

A PUBLICATION OF THE IVES TRAIN SOCIETY

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# IVES TRACKS

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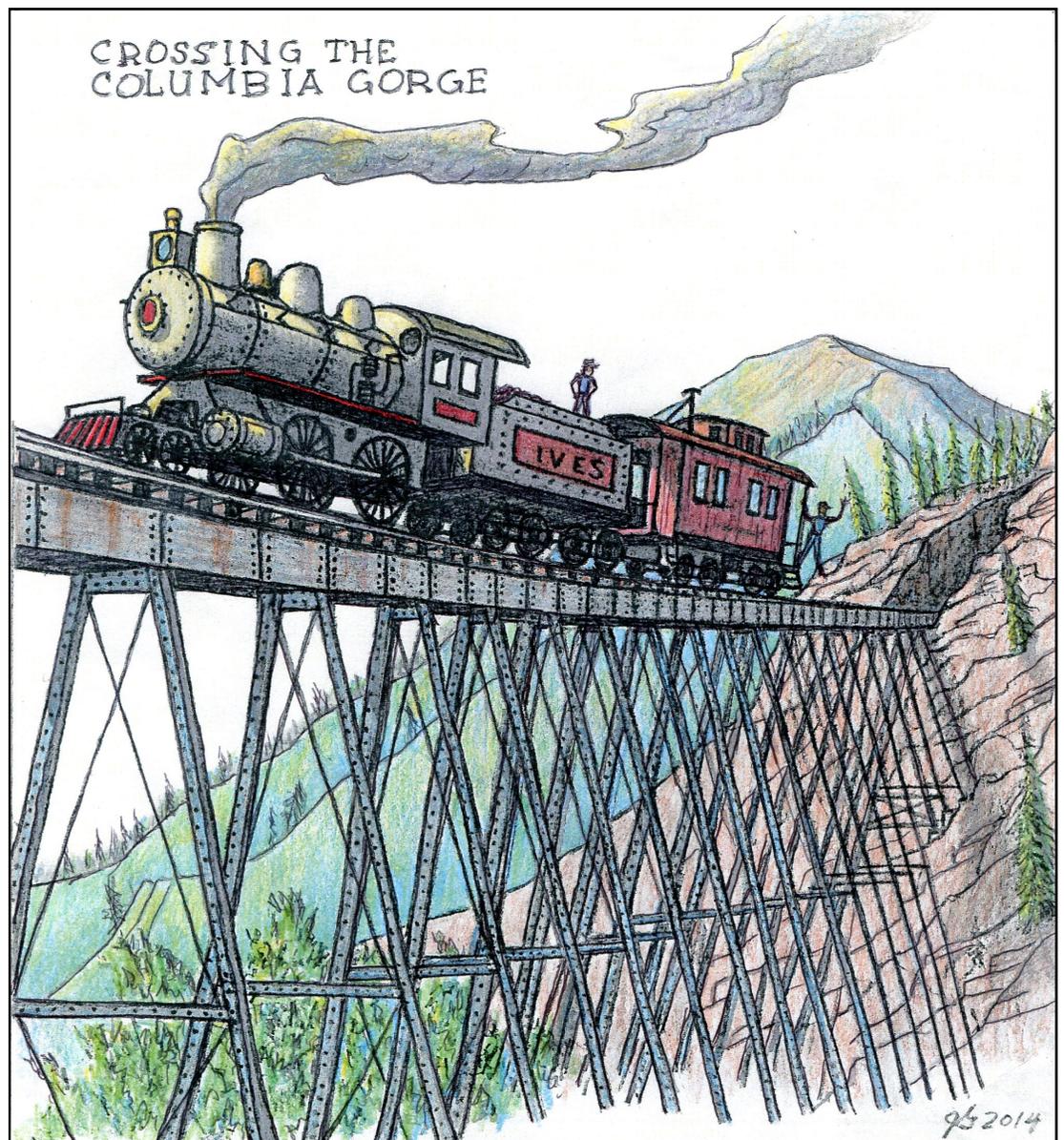
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## ***CROSSING THE COLUMBIA GORGE***

***By: John Gray I-6662***

One of the greatest engineering challenges presented to the American railroad companies was the bridging of the many waterways throughout the continent during the expansion of the nation's railroads. These included numerous lakes, rivers, streams, and gorges. Of course the American West offered the greatest challenges, where railroad engineers had to design and construct railway lines either over, around or through high mountain ranges, and forge deep river gorges throughout the intermountain regions.

High trestles supported by towering steel columns, sometimes hundreds of feet high, had to be designed to support heavy steam locomotives and their long consists of freight and passenger cars. The old, unsafe, wooden trestles were a thing of the past! And the new steel bridges and trestles were stronger, safer, and required less maintenance. These challenges were met head on which vastly contributed to the phenomenal success of the American railroad system. This issue's front cover illustration depicts an IVES 1-Gauge steam locomotive with its tender and caboose, as it trundles across the high steel trestle spanning the Columbia River Gorge on a clear, sunny day, affording a most magnificent view for the engineer, and his coalman. A bit precarious for sure, but beautiful nonetheless!

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**From the York Meeting:** To obtain the book on IVES Advertising write: Jim Cox, 6 Avoca Lane, Massapequa Park, NY 11762. The cost is \$16.50

## ***PRESIDENT'S COLUMN***

***By: Don Lewis***

## **INSTRUCTIONS FOR WIRING AN IVES R-UNIT & HAND REVERSE SWITCH**

By: Phil Morris I-7042, TCA 79-13340

Prior to wiring the R-Unit one must first take careful note of the position of the 4 brass contact leafs or fingers that index with the ratcheting red non-conductive drum. Regardless of how the contact fingers are bent, or the type of R-unit, close examination will reveal a 3 finger grouping in which the outer two fingers contact the drum from the top side and the middle or central finger contacts the drum from the side ( 90 degrees out of phase from the outer fingers). The solder contacts for the 3 finger grouping present all in a row, typically positioned in front of the solder contact for the single central finger that contacts the drum from the bottom side.

The hand reverse set-up displays the 3 finger grouping all contacting the top of the drum and a central finger contacting the drum from the bottom. In all cases, the contact finger set-up contains a total of 4 contact leafs characterized by a single leaf and a 3 leaf grouping all insulated from ground and insulated from each other through the use of 3 red or black fiber insulator plates.

The actual wiring for the Ives reversing units is fairly straight forward but to achieve good and consistent motor function, one must employ a good working and properly adjusted reverse unit.

For most R-unit motors which have both

brush tubes insulated from ground, the following wiring steps will yield positive results, assuming a proper functioning R-Unit.

-- One motor field coil wire connects to ground (usually secured under a motor side plate screw).

-- The other motor field coil wire connects to the front middle contact finger (the one that is part of the 3 finger grouping)

-- One R-Unit coil wire goes to ground; if still intact, it is usually the red rubber covered multi-strand wire.

-- The other R-Unit coil wire (black rubber covered) connects to the rear central contact finger as does the wire from the collector plate or pick-up rollers, if you will, as well as the head light wire. Typically, just the black R-unit coil wire and another lead wire are soldered to the central rear contact leaf; the collector wire and head light wire(s) are pigtailed to the lead wire.

-- One motor brush tube connects to the left front contact leaf of the R-Unit

-- And lastly, the other motor brush tube connects to the right front contact leaf of the R-Unit.

Please refer to diagram 1

The wiring for a hand-reverse set-up, on a

motor which has both brush tubes insulated, is exactly the same as for an R-Unit except for the elimination of the R-unit coil wires.

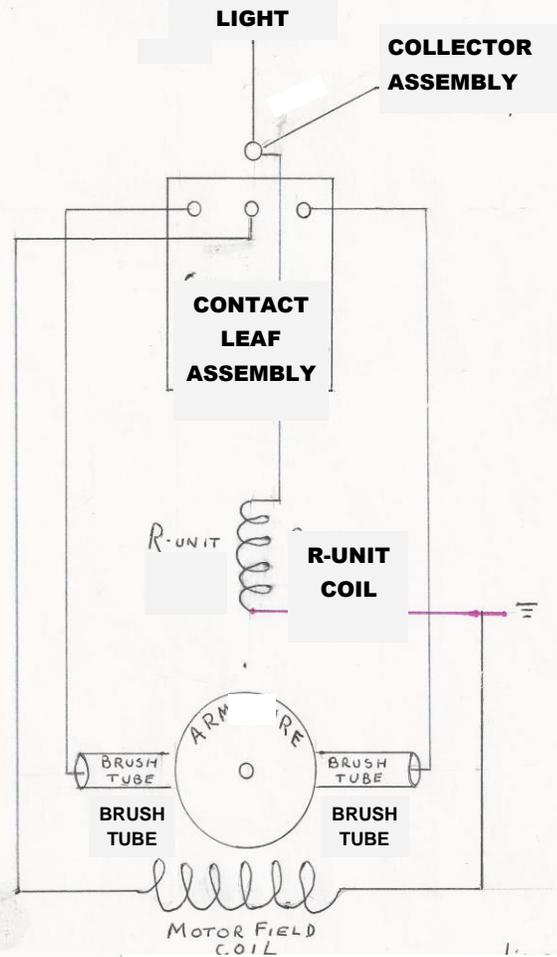
Please refer to diagram 2.

The wiring for a hand-reverse set-up for a motor which has one brush tube insulated from ground and one brush tube that is soldered to ground is essentially the same but in this case, the insulated brush tube is connected to the to the front middle contact finger (the one that is part of the 3 finger grouping) rather than the motor field wire. And, the motor field wires are connected to the right and left front contact fingers of the R-Unit.

Please refer to diagram 3.

### IVES R-UNIT WIRING

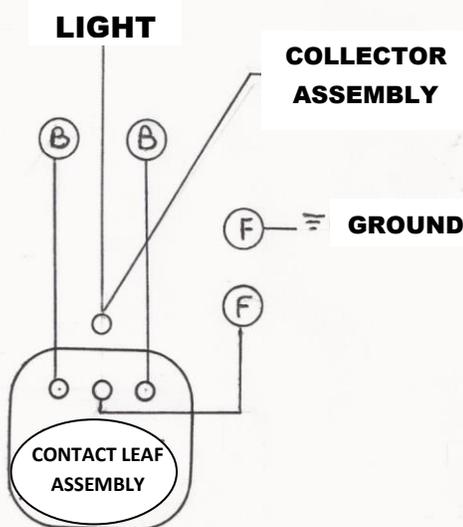
Diagram 1



MOTOR FIELD COIL

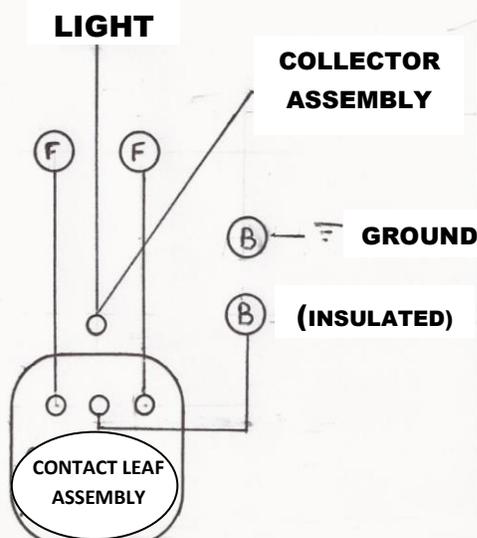
## WIRING FOR IVES MANUAL REVERSE

LEGEND: B = MOTOR BRUSH; F = MOTOR FIELD COIL; ⏏ = GROUND



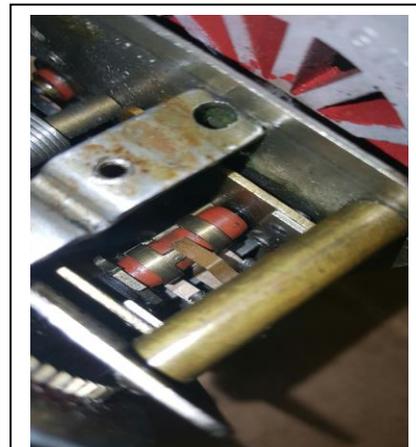
**BOTH MOTOR BRUSHES ARE INSULATED**

Diagram 2



**ONE MOTOR BRUSH IS GROUNDED**

Diagram 3



# IVES 1105X SET BY Dave McEntarfer and Dave Bashline

If you look in the catalogs from 1911 to 1917, set No. 1105x was cataloged at least three different ways with three different engines. The X simply meant that it came with an electric style engine instead of steam (1116). Depending on the year, it came with either a 3200, a 3217 or in 1917 only with the 3216. Also depending on the year, the cars in the set were either the Newark / Washington cars, the Harvard / Yale cars or different variations of the 551, 552 cars. Attached is what the set looked like in 1913-1914, Dave Bashline's set was only cataloged in 1917.

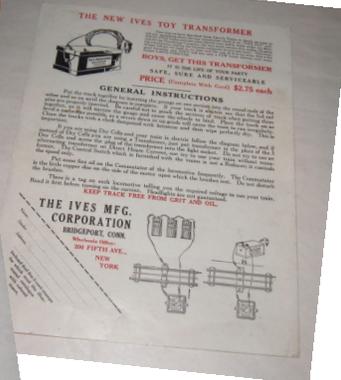
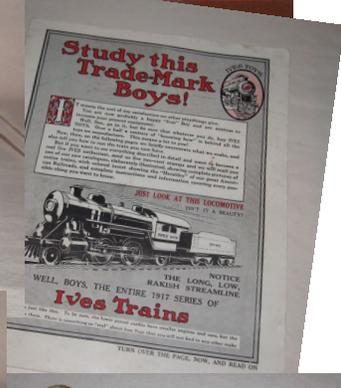
## 1105X SET 1913-1914 WITH 3217 LOCOMOTIVE



## 1105X SET 1917 ONLY WITH 3216 LOCOMOTIVE



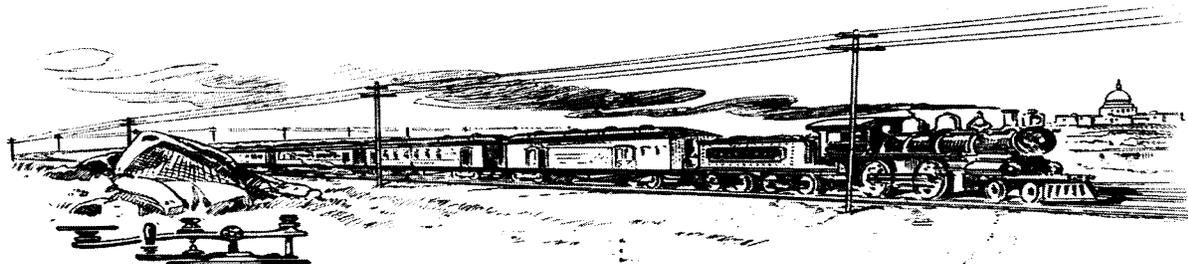
The 1917 1105X set below is owned by Dave Bashline and because of its exceptional condition and completeness we present the following pictures for your review. Note the box states "S" Special on the label. Can anyone tell us what this meant?





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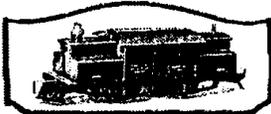


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