open-circuited as it should be, but it will not provide any indication that an inductor is properly close-circuited as it should be when the signal is clear. However, an in-

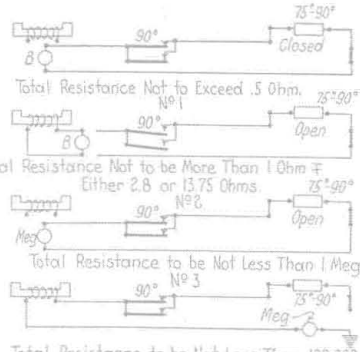


Fig. 1

Test of Inductor Circuits

Date	Signal Number	Total Res. of Inductor Leads	Res. of Inductor Winding	Cross Test of Inductor Leads	Ground Test of Inductor Circuit

Fig. 2

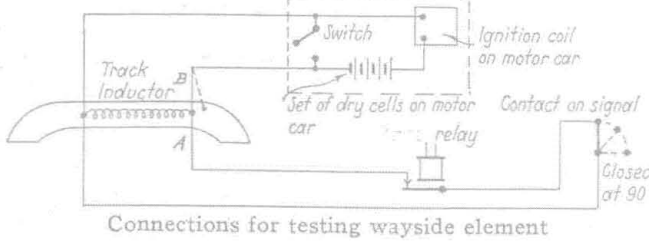
Circuit hook-up for making resistance and insulation measurements together with report forms used in checking wayside inductors

dication would be received by the head engine if such a false stop signal were received.

Albany, N. Y. A. H. RICE,
Signal Engineer, Delaware & Hudson.

Motor Car Ignition Coil Used in Testing Train Stop Inductors

ON the Atlanta divisoin of the Southern, we have developed a scheme for testing the G-R-S wayside elements of the intermittent auto-manual train stop system, using the regular ignition circuit of a motor car. After removing the cover of the terminal



Connections for testing wayside element

box on the wayside element long jumpers from the switch or battery box on the motor car are connected to the terminals of the coil on the inductor. When the circuit is closed to the signals, that is, the *HD* relay is up and the signal clear, the buzzer on the motor car will operate, but when the circuit to the signal is opened the buzzer stops on account of the inductance in the wayside element coil being too high. Therefore, we have a check on the circuit from the inductor through the relay and signal contact. The next test is to determine that the coil in the inductor is not open. We found that although the buzzer would not work when the circuit to the signal was open, a spark would be made when touching the jumper to the terminal of the inductor coil, which indicated that the coil winding was complete. A test to see if the inductor coil is grounded can be made by disconnecting wires *A* and *B* and touching wire *B* to a cleaned spot on the metal frame of the inductor as shown by the dotted line. These tests are made once a month.

Rome, Ga. J. WALLER,
Assistant Signal Supervisor, Southern.

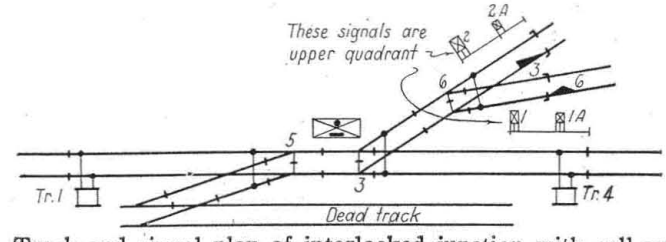
Additional Solutions to Call-On Signal Circuit Problem

"Can you design a circuit to obtain the desired operation of the call-on arms as indicated in the sketch below?"

Information Desired in Question No. 4

I would like to install a circuit to clear signal *1* and prevent call-on signal *1A* from clearing when a train passes No. *1*, such a circuit to use the same signal lever in the tower but not a middle position on the segement, using only the full normal and full reverse position. The same requisite applys to signals *2* and *2A*.

The present condition allows the operator to use the



Track and signal plan of interlocked junction with call-on signals at two locations

call-on signal under all conditions and I would like to change it so that when he pulls lever *1* or *2* (which ever route is set up) the train will receive full protection from the high signal. Signal *1A* must not be allowed to bob. I would also like to include signal repeaters for the call-on arms. Note that I do not want to use push buttons to clear the call-on signals, but want the same lever to clear both signals.

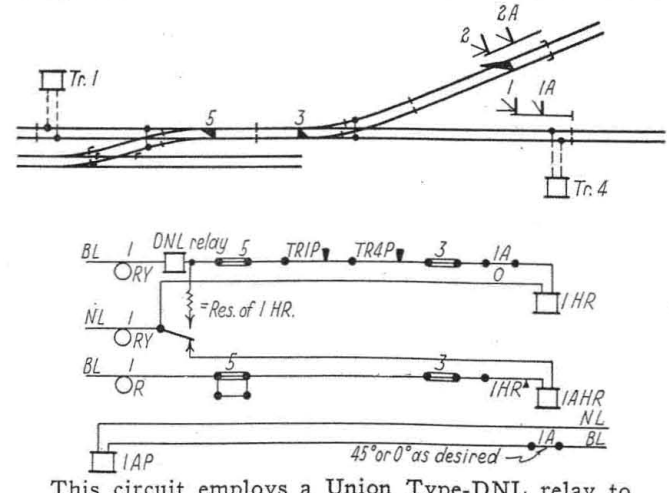
If a train approaches and passes either high signal and opens the track circuit, putting the high arm at stop I do not want the call-on arm to clear immediately.—P. H. W.

Some More Prize Winners

(This concludes the publication of solutions received in response to the foregoing question. Several others were received too late to be considered, or in the opinion of the judges did not conform to the conditions specified in the question.—EDITOR.)

Uses a DNL Relay in Addition to H Control Relay

IT is interesting to note that all of the circuits submitted in response to question No. 4 in the April issue of *Railway Signaling,* are dependent on the track relays for selection of the two arms. Herewith is a



This circuit employs a Union Type-DNL relay to accomplish desired results