemed familiar to me.

She became a cable ship for the Greek state-owned communications OTE under the name Thalís o Milísios (ie., Thales the Militian [from Militos]). She was active into the eighties when she was to be sold for scrap. However she was saved and is now anchored in the Maritime Museum at Falíro, Athens.



Thalís o Milísios, ex Joseph Henry photographed by Aris Bilalis, 2003

What is immediately obvious to me is that Major General Gardner's Random Recollections states that *Joseph Henry* and "the Western Union cable ship *Western Union* became models for the first 'combined mine planter and cable ship'" and that stern shows the same curves and form I knew aboard the ex *Lt. Col. Ellery W. Niles*, the R/V *F. V. Hunt*. Of course it is also seen clearly in the photograph of *Gen. Absalom Baird* as well. The family resemblance is striking. *Niles/Hunt* rests among the groupers off the Florida Keys and her ancestor, two generations back, rests in the Maritime Museum at Falíro, Athens.

Builders

The 1904 ships were built at shipyards not yet located in ready sources. Information is sought.

The 1909 ships were built by several yards:

New York Shipbuilding of Camden, New Jersey: *Mills* (contract #75), *Schofield* (#76) and *Frank* (#77). Thanks to Patricia Mikkelsen, whose grandfather served on a mine planter in 1910, I have the builder of *Mills* and a web reference with details for the three: New York Shipbuilding Company Historical Site - Contracts 1-110.
Pusey and Jones of Wilmington, Delaware (*Ord*)
Newport News Shipbuilding of Newport News, Virginia (*Henry*).

Gen. William M. Graham of 1917 was built by New York Shipbuilding of Camden, New Jersey

The 1919 ships appear to have all been built at Fabricated Shipbuilding of Milwaukee, Wisconsin.

The *Lt. Col. Ellery W. Niles* of 1937 was built by Pusey and Jones of Wilmington, Delaware.

All the 1942/43 ships were built by Marietta Manufacturing of Point Pleasant, West Virginia.

WW II Era Vessels - Disposition & Miscellaneous Information

The following U. S. Army Mine Planters (USAMP) became Navy Auxilliary Minelayers (ACM). Where known I've added the mine planter's number as in USAMP-11. The links are to the NavSource page for ship with the DANFS history linked from that page.

USAMP Col. *Charles W. Bundy* became *Chimo* ACM-1
USAMP Col. *George Ricker* became *Planter* ACM-2
USAMP Col. *John Storey* became *Barricade* ACM-3
USAMP Col. *George Armistead* became *Barbican* ACM-5
USAMP Col. *Henry J. Hunt* became *Bastion* ACM-6
USAMP 1st Lt. *William G. Sylvester* became *Obstructor* ACM-7
USAMP Gen. *Henry Knox* became *Picket* ACM-8
USAMP Maj. Gen. *Arthur Murray* became *Trapper* ACM-9 and later the *Yarmacraw* (ARC-5)
USAMP-12 Maj Brig. Gen. *Royal T. Frank* became ACM-11
USAMP Maj. Gen. *Erasmus Weaver* became *Canonicus* ACM-12
USAMP-14 Col. *Horace F. Spurgin* became *Miantonomah* ACM-13
USAMP-11 Maj. *Samuel Ringgold* became *Monadnock* ACM-14 (See photo for Army's name format.)
USAMP Major General *Wallace F. Randolph* became ACM-15
USAMP Colonel *Alfred A. Maybach* became *Puritan* ACM-16

Some of these ships had no real service as naval vessels as they went almost immediately into inactive status. ACM-4 and ACM-10 were never Army mine vessels.

Reuse of names used by more active ships for these ships that probably never had a real Navy crew or operational record creates considerable confusion:

ACM-13, *Miantonomah*, is a different vessel than CM-10 *Miantonomah*. CM-10 was lost to a mine off France in 1944. ACM-13 was commissioned 25 January 1950.

ACM-14, *Monadnock*, is not the vessel *Monadnock* designated ACM-10. The ACM-10 was a commercial vessel, the SS *Cavalier*, that was sold in 1949 to become *Karukara* and then *Monte de la Esperanza*.

Of those that did not transfer to Navy:

USAMP Gen. *Samuel M. Mills* remained in Army service into the fifties and became the Liberian *Gran Canaria* until scrapped in 1975 (Grover).

Additional References

National Archives and Records Administration

391.2.6 Records of U.S. Army mine planters:

History: Army Mine Planter Service established in Coast Artillery Corps by War Department Bulletin 43, July 22, 1918, from mine companies and mine planters, which had been part of the Coast Artillery Corps since 1908.

Textual Records: General correspondence and logbooks of U.S. Army Mine Planters *Colonel Albert Todd*, 1920-21; *Cyrus W. Field*, 1908- 20; *Brig. Gen. Edmund Kirby*, 1920-21; *Colonel Garland N. Whistler*, 1920-21; *General Samuel M. Mills*, 1914-22; *Major Samuel Ringgold*, 1919-22; *John P. Story*, 1920-21; and *General Wallace F. Randolph*, 1920-21.

[Microfilm](#) rolls at NARA: "Returns From Regular Army Cavalry Regiments, 1833-1916. M691*. 117 rolls. This microfilm publication reproduces the monthly returns received by the AGO from the Regular Army cavalry regiments, and the predecessor dragoon and rifle regiments, from August 1833 to December 1916" has a section "U.S. Army Mine Planter" [rolls 80/81] with inclusive dates December 1907 - January 1917:

Roll 80:

Col. George Armistead

Gen. Royal T. Frank

Gen. Henry J. Hunt

Gen. Henry Knox

Roll 81

Gen. S. M. Mills

Gen. E. O. C. Ord

Maj. Samuel Ringgold

Gen. John M. Schofield

* Patricia Mikkelsen visited Archives about April 2002 and reports the correct number is M691. She also determined the locations of some of the mine planters for Jan-Mar 1910:

Col. George Armistead was in San Francisco (Feb. 1910).

Gen. Royal T. Frank was in Pensacola (Jan 1910).

Henry Hunt was in Manila (June 1910)

Henry Knox -- these records only went through 1908.

Gen. S. Mills was at Fort Monroe VA (1910).

Gen. E.O.C. Ord -- reports did not mention the ship's location, but it appeared to be in NY in 1910.

Maj. Samuel Ringgold was in Washington state (Feb 1910).

Gen. John M. Schofield was in South Carolina (Feb 1910).

[Record group 392](#), *Records of U.S. Army Coast Artillery Districts and Defenses, 1901-1942*, might also be of considerable interest. Record group 92, *Records of the Office of the Quartermaster General*, contain mention of early mine planters and also records relating to other areas covered on this page as the Quartermaster Corps was originally the large ship operator. In particular group 92.5.3 appears to be interesting.

[Harrison](#) is mentioned among units cited for defense of the Philippines March 14 to April 9, 1942: "Citation of units in the United States Forces in the Philippines--As authorized by Executive Order 9075 (sec. II, Bull. 11, W.D., 1942), a citation in the name of the President of the United States, as public evidence of deserved honor and distinction, is awarded to the following-named units" mentioning "detachments DS Army Mine Planter *Harrison* (American and Philippine Scouts)" She was captured, served in the Japanese Imperial Navy and was sunk by bombs in Yokosuka late in the war.

Also in the Philippines: "An auxiliary mine planter, the commercial vessel *Neptune* which was suitable for the purpose, was leased." [The Moore Report](#)

Gen. Absalom Baird is briefly described by Les Stevens in [Memories of defending New Hampshire's Seacoast](#). He also mentions service aboard a "Junior Mine Planter," *General Richard Arnold*. This was a 98 foot tug built in 1909 assisting mine planters and apparently designated as a JMP at the time. *Arnold* sank in January 1942. Several of the other small support type vessels are mentioned. In a [story about the Arnold](#) there are photos, one of the L-88, a classic WW II "Distribution Box Boat", heavy with ice.

[Observation Mines](#), 1914, a web version of the Royal Navy's *Torpedo Drill Book, 1914 (corrected to May 15)* instructions from 1914 will give some idea of coastal defense minefields. It mentions "junction box boat," a name and function applied to one of the U.S. vessel types in use into WW II.

A Junction Box Boat, or "L" boat is shown in a [photo](#) from Ft. Sherman, Canal Zone, found with photos dated 1917. The boat is not identified as such on the page and is apparently something of a mystery. Comparison with another photo of a Junction Box Boat confirms configuration and the "Submarine L-36" notation (certainly not of a submarine) fits the "L" series numbers of the Junction Box Boats. Some of the early boats were redesignated "J" boats, a term used as late as the 1970s for a very similar small Army craft.

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