



THE YELLA BOARD

Volume 42 Number 1

MONTICELLO RAILWAY MUSEUM
Where "I've Been Working On the
Railroad" Becomes a Reality

May-June 2009



Arriving Monticello aboard an Illinois Central passenger car harkens back into time when this would have been a common scene across the heartland of Central Illinois.

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Safety for you is safety for me!!	
Have you been to the mu- seum lately to see what changes have been made the past year or what new equipment has been ac- quired or restored? Now is the time to come on out and see <i>YOUR</i> museum!!!	

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THE
OBSERVATION
PLATFORM



Updates for 2009

John Scuitto, President

LOOKING FOR MR. LINCOLN IN MONTICELLO

Monticello Railway Museum has been designated as a "Looking for Lincoln" site and will feature an authentic story about how Abraham Lincoln helped influence development of railroading in Piatt County. In particular, how the original route of the Northern Cross Railroad was originally planned to go through the settlement of Centerville, which is located north of present day White Heath. In the 1850's, Centerville was one of the towns that were lobbying to be the new State Capital. Following Lincoln's death, the railroads eventually plotted the route south of Centerville in White Heath. The Lincoln storyboard signs should be received from the State of Illinois sometime in May or June. One sign will be installed adjacent to the Wabash depot downtown and the other sign will be installed at the museum site. These signs and their locations at the museum will be listed and publicized and will draw yet more visitors to the museum in the future.

The Railway Museum is also featured in the new film being shown at the Lincoln Home National Historic Site in Springfield, Illinois. The movie "Abraham Lincoln: Journey to Greatness" was partially filmed at the museum in 2007. This movie highlights Lincoln's life while in New Salem and Springfield, Illinois. The final scenes where Lincoln left Springfield for Washington DC were filmed at the museum. Through the magic of film, the hot August day was transformed into early February and the trees and background were "green screened" and the train is actually shown leaving the Great Western Depot in Springfield!

WELCOME ABOARD JOHN BRATCHER

Hats off and a big "thank you" to everyone that helped during this years *Spring Fling* activities. As always, much work was accomplished but the list of work remaining is long. Once again, numerous members assisted with this years projects, but I want to highlight one individual in particular, that not only made a difference, but spent his inaugural week as a member volunteering at the museum. Mr. John Bratcher of Murfreesboro, Tennessee, took a weeks vacation to work at the museum's Spring Fling. Researching the Illinois Central Railroad, he learned that the museum had several examples of Illinois Central equipment and stopped by to visit in 2008. Upon learning that the museum and equipment is staffed and maintained by volunteers, John vowed to return and help in 2009. John pitched in and helped where he could and had fun in the process, being recruited to the museum by our website! Every time I saw John during that week, he had a big smile on his face and seemed as happy as a big kid living out his life long dream of actually working on a railroad. Although he had spent the week working long hours, he was full of enthusiasm and expressed his appreciation for the opportunity to not only spend time at the museum but the opportunity to pitch in and help make a difference. Over dinner, John told stories of his encounters with and visits to other numerous museums but liked what he saw at Monticello and chose to come to Illinois and help us out. John's eagerness to help and learn from his experience was contagious and rewarding . Quite often, we get wrapped up in the day-to-day activities at the museum, and it is sometimes easy to lose perspective. However, John's visit reinforced that our museum is appreciated by members near and far away and that we *are* headed in the right direction. Come join us to see for yourself!



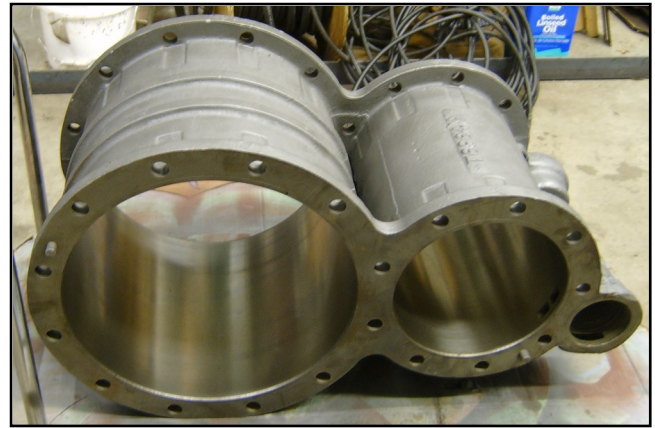
**THE
RIP
TRACK**
By Russ Fischer

Locomotive 401 Air Compressor

Over the past several years we have seen a lot of progress on 401, much of it obvious, such as installation of the new boiler, rebuilding of the cab, and construction of a new tender tank. However, many hours of not so obvious work have also gone into the appliances over in the machine shop. Some of these parts will not make an appearance on the locomotive until the final assembly stage of the rebuild.

One of the major appliances needing attention was the air compressor, also referred to as an air pump. It lives on the left side of the boiler just ahead of the cab and supplies compressed air to the main reservoirs. A governor controls the steam supply to the compressor, automatically cycling it on and off to maintain the main reservoir pressure at 130 psi. Air from the main reservoirs is used to power the

Compressor before disassembly



Air cylinders after boring and honing

brakes on the train and locomotive and to operate the sanders and bell ringer.

The Westinghouse 8½" cross compound compressor is the industry standard used on most medium and large steam locomotives. It is available in two sizes depending on the operating steam supply pressure; 8½ -120, designed to operate on 160 psi steam and 8½ -150, designed to operate on 200 psi steam. 8½ is the bore diameter in inches of the high pressure steam cylinder and 120/150 indicates the volume of compressed air in cubic feet per minute (CFM) that the compressor will deliver to the main reservoir at 140 psi at the specified steam supply pressure.

The steam portion of the compressor is compound, meaning it uses the steam more than once; first, in a high pressure cylinder and then a second time in a low pressure cylinder. The air end is a two stage compressor. Air is compressed in a low pressure cylinder to about 40 psi then again in a high pressure cylinder to main reservoir pressure. This compound/two stage design makes it very efficient.

401 came to us with an 8½ -120 compressor. We also have an 8½ -150 that came off of engine 191. The 120 size is less common but actually in demand now due to the comparatively large number of smaller engines with low pressure boilers currently in operation at museums and tourist railroads. We traded our 120 to Steve Butler, who had a need for the smaller capacity compressor, for a re-buildable 150 giving us two identical units.

After a complete teardown by the Thursday

steam crew we began the assessment of what work would be needed. Our goal was to immediately rebuild one pump for use on 401 and, as time permits, rebuild the second as a spare. With that in mind we selected the best parts from both to expedite completion of the first one as much as possible. The pump off of 191 had been stored outside lying on the ground for years and was full of water. Because of this, it is in considerably worse condition. The cylinders and all the check valves are rusted and badly pitted. The pump we traded for had a good set of steam cylinders, steam pistons and rods, and most of the check valves were usable. That became the basis of our first rebuild.

To paraphrase what a colleague once told me about buying parts and services; “There is good, fast, and cheap, you can have any two but rarely all three.” A good reliable compressor is an absolute necessity so we only had to choose between “fast” and “cheap” as the second option. With funding always a critical issue for the museum that decision was important.

Steam locomotives and the appliances used on them, while fairly complex, are not particularly high-tech. They are designed so that a railroad with a fairly basic machine shop can repair and maintain them. Having the necessary equipment and the people with the skills available, we decided to manufacture many of the parts we needed in our own shop. This saved quite a bit over buying all the parts, which are available, but very expensive. In some cases we were able to buy common items “off the shelf” saving both time and money.

We began with cylinder work. The air cylinders were set up in the horizontal boring mill and bored just enough to clean them up. Both cylinder castings were then set up in the radial drill and finished with a large cylinder hone. This took several hours of work on each one to get the necessary smooth finish. The steam pistons were in good enough condition to re-use. One of the piston rods was re-ground in the lathe using a tool post grinder.

Since the air cylinders were bored 1/8 inch oversize, new air pistons were required. We were able to recycle the large (low pressure) air piston by using a special cutting tool in the lathe to cut the center out of it. That was used to make the new small (high pressure) piston, saving the cost of the cast iron stock and some machining time. The ring that was left over was used to make a jig to hold the large piston rings during finish machining. The large piston was made of a 3 inch slice of 15 inch diameter cast iron. Most of the original parts for these compressors were made from castings. Castings are commonly used to make complex shapes but are also economical when a large number of the same part is needed since less metal must be removed and wasted during finishing, saving both the metal and machining time. However, castings are fairly expensive and it is often cheaper to make parts from standard stock when only a few are needed. That was the case with all the parts we made for this project.

The process of manufacturing a new part begins with making a CAD drawing based on measurements of the original. This is fairly straight forward when we have an example in good condition. Parts that have considerable wear, are badly rusted and pitted, or have been damaged during removal due to being rusted in place require some interpretation to determine what the original dimensions were. In some cases we were able to make minor changes to allow the use of standard more economical components, such as rings, or to make the parts easier to manufacture.



Above: New air pistons and jig for machining large piston rings.

Right: Cast iron blank for large air piston

Left: Top cylinder head

Center: Main valve and reversing valve complete with new rings ready to install.

Right; air compressor has been completely restored and ready for service.



Once the drawings were complete and stock obtained it was time to start making metal chips in the machine shop. Where it was known in advance that several identical parts would be needed to complete both air pumps we made them all at once. This will speed the completion of the second one when we get around to building it.

The top head contains the reversing valve and main valve. Working together, these valves control the flow of steam through the pump. Both of these valve bores were worn to the point of needing attention and were machined and honed. This required us to make new, oversize valves as well.

The air flow through the compressor is controlled by 10 check valves. A few were reusable and just needed regrinding. Some needed complete new valve seats and valve disks and all were measured and adjusted as necessary for the proper lift.

Once all the components were ready, final assembly progressed fairly quickly. Both cylinder castings were bolted to the center casting. Then the steam piston/rod assemblies were installed and the air pistons mounted to the lower ends of the piston rods. The bottom head was bolted on and new piston packing fitted. At this point the air end of the pump was pressurized with compressed air and tested for leaks.



Last, the upper steam head was installed and the steam portion leak tested in the same way. The final in-shop test was to run the pump on compressed air to see that everything was functioning properly.

Check valve seats and other parts we made in our shops at the museum.

New material for the steam cylinder jacket was purchased and formed. We made a data plate, etched out of sheet brass, which will be attached to the steam cylinder jacket. This will add a nice finishing touch to our rebuilt air compressors.

Final testing will be completed when the compressor is mounted on the locomotive and the air system is completed. After the pump is run on steam and thoroughly warmed up all the bolts must be re-tightened. The pump must also pass an orifice test. This tests the capacity of the compressor by forcing it to maintain a prescribed pressure against a calibrated leak. It must be able to do this while making no more than 100 strokes per minute.

This project has taken several months and consumed considerable amounts of money. We now have a compressor that should run reliably for many years with little more than routine maintenance and servicing. In addition, when the second one is complete we will have a spare that can be changed out in as little as a few hours should problems develop.

THE TRAIN ORDER

AN ADVENTURE IN MOVING (AN ICRR DINING CAR)

By Kent McClure

ILLINOIS TERMINAL RAILROAD COMPANY Order No. 37 Date 9-19-08 To C & M Train 285 ...

Doug Butzow, Syl Keller and Paul Bundy left Monticello, Illinois at 8:00 AM on November 24, 2008 for the approximately 850 mile trip to Baton Rouge, Louisiana to prepare Illinois Central diner 4112 for its movement to the Monticello Railway Museum.



The Work Crew Has Arrived!!

details and methods of movement of the cars.

Sunday we worked in the rain and started on the 15 plus items that needed to be completed prior to the car being removed from its trucks, loaded on a special trailer for transport to the local railroad yard, and replaced on its trucks for movement to MRM.

Sunday's work included disassembly of the truck air brake cylinders for renewal, removing the over 300 feet of the LASM electrical supply conduits from the underframe of the car and removal of the HVAC equipment from the interior.



ICRR Diner 4112 as it appears under shed at the Louisiana Arts & Science Museum in 2007.



Diner ICRR 4112 is being lifted off its trucks and onto a trailer for movement between LASM and CN Yard . Photo courtesy of John Fortner-SELA-NRHS

overnight. Monday's work started with the removal of a broken exterior window pane, inspection of axle roller bearings, including draining and re-filling journal boxes with fresh lubricant, removal of the locking center pins (unlike on freight cars, passenger cars have a locking center pin to prevent the truck from separating from the car during a derailment), installing locks in the car doors on each end so it could be secured during transit, and installing the renewed truck air brake cylinders and the main air brake valves, which we had transported with us. Tuesday's work started off with renting an air compressor with a large enough capacity to test that the renewed air brake system would perform properly. Over a half dozen air brake hoses required replacement due to age with two of the hose connections being next to impossible to get a wrench on. The

angle cocks also required replacement and the steam heat line connector pipes were removed so that they could not break loose and drag on the tracks. By early afternoon we were down to installing the Automatic Equipment Identification tags, stenciling the car with its reporting marks (RPCX 4112) and other handling instructions, testing the air brake system, and loading up our tools and the parts removed from the car.

All of this work took up the entire three days allocated to prepare the car for movement. Much work was done prior to the trip in acquiring the replacement parts that were either known or expected to require replacement and in preparing and renewing the airbrake parts which were changed out on the car. Even with bringing all of the tools and parts we thought we might need, we still had to make several trips to a local hardware store for items that were needed for unanticipated repairs.

All of this effort will allow MRM to display and operate a dining car, which was a car type that we did not have in our collection. Further, this was the main car type still missing from our collection for our representative Illinois Central streamlined train which we are in the process of completing. Although we do not currently have a lounge or a dome car for this train, these car types did not see as wide spread of use throughout the Illinois Central system and therefore have not been pursued as much as the dining car was. All of the cars that will be placed in this train were either built for or owned by the Illinois Central Railroad. Finally, we owe the Southeast Louisiana Chapter-National Railroad Historical Society, a huge debt of gratitude for their generous donation of this car to MRM, which will allow it to be available for display and use for generations to come. In addition, we also are very appreciative the efforts of Mr. John Fortner of SELA-NRHS. John coordinated the movement of all four cars from LASM's site, to CN's Baton Rouge yard where, with the exception of diner 4112, each car was loaded onto a flat car for the continuation of its journey. All of the work required to lift and haul the diner from LASM to the CN yard via special truck, and placing it back on its trucks at that location, was done at no cost to MRM. As you can imagine, that was no small sum!

ICRR 4112 on former IC trackage in Decatur on December 22, 2007. Kent McClure





**THE
CREW
CALLER**

“ON TRACK WITH HANK BRICKMAN”



“This would be the first time in Hank’s life that he would drive a spike; on this twelve foot piece of track.”

Hank Brickman

Within every organization there are members who have established their seniority at the time of the group’s founding and our member Hank Brickman carries these credentials. Hank’s introduction to the Monticello Railway Museum predecessor’s group was on a fan trip in Southern Illinois sponsored by Ted Lehman, who had an idea of starting a railroad museum. In February of 1966 Hank paid the 50 cents membership fee to join the Society of Unretiring Railfans (SPUR) which was chartered on the 16th day of that month. The initial plan was to lease the Illinois Central’s “Pumpkin Vine” line between LeRoy and Sabina and operate excursion trains. However, this was immediately met with opposition in the form of a \$400 a day ICRR crew cost. The next effort was to begin looking at property first south of Monticello, then north. It was at this time that Hank become further



“Little Dumpy” soon found a new home in the Camp Creek Yards and in the “open air” shop” receives repairs to keep the locomotive in operating condition



Hank (center; standing) is overseeing the laying of the rail on the “Hill” of the former IT main line .

involved by serving on the Board of Directors for SPUR. The board would meet in a wooden caboose located on an ICRR spur in Monticello and was now involved in the acquisition of a steam locomotive from a gravel pit in Montezuma, Indiana.

The finances to pay for this unique piece of equipment would come from the members pooling their resources to have the steam locomotive moved to a small piece of property west of Market Street. It was at this location that a small piece of track would be built to store the locomotive. This would be the first time in Hank’s life that he would drive a spike; on this twelve foot piece of track. Of course a search was underway to locate property to call home, which would come in the form of a former Illinois Terminal



site of the museum would come from the purchase of land north of Camp Creek from Stan Duvall.

With the acquisition of the property complete, the steam locomotive, affectionately named "Little Dumpy" was moved to a piece of track which would become the south end of No. 1 Track. Adjacent to the track was the first building on the property, a wooden shed, dubbed "The Inman Center". This would become the humble beginnings of the Monticello & Sangamon Valley Railway. The track was extended to 400 feet of which Road Foreman of Engines Charlie Daigh would run "Little Dumpy" back and forth on. As rail and ties were located and brought to the property, Track No. 1 was extended and eventually Track No. 2 would be built to have a place to store equipment as it started to come onto the property. Equipment received at the museum was donated by the N&W, ICRR, private individuals or purchased by the museum and was accessed from the adjoining Illinois Central by a method of "straight raiing" between the two railroads. This was accomplished by the ICRR Maintenance of Way crew coming out on a Saturday and unbolting the main line, then using a tractor, "pull" the track towards a piece of track that would link with the MSV Ry main line. The IC local would then shove the newest acquisitions onto the museum property and the IC main line restored.

The expansion of the main line beyond the yard would reach the base of the hill and in May of 1972 would begin operation using Little Dumpy, a Rock Island Coach and

an ICRR caboose. A Nickel Plate Railway Post Office Car was our first ticket office; located in the yards on No. 2 Track. The train would leave the yards, running to the base of the hill (and the end of the line at the time) then back up to Duvall's Crossing, return to the base of the hill, and then back up to the yards.

A major boost in the line's expansion would come under the guise of a two-mile donation of Illinois Terminal track from south of Maroa. On Saturdays, Charlie Durst and Hank would drag rail behind a truck up the hill and spot the rail along the right of way. Afterwards a push car loaded with ties was pushed to the end of the track and the ties spread out and the rail then placed and spiked. Each weekend the line would be extended by 30 to 40 feet until it reached County Road. It was during this time that Syl Keller had recovered switches from the Bright Star Coal Mine at Fairview to build the run-around track on the north side of County Road and add yard tracks. Hank would work mostly on the track as the "liner", standing about 100 yards down the track and telling the track crew members with pry bars which way to move the track to correctly "align" it.



In addition to being a certified engineer, Hank is also qualified as a Flagman and Conductor .



Alco RS-1 No. 301 is the motive power for the train that Hank prepares to depart with. Hank has the distinction of being of the few minority to have operated both steam and diesel on the property.

course his efforts were utilized to clear brush, as looking south from Cemetery Crossing, “it appeared as if you were looking through a tunnel of brush”. Of course the merging of the Monticello Depot Association with the museum would further establish the atmosphere “of a railroad with a purpose”.

From the humble beginning of SPUR to the magnificent railroad of the Monticello Railway Museum, Hank has established a seniority of 43 years of dedicated service to the organization. His contribution can be found as close as to the very track that we travel over!



Hank Brickman, retired from Central Soy of Gibson City, has served on the Board of Directors of SPUR, Monticello & Sangamon Valley and the Monticello Railway Museum, in addition to serving as Treasurer, and Vice President of the M&SVRY and MRM.

Hank would continue to serve the museum in the capacity of Roadmaster, but would also start a second “career” of working aboard the train. As some of the older members started to drop out or pass away, Hank would assume the new duties of flagman and conductor. Then he was “drafted” into engine service to build a fire in Little Dumpy on Saturdays in preparation for the day’s run. Starting at 7 AM, he would start the fire with newspaper and small pieces of wood like a camp fire, and build up to larger pieces of wood, then when it was hot enough, added coal. A conveyer was used to load coal and a fire hose to fill tender. By 11 AM, the engine was ready for service. Next he would be trained to be the fireman who was required to operate the bell, watch the fire, breaking up the lump coal to better burn in the fire box and keep the water level maintained. Five years later he would be permitted to occupy the right hand side of the cab as a qualified engineer. In the Spring of 1988, due to extensive boiler repairs, the steam locomotive made its last run and Hank would transition to the diesel age at the museum.

Hank notes that one of the greatest achievements of the museum was the acquisition of the Illinois Central trackage in 1987. Of



Hank poses with his flagman Harold Slade in preparation for another run.

MONTICELLO
RAILWAY MUSEUM
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MONTICELLO, ILLINOIS 61856

THE NEWSLETTER OF THE MONTICELLO RAILWAY MUSEUM



ARRIVALS
&
DEPARTURES

-  **Ken Davis 20th Annual "Bud Titus Memorial Run" - June 14th:**
Sun-up till Sun-Down 1641 Westland Rd. Decatur, IL
- **Father's Day Weekend** - June 20th & June 21st: Dads ride FREE when accompanied by their children!
- **Railroad Days** - September 19th & 20th: Come ride our vintage passenger and freight trains on the former Illinois Central and Illinois Terminal trackage.
- **Ghost Train** - October 23d-24th-25th 30th-31st: ALL ages can enjoy a train ride through Camp Creek Hollow with a stop at Cemetery Road... but only the BRAVE should check out our Haunted Boxcar!
- **The Polar Express™** - November 27th-28th and December 4th-5th: Read along with the story as the train makes its round-trip journey to the North Pole.
- **Lunch on the Train With Santa** - December 5th-6th A train ride and lunch with Santa!!