

## TESTING REPEATING COILS

*"In testing communication repeating coils to determine whether or not they are defective, what procedure have you found to be most effective?"*

### Two Measurements

By H. B. HILDRETH  
Equipment Engineer  
Central of Georgia, Macon, Ga.

THE most common test procedure used by the Central of Georgia for checking telephone repeating coils consists of two separate measurements. Coils suspected of being defective are first measured, using a bridge-type resistance test to determine individual winding resistance and balance. A Megger is then applied to test for cross or breakdown with other windings.

Both of these tests being satisfactory, a measurement of actual transmission is usually not required. We have found the above tests to be adequate for all previous cases of repeating coil breakdown.

## CROSSING PROTECTION\*

*"Where manually-controlled crossing gates are in service, what precautions do you take at busy street crossings to insure that the gates are down before a train is permitted to pass over the crossing?"*

### Special Indicator

By H. P. HANCOCK  
Supervisor of Signals  
Norfolk & Western, Roanoke, Va.

EVER since the first manually-controlled crossing gates were installed, it has been realized that, since these gates were controlled by one man, their correct operation was entirely dependent upon the gate operator. In times past, where accidents occurred on grade crossings, caused by the failure of the gateman, it was considered unavoidable, as no one could have anticipated the failure on the part of the gateman. In recent years, this condition has been given considerable study, with the idea of correcting this situation wherever possible. Obviously, the solution was to prevent an engineman from operating his engine over the crossing until he knew

that all of the gates were down.

The chance of both the engineman and the gateman failing simultaneously in handling a train movement over the crossing is very remote, so the solution, wherever operating conditions permit, is to prevent the engineman from going over the crossing until he has received a crossing gate signal indicating that all crossing gates are down. This signal, where position-light signals are in service, consists of a green color-light unit, which remains dark until all of the crossing gates are in the down position, at which time the indication is green. The crossing gate signal is controlled by a relay which can only be energized to display this signal when all gates are down. The circuit for this signal is completed through circuit controllers on each gate which are connected in series. This method of train movement protection at highway crossings for both automatic

and manually-controlled gates has been in effect for some time and has proven entirely satisfactory.

## JACK PLUGS

*"What is the quickest and most effective means you have found to clean and polish communication jack plugs on switchboard and patch cords?"*

### Machine Buffing

By T. C. LUKE  
Superintendent of Telegraph.  
Boston & Maine, Boston, Mass.

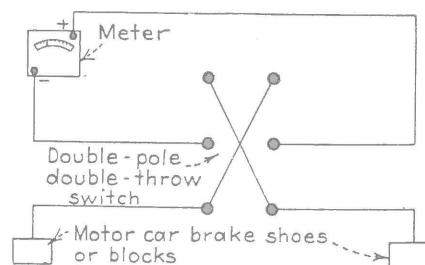
ON the Boston & Maine, we have found machine buffing to be the most effective and quickest means to clean and polish the communication jack plugs and cords.

# KINKS

## TRAIN INDICATOR FOR MOTOR CAR

By T. S. DUTTON  
Signal Maintainer  
Chicago, Rock Island & Pacific  
Bowie, Tex.

THE accompanying sketch shows the circuit for a train indicator on a motor car, which I have found to be a life saver in station-to-station automatic block territory with coded track circuits. By using a double-pole, double-throw switch, wired to a d.c. voltmeter and the brake shoes or blocks on a motor car, as shown, you can tell if there is a train in the station-to-station block in which you are



Circuit for the indicator on motor car

traveling. The meter is set on the 1.5-volt scale.

The cost of this arrangement is small, and will afford a maintainer a

great deal of protection in all kinds of weather. It is an idea which should help a lot of the boys, as it looks like we are coming to more and more coded track circuits, station-to-station automatic block and C.T.C.

## INSULATED JOINTS

By T. W. BELL  
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Dixon, Mo.

The following is an idea which may prove of some help to other signal maintainers in the performance of their duties:

When the ends of rails overflow the end post of an insulated joint, use a rat-tail file to cut them off. This procedure is just as fast and a lot safer than using a hammer and chisel.

## RAISING POLES

By W. A. LANE  
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Communications Department  
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THE accompanying sketch illustrates a means of raising heavy telephone line poles with a hand winch or at locations where a truck derrick cannot be used. By using the method, the poles can be set safely by two or three men.

\*Other answers on this subject were published on page 326 of the May issue—Editor.