About John Ott's Locomotive Prints:

WHAT DID THE DURNED THINGS LOOK LIKE?

This project started with trying to find answers to a very basic modeler's question: *What did these machines look like when they were new?* The hunt for information took me down a rabbit hole several years long and involved books, periodicals, unpublished texts, archived photos, old period lithographs, and lots and lots of Internet searches. These renderings are the result of that search. I tried to account for every component on the locomotives, and traced off photos, diagrams, and old lithographs wherever I could.

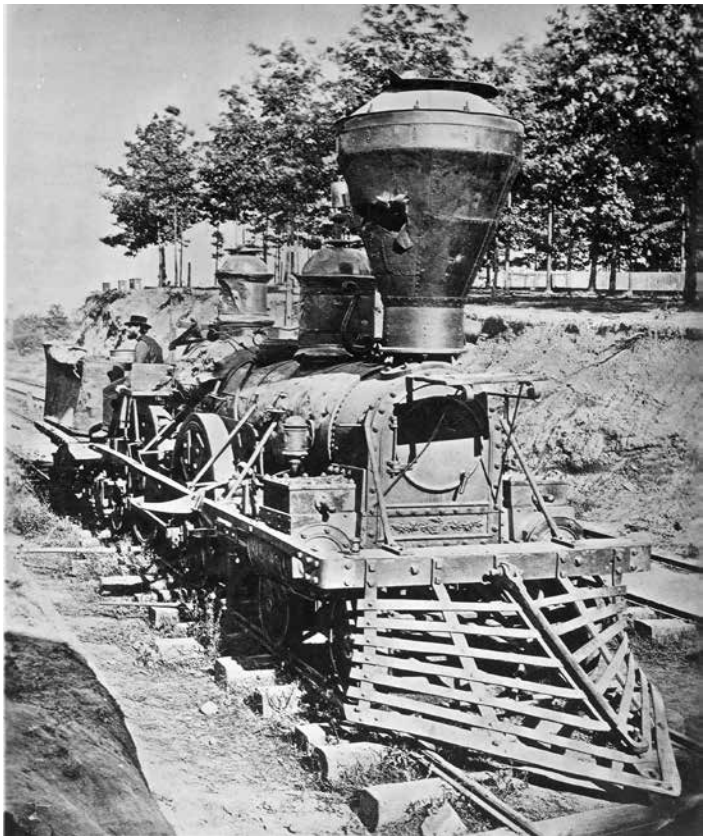
The engines of the Great Locomotive Chase are America's best-known relics of 19th-century railroading. The *General*, in Kenesaw, GA, and the *Texas*, at the Atlanta History Center, are close to being sacred icons—yet there is very little recorded about what the machines actually looked like when they made their dash across the Georgia countryside. The surviving museum pieces were rebuilt and modified so many times in their 160-year history that they are almost completely different engines— and no thorough descriptions or photographs of their original appearances have survived. The best that modern students of ferroequinology can do is make educated guesses based on similar engines from the same builder and the few scraps of description that managed to make it to the modern day.

My drawings of the Western & Atlantic engines have been heavily influenced by the notes of historian and artist Wilbur Kurtz which are now in the Atlanta History Center, copies of which I got to study in detail thanks to the help of a generous friend. In the very early 1900s, Kurtz interviewed the surviving participants of the Great Locomotive Chase and even married the daughter of one. He studied the locomotives, asked detailed questions, and got answers about the how the locomotives looked from the men who actually drove them. Kurtz advised on the original restoration of the *Texas* and on the appearance of Civil War Atlanta for the movie *Gone With The Wind.*

Wilbur Kurtz

So, without further boring exposition, here are some of the prime sources for my locomotive prints.

The rendering of the *General*, built by the Rogers Locomotive Works, is mostly based on lithographs and drawings of contemporary Rogers engines. There is only one surviving photo of the original *General*—in wrecked condition after the fall of Atlanta. A high-resolution scan of that photo was studied and details measured. It is that photo that confirms that the engine was a 25-ton three-domed engine with a belt rail, slant cylinders, horizontally-slatted pilot, simple headlight bracket, pilot trucks with inside frames, and tender trucks with outside frames. Besides his extensive notes, Wilbur Kurtz left his own impressions on the *General's* original appearance in a fine watercolor painting now at the

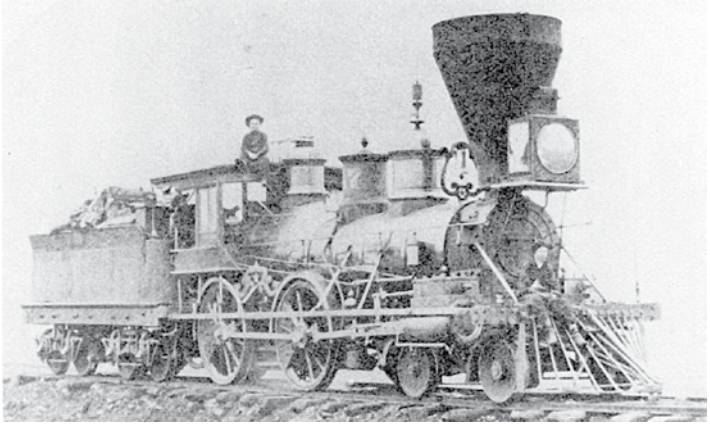


The only wartime photo of the General*—Atlanta, 1864.*

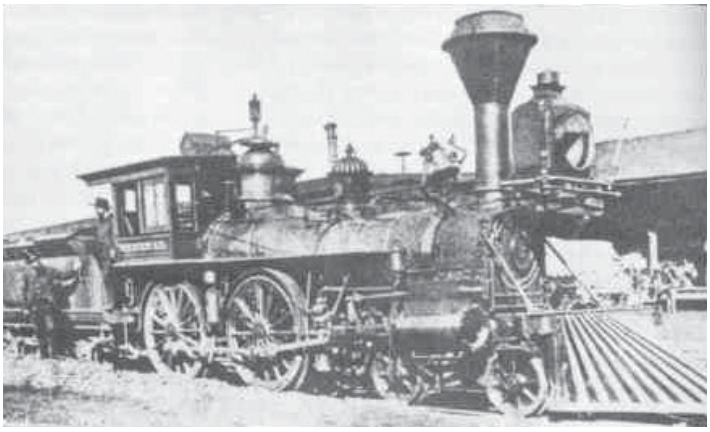
Atlanta History Center. His interviews with the men who actually drove the *General* are the sources for the engine's paint scheme and its flat-lidded sand dome. (The dome is missing in the photo of the damaged engine.) Unlike many other Rogers engines of the period— and unlike the "restored" relic engine, the *General* did not have fluted domes. In the course of my research, I found other Rogers engines with nearly identical sand domes. This odd little detail taught me to trust in Mr. Kurtz's information— and the memories of the old enginemen he questioned.

My tracing was made from a lithograph commissioned by Rogers a few years after the *General* was built: the *Thomas Rogers.* Adjustments were made to accommodate the General's smaller drivers and slant cylinders. (The tops of locomotive frames— 3 feet above the rails— never rose or fell with different sized drivers. Instead, the builders slanted the cylinders to compensate.) Since the Rogers lithograph didn't include a tender, I took clues from photos of other Rogers locos— specifically, the New York & New Haven RR's *Madison* and the Erie RR's *#105*.

Wilbur Kurtz's watercolor of the General*.*

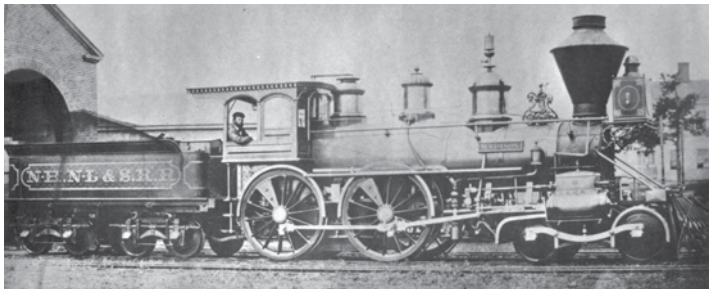


The Nashville & Chattanooga RR John T. Souter, *said by Wilbur Kurtz to be a near twin to the* General*.*

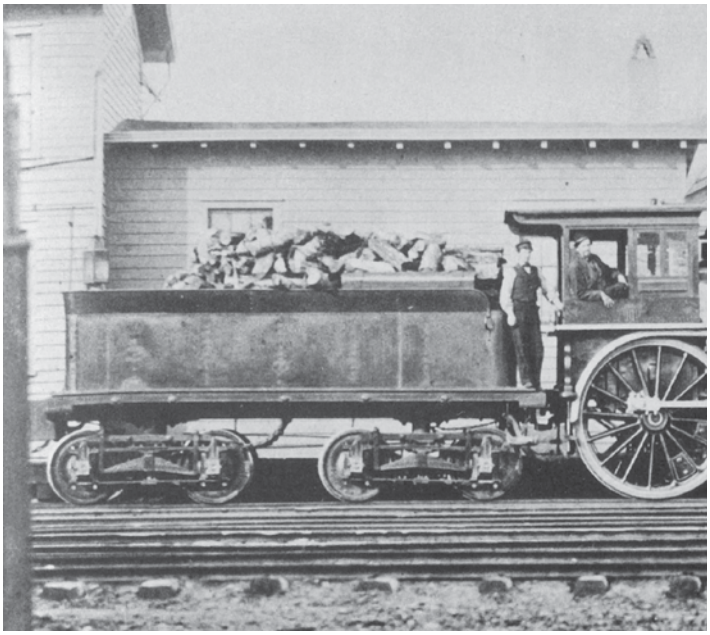


The General *at the end of its working life, 1887.*

The Thomas Rogers *lithograph.*



The New Haven, New London & Stonington RR (New York & New Haven) Madison*, built in 1860.*



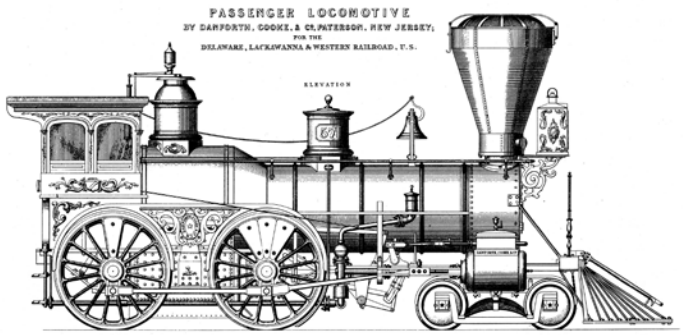
The tender of Erie #105.

The *Texas* is likewise based on drawings from Danforth & Cooke, the engine's builder. Detailed tracings of components were made from the drawings of the *Southport* in John White's book *American Locomotives—an Engineering History: 1830–1880.* These were fitted to the *Texas*' smaller frame—about the only original part of the locomotive surviving. Details like the mahogany cab were attested to in descriptions of other Danforths from the same period.

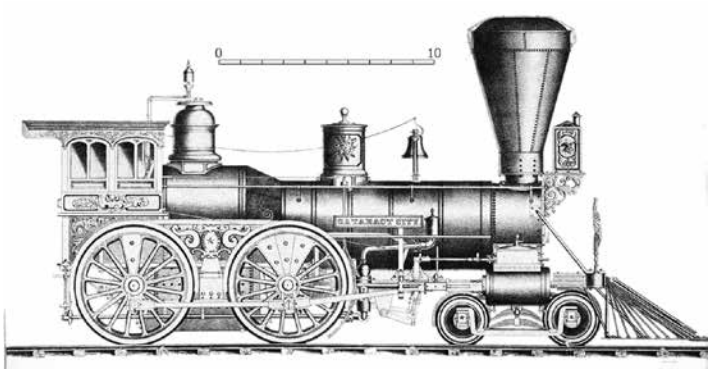
It was fortunate for me that the relic *Texas* is presently undergoing restoration and is away from its cramped former quarters in the basement of Atlanta's Cyclorama—a venue where good photography was nearly impossible. There are now good side-view shots of the stripped engine available on the Internet, and from these I confirmed the engine's wheelbase and overall dimensions. The frame and cylinders are possibly the only parts of the original engine that are intact. We know that over the course of its life, the *Texas* got a new boiler, stack, domes, cab, pilot, front truck, driving wheels, and Mason-built tender.

Besides the *Southport*, I used drawings of the Danforth *Cataract City* and again, the detailed notes of Wilbur Kurtz. Jon Davis' recent digital rendering of the *Texas* was also a big influence.


The Texas *in mid-2016, undergoing restoration.*



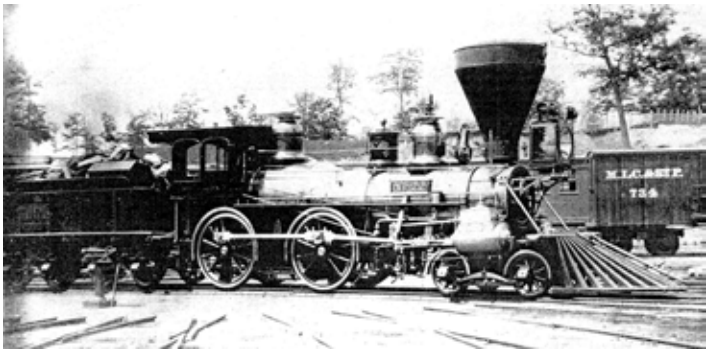
The Southport, *a 6-foot gauge engine.*

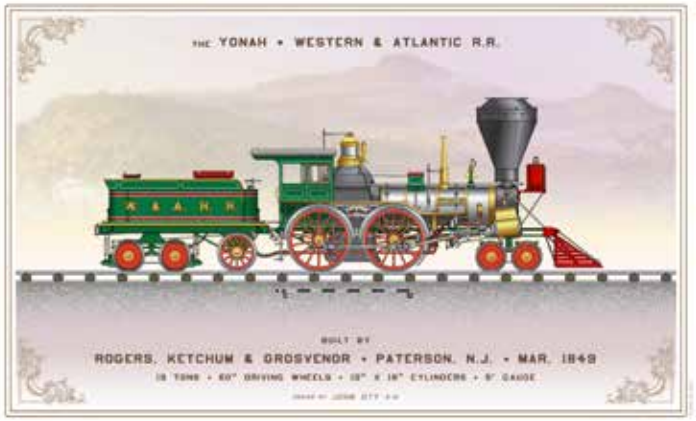


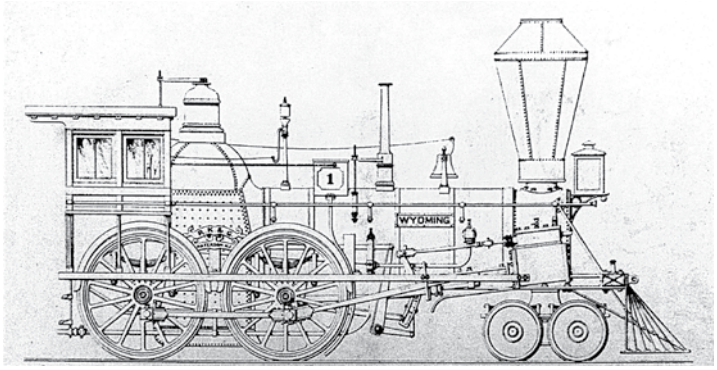
The Cataract City.


The Texas, *on display in an Atlanta park 1910–1927.*


In the basement of the Cyclorama, 1927–2016.

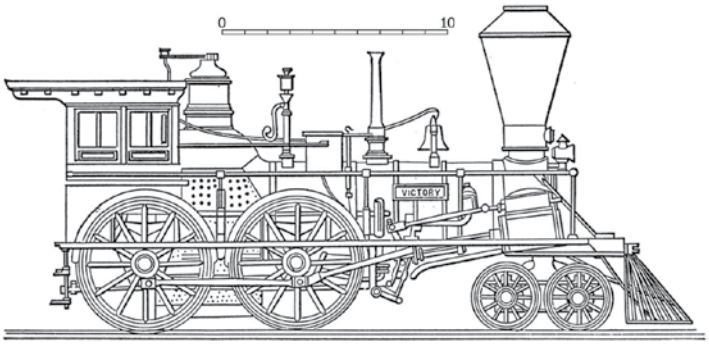

Danforth's LaCrosse & Milwaukee RR #22, built in 1857.



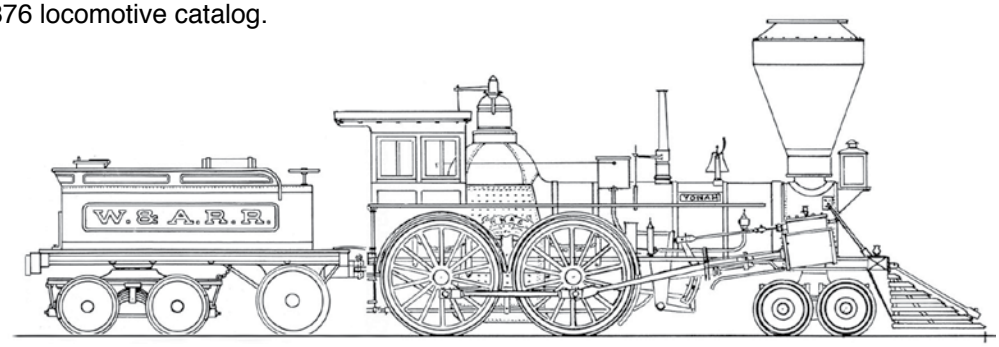


Rogers' Wyoming — *early 1850s.*

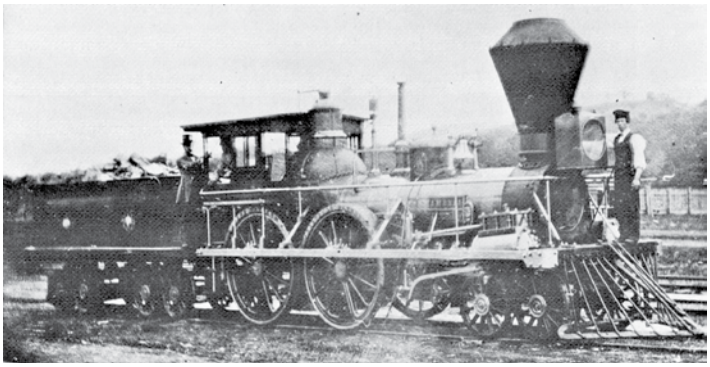
The *Yonah* was another Rogers engine that had several contemporary drawings to reference. The main ones used for tracing were Rogers' *Wyoming* and *Victory,* both printed in 19th-century books. Kurtz gathered detailed information from the old enginemen that enabled me to come up with a list of twenty features specific to the engine, including the cannon safety valve, solid pilot wheels, the hook-motion valve gear, the lack of a belt rail, and the whistle attached to the haystack dome. I traced components like the frame and suspension from Matthias Forney's treatise on the development of Rogers engines in their 1876 locomotive catalog.



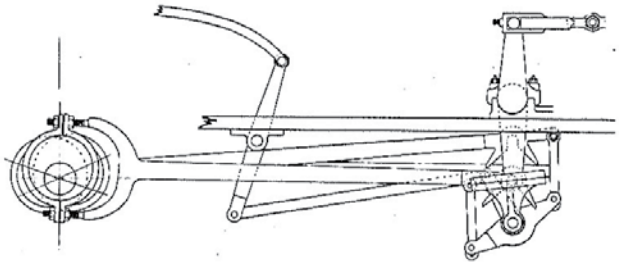
Rogers' Victory — *1850.*



Drawing of the Yonah *by E. P. Alexander for his 1971 book Civil War Railroads and Models, made after reviewing Wilbur Kurtz' notes.*



The New York & Harlem RR's Amenia — *a Rogers product of 1850, sometimes mislabeled on the web as the* Yonah.



Hook-motion valve gear, common when the Yonah *was built (1849). Most sources, including Mattias Forney, say that link-motion valve gear wasn't introduced until the next year.*

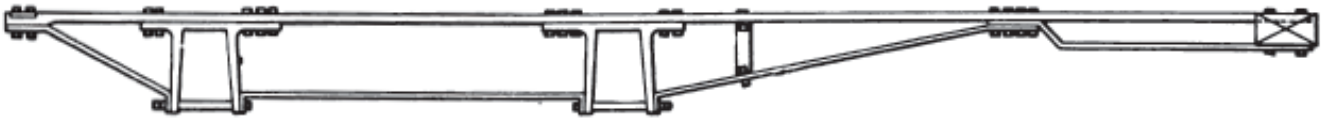


Fig. 176.

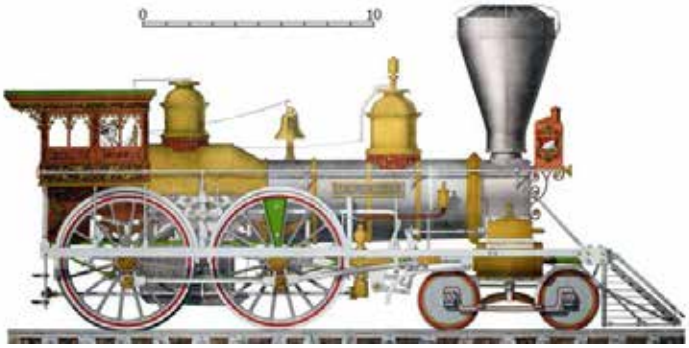
Late 1840s engine frame used by Rogers, from Matthias Fortney.

The Central Pacific's *Jupiter* and the Union Pacific's *119* were the two locomotives in Andrew J. Russell's famous photograph of the 1869 ceremony at Promontory Summit, Utah— the driving of the famed Golden Spike to celebrate the completion of America's first transcontinental railway.

The locomotives themselves were scrapped long ago and their original engineering drawings were lost— the *Jupiter* being a product of New York's Schenectady Locomotive Works and the *119* coming from the Rogers works in Paterson, NJ. Famed draftsman William Plunkett made measurements from surviving period photos and re-created the drawings for the Golden Spike centennial in 1969, sponsored by the NMRA. Copies of the detailed drawings were printed in the book *Iron Horses to Promontory* by Gerald M. Best. These, plus examination of the original photographs, were used to make these prints.

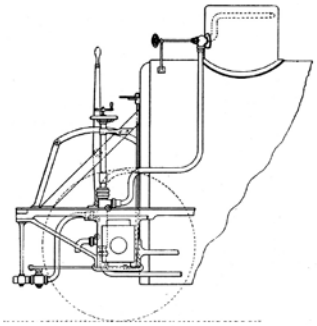
Information in the form of an 1869 Sacramento newspaper clipping described the then-new *Jupiter* as painted in blue and crimson. Rogers engines like the *119* use a limited number of color choices— among them, wine red with gold striping for the base color plus additional red and green highlights and vermillion wheels. Cabs were often left in their natural wood. Building on that research, historian Jim Wilke and artist Jon Davis have reconstructed likely and attractive paint schemes for both locomotives.

Above: the famed "Meeting of East and West"— the photo of the Golden Spike ceremony by Andrew J. Russell. Right: the replica engines at the Promontory National Historic Site have slightly different paint schemes from the ones determined by Jim Wilke and Jon Davis. Notably, the Jupiter *has brighter colors than the dark blue and crimson that the Scottish managers of the Schenectady Locomotive Works copied from the livery of Scotland's Caledonian Railway.*



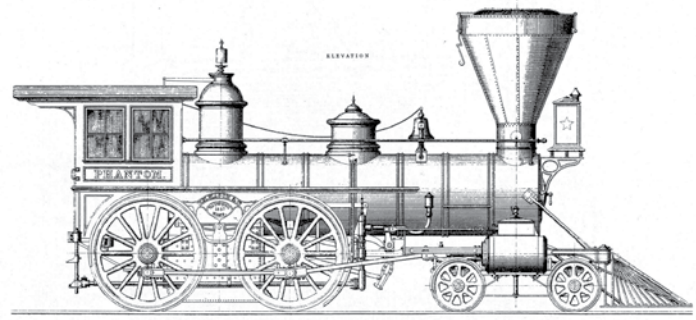
The Grant *started life as the CRRNJ* Delaware *(#8) in 1852. The* New Jersey *(#7), shown here, was its sister engine, delivered from Rogers at the same time.*

The drawing of the USMRR *Lt. Gen'l Grant* is based on my own discovery that the engine—originally built by Rogers for the Central RR of New Jersey—had a sister engine on the roster from the same builder at the same time. I traced the surviving lithograph of the sister engine to build the basic frame and components, adding the details that show up in the wonderful photographic portrait of the *Grant* at City Point, VA, taken by famed Civil War photographer Andrew J. Russell and printed in an album now in the possession of the Virginia Historical Society. The society provided a high-resolution scan of the photoprint, which is seen below.



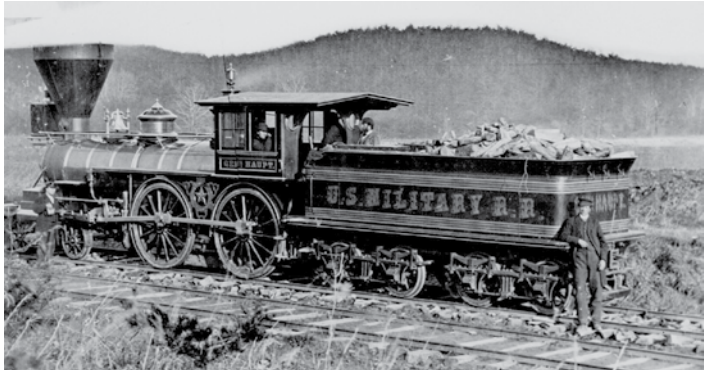
The photos of the Grant *show no sign of crosshead pumps. Likely the rebuilt engine was equipped with one of the latest inventions— Giffard's feedwater injectors. Here is the diagram of an 1860s backhead installation copied for the rendering.*

No. 138.—ENGINE HOUSE AT CITY POINT,
September 1, 1864.



William Mason's Phantom, *1857*

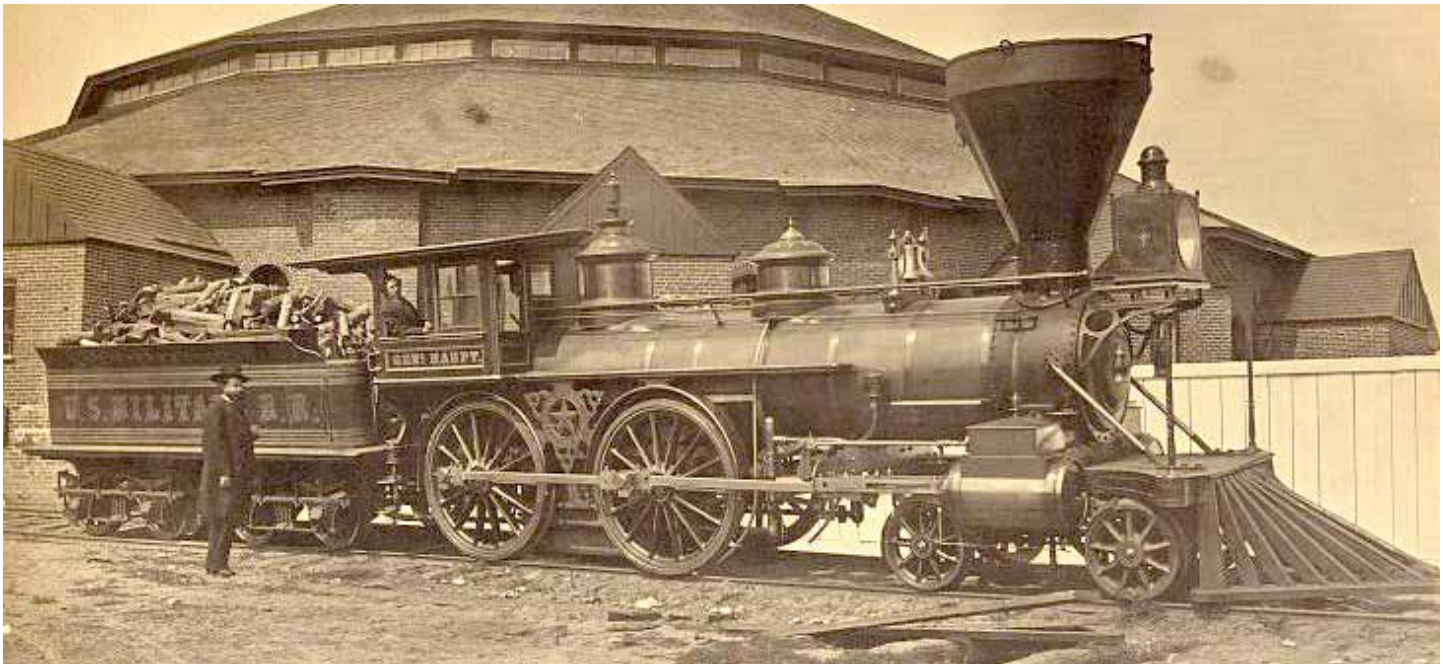
The William Mason-built *Gen'l Haupt* was also the subject of a superb Andrew J. Russell photo downloadable from the Library of Congress website. The rendering is traced from detailed drawings of a similar Mason engine, the *Phantom*, in John White's book mentioned before. The tender was scaled from a side view photo of the tender of the Haupt's sister engine, the *General McCallum.* The blue color scheme is also based on the *Phantom,* with stylistic details taken from a Mason lithograph of the engine *Highland Light.*



The Haupt *was the subject of several wartime photos.*

The Haupt *was renamed the* Gen'l J.C. Robinson *after the original General Herman Haupt was no longer in command. This photo provided good measurements for the tender.*

William Mason's Highland Light, *1867.*



Well-detailed A.J. Russell photo of the Gen'l Haupt, *available for download from the Library of Congress.*