

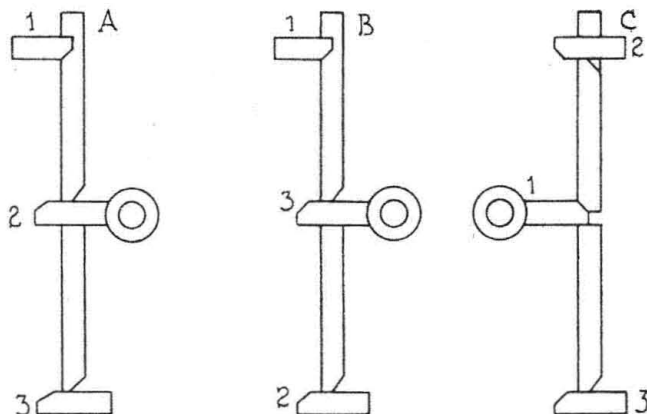
shows a double rail connection which provides two gas-weld bonded connections with the ball of the rail. There is thus double assurance of a track circuit connection. Moreover, there is a decided saving in cost, because the suggested type of rail bond connection costs about 18 cents as compared to 84 cents apiece for a rail connection measuring 120 in. in length. The type of connection illustrated is made from an ordinary frog bond. The rail vibration is taken care of by winding several turns of the No. 9 copper track circuit wire around the stranded bond before making the soldered connection. The track circuit wire is enclosed in circular loom from inside the trunking to the point of connection with the stranded bond. The bootleg connection can be prepared in a number of shapes to meet the local requirements, particularly as to the location of the trunking in respect to the welded connection to the rail. I believe the scheme suggested is much superior to the method of running the stranded bond wire from the point of its welded connection at the rail to the interior of the trunking.

Mechanical Locking Suggestion

By Oscar E. Miller

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ONE of the most difficult things to understand in connection with mechanical locking in an interlocking machine is the "special" locking frequently used. This is, no doubt, due to the fact that it is possible to transpose a "special" in a number of different ways. For example, in the combination shown, x (when z is normal) locks 3 reversed may be arranged



Three different methods of arranging "special" mechanical locking to accomplish the same purpose

in three different ways. By inspection of the chart, it will be noted that the desired result is achieved in each case, namely, that x (when z is normal) locks 3 reversed. Transposing is especially apt to be necessary in changing old locking, when the longitudinal locking bars do not come in the proper sequence for making a straight "special" as in *A*, and a shift to the transposed "specials" such as *B* or *C* must be made.

Advantages of Quick-Drying Paint

By J. A. Work

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THE necessity of painting wooden relay cases before installing relays and wiring, frequently causes delays, varying from 24 to 48 hours, in order to permit the paint to dry. There are a number of prepared paints on the market known as "traffic zone" paints

which will dry sufficiently in 10 min. Furthermore, they have a good hard finish which holds up in service. This type of paint is usually furnished in white, but it can be tinted if another color is desired. When signal numbers are painted with "traffic zone" paint, the usual collection of dust and cinders from passing trains is eliminated. Other applications of this quick-drying paint may suggest themselves to signal men.

Numbering Code for Batteries

By Roy Tefft

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A MAINTAINER can report cases of battery trouble much easier if a simple numbering code is followed in lettering all track, line and operating batteries. A signal supervisor also can refer to his blue print and locate any battery referred to in a maintainer's report without "wading" through a lot of circuit details. All track batteries on my territory are numbered according to the mile posts. That is, in Mile 950, which has three sets of track batteries, two feeding east and one feeding west, the batteries are numbered 950-1-E, 950-2-E and 950-3-W. Mile 951 has four sets: 951-1-E, 951-2-W, 951-3-E and 951-4-W.

All operating batteries are designated as follows: 9501—Motor—16 Cell, 9502—Motor—16 Cell. Line batteries similarly are numbered: 9512—Line 18—11 Cell, 9526—Line 2—11 Cell, the signal number and line circuit number both being given. If a switch indicator is on the line, the battery number would be as follows: 9511—Line K (K for indicator)—9 Cell. At crossing signals a distinctive code can be used.

Better Motor Car Ignition Service

By W. L. Padbury

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IT IS a problem to start a motor car in cold weather and I formerly experienced trouble of this nature until I adopted the plan I am now using. My No. 41, Fairbanks-Morse motor car ordinarily requires only five dry cells for ignition purposes. I have found, however, that by using eight dry cells in my car that it can be started in any kind of weather which is a great advantage to me inasmuch as I have to operate it every day regardless of cold weather. I believe it will be worth while for others to try out, adding two or three more dry cells to their cars, because this will insure a heavy spark and it does not allow oil and gas to foul the plug. During the summer months I use only five dry cells.

A Striking Plate for Safety Matches

By H. Fairfield

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LAMP MEN, as a rule, do not like to use safety matches to light signal lamps because they cannot be ignited on every surface. As a result the ordinary household type of match is used by lampmen. Much of the inconvenience incurred with safety matches can be avoided if a suitable striking pad is carried on the coat or jacket. I obtained a piece of tin about 2½ in. wide and 3 in. long and bent it into a holder to receive the scratch pad on the side of a safety match box. I then fastened this scratch pad holder to the front of my coat and carried the matches in my pocket. The tin forms a backing for the scratch pad and provides a means for fastening it to the coat.