

wires between the relay house and the frame structure are carried either underground or in conduit to an enclosed metal terminal box in the frame building. Fire resistant wires between this terminal box and control machine are carried on messengers.

Ladder-type Rack

By W. A. FORD
Chief Signal Officer
New York, New Haven & Hartford
New Haven, Conn.

On recent installations we have been using a ladder-type rack for wire runs. These racks are made of two aluminum alloy side stringers, 24 in. apart, which are joined at 9 in. intervals by rungs made of an aluminum extrusion. These rungs have rounded edges and are slotted above with a continuous opening below to accommodate either cable clamps or insulator blocks, if required. Rungs are inserted through the side stringers and welded. All wires and cable are laid loosely on the rungs and do not require clamps or ties.

We have found that this type of wire rack is strong enough to support sufficient wires and cable for the modern interlocking plants. It is light weight, easily installed and requires no maintenance. It being open on the top and bottom prevents dirt and dust from accumulating in the racks and is easily kept clean.

Interlocking Phones

When cutting a new interlocking into service, what type of communications do you use to enable men at switches and signals to inform the leverman that the switches are positioned correctly and the signals cleared?

Wire Pair for Talking

By R. E. TESTERMAN
Superintendent Signals
St. Louis-San Francisco
Springfield, Mo.

Our practice is to provide a pair of wires for communication purposes between each power switch and signal to the interlocking control machine. These wires are terminated along with other signal control wires in junction boxes or signal cases. When checking out the plant, portable telephones are used between the function in the field and the control machine.

This same telephone circuit is also used by maintenance forces or trainmen after the plant is placed in service, and a loudspeaker pro-

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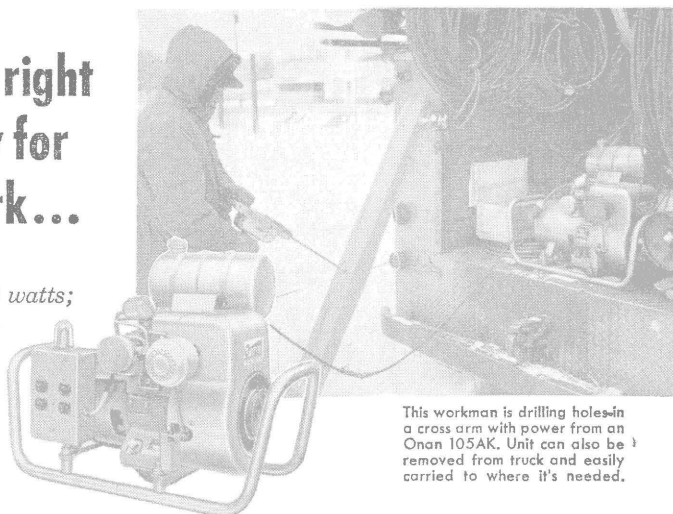
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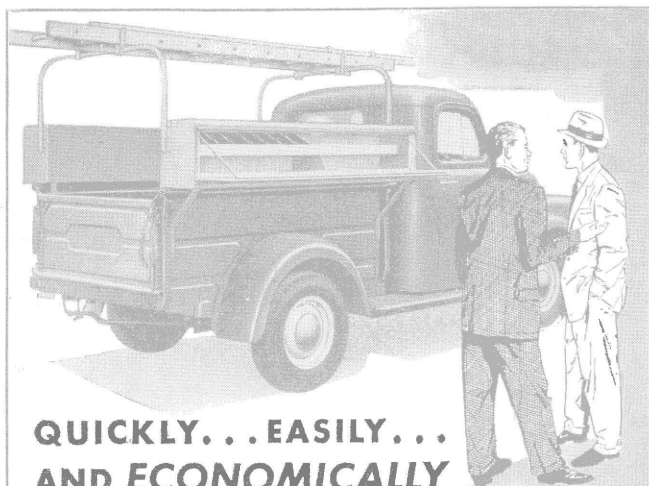
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vided on the control machine and a permanent telephone installation in the field for use by trainmen.

The above arrangement was used in the last two interlockings installed on this road, because the leverman's location being such that he did not have a full view of the entire track layout and also was not in position where he could converse with train crews or maintenance forces except by telephone.

Portable Telephones

By VIRGIL O. DRYER
Signal Engineer
Kansas City Terminal
Kansas City, Mo.

In a new interlocking installation our practice has been to use portable telephone communication between the men in the field and the tower when checking the position of switches and the signals cleared. The interlocking cables are used for this service and, therefore, provide connections in all relay cases. These connections can be extended to remote signals, when required, giving the men direct contact with each other. This method is not a part of and does not disturb the regular communication system, primarily designed for the handling of trains.

Air Line Leak

If a hole rusted out in an air line at an electro-pneumatic interlocking, how could the defect be remedied quickly?

Switch Spiked

By J. E. HOUSER
Supervisor Signals
Chesapeake & Ohio
Ashland, Ky.

Present C&O practice is as follows: Should a leak be detected in a cross-run to an electro-pneumatic switch from the main air line, the switch is immediately spiked until a temporary $\frac{3}{4}$ in. air hose can be run between the switch and the main air line, which will by-pass the defective pipe until permanent repairs are made to the defective pipe. At large electro-pneumatic interlockings two such air hoses, 50 ft. in length, are maintained complete with suitable connections. The majority of main air lines are above ground and should a leak be detected in the main line, that portion of the main line is sectioned and either temporary hose or a small portable air compressor is used on the end of the main air line beyond the defective pipe.