to the signal unit, the lead covering is removed, the end being opened and filled with insulating compound. The opening is then taped with rubber and friction tape to insure a perfect seal. The flexible conduit is then slid on and fastened in place. Taping the cable at both ends of the flexible conduit prevents vibration from wearing the lead covering. The separate cable conductors are then terminated on their respective posts within the signal unit.

# F.P.L. Adjustment on Spring Switches

"Where the new type mechanically-operated facing-point lock for a spring switch is used, how close an adjustment on the lock rod is practicable?"

### Practice on the Pennsylvania

E. B. Pry

Superintendent of Signals, Pennsylvania, Pittsburgh, Pa.

We adjust our mechanical locks to foul if the switch point is open in excess of 3/16 in. They are, of course, adjusted just a little closer than the 3/16-in. opening so that the plunger works freely through the lock rod. With this adjustment, the spring seems ample to force the points back to the locking position, unless they are obstructed by some unusual condition, which would not be prevented by a wider adjustment.

We do not feel that it would be necessary or practicable to maintain a closer adjustment without incurring frequent delays when a dangerous condition does not actually exist.

### Adjust Same as Interlocked Switch

C. A. Taylor

Superintendent of Telegraph and Signals, Chesapeake & Ohio, Richmond, Va.

The narrow slot of the lock rod, used in connection with the mechanically-operated facing-point lock for spring switches, is 2 3/16 in. wide, while the width of the plunger furnished with the mechanism is 2 in. wide,

Our instructions require that the lock rod be adjusted so that the placing of a 3/16 in. obstruction, between the switch point and the stock rail at a point 6 in. back of the switch point, will cause the locking plunger to foul

the lock rod. These instructions are the same as those that we have in effect covering the adjustment of lock rods on mechanically-interlocked switches and so far we have not experienced any difficulty in maintaining this adjustment on the mechanically-operated facing-point locks used in connection with spring switches. It is, of course, our practice to equip such switches with adjustable rail braces, heel blocks, and necessary rail anchors, the same as is done on any interlocked switch.

#### One-Fourth Inch Sufficient

G. A. Ziehlke

Signal Supervisor, Union Pacific, Kansas City, Mo.

Based on our past experience, the lock rod, of the mechanically-operated facing-point lock for a spring switch, should be adjusted so that the plunger will not lock up when a ¼-in. obstruction is placed between the switch point and the stock rail 6 in. back of the end of the switch point.

### Can Be One-Eighth Inch

C. A. Dunham

Superintendent of Signals, Great Northern, St. Paul Minn.

With the Style S-1 mechanical facing-point lock for spring switches, a ½-in. adjustment of the lock rod is practicable and can be maintained satisfactorily. It is to be understood that a ½-in. adjustment applies only to a well installed switch. The switch must be thoroughly equipped with gage plates and rail braces that have been carefully applied. The S-1 device affords interlocking protection, where it is used in connection with block or interlocking signals.

# Storage Battery Trays

"What kind of racks or trays do you use for storage battery when housed in concrete boxes?"

### Recommends A.R.A. Standard

E. T. Ambach

Assistant Signal Engineer, Western Lines, Baltimore & Ohio, Cincinnati, Ohio.

Concrete boxes for storage-battery housing should be provided with a wood support of slat construction with three-inch spacing. The slats should be nailed with zinc-coated nails and painted with P. & B. paint or the equivalent. The rack should be made in two or more parts to permit easy removal for cleaning the box. For details see the A. R. A. plan No. 1598-A.

### Lattice Supports Used

C. F. Stoltz

Signal Engineer, Cleveland, Cincinnati, Chicago & St. Louis, Cincinnati, Ohio

On the Big Four we use a wood lattice support for lead-type storage cells and find it desirable to nail wood strips approximately ½-in. square around the bottom of the cells to prevent them from being moved about by vibration.

### Wooden Shelves with Strips

H. H. Orr

Superintendent of Signals and Telegraph, Chicago & Eastern Illinois, Danville, Ill.

The practice of the C. & E.I. with respect to the storage battery arrangement in concrete boxes is as follows: The cells are placed on wooden shelves which have been fitted with ½-in, to 1-in, wooden strips. The wood strips are necessary in order to prevent shifting of the cells on account of the vibration due to passing trains.

## Radio Message on Crossing Safety

The proper procedure for automobile drivers to insure safety when crossing railroad tracks was the subject of a talk by Arthur B. Nicholas, vice-president of the Boston & Maine, recently when he addressed the radio audience of Station WEEI. In simple words, he explained why it was impossible to stop a train quickly or to make it dodge automobiles at crossings and, therefore, he said, it is up to the drivers to be cautious. "It is all so simple," he explained. "Slow up and get your car under control as you approach a railroad grade crossing. Look for gates or signals, or the crossing watchman with his 'Stop' disk or his lantern, and, if they are giving their warning, believe them that a train is coming, and stop until the train has passed. But in any event, whether there are signals or not, approach that railroad crossing expecting that a train is due, and look to the left, then to the right, up and down the track. If the track is clear, in both directions, go ahead and cross, but if a train is coming-wait."