

### Gold Leaf for Signal Blades.

BY J. G. PANBORN.

For some time past the signal and paint departments of the Baltimore and Ohio railroad have been experimenting with gold leaf as a covering for signal arms in an effort to retain distinctness of color without having to resort to painting the arms three or four times a year. Mr. F. P. Patenall, signal engineer of the road, is greatly pleased with the results of the experiment, which seem to justify its continuance as standard practice, for the reason that under all varieties of background the arm so prepared presents a more distinct aspect, which consequently is very favorable to the runner as the aspect which is most clearly defined is none too good.

The question of the color of the arm has no governing importance as instructions to the runner are transmitted by the position of the arm, under the three-position method of signaling which is in use on the Baltimore and Ohio. The use of gold leaf in covering signal arms was suggested by Mr. W. S. Scheneck, master carpenter of the Connellsville Division, and Mr. J. D. Wright, general foreman painter of the Mt. Clare shops at Baltimore, has made a special study of this application.

In order to prepare a suitable foundation and ground for the gold leaf, new signal arms receive three or four coats of paint, according to the roughness of the surface, and are sand-papered down thoroughly. The first two or three coats are surfaced similar to that used for the foundation coats of passenger cars, and applied in the same manner, or they may be made with white lead tinted with yellow. When the latter is used the first coat of lead is thinned with one-half linseed oil and one-half turpentine, and the subsequent coats with one-fourth linseed oil and three-fourths turpentine, each coat being sand-papered. In either case it is recommended that the last coat be made a gold color, so that the ground will not show badly when the leaf begins to wear off. After the foundation, or ground, has been prepared, a coat of fatty linseed oil sizing is applied. This is allowed to stand about twenty-four hours when it has sufficient adhesiveness to hold the leaf without dimming its luster. The gold leaf is then laid on the sizing and the surface burnished with raw cotton. Gold leaf applied in this manner, it is claimed, will stand weather exposure for fifteen or twenty years.

The cost of preparing the arms in this manner averages ninety cents each, in quantities, and it is believed will result in considerable economy in avoiding the necessity of painting arms, which in order to obtain results equal to the use of gold leaf arms would require the painting of the same six times a year, at a cost of approximately twenty-five cents per arm, or a total of \$1.50 per annum per arm.

To maintain these gold leaf arms in good condition a mild solution of oxalic acid is used, with which the arm is sponged off at such intervals as may be found necessary by the men engaged in the maintenance of signal appliances on each district.

On Jan. 6, W. C. Brown, senior vice president of the New York Central, was elected to the presidency of that road to succeed W. H. Newman, who recently resigned. Mr. Brown will take office on Feb. 1, and Mr. Newman, it is announced, will remain a member of the board of directors.

Forty years of railroad service have given the new president of the New York Central a wide experience

and an intimate knowledge of all the details of operation and organization. He entered the employ of the Chicago, Milwaukee & St. Paul Ry., in 1869, at the age of 16, as engine fireman and section hand. In March of the following year he was made a telegraph operator on the same road. Two years later he became train dispatcher for the Illinois Central, remaining in that position until March, 1875. Then he spent a year as train dispatcher with the Rock Island, followed by four years as train dispatcher for the Chicago, Burlington & Quincy Railroad. In January, 1880, he assumed the responsibilities of chief train dispatcher for the Burlington, and one year later was made trainmaster. In 1884 came a promotion to the position of assistant superintendent, and in 1887 Mr. Brown was made a superintendent. In 1890 he was appointed general manager of the Hannibal & St. Joseph and Kansas City, St. Joseph & Council Bluffs Railroads, which were controlled by the C., B. & Q. The next year found him also managing the Chicago, Burlington & Kansas City and the St. Louis, Keokuk & Northwestern Railroads. For five years from January, 1896, he was general manager of the Burlington system. Then the Lake Shore & Michigan Southern secured his services as vice president and general manager. In February, 1902, he became vice president of the New York Central & Hudson River Railroad and the Lake Shore & Michigan Southern Railway. In 1905 the vice presidencies of the Michigan Central, the Big Four, the West Shore, the New York & Ottawa and Ottawa & New York Railways, Rutland Railroad, and Indiana, Illinois & Iowa Railroad, were added to his duties. The title of senior vice president was created for him in 1906, when his jurisdiction was extended over all departments of the New York Central & Hudson River Company. Mr. Brown has always stood for a policy of publicity and square dealing on the part of the roads he represents, and his efforts have gone far toward establishing a feeling of accord between the railroads and the many unfavorably inclined and sometimes unreasonably antagonistic public and legislative interests throughout the East. His earnest endeavors in behalf of well considered legislation, which would insure justice to labor and capital alike, have made him almost a national character. Railroad men, in general, feel that the great responsibilities of the position to which Mr. Brown has been elected will fall upon shoulders well prepared to receive them.

### Signals Installed on Electric Railways in 1908.

Information received from the manufacturers of signal apparatus for electric railways shows that there were installed, during the year 1908, 486 automatic block signals, protecting 75.17 miles of single track, and 111 dispatchers' train order signals, operated from central dispatchers' offices, protecting 265.5 miles of track. Statistics of installations of signals were received from all of the signal manufacturers in the United States except two companies, who failed to reply. They are given in detail in the accompanying table.

Included in the table are all of the installations made on railways operated electrically, including electrified steam roads. There are two types of automatic block signals in use for overhead trolley lines: (1) Signals actuated by the passage of the trolley wheel under a contact device inserted in the trolley wire, and (2) signals controlled by electric track circuits. Comparatively few signals of the latter type have yet been installed on interurban electric railways operated by