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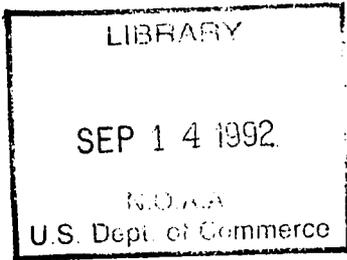
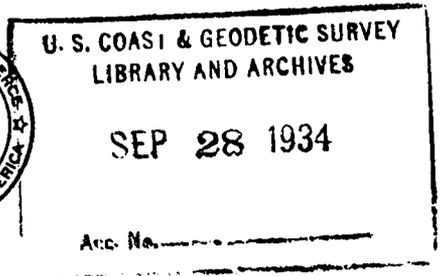
U.S. DEPARTMENT OF COMMERCE
DANIEL C. ROPER, Secretary
COAST AND GEODETIC SURVEY
R. S. PATTON, Director

Special Publication No. 184

LEVELING IN MAINE

By

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ASSISTANT MATHEMATICIAN



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LEVELING IN MAINE

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GENERAL STATEMENT

This publication contains the descriptions and elevations of bench marks, in the State of Maine, the elevations of which have been determined by first-order and second-order leveling executed by the Coast and Geodetic Survey.

Approximately 840 miles of first-order leveling and 470 miles of second-order leveling have been run within the limits of this State.

The several lines are listed below, together with the years in which the field work was done.

Line 1, Boundary to Vanceboro, Maine.....	1916
Line 2, Rouses Point, N.Y., to Portland, Maine (part).....	1922
Line 3, Portland, Maine, to Boston, Mass. (part).....	1928

Line 4, Calais to South Lagrange, Maine-----	1927
Line 5, Fort Kent to South Lagrange, Maine-----	1927
Line 6, Northern Maine Junction to Danville Junction, Maine-----	1927
Line 7, Yarmouthville to Northern Maine Junction, Maine (second-order leveling)-----	1933
Line 8, St. Croix Junction to Eaton, Maine (second-order leveling)-----	1933
Line 9, Danforth to Houlton, Maine (second-order leveling)-----	1933
Line 10, Houlton to Oakfield, Maine-----	1933
Line 11, Somerset Junction to Oakland, Maine (second-order leveling)---	1933
Line 12, North Anson to Bethel, Maine (second-order leveling)-----	1933
Line 13, Newry, Maine, to Jefferson Junction, N.H. (part) (second-order leveling)-----	1933

A short paragraph descriptive of each line will be found at the beginning of the list of descriptions and elevations of the bench marks along the line.

INSTRUMENTS AND FIELD METHODS

The first-order leveling by the Coast and Geodetic Survey in Maine was all run with instrumental equipment either exactly like, or very similar to, that described in Coast and Geodetic Survey Special Publication No. 129, Geodetic Level and Rod. The field work was done in accordance with the instructions and specifications given in Coast and Geodetic Survey Special Publication No. 140. *Manual of First-order Leveling.*

The second-order leveling by this Bureau was run with the same instrumental equipment and under the same instructions as the first-order leveling with the exception that a single running was permitted instead of the double running in opposite directions required for first-order work. The leveling on alternate days on the second-order leveling was run in opposite directions with regard to the general direction of progress, so that approximately half of the second-order leveling was done in a forward direction and the remainder in a backward direction.

COMPUTATIONS AND ADJUSTMENTS

The office computation of the leveling done by this Bureau in Maine was carried out in accordance with the instructions given in Special Publication No. 140, *Manual of First-order Leveling.* Rod and temperature corrections were applied to the observed differences and, in cases where it was necessary, the level corrections and the corrections for index errors of the rods were also applied.

These corrections, with modern leveling equipment, especially with well-graduated invar rods, are very small and usually are of small moment except in mountainous country where large differences of elevation are encountered.

The computations and corrections for the Coast and Geodetic Survey leveling were carried to four decimal places in meters until the final elevations were derived, when they were rounded off to the nearest millimeter for publication. The elevations in feet were determined by converting the metric elevations, using the factor, 1 meter = 3.2808333 feet.

At the time of the 1912 adjustment of the precise level net in the United States, the only precise leveling in New England which could be included in the adjustment was the Van Orden line from

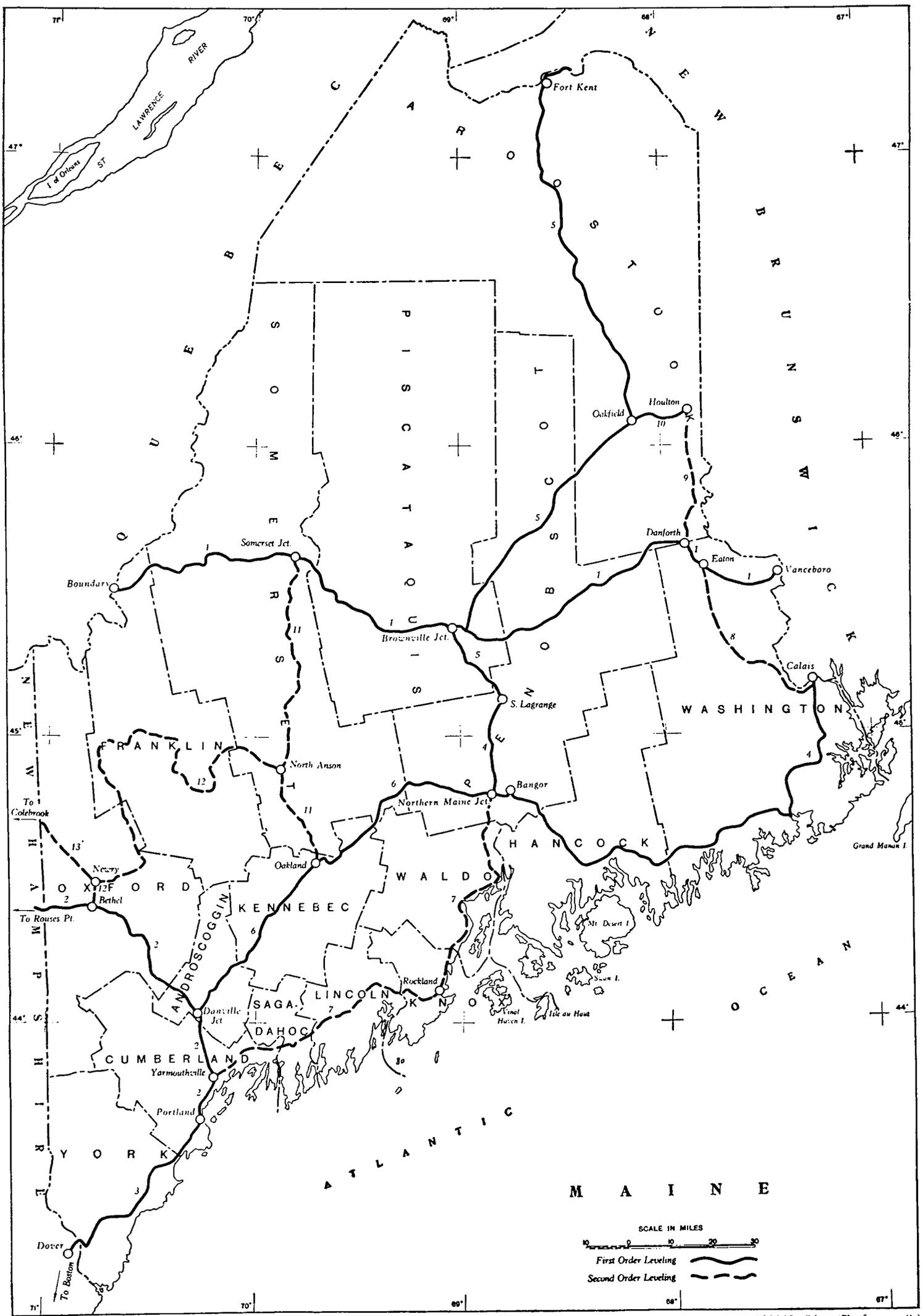


FIGURE 1.—Index map, showing leveling in Maine.

50114°-34. (To face p. 2.)

Boston, Mass., to Albany, N.Y. This line was included in the adjustment, but the details of the line as then adjusted were never published by the Coast and Geodetic Survey.

In 1928, in order to furnish consistent elevations throughout the New England area to engineers and others who would have need of the data, the New England preliminary adjustment was made, and the descriptions of bench marks with the elevations based on that adjustment were issued in the form of "ditto" copies of the manuscript lists.

THE 1929 GENERAL ADJUSTMENT

By 1929 so much additional leveling had been run throughout the United States that a new general adjustment was needed. It was believed that the net would be considerably strengthened by the introduction of the first-order leveling of Canada. Upon request, the Geodetic Survey of Canada kindly placed at the disposal of this Bureau the results of some 20,000 miles of first-order leveling in the Dominion of Canada. This leveling, combined with about 40,000 miles of leveling in the United States, was all adjusted in a single least-squares adjustment in which mean sea level was held at zero, as observed at 26 tidal stations (21 in the United States and 5 in Canada). The elevations resulting from the general adjustment are the best elevations obtainable from the data available at the time of the adjustment. Lines 1 to 6, inclusive, in this publication, were included in the 1929 general adjustment, and the elevations given are the direct result of fitting the various lines to the elevations of the junction bench marks as determined by that adjustment. Lines 7 to 13, inclusive, are here published with elevations which have been brought into agreement with the 1929 general adjustment by fitting the lines in between the adjusted elevations of the bench marks on which the lines originate and terminate.

ORTHOMETRIC CORRECTION

Owing to the fact that the earth is an oblate spheroid, level surfaces at different elevations are not parallel but tend to converge slightly toward the poles of the earth. This necessitates the application of an orthometric correction to the observed differences of elevation in order that the resulting elevations of the bench marks may represent their true heights above mean sea level. The orthometric correction and the methods used in computing it are discussed in detail in Special Publication No. 140, Manual of First-order Leveling.

The orthometric correction reaches a maximum on north-and-south lines run at high elevations, and it is zero on east-and-west lines. The orthometric correction has been applied to the leveling included in this publication. In order that persons using this publication may form an idea as to the order of size of the orthometric correction, the following example is cited:

The difference in elevation between two bench marks at about the latitude of Brownville Junction, Maine, in such locations that their geographic latitudes would differ by 2 minutes and the average elevation of the line of levels connecting them would be 400 feet, would require an orthometric correction of 0.0012 foot. This correction

varies directly with the average elevation and with the difference in latitude between the marks and depends slightly upon the latitude. Tables for use in computing the orthometric correction are given in Special Publication No. 140.

BENCH MARKS

The standard bench-mark disk now used by the Coast and Geodetic Survey is shown in figures 2 and 3. These disks are set in existing structures, in concrete posts cast in place for the special purpose, and in outcrops of rock where such outcrops are available. The concrete posts extend deep enough below the surface of the ground to be reasonably free from disturbance from frost action. They usually project a few inches above the ground to aid in their recovery.

In this publication will be found the descriptions and elevations for many points not marked with the standard disks of this Bureau. The United States Geological Survey established many of the bench marks which are included in this publication. A standard disk, somewhat similar to that used by the Coast and Geodetic Survey, forms the standard type of mark used by that Bureau. In all other cases, the character of the mark is given with the description.

In starting new leveling, difficulty is sometimes encountered by field parties in connecting with bench marks which are disks set vertically in walls or which are small chiseled squares, with the elevations referred to the bottoms of the holes. The wall bench marks present no difficulty if the levelman uses a tape instead of a rod in taking the sight on the bench mark. If the mark is high on the wall, a tape can be allowed to hang down from the mark, giving a "minus backsight" or a "plus foresight."

In connecting with the bottom of a chiseled square which is too small to admit the foot of an ordinary level rod, a small block can be put in the hole. The rod is held on it for the backsight and the same block is carried forward and placed on the first turning point while the foresight is being taken. Then, if the block is removed from the first turning point before the next backsight is taken, the elevation carried forward will be the same as if the rod had been held directly on the bottom of the square. A $\frac{3}{4}$ -inch length of $\frac{1}{2}$ - or $\frac{3}{8}$ -inch dowel stick, or a similar piece of metal rod, makes an excellent block for use in small chiseled squares.

COOPERATION IN THE PRESERVATION OF BENCH MARKS

A bench mark is useful only as long as it is recoverable. When changes occur, as they often do, in the surrounding natural and cultural features with relation to which the mark is described, it becomes increasingly difficult to find the mark by means of the published description. Engineers and others who have occasion to visit any bench marks established by this Bureau or other Government organizations will be doing a public service if they will report the condition of the marks and make suggestions as to needed changes in the descriptions.

Form 685, Report on Condition of Bench Mark (see fig. 4), is a 5- by 8-inch card with blanks to be filled in regarding the condition of the mark. Copies of this form will be furnished on request to

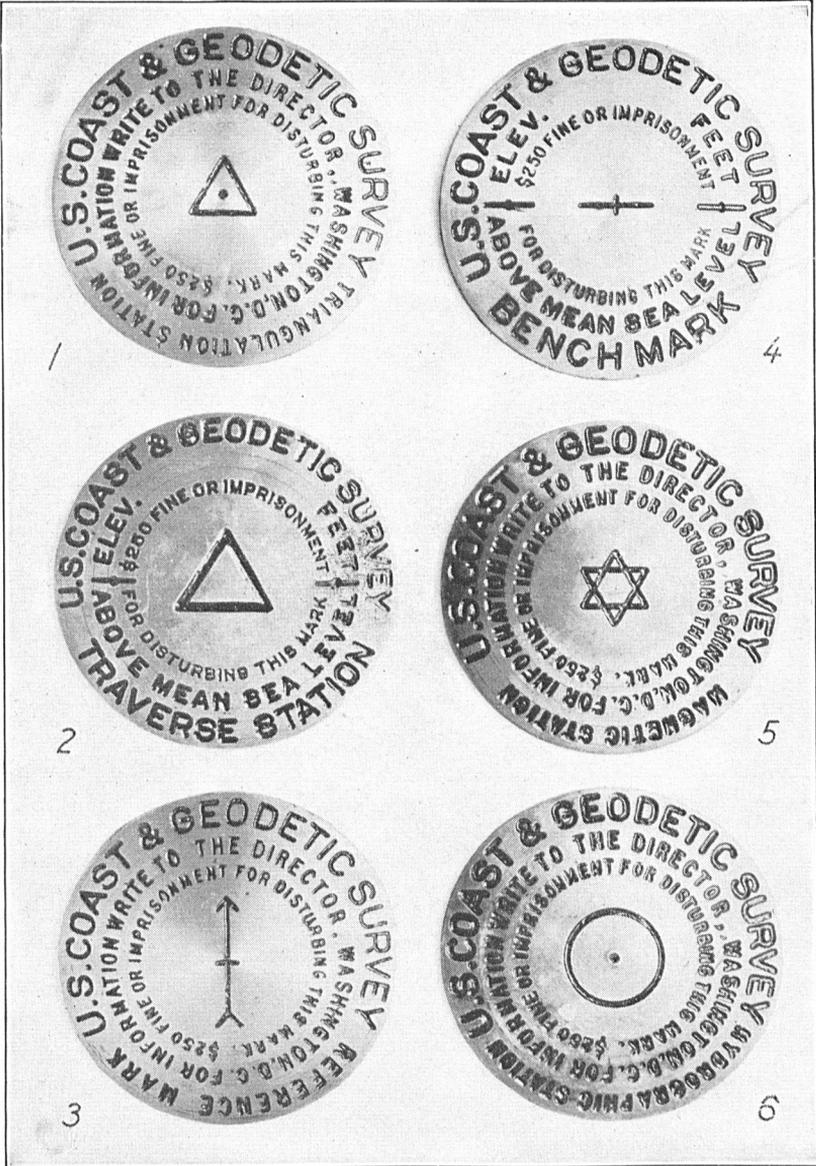


FIGURE 2.—STANDARD MARKS OF THE U.S. COAST AND GEODETIC SURVEY.

- 1. Triangulation station mark.
- 2. Traverse station mark.
- 3. Reference mark.

- 4. Bench mark.
- 5. Magnetic station mark.
- 6. Hydrographic station mark.

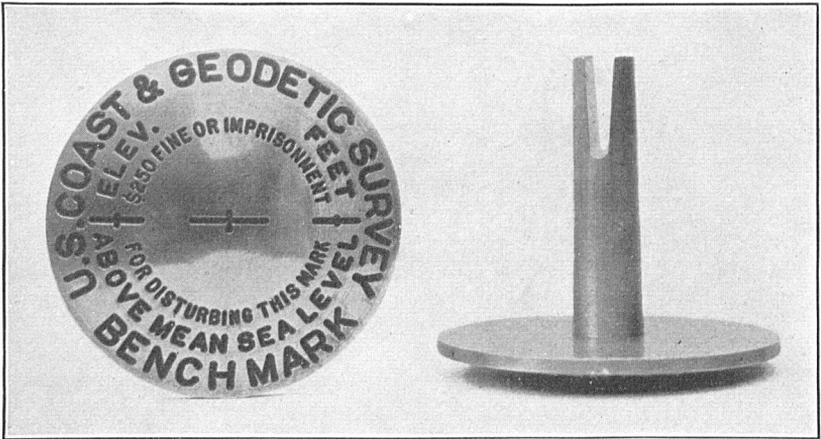


FIGURE 3.—STANDARD BENCH MARK DISK, SHOWING SHANK BY WHICH IT IS FASTENED IN PLACE.

anyone who may have occasion to visit any of these marks. Envelopes addressed to the Director, United States Coast and Geodetic Survey, Washington, D.C., and requiring no postage, will also be furnished for returning these reports.

The Coast and Geodetic Survey proposes to issue from time to time, probably in the form of mimeographed sheets, supplements to this publication and to other State leveling publications, in which will be given such changes in description as may be reported to this office by engineers and others who have visited any of the marks and found the descriptions to be in need of revision. Persons or organizations who have copies of this publication and who wish to receive the supplements as they are issued should write to the Director,

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
Form 685
Ed. Oct., 1920

R

REPORT ON CONDITION OF BENCH MARK

Designation of mark F 14 State Texas County Mitchell
 Mark searched for or recovered by—(Name) Robert Muldron
 Date June 14, 1922 (Occupation) Engineer
 (Address) Mims Bldg., Abilene, Tex.
 Present condition of the mark Good
 Letters or numbers found stamped on (not cast in) the mark None

Use the following space for reporting upon the thoroughness of the search in case mark was not recovered, or for suggesting needed changes in the published description, if the mark was recovered

This mark in good condition and has not been disturbed. The railroad station mentioned in the description has been moved one and one-half miles east.

U. S. GOVERNMENT PRINTING OFFICE: 1920

Signed Robert Muldron

FIGURE 4.—Facsimile of Form 685, Report on Condition of Bench Mark.

United States Coast and Geodetic Survey, Washington, D.C., stating the title and number of the publication for which the supplements are desired.

DESCRIPTIONS AND ELEVATIONS OF BENCH MARKS

LINE 1, BOUNDARY TO VANCEBORO, MAINE

[First-order leveling]

This line follows the Canadian Pacific Railway from Boundary, through Brownville Junction, to Mattawamkeag, and the Maine Central Railroad, through Bancroft and Eaton, to Vanceboro. The field work was done, during the fall of 1916, by a party in charge of J. D. Powell, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Boundary, see Geodetic Survey of Canada Special Publication No. 17, "Precise Levelling in Quebec South of St. Lawrence River."

23 (G.S.C.).—At Ditchfield, Quebec, 25 feet east of the thirteenth pole east of the Canadian Pacific Railway station, and 12 feet south of the track, in the west face of an irregular, partly broken mass of rock. A chisel mark on the end of a $\frac{3}{4}$ -inch copper bolt, stamped "G.S.C. B.M. 23 A." (448.675 meters or 1,472.028 feet.)

D.—About $\frac{1}{8}$ mile southeast along the Canadian Pacific Railway from **Boundary**, Franklin County, and about 20 yards north of the track, in the top of a large boulder. A standard disk. (560.976 meters or 1,840.469 feet.)

E.—About $\frac{1}{8}$ mile southeast along the Canadian Pacific Railway from **Boundary**, Franklin County, at a concrete culvert, in the south parapet wall. A standard disk. (557.037 meters or 1,827.546 feet.)

F.—About 1.6 miles southeast along the Canadian Pacific Railway from **Boundary**, Franklin County, and about 50 yards west of milepost 100, at a concrete culvert, on the south parapet wall. A chiseled square. (529.418 meters or 1,736.932 feet.)

G.—About 2.1 miles southeast along the Canadian Pacific Railway from **Boundary**, Franklin County, at mileage 99.5, about 50 feet east of the track, in a low, flat, rock ledge. A standard disk. (518.436 meters or 1,700.902 feet.)

H.—At **Lowelltown**, Franklin County, just west of the Canadian Pacific Railway station, at a water tank, in the south side of the concrete foundation. A standard disk. (486.475 meters or 1,596.043 feet.)

I.—About 0.2 mile east along the Canadian Pacific Railway from **Lowelltown**, Franklin County, and about 50 yards south of the track, in the top of a medium-sized boulder. A standard disk. (462.802 meters or 1,533.993 feet.)

J.—About 0.9 mile southwest along the Canadian Pacific Railway from **Skinner**, Franklin County, about 0.3 mile northeast of milepost 96, and about 20 yards north of the track, in a flat rock ledge. A standard disk. (447.625 meters or 1,468.583 feet.)

K.—At **Skinner**, Franklin County, about $\frac{1}{8}$ mile east of the Canadian Pacific Railway station, and about 20 yards south of the track, in a low, flat rock. A standard disk. (433.781 meters or 1,423.163 feet.)

L.—At **Keough**, Franklin County, about 500 feet southwest of the Canadian Pacific Railway station, about 25 yards southeast of the track, and about 1 yard outside of the right-of-way, in a large pointed rock. A standard disk. (405.739 meters or 1,331.162 feet.)

M.—About 2.1 miles northeast along the Canadian Pacific Railway from **Keough**, Franklin County, about $\frac{1}{4}$ mile west of milepost 90, and about 50 feet north of the track, in a flat rock ledge. A standard disk. (390.433 meters or 1,280.946 feet.)

N.—About 1.8 miles west along the Canadian Pacific Railway from **Holeb**, Somerset County, about 0.3 mile west of milepost 88, and about 20 yards south of the track, in a low granite boulder. A standard disk. (386.485 meters or 1,267.993 feet.)

O.—About 0.2 mile west along the Canadian Pacific Railway from **Holeb**, Somerset County, about 250 yards west of a water tank, and about 20 yards south of the track, in a large rock ledge. A standard disk. (383.309 meters or 1,257.573 feet.)

P.—About 1 mile east along the Canadian Pacific Railway from **Holeb**, Somerset County, at mileage 85.4, at the bridge over Holeb Stream, in the north end of the east abutment. A standard disk. (379.815 meters or 1,246.110 feet.)

Q.—About 2.8 miles west along the Canadian Pacific Railway from **Attean**, Somerset County, about 1,000 feet east of milepost 82, and about 15 yards south of the track, in a large granite boulder. A standard disk. (381.328 meters or 1,251.074 feet.)

R.—About 1.3 miles west along the Canadian Pacific Railway from **Attean**, Somerset County, $3\frac{1}{2}$ poles west of milepost 80, and about 15 yards south of the track, in a large rock ledge overlooking Attean Pond. A standard disk. (371.932 meters or 1,220.247 feet.)

S.—About 0.9 mile northeast along the Canadian Pacific Railway from **Attean**, Somerset County, about 75 yards east of milepost 78, and about 10 yards north of the track, in a large boulder. A standard disk. (368.528 meters or 1,209.079 feet.)

T.—About 2 miles south along the Canadian Pacific Railway from **Jackman**, Somerset County, at mileage 75.5, at the bridge over the river connecting Wood Pond and Attean Pond, in the south abutment. A standard disk. (356.930 meters or 1,171.028 feet.)

1171 (U.S.G.S.)—About 2 miles south along the Canadian Pacific Railway from **Jackman**, Somerset County, at mileage 75.5, at the bridge over the river connecting Wood Pond and Attean Pond, in the northeast abutment. A United States Geological Survey standard disk. (356.833 meters or 1,170.710 feet.)

U.—About 0.4 mile south along the Canadian Pacific Railway from **Jackman**, Somerset County, 2 poles north of milepost 74, and about 20 yards east of the crossing of the road leading to the yard of the Newcastle Lumber Co., at a concrete culvert, in the north parapet wall. A standard disk. (367.182 meters or 1,204.663 feet.)

V.—At **Jackman**, Somerset County, about $\frac{1}{4}$ mile south of the Canadian Pacific Railway station, at a Roman Catholic convent, in the northwest corner of the south wing. A standard disk. (381.168 meters or 1,250.549 feet.)

W.—At **Jackman**, Somerset County, about 30 yards east of the Canadian Pacific Railway station, and about 10 yards south of the track, on a large boulder. A chiseled square. (372.418 meters or 1,221.841 feet.)

X.—About 0.9 mile east along the Canadian Pacific Railway from **Jackman**, Somerset County, 13 poles east of milepost 73, and about 20 yards north of the track, in a flat rock ledge. A standard disk. (357.915 meters or 1,174.259 feet.)

Y.—About 0.3 mile west along the Canadian Pacific Railway from **Blair**, Somerset County, and $8\frac{1}{2}$ poles east of milepost 70, at a double culvert, north of the track, over the central pier. A standard disk. (355.388 meters or 1,165.969 feet.)

Z.—About 1.6 miles east along the Canadian Pacific Railway from **Blair**, Somerset County, 2 poles west of milepost 68, and about 15 yards north of the track, in a large mass of shale. A standard disk. (358.333 meters or 1,175.631 feet.)

A 1.—At **Long Pond**, Somerset County, about 20 yards north of the track, at the rear of the building used as the post office and general store of the Kellogg Lumber Co., in a large granite boulder. A standard disk. (363.382 meters or 1,192.196 feet.)

B 1.—About 1.5 miles southeast along the Canadian Pacific Railway from **Long Pond**, Somerset County, near mileage 63.5, at the bridge over Parlin Stream, in the east abutment. A standard disk. (356.399 meters or 1,169.286 feet.)

C 1.—About 1 mile west along the Canadian Pacific Railway from **Mackamp**, Somerset County, about $\frac{1}{3}$ mile west of milepost 61, and about 20 yards south of the track, in a large, flat, moss-covered rock. A standard disk. (362.266 meters or 1,188.534 feet.)

D 1.—At **Mackamp**, Somerset County, on the Canadian Pacific Railway, about $\frac{1}{4}$ mile west of milepost 60, and about 20 yards east of the east switch of a side track, at a granite culvert, in the south parapet wall. A standard disk. (357.127 meters or 1,171.674 feet.)

E 1.—About 1.9 miles west along the Canadian Pacific Railway from **Brassua**, Somerset County, 12 poles east of milepost 58, and about 15 yards south of the track, in a boulder. A standard disk. (355.050 meters or 1,164.860 feet.)

F 1.—About 0.2 mile west along the Canadian Pacific Railway from **Brassua**, Somerset County, and 3 poles west of milepost 56, at a concrete culvert, in the south parapet wall. A standard disk. (339.997 meters or 1,115.473 feet.)

1110 (U.S.G.S.).—About 0.2 mile west along the Canadian Pacific Railway from **Tarratine**, Somerset County, at milepost 52, at the bridge over Misery Stream, in the south end of the east abutment. A United States Geological Survey standard disk. (338.331 meters or 1,110.008 feet.)

For additional bench marks in the vicinity of Somerset Junction, see page 50.

G 1.—About 0.2 mile east along the Canadian Pacific Railway from **Somerset Junction**, Somerset County, at mileage 48.72, at the bridge over Kennebec River, in the center of the stone arch span, under about 1 foot of gravel ballast. A standard disk. (313.485 meters or 1,028.492 feet.)

1028 (U.S.G.S.).—About 0.2 mile east along the Canadian Pacific Railway from **Somerset Junction**, Somerset County, at mileage 48.72, at the bridge over Kennebec River, in the north end of the east abutment, under about 1 foot of gravel ballast. A United States Geological Survey standard disk. (313.434 meters or 1,028.325 feet.)

H 1.—About 1.7 miles east along the Canadian Pacific Railway from **Somerset Junction**, Somerset County, 3 poles east of milepost 47, and about 10 yards south of the track, on a large granite boulder. A chiseled square. (309.673 meters or 1,015.985 feet.)

1028 (U.S.G.S.).—About $\frac{1}{3}$ mile northwest of the Canadian Pacific Railway station at **Moosehead**, Piscataquis County, at the bridge over Kennebec River,

in the south end of the east abutment. A United States Geological Survey standard disk. (313.449 meters or 1,028.374 feet.)

I 1.—About 1.6 miles southeast along the Canadian Pacific Railway from Moosehead, Piscataquis County, 12 poles south of milepost 43, and about 20 yards east of the track, in a boulder. A standard disk. (321.241 meters or 1,053.938 feet.)

J 1.—About 2.8 miles north along the Canadian Pacific Railway from Squaw Brook, Piscataquis County, $4\frac{1}{2}$ poles south of milepost 41, and about 20 yards west of the track, in a boulder. A standard disk. (316.045 meters or 1,036.891 feet.)

K 1.—About 0.8 mile north along the Canadian Pacific Railway from Squaw Brook, Piscataquis County, and about 3 poles northwest of milepost 39, at a concrete culvert, in the southwest parapet wall. A standard disk. (317.394 meters or 1,041.317 feet.)

L 1.—At Squaw Brook, Piscataquis County, on the Canadian Pacific Railway, $8\frac{1}{2}$ poles north of milepost 38, and about 20 yards east of the track, in a large rock outcrop. A standard disk. (310.917 meters or 1,039.752 feet.)

M 1.—About 2 miles north along the Canadian Pacific Railway from Greenville Junction, Piscataquis County, and $14\frac{1}{2}$ poles north of milepost 35, at a concrete culvert, in the east parapet wall. A standard disk. (316.655 meters or 1,038.892 feet.)

N 1.—At Greenville Junction, Piscataquis County, just east of the Canadian Pacific Railway station, at the undergrade crossing of a highway, in the west abutment, in the south end of the top course of stone. A standard disk. (322.744 meters or 1,058.869 feet.)

O 1.—At Greenville Junction, Piscataquis County, at the Young Men's Christian Association Building, in the stonework at the northwest corner. A standard disk. (315.962 meters or 1,036.619 feet.)

P 1.—About 2.3 miles southeast along the Canadian Pacific Railway from Greenville Junction, Piscataquis County, $\frac{1}{2}$ pole west of milepost 31, and about 20 yards south of the track, in a large boulder. A standard disk. (341.811 meters or 1,121.425 feet.)

Q 1.—About 2.5 miles west along the Canadian Pacific Railway from Morkill, Piscataquis County, 1 pole east of milepost 29, and 15 yards south of the track, in a large rock. A standard disk. (319.915 meters or 1,049.588 feet.)

R 1.—About 1.9 miles west along the Canadian Pacific Railway from Morkill, Piscataquis County, at the trestle at mileage 28.29, on the north end of the west abutment. A chiseled square. (309.667 meters or 1,015.966 feet.)

S 1.—About 0.6 mile west along the Canadian Pacific Railway from Morkill, Piscataquis County, and $3\frac{1}{2}$ poles west of milepost 27, at a culvert, in the south parapet wall. A standard disk. (304.480 meters or 998.948 feet.)

T 1.—About 1.7 miles southeast along the Canadian Pacific Railway from Morkill, Piscataquis County, at the bridge at mileage 24.89, in the north end of the east abutment. A standard disk. (293.640 meters or 963.384 feet.)

U 1.—About 2.4 miles northwest along the Canadian Pacific Railway from Bodfish, Piscataquis County, and 18 poles east of milepost 23, at a concrete culvert, in the south parapet wall. A standard disk. (259.068 meters or 849.959 feet.)

V 1.—About 1.1 miles southeast along the Canadian Pacific Railway from Bodfish, Piscataquis County, and 2 poles west of milepost 20, in the north parapet wall of a culvert. A standard disk. (219.004 meters or 718.516 feet.)

W 1.—About 0.2 mile west along the Canadian Pacific Railway from Onawa, Piscataquis County, 4 poles east of milepost 18, and about 20 yards north of the track, in a large granite boulder. A standard disk. (193.069 meters or 633.427 feet.)

X 1.—Destroyed. (195.901 meters or 642.719 feet.)

Y 1.—About 2.7 miles west along the Canadian Pacific Railway from Benson, Piscataquis County, and 19 poles east of milepost 16, at a concrete culvert, in the north parapet wall. A standard disk. (219.009 meters or 720.501 feet.)

Z 1.—About 0.2 mile east along the Canadian Pacific Railway from Benson, Piscataquis County, at milepost 13, about 60 feet south of the track, in a granite boulder. A standard disk. (222.333 meters or 729.438 feet.)

A 2.—About 0.3 mile west along the Canadian Pacific Railway from Ray, Piscataquis County, at a large concrete culvert, on the north parapet wall. A chiseled square. (215.517 meters or 707.075 feet.)

B 2.—About 0.6 mile east along the Canadian Pacific Railway from Ray, Piscataquis County, 16 poles east of milepost 11, and about 25 yards north of

the track, in a granite boulder. A standard disk. (226.711 meters or 743.801 feet.)

C 2.—About 0.6 mile east along the Canadian Pacific Railway from **Barnard**, Piscataquis County, $1\frac{1}{2}$ poles west of milepost 8, and about 20 yards north of the track, in a large granite boulder. A standard disk. (227.244 meters or 745.550 feet.)

D 2.—About $1\frac{1}{2}$ miles west along the Canadian Pacific Railway from **Williamsburg**, Piscataquis County, 20 poles east of milepost 6, and about 25 yards south of the track, in a granite boulder. A standard disk. (206.965 meters or 678.985 feet.)

E 2.—About 2.3 miles west along the Canadian Pacific Railway from **Brownville Junction**, Piscataquis County, 17 poles west of milepost 2, and about 20 yards north of the track, in a boulder. A standard disk. (155.465 meters or 510.055 feet.)

F 2.—At **Brownville Junction**, Piscataquis County, at Wilkinson's store on Main Street, in the cement porch. A standard disk. (119.163 meters or 390.954 feet.)

For additional bench marks in the vicinity of Brownville Junction, see page 32.

G 2.—About 1.7 miles west along the Canadian Pacific Railway from **Knights**, Piscataquis County, $3\frac{1}{2}$ poles east of milepost 102, and about 30 feet south of the track, in a boulder. A standard disk. (152.983 meters or 501.912 feet.)

H 2.—About 0.4 mile southeast along the Canadian Pacific Railway from **Knights**, Piscataquis County, and 1 pole east of milepost 100, south of the track, in a boulder. A standard disk. (157.014 meters or 515.137 feet.)

I 2.—About 1.9 miles northwest along the Canadian Pacific Railway from **Lake View**, Piscataquis County, 16 poles west of milepost 97, 6 poles east of bridge 97.62, and about 50 feet north of the track, in a boulder. A standard disk. (141.605 meters or 464.582 feet.)

J 2.—About 0.5 mile east along the Canadian Pacific Railway from **Lake View**, Piscataquis County, and 1 pole west of milepost 95, at the south edge of the right-of-way, in a boulder. A standard disk. (140.858 meters or 462.132 feet.)

K 2.—About 3 miles west along the Canadian Pacific Railway from **Hardy Pond**, Piscataquis county, and $17\frac{1}{2}$ poles east of milepost 93, at a concrete culvert, in the north parapet wall. A standard disk. (107.560 meters or 352.886 feet.)

L 2.—At **Hardy Pond**, Piscataquis County, on the Canadian Pacific Railway, $8\frac{3}{4}$ poles east of milepost 90, and about 20 yards south of the track, in a large granite boulder. A standard disk. (121.673 meters or 399.189 feet.)

M 2.—About 0.3 mile southwest along the Canadian Pacific Railway from **Russells Siding**, Penobscot County, about 19 poles west of milepost 87, and about 20 yards south of the track, in a large granite boulder. A standard disk. (97.255 meters or 319.077 feet.)

N 2.—About 1.5 miles west along the Canadian Pacific Railway from **Seboois**, Penobscot County, 6 poles east of milepost 85, and about 15 yards north of the track, in a large granite boulder. A standard disk. (73.342 meters or 240.623 feet.)

223 (U.S.G.S.)—About 0.6 mile east along the Canadian Pacific Railway from **Seboois**, Penobscot County, 11 poles east of milepost 83, and about 15 yards north of the track, in a boulder. A United States Geological Survey standard disk. (68.248 meters or 223.910 feet.)

O 2.—About $\frac{3}{4}$ mile east along the Canadian Pacific Railway from **Seboois**, Penobscot County, $22\frac{1}{2}$ poles east of milepost 83, and about 60 feet north of the track, in a granite boulder. A standard disk. (75.895 meters or 248.999 feet.)

P 2.—About 1 mile west along the Canadian Pacific Railway from **Gilford**, Penobscot County, at the bridge at mileage 80.41, in the north end of the east abutment. A standard disk. (69.129 meters or 226.801 feet.)

225 (U.S.G.S.)—About 0.5 mile west along the Canadian Pacific Railway from **Gilford**, Penobscot County, at the bridge at mileage 79.94, in the south end of the east abutment. A United States Geological Survey standard disk. (68.663 meters or 225.272 feet.)

Q 2.—About 0.4 mile west along the Canadian Pacific Railway from **Woodard**, Penobscot County, $2\frac{1}{2}$ poles west of milepost 76, and about 10 yards north of the track, in a large boulder. A standard disk. (85.019 meters or 278.933 feet.)

R 2.—About $1\frac{1}{4}$ miles northeast along the Canadian Pacific Railway from **Woodard**, Penobscot County, 5 poles east of milepost 74, and about 60 feet north of the track, in a boulder. A standard disk. (86.975 meters or 285.350 feet.)

217 (U.S.G.S.).—About $2\frac{1}{4}$ miles southwest along the Canadian Pacific Railway from **Chester**, Penobscot County, at the bridge over Medunkeunk Stream, at mileage 72.29, in the north end of the west abutment. A United States Geological Survey standard disk. (66.120 meters or 216.929 feet.)

S 2.—About 0.8 mile southwest along the Canadian Pacific Railway from **Chester**, Penobscot County, $17\frac{3}{4}$ poles east of milepost 71, and about 20 yards south of the track, in a granite boulder. A standard disk. (77.757 meters or 255.108 feet.)

T 2.—At **Craigvale**, Penobscot County, on the Canadian Pacific Railway, $20\frac{1}{2}$ poles west of milepost 66, in the south side of a culvert. A standard disk. (70.241 meters or 230.449 feet.)

U 2.—About 2 miles southwest along the Canadian Pacific Railway from **Mattawamkeag**, Penobscot County, at milepost 64, about 15 yards north of the track, in a granite boulder. A standard disk. (64.767 meters or 212.490 feet.)

V 2.—At **Mattawamkeag**, Penobscot County, in the Maine Central Railroad yards, about 1,000 feet west of the station, at a concrete culvert, in the north parapet wall. A standard disk. (66.132 meters or 216.968 feet.)

W 2.—At **Mattawamkeag**, Penobscot County, at the Methodist Episcopal Church, just south of the west entrance, in a shelf in the foundation. A standard disk. (66.728 meters or 218.923 feet.)

Y 2.—About 1.1 miles west along the Maine Central Railroad from **Gordon**, Penobscot County, 6 poles west of the sign "Gordon One Mile", and about 10 yards north of the track, in a large boulder. A standard disk. (105.104 meters or 344.829 feet.)

Z 2.—About 2.9 miles west along the Maine Central Railroad from **Kingman**, Penobscot County, 8 poles east of milepost 51, and about 20 yards north of the track, in a boulder. A standard disk. (100.308 meters or 329.291 feet.)

A 3.—At **Kingman**, Penobscot County, on the Maine Central Railroad, $1\frac{1}{2}$ poles east of milepost 48, at a bridge, in the south end of the west abutment. A standard disk. (104.037 meters or 341.328 feet.)

B 3.—At **Drew**, Penobscot County, on the Maine Central Railroad, at milepost 45, about 20 yards south of the track, in a boulder. A standard disk. (99.144 meters or 325.275 feet.)

C 3.—About 3.7 miles southwest along the Maine Central Railroad from **Wytopitlock**, Aroostook County, about 10 poles west of milepost 42, at a bridge, in the south end of the west abutment. A standard disk. (99.111 meters or 325.167 feet.)

CX 3 (U.S.G.S.).—About 3.7 miles southwest along the Maine Central Railroad from **Wytopitlock**, Aroostook County, and about 10 poles west of milepost 42, at a bridge, in the south end of the east abutment. A United States Geological Survey standard disk. (98.714 meters or 323.864 feet.)

D 3.—About 1.3 miles southwest along the Maine Central Railroad from **Wytopitlock**, Aroostook County, and $8\frac{1}{2}$ poles east of milepost 40, at a bridge, in the north end of the east abutment. A standard disk. (99.900 meters or 327.755 feet.)

DX 3 (U.S.G.S.).—About $\frac{1}{2}$ mile northeast along the Maine Central Railroad from **Wytopitlock**, Aroostook County, $9\frac{1}{2}$ poles west of milepost 38, at a bridge, in the south end of the west abutment. A United States Geological Survey standard disk. (103.463 meters or 339.445 feet.)

E 3.—About 1 mile southwest along the Maine Central Railroad from **Bancroft**, Aroostook County, and 2 poles southwest of milepost 37, at a concrete culvert, in the south parapet wall. A standard disk. (102.667 meters or 336.833 feet.)

F 3.—About 1.6 miles east along the Maine Central Railroad from **Bancroft**, Aroostook County, and 24 poles east of milepost 35, at a bridge, in the south end of the east abutment. A standard disk. (105.474 meters or 346.043 feet.)

G 3.—About 3.9 miles east along the Maine Central Railroad from **Bancroft**, Aroostook County, and $3\frac{1}{2}$ poles west of milepost 32, at a concrete culvert, in the south parapet wall. A standard disk. (127.708 meters or 418.989 feet.)

H 3.—About 4.4 miles east along the Maine Central Railroad from **Bancroft**, Aroostook County, 15 poles east of milepost 32, and 5 poles west of the sign "Cherokee One Mile", at a concrete culvert, on the top of the south parapet wall. A chiseled square. (128.655 meters or 422.066 feet.)

I 3.—About 2.2 miles west along the Maine Central Railroad from **Danforth**, Washington County, 9 poles east of milepost 29, and about 60 feet south of the track, in a boulder. A standard disk. (121.583 meters or 398.894 feet.)

J 3.—At **Danforth**, Washington County, at the town hall, at the east side of the west entrance, in the granite foundation. A standard disk. (119.412 meters or 391.771 feet.)

For additional bench marks in the vicinity of **Danforth**, see page 47.

K 3.—About 1 mile southeast along the Maine Central Railroad from **Danforth**, Washington County, 15 poles southeast of milepost 26, and about 60 feet southwest of the track, in a large granite boulder. A standard disk. (120.576 meters or 395.590 feet.)

L 3.—About 1 mile northwest along the Maine Central Railroad from **Eaton**, Washington County, at milepost 23, about 20 yards northeast of the track, in a large boulder. A standard disk. (127.189 meters or 417.286 feet.)

For additional bench marks in the vicinity of **Eaton**, see pages 46 and 47.

M 3.—About 1.6 miles southeast along the Maine Central Railroad from **Eaton**, Washington County, 26 poles east of milepost 21, and about 20 yards north of the track, in a large granite boulder. A standard disk. (124.928 meters or 409.863 feet.)

N 3.—About 0.7 mile northwest along the Maine Central Railroad from **Forest**, Washington County, 12 poles east of milepost 18, and about 15 yards north of the track, in a large flat boulder. A standard disk. (134.176 meters or 440.209 feet.)

O 3.—About 1 mile southeast along the Maine Central Railroad from **Forest**, Washington County, and 1 pole west of milepost 16, at a culvert, in the north parapet wall. A standard disk. (125.102 meters or 410.439 feet.)

P 3.—About 1.6 miles southeast along the Maine Central Railroad from **Forest**, Washington County, 25 poles east of milepost 16, and about 60 feet south of the track, in a boulder. A standard disk. (118.573 meters or 389.018 feet.)

Q 3.—About 4.1 miles southeast along the Maine Central Railroad from **Forest**, Washington County, 4 poles east of milepost 13, and about 10 yards south of the track, in a boulder. A standard disk. (114.708 meters or 376.338 feet.)

R 3.—About 7.5 miles southeast along the Maine Central Railroad from **Forest**, Washington County, 18 poles west of milepost 9, and about 20 yards south of the track, in a boulder. A standard disk. (152.646 meters or 500.806 feet.)

S 3.—About 1½ miles southwest along the Maine Central Railroad from **Lambert Lake**, Washington County, 12 poles east of milepost 7, and about 60 feet south of the track, in a boulder. A standard disk. (140.359 meters or 460.494 feet.)

T 3.—At **Lambert Lake**, Washington County, 6 poles west of the Maine Central Railroad station, at a culvert over the outlet of **Lambert Lake**, on the south parapet wall. A chiseled square. (130.699 meters or 428.802 feet.)

U 3.—About 4 miles southwest along the Maine Central Railroad from **Vanceboro**, Washington County, 1½ poles west of milepost 4, and about 30 yards south of the track, in a boulder. A standard disk. (125.113 meters or 410.475 feet.)

V 3.—At **Vanceboro**, Washington County, about ¼ mile east of the Canadian Pacific Railway station, at the bridge over **St. Croix River**, in the south end of the west abutment. A standard disk. (119.411 meters or 391.768 feet.)

W 3.—At **Vanceboro**, Washington County, about ¼ mile east of the Canadian Pacific Railway station, at the bridge over **St. Croix River**, in the north end of the west abutment. A standard triangulation-station disk. (119.401 meters or 391.735 feet.)

13 B (G.S.C.).—At **Vanceboro**, Washington County, ¼ mile east of the Canadian Pacific Railway station, at the bridge over **St. Croix River**, in the south face of the southeast retaining wall, 11 feet east of the east face of the east abutment, in the third course below the top. The chisel mark on the end of a ¾-inch copper bolt, stamped "G.S.C. B.M. 13 B." (118.443 meters or 388.592 feet.)

For additional bench marks in the vicinity of **Vanceboro**, see Geodetic Survey of Canada Publication No. 16, "Precise Levelling in Nova Scotia, New Brunswick, and Prince Edward Island."

LINE 2, ROUSES POINT, N.Y., TO PORTLAND, MAINE (PART)

[First-order leveling]

This line enters Maine in the vicinity of Gilead and follows the Grand Trunk Railway, through Bethel and Oxford, to Yarmouth Junction, and the Maine Central Railroad to Portland. The field work was done, during November and December 1922, by a party in charge of D. B. Pheley, junior engineer.

X 3=712 (U.S.G.S.).—About 0.3 mile west along the Grand Trunk Railway from Gilead, Oxford County, at the bridge over Wild River, in the north corner of the east abutment, in the second course of stone from the top. A United States Geological Survey standard disk, stamped "712 MB." (217.128 meters or 712.361 feet.)

Y 3.—About 2 miles east along the Grand Trunk Railway from Gilead, Oxford County, about 300 feet east of milepost 219-78, at a small underpass, in the south end of the east abutment. A standard disk, stamped "Y 3 1922." (208.288 meters or 683.358 feet.)

Z 3=656 (U.S.G.S.).—About 1.0 mile west along the Grand Trunk Railway from Allens, Oxford County, at a highway bridge over Pleasant River, in the northeast corner of the east abutment. A United States Geological Survey standard disk, stamped "656." (199.956 meters or 656.022 feet.)

A 4.—About 0.8 mile northeast along the Grand Trunk Railway from Allens, Oxford County, at the bridge over Androscoggin River, in the north end of the west abutment, in the second course of stone. A standard disk, stamped "A 4 1922." (201.326 meters or 660.517 feet.)

B 4.—About 1.0 mile west along the Grand Trunk Railway from Bethel, Oxford County, and about 200 feet east of a road crossing, at a small underpass, in the south end of the east abutment. A standard disk, stamped "B 4 1922." (197.530 meters or 648.063 feet.)

C 4=648 (U.S.G.S.).—About 0.5 mile north of Bethel, Oxford County, at the highway bridge over Androscoggin River, in the west end of the south abutment. A United States Geological Survey standard disk, stamped "648." (197.429 meters or 647.732 feet.)

For additional bench marks in the vicinity of Bethel, see page 63.

D 4.—About 0.5 mile east along the Grand Trunk Railway from Bethel, Oxford County, at the bridge over Alder River, in the north end of the west abutment. A standard disk, stamped "D 4 1922." (197.790 meters or 648.916 feet.)

E 4=655 (U.S.G.S.).—About 2.0 miles east along the Grand Trunk Railway from Bethel, Oxford County, at a small bridge, in the north end of the east abutment. A United States Geological Survey standard disk, stamped "655." (199.571 meters or 654.759 feet.)

F 4.—About 1.7 miles northwest along the Grand Trunk Railway from Locke Mills, Oxford County, at a girder bridge over Alder River, in the south end of the west abutment. A standard disk, stamped "F 4 1922." (210.288 meters or 689.920 feet.)

G 4=753 (U.S.G.S.).—About 400 feet north of the Grand Trunk Railway station at Locke Mills, Oxford County, and 100 feet west of Hotel Greenwood, in the face of a rock ledge. A United States Geological Survey standard disk, stamped "753." (229.492 meters or 752.925 feet.)

H 4.—About 1.5 miles northwest along the Grand Trunk Railway from Bryant Pond, Oxford County, and about 350 feet west of milepost 234-83, on the north side of the track, in the top of a large boulder. A standard disk, stamped "H 4 1922." (226.453 meters or 742.955 feet.)

J 4=720 (U.S.G.S.).—Destroyed in September 1932. (219.413 meters or 719.857 feet.)

J 4 RESET (G.T.Ry.).—About 0.4 mile west along the Grand Trunk Railway from the station at Bryant Pond, Oxford County, 652 feet west of the center of a highway crossing, and 36 feet north of the track, in a rock ledge. A standard disk, stamped "J 4 RESET 1932." (729.869 feet.)

NOTE.—This bench mark was established and its elevation determined by engineers of the Grand Trunk Railway in September 1932.

K 4=577 (U.S.G.S.).—About 2.7 miles west along the Grand Trunk Railway from Bates, Oxford County, and about 200 feet north of milepost 239-58, on the west side of the track, in the inclined foot of a rock ledge. A United States Geological Survey standard disk, stamped "577." (175.795 meters or 576.754 feet.)

L 4.—About 2.3 miles west along the Grand Trunk Railway from Bates, Oxford County, at an arch bridge over Black Brook, in the west end of the south spandrel wall. A standard disk, stamped "L 4 1922." (169.204 meters or 555.130 feet.)

M 4.—About 1.9 miles west along the Grand Trunk Railway from Bates, Oxford County, at an undergrade crossing, in the north end of the east abutment. A standard disk, stamped "M 4 1922." (159.985 meters or 524.884 feet.)

N 4=486 (U.S.G.S.).—At Bates, Oxford County, about 300 feet east of the Grand Trunk Railway station, at the bridge over Little Androscoggin River, in the north end of the capstone of the west abutment. A United States Geological Survey standard disk, stamped "486." (148.148 meters or 486.049 feet.)

O 4=462 (U.S.G.S.).—About 2.3 miles southeast along the Grand Trunk Railway from Bates, Oxford County, at the Snows Falls road crossing, opposite milepost 244-53, on the west side of the track, in the face of a rock ledge. A United States Geological Survey standard disk, stamped "462." (140.668 meters or 461.508 feet.)

P 4.—About 4.7 miles north along the Grand Trunk Railway from South Paris, Oxford County, and about 40 feet south of a grade crossing, at a small bridge, in the east end of the south abutment. A standard disk, stamped "P 4 1922." (126.649 meters or 415.514 feet.)

Q 4.—About 2.4 miles north along the Grand Trunk Railway from South Paris, Oxford County, at a bridge, in a cubical granite block on the east end of the north abutment. A standard disk, stamped "Q 4 1922." (124.512 meters or 408.503 feet.)

NOTE.—This bench mark is 8 inches from the former location of 409 (U.S.G.S.), which was removed in 1922.

R 4.—At South Paris, Oxford County, at the Association Building, in the foundation of the northeast wall, 2 feet from the north corner, and 3 feet higher than the ground. A standard disk, stamped "R 4 1922." (116.698 meters or 382.867 feet.)

S 4.—At South Paris, Oxford County, at the courthouse, in the foundation of the east wall, 8 feet from the northeast corner. A standard disk, stamped "S 4 1922." (126.789 meters or 415.974 feet.)

T 4=376 (U.S.G.S.).—About 1.4 miles south along the Grand Trunk Railway from South Paris, Oxford County, at a granite arch culvert, and in the south end of the east wall. A United States Geological Survey standard disk, stamped "376." (114.736 meters or 376.430 feet.)

U 4=363 (U.S.G.S.).—About 2¼ miles northwest along the Grand Trunk Railway from Oxford, Oxford County, about 500 feet north of a highway crossing, and 280 feet east of the highway, on the property of L. A. Twitchell, in a prominent rock ledge. A United States Geological Survey standard disk, stamped "363 1906." (110.753 meters or 363.362 feet.)

V 4.—About ¼ mile northwest along the Grand Trunk Railway from the station at Oxford, Oxford County, near milepost 256-41, at a small bridge, in the west end of the northwest abutment. A standard disk, stamped "V 4 1922." (100.625 meters or 330.134 feet.)

W 4.—Destroyed in 1931. (95.267 meters or 312.555 feet.)

WX 4 (M.S.H.C.).—In Oxford County, about 2 miles west along the Grand Trunk Railway from Mechanic Falls, Androscoggin County, about 250 feet west of block signal 2584, at a point where the highway parallels the track, on the northeast side of the road, in the top of a rock ledge, 5 feet higher than the ground. A standard disk, stamped "WX 4 1931." (313.714 feet.)

NOTE.—This bench mark was set and its elevation determined in 1931 by the Maine State Highway Commission.

X 4.—At Mechanic Falls, Androscoggin County, at the Maine Central Railroad station, at the southeast corner, in the foundation, 6 inches higher than the walk. A standard disk, stamped "X 4 1922." (92.702 meters or 304.140 feet.)

Y 4.—About $\frac{3}{4}$ mile northwest along the Grand Trunk Railway from **Empire Road**, Androscoggin County, at the bridge over Worthley Brook, in the north end of the southeast abutment. A standard disk, stamped "Y 4 1922." (77.650 meters or 254.757 feet.)

Z 4=280 (U.S.G.S.).—Destroyed in 1929. (85.440 meters or 280.314 feet.)

Z 4=280 RESET (M.C.R.R.).—About $\frac{3}{4}$ mile northwest along the Grand Trunk Railway from the station at **Lewiston Junction**, Androscoggin County, at the overhead bridge of the Maine Central Railroad, at the north end of the east abutment, in the top of the bridge seat. A United States Geological Survey standard disk, stamped "280 AUGUSTA Z 4." (279.949 feet.)

NOTE.—This bench mark was set and its elevation determined by engineers of the Maine Central Railroad in 1929.

A 5.—At **Danville Junction**, Androscoggin County, at the Grand Trunk Railway station, in the southeast corner of the foundation, 2 feet higher than the ground. A standard disk, stamped "A 5 1922." (63.197 meters or 207.339 feet.)

For additional bench marks in the vicinity of **Danville Junction**, see page 37.

B 5.—About 0.8 mile south along the Grand Trunk Railway from the station at **Danville Junction**, Androscoggin County, at the bridge over Royal River, in the east end of the north abutment. A standard disk, stamped "B 5 1922." (56.448 meters or 185.196 feet.)

C 5.—At **Pownal**, Cumberland County, about 200 feet north of the Grand Trunk Railway station, at an overhead crossing, in the north end of the east spandrel wall. A standard disk, stamped "C 5 1922." (45.946 meters or 150.741 feet.)

D 5.—About $\frac{1}{4}$ mile northwest along the Grand Trunk Railway from the station at **Dunns**, Cumberland County, at the bridge over a branch of Royal River, in the east end of the south abutment. A standard disk, stamped "D 5 1922." (30.289 meters or 99.373 feet.)

F 5=92 (U.S.G.S.).—About $\frac{1}{4}$ mile southwest of **Yarmouth Junction**, Cumberland County, at the Maine Central Railroad bridge over Royal River, in the northwest end of the south abutment. A United States Geological Survey standard disk, stamped "92." (27.947 meters or 91.689 feet.)

For additional bench marks in the vicinity of **Yarmouth Junction**, see page 38.

G 5.—About $1\frac{1}{4}$ miles southwest along the Maine Central Railroad from **Yarmouth Junction**, Cumberland County, at an overhead crossing, in the west end of the north abutment. A standard disk, stamped "G 5 1922." (27.102 meters or 88.917 feet.)

H 5=58 (U.S.G.S.).—At **Cumberland Center**, Cumberland County, about 250 feet south of the Maine Central Railroad station, at a culvert, in the capstone at the southeast end. A United States Geological Survey standard disk, stamped "58." (17.624 meters or 57.821 feet.)

J 5=48 (U.S.G.S.).—About 2.5 miles north along the Maine Central Railroad from the station at **Deering Junction**, Cumberland County, at the bridge over Presumpscot River, in the northwest end of the northeast abutment. A United States Geological Survey standard disk. (14.506 meters or 47.592 feet.)

K 5=110 (U.S.G.S.).—About 0.2 mile north along the Maine Central Railroad from the station at **Deering Junction**, Cumberland County, and about 100 feet northeast of a highway crossing, on the southeast side of the truck, in the face of a rock ledge. A United States Geological Survey standard disk, stamped "110." (33.371 meters or 109.485 feet.)

Tidal 36=26 (U.S.G.S.).—At **Portland**, Cumberland County, at the Union Station, on the right side of the entrance. A United States Geological Survey standard disk, stamped "26." (7.918 meters or 25.978 feet.)

NOTE.—It was reported, in September 1930, that the disk had been broken off, leaving only the shank in the hole in which it was set.

Tidal 4.—At **Portland**, Cumberland County, at 147 Commercial Street, in the stone doorstep of the building. A point on the step, marked by a $\frac{1}{2}$ -inch drill hole. (3.499 meters or 11.480 feet.)

NOTE.—It was reported, on September 23, 1932, that the bench mark was covered by a cement patch.

Tidal 2 (U.S.E.).—At **Portland**, Cumberland County, at the customhouse, at the corner of Vine and Commercial Streets, between two pillars on the right of the Commercial Street entrance, at a point on the water table marked by a drill hole $\frac{1}{2}$ inch in diameter and $\frac{1}{8}$ inch deep. The top of the water table. (4.280 meters or 14.042 feet.)

Tidal 32.—At **Portland**, Cumberland County, on Commercial Street, about 36 yards north of Franklin Street, at the window just north of 33 Commercial Street, 9 feet south of the northeast corner of the building, on the top of the window sill, about 2 feet higher than the ground. A chiseled cross. (4.056 meters or 15.276 feet.)

Tidal 31.—At **Portland**, Cumberland County, on Commercial Street, about 75 yards south of India Street, at the office of the Maine Electric Co., in the northeast corner of the stone foundation, 6 inches higher than the ground. A standard disk. (4.420 meters or 14.501 feet.)

Tidal 30.—At **Portland**, Cumberland County, at the corner of Commercial and India Streets, at the brick freight depot of the Grand Trunk Railway, on the lower foundation stone, about $\frac{1}{2}$ foot lower than the cement sidewalk, and 4 inches above ground. A 1-inch chiseled cross. (4.413 meters or 14.478 feet.)

Tidal 33.—At **Portland**, Cumberland County, at 79 Commercial Street, about 40 yards north of Custom House Street, in the doorway of the store of W. L. Blake & Co., on the lower stone sill, about 1 foot higher than the sidewalk. A 2-inch chiseled cross. (3.933 meters or 12.904 feet.)

For additional bench marks in the vicinity of Portland, see below.

LINE 3, PORTLAND, MAINE, TO BOSTON, MASS. (PART)

[First-order leveling]

This line follows the Boston & Maine Railroad from Portland, through Biddeford, Kennebunk, and North Berwick to South Berwick, Maine, and continues into New Hampshire. The field work was done, during the fall of 1923, by a party in charge of E. B. Roberts, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Portland, see above.

L 5.—At **Portland**, Cumberland County, at the Portland Bridge, on the pier just southeast of Commercial Street, between the street and the tracks connecting the street service tracks with the water-front freight yards, in the top of the lower course of the pier, 10 feet from the southwest end, and 4 feet higher than the ground. A standard disk, stamped "L 5 1923." (4.750 meters or 15.584 feet.)

M 5.—At **Rigby**, Cumberland County, on the Dover Line of the Boston & Maine Railroad, 2 rails south of the station, southeast of a road crossing, 12 feet south of the road, and 17 feet east of the east rail. A standard disk, stamped "M 5 1923" and set in the top of a concrete post. (11.538 meters or 37.854 feet.)

N 5.—At **Scarboro Beach**, Cumberland County, on the Dover Line of the Boston & Maine Railroad, just north of the station, 3 rails north of bridge 108.77, and 7 feet east of the east rail, in a retaining wall, 2 feet higher than the ground. A standard disk, stamped "N 5 1923." (5.183 meters or 17.005 feet.)

O 5.—At **Pine Point**, Cumberland County, on the Dover Line of the Boston & Maine Railroad, 6 rails south of the station, 51 feet north of a highway, and 129 feet east of the east rail, in a boulder. A standard disk, stamped "O 5 1923." (3.937 meters or 12.917 feet.)

B 104.—At **Old Orchard Beach**, York County, on the Dover Line of the Boston & Maine Railroad, in the top of milepost B 104. A standard disk. (4.892 meters or 16.050 feet.)

P 5.—At **Old Orchard Beach**, York County, on the Dover Line of the Boston & Maine Railroad, $10\frac{1}{2}$ rails north of the station, and 54 feet west of the west rail, in the southeast corner of the concrete foundation of the Vermont Dairy, 1 foot higher than the ground. A standard disk, stamped "P 5 1923." (3.397 meters or 11.145 feet.)

Q 5.—About $1\frac{1}{4}$ miles southwest along the Dover Line of the Boston & Maine Railroad from **Old Orchard Beach**, York County, $20\frac{1}{2}$ rails south of milepost B 102, 9 feet north of a private-road crossing, and 39 feet west of the west rail. A standard disk, stamped "Q 5 1923" and set in the top of a concrete post. (9.001 meters or 29.531 feet.)

R 5.—At **Saco**, York County, on the Dover Line of the Boston & Maine Railroad, 9 rails south of the station, 2 rails north of signal bridge D 906, and 6 feet west of the west rail, in an old bridge abutment about 2 feet underground. A standard disk, stamped "R 5 1923." (19.966 meters or 65.505 feet.)

S 5.—At **Biddeford**, York County, on the south bank of Saco River, 84 feet east of the east stone retaining wall of the Cumberland County Light & Power Co., and 345 feet east of the last power-transmission line tower, in a rock ledge, about 4 feet higher than the ground. A standard disk, stamped "S 5 1923." (2.044 meters or 6.706 feet.)

4.6 (U.S.E.)—At **Biddeford**, York County, on the south side of Saco River, near the outer end of the second small rocky point east of the east pier of the Cumberland County Light & Power Co., in a rock ledge, at the high-tide mark. A $\frac{3}{4}$ -inch horizontal drill hole. (1.412 meters or 4.633 feet.)

T 5.—About 2 miles southwest of **Biddeford**, York County, near the divergence of the Eastern and Western Divisions of the Boston & Maine Railroad, $48\frac{1}{2}$ rails south of signal P 917, 9 feet east of the east rail of the Eastern Division, and 1 foot higher than the ground, in a ledge of a rock cut. A standard disk, stamped "T 5 1923." (33.271 meters or 109.157 feet.)

U 5.—About $2\frac{1}{4}$ miles north along the Western Division of the Boston & Maine Railroad from **Arundel**, York County, 13 poles south of signal D 948, on the J. H. Johnson property, 115 feet west of the west rail, in a rock ledge. A standard disk, stamped "U 5 1923." (37.107 meters or 121.742 feet.)

V 5.—About $2\frac{1}{4}$ miles north along the Western Division of the Boston & Maine Railroad from **Kennebunk**, York County, 17 poles north of milepost B92-P32, and 173 feet west of the west rail, in a rock ledge. A standard disk, stamped "V 5 1923." (23.841 meters or 78.218 feet.)

W 5.—At **Kennebunk**, York County, on the Western Division of the Boston & Maine Railroad, 1 rail north of the north end of the station platform, on Summer Street, in the west abutment of bridge 96, 4 feet west of the west rail, and 1 foot higher than the ground. A standard disk, stamped "W 5 1923." (15.573 meters or 51.092 feet.)

X 5.—About 2 miles north along the Western Division of the Boston & Maine Railroad from the station at **Wells Beach**, York County, $11\frac{1}{2}$ rails north of milepost P28-B87, at the bridge over the Kennebunk-Wells highway, in the top of the east end of the north abutment, 5 feet east of the east rail. A standard disk, stamped "X 5 1923." (14.424 meters or 47.323 feet.)

Y 5.—About 1 mile north along the Western Division of the Boston & Maine Railroad from the station at **Wells Beach**, York County, about 12 rails south of the Wells-Wells Branch highway, and 147 feet west of the west rail, in a boulder. A standard disk, stamped "Y 5 1923." (20.075 meters or 65.863 feet.)

Z 5.—About $\frac{3}{4}$ mile southwest along the Western Division of the Boston & Maine Railroad from the station at **Wells Beach**, York County, 14 poles northeast of milepost B84-P31, 120 feet southwest of the Wells-Dover highway, and 420 feet north of the north rail, in a large boulder. A standard disk, stamped "Z 5 1923." (35.543 meters or 116.611 feet.)

A 6.—About $3\frac{1}{4}$ miles west along the Western Division of the Boston & Maine Railroad from the station at **Wells Beach**, York County, 22 rails west of the bridge at Merriland Ridge, 4 rails east of signal D-817, and 24 feet north of the north rail, in a large boulder. A standard disk, stamped: "A 6 1923." (57.774 meters or 189.547 feet.)

B 6.—About $2\frac{1}{2}$ miles northeast along the Western Division of the Boston & Maine Railroad from **North Berwick**, York County, 198 feet west of the crossing of the Sanford road, 9 feet south of milepost P35-B80, and 31 feet south of the south rail, in a rock ledge. A standard disk, stamped "B 6 1923." (54.174 meters or 177.736 feet.)

C 6.—At **North Berwick**, York County, 108 feet northeast of the crossing of the Eastern and Western Divisions of the Boston & Maine Railroad, at the first bridge north of the station, in the concrete pier of the bridge, 10 feet west of the west rail, and 2.5 feet higher than the ground. A standard disk, stamped "C 6 1923." (44.698 meters or 146.647 feet.)

NOTE.—A report, dated March 1933, stated that the bridge mentioned in this description had been removed, but that the concrete piers remained.

D 6.—About $1\frac{1}{2}$ miles northeast of **Agamenticus**, York County, on the Eastern Division of the Boston & Maine Railroad, 32 poles south of bridge 72-26, 15 poles south of milepost P36-B72, 9 rails south of signal P-719, 36 feet north of the south end of a rock cut, and 9 feet west of the west rail, in the rock wall of the cut, 1 foot higher than the ground. A standard disk, stamped "D 6 1923." (44.480 meters or 145.931 feet.)

E 6.—At **Agamenticus**, York County, on the Eastern Division of the Boston & Maine Railroad, $2\frac{1}{2}$ rails south of milepost B70-P38, and 75 feet east of the east rail, at a highway bridge over a stream, in the top of the south end of the west abutment. A standard disk, stamped "E 6 1923." (28.858 meters or 94.678 feet.)

F 6.—At **Jewett**, York County, on the Eastern Division of the Boston & Maine Railroad, $11\frac{1}{2}$ rails south of the south end of the station platform, and 3 feet west of the west rail, in a rock ledge, 1 foot higher than the ground. A standard disk, stamped "F 6 1923." (29.500 meters or 96.785 feet.)

101.7 (U.S.G.S.).—At **South Berwick**, York County, near the Boston & Maine Railroad station. The top of milepost I 71, marked "101.7 feet." (30.946 meters or 101.529 feet.)

The line continues into New Hampshire.

LINE 4, CALAIS TO SOUTH LAGRANGE, MAINE

[First-order leveling]

This line follows the Maine Central Railroad from Calais, through Marion, Machias, Cherryfield, Franklin, Holden, and Bangor, to Northern Maine Junction, and the Bangor & Aroostook Railroad to South Lorange. The field work was done, during the fall of 1927, by a party in charge of Byron Williams, junior hydrographic and geodetic engineer.

NOTE.—Since the time of the original leveling, this office has received reports stating that several of the concrete-post bench marks have heaved as a result of frost action. Before any of the bench marks along this line are used to control important leveling, they should be inspected for signs of disturbance, and, if possible, checked against nearby marks set in bedrock, or other bench marks shown by new leveling to have accurately maintained their relative elevations.

For additional bench marks in Canada in the vicinity of Calais, Maine, see Geodetic Survey of Canada Special Publication No. 16, "Precise Levelling in Nova Scotia, New Brunswick, and Prince Edward Island."

1 B (G.S.C.).—At **Calais**, Washington County, on Church Street, at the city building, in the northeast wall of the rear section, about 3.6 feet to the rear of the front section, and about 2 feet higher than the ground. A metal plug. (16.381 meters or 53.743 feet.)

G 6.—At **Calais**, Washington County, in the east wall of the Maine Central Railroad station, 1 foot south of the northeast corner, and about 1 foot higher than the platform. A standard disk, stamped "G 6 1927." (5.882 meters or 19.298 feet.)

H 6.—At **Milltown**, Washington County, 180 feet northeast of the semaphore in front of the Maine Central Railroad station, and 17.8 feet east of the east rail. A standard disk, stamped "H 6 1927" and set in the top of a concrete post. (21.587 meters or 70.725 feet.)

For additional bench marks in this vicinity, see page 44.

I 6.—About $\frac{1}{4}$ mile south along the Maine Central Railroad from **St. Croix Junction**, Washington County, at the Baring road crossing, 25.2 feet southwest of the center line of the track, and 26.9 feet northwest of the center line of the road. A standard disk, stamped "I 6 1927" and set in the top of a concrete post. (23.104 meters or 75.800 feet.)

J 6.—About $3\frac{1}{2}$ miles south along the Maine Central Railroad from **Milltown**, Washington County, at a highway crossing, 26.5 feet northwest of the

center line of the track, and 70 feet northeast of the highway. A standard disk, stamped "J 6 1927" and set in the top of a concrete post. (39.479 meters or 129.524 feet.)

K 6.—About $4\frac{1}{2}$ miles north along the Maine Central Railroad from Charlotte, Washington County, and 39.2 feet south of a highway crossing, at a large concrete culvert, in the north end of the east abutment. A standard disk, stamped "K 6 1927." (38.128 meters or 125.092 feet.)

L 6.—About 2 miles north along the Maine Central Railroad from Charlotte, Washington County, 70 feet north of a road crossing, and 27.6 feet east of the center line of the track. A standard disk, stamped "L 6 1927" and set in the top of a concrete post. (34.646 meters or 113.668 feet.)

M 6.—At Charlotte, Washington County, 180 feet southwest of the southwest corner of the Maine Central Railroad station, 180 feet northeast of a road crossing, and 23.2 feet east of the center line of the track. A standard disk, stamped "M 6 1927" and set in the top of a concrete post. (26.946 meters or 88.405 feet.)

N 6.—About $2\frac{1}{2}$ miles south along the Maine Central Railroad from Charlotte, Washington County, 51 feet north of the center of the "Mt. Toms Crossing", and 27.9 feet west of the center line of the track. A standard disk, stamped "N 6 1927" and set in the top of a concrete post. (27.898 meters or 91.529 feet.)

NOTE.—In 1930 this bench mark was reported as being in the northeast corner of the intersection instead of the northwest corner and at an elevation approximately 0.55 foot higher than that given above. This bench mark should not be used to control important leveling without checking against nearby bench marks.

O 6.—About $1\frac{1}{2}$ miles southwest along the Maine Central Railroad from Ayers Junction, Washington County, 75 feet east of milepost P253-C17, and 15.1 feet north of the center line of the track, in a rock ledge. A standard disk, stamped "O 6 1927." (41.909 meters or 137.493 feet.)

P 6.—About $2\frac{3}{4}$ miles southwest along the Maine Central Railroad from Ayers Junction, Washington County, at a siding, 25 feet east of the "Shaw Meadow Crossing", and 24.5 feet south of the center line of the track. A standard disk, stamped "P 6 1927" and set in the top of a concrete post. (39.356 meters or 129.120 feet.)

Q 6.—About $2\frac{1}{4}$ miles north along the Maine Central Railroad from Dennysville, Washington County, about 750 feet south of milepost C20-P250, and 11.7 feet east of the center line of the track, in a rock ledge. A standard disk, stamped "Q 6 1927." (45.627 meters or 149.695 feet.)

R 6.—At Dennysville, Washington County, 94.8 feet north of the northwest corner of the Maine Central Railroad station, and 180 feet north of the road crossing south of the station, opposite the point of a switch, 22.5 feet west of the center line of the track. A standard disk, stamped "R 6 1927" and set in the top of a concrete post. (26.647 meters or 87.424 feet.)

92 (M.I.T.).—At Dennysville, Washington County, at the Maine Central Railroad bridge over Dennys River, on the east side of the top course of the south abutment. A chiseled circle. (28.014 meters or 91.909 feet.)

S 6.—About 2 miles southwest along the Maine Central Railroad from Dennysville, Washington County, 300 feet west of a road crossing, and 10.8 feet south of the center line of the track. A standard disk, stamped "S 6 1927" and set in the top of a concrete post. (25.956 meters or 85.157 feet.)

89 (M.C.R.R.).—About $2\frac{3}{4}$ miles southwest along the Maine Central Railroad from Dennysville, Washington County, at mileage 244.6, at the bridge over Cathance River, in the north side of the east end of the north girder. The top of an anchor bolt. (27.180 meters or 89.173 feet.)

T 6.—At Marion, Washington County, 250 feet east of the Maine Central Railroad station, and 25.0 feet north of the center line of the track. A standard disk, stamped "T 6 1927" and set in the top of a concrete post. (56.312 meters or 184.750 feet.)

U 6.—About 1.3 miles southwest along the Maine Central Railroad from Marion, Washington County, 82.5 feet east of the point of switch at Cliffords siding, and 22.8 feet north of the center line of the track, in a rock ledge. A standard disk, stamped "U 6 1927." (37.400 meters or 122.703 feet.)

V 6.—About 3 miles southwest along the Maine Central Railroad from Marion, Washington County, 32 feet east of the point of switch at Halloway siding, and 15.0 feet north of the center line of the track. A standard disk, stamped "V 6 1927" and set in the top of a concrete post. (32.290 meters or 105.938 feet.)

W 6.—About 5.5 miles north along the Maine Central Railroad from **Jacksonville**, Washington County, at **Ellis siding**, at "McGeorges Crossing", 24.5 feet northwest of the center line of the track, and 23.8 feet northeast of the center line of State Highway 191. A standard disk, stamped "W 6 1927" and set in the top of a concrete post. (27.036 meters or 88.701 feet.)

X 6.—About 3 miles north along the Maine Central Railroad from **Jacksonville**, Washington County, 14 feet south of a private-road crossing, and 15.6 feet west of the center line of the track. A standard disk, stamped "X 6 1927" and set in the top of a concrete post. (32.389 meters or 106.263 feet.)

47 (M.I.T.).—At **Jacksonville**, Washington County, about 200 feet north of the Maine Central Railroad station, and 50 feet east of the track, in a wye formed by the roads at the station, on the top of a boulder. A chiseled circle, marked "B.M." (14.186 meters or 46.542 feet.)

Y 6.—At **Jacksonville**, Washington County, about 200 feet north of the Maine Central Railroad station, at a highway crossing, 38.7 feet south of an electric crossing signal, and 10.3 feet west of the center line of the track. A standard disk, stamped "Y 6 1927" and set in the top of a concrete post. (14.574 meters or 47.815 feet.)

Z 6.—At **East Machias**, Washington County, 81.1 feet northeast of the northeast corner of the Maine Central Railroad station, and 20.5 feet northwest of the center line of the track. A standard disk, stamped "Z 6 1927" and set in the top of a concrete post. (13.792 meters or 45.249 feet.)

44 (U.S.G.S.).—At **East Machias**, Washington County, at a three-arch concrete highway bridge over **East Machias River**, at the junction of the east approach and east arch, in the top of the north guard rail. A United States Geological Survey standard disk, stamped "44 ME 1917." (13.354 meters or 43.812 feet.)

A 7.—At **Machiasport**, Washington County, 90 feet west of the west end of the Maine Central Railroad station, 14.4 feet south of the south rail, and 11.7 feet west of a road. A standard disk, stamped "A 7 1927" and set in the top of a concrete post. (6.459 meters or 21.191 feet.)

B 7.—At **Machias**, Washington County, 30 feet west of the west end of the Maine Central Railroad station, and 36.1 feet north of the north rail of the main track. A standard disk, stamped "B 7 1927" and set in the top of a concrete post. (4.150 meters or 13.615 feet.)

C 7.—About $\frac{1}{4}$ miles west along the Maine Central Railroad from **Machias**, Washington County, at the "Sylvan Park Crossing", 41.3 feet west of the center line of United States Highway 1, and 18.5 feet south of the south rail. A standard disk, stamped "C 7 1927" and set in the top of a concrete post. (35.626 meters or 116.883 feet.)

57 (U.S.G.S.).—About 0.4 mile east along the Maine Central Railroad from **Whitneyville**, Washington County, at the bridge over **Machias River**, in the top of the south end of the parapet wall of the west abutment. A United States Geological Survey standard disk, stamped "57 ME 1917." (17.408 meters or 57.113 feet.)

D 7.—About $\frac{1}{4}$ mile east of the Maine Central Railroad station at **Whitneyville**, Washington County, 26.7 feet west of the center line of U.S. Highway 1, and 21.2 feet south of the south rail, on the bank above the track. A standard disk, stamped "D 7 1927" and set in the top of a concrete post. (19.952 meters or 65.459 feet.)

129 (U.S.G.S.).—About 3.1 miles southwest along the Maine Central Railroad from **Whitneyville**, Washington County, 0.4 mile west of milepost C51-P219, 0.1 mile west of a rock cut, about 300 feet east of a rail stand, 120 feet east of the point of curvature at the west end of a long tangent, 90 feet east of a drain, and 45 feet north of the track, in the top of a rock outcrop. A United States Geological Survey standard disk, stamped "129 ME 1917." (39.442 meters or 129.403 feet.)

E 7.—About $\frac{3}{4}$ miles northeast along the Maine Central Railroad from the station at **Jonesboro**, Washington County, opposite a spring walled with tile, 17.5 feet south of the south rail, in a conspicuous rock outcrop. A standard disk, stamped "E 7 1927." (29.925 meters or 98.179 feet.)

58 (U.S.G.S.).—About 1.4 miles northeast along the Maine Central Railroad from the station at **Jonesboro**, Washington County, at the southwest corner of the bridge over **Chandler River**, in the top of a long wing wall, 10 feet southwest of the west end of the parapet wall. A United States Geological Survey standard disk, stamped "58 ME 1917." (17.709 meters or 58.100 feet.)

F 7.—At Jonesboro, Washington County, about 1,000 feet east of the east end of the Maine Central Railroad station, 15.2 feet south of the south rail, and 39 feet east of the center line of a highway. A standard disk, stamped "F 7 1927" and set in the top of a concrete post. (39.408 meters or 129.291 feet.)

68 (U.S.G.S.).—About 2.0 miles east along the Maine Central Railroad from Columbia Falls, Washington County, 770 feet west of a pump station, and 530 feet west of a trail crossing, at a stone culvert, in the top of the east end of the north head wall. A United States Geological Survey standard disk, stamped "68 ME 1917." (20.732 meters or 68.018 feet.)

G 7.—About $\frac{3}{8}$ mile east along the Maine Central Railroad from the station at Columbia Falls, Washington County, 34 feet east of a private-road crossing, 21.5 feet south of the south rail, and about 4 feet higher than the rail. A standard disk, stamped "G 7 1927" and set in the top of a concrete post. (26.141 meters or 85.764 feet.)

37 (U.S.G.S.).—About 0.7 mile west along the Maine Central Railroad from Columbia Falls, Washington County, at the bridge over Pleasant River, in the top of the north end of the parapet wall of the west abutment. A United States Geological Survey standard disk, stamped "37 ME 1917." (11.393 meters or 37.379 feet.)

H 7.—About 1.5 miles northwest along the Maine Central Railroad from Columbia Falls, Washington County, at Wards siding, 380 feet west of the Epping Road crossing, and 21.2 feet north of the north rail. A standard disk, stamped "H 7 1927" and set in the top of a concrete post. (25.392 meters or 83.307 feet.)

J 7.—At Addison, Washington County, 180 feet east of the east end of the Maine Central Railroad station, opposite the Saco Valley Canning Co. factory, 106.5 feet east of the center line of a road, and 31.0 feet south of the south rail. A standard disk, stamped "J 7 1927" and set in the top of a concrete post. (19.795 meters or 64.944 feet.)

K 7.—About 1.1 miles east along the Maine Central Railroad from the station at Harrington, Washington County, 65.0 feet east of the Forest Hill Cemetery road crossing, and 30.7 feet north of the north rail. A standard disk, stamped "K 7 1927" and set in the top of a concrete post. (27.750 meters or 91.043 feet.)

T.B.M. 56.—About 0.7 mile east along the Maine Central Railroad from the station at Harrington, Washington County, and about 90 yards east of a highway crossing, on the north side of the track. The highest point of the only large boulder in this vicinity. (16.565 meters or 54.347 feet.)

L 7.—At Harrington, Washington County, 220 feet east of the east end of the Maine Central Railroad station, 17.0 feet east of a road crossing, and 22.0 feet south of the south rail. A standard disk, stamped "L 7 1927" and set in the top of a concrete post. (15.216 meters or 49.921 feet.)

M 7.—At Dorman, Washington County, on the Maine Central Railroad, 42.0 feet west of the center line of United States Highway 1, and 19.3 feet south of the south rail. A standard disk, stamped "M 7 1927" and set in the top of a concrete post. (32.482 meters or 106.568 feet.)

N 7.—About 1.3 miles west along the Maine Central Railroad from Dorman, Washington County, 29.6 feet west of the center of a road crossing, and 24.7 feet south of the south rail. A standard disk, stamped "N 7 1927" and set in the top of a concrete post. (22.503 meters or 73.829 feet.)

P 7.—At Cherryfield, Washington County, 830 feet east of the northeast corner of the Maine Central Railroad station, 14.4 feet west of the center of the Deblois Highway crossing, and 19.0 feet north of the north rail. A standard disk, stamped "P 7 1927" and set in the top of a concrete post. (16.482 meters or 54.075 feet.)

Q 7.—About 2 miles west along the Maine Central Railroad from Cherryfield, Washington County, 48 feet west of a road leading to a gravel pit, and 21.1 feet north of the north rail. A standard disk, stamped "Q 7 1927" and set in the top of a concrete post. (46.319 meters or 151.965 feet.)

R 7.—At Unionville, Washington County, 75 feet east of the east end of the Maine Central Railroad station, 33.0 feet east of the center line of a road, and 9.6 feet north of the north rail. A standard disk, stamped "R 7 1927" and set in the top of a concrete post. (30.530 meters or 100.164 feet.)

S 7.—In Hancock County, about 1.8 miles southwest along the Maine Central Railroad from Unionville, Washington County, and about 140 yards west of milepost P191-C79, at a bridge, in the south end of the east abutment. A standard disk, stamped "S 7 1927." (50.995 meters or 167.306 feet.)

T.B.M. 68.—In Hancock County, about 2.7 miles southwest along the Maine Central Railroad from Unionville, Washington County, 181 feet east of milepost C80-P190, and 20 feet north of the north rail, on the highest point of a boulder about 8 feet in diameter. A chiseled circle. (67.572 meters or 221.692 feet.)

T 7.—About 1.6 miles southeast along the Maine Central Railroad from the station at Tunk Lake, Hancock County, about 270 yards west of milepost P187-C83, and 8.5 feet north of the north rail, in a rock outcrop. A standard disk, stamped "T 7 1927." (80.900 meters or 265.419 feet.)

U 7.—At Tunk Lake, Hancock County, 25 feet east of the east end of the Maine Central Railroad station platform, 17.5 feet north of the north rail, and about 4 feet lower than the rail. A standard disk, stamped "U 7 1927" and set in the top of a concrete post. (59.690 meters or 195.833 feet.)

NOTE.—In May 1930, the United States Geological Survey reported that this bench mark was at an elevation of 190.336 feet. This change was probably due to frost action.

V 7.—About 2.3 miles west along the Maine Central Railroad from Tunk Lake, Hancock County, 315 feet west of milepost C87-P183, and 21.0 feet south of the south rail, in a rock outcrop. A standard disk, stamped "V 7 1927." (57.801 meters or 189.635 feet.)

W 7.—About 3.1 miles east along the Maine Central Railroad from Franklin, Hancock County, about 500 feet west of milepost C83-P181, at the top of a cut, 21.0 feet north of the north rail, in a rock outcrop. A standard disk, stamped "W 7 1927." (40.791 meters or 133.828 feet.)

X 7.—About 1.7 miles east along the Maine Central Railroad from Franklin, Hancock County, at the bridge over Card Mill Stream, in the east end of the south abutment. A standard disk, stamped "X 7 1927." (13.847 meters or 45.430 feet.)

Y 7.—At Franklin, Hancock County, 170 feet east of the east end of the Maine Central Railroad station, 76.7 feet northwest of the crossing of State Highway 182, and 40.3 feet north of the north rail. A standard disk, stamped "Y 7 1927" and set in the top of a concrete post. (21.880 meters or 71.785 feet.)

NOTE.—In May 1930, the United States Geological Survey reported that this bench mark was at an elevation of 71.889 feet. This change was probably due to frost action.

88 (U.S.G.S.).—About 1.6 miles west along the Maine Central Railroad from Franklin, Hancock County, and about 250 feet north of the track, on the west side of a highway, in the top of a large boulder. A United States Geological Survey standard disk, stamped "88." (27.026 meters or 88.668 feet.)

Z 7.—About 2.5 miles west along the Maine Central Railroad from Franklin, Hancock County, about $\frac{3}{4}$ mile west of the Eastbrook Road crossing, 35 feet west of a private-road crossing, and 27.9 feet north of the north rail. A standard disk, stamped "Z 7 1927" and set in the top of a concrete post. (21.799 meters or 71.519 feet.)

NOTE.—In May 1930, the United States Geological Survey reported that this bench mark was at an elevation of 71.786 feet. This change was probably due to frost action.

121 (U.S.G.S.).—About 5 miles northeast along the Maine Central Railroad from Washington Junction, Hancock County, at the bridge over Egypt Stream, south of the track, in the east end of the abutment. A United States Geological Survey standard disk, stamped "121." (37.146 meters or 121.870 feet.)

A 8.—About $4\frac{1}{2}$ miles northeast along the Maine Central Railroad from Washington Junction, Hancock County, at the bridge over the west branch of Egypt Stream, in the west end of the south abutment. A standard disk, stamped "A 8 1927." (27.650 meters or 90.715 feet.)

B 8.—About $1\frac{1}{4}$ miles northeast along the Maine Central Railroad from Washington Junction, Hancock County, and 825 feet east of milepost C100-P170, at the bridge over Kilkenny Stream, in the east end of the south abutment. A standard disk, stamped "B 8 1927." (21.436 meters or 70.323 feet.)

172 (U.S.G.S.).—About 0.4 mile northeast along the Maine Central Railroad from the station at Washington Junction, Hancock County, on the south side of the track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "172." (52.662 meters or 172.775 feet.)

C 8.—At Washington Junction, Hancock County, 425 feet west of the west end of the Maine Central Railroad station, 50 feet southeast of the point of the switch at the junction, 32 feet northwest of the road intersection just east of a crossing, and 23.0 feet south of the south rail. A standard disk, stamped "C 8 1927" and set in the top of a concrete post. (60.107 meters or 197.201 feet.)

D 8.—About 0.3 mile southwest along the Maine Central Railroad from the station at **Washington Junction**, Hancock County, 25.6 feet west of the center of a road crossing, and 25.9 feet south of the south rail. A standard disk, stamped "D 8 1927" and set in the top of a concrete post. (52.279 meters or 171.519 feet.)

E 8.—At **Ellsworth**, Hancock County, near the Maine Central Railroad station, south of the tracks, near the northeast corner of a brick building just west of Main Street, in the north wall, 1.3 feet higher than the ground. A standard disk, stamped "E 8 1927." (34.293 meters or 112.510 feet.)

24 (U.S.G.S.).—At **Ellsworth**, Hancock County, on Main Street, $\frac{1}{4}$ mile south of the Maine Central Railroad station, in the foundation of the Ellsworth Trust Co. building. A United States Geological Survey standard disk, stamped "24." (7.419 meters or 24.341 feet.)

F 8.—At **Ellsworth Falls**, Hancock County, about $\frac{1}{8}$ mile west of the Maine Central Railroad station, 250 feet west of the crossing of State Highway 179, 40 feet north of the center line of United States Highway 1, and 11.2 feet north of the north rail. A standard disk, stamped "F 8 1927" and set in the top of a concrete post. (36.918 meters or 121.122 feet.)

G 8.—About 2 miles northwest along the Maine Central Railroad from **Ellsworth Falls**, Hancock County, 16.5 feet northwest of a private-road crossing, and 26.0 feet southwest of the southwest rail. A standard disk, stamped "G 8 1927" and set in the top of a concrete post. (51.340 meters or 168.438 feet.)

H 8.—About $1\frac{1}{2}$ miles southeast along the Maine Central Railroad from **Nicolin**, Hancock County, and 130 feet west of milepost BH27-P160, at a bridge, in the east end of the north abutment. A standard disk, stamped "H 8 1927." (73.824 meters or 242.204 feet.)

J 8.—At **Nicolin**, Hancock County, 5.9 feet southeast of the southeast corner of the Maine Central Railroad station, and 11.9 feet north of the north rail. A standard disk, stamped "J 8 1927" and set in the top of a concrete post. (83.133 meters or 272.746 feet.)

K 8.—About $1\frac{1}{4}$ miles southeast along the Maine Central Railroad from **Green Lake**, Hancock County, 35.0 feet east of milepost P156-BH31, and 18.0 feet north of the north rail, in the top of a boulder about 12 feet in diameter. A standard disk, stamped "K 8 1927." (70.922 meters or 232.683 feet.)

L 8.—At **Green Lake**, Hancock County, 140 feet west of the west end of the Maine Central Railroad station, 51 feet west of a highway crossing, and 26.1 feet north of the north rail. A standard disk, stamped "L 8 1927" and set in the top of a concrete post. (54.216 meters or 177.874 feet.)

M 8.—About 2.0 miles northwest along the Maine Central Railroad from **Green Lake**, Hancock County, 87 feet west of the crossing of United States Highway 1, 26.5 feet south of the center line of the highway, and 12.5 feet north of the north rail. A standard disk, stamped "M 8 1927" and set in the top of a concrete post. (79.735 meters or 261.597 feet.)

N 8.—At **Lucerne in Maine**, Hancock County, 150 feet west of the west end of the Maine Central Railroad station, 100 feet west of the center of a road crossing, and 23.1 feet south of the south rail. A standard disk, stamped "N 8 1927" and set in the top of a concrete post. (77.268 meters or 253.503 feet.)

232 (M.I.T.).—In Hancock County, about 1.4 miles south along the Maine Central Railroad from **Holden**, Penobscot County, at the bridge over the outlet at the north end of Phillips Lake, on the north end of the west abutment. A painted circle. (70.687 meters or 231.912 feet.)

P 8.—At **Holden**, Penobscot County, 45 feet east of the east end of the Maine Central Railroad station, 70 feet west of the crossing of State Highway 193, and 22.2 feet north of the north rail. A standard disk, stamped "P 8 1927" and set in the top of a concrete post. (60.698 meters or 199.140 feet.)

Q 8.—About $1\frac{1}{2}$ miles northwest along the Maine Central Railroad from **Holden**, Penobscot County, 180 feet west of the Bagadauce Road crossing, and 11.5 feet south of the south rail, in a rock outcrop. A standard disk, stamped "Q 8 1927." (75.339 meters or 247.175 feet.)

R 8.—About 2.6 miles west along the Maine Central Railroad from **Holden**, Penobscot County, about 200 feet west of the Fisher Road crossing, 23.3 feet north of the north rail, and about 3 feet higher than the rail, in the top of a rock outcrop. A standard disk, stamped "R 8 1927." (51.414 meters or 168.681 feet.)

S 8.—About $5\frac{1}{4}$ miles west along the Maine Central Railroad from **Holden**, Penobscot County, 80 feet west of the crossing of United States Highway 1, and 19.2 feet south of the south rail. A standard disk, stamped "S 8 1927" and set in the top of a concrete post. (25.363 meters or 83.212 feet.)

T 8.—About 2.0 miles southeast along the Maine Central Railroad from **Brewer Junction**, Penobscot County, at the crossing of Green Point Road, 55.3 feet west of the center line of the road, 27.3 feet south of the south rail, and about 3 feet lower than the rail. A standard disk, stamped "T 8 1927" and set in the top of a concrete post. (38.619 meters or 126.703 feet.)

U 8.—At **Brewer Junction**, Penobscot County, 70 feet south of the Maine Central Railroad station, 300 feet north of the point of the switch at the junction, and 24.5 feet east of the east rail. A standard disk, stamped "U 8 1927" and set in the top of a concrete post. (11.741 meters or 38.520 feet.)

V 8.—About $\frac{1}{4}$ mile north along the Maine Central Railroad from **Brewer Junction**, Penobscot County, at the bridge carrying United States Highway 1 over Penobscot River, in the west end of the south abutment. A standard disk, stamped "V 8 1927," (10.872 meters or 35.669 feet.)

W 8.—Destroyed. (10.881 meters or 35.699 feet.)

W 8 RESET.—At **Bangor**, Penobscot County, at the upstream side of the Bangor end of the bridge carrying United States Highway 1 over Penobscot River, and in the top of the concrete abutment parapet. A standard disk, stamped "W 8 RESET 1934." (36.048 feet.)

X 8.—At **Bangor**, Penobscot County, in the west wall of the Union Station, 5.2 feet south of the northwest corner, and 1.5 feet higher than the sidewalk. A standard disk, stamped "X 8 1927" and set vertically. (5.578 meters or 18.300 feet.)

Y 8.—At **Bangor**, Penobscot County, about $\frac{3}{8}$ mile west of the Union Station, at the brick building of the Dayson Bedding Co., in the face of the south wall, 29.5 feet east of the southwest corner. A standard disk, stamped "Y 8 1927" and set vertically. (6.305 meters or 20.686 feet.)

Z 8.—About $3\frac{1}{2}$ miles southwest along the Maine Central Railroad from **Bangor**, Penobscot County, 32.5 feet east of the center of a road crossing, and 30.5 feet north of the north rail. A standard disk, stamped "Z 8 1927" and set in the top of a concrete post. (38.885 meters or 127.575 feet.)

A 9.—About $\frac{3}{4}$ mile east along the Maine Central Railroad from **Northern Maine Junction**, Penobscot County, 215 feet east of milepost P132-V119, and 9.0 feet north of the north rail, in the top of a rock outcrop. A standard disk, stamped "A 9 1927." (44.356 meters or 145.525 feet.)

B 9.—At **Northern Maine Junction**, Penobscot County, about 200 feet east of the east end of the Bangor & Aroostook Railroad station, and 15 feet south of the south rail of the main track, in a plot of grass. A standard disk, stamped "B 9 1927" and set in the top of a concrete post. (47.841 meters or 156.958 feet.)

C 9.—About $\frac{1}{4}$ mile northwest of **Northern Maine Junction**, Penobscot County, on the right-of-way of a branch line of the Bangor & Aroostook Railroad connecting the main line with that of the Maine Central Railroad, about 100 feet north of the center line of United States Highway 2, and 46 feet west of the west rail of the branch line, in the top of a medium-sized boulder. A standard disk, stamped "C 9 1927." (44.898 meters or 147.303 feet.)

For additional bench marks in this vicinity, see pages 33 and 44.

D 9.—About 3 miles north along the Bangor & Aroostook Railroad from **Northern Maine Junction**, Penobscot County, at the bridge over Union Street, in the west end of the north concrete abutment. A standard disk, stamped "D 9 1927." (44.975 meters or 147.555 feet.)

E 9.—At **North Bangor**, Penobscot County, 180 feet north of the north end of the Bangor & Aroostook Railroad station, and 54.0 feet east of the east rail. A standard disk, stamped "E 9 1927" and set in the top of a concrete post. (39.379 meters or 129.196 feet.)

F 9.—At **Glenburn**, Penobscot County, south of the Bangor & Aroostook Railroad station, 33.1 feet north of the center of a highway crossing, and 16.1 feet east of the east rail. A standard disk, stamped "F 9 1927" and set in the top of a concrete post. (34.563 meters or 113.395 feet.)

G 9.—About 3 miles north along the Bangor & Aroostook Railroad from **Glenburn**, Penobscot County, 600 feet south of the Bangor-Hudson highway

crossing, and 22.0 feet west of the west rail, in a rock outcrop. A standard disk, stamped "G 9 1927." (41.420 meters or 135.892 feet.)

H 9.—About $1\frac{3}{4}$ miles southeast along the Bangor & Aroostook Railroad from Hudson, Penobscot County, about 0.2 mile south of milepost 44, and 38.6 feet west of the west rail, in the top of a large boulder. A standard disk, stamped "H 9 1927." (39.929 meters or 131.000 feet.)

J 9.—At Hudson, Penobscot County, 429 feet south of the south end of the Bangor & Aroostook Railroad station, 36 feet southwest of the center of a highway crossing, and 17.1 feet west of the west rail. A standard disk, stamped "J 9 1927" and set in the top of a concrete post. (42.492 meters or 139.409 feet.)

K 9.—About 3 miles north along the Bangor & Aroostook Railroad from Hudson, Penobscot County, 231 feet south of culvert 48.44, and 20.2 feet west of the west rail, in a rock outcrop. A standard disk, stamped "K 9 1927." (45.736 meters or 150.052 feet.)

L 9.—At Bradford, Penobscot County, opposite the southeast corner of the Bangor & Aroostook Railroad station, 40.9 feet east of the east rail. A standard disk, stamped "L 9 1927" and set in the top of a concrete post. (48.636 meters or 159.567 feet.)

M 9.—About 1.4 miles south along the Bangor & Aroostook Railroad from South Lagrange, Penobscot County, at bridge 52.59, in the west side of the north concrete abutment. A standard disk, stamped "M 9 1927." (51.942 meters or 170.413 feet.)

For bench marks in the vicinity of South Lagrange, see page 32.

LINE 5, FORT KENT TO SOUTH LAGRANGE, MAINE

[First-order leveling]

This line enters Maine in the vicinity of Fort Kent, and follows the Bangor & Aroostook Railroad through Portage, Masardis, Sherman, West Seboois, and Brownville, to South Lagrange. The field work was done, during the summer of 1927, by a party in charge of Charles A. Schanck, aid.

For additional bench marks in the vicinity of Baker Brook, New Brunswick, see Geodetic Survey of Canada Special Publication No. 16, "Precise Levelling in Nova Scotia, New Brunswick, and Prince Edward Island."

263-B (G.S.C.).—About $1\frac{1}{4}$ miles east along the Canadian National Railway from Baker Brook, Madawaska County, New Brunswick, about $\frac{1}{2}$ mile east of the Temiscouata Railway crossing, at the second pole west of milepost 11, at a large concrete arch culvert, in the east face of the coping on the south side. A copper bolt. (150.471 meters or 493.670 feet.)

77 (U. S. & C. B. S.).—About $5\frac{3}{4}$ miles northeast along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, about $\frac{1}{4}$ mile west of a road crossing, in a small field, about 65 feet south of the south rail, and 32 feet north of the center line of the highway. An iron rod in the apex of boundary monument 77. (165.197 meters or 541.984 feet.)

78 (U. S. & C. B. S.).—About $5\frac{1}{2}$ miles northeast along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, about 300 feet south of the track, in an open field, about 90 feet east of the east side of a farmhouse on the north side of the highway, and 33 feet south of the center line of the highway. The apex of boundary monument 78. (168.178 meters or 551.764 feet.)

79 (U. S. & C. B. S.).—About $5\frac{1}{4}$ miles northeast along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, about 200 feet south of the track, about 350 feet west of the junction of a road turning north from the main highway and leading to an old ferry, 60 feet south of an old pole fence, and about 70 feet west of the west post of a gate in the fence. The apex of boundary monument 79. (168.120 meters or 551.574 feet.)

83 (U. S. & C. B. S.).—About $2\frac{3}{4}$ miles northeast along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, about 200 feet south of the track, about 80 feet west of the west side of a small house on the north side of the road, 10 feet north of the center line of the highway, and about 3 feet

higher than the ground. The apex of boundary monument 83. (170.065 meters or 557.955 feet.)

84 (U. S. & C. B. S.).—About 2½ miles northeast along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, about 500 feet south of the track, about 400 feet west of a fence at the west edge of a woods, and 14.5 feet north of the center line of the highway. The apex of boundary monument 84. (171.798 meters or 563.641 feet.)

A 10.—At Fort Kent, Aroostook County, 9 rails north of the north end of the Bangor & Aroostook Railroad station, 8 feet east of the east side of a cafe, 27 feet west of the west rail, and 2 feet east of a point 3 feet north of a corner of the right-of-way fence. A standard disk, stamped "A 10 1927" and set in the top of a concrete post. (161.635 meters or 530.297 feet.)

R 13 (U.S.G.S.).—About 1.6 miles south along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, 2 rails north of Bradbury station, just north of a road crossing, 22 feet east of the east rail, and 7 feet south of the right-of-way fence. A United States Geological Survey standard disk, set in the top of a concrete post. (168.006 meters or 551.200 feet.)

B 10.—About ¾ miles south along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, 30 rails south of culvert A-91.73, 7 rails north of culvert A-91.51, 46.5 feet west of the west rail, and 33.3 feet south of a fence joining the right-of-way fence at right angles. A standard disk, stamped "B 10 1927" and set in the top of a concrete post. (180.041 meters or 590.685 feet.)

C 10.—About 5.8 miles south along the Bangor & Aroostook Railroad from Fort Kent, Aroostook County, 29 rails south of the junction of a spur track leading southwest to a gravel pit, 18 rails south of pole 89.61, and 33 feet west of the west rail, at the north end of a board fence. A standard disk, stamped "C 10 1927" and set in the top of a concrete post. (170.904 meters or 590.530 feet.)

D 10.—At Soldier Pond, Aroostook County, 30 rails north of the Bangor & Aroostook Railroad station, 6 rails north of the north end of the north warehouse, 45.8 feet east of the east rail, 9.8 feet south of the south post of a board gate in the right-of-way fence, and 3.5 feet west of the fence. A standard disk, stamped "D 10 1927" and set in the top of a concrete post. (179.949 meters or 590.383 feet.)

E 10.—About 1¾ miles north along the Bangor & Aroostook Railroad from the station at Wallagrass, Aroostook County, 9 rails south of culvert 84.31, 46.7 feet east of the east rail, 49.4 feet north of the north post of a wooden gate, and 3 feet west of the fence. A standard disk, stamped "E 10 1927" and set in the top of a concrete post. (181.181 meters or 594.425 feet.)

F 10.—About ¼ mile south along the Bangor & Aroostook Railroad from the station at Wallagrass, Aroostook County, 36 rails south of a road crossing, 11 rails south of culvert 82.32, 45.2 feet east of the east rail, 1.8 feet west of a fence, and 3 feet north of the north post of a wooden gate. A standard disk, stamped "F 10 1927" and set in the top of a concrete post. (180.363 meters or 591.741 feet.)

G 10.—About 2.5 miles south along the Bangor & Aroostook Railroad from the station at Wallagrass, Aroostook County, 18 rails south of milepost A 80, 43.7 feet west of the west rail, 3 feet east of the right-of-way fence, and 5 feet north of the north post of a wooden gate. A standard disk, stamped "G 10 1927" and set in the top of a concrete post. (182.052 meters or 597.282 feet.)

H 10.—At Eagle Lake, Aroostook County, 7½ rails south of the south end of the Bangor & Aroostook Railroad station, 45.8 feet west of the west rail, 1.4 feet east of the right-of-way fence, and 4.1 feet south of the end of the fence. A standard disk, stamped "H 10 1927" and set in the top of a concrete post. (183.970 meters or 603.575 feet.)

J 10.—About 2¼ miles south along the Bangor & Aroostook Railroad from Eagle Lake, Aroostook County, at bridge 75.75 over Fish River, in the southwest corner of the north abutment. A standard disk, stamped "J 10 1927." (190.591 meters or 625.297 feet.)

K 10.—About 1¾ miles north along the Bangor & Aroostook Railroad from Winterville, Aroostook County, 26 rails south of culvert 73.43, 43.0 feet east of the east rail, 1.8 feet west of the east right-of-way fence, and 2.3 feet south of the south post of a board gate. A standard disk, stamped "K 10 1927" and set in the top of a concrete post. (188.927 meters or 619.838 feet.)

L 10.—At Winterville, Aroostook County, 38 rails south of the south end of the Bangor & Aroostook Railroad station, 12½ rails south of culvert 71.35,

44.1 feet east of the east rail, and 3.8 feet north of the north post of a wooden gate in the right-of-way fence. A standard disk, stamped "L 10 1927" and set in the top of a concrete post. (189.822 meters or 622.774 feet.)

M 10.—About $1\frac{3}{4}$ miles south along the Bangor & Aroostook Railroad from the station at **Winterville**, Aroostook County, 7.8 feet north of culvert A-69.72, and 23.4 feet west of the west rail, in the north one of two rock outcrops. A standard disk, stamped "M 10 1927." (187.544 meters or 615.301 feet.)

N 10.—About 3.9 miles southeast along the Bangor & Aroostook Railroad from the station at **Winterville**, Aroostook County, at concrete culvert A-67.56, in the south end of the east head wall, 15 feet east of the east rail, and 8 feet lower than the rail. A standard disk, stamped "N 10 1927." (186.972 meters or 613.424 feet.)

P 10.—About $6\frac{1}{4}$ miles southeast along the Bangor & Aroostook Railroad from the station at **Winterville**, Aroostook County, at concrete culvert A-65.21, in the east end of the north wall, about 2 feet lower than the tracks. A standard disk, stamped "P 10 1927." (187.119 meters or 613.906 feet.)

Q 10.—About $8\frac{3}{4}$ miles north along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, 52 rails north of culvert A-63.23, 36 rails north of the south end of Nixon siding, and 27.7 feet west of the west rail, directly across the tracks from the southernmost one of a group of huts along the siding. A standard disk, stamped "Q 10 1927" and set in the top of a concrete post. (186.516 meters or 611.736 feet.)

R 10.—About 6.2 miles north along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, 7 rails south of the south end of an abandoned siding on the west side of the track, 1 rail south of milepost A-61, and 30.2 feet west of the west rail. A standard disk, stamped "R 10 1927" and set in the top of a concrete post. (193.880 meters or 636.088 feet.)

S 10.—About 4.1 miles north along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, $12\frac{1}{2}$ rails south of milepost A-59, 44.1 feet west of the west rail, and 6.5 feet north of the north post of a wooden gate in the right-of-way fence. A standard disk, stamped "S 10 1927" and set in the top of a concrete post. (197.149 meters or 646.813 feet.)

T 10.—About 1.9 miles north along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, 35 rails south of milepost A-57, at the north end of a cut, at the south end of a fill, 42.9 feet west of the west rail, and 3.6 feet east of the right-of-way fence. A standard disk, stamped "T 10 1927" and set in the top of a concrete post. (196.672 meters or 645.248 feet.)

U 10.—At **Portage**, Aroostook County, 55.9 feet south of the south wall of the Bangor & Aroostook Railroad station, just east of the plank platform, and 14.0 feet east of the east rail. A standard disk stamped "U 10 1927" and set in the top of a concrete post. (195.324 meters or 640.825 feet.)

V 10.—About 1.9 miles southwest along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, $8\frac{1}{2}$ rails south of milepost A-53, $2\frac{1}{2}$ rails north of culvert A-52.93, 42.5 feet east of the east rail, and about 10 feet north of a stump 4 feet high and 3 feet in diameter. A standard disk, stamped "V 10 1927" and set in the top of a concrete post. (198.254 meters or 650.438 feet.)

W 10.—About 2.9 miles southwest along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, $6\frac{1}{4}$ rails south of milepost A-52, 11 rails south of a logging-road crossing, 44.3 feet east of the east rail, and directly west of a small log cabin about 100 yards east of the track. A standard disk, stamped "W 10 1927" and set in the top of a concrete post. (191.112 meters or 627.007 feet.)

X 10.—About 5.8 miles south along the Bangor & Aroostook Railroad from the station at **Portage**, Aroostook County, in the south end of the west head wall of concrete culvert A-49.08, 12 feet west of the west rail, and 2 feet lower than the rail. A standard disk, stamped "X 10 1927." (180.776 meters or 593.096 feet.)

Y 10.—About 3.8 miles northwest along the Bangor & Aroostook Railroad from the station at **Ashland**, Aroostook County, $6\frac{1}{2}$ rails south of milepost A-47, about 16 feet east of the east rail, and 5 feet lower than the rail, in the top of a boulder about 6 feet in diameter and projecting about 2 feet above ground. A standard disk, stamped "Y 10 1927." (182.888 meters or 600.025 feet.)

Z 10.—About 2.3 miles north along the Bangor & Aroostook Railroad from the station at **Ashland**, Aroostook County, at the southeast corner of the crossing

of State Highway 163, 45.3 feet east of the east rail, 40 feet south of the center line of the highway, and 3.7 feet west of a point 3.2 feet south of a corner of the right-of-way fence. A standard disk, stamped "Z 10 1927" and set in the top of a concrete post. (177.540 meters or 582.479 feet.)

T.B.M. 68.—About 1.6 miles north along the Bangor & Aroostook Railroad from the station at Ashland, Aroostook County, about 20 rails north of the station at Sheridan, at bridge A-44.74, on the west edge of the top course of the south abutment, 4 feet south of the north edge of the abutment. A chiseled square. (174.549 meters or 572.066 feet.)

A 11.—At Ashland, Aroostook County, $4\frac{1}{2}$ rails south of the south wall of the Bangor & Aroostook Railroad station, about on range with the south wall of a water tank across the track, 18.5 feet east of the east rail, and 44 feet north of the center line of a highway. A standard disk, stamped "A 11 1927" and set in the top of a concrete post. (174.344 meters or 571.904 feet.)

B 11.—About 0.9 mile south along the Bangor & Aroostook Railroad from the station at Ashland, Aroostook County, 11 rails north of the north end of a switch, at concrete culvert A-42.26, in the north end of the west head wall, 14.5 feet west of the west rail, and about 5 feet lower than the rail. A standard disk, stamped "B 11 1927." (175.174 meters or 574.717 feet.)

C 11.—About 3.1 miles south along the Bangor & Aroostook Railroad from the station at Ashland, Aroostook County, $3\frac{1}{2}$ rails north of milepost A-40, at the northeast corner of a road crossing, 40.5 feet east of the east rail, and 2 feet west of a point 12 feet north of a corner of the right-of-way fence. A standard disk, stamped "C 11 1927" and set in the top of a concrete post. (173.386 meters or 568.851 feet.)

D 11.—At Squa Pan, Aroostook County, about 32 rails north of the Bangor & Aroostook Railroad station, at the northwest corner of a highway crossing, 55 feet north of the center line of the highway, 27.2 feet west of the west rail, and 4.6 feet east of a point 9.6 feet north of a corner of the right-of-way fence. A standard disk, stamped "D 11 1927" and set in the top of a concrete post. (167.197 meters or 548.545 feet.)

E 11.—At Squa Pan, Aroostook County, on the Bangor & Aroostook Railroad, 1 rail south of culvert A-36.82, at the crossing of State Highway 158, 45 feet west of the center line of the highway, 37.5 feet east of the east rail, and 5.2 feet west of the right-of-way fence. A standard disk, stamped "E 11 1927" and set in the top of a concrete post. (168.535 meters or 552.935 feet.)

F 11.—About 2.4 miles north along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, 2 rails north of culvert A-35.31, $1\frac{1}{2}$ rails south of a road crossing, 23.5 feet west of the west rail, and 4.1 feet east of a point 4.9 feet south of a corner of the right-of-way fence. A standard disk, stamped "F 11 1927" and set in the top of a concrete post. (169.808 meters or 557.112 feet.)

G 11.—At Masardis, Aroostook County, about 100 yards north of the Bangor & Aroostook Railroad station, $7\frac{1}{2}$ rails south of milepost A-33, 43.0 feet east of the rail, and 2.8 feet west of a point 2.9 feet north of a corner of the right-of-way fence. A standard disk, stamped "G 11 1927" and set in the top of a concrete post. (176.786 meters or 580.005 feet.)

H 11.—About 2.2 miles south along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, 20 rails north of bridge A-30.58, 3 rails south of the north siding switch on the east side of the main tracks, 44.0 feet east of the east rail of the main tracks, and 3 feet west of the right-of-way fence. A standard disk, stamped "H 11 1927" and set in the top of a concrete post. (175.274 meters or 575.045 feet.)

J 11.—About 3.7 miles south along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, 1 rail north of culvert A-29.20, and 25.0 feet east of the east rail, in the top of a boulder. A standard disk, stamped "J 11 1927." (173.750 meters or 570.045 feet.)

K 11.—About 5.8 miles south along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, 12 rails north of milepost A-27, $15\frac{1}{2}$ rails south of culvert A-27.17, and 9.1 feet west of the west rail, in the top of a boulder. A standard disk, stamped "K 11 1927." (173.710 meters or 569.914 feet.)

L 11.—About $8\frac{1}{4}$ miles south along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, 18 rails south of the south signal post at Griswold, 15 rails north of culvert A-24.56, 6 rails south of an extremely large boulder, and 28.3 feet west of the west rail, in the top of a boulder,

8 inches higher than the ground. A standard disk, stamped "L 11 1927." (180.118 meters or 590.937 feet.)

M 11.—About 10.0 miles south along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, at concrete culvert A-22.93, 18.3 feet east of the east rail, and 8 feet lower than the rail, in the east end of the north head wall. A standard disk, stamped "M 11 1927." (185.322 meters or 608.011 feet.)

T.B.M. 91.—About 10.6 miles south along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, at culvert A-22.30, on the west end of the south head wall. A chiseled square. (188.538 meters or 618.562 feet.)

N 11.—About 11.2 miles southeast along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, 7 rails south of culvert A-21.79, and 27.1 feet east of the east rail, in the top of a boulder about $2\frac{1}{2}$ feet in diameter, $1\frac{1}{2}$ feet higher than the ground. A standard disk, stamped "N 11 1927." (192.301 meters or 630.908 feet.)

P 11.—About 13.9 miles southeast along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, $\frac{1}{2}$ rail north of milepost A-19, $4\frac{1}{2}$ rails north of bridge A-18.98, and 18.8 feet east of the east rail, in the top of a 3- by 5-foot boulder, about 1 foot above the ground. A standard disk, stamped "P 11 1927." (200.459 meters or 657.673 feet.)

Q 11.—About 15.2 miles southeast along the Bangor & Aroostook Railroad from the station at Masardis, Aroostook County, at concrete culvert A-17.69, in the south end of the west head wall. A standard disk, stamped "Q 11 1927." (202.360 meters or 663.909 feet.)

R 11.—About 12.9 miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, $5\frac{1}{2}$ rails north of the south switch of a siding, 4 rails north of culvert A-15.21, and 29.3 feet east of the east rail of the main track, in the top of a boulder. A standard disk, stamped "R 11 1927." (202.292 meters or 663.688 feet.)

S 11.—About 10.9 miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, 7 rails north of culvert A-13.19, and 42 feet west of the west rail, in the top of a boulder about 3 feet in diameter projecting about 18 inches above ground. A standard disk, stamped "S 11 1927." (202.540 meters or 664.500 feet.)

T 11.—About 8.7 miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, at concrete culvert A-11.08, 5.8 feet west of the west rail, in the south end of the west head wall. A standard disk, stamped "T 11 1927." (212.459 meters or 697.043 feet.)

V 11.—About 7.1 miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, at concrete culvert A-9.41, in the north end of the east head wall. A standard disk, stamped "V 11 1927." (219.179 meters or 719.090 feet.)

T.B.M. 106.—About 5.7 miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, at Hillman siding, about 10 rails north of milepost A-8, at a foundation for a water tank, 8.3 feet west of the west rail, on the southeast corner of the northeast concrete footing. A chiseled square. (223.228 meters or 732.374 feet.)

U 11.—About $4\frac{3}{4}$ miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, $15\frac{1}{2}$ rails north of milepost A-7, and 29.7 feet east of the east rail, in a 4- by 7-foot rock outcrop projecting about 1 foot above ground. A standard disk, stamped "U 11 1927." (206.836 meters or 678.594 feet.)

W 11.—About $2\frac{3}{4}$ miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, $2\frac{1}{2}$ rails south of culvert A-5.12, and 12.3 feet east of the east rail, in a rock outcrop. A standard disk, stamped "W 11 1927." (194.757 meters or 638.965 feet.)

X 11.—About 1.2 miles north along the Bangor & Aroostook Railroad from the station at Smyrna Mills, Aroostook County, $7\frac{1}{2}$ rails north of culvert A-3.47, and 10.0 feet east of the east rail, in a rock outcrop about 3 feet in diameter and projecting $1\frac{1}{2}$ feet above ground. A standard disk, stamped "X 11 1927." (184.270 meters or 604.559 feet.)

Y 11.—At Smyrna Mills, Aroostook County, 13 rails north of the Bangor & Aroostook Railroad station, 9 rails north of a road crossing, and 30.8 feet east of the east rail, in a rock outcrop. A standard disk, stamped "Y 11 1927." (176.603 meters or 579.405 feet.)

Z 11.—At **Oakfield**, Aroostook County, $3\frac{1}{2}$ rails south of the south end of the Bangor & Aroostook Railroad station, 21.8 feet east of the east rail of the main track, and 34 feet north of the center line of a highway. A standard disk, stamped "Z 11 1927" and set in the top of a concrete post. (169.405 meters or 555.790 feet.)

For additional bench marks in the vicinity of Oakfield, see page 49.

A 12.—About 0.5 mile southwest along the Bangor & Aroostook Railroad from the station at **Oakfield**, Aroostook County, $5\frac{1}{2}$ rails south of bridge 148.28, 47 feet west of the west rail, and about 60 feet south of the center line of a highway. A standard disk, stamped "A 12 1927" and set in the top of a concrete post. (170.740 meters or 560.169 feet.)

B 12.—At **Dyer Brook**, Aroostook County, 17 rails south of the door of the Bangor & Aroostook Railroad station, 14 rails south of culvert 146.41, 35.3 feet east of the east rail, and 3.5 feet west of the right-of-way fence. A standard disk, stamped "B 12 1927" and set in the top of a concrete post. (195.701 meters or 642.062 feet.)

C 12.—About 2.3 miles southwest along the Bangor & Aroostook Railroad from the station at **Dyer Brook**, Aroostook County, at concrete culvert 144.13, in the east end of the south head wall. A standard disk, stamped "C 12 1927." (167.180 meters or 548.490 feet.)

D 12.—About 2.6 miles northeast along the Bangor & Aroostook Railroad from the station at **Island Falls**, Aroostook County, 3 rails south of culvert 142.54, in the top of a boulder about 3 feet in diameter, 12.5 feet east of the east rail, $2\frac{1}{2}$ feet lower than the rail, and about 6 inches above the ground. A standard disk, stamped "D 12 1927." (145.513 meters or 477.404 feet.)

E 12.—At **Island Falls**, Aroostook County, on the Bangor & Aroostook Railroad, 3 rails north of the north end of bridge 139.56, 20.5 feet west of the west rail, and 31 feet south of the center line of a highway. A standard disk, stamped "E 12 1927" and set in the top of a concrete post. (138.811 meters or 455.416 feet.)

F 12.—About 1.6 miles southwest along the Bangor & Aroostook Railroad from the station at **Island Falls**, Aroostook County, at **Belvedere** siding, $44\frac{1}{2}$ rails south of culvert 138.58, $9\frac{1}{2}$ rails north of the south switch, 43.3 feet east of the east rail, 35.5 feet south of the center line of a highway, and 3.5 feet west of the right-of-way fence. A standard disk, stamped "F 12 1927" and set in the top of a concrete post. (149.919 meters or 491.859 feet.)

G 12.—About 2.0 miles northeast along the Bangor & Aroostook Railroad from the station at **Crystal**, Aroostook County, 1 rail north of milepost 136, and 23.7 feet west of the west rail, in a 2- by 3-foot rock, 4 inches above ground. A standard disk, stamped "G 12 1927." (146.781 meters or 481.564 feet.)

H 12.—At **Crystal**, Aroostook County, 11 rails south of the south end of the Bangor & Aroostook Railroad station, 1 rail north of milepost 134, $2\frac{1}{2}$ rails north of the center line of a highway, and 27.0 feet west of the west rail. A standard disk, stamped "H 12 1927" and set in the top of a concrete post. (155.677 meters or 510.750 feet.)

J 12.—In Aroostook County, about 3.4 miles northeast along the Bangor & Aroostook Railroad from the station at **Sherman**, Penobscot County, $30\frac{1}{2}$ rails north of milepost 132, $21\frac{1}{2}$ rails south of culvert 132.31, and about 22 feet east of the east rail, in a boulder about $2\frac{1}{2}$ feet in diameter, about 8 inches above ground. A standard disk, stamped "J 12 1927." (147.751 meters or 484.746 feet.)

K 12.—In Aroostook County, about 1.4 miles northeast along the Bangor & Aroostook Railroad from the station at **Sherman**, Penobscot County, at **Patten Junction**, in culvert 130.17, 6.9 feet east of the east rail, and 1 foot lower than the track. A standard disk, stamped "K 12 1927." (145.879 meters or 478.605 feet.)

L 12.—At **Sherman**, Penobscot County, 19 rails south of the Bangor & Aroostook Railroad station, between the Sherman lumber yard and the railroad property, about 125 feet south of a highway, 42 feet west of the west rail of the main track, and about 3 feet east of the board fence. A standard disk, stamped "L 12 1927" and set in the top of a concrete post. (147.892 meters or 485.209 feet.)

M 12.—About $1\frac{1}{4}$ miles northeast along the Bangor & Aroostook Railroad from the station at **Stacyville**, Penobscot County, at a highway crossing, 43.4 feet east of the east rail, 44 feet north of the center line of the highway,

and about 3 feet west of the right-of-way fence. A standard disk, stamped "M 12 1927" and set in the top of a concrete post. (155.057 meters or 508.716 feet.)

N 12.—At **Stacyville**, Penobscot County, 39 rails south of the south end of the Bangor & Aroostook Railroad station, at a highway crossing, 31.5 feet east of the east rail, 38 feet south of the center line of the highway, and 2.7 feet from the right-of-way fence. A standard disk, stamped "N 12 1927" and set in the top of a concrete post. (157.730 meters or 517.486 feet.)

P 12.—At **Davidson**, Penobscot County, 3 rails north of the north end of the Bangor & Aroostook Railroad station, 36.6 feet east of the post office, and 24.6 feet west of the west rail. A standard disk, stamped "P 12 1927" and set in the top of a concrete post. (147.245 meters or 483.086 feet.)

Q 12.—About 1.7 miles south along the Bangor & Aroostook Railroad from the station at **Davidson**, Penobscot County, in the northwest corner of culvert 121.28, about 6 feet west of the west rail. A standard disk, stamped "Q 12 1927." (144.018 meters or 472.499 feet.)

R 12.—About 4.0 miles south along the Bangor & Aroostook Railroad from the station at **Davidson**, Penobscot County, 3 rails south of milepost 119, $\frac{1}{2}$ rail north of the north switch at a siding, 42.8 feet east of the east rail, in a boulder about 3 feet in diameter, about 1 foot higher than the ground. A standard disk, stamped "R 12 1927." (150.350 meters or 493.273 feet.)

S 12.—About 3.2 miles northeast along the Bangor & Aroostook Railroad from the station at **Grindstone**, Penobscot County, $5\frac{1}{4}$ rails south of milepost 117, and 21.9 feet east of the east rail, in a rock outcrop about 10 feet in diameter and projecting 2 feet above ground. A standard disk, stamped "S 12 1927." (125.799 meters or 412.726 feet.)

T 12.—About $1\frac{1}{4}$ miles northeast along the Bangor & Aroostook Railroad from the station at **Grindstone**, Penobscot County, 5 rails northeast of milepost 115, and 21.9 feet northwest of the northwest rail, in a boulder about 4 feet in diameter and projecting about 1 foot above ground. A standard disk, stamped "T 12 1927." (99.530 meters or 326.541 feet.)

U 12.—At **Grindstone**, Penobscot County, on the Bangor & Aroostook Railroad, 3 rails north of the north switch of the west siding, and 61.4 feet west of the west rail. A standard disk, stamped "U 12 1927" and set in the top of a concrete post. (99.637 meters or 326.892 feet.)

317 (U.S.G.S.).—About 0.7 mile southwest along the Bangor & Aroostook Railroad from the station at **Grindstone**, Penobscot County, at the railroad bridge over East Branch, in the north end of the coping on the east pier. A United States Geological Survey standard disk. (96.693 meters or 317.234 feet.)

V 12.—About 2.9 miles southwest along the Bangor & Aroostook Railroad from the station at **Grindstone**, Penobscot County, 13 rails south of milepost 111, and 17.8 feet west of the west rail, in a boulder about 8 feet in diameter and projecting about 4 feet above ground. A standard disk, stamped "V 12 1927." (98.043 meters or 321.663 feet.)

W 12.—About 4.1 miles northeast along the Bangor & Aroostook Railroad from **Millinocket**, Penobscot County, $7\frac{1}{2}$ rails south of milepost 109, $\frac{1}{2}$ rail north of culvert 108.95, and 19.1 feet east of the east rail, in a boulder about 9 feet in diameter and projecting 4 feet above ground. A standard disk, stamped "W 12 1927." (110.542 meters or 362.670 feet.)

X 12.—About $2\frac{1}{2}$ miles northeast along the Bangor & Aroostook Railroad from the station at **Millinocket**, Penobscot County, $11\frac{1}{2}$ rails northeast of culvert 107.28, 11 rails southwest of the switch at the northeast end of the double track, and about 32 feet northwest of the northwest rail, in a boulder. A standard disk, stamped "X 12 1927." (123.034 meters or 403.654 feet.)

Y 12.—At **Millinocket**, Penobscot County, 3 rails south of the south end of the Bangor & Aroostook Railroad station, 46.0 feet west of the west rail, and 2.0 feet east of the right-of-way fence. A standard disk, stamped "Y 12 1927" and set in the top of a concrete post. (110.570 meters or 362.762 feet.)

Z 12.—About 2.5 miles southwest along the Bangor & Aroostook Railroad from the station at **Millinocket**, Penobscot County, 5 rails southwest of the northeast end of a siding, and 36.4 feet northwest of the northwest rail of the main track, in a boulder about 6 feet in diameter and projecting 2 feet above ground. A standard disk, stamped "Z 12 1927." (146.257 meters or 479.845 feet.)

495 (U.S.G.S.).—About $4\frac{1}{2}$ miles southwest along the Bangor & Aroostook Railroad from the station at **Millinocket**, Penobscot County, at the dam at

North Twin Lake, in the top of the north pier at the 24-foot gate opening. A United States Geological Survey standard disk, stamped "495." (150.714 meters or 494.468 feet.)

A 13.—About $\frac{1}{2}$ mile northeast along the Bangor & Aroostook Railroad from the station at **Norcross**, Penobscot County, $13\frac{1}{2}$ rails northeast of milepost 100, 6 rails southwest of culvert 100.15, $1\frac{3}{4}$ rails northeast of a semaphore, and 22.2 feet southeast of the southeast rail, in a granite boulder about 6 feet in diameter and projecting $1\frac{1}{2}$ feet above ground. A standard disk, stamped "A 13 1927." (151.303 meters or 496.400 feet.)

B 13.—About $1\frac{1}{2}$ miles south along the Bangor & Aroostook Railroad from the station at **Norcross**, Penobscot County, just south of milepost 98, and 7.6 feet west of the west rail, in a boulder. A standard disk, stamped "B 13 1927." (153.499 meters or 503.605 feet.)

C 13.—About $3\frac{1}{2}$ miles south along the Bangor & Aroostook Railroad from the station at **Norcross**, Penobscot County, $11\frac{1}{2}$ rails north of milepost 96, and 29.6 feet east of the east rail, in a granite boulder about 8 feet in diameter and projecting 3 feet above ground. A standard disk, stamped "C 13 1927." (168.755 meters or 553.657 feet.)

D 13.—About 3.2 miles north along the Bangor & Aroostook Railroad from the station at **West Seboois**, Penobscot County, $11\frac{1}{2}$ rails north of culvert 93.85, 9 rails south of milepost 94, 12.0 feet east of the east rail, in a boulder about 7 feet in diameter and projecting about 2 feet above ground. A standard disk, stamped "D 13 1927." (171.472 meters or 562.571 feet.)

E 13.—About 1.3 miles northeast along the Bangor & Aroostook Railroad from the station at **West Seboois**, Penobscot County, $\frac{1}{2}$ rail north of milepost 92, and 20.3 feet east of the east rail, in a granite boulder about 3 feet in diameter and projecting about 1 foot above ground. A standard disk, stamped "E 13 1927." (162.889 meters or 534.412 feet.)

F 13.—In Piscataquis County, about $\frac{3}{4}$ mile southwest along the Bangor & Aroostook Railroad from the station at **West Seboois**, Penobscot County, 6 $\frac{1}{2}$ rails southwest of milepost 90, and 14.2 feet southeast of the southeast rail, in a granite boulder about 5 feet in diameter and projecting $2\frac{1}{2}$ feet above ground. A standard disk, stamped "F 13 1927." (147.796 meters or 484.894 feet.)

G 13.—In Piscataquis County, about 2 miles southwest along the Bangor & Aroostook Railroad from the station at **West Seboois**, Penobscot County, at culvert 88.67, in the northwest end of the southeast head wall, 13.0 feet southeast of the southeast rail. A standard disk, stamped "G 13 1927." (143.104 meters or 469.500 feet.)

H 13.—About 0.2 mile north along the Bangor & Aroostook Railroad from the station at **Packard**, Piscataquis County, at culvert 86.48, in the north end of the east head wall, 20.4 feet east of the east rail. A standard disk, stamped "H 13 1927." (135.217 meters or 443.624 feet.)

J 13.—About 2.0 miles south along the Bangor & Aroostook Railroad from the station at **Packard**, Piscataquis County, 29 rails north of culvert 84.17, and 21.2 feet east of the east rail, in a granite boulder about 6 feet in diameter and projecting about 2 feet above ground. A standard disk, stamped "J 13 1927." (162.110 meters or 531.856 feet.)

K 13.—About $\frac{3}{4}$ mile south along the Bangor & Aroostook Railroad from **Schoodic**, Piscataquis County, 11 rails south of culvert 81.84, near the north end of a rail rack, and 16.8 feet east of the east rail, in a granite boulder about 6 feet in diameter and projecting about 1.5 feet above ground. A standard disk, stamped "K 13 1927." (140.086 meters or 459.599 feet.)

L 13.—About 2.7 miles southwest along the Bangor & Aroostook Railroad from **Schoodic**, Piscataquis County, 7 rails south of culvert 79.90, and 19.0 feet west of the west rail, in a granite boulder about 7 feet in diameter and projecting about 2 feet above ground. A standard disk, stamped "L 13 1927." (145.139 meters or 476.177 feet.)

M 13.—About $5\frac{1}{4}$ miles southwest along the Bangor & Aroostook Railroad from **Schoodic**, Piscataquis County, 18 rails north of culvert 77.15, and 37.4 feet east of the east rail, in a granite boulder about 8 feet in diameter and projecting about 2 feet above ground. A standard disk, stamped "M 13 1927." (142.707 meters or 468.198 feet.)

T.B.M. 193.—About 5.9 miles southwest along the Bangor & Aroostook Railroad from **Schoodic**, Piscataquis County, at bridge 76.62, on the third course of stone from the top of the west end of the north abutment. A chiseled square. (141.523 meters or 464.313 feet.)

For additional bench marks in this vicinity, see page 9.

N 13.—About $1\frac{1}{2}$ miles south along the Bangor & Aroostook Railroad from the station at **Brownville Junction**, Piscataquis County, in the northeast corner of the first large concrete culvert south of the junction, 17.5 feet east of the east rail. A standard disk, stamped "N 13 1927." (114.199 meters or 374.668 feet.)

P 13.—At **Brownville**, Piscataquis County, 63 feet south of the south end of the Bangor & Aroostook Railroad station, and 18 feet west of the west rail of the main track. A standard disk, stamped "P 13 1927" and set in the top of a concrete post. (102.137 meters or 335.094 feet.)

Q 13.—About 1.5 miles north along the Bangor & Aroostook Railroad from the station at **Milo**, Piscataquis County, 6 rails south of a highway crossing, $3\frac{1}{2}$ rails south of culvert 68.68, 23.5 feet west of the west rail, 37 feet south of the center line of a highway, and 2.9 feet east of a point 3.5 feet south of a corner of the right-of-way fence. A standard disk, stamped "Q 13 1927" and set in the top of a concrete post. (100.402 meters or 329.402 feet.)

R 13.—At **Milo**, Piscataquis County, about $\frac{1}{4}$ mile south of the Bangor & Aroostook Railroad station, 28.1 feet north of the center line of Gould Street, 35.7 feet west of the west rail of the main track, and 3.2 feet east of the right-of-way fence. A standard disk, stamped "R 13 1927" and set in the top of a concrete post. (90.592 meters or 297.217 feet.)

S 13.—About 1 mile southeast along the Bangor & Aroostook Railroad from the station at **Derby**, Piscataquis County, 19 rails southeast of milepost 65, 2 rails northwest of a road crossing, and 17.9 feet southwest of the southwest rail. A standard disk, stamped "S 13 1927" and set in the top of a concrete post. (88.931 meters or 291.768 feet.)

T 13.—About $2\frac{3}{4}$ miles southeast along the Bangor & Aroostook Railroad from the station at **Derby**, Piscataquis County, $3\frac{1}{2}$ rails northwest of milepost 63, 12 feet southeast of culvert 63.02, 32.7 feet northeast of the northeast rail, and 37 feet southwest of the center line of a highway. A standard disk, stamped "T 13 1927" and set in the top of a concrete post. (93.987 meters or 308.356 feet.)

U 13.—In Piscataquis County, about $3\frac{3}{4}$ miles northwest along the Bangor & Aroostook Railroad from the station at **La Grange**, Penobscot County, 1 rail north of culvert 61.39, at a road crossing, 40.5 feet east of the east rail, and 37 feet south of the center line of the road. A standard disk, stamped "U 13 1927" and set in the top of a concrete post. (94.706 meters or 310.715 feet.)

V 13.—In Piscataquis County, about 1.3 miles northwest along the Bangor & Aroostook Railroad from the station at **La Grange**, Penobscot County, 18 rails southeast of milepost 59, 28.5 feet northeast of the northeast rail, and 4.0 feet southwest of the right-of-way fence. A standard disk, stamped "V 13 1927" and set in the top of a concrete post. (85.074 meters or 279.114 feet.)

W 13.—At **La Grange**, Penobscot County, at the Bangor & Aroostook Railroad station, 24 feet south of the south wall, and 13.0 feet east of the east rail of the main track. A standard disk, stamped "W 13 1927" and set in the top of a concrete post. (73.798 meters or 242.119 feet.)

X 13.—About 1.8 miles northwest along the Bangor & Aroostook Railroad from the station at **South Lagrange**, Penobscot County, $3\frac{1}{2}$ rails north of culvert 55.80, 23.4 feet east of the east rail, and 3.6 feet west of the right-of-way fence. A standard disk, stamped "X 13 1927" and set in the top of a concrete post. (61.466 meters or 201.660 feet.)

Y 13.—At **South Lagrange**, Penobscot County, about 100 yards south of the south end of the Bangor & Aroostook Railroad station, 10 rails south of the crossing of the cut-off railroad to Old Town and Medford, and 64.8 feet east of the east rail of the Bangor line. A standard disk, stamped "Y 13 1927" and set in the top of a concrete post. (55.188 meters or 181.063 feet.)

For additional bench marks in the vicinity of South Lagrange, see page 24.

LINE 6, NORTHERN MAINE JUNCTION TO DANVILLE JUNCTION, MAINE

[First-order leveling]

This line follows the Maine Central Railroad from Northern Maine Junction, through Newport, Clinton, Oakland, and Lewiston,

to Danville Junction. The field work was done, during the fall of 1927, by a party in charge of Charles A. Schanck, aid.

For additional bench marks in the vicinity of Northern Maine Junction, see pages 23 and 44.

Z 13.—At **Hermon Centre**, Penobscot County, at the Maine Central Railroad station, 6.6 feet east of a point 13.8 feet south of the door, and 13.6 feet north of the north rail. A standard disk, stamped "Z 13 1927" and set in the top of a concrete post. (42.421 meters or 139.176 feet.)

A 14.—About 2.0 miles west along the Maine Central Railroad from **Hermon Centre**, Penobscot County, 14½ rails west of milepost V 123, 49.2 feet north of the north rail, and 26 feet east of the center line of a road. A standard disk, stamped "A 14 1927" and set in the top of a concrete post. (46.785 meters or 153.494 feet.)

B 14.—At **Hermon Pond**, Penobscot County, 9 feet west of the west end of the Maine Central railroad station, and 11.6 feet south of the south rail, in a plot of grass. A standard disk, stamped "B 14 1927" and set in the top of a concrete post. (47.075 meters or 156.414 feet.)

T.B.M. 7.—About 1½ miles west along the Maine Central Railroad from **Hermon Pond**, Penobscot County, at semaphore P 1248, on the southwest corner of the concrete base. A chiseled square. (44.140 meters or 144.816 feet.)

C 14.—About 2.1 miles west along the Maine Central Railroad from **Hermon Pond**, Penobscot County, 18 rails east of milepost V 127, at the bridge over Squadabscook Stream, in the south end of the west concrete abutment, 5.7 feet south of the south rail. A standard disk, stamped "C 14 1927." (41.652 meters or 136.653 feet.)

D 14.—At **Carmel**, Penobscot County, 93 feet east of the east end of the Maine Central Railroad station, and 96.5 feet south of the south rail. A standard disk, stamped "D 14 1927" and set in the top of a concrete post. (46.924 meters or 153.950 feet.)

E 14.—About 1¼ miles northwest along the Maine Central Railroad from **Carmel**, Penobscot County, 1½ rails east of semaphore P 1206, 7 rails west of a road crossing, and 26.4 feet south of the south rail. A standard disk, stamped "E 14 1927" and set in the top of a concrete post. (56.691 meters or 185.994 feet.)

F 14.—At **Etna**, Penobscot County, 114 feet east of the east end of the Maine Central Railroad station, and 53.5 feet north of the north rail. A standard disk, stamped "F 14 1927" and set in the top of a concrete post. (71.093 meters or 233.244 feet.)

G 14.—About 2½ miles west along the Maine Central Railroad from **Etna**, Penobscot County, 28 rails east of semaphore P 1152, 34.9 feet north of the north rail, 36 feet west of the center line of a road, and 2.9 feet south of the right-of-way fence. A standard disk, stamped "G 14 1927" and set in the top of a concrete post. (76.258 meters or 250.190 feet.)

H 14.—About 4.8 miles west along the Maine Central Railroad from **Etna**, Penobscot County, 15 rails east of semaphore P 1131, and 47.2 feet north of the north rail. A standard disk, stamped "H 14 1927" and set in the top of a concrete post. (75.012 meters or 246.102 feet.)

J 14.—About 2.1 miles east along the Maine Central Railroad from **Newport**, Penobscot County, 18 rails west of semaphore P 1116, at the point of curvature of the first curve east of Newport, and 44.2 feet north of the north rail. A standard disk, stamped "J 14 1927" and set in the top of a concrete post. (71.587 meters or 234.865 feet.)

K 14.—At **Newport**, Penobscot County, 7 rails east of the east end of the Maine Central Railroad station, at a concrete culvert, in the west end of the north head wall, 19.0 feet north of the north rail. A standard disk, stamped "K 14 1927." (61.545 meters or 201.919 feet.)

L 14.—At **Newport**, Penobscot County, on the Maine Central Railroad, 35 feet east of the center line of Spring Street, and 24.9 feet south of the south rail. A standard disk, stamped "L 14 1927" and set in the top of a concrete post. (61.458 meters or 201.633 feet.)

M 14.—In **Somerset County**, about 2 miles southwest along the Maine Central Railroad from **Newport**, Penobscot County, 34 rails northeast of semaphore P 1072, 24.9 feet northwest of the northwest rail, and 28.3 feet southeast of the right-of-way fence, in a medium-sized boulder. A standard disk, stamped "M 14 1927." (57.382 meters or 188.261 feet.)

N 14.—About 1.2 miles southwest along the Maine Central Railroad from Detroit, Somerset County, $1\frac{1}{2}$ rails northeast of semaphore P 1055, 50.1 feet northwest of the northwest rail, and 2.1 feet southeast of the right-of-way fence. A standard disk, stamped "N 14 1927" and set in the top of a concrete post. (59.165 meters or 194.111 feet.)

P 14.—About $\frac{1}{2}$ mile east along the Maine Central Railroad from Pittsfield, Somerset County, $13\frac{1}{2}$ rails west of milepost P 103, 46.8 feet north of the north rail, and 5.4 feet south of the right-of-way fence. A standard disk, stamped "P 14 1927" and set in the top of a concrete post. (65.306 meters or 214.258 feet.)

K 20 (U.S.G.S.).—At Pittsfield, Somerset County, at the Pittsfield National Bank building, in the granite coping of the entrance to the basement. A United States Geological Survey standard disk, stamped "ME 1923 K 20." (68.078 meters or 223.353 feet.)

Q 14.—About $1\frac{1}{2}$ miles southwest along the Maine Central Railroad from Pittsfield, Somerset County, 25 rails southwest of milepost P 101, at a road crossing, 38.9 feet northwest of the northwest rail, and 34 feet northeast of the center line of the road. A standard disk, stamped "Q 14 1927" and set in the top of a concrete post. (63.658 meters or 208.851 feet.)

R 14.—In Somerset County, about $3\frac{1}{2}$ miles north along the Maine Central Railroad from Burnham Junction, Waldo County, $3\frac{1}{2}$ rails north of semaphore P 986, at a road crossing, 32.7 feet east of the east rail, and 54 feet south of the center line of the road. A standard disk, stamped "R 14 1927" and set in the top of a concrete post. (73.244 meters or 240.301 feet.)

S 14.—In Somerset County, about $2\frac{1}{2}$ miles north along the Maine Central Railroad from Burnham Junction, Waldo County, 20 rails north of semaphore P 976, at a road crossing, 49.6 feet west of the west rail, 61 feet south of the center line of the road, and 3.1 feet east of the right-of-way fence. A standard disk, stamped "S 14 1927" and set in the top of a concrete post. (62.182 meters or 204.009 feet.)

K 6 (U.S.G.S.).—At Burnham Junction, Waldo County, at the northwest corner of the I & H building, in the top of a large boulder. A United States Geological Survey standard disk, stamped "ME 1923 K 6." (49.050 meters or 160.925 feet.)

NOTE.—The rod was held on the letter "R" of the word "SURVEY" as this was the highest part of the disk.

152.7 (U.S.G.S.).—About 1.0 mile southwest along the Maine Central Railroad from Burnham Junction, Waldo County, at block signal P 940, on the concrete base. A chiseled square. (46.552 meters or 152.729 feet.)

T 14.—About 1.3 miles southwest along the Maine Central Railroad from Burnham Junction, Waldo County, 2 rails northeast of block signal P 937, and 27.7 feet southeast of the southeast rail. A standard disk, stamped "T 14 1927" and set in the top of a concrete post. (51.862 meters or 170.151 feet.)

169.4 (U.S.G.S.).—In Kennebec County, about 1.9 miles southwest along the Maine Central Railroad from Burnham Junction, Waldo County, at block signal P 932, on the concrete base. A chiseled square. (51.648 meters or 169.448 feet.)

K 5 (U.S.G.S.).—About 2.5 miles northeast along the Maine Central Railroad from Clinton, Kennebec County, 10 feet south of a gate, and 70 feet south of the track, in the top of a large flat rock. A United States Geological Survey standard disk, stamped "ME 1923 K 5 190." (58.042 meters or 190.426 feet.)

162.6 (U.S.G.S.).—About 1 mile northeast along the Maine Central Railroad from Clinton, Kennebec County, at block signal P 910, on the concrete base. A chiseled square. (49.569 meters or 162.628 feet.)

K 4 (U.S.G.S.).—At the west edge of Clinton, Kennebec County, on the Maine central Railroad, 50 feet northeast of block signal P 897, and 30 feet southeast of the track, in the top of a boulder. A United States Geological Survey standard disk, stamped "ME 1923 K 4." (45.126 meters or 148.051 feet.)

156.5 (U.S.G.S.).—About 1 mile southwest along the Maine Central Railroad from Clinton, Kennebec County, at block signal P 889, on the concrete base. A chiseled square. (47.714 meters or 156.542 feet.)

U 14.—About 1.3 miles southwest along the Maine Central Railroad from Clinton, Kennebec County, 35 rails southwest of semaphore P 889, at a con-

crete culvert, in the southwest end of the southeast head wall. A standard disk, stamped "U 14 1927." (47.651 meters or 156.335 feet.)

167.0 (U.S.G.S.).—About 3.8 miles northeast along the Maine Central Railroad from **Fairfield**, Kennebec County, at block signal P 879, on the concrete base. A chiseled square. (50.888 meters or 166.955 feet.)

K 3 (U.S.G.S.).—About 3 miles northeast along the Maine Central Railroad from **Fairfield**, Kennebec County, about 800 feet northeast of milepost P 87, and 60 feet southeast of the track, in a granite boulder. A United States Geological Survey standard disk, stamped "ME 1923 K 3." (48.601 meters or 159.452 feet.)

163.0 (U.S.G.S.).—About 1.8 miles northeast along the Maine Central Railroad from **Fairfield**, Kennebec County, at block signal P 861, on the concrete base. A chiseled square. (49.685 meters or 163.008 feet.)

V 14.—About 1.6 miles northeast along the Maine Central Railroad from **Fairfield**, Kennebec County, and 44 rails southwest of block signal P 861, at a concrete culvert, in the northeast end of the northwest head wall. A standard disk, stamped "V 14 1927." (48.378 meters or 158.720 feet.)

K 2 (U.S.G.S.).—At **Fairfield**, Kennebec County, in the park opposite the schoolhouse, in the concrete base of a flagpole. A United States Geological Survey standard disk, stamped "ME 1923 K 2." (43.166 meters or 141.620 feet.)

W 14.—At **Waterville**, Kennebec County, about 200 feet west of the west end of the Maine Central Railroad station, and 22 feet east of the center line of Chaplin Street, at the end of a plot of grass along the tracks. A standard disk, stamped "W 14 1927" and set in the top of a concrete post. (36.117 meters or 118.494 feet.)

K 1 (U.S.G.S.).—At **Waterville**, Kennebec County, at the post office, at the southwest corner, in a cement block at the edge of the coping. A United States Geological Survey standard disk, stamped "ME 1923 K 1." (34.559 meters or 113.382 feet.)

X 14.—About 1.8 miles northwest along the Maine Central Railroad from **Waterville**, Kennebec County, 63 rails southeast of milepost P 83, and 23.2 feet northeast of the northeast rail. A standard disk, stamped "X 14 1927" and set in the top of a concrete post. (42.251 meters or 138.618 feet.)

Y 14.—About 1.6 miles northeast along the Maine Central Railroad from **Oakland**, Kennebec County, 51 rails west of milepost P 81, 18.6 feet north of the north rail, and 25 feet south of the center line of the road. A standard disk, stamped "Y 14 1927" and set in the top of a concrete post. (55.922 meters or 183.471 feet.)

For additional bench marks in the vicinity of **Oakland**, see pages 53 and 54.

Z 14.—At **Oakland**, Kennebec County, 15.3 feet east of the east end of the Maine Central Railroad station, and 16.2 feet south of the south rail. A standard disk, stamped "Z 14 1927" and set in the top of a concrete post. (75.574 meters or 247.946 feet.)

A 15.—About $1\frac{3}{4}$ miles southwest along the Maine Central Railroad from **Oakland**, Kennebec County, 2 rails northeast of block signal B 76.8, 31.0 feet southeast of the southeast rail, and 1.2 feet northwest of the right-of-way fence. A standard disk, stamped "A 15 1927" and set in the top of a concrete post. (79.536 meters or 260.944 feet.)

B 15.—At **North Belgrade**, Kennebec County, on the Maine Central Railroad, 1 rail west of block signal B 74.9, and 27.9 feet north of the north rail of the main track. A standard disk, stamped "B 15 1927" and set in the top of a concrete post. (76.670 meters or 251.541 feet.)

C 15.—About 2.5 miles southwest along the Maine Central Railroad from **North Belgrade**, Kennebec County, 16 rails southwest of block signal B 72.5, and 17.5 feet north of the north rail, in a granite boulder. A standard disk, stamped "C 15 1927." (78.006 meters or 255.925 feet.)

D 15.—At **Belgrade**, Kennebec County, 7 rails southwest of the Maine Central Railroad station, 35.0 feet northwest of the northwest rail, and 55 feet southwest of the center line of a highway. A standard disk, stamped "D 15 1927" and set in the top of a concrete post. (79.176 meters or 259.763 feet.)

E 15.—About 2.2 miles southwest along the Maine Central Railroad from **Belgrade**, Kennebec County, 5 rails northeast of block signal B 67.8, and 11.4 feet northwest of the northwest rail, in a boulder. A standard disk, stamped "E 15 1927." (79.360 meters or 260.367 feet.)

F 15.—About 4.0 miles southwest along the Maine Central Railroad from **Belgrade**, Kennebec County, opposite milepost P 66, and 20.5 feet north of the north rail, in a boulder. A standard disk, stamped "F 15 1927." (83.450 meters or 273.786 feet.)

G 15.—About 2 miles east along the Maine Central Railroad from **Readfield**, Kennebec County, 12 rails west of milepost P 64, at a road crossing, 50.7 feet north of the north rail, and 16 feet east of the center line of the road. A standard disk, stamped "G 15 1927" and set in the top of a concrete post. (96.741 meters or 317.391 feet.)

H 15.—At **Readfield**, Kennebec County, 7 rails west of the west end of the Maine Central Railroad station, 32.2 feet north of the north rail, and about 4 feet south of the right-of-way fence. A standard disk, stamped "H 15 1927" and set in the top of a concrete post. (96.268 meters or 315.839 feet.)

J 15.—About $\frac{1}{4}$ mile north along the Maine Central Railroad from **Maranacook**, Kennebec County, and 5 rails north of milepost P 60, in the east end of the north abutment of the first bridge north of the station. A standard disk, stamped "J 15 1927." (72.024 meters or 236.299 feet.)

K 15.—About 1.9 miles north along the Maine Central Railroad from **Winthrop**, Kennebec County, 56 rails north of milepost P 58, and 21.1 feet east of the east rail, in a boulder about 5 feet in diameter and projecting 2 feet above ground. A standard disk, stamped "K 15 1927." (67.458 meters or 221.318 feet.)

L 15.—At **Winthrop**, Kennebec County, about 5 feet south of the south end of the Maine Central Railroad station, and 38.6 feet west of the west rail, in line with a row of poles. A standard disk, stamped "L 15 1927" and set in the top of a concrete post. (68.635 meters or 225.180 feet.)

M 15.—About 1.5 miles south along the Maine Central Railroad from the station at **Winthrop**, Kennebec County, 11 rails south of milepost P 55, 38.6 feet west of the west rail, and 3.2 feet west of the right-of-way fence. A standard disk, stamped "M 15 1927" and set in the top of a concrete post. (55.586 meters or 182.368 feet.)

N 15.—At **Annabessacook**, Kennebec County, 6 rails northeast of the northwest end of the Maine Central Railroad station, 25.2 feet northwest of the northwest rail, and 28 feet northeast of the center line of a road. A standard disk, stamped "N 15 1927" and set in the top of a concrete post. (54.415 meters or 178.527 feet.)

P 15.—At **Monmouth**, Kennebec County, 72.7 feet east of the east end of the Maine Central Railroad station, 9 rails east of milepost P 51, and 13.6 feet south of the south rail. A standard disk, stamped "P 15 1927" and set in the top of a concrete post. (82.858 meters or 271.843 feet.)

Q 15.—In Kennebec County, about $\frac{3}{4}$ mile northeast along the Maine Central Railroad from **Leeds Junction**, Androscoggin County, 4 rails southwest of block signal B 48.3, 24.5 feet northwest of the northwest rail, and 20 feet northeast of the center line of a road. A standard disk, stamped "Q 15 1927" and set in the top of a concrete post. (89.361 meters or 293.179 feet.)

R 15.—About 1.9 miles northeast along the Maine Central Railroad from **Greene**, Androscoggin County, about $\frac{1}{2}$ mile west of milepost P 47, 24 feet east of the center of a private-road crossing, and 30.9 feet south of the south rail. A standard disk, stamped "R 15 1927" and set in the top of a concrete post. (88.265 meters or 289.583 feet.)

293 (U.S.G.S.).—About $\frac{1}{4}$ mile northeast along the Maine Central Railroad from **Greene**, Androscoggin County, in a rock ledge. A United States Geological Survey standard disk, stamped "293 AUGUSTA." (89.126 meters or 292.408 feet.)

NOTE.—This elevation is subject to some small uncertainty since the disk is set at an angle of about 40° with the horizontal. The rod was held as near the center of the disk as possible.

S 15.—About $\frac{1}{4}$ mile southwest along the Maine Central Railroad from **Greene**, Androscoggin County, 13 rails northeast of block signal B 44.2, at a road crossing, 34.4 feet southeast of the southeast rail, and 21.0 feet southwest of the center line of the road. A standard disk, stamped "S 15 1927" and set in the top of a concrete post. (96.295 meters or 315.928 feet.)

275 (U.S.G.S.).—About 6 miles northeast along the Maine Central Railroad from Upper Station at **Lewiston**, Androscoggin County, in milestone V 211. A United States Geological Survey standard disk, stamped "AUGUSTA 275." (82.862 meters or 271.856 feet.)

NOTE.—The original description of this bench mark states that it is in milestone V 212. The difference in elevation is probably due to the milestone having been moved.

T 15.—About $4\frac{1}{2}$ miles northeast along the Maine Central Railroad from Upper Station at **Lewiston**, Androscoggin County, 36 rails southwest of block signal B 41.9, and 19.4 feet northwest of the northwest rail, in a rock outcrop. A standard disk, stamped "T 15 1927." (74.971 meters or 245.967 feet.)

228 (U.S.G.S.).—About 3 miles northeast along the Maine Central Railroad from Upper Station at **Lewiston**, Androscoggin County, in milestone V 214, on the east side of the track. A United States Geological Survey standard disk, stamped "AUGUSTA 228." (77.177 meters or 253.205 feet.)

NOTE.—The original description of this bench mark states that it is on the west side of the track and in milestone V 215. The difference in elevation is probably due to the milestone having been moved.

U 15.—About $2\frac{1}{2}$ miles northeast along the Maine Central Railroad from Upper Station at **Lewiston**, Androscoggin County, 25 rails northeast of block signal B 39.4, 23.5 feet southeast of the southeast rail, and 31 feet northeast of the center line of a road. A standard disk, stamped "U 15 1927" and set in the top of a concrete post. (71.132 meters or 233.372 feet.)

V 15.—At the north edge of **Lewiston**, Androscoggin County, on the Maine Central Railroad, opposite the main entrance to the Maine State Fairgrounds, 27.1 feet southeast of the southeast rail of the main track, and 29.2 feet northeast of the center line of State Highway 100. A standard disk, stamped "V 15 1927" and set in the top of a concrete post. (63.105 meters or 207.037 feet.)

W 15.—At **Lewiston**, Androscoggin County, on the Maine Central Railroad, about 200 feet north of the north end of the Upper Station, in the south end of the concrete retaining wall, about 2.5 feet higher than the tracks. A standard disk, stamped "W 15 1927." (63.954 meters or 209.822 feet.)

196 (U.S.G.S.).—At **Lewiston**, Androscoggin County, at the post office, in the south face of the southwest corner. A United States Geological Survey standard disk, stamped "AUGUSTA 196." (59.709 meters or 195.895 feet.)

X 15.—At **Auburn**, Androscoggin County, about 300 feet south of the Maine Central Railroad station, and 28.8 feet west of the west rail of the main track. A standard disk, stamped "X 15 1927" and set in the top of a concrete post. (57.379 meters or 188.251 feet.)

Y 15.—About 2 miles south along the Maine Central Railroad from **Auburn**, Androscoggin County, and about $\frac{1}{4}$ mile north of milepost P 34, at a bridge, in the top course of the north abutment. A standard disk, stamped "Y 15 1927." (63.771 meters or 209.222 feet.)

204 (U.S.G.S.).—About 1.3 miles northeast along the Maine Central Railroad from **Rumford Junction**, Androscoggin County, in milepost V 220. A United States Geological Survey standard disk, stamped "AUGUSTA 204." (63.223 meters or 207.424 feet.)

NOTE.—The original description of this bench mark states that it is in milepost V 221 and that it is stamped "205." The difference in elevation is probably due to the milepost having been moved.

Z 15.—At **Rumford Junction**, Androscoggin County, on the Maine Central Railroad, 7 rails northeast of block signal B 32.6, and 24.8 feet southeast of the southeast rail. A standard disk, stamped "Z 15 1927" and set in the top of a concrete post. (68.960 meters or 226.246 feet.)

For bench marks in the vicinity of Danville Junction, see page 14.

LINE 7, YARMOUTHVILLE TO NORTHERN MAINE JUNCTION, MAINE

[Second-order levelling]

This line follows the Maine Central Railroad from Yarmouth Junction, through Brunswick, Bath, Wiscasset, Newcastle, Waldoboro, and Warren, to Rockland; United States Highway 1 from Rockland, through Camden, Lincolnville, and Belfast, to Searsport; and the Bangor & Aroostook Railroad from Searsport, through Stockton, Frankport, and Winterport, to Northern Maine Junction. The field work was done, during the late summer of 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For bench marks in the vicinity of Yarmouthville, see page 14.

S 16.—About $1\frac{1}{4}$ miles northeast along the Maine Central Railroad from **Yarmouth Junction**, Cumberland County, about 730 feet southwest of milepost **P 17**, about 50 feet southwest of an overhead highway bridge, and 8 feet northwest of the center line of the track, in the top of a rock ledge, about level with the base of the rail. A standard disk, stamped "S 16 1933." (22.581 meters or 74.084 feet.)

90 (U.S.G.S.).—About 1.7 miles southwest along the Maine Central Railroad from the station at **Freeport**, Cumberland County, about 200 feet northeast of milepost **P 19**, at an overhead highway bridge, 8 feet southeast of the center line of the track, in the top of the southwest wing wall of the southeast abutment, about 1 foot lower than the base of the rail. A United States Geological Survey standard disk, stamped "90." (27.379 meters or 89.826 feet.)

T 16.—At **Freeport**, Cumberland County, about 200 feet north of the Maine Central Railroad station, about 50 feet southwest of the center line of **United States Highway 1**, in the top of the base of a block signal tower, 8 feet east of the center line of the east main track, and about 1 foot higher than the base of the rail. A standard disk, stamped "T 16 1933." (39.700 meters or 130.249 feet.)

U 16.—About 2.8 miles northeast along the Maine Central Railroad from the station at **Freeport**, Cumberland County, about $\frac{1}{2}$ mile northeast of milepost **P 23**, about 250 feet southwest of an overhead bridge, about 170 feet southwest of automatic signal **L 235**, and 4 yards northwest of the northwest rail, in the top of a sandstone outcrop, about 3 feet lower than the track. A standard disk, stamped "U 16 1933." (38.008 meters or 124.698 feet.)

V 16.—About 2.9 miles west along the Maine Central Railroad from the station at **Brunswick**, Cumberland County, $\frac{1}{4}$ mile west of an overhead bridge, about 200 feet east of automatic signal **L 263**, about 100 feet south of **United States Highway 1**, and 10 feet north of the north rail, in the top of a sandstone outcrop, about 2 feet higher than the track. A standard disk, stamped "V 16 1933." (43.549 meters or 142.877 feet.)

W 16.—At **Brunswick**, Cumberland County, on the Maine Central Railroad, about 0.4 mile west of the station, at automatic signal **L 288**, at an overhead highway bridge, in the top of the west end of the southwest wing wall, about 30 feet south of the center line of the main track, and 6 feet higher than the top of the rail. A standard disk, stamped "W 16 1933." (23.769 meters or 77.982 feet.)

67.1 (U.S.G.S.).—At **Brunswick**, Cumberland County, at the west end of the Maine Central Railroad station, 39 feet north of the north rail, in the south corner of the south doorstep, about 8 inches higher than the ground. A United States Geological Survey standard disk, stamped "67.1." (20.400 meters or 66.929 feet.)

66.5 (U.S.G.S.).—At **Brunswick**, Cumberland County, at the north side of the Maine Central Railroad station, 66 feet north of the north rail of the north track, in the southwest corner of the coping around the westernmost basement window, about level with the sidewalk. A United States Geological Survey standard disk, stamped "66.5." (20.228 meters or 66.365 feet.)

NOTE.—About three-fourths of the disk has been destroyed.

70 (U.S.G.S.).—At **Brunswick**, Cumberland County, in the southeast face of the town hall, about 30 feet north of **Town Hall Place**, about 10 feet west of the center line of **Main Street**, in the granite foundation, 3 feet above the sidewalk, and 6 inches below the water table. A United States Geological Survey standard disk, stamped "70." (21.164 meters or 69.436 feet.)

X 16.—About 2.2 miles east along the Maine Central Railroad from the station at **Brunswick**, Cumberland County, about 0.4 mile east of milepost **P 31**, about 200 feet north of **United States Highway 1**, and 12 feet north of the center line of the track, in a large granite outcrop, about 6 feet higher than the base of the rail. A standard disk, stamped "X 16 1933" and set vertically. (19.140 meters or 62.795 feet.)

Y 16.—About 3.8 miles east along the Maine Central Railroad from the station at **Brunswick**, Cumberland County, at the west end of a small rock cut, directly across the track from milepost **P 33**, 3 yards north of the north rail, in a large rock outcrop, about 1 foot lower than the track. A standard disk, stamped "Y 16 1933" and set vertically. (10.968 meters or 35.984 feet.)

Z 16.—About 3.6 miles west along the Maine Central Railroad from the station at **Bath**, Sagadahoc County, about 1,000 feet east of the bridge over **New Meadows River**, about 100 feet west of a dirt-road crossing, about 20

yards south of the center line of the track, 9 feet south of the center line of a trolley car line, and about 4 feet higher than the top of the rail. A standard disk, stamped "Z 16 1933" and set in the top of a concrete post. (13.180 meters or 43.241 feet.)

A 17.—At Bath, Sagadahoc County, at the Maine Central Railroad station, about 350 feet west of the west end of the railroad bridge over Kennebec River, about 125 feet south of the east end of the baggage room, and about 75 feet south of the main track, in the east end of the north foundation of the roof over a railroad scale, about level with the track. A standard disk, stamped "A 17 1933." (2.458 meters or 8.064 feet.)

B 17.—At Bath, Sagadahoc County, about 350 feet east of the east end of the Maine Central Railroad station baggage room, at the west end of the railroad bridge over Kennebec River, 10 feet south of the center line of the track, in the top of the southwest corner of the foundation of a large concrete column, about 1 foot lower than the base of the rail. A standard disk, stamped "B 17 1933." (3.822 meters or 12.539 feet.)

C 17.—About 0.7 mile northeast along the Maine Central Railroad from the station at Bath, Sagadahoc County, about 90 feet southwest of the south end of the station at Woolwich, at the overhead highway bridge, in the top of the south wing wall of the east abutment, 7 feet south of the center line of the track, and about 2 feet lower than the base of the rail. A standard disk, stamped "C 17 1933." (12.221 meters or 40.095 feet.)

D 17.—At Nequasset, Sagadahoc County, on the Maine Central Railroad, about 1,200 feet east of the station, about 275 feet east of signal tower BR 41-1, at a railroad bridge, in the top of the northeast corner of the west abutment, 7 feet north of the center line of the track, about level with the base of the rail. A standard disk, stamped "D 17 1933." (13.102 meters or 42.985 feet.)

E 17.—About 1.0 mile west along the Maine Central Railroad from the station at Montsweag, Sagadahoc County, about 0.6 mile west of milepost P 45, about 250 feet west of an overhead highway bridge, 65 feet east of another overhead bridge, 15 feet south of the center line of the track, and about 4 feet higher than the base of the rail. A standard disk, stamped "E 17 1933" and set in the top of a concrete post. (19.642 meters or 64.442 feet.)

F 17.—At Montsweag, Sagadahoc County, opposite the Maine Central Railroad station, 7 feet north of the center line of the track, in the top of a rock ledge, about level with the base of the rail. A standard disk, stamped "F 17 1933." (18.122 meters or 59.455 feet.)

G 17.—About 2.1 miles southwest along the Maine Central Railroad from the station at Wiscasset, Lincoln County, about 1,280 feet northeast of milepost P 47, about 1,000 feet southwest of automatic signal BR 474, and about 7 yards northwest of the northwest rail, in the top of a large boulder, about level with the track. A standard disk, stamped "G 17 1933." (19.003 meters or 62.346 feet.)

H 17.—At Wiscasset, Lincoln County, in the south face of the post office, at the southeast corner of the building, 4 feet higher than the ground. A standard disk, stamped "H 17 1933" and set vertically. (9.079 meters or 29.787 feet.)

J 17.—At Wiscasset, Lincoln County, about 120 yards northeast of the Maine Central Railroad station, about 50 yards northeast of a railroad crossing, about 23 yards southwest of automatic signal BR 493, about 9 yards southeast of the center line of the track, and about 1 foot higher than the top of the rail. A standard disk, stamped "J 17 1933" and set in the top of a concrete post. (3.693 meters or 12.116 feet.)

K 17.—At South Newcastle, Lincoln County, about 24 yards west of the west end of the Maine Central Railroad station, at a concrete culvert, in the top of the east end of the north head wall, 2 yards north of the north rail, and about 1 foot lower than the track. A standard disk, stamped "K 17 1933." (13.421 meters or 44.032 feet.)

L 17.—About 2.6 miles east along the Maine Central Railroad from the station at South Newcastle, Lincoln County, about 2,230 feet west of milepost P 55, at a grade crossing, about 40 yards southeast of the point of a switch of a sidetrack, about 28 yards south of the center line of the track, and about 6 yards west of the center line of the road, in the top of a large granite outcrop, about 3 feet higher than the road. A standard disk, stamped "L 17 1933." (17.616 meters or 57.795 feet.)

M 17.—At Newcastle, Lincoln County, about 52 yards west of the west end of the Maine Central Railroad station, about 20 yards east of the center of a

grade crossing, at a large water tank, 3 yards north of the center line of the main track, in the south corner of the concrete base of the southeast pedestal, 1 foot higher than the base of the rail. A standard disk, stamped "M 17 1933." (27.697 meters or 90.869 feet.)

N 17.—At **Newcastle**, Lincoln County, about 35 yards east of the east end of the Maine Central Railroad station, and 8 yards north of the center line of the main track, in the top of a large projecting rock, about 3 feet higher than the top of the rail. A standard disk, stamped "N 17 1933." (28.230 meters or 92.618 feet.)

P 17.—At **Damariscotta Mills**, Lincoln County, on the Maine Central Railroad, about 300 yards southwest of the station, about 21 yards northeast of milepost P 58, at a railroad bridge, in the top of the northwest end of the southwest bridge seat, 3 yards northwest of the northwest rail, and about 4 feet lower than the track. A standard disk, stamped "P 17 1933." (3.178 meters or 10.428 feet.)

R 17.—At **Nobleboro**, Lincoln County, about 57 yards southwest of the southwest end of the Maine Central Railroad station, about 200 yards southwest of milepost P 61, and about 12 yards northwest of the center line of the main track, in the top of a large granite outcrop, about 1 foot higher than the base of the rail. A standard disk, stamped "R 17 1933." (20.951 meters or 68.737 feet.)

S 17.—About 1.5 miles northeast along the Maine Central Railroad from the station at **Nobleboro**, Lincoln County, about $\frac{1}{4}$ mile east of milepost P 62, about 400 feet east of signal BR 62.3, about 375 feet east of a dirt-road crossing, and 8 feet south of the center line of the track, in the top of a rock outcrop, about 2 feet lower than the base of the rail. A standard disk, stamped "S 17 1933." (22.334 meters or 73.274 feet.)

120 (U.S.G.S.).—About 0.6 mile west along the Maine Central Railroad from the station at **Glendon**, Lincoln County, about 25 feet east of a dirt-road crossing, and about 10 feet south of the center line of the track, in the top of a rock ledge, about 2 feet higher than the base of the rail. A United States Geological Survey standard disk, stamped "120." (36.482 meters or 119.691 feet.)

T 17.—About 0.5 mile west along the Maine Central Railroad from the station at **Winslows Mills**, Lincoln County, about 400 feet west of signal BR 65.8, about 340 feet west of the Metomok Canning Co., about 30 feet east of a dirt-road crossing, and about 20 feet south of the center line of the track, in the top of a large boulder. A standard disk, stamped "T 17 1933." (30.196 meters or 99.068 feet.)

108 (U.S.G.S.).—At **Waldoboro**, Lincoln County, about 70 yards northwest of the northwest corner of the Maine Central Railroad station, about 35 yards north of the center line of the main track, about 20 yards southeast of a residence, and about 4 yards west of the center line of Winslow Road, in the top of a large, flat, rock outcrop, about level with the base of the rail. A United States Geological Survey standard disk, stamped "108." (32.994 meters or 108.248 feet.)

U 17.—At **Waldoboro**, Lincoln County, about 43 yards west of the west corner of the Maine Central Railroad station, about 30 yards south of the center line of the main track, about 29 yards west of Winslow Road, and 4 feet south of the south side of a residence, in the top of a large, flat, rock outcrop. A standard disk, stamped "U 17 1933." (31.301 meters or 102.693 feet.)

V 17.—About 3.8 miles east along the Maine Central Railroad from the station at **Waldoboro**, Lincoln County, about 0.4 mile east of milepost P 71, about 195 yards west of automatic signal BR 71.5, about 130 yards west of a grade crossing, and about 6 yards north of the north rail, in the top of a large embedded boulder, about 2 feet lower than the base of the rail. A standard disk, stamped "V 17 1933." (48.864 meters or 160.315 feet.)

W 17.—In Knox County, about 4.7 miles east along the Maine Central Railroad from the station at **Waldoboro**, Lincoln County, about 1,759 feet east of milepost P 72, about 150 yards from a grade crossing, and about 3 yards northwest of the northwest rail, in the top of a small rock outcrop, about 1 foot lower than the base of the rail. A standard disk, stamped "W 17 1933." (45.030 meters or 147.736 feet.)

X 17.—At **Warren**, Knox County, about 85 feet southeast of the southeast end of the Maine Central Railroad station, about 60 feet northeast of the freight station, at a dirt-road crossing, about 45 feet northeast of the center line of

the track, and 35 feet east of the road, in the top of a rock outcrop. A standard disk, stamped "X 17 1933." (16.368 meters or 53.701 feet.)

Y 17.—About 1.8 miles southeast along the Maine Central Railroad from the station at Warren, Knox County, about 150 feet north of signal BR 76.4, at a dirt-road crossing, about 50 feet west of the center line of the track, and about 15 feet south of the center line of the road, in the top of a boulder, about 4 feet higher than the base of the rail. A standard disk, stamped "X 17 1933." (15.341 meters or 50.331 feet.)

Z 17.—About 2.5 miles west along the Maine Central Railroad from the station at Thomaston, Knox County, about 500 feet west of a dirt-road crossing, at the bridge over St. George River, at the east abutment, 6 feet south of the center line of the track, in the south end of the bridge seat, about 5 feet lower than the base of the rail. A standard disk, stamped "Z 17 1933." (4.440 meters or 14.567 feet.)

142 (U.S.G.S.)—At Thomaston, Knox County, on Main Street (also U.S. Highway 1), in the west wall of the penitentiary about 70 feet east of the center line of the street, about 1 foot south of the northwest corner, and about 1 foot higher than the ground. A United States Geological Survey standard disk, stamped "142" and set vertically. (43.349 meters or 142.221 feet.)

A 18.—At Thomaston, Knox County, in the east face of the Maine Central Railroad station, at the southeast corner, about 4 yards north of the north rail, and about 2 feet higher than the base of the rail. A standard disk, stamped "A 18 1933" and set vertically. (17.105 meters or 56.119 feet.)

B 18.—About 2.4 miles southwest along the Maine Central Railroad from the station at Rockland, Knox County, about 15 yards east of signal tower BR 83.5, about 21 yards west of the center of a dirt-road crossing, about 3 yards north of the north rail, and about 1 foot lower than the base of the rail. A standard disk, stamped "B 18 1933" and set in the top of a concrete post. (11.860 meters or 38.911 feet.)

C 18.—At Rockland, Knox County, on the Maine Central Railroad, about 18 yards east of automatic signal BR 855, about 60 yards south of the center line of United States Highway 1, about 8 yards west of the center line of Broadway, and about 4 yards north of the north rail, in the top of a rock outcrop, about 2 feet higher than the base of the rail. A standard disk, stamped "C 18 1933." (17.525 meters or 57.497 feet.)

D 18.—At Rockland, Knox County, in the east wall of the Maine Central Railroad station, at the northeast corner, about 15 yards west of the center line of Union Street, about 8 yards south of the center line of the south track, and about 8 inches higher than the sidewalk. A standard disk, stamped "D 18 1933" and set vertically. (11.051 meters or 36.256 feet.)

Tidal 10.—At Rockland, Knox County, at the south side of the post office, about 10 yards east of the middle of the south entrance, and 3 feet west of the southeast corner of the building, in the water table, about 3 feet higher than the ground. A standard disk, set vertically. (10.712 meters or 35.144 feet.)

E 18.—At Rockland, Knox County, at 460 Main Street, at the Masonic Temple, in the east face of the north portal of the entrance, about 10 yards west of the center line of Main Street, and about 2 feet higher than the sidewalk. A standard disk, stamped "24.311 E 18 1933" and set vertically. (7.410 meters or 24.311 feet.)

F 18.—About 1.4 miles northeast along United States Highway 1 from Rockland, Knox County, directly opposite pole 560, at Silby's greenhouse, 24 feet west of the center line of the highway, in the top of a granite outcrop, about 2 feet higher than the highway. A standard disk, stamped "F 18 1933." (24.779 meters or 81.296 feet.)

G 18.—About 2.3 miles southwest along United States Highway 1 from Rockport, Knox County, at a 3- by 5-foot concrete box culvert over Varnah Brook, about 10 yards south of the center line of the highway, in the top of the east end of the south head wall, about level with the highway. A standard disk, stamped "G 18 1933." (34.074 meters or 111.791 feet.)

H 18.—At Rockport, Knox County, in the north face of the post office, about 10 yards south of the center line of Center Street, and about 4 yards east of the entrance, in the stone window sill, about 3 feet higher than the sidewalk. A standard disk, stamped "H 18 1933." (20.190 meters or 66.240 feet.)

J 18.—At Camden, Knox County, at the west side of the post office, about 60 feet north of the center line of Chestnut Street, and about 2 feet north of the southwest corner of the building, in the top of the water table, about 3

feet higher than the pavement. A standard disk, stamped "J 18 1933." (12.817 meters or 42.050 feet.)

K 18.—At Camden, Knox County, on Main Street (also U.S. Highway 1), about 300 feet north of the intersection of Commerce Street, at a bridge over Megunticook River, in the top of the south end of the sidewalk railing, about 33 feet west of the center line of the street. A standard disk, stamped "K 18 1933." (10.149 meters or 33.297 feet.)

L 18.—About 1.0 mile north along United States Highway 1 from Camden, Knox County, opposite the residence of the late Dr. N. B. Foster, about 50 feet west of the center line of the highway, in the top of a rock ledge, about 3 feet higher than the highway. A standard disk, stamped "L 18 1933." (41.863 meters or 137.346 feet.)

194 (U.S.G.S.).—About $2\frac{1}{4}$ miles south along United States Highway 1 from the post office at Lincolnton, Waldo County, on the top of a jagged rock cut, about 25 feet west of the highway, in the top of a granite outcrop, about 8 feet higher than the highway. A United States Geological Survey standard disk, stamped "194." (59.242 meters or 194.363 feet.)

M 18.—At Lincolnton, Waldo County, on United States Highway 1, about 300 feet north of the post office, at a bridge over Frohock Creek, in the top of the north end of the balustrade base, 15 feet east of the center line of the highway, and about 6 inches higher than the highway. A standard disk, stamped "M 18 1933." (2.851 meters or 9.354 feet.)

34 (U.S.G.S.).—About 1 mile north along United States Highway 1 from the post office at Lincolnton, Waldo County, about 170 feet northwest of the northeast end of a concrete bridge over Ducktrap River, and about 50 feet west of the center line of the highway, in the top of a solid rock outcrop, about 5 feet lower than the highway. A United States Geological Survey standard disk, stamped "34." (10.377 meters or 34.045 feet.)

N 18.—About $3\frac{1}{4}$ miles northeast along United States Highway 1 from the post office at Lincolnton, Waldo County, at the top of a hill, about 15 yards southeast of the southeast corner of a residence, about 8 yards north of the center line of the highway, in the top of a rock outcrop, about 1 foot higher than the highway. A standard disk, stamped "N 18 1933." (57.518 meters or 188.707 feet.)

P 18.—About $6\frac{1}{2}$ miles southeast along United States Highway 1 from the post office at Belfast, Waldo County, at a culvert over Shaw's Hill Stream, about 4 yards south of the center line of the highway, in the top of the west end of the south head wall, about 2 feet higher than the highway. A standard disk, stamped "P 18 1933." (55.701 meters or 182.746 feet.)

Q 18.—About 4.3 miles southeast along United States Highway 1 from the post office at Belfast, Waldo County, about 70 yards southwest of a large barn, about 70 yards northwest of a large residence, and about 10 yards north of the center line of the highway, in the top of a large rock outcrop, about 2 feet higher than the highway. A standard disk, stamped "Q 18 1933." (57.638 meters or 189.101 feet.)

R 18.—About $2\frac{1}{2}$ miles southeast along United States Highway 1 from the post office at Belfast, Waldo County, at the east end of a deep highway cut, at a steep grade leading east, about 18 yards south of the center line of the highway, and about 8 yards southeast of a small rock outcrop, in the top of a similar small rock outcrop, about 2 feet higher than the highway. A standard disk, stamped "R 18 1933." (19.104 meters or 62.677 feet.)

S 18.—At Belfast, Waldo County, in the east face of the post office, at the southeast corner, about 8 yards south of the center of the main entrance, about 8 yards north of the center line of Franklin Street, and about 4 feet higher than the sidewalk. A standard disk, stamped "S 18 1933" and set vertically. (34.597 meters or 113.507 feet.)

102 (U.S.G.S.).—At Belfast, Waldo County, in the south wall of the courthouse, about 13 yards east of the middle of the Church Street entrance, and about 7 yards north of the center line of Church Street, in the top of the water table, about $1\frac{1}{2}$ feet higher than the sidewalk. A United States Geological Survey standard disk, stamped "102." (31.274 meters or 102.605 feet.)

T 18.—At Belfast, Waldo County, on United States Highway 1, at the southwest end of the highway bridge over Passagassawakeag River, in the top of the southwest wing wall, about 7 yards southeast of the center line of the highway, about level with the highway. A standard disk, stamped "T 18 1933." (4.958 meters or 16.266 feet.)

U 18.—About 2½ miles northeast along United States Highway 1 from the post office at **Belfast**, Waldo County, about 1,200 yards east of the Penobscot Bay tourist cabins, about 50 yards southeast of a residence, about 12 yards north of the center line of the highway, about 4 yards northeast of pole 79, and about 4 feet higher than the highway. A standard disk, stamped "U 18 1933" and set in the top of a concrete post. (22.659 meters or 74.340 feet.)

V 18.—At **Searsport**, Waldo County, at the southeast corner of the intersection of United States Highway 1 and Steamboat Avenue, about 30 yards west of the west end of the Littlefields lumber mill, about 10 yards south of the center line of the highway, and about 7 yards east of the center line of Steamboat Avenue. A standard disk, stamped "V 18 1933" and set in the top of a granite post. (12.214 meters or 40.072 feet.)

W 18.—At **Searsport**, Waldo County, in the north face of the post office, about 10 yards south of Main Street, about 10 feet east of the middle of the Main Street entrance, and about 5 feet higher than the sidewalk. A standard disk, stamped "W 18 1933" and set vertically. (18.252 meters or 59.882 feet.)

X 18.—At **Searsport**, Waldo County, about 120 yards north of the Bangor & Aroostook Railroad station, on the road leading to United States Highway 1, about 11 yards west of the center line of the road, and about 3 feet lower than the road. A standard disk, stamped "X 18 1933" and set in the top of a concrete post. (9.483 meters or 31.112 feet.)

Y 18.—About 1.8 miles northeast along the Bangor & Aroostook Railroad from the station at **Searsport**, Waldo County, about 2 miles southeast of **Stockton**, and about 60 feet southeast of mileage 2.39, at a switch for a sidetrack to a fertilizer factory, about 20 feet northwest of the center line of the track, in the top of a large granite boulder, about 4 feet higher than the top of the rail. A standard disk, stamped "Y 18 1933." (8.684 meters or 28.491 feet.)

Z 18.—About 0.3 mile northeast along the Bangor & Aroostook Railroad from the station at **Stockton**, Waldo County, at mileage 4.64, about 200 feet north of a switch leading to a fertilizer plant, and about 40 feet east of the center line of the track, in the top of an abandoned concrete foundation, about level with the top of the rail. A standard disk, stamped "Z 18 1933." (11.622 meters or 38.130 feet.)

A 19.—About 0.1 mile north along the Bangor & Aroostook Railroad from the station at **Sandy Point**, Waldo County, at mileage 7.51, at an overhead highway bridge, in the top of the southeast wing wall, 20 feet east of the center line of the track, and about 2 feet lower than the base of the rail. A standard disk, stamped "A 19 1933." (28.984 meters or 95.092 feet.)

B 19.—About 1¼ miles south along the Bangor & Aroostook Railroad from **Prospect**, Waldo County, at mileage 9.29, about 100 feet south of a grade crossing, and about 50 feet west of the center line of the track, in the top of a large boulder, about level with the base of the rail. A standard disk, stamped "B 19 1933." (29.489 meters or 96.748 feet.)

C 19.—About 0.5 mile north along the Bangor & Aroostook Railroad from the station at **Prospect**, Waldo County, at mileage 11.54, about 500 feet north of a power-transmission line, about 350 feet northeast of United States Highway 1, about 50 feet north of the intersection of a dirt road with United States Highway 1 at a cemetery, 18 feet northeast of the center line of the track, and about ½ foot lower than the base of the rail. A standard disk, stamped "C 19 1933" and set in the top of a concrete post. (19.347 meters or 63.474 feet.)

D 19.—About 2.5 miles north along the Bangor & Aroostook Railroad from the station at **Prospect**, Waldo County, at mileage 13.51, about 30 feet north of the point of a switch of a sidetrack leading to a gravel pit, at the overhead crossing of United States Highway 1, 16 feet east of the center line of the track, in the top of the south end of the retaining wall, about 2 feet lower than the track. A standard disk, stamped "D 19 1933." (15.828 meters or 51.929 feet.)

E 19.—At **Frankfort**, Waldo County, on the Bangor & Aroostook Railroad, about 200 yards south of the south end of the station, at a railroad bridge, in the top of the west end of the northwest wing wall, about 6 yards west of the center line of the track, and about 4 feet lower than the base of the rail. A standard disk, stamped "E 19 1933." (16.280 meters or 53.412 feet.)

F 19.—About 2.3 miles north along the Bangor & Aroostook Railroad from **Frankfort**, Waldo County, at bridge S 1838, in the top of the east end of the south bridge seat, about 5 yards east of the center line of the track, and about

4 feet lower than the base of the rail. A standard disk, stamped "F 19 1933." (33.637 meters or 110.357 feet.)

G 19.—At **Winterport**, Waldo County, about 85 yards northwest of the Bangor & Aroostook Railroad station, and about 70 yards west of the center line of the main track, at the middle of a small rock cliff, in the top of a large boulder, about 3 feet higher than the ground. A standard disk, stamped "G 19 1933." (42.711 meters or 140.128 feet.)

H 19.—About $2\frac{1}{4}$ miles north along the Bangor & Aroostook Railroad from the station at **Winterport**, Waldo County, at mileage 22.2, about 936 feet north of a dirt-road crossing, about 10 feet east of the center line of the track, and about 2 feet higher than the base of the rail. A standard disk, stamped "H 19 1933" and set in the top of a concrete post. (47.773 meters or 156.735 feet.)

J 19.—In Penobscot County, about 4.0 miles north along the Bangor & Aroostook Railroad from the station at **Winterport**, Waldo County, at mileage 23.82, about 110 feet east of the center line of the track, in the top of a large 4- by 6-foot boulder, about 6 feet lower than the base of the rail. A standard disk, stamped "J 19 1933." (54.871 meters or 180.023 feet.)

Hampden.—At **Hampden**, Penobscot County, about 150 yards north of the Bangor & Aroostook Railroad station, about 21 yards west of the center line of the track, about 7 yards south of the center line of a highway, and about 2 feet higher than the track. A standard disk, stamped "HAMPDEN 1933" and set in the top of a concrete post. (47.455 meters or 155.692 feet.)

Dunn.—About 1.3 miles north along the Bangor & Aroostook Railroad from **Hampden**, Penobscot County, about 0.3 mile south of milepost 28, at bridge 2773, in the top of the west end of the south bridge seat, about 13 yards west of the center line of the track, and about 4 feet lower than the base of the rail. A standard disk, stamped "DUNN 1933." (38.569 meters or 126.538 feet.)

N. Maine Junction.—About 0.2 mile northwest along the Bangor & Aroostook Railroad from **Northern Maine Junction**, Penobscot County, at a railroad bridge over United States Highway 2, in the top of the west end of the north abutment, about 3 yards west of the west rail, and about 3 feet lower than the base of the rail. A standard disk, stamped "N. MAINE JUNCTION 1933." (47.903 meters or 157.162 feet.)

For additional bench marks in the vicinity of Northern Maine Junction, see pages 23 and 33.

LINE 8, ST. CROIX JUNCTION TO EATON, MAINE

[Second-order leveling]

This line follows the Maine Central Railroad from Milltown, through Baring, to Princeton, and United States Highway 1 from Princeton, through Topsfield and Brookton, to Eaton. The field work was done, during September 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of St. Croix Junction, see page 17.

K 19.—About 0.9 mile south along the Maine Central Railroad from the station at **Milltown**, Washington County, about 0.6 mile north of **St. Croix Junction**, about 35 yards north of the north end of the railroad scales, and about 25 yards east of the east rail, in the top of a small projection, about 3 feet higher than the track. A standard disk, stamped "K 19 1933." (25.443 meters or 83.474 feet.)

L 19.—In New Brunswick, Canada, about 0.5 mile southwest along the Maine Central Railroad from the station at **Baring**, Washington County, Maine, about 12 rails west of a small bridge, near the middle of a small cut, about 18 yards south of the center line of the track, and about 6 yards south of a fence line, in the top of a lone projecting boulder, about 4 feet higher than the track. A standard disk, stamped "L 19 1933." (29.573 meters or 97.024 feet.)

M 19.—In New Brunswick, Canada, about $2\frac{3}{4}$ miles west along the Maine Central Railroad from the station at **Baring**, Washington County, Maine, about 76 rails east of milepost C 8, about 14 rails east of a small tool house, near

the middle of a long curve, about 7 yards north of the center line of the track, in the top of a small rock outcrop, about 2 feet lower than the track. A standard disk, stamped "M 19 1933." (30.089 meters or 98.717 feet.)

Triangulation Station Abutment (U.S. & C.B.S.).—At **Woodland Junction**, Washington County, on the Maine Central Railroad, about $\frac{1}{2}$ mile upstream from the St. Croix Paper Mill, at the bridge over St. Croix River, in the top of the southwest end of the northwest abutment, $5\frac{1}{2}$ feet southwest of the center line of the track, and 2.3 feet northeast of Reference Mark 194, about level with the track. A standard triangulation-station disk. (47.136 meters or 154.645 feet.)

N 19.—At **Woodland Junction**, Washington County, on the Maine Central Railroad, about 37 yards west of the west end of the bridge over St. Croix River, and about 8 yards north of the center line of the main track, at a power-transmission line tower, in the top of the southeast corner of the southeast concrete footing, about level with the track. A standard disk, stamped "N 19 1933." (46.972 meters or 154.107 feet.)

P 19.—About 1.9 miles northwest along the Main Central Railroad from **Woodland Junction**, Washington County, about $27\frac{1}{2}$ rails northwest of milepost C 12, at the third power-transmission line tower northwest of the milepost, about 15 yards northeast of the northeast rail, in the top of the east corner of the concrete foundation, about 1 foot lower than the track. A standard disk, stamped "P 19 1933." (44.816 meters or 147.034 feet.)

Q 19.—About 3.6 miles northwest along the Maine Central Railroad from **Woodland Junction**, Washington County, about 45 rails southeast of milepost C 14, about $2\frac{1}{2}$ rails west of a power-transmission line tower, and about 8 yards north of the center line of the track, in the top of a small projecting rock, about 2 feet higher than the track. A standard disk, stamped "Q 19 1933." (51.196 meters or 167.966 feet.)

R 19.—About 5 miles east along the Maine Central Railroad from the station at **Princeton**, Washington County, about 12 rails east of milepost C 16, at the west end of a short cut, about 6 yards south of the center line of the track, in the top of a large rock outcrop, about 2 feet higher than the track. A standard disk, stamped "R 19 1933." (64.678 meters or 212.198 feet.)

S 19.—About 3 miles east along the Maine Central Railroad from the station at **Princeton**, Washington County, about 8 rails east of milepost C 18, about 6 rails west of a small concrete culvert, and about 5 yards south of the center line of the track, in the top of a large rock outcrop, about level with the track. A standard disk, stamped "S 19 1933." (62.755 meters or 205.889 feet.)

T 19.—About 1 mile northeast along the Maine Central Railroad from the station at **Princeton**, Washington County, about 350 yards east of a large lumberyard, about 20 yards east of milepost C 20, about 8 yards north of the center line of a dirt road, and about 4 yards south of the center line of the track, in the top of a small rock outcrop, about 1 foot higher than the track. A standard disk, stamped "T 19 1933." (69.604 meters or 228.359 feet.)

U 19.—At **Princeton**, Washington County, on United States Highway 1, about 35 yards north of the north end of a small bridge over St. Croix River, about 14 yards east of the center line of the highway, and about 11 yards northwest of a small willow tree, at the south end of a small store, in the top of the southwest corner of the concrete base of the brick chimney, about 2 feet higher than the ground. A standard disk, stamped "U 19 1933." (63.400 meters or 208.005 feet.)

V 19.—About 1.9 miles northwest along United States Highway 1 from the post office at **Princeton**, Washington County, about 0.7 mile north of Civilian Conservation Corps Camp 59, about 825 yards south of a road turning west to the Treadwell's Camps, about 46 yards south of a small culvert, about 22 yards west of the center line of the highway, and $3\frac{1}{2}$ feet southeast of an 8-inch pine tree, in the top of a large embedded boulder, about 2 feet higher than the highway. A standard disk, stamped "V 19 1933." (70.303 meters or 230.652 feet.)

W 19.—About 3.8 miles northwest along United States Highway 1 from the post office at **Princeton**, Washington County, at the north end of a concrete bridge over Huntley Brook, in the top of the north end of the concrete retaining wall, about 6 yards east of the center line of the highway, and about 2 feet lower than the highway. A standard disk, stamped "W 19 1933." (70.436 meters or 231.089 feet.)

X 19.—About 6.9 miles northwest along United States Highway 1 from the post office at **Princeton**, Washington County, 214 yards south of a dirt road

leading west, about 11 yards west of the center line of the highway, 11 yards southeast of a 16-inch fir tree, and about 5 yards northeast of a 12-inch birch tree, in the top of a large embedded boulder, about 3 feet higher than the highway. A standard disk, stamped "X 19 1933." (83.363 meters or 289.904 feet.)

Y 19.—About 0.9 mile southeast along United States Highway 1 from the post office at **Waite**, Washington County, about 0.7 mile north of the Felps residence, about 96 yards south of a small culvert, about 30 yards east of the center line of the highway, and about 20 yards east of a fence line, in the top of a large rock outcrop, about 1 foot lower than the highway. A standard disk, stamped "Y 19 1933." (93.818 meters or 307.801 feet.)

Z 19.—About 1 mile north along United States Highway 1 from the post office at **Waite**, Washington County, about 73 yards south of a small culvert, about 68 yards north of another small culvert, about 10 yards east of the center line of the highway, about 7 yards north of an 18-inch fir tree, and about 5 yards south of a 10-inch pine tree, in the top of a large embedded boulder, about 2 feet lower than the highway. A standard disk, stamped "Z 19 1933." (107.240 meters or 351.837 feet.)

A 20.—About 3.1 miles north along United States Highway 1 from the post office at **Waite**, Washington County, about 54 yards north of a small culvert, about 15 yards north of a 24-inch pine tree, directly across the highway from a 24-inch birch tree, and about 7 yards east of the center line of the highway, in the top of a large embedded boulder, about level with the highway. A standard disk, stamped "A 20 1933." (131.294 meters or 430.754 feet.)

B 20.—About 1.3 miles south along United States Highway 1 from the post office at **Topsfield**, Washington County, about 185 yards southwest of a small farmhouse, at the north end of a small clearing, directly across the highway from the "Calais 37 miles" sign, about 12 yards west of the center line of the highway, and about 10 yards northwest of a pole, in the top of a large embedded boulder, about 2 feet higher than the highway. A standard disk, stamped "B 20 1933." (122.390 meters or 401.541 feet.)

C 20.—About 0.5 mile north along United States Highway 1 from the post office at **Topsfield**, Washington County, at the intersection of State Highway 167, about 300 yards northeast of the **Topsfield School**, about 23 yards north of State Highway 167, and about 12 yards east of United States Highway 1, in the top of a small rock projection. A standard disk, stamped "C 20 1933." (148.646 meters or 487.683 feet.)

D 20.—About 2.5 miles north along United States Highway 1 from the post office at **Topsfield**, Washington County, about 144 yards southwest of the **R. T. Bagley** residence, about 11 yards west of the center line of the highway, and about 14 yards southeast of an 8-inch pine tree, in the top of a large, flat, rock outcrop, about 2 feet higher than the highway. A standard disk, stamped "D 20 1933." (229.354 meters or 752.472 feet.)

E 20.—About 3.2 miles south along United States Highway 1 from the post office at **Brookton**, Washington County, about 250 yards north of a dirt road leading east, about 200 yards south of the summit of a hill, about 16 yards east of the center line of the highway, and about 4 yards east of a 14-inch birch tree, in the top of a large embedded boulder, about level with the highway. A standard disk, stamped "E 20 1933." (164.061 meters or 538.257 feet.)

F 20.—About 1 mile south along United States Highway 1 from the post office at **Brookton**, Washington County, about 300 yards north of a small concrete bridge, about 9 yards east of the center line of the highway, and about 8 yards west of a 24-inch birch tree, in the top of a large, flat, rock outcrop, about level with the highway. A standard disk, stamped "F 20 1933." (140.539 meters or 461.085 feet.)

G 20.—About 0.7 mile north along United States Highway 1 from the post office at **Brookton**, Washington County, about 25 yards east of the center line of the highway, in a pasture, about 60 yards southeast of a 12-inch pine tree, in the top of a large rock outcrop, about level with the highway. A standard disk, stamped "G 20 1933." (150.901 meters or 495.081 feet.)

H 20.—About 3 miles southeast along United States Highway 1 from the **Maine Central Railroad** station at **Eaton**, Washington County, about 200 yards southeast of a small residence, in a pasture, about 28 yards north of a corrugated-iron pipe culvert, and about 17 yards west of the center line of the highway, in the top of a large embedded boulder, about level with the highway. A standard disk, stamped "H 20 1933." (174.595 meters or 572.817 feet.)

J 20.—About 1 mile southeast along United States Highway 1 from the Maine Central Railroad station at **Eaton**, Washington County, about 20 yards north of a Brookton-Danforth town-line marker, and about 10 yards east of the center line of the highway, in the top of the south end of a large granite boulder, about level with the highway. A standard disk, stamped "J 20 1933." (119.242 meters or 391.213 feet.)

K 20.—At **Eaton**, Washington County, on United States Highway 1, about 70 yards northwest of the northwest corner of the Maine Central Railroad station, and about 34 yards west of the track, at the west end of the concrete highway bridge over Crooked Brook, in the top of the west end of the concrete retaining wall, about 3 yards north of the center line of the highway, about level with the highway. A standard disk, stamped "K 20 1933." (124.252 meters or 407.650 feet.)

For additional bench marks in the vicinity of Eaton, see page 11.

LINE 9, DANFORTH TO HOULTON, MAINE

[Second-order leveling]

This line follows United States Highway 1 from Danforth, through Orient and Amity, to Houlton. The field work was done, during September 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Danforth, see page 11.

L 20.—About 1 mile north along United States Highway 1 from the town hall at **Danforth**, Washington County, about 165 yards southwest of Mr. Gilpatrick's residence, about 34 yards north of Mr. Wood's residence, and about 10 yards west of the center line of the highway, in the top of a large rock projection, about level with the highway. A standard disk, stamped "L 20 1933." (139.155 meters or 456.544 feet.)

M 20.—In Aroostook County, about $2\frac{3}{4}$ miles north along United States Highway 1 from the town hall at **Danforth**, Washington County, and about 200 yards north of a small apple orchard, on the east side of the highway, at a concrete culvert, about 6 yards east of the center line of the highway, in the top of the south end of the east head wall, about level with the highway. A standard disk, stamped "M 20 1933." (202.513 meters or 664.411 feet.)

N 20.—In Aroostook County, about $5\frac{1}{4}$ miles north along United States Highway 1, from the post office at **Danforth**, Washington County, at **Weston**, about 700 feet north of a schoolhouse, about 160 feet north of the post office, and 27 feet west of the center line of the highway, in the top of a 4- by 5-foot granite boulder, about 4 feet higher than the highway. A standard disk, stamped "N 20 1933." (218.526 meters or 716.947 feet.)

P 20.—In Aroostook County, about 6.9 miles north along United States Highway 1 from the post office at **Danforth**, Washington County, about 1,240 feet south of the farmhouse of M. L. Rollins, and 30 feet west of the center line of the highway, in the top of a 4- by 4-foot granite boulder, about 3 feet higher than the highway. A standard disk, stamped "P 20 1933." (193.361 meters or 634.385 feet.)

Q 20.—About $3\frac{1}{4}$ miles south along United States Highway 1 from the post office at **Orient**, Aroostook County, about 130 yards south of the farmhouse of Leon Faulkner, about 50 yards south of the apple orchard, and about 30 yards west of the center line of the highway, in the top of a granite boulder, about 4 feet higher than the ground. A standard disk, stamped "Q 20 1933." (179.626 meters or 589.323 feet.)

R 20.—About 1 mile south along United States Highway 1 from the post office at **Orient**, Aroostook County, about 200 feet south of the farmhouse of Rowland Peters, about 90 feet south of the barns, and about 125 feet west of the highway, in the top of a large embedded boulder, about 4 feet lower than the highway. A standard disk, stamped "R 20 1933." (147.878 meters or 485.163 feet.)

S 20.—About 0.7 mile north along United States Highway 1 from the post office at **Orient**, Aroostook County, and about 0.7 mile north of a dirt road

leading southeast, at the concrete bridge over Skacrock Brook, in the top of the northeast wing wall, about 5 yards east of the center line of the highway, about level with the highway. A standard disk, stamped "S 20 1933." (136.054 meters or 446.370 feet.)

T 20.—About 2.6 miles north along United States Highway 1 from the post office at **Orient**, Aroostook County, at the top of a small hill opposite a curve, about 10 yards west of the center line of the highway, in the top of a 4- by 6-foot boulder, about $\frac{1}{2}$ foot lower than the highway. A standard disk, stamped "T 20 1933." (152.083 meters or 498.959 feet.)

U 20.—At **South Amity**, Aroostook County, on United States Highway 1, about 30 yards south of the South Amity School, about 25 yards south of a large, lone, pine tree, and about 12 yards east of the center line of the highway, in the top of a rock outcrop. A standard disk, stamped "U 20 1933." (175.686 meters or 576.396 feet.)

V 20.—About 1.0 mile south along United States Highway 1 from the post office at **North Amity**, Aroostook County, about $\frac{1}{4}$ mile north of the top of a hill, about 100 yards east of the residence of Percy H. Boles, and about 18 yards west of the center line of the highway, in the top of a granite boulder, about level with the highway. A standard disk, stamped "V 20 1933." (176.995 meters or 580.691 feet.)

W 20.—At **Amity**, Aroostook County, about 375 yards south of the Amity Grange building, about 150 yards west of the residence of L. P. Knapp, about 100 yards north of the residence of Alton Black, and about 75 yards north of the center line of United States Highway 1, in the top of a granite boulder, about 12 feet lower than the highway. A standard disk, stamped "W 20 1933." (186.283 meters or 611.163 feet.)

X 20.—About 11.7 miles south along United States Highway 1 from the post office at **Houlton**, Aroostook County, and about 650 feet north of the residence of James A. Moss, in a boulder-strewn meadow, opposite pole 401-460, 40 feet northeast of the center line of the highway, in the top of a 3- by 5-foot boulder, about level with the highway. A standard disk, stamped "X 20 1933." (165.700 meters or 543.634 feet.)

Y 20.—About $9\frac{1}{2}$ miles south along United States Highway 1 from the post office at **Houlton**, Aroostook County, and about 125 feet north of the residence of Byron Alexander, in a field on the north side of the house, about 40 feet west of the center line of the highway, in the top of the only 5- by 10-foot boulder in the field, about $1\frac{1}{2}$ feet higher than the highway. A standard disk, stamped "Y 20 1933." (132.700 meters or 435.367 feet.)

Z 20.—About $7\frac{1}{2}$ miles south along United States Highway 1 from the post office at **Houlton**, Aroostook County, about 500 feet south of the farmhouse of E. Esterbrook, about 20 yards east of the center line of the highway, and about 20 yards from pole 308, in the top of a 6- by 8-foot granite boulder, about 3 feet higher than the ground. A standard disk, stamped "Z 20 1933." (161.619 meters or 530.245 feet.)

A 21.—About 5.6 miles south along United States Highway 1 from the post office at **Houlton**, Aroostook County, about 465 yards north of a schoolhouse, about 65 yards north of the farmhouse of H. M. Sherman, and about 31 yards south of pole 401-235, at the concrete skew bridge over the South Branch of Meduxnickag River, in the top of the northeast wing wall. A standard disk, stamped "A 21 1933." (147.352 meters or 483.437 feet.)

B 21.—About 3.5 miles south along United States Highway 1 from the post office at **Houlton**, Aroostook County, about 130 yards south of a frame schoolhouse, about 65 yards north of the E. B. Jones Socony filling station, about 15 yards northeast of pole 401-150, and about 17 yards east of the center line of the highway, in the top of a rock outcrop, about 2 feet higher than the highway. A standard disk, stamped "B 21 1933." (177.193 meters or 581.341 feet.)

C 21.—About 1.8 miles south along United States Highway 1 from the post office at **Houlton**, Aroostook County, about 50 yards east of a point 17 yards north of the northeast corner of the farmhouse of Harley Rourke, about 10 yards north of a fence line, about 8 yards east of the center line of the highway, and about 2 yards north of a pole, in the top of an embedded boulder. A standard disk, stamped "C 21 1933." (146.603 meters or 480.980 feet.)

For additional bench marks in the vicinity of Houlton, see page 49.

LINE 10, HOULTON TO OAKFIELD, MAINE

[First-order leveling]

This line follows the Bangor & Aroostook Railroad from Houlton to Oakfield. The field work was done, during September 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Houlton, see page 48.

E 21.—At **Houlton**, Aroostook County, on Main Street, in the south face of the building occupied by F. W. Woolworth & Co., about 100 feet north of the center line of the street, 6 inches east of the southwest corner of the building, and about 2 feet higher than the sidewalk. A standard disk, stamped "E 21 1933" and set vertically. (109.791 meters or 360.206 feet.)

360.00 (H.W.C.).—Not described. (108.940 meters or 357.414 feet.)

360.78 (H.W.C.).—Not described. (110.223 meters or 361.623 feet.)

Jenkins.—About 560 feet west along the Bangor & Aroostook Railroad from **Carys Mills**, Aroostook County, about 560 feet west of the west end of the Baldwin and Doherty potato-shipping houses, about 415 feet west of milepost 164, and 30 feet south of the center line of the track, in the top of a 3- by 4-foot boulder, about level with the top of the rail. A standard disk, stamped "JENKINS 1933." (119.826 meters or 393.129 feet.)

Dillon.—About 1.1 miles east along the Bangor & Aroostook Railroad from **New Limerick**, Aroostook County, at bridge 160.80, in the top of the northeast wing wall, 8 feet north of the center line of the track, 5 feet east of the bridge seat, and about 1 foot lower than the top of the rail. A standard disk, stamped "DILLON 1933." (118.295 meters or 388.106 feet.)

Holladay.—About 0.9 mile west along the Bangor & Aroostook Railroad from **New Limerick**, Aroostook County, about 650 feet west of milepost 159, and 33 feet north of the center line of the track, in the top of the west end of a large schist outcrop, about 1 foot lower than the top of the rail. A standard disk, stamped "HOLLADAY 1933." (132.338 meters or 434.179 feet.)

Lyons.—About 1.4 miles east along the Bangor & Aroostook Railroad from **Ludlow**, Aroostook County, at milepost 157, about 25 feet north of the center line of the track, in the top of the north one of two granite blocks, about 1 foot higher than the top of the rail. A standard disk, stamped "LYONS 1933." (148.954 meters or 488.693 feet.)

Reher.—About 0.5 mile west along the Bangor & Aroostook Railroad from **Ludlow**, Aroostook County, about 130 yards east of milepost 155, about 30 feet south of the center line of United States Highway 2, and about 30 feet west of the center line of the track, in the top of a granite boulder, about 2 feet lower than the track. A standard disk, stamped "REHER 1933." (157.303 meters or 516.085 feet.)

Bennett.—At **Ashland Junction**, Aroostook County, about 185 yards east of the east branch of a switch forming a wye, about 130 feet east of milepost 150, and about 17 yards south of the center line of the track, in the top of a boulder, about 6 feet lower than the track. A standard disk, stamped "BENNETT 1933." (172.972 meters or 567.492 feet.)

For additional bench marks in the vicinity of Oakfield, see page 29.

LINE 11, SOMERSET JUNCTION TO OAKLAND, MAINE

[Second-order leveling]

This line follows the Maine Central Railroad from Somerset Junction, through Embden, Bingham Heights, and Anson, to Oakland. The field work was done, during the fall of 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Somerset Junction, see page 7.

Q 23.—About 0.2 mile east along the Canadian Pacific Railway from the station at **Somerset Junction**, Somerset County, at the bridge over the Maine Central Railroad, in the top of the south end of the east bridge seat, 9 feet south of the center line of the track, and about 2 feet lower than the track. A standard disk, stamped "Q 23 1933." (313.417 meters or 1,028.269 feet.)

R 23.—About 1.5 miles south along the Maine Central Railroad from the overhead crossing of the Canadian Pacific Railway at **Somerset Junction**, Somerset County, about 7 rails south of milepost K 8, and about 22 yards east of the center line of the track, in the top of a large oblong boulder, about level with the track. A standard disk, stamped "R 23 1933." (309.655 meters or 1,015.926 feet.)

S 23.—About 3.4 miles south along the Maine Central Railroad from the overhead crossing of the Canadian Pacific Railroad at **Somerset Junction**, Somerset County, about 14 poles northeast of **Marrs**, about 22 rails north of milepost K 10, at a small bridge, in the top of the east end of the south abutment, 9 feet east of the center line of the track, about level with the track. A standard disk, stamped "S 23 1933." (291.343 meters or 955.848 feet.)

T 23.—About 5.1 miles south along the Maine Central Railroad from the overhead crossing of the Canadian Pacific Railway at **Somerset Junction**, Somerset County, about 84 rails north of milepost K 12, in the center of a small clearing, about 34 yards west of the center line of the track, in the top of a large, flat, rock outcrop, about level with the track. A standard disk, stamped "T 23 1933." (298.198 meters or 978.338 feet.)

U 23.—About 1.4 miles north along the Maine Central Railroad from the station at **Indian Pond**, Somerset County, about 66 rails north of milepost K 14, in a rocky field, about 24 yards west of the center line of the track, in the top of a large embedded boulder, about 6 feet lower than the track. A standard disk, stamped "U 23 1933." (285.106 meters or 935.385 feet.)

V 23.—About 0.6 mile south along the Maine Central Railroad from the station at **Indian Pond**, Somerset County, about 64 rails north of milepost K 16, at the bridge over Kennebec River, in the top of the west end of the south abutment, 9 feet west of the center line of the track, about level with the track. A standard disk, stamped "V 23 1933." (283.405 meters or 929.805 feet.)

W 23.—About 2.7 miles south along the Maine Central Railroad from the station at **Indian Pond**, Somerset County, about 0.5 mile south of **Moore's**, about 43 rails north of milepost K 18, and about 5 yards west of the center line of the track, in the top of the east edge of a large rock outcrop, about 1 foot higher than the track. A standard disk, stamped "W 23 1933." (306.540 meters or 1,005.707 feet.)

X 23.—About 6.6 miles north along the Maine Central Railroad from the station at **Lake Moxie**, Somerset County, about 71½ rails north of milepost K 20, at the bottom of a dip in the track, about 17 yards west of the center line of the track, in the top of a large rock outcrop, about 3 feet lower than the track. A standard disk, stamped "X 23 1933." (285.976 meters or 938.240 feet.)

Y 23.—About 4.2 miles north along the Maine Central Railroad from the station at **Lake Moxie**, Somerset County, about 0.8 mile south of the station at **Forsythe**, about 7½ rails north of milepost K 22, and about 7 yards west of the center line of the track, in the top of a large rock outcrop, about 3 feet higher than the track. A standard disk, stamped "Y 23 1933." (289.904 meters or 951.127 feet.)

Z 23.—About 2.3 miles north along the Maine Central Railroad from the station at **Lake Moxie**, Somerset County, about 21 rails north of milepost K 24, midway between two small cuts, about 10 yards west of the center line of the track, in the top of a small rock projection, about 2 feet higher than the track. A standard disk, stamped "Z 23 1933." (300.374 meters or 985.477 feet.)

A 24.—At **Lake Moxie**, Somerset County, about 34 rails north of the Maine Central Railroad station, about 4 rails south of milepost K 26, and about 26 yards east of the center line of the track, at a large concrete dam, in the top of the north end of the elevated portion, about 2 feet higher than the track. A standard disk, stamped "A 24 1933." (296.404 meters or 972.452 feet.)

B 24.—About 2 miles south along the Maine Central Railroad from the station at **Lake Moxie**, Somerset County, about 6½ rails north of milepost K 28, and about 20 yards west of the center line of the track, in the top of the largest

and highest one of a group of boulders, about 8 feet higher than the track. A standard disk, stamped "B 24 1933." (302.267 meters or 991.688 feet.)

C 24.—About 1 mile northwest along the Maine Central Railroad from the station at Troutdale, Somerset County, about 21 rails north of milepost K 30, near the middle of a 12-foot fill, about 14 yards east of the center line of the track, in the top of a large projecting boulder, about 8 feet lower than the track. A standard disk, stamped "C 24 1933." (298.460 meters or 979.198 feet.)

D 24.—About 1.2 miles south along the Maine Central Railroad from the station at Troutdale, Somerset County, on the west bank of Lake Moxie, about 4 rails south of milepost K 32, and about 6 yards east of the center line of the track, in the top of a large embedded boulder, about 2 feet lower than the track. A standard disk, stamped "D 24 1933." (296.336 meters or 972.229 feet.)

E 24.—At Bakers, Somerset County, about 25 rails north of the north end of the Maine Central Railroad station, about 4 rails north of milepost K 34, and about 11 yards east of the center line of the track, in the top of a large boulder, about 1 foot lower than the track. A standard disk, stamped "E 24 1933." (297.773 meters or 976.944 feet.)

F 24.—About 1.8 miles south along the Maine Central Railroad from the station at Bakers, Somerset County, about 7 rails north of milepost K 36, and about 11 yards east of the center line of the track, in the top of a large, round, embedded boulder, about 5 feet higher than the track. A standard disk, stamped "F 24 1933." (303.648 meters or 996.218 feet.)

G 24.—About 4.7 miles north along the Maine Central Railroad from the station at Deadwater, Somerset County, about 0.8 mile south of the station at Lake Austin, about 24½ rails north of milepost K 38, and about 18 yards east of the center line of the track, in the top of a large embedded boulder, about level with the track. A standard disk, stamped "G 24 1933." (329.833 meters or 1,082.127 feet.)

H 24.—About 2.2 miles north along the Maine Central Railroad from the station at Deadwater, Somerset County, about 65 rails south of milepost K 40, at a concrete culvert, about 4 yards west of the center line of the track, in the top of the north end of the west head wall, about 1 foot lower than the track. A standard disk, stamped "H 24 1933." (313.581 meters or 1,028.807 feet.)

J 24.—At Deadwater, Somerset County, about 12 yards north of the north end of the Maine Central Railroad station, about 4 yards south of a tank house, at a concrete pit, about 7 yards east of the center line of the track, in the top of the southwest corner of the pit, about level with the track. A standard disk, stamped "J 24 1933." (306.576 meters or 1,005.825 feet.)

K 24.—About 4.7 miles north along the Maine Central Railroad from the station at Bingham Heights, Somerset County, about 28 rails north of the north end of a trestle, about 18 rails south of milepost K 45, and about 6 yards east of the center line of the track, in the top of a large embedded boulder, about 2 feet higher than the track. A standard disk, stamped "K 24 1933." (246.996 meters or 810.353 feet.)

L 24.—About 2.8 miles north along the Maine Central Railroad from the station at Bingham Heights, Somerset County, at milepost K 47, about 10 rails south of a dirt-road crossing, and about 4 yards west of the center line of the track, in the top of a small rock projection, about level with the track. A standard disk, stamped "L 24 1933." (198.804 meters or 652.243 feet.)

M 24.—About 1.2 miles north along the Maine Central Railroad from the station at Bingham Heights, Somerset County, at the crossing of State Highway 149, about 32 yards north of the center line of the highway, and about 20 yards east of the center line of the track, in the top of a small rock projection, about 5 feet higher than the track. A standard disk, stamped "M 24 1933." (158.683 meters or 520.612 feet.)

N 24.—About 1.1 miles southeast along the Maine Central Railroad from the station at Bingham Heights, Somerset County, at the crossing of United States Highway 201, about 10 rails north of milepost K 51, and about 70 yards east of the center line of the track, at the highway bridge over Jackson Brook, about 5 yards south of the center line of the highway, in the top of the southwest wing wall, about level with the highway. A standard disk, stamped "N 24 1933." (104.344 meters or 342.335 feet.)

P 24.—About 2.7 miles southeast along the Maine Central Railroad from the station at Bingham Heights, Somerset County, about 47½ rails south of milepost K 53, about 7 rails north of the end of a cut, and about 30 yards east

of the center line of the track, in the top of a large rock outcrop, about 4 feet lower than the track. A standard disk, stamped "P 24 1933." (101.780 meters or 333.923 feet.)

Q 24.—About 1.9 miles north along the Maine Central Railroad from the station at **Solon**, Somerset County, about 32½ rails south of milepost K 55, near the middle of a long curve, about 5 yards west of the center line of the track, about level with the track. A standard disk, stamped "Q 24 1933" and set in the top of a concrete post. (100.684 meters or 330.327 feet.)

R 24.—At **Solon**, Somerset County, about 24 rails south of the south end of the Maine Central Railroad station, at an abandoned mill of the International Paper Co., at the bridge over Kennebec River, about 4 yards west of the center line of the track, in the top of the north abutment, about 3 feet lower than the track. A standard disk, stamped "R 24 1933." (98.652 meters or 323.661 feet.)

S 24.—About 1.5 miles south along the Maine Central Railroad from the station at **Solon**, Somerset County, at a bridge over a small stream, about 3½ rails north of the center of a road crossing, and about 7 yards east of the center line of the track, in the top of the east end of the north abutment, about 3 feet lower than the track. A standard disk, stamped "S 24 1933." (90.544 meters or 297.000 feet.)

T 24.—At **Embden**, Somerset County, about 28 rails north of the Maine Central Railroad station, about 41½ rails south of milepost K 60, about 110 yards west of the track, in the top of a large embedded boulder, about level with the track. A standard disk, stamped "T 24 1933." (114.065 meters or 374.228 feet.)

U 24.—About 2.2 miles northeast along the Maine Central Railroad from the station at **North Anson**, Somerset County, about 40 rails north of milepost K 64, about 23 rails south of a private-road crossing, and about 9 yards east of the center line of the track, in the top of a large embedded boulder, about 2 feet lower than the track. A standard disk, stamped "U 24 1933." (103.638 meters or 340.019 feet.)

V 24.—At **North Anson**, Somerset County, about 5 rails south of the south end of the Maine Central Railroad station, at the bridge over Carrabassett River, 9 feet east of the center line of the track, in the top of the east end of the north abutment, about level with the track. A standard disk, stamped "V 24 1933." (96.290 meters or 315.911 feet.)

293 (U.S.G.S.).—At **North Anson**, Somerset County, on United States Highway 201, at the post office, in the south face, at the southwest corner, in the granite underpinning, about 1 foot higher than the ground. A United States Geological Survey standard disk, stamped "AUGUSTA 293" and set vertically. (90.135 meters or 295.718 feet.)

W 24.—At **North Anson**, Somerset County, about 5 rails south of the south end of the Maine Central Railroad station, at the north end of the bridge over Carrabassett River, about 34 yards west of the center line of the track, in the top of the concrete retaining wall, about level with the street. A standard disk, stamped "W 24 1933." (95.023 meters or 311.755 feet.)

For additional bench marks in the vicinity of **North Anson**, see page 54.

X 24.—About 2.4 miles southeast along the Maine Central Railroad from the station at **North Anson**, Somerset County, about 4 rails south of milepost K 68, about 8 poles north of a road crossing, at a masonry culvert, about 10 yards east of the center line of the track, in the top of the south end of the east head wall, about 7 feet lower than the track. A standard disk, stamped "X 24 1933." (94.807 meters or 311.046 feet.)

Y 24.—At **Anson**, Somerset County, about 15 rails south of the Maine Central Railroad station, at the bridge over Kennebec River, in the top of the west end of the northernmost pier, about 5 yards west of the center line of the track, and about 4 feet lower than the track. A standard disk, stamped "Y 24 1933." (79.569 meters or 261.053 feet.)

Z 24.—At **Madison**, Somerset County, about 10 rails north of the Maine Central Railroad station, and about 3½ rails south of the south end of the bridge over Kennebec River, at the south end of a small bridge over a gravel road, in the top of the south end of the concrete retaining wall, level with the track. A standard disk, stamped "Z 24 1933." (80.641 meters or 264.570 feet.)

294 (U.S.G.S.).—At **Madison**, Somerset County, on Main Street, in the south face of the Odd Fellows Block, 15 feet east of the southwest corner, in the granite underpinning, about 1 foot higher than the sidewalk. A United States Geological Survey standard disk, stamped "AUGUSTA 294" and set vertically. (90.554 meters or 297.093 feet.)

1 (M.C.R.R.).—About 2.3 miles south along the Maine Central Railroad from the station at **Madison**, Somerset County, about 18½ rails south of milepost K 72, and about 17 rails south of a private-road crossing, at a cattle pass, about 4 yards east of the center line of the track, on the top of the east end of the southeast wing wall, about 2 feet lower than the track. A chiseled point. (61.950 meters or 203.248 feet.)

A 25.—About 2.3 miles south along the Maine Central Railroad from the station at **Madison**, Somerset County, about 18½ rails south of milepost K 72, and 17 rails south of a private-road crossing, at a cattle pass, about 5 yards west of the center line of the track, in the top of the west end of the southwest wing wall, about 2 feet lower than the track. A standard disk, stamped "A 25 1933." (61.875 meters or 203.002 feet.)

B 25.—About 3.5 miles southeast along the Maine Central Railroad from the station at **Madison**, Somerset County, at the crossing of United States Highway 201, about 6 rails north of the center line of the highway, about 13 yards south of the third pole north of the highway, and about 18 yards east of the center line of the track, in the top of a large rock outcrop, about 2 feet higher than the track. A standard disk, stamped "B 25 1933." (56.902 meters or 186.086 feet.)

C 25.—About 6 miles southeast along the Maine Central Railroad from the station at **Madison**, Somerset County, about 22 rails north of milepost K 76, about 5 rails north of a small rock cut, about 2 rails south of a small culvert, and about 6 yards east of the center line of the track, in the top of a small, flat, rock outcrop, about level with the track. A standard disk, stamped "C 25 1933." (53.566 meters or 175.741 feet.)

D 25.—At **Norridgewock**, Somerset County, about 32 rails north of the Maine Central Railroad station, about 120 yards east of the center line of the track, at the concrete highway bridge over Kennebec River, in the top of the southwest wing wall, about 7 yards south of the center line of United States Highway 201, about level with the highway. A standard disk, stamped "D 25 1933." (55.835 meters or 183.185 feet.)

E 25.—At **Norridgewock**, Somerset County, on the Maine Central Railroad, about 8 rails south of milepost K 78, about 11 rails south of the center line of Maine Street, about 7 rails north of the center line of New Hampshire Street, at a small bridge, in the top of the west end of the north abutment, 6 feet west of the center line of the track, about level with the track. A standard disk, stamped "E 25 1933." (62.208 meters or 204.094 feet.)

199 (U.S.G.S.).—At **Norridgewock**, Somerset County, on Maine Street, at the intersection with the highway to Oakland, about 62 yards east of the center line of the highway, and about 27 yards south of the center line of Maine Street, in the east face of the Norridgewock Garage, at the northeast corner. A United States Geological Survey standard disk, stamped "AUGUSTA 199" and set vertically. (61.552 meters or 201.942 feet.)

F 25.—About 2.3 miles southeast along the Maine Central Railroad from the station at **Norridgewock**, Somerset County, about 47 rails south of milepost K 80, about 18 yards south of the south face of the Bangs tank house, and about 4 yards east of the center line of the track, in the top of a small rock projection, about level with the track. A standard disk, stamped "F 25 1933." (69.099 meters or 226.702 feet.)

G 25.—About 4.1 miles south along the Maine Central Railroad from the station at **Norridgewock**, Somerset County, about 21½ rails south of milepost K 82, about 3 rails north of a small tool house, about 9 yards east of the center line of a road, and about 8 yards west of the center line of the track, in the top of a small rock projection, about 2 feet lower than the track. A standard disk, stamped "G 25 1933." (66.849 meters or 219.320 feet.)

H 25.—In Somerset County, about 7.0 miles north along the Maine Central Railroad from the station at **Oakland**, Kennebec County, about 3 rails north of milepost K 84, about 6 rails south of a dirt-road crossing, about 35 yards east of the center line of the track, and about 9 yards south of the center line of the road, in the top of a large embedded boulder, about level with the track. A standard disk, stamped "H 25 1933." (80.083 meters or 262.739 feet.)

J 25.—In Somerset County, about 5.1 miles north along the Maine Central Railroad from the station at **Oakland**, Kennebec County, about 18 rails north of milepost K 86, about 6 rails south of a dirt-road crossing, about 48 yards southwest of a 2-foot pine tree, and about 18 yards east of the center line of the track, in the top of a large embedded boulder, about 4 feet higher than the track. A standard disk, stamped "J 25 1933." (106.656 meters or 349.921 feet.)

K 25.—About 3.1 miles north along the Maine Central Railroad from the station at **Oakland**, Kennebec County, about 18 rails north of milepost K 88, about 4½ rails north of the center of a dirt-road crossing, about 3 yards north of the second pole north of the crossing, and about 8 yards east of the center line of the track, in the top of a large rock outcrop, about 2 feet lower than the track. A standard disk, stamped "K 25 1933." (98.244 meters or 322.322 feet.)

L 25.—About 1 mile north along the Maine Central Railroad from the station at **Oakland**, Kennebec County, about 3 rails north of milepost K 90, at a concrete culvert, in the top of the north end of the west head wall, about 3 yards west of the center line of the track, and about level with the track. A standard disk, stamped "L 25 1933." (72.828 meters or 238.937 feet.)

For additional bench marks in the vicinity of **Oakland**, see page 35.

LINE 12, NORTH ANSON TO BETHEL, MAINE

[Second-order leveling]

This line follows State Highway 144 from North Anson to North New Portland; State Highway 145 from North New Portland to Kingfield; the Sandy River & Rangeley Lakes Railroad through Strong, Madrid Junction, Perham Junction, and Dallas to Rangeley; State Highway 107 from Rangeley to Oquosoc; the Maine Central Railroad from Oquosoc to Rumford; and United States Highway 2 from Rumford, through Rumford Center and Newry, to Bethel. The field work was done, during the fall of 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of North Anson, see page 52.

M 25.—About 2.5 miles west along State Highway 144 from the Maine Central Railroad station at **North Anson**, Somerset County, about 200 yards east of the summit of a hill, and about 100 yards west of a large farmhouse, in a pasture, about 25 yards north of the center line of the highway, in the top of a large rock projection, about 2 feet higher than the highway. A standard disk, stamped "M 25 1933." (120.816 meters or 395.721 feet.)

K 29 (U.S.G.S.).—About 3.9 miles west along State Highway 144 from the Maine Central Railroad station at **North Anson**, Somerset County, at the intersection of a road to Embden Pond, about 6 yards south of the center line of the highway, in the top of a large round boulder, about 3 feet higher than the highway. A United States Geological Survey standard disk, stamped "K 29 1924." (123.831 meters or 406.269 feet.)

K 28 (U.S.G.S.).—About 1.5 miles southeast along State Highway 144 from the post office at **North New Portland**, Somerset County, in the pasture of F. S. Nye, about 8 yards northwest of the fifth pole east of the F. S. Nye residence, and about 15 yards north of the center line of the highway, in the top of a large rock projection, about 1 foot higher than the highway. A United States Geological Survey standard disk, stamped "K 28 1924." (130.223 meters or 427.240 feet.)

N 25.—About 1.1 miles southeast along State Highway 144 from the post office at **North New Portland**, Somerset County, about 110 yards east of a small concrete culvert, about 20 yards west of the west end of a small shack, and about 15 yards south of the center line of the highway, in the top of a large embedded boulder, about 1 foot higher than the highway. A standard disk, stamped "N 25 1933." (126.017 meters or 413.441 feet.)

423.6 (U.S.G.S.).—At **North New Portland**, Somerset County, at the intersection of State Highways 144 and 145, in front of the C. L. Standsbury

garage, about 12 yards south of the center line of State Highway 144, and about 8 yards east of the center line of State Highway 145, on the top of the northwest corner of the concrete base of a gasoline pump. A chiseled square. (128.967 meters or 423.119 feet.)

P 25.—About 0.1 mile west along State Highway 145 from the post office at North New Portland, Somerset County, about 22 yards west of the west end of a concrete bridge over Gilman Stream, about 15 yards south of the center line of the highway, and about 7 yards west of the center line of a dirt road running along the river, in the top of a large, round, rock outcrop, about 3 feet higher than the highway. A standard disk, stamped "P 25 1933." (116.527 meters or 382.306 feet.)

Q 25.—About 2.1 miles west along State Highway 145 from the post office at North New Portland, Somerset County, about 72 yards north of a wooden bridge over a small stream, at the bottom of a short, steep hill, in a pasture, about 20 yards west of the center line of the highway, and about 12 yards west of a fence line, in the top of a 14-foot boulder, about 3 feet higher than the highway. A standard disk, stamped "Q 25 1933." (125.521 meters or 411.813 feet.)

R 25.—About 3 miles southeast along State Highway 145 from the bridge over Carrabassett River at Kingfield, Franklin County, about 100 yards north of the Somerset-Franklin County line, about 50 yards south of a 2-foot pine tree on the east edge of the highway, and about 10 yards east of the center line of the highway, in the top of a large embedded boulder, about 3 feet higher than the highway. A standard disk, stamped "R 25 1933." (225.366 meters or 739.388 feet.)

780.3 (U.S.G.S.).—About 1¼ miles southeast along State Highway 145 from the bridge over Carrabassett River at Kingfield, Franklin County, at the top of a long hill, about 200 feet southeast of a farm clearing, and about 10 yards south of the center line of the highway, on the top of a large round boulder, about 4 feet higher than the highway. A chiseled square. (237.568 meters or 779.421 feet.)

S 25.—At Kingfield, Franklin County, on State Highway 145, about ¼ mile south of the bridge over Carrabassett River, about 64 yards north of a right-angle turn in the highway, and about 7 yards west of the center line of the highway, in the top of a large rock outcrop, about level with the highway. A standard disk, stamped "S 25 1933." (173.519 meters or 569.287 feet.)

K 35 (U.S.G.S.).—At Kingfield, Franklin County, on State Highway 145, at the north end of a dam across Carrabassett River, about 200 feet east of a concrete arch bridge over the river, and about 8 yards south of the center line of the highway, in the top of a large rock, about 2 feet lower than the highway. A United States Geological Survey standard disk, stamped "K 35 1924." (170.850 meters or 560.530 feet.)

T 25.—At Kingfield, Franklin County, on State Highway 145, about 43 yards southwest of the Sandy River & Rangeley Lakes Railroad station, about 15 yards northwest of the center line of the highway, and about 12 yards southeast of the center line of the track, in the top of a large rock projection, about 5 feet higher than the track. A standard disk, stamped "T 25 1933." (181.189 meters or 594.451 feet.)

U 25.—About 2.6 miles southwest along the Sandy River & Rangeley Lakes Railroad from the station at Kingfield, Franklin County, about 30¾ rails northeast of milepost F 23, about 0.1 mile northeast of a large farmhouse, in a thicket, about 56 yards northwest of the center line of the track, and about 15 yards northwest of the center line of the highway, in the top of a large, round, rock outcrop, about 1 foot higher than the highway. A standard disk, stamped "U 25 1933." (188.710 meters or 619.126 feet.)

R 38 (U.S.G.S.).—About 3¼ miles southwest along the Sandy River & Rangeley Lakes Railroad from the station at Kingfield, Franklin County, on State Highway 145, about 250 feet south of the junction of the Salem-Kingfield road and the highway, about 74 yards south of the center line of the track, about 14 yards southwest of the southwest corner of a large barn, and about 12 yards east of the center line of the highway, in the top of a large boulder, about 1 foot higher than the highway. A United States Geological Survey standard disk, stamped "R 38 1928." (209.800 meters or 688.319 feet.)

V 25.—About 2.0 miles northeast along the Sandy River & Rangeley Lakes Railroad from the station at Salem, Franklin County, about 9 rails southwest of milepost F 21, and about 75 yards south of a small stream, at the northeast end of a small cut, about 5 yards northwest of the center line of the track, in the top of a small, round, embedded boulder, about 3 feet higher than the track. A standard disk, stamped "V 25 1933." (233.280 meters or 765.353 feet.)

R 37 (U.S.G.S.).—At Salem, Franklin County, at the Sandy River & Rangeley Lakes Railroad station, in the granite foundation at the northwest corner, about 11 yards west of the center line of the track, and about $\frac{1}{2}$ foot higher than the ground. A United States Geological Survey standard disk, stamped "R 37 1928." (261.312 meters or 857.321 feet.)

W 25.—About 2.0 miles south along the Sandy River & Rangeley Lakes Railroad from the station at Salem, Franklin County, about 22 rails south of the flag stop at Summit, about 4 rails south of milepost F 17, and about 7 yards east of the center line of the track, in the top of a 5-foot boulder, about level with the track. A standard disk, stamped "W 25 1933." (283.559 meters or 930.310 feet.)

R 36 (U.S.G.S.).—About 4.2 miles north along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, about 3.7 miles south of the station at Salem, about 34 rails north of the north end of a large bog, and 20 feet east of the center line of the track, in the top of a 12-foot boulder, about level with the track. A United States Geological Survey standard disk, stamped "R 36 1928." (226.187 meters or 742.082 feet.)

632.5 (U.S.G.S.).—About 3.2 miles north along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, about 64 rails north of the beginning of a steep grade, and 15 feet east of the track, in the top of a large boulder, about 2 feet higher than the track. A drill hole. (192.858 meters or 632.735 feet.)

X 25.—About 2 miles north along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, about 28 rails north of milepost F 13, about 18 rails south of a grade crossing, about 4 rails south of a small bridge, and about 6 yards east of the center line of the track, in the top of a large rock projection, about 3 feet lower than the track. A standard disk, stamped "X 25 1933." (168.523 meters or 552.896 feet.)

Y 25.—At Strong, Franklin County, about 0.2 mile north of the Sandy River & Rangeley Lakes Railroad station, about 100 yards north of the north end of a toothpick factory warehouse, and about 32 yards west of the center line of the track, on the south side of a 20-inch oak tree, in the top of a large boulder, about level with the track. A standard disk, stamped "Y 25 1933." (156.575 meters or 513.696 feet.)

R 34 (U.S.G.S.).—At Strong, Franklin County, about 150 feet south of the Sandy River & Rangeley Lakes Railroad station, and 20 feet southwest of the southwest edge of the turntable, in the top of a 5-foot boulder, about 1 foot higher than the ground. A United States Geological Survey standard disk, stamped "R 34 1928." (152.501 meters or 500.330 feet.)

Z 25.—About 0.2 mile west along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, at the west end of a cut, about 16 rails east of the east end of a bridge over a small stream, about 11 rails west of a street crossing, and about 7 yards south of the center line of the track, in the top of a large embedded boulder, about 4 feet lower than the track. A standard disk, stamped "Z 25 1933." (149.050 meters or 480.008 feet.)

493.1 (U.S.G.S.).—About 0.9 mile west along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, about 13 rails east of milepost F 12, about 6 yards east of a 12-foot boulder, and about 4 yards north of the center line of the track, at a masonry culvert, in the top of the east end of the north head wall, about level with the track. A drill hole. (150.324 meters or 493.188 feet.)

504.5 (U.S.G.S.).—About 1.9 miles west along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, about 17 rails east of milepost F 13, about 100 yards south of a large barn and silo, and about 5 yards north of the center line of the track, in the top of a small round boulder, about 1 foot lower than the track. A drill hole. (153.921 meters or 504.989 feet.)

A 26.—About 2.8 miles west along the Sandy River & Rangeley Lakes Railroad from the station at Strong, Franklin County, about 6 rails west of a masonry culvert, about $4\frac{1}{2}$ rails east of a road crossing, and about 3 yards north of the center line of the track, in the top of a small round outcrop, about 2 feet higher than the track. A standard disk, stamped "A 26 1933." (150.281 meters or 493.047 feet.)

501.8 (U.S.G.S.).—About 3.8 miles east along the Sandy River & Rangeley Lakes Railroad from the station at Phillips, Franklin County, at the west end of a cut on the north side of the track, about 200 yards east of a small yellow farmhouse, and about 5 yards south of the center line of the track, in the top

of a small boulder, about 1 foot lower than the track. A drill hole. (153.081 meters or 502.233 feet.)

R 33 (U.S.G.S.).—About 2.7 miles east along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 8 rails east of the center of a crossing, about 35 yards south of a 2-foot pine tree, about 1½ rails west of a 12-foot boulder, and about 8 yards south of the center line of the track, in the top of a large, round, rock outcrop, about level with the track. A United States Geological Survey standard disk, stamped "R 33 1928." (158.425 meters or 519.766 feet.)

555.8 (U.S.G.S.).—About 0.9 mile southeast along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 44 rails north of milepost F 17, at a grade crossing, about 14 yards west of the center line of the road, and about 13 yards south of the center line of the track, on the granite slab of the doorstep of a dwelling. A chiseled square. (169.558 meters or 556.292 feet.)

R 32 (U.S.G.S.).—At **Phillips**, Franklin County, about 124 yards north of the Sandy River & Rangeley Lakes Railroad station, about 22 yards south of the center line of a street, about 12 yards east of the center line of the track, and about 11 yards west of a house, in the top of a large rock projection, about 4 feet higher than the track. A United States Geological Survey standard disk, stamped "R 32 1928." (174.231 meters or 571.623 feet.)

Phillips.—About 0.2 mile north along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 5 rails north of the north end of a covered bridge, and about 5 yards east of the center line of the track, in the top of a large imbedded boulder, about 3 feet higher than the track. A standard disk, stamped "PHILLIPS 1933." (176.294 meters or 578.391 feet.)

642.6 (U.S.G.S.).—About 1.1 miles north along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, at a dirt-road crossing, about 8 yards east of the center line of the track, and about 4 yards north of the center line of the road, in the top of a small round outcrop, about 2 feet higher than the track. A drill hole. (195.925 meters or 642.797 feet.)

B 26.—About 1.6 miles north along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 13 rails north of an overhead highway crossing, and about 6 yards east of the center line of the track, in the top of a large, round, embedded boulder, about 2 feet higher than the track. A standard disk, stamped "B 26 1933." (197.967 meters or 649.497 feet.)

636.2 (U.S.G.S.).—About 2.3 miles north along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 29½ rails south of a public-road crossing, about 5½ rails north of a private-road crossing, about 8 yards south of the south end of a small wooden bridge, and 8 feet east of the center line of the track, in the top of a small rock, about one foot lower than the track. A drill hole. (194.009 meters or 636.511 feet.)

R 31 (U.S.G.S.).—About 3.3 miles northwest along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 1½ rails north of the north end of a small wooden bridge, about 12 yards southeast of a road crossing, about 8 yards south of the center line of the road, and about 8 yards east of the center line of the track, in the top of a 4-foot boulder, about 2 feet lower than the track. A United States Geological Survey standard disk, stamped "R 31 1928." (204.444 meters or 670.747 feet.)

715.9 (U.S.G.S.).—About 3.6 miles northwest along the Sandy River & Rangeley Lakes Railroad from the station at **Phillips**, Franklin County, about 50 rails north of a road crossing, on the inside of a sharp curve, about 47 yards west of the center line of the highway, and about 5 yards west of the center line of the track, in the top of a 5-foot boulder, about 2 feet higher than the track. A drill hole. (218.278 meters or 716.134 feet.)

C 26.—At **Madrid Junction**, Franklin County, about 100 yards southwest of the Sandy River & Rangeley Lakes Railroad station, and about 71 yards northwest of a road, in the top of an 8-foot boulder, about 5 feet higher than the ground. A standard disk, stamped "C 26 1933." (246.852 meters or 809.880 feet.)

803.3 (U.S.G.S.).—At **Madrid Junction**, Franklin County, 22 feet northwest of the northwest corner of the Sandy River & Rangeley Lakes Railroad station, about 10 yards west of the center line of the track, and 12 feet east of the center line of a road, in the top of a 5-foot boulder, about 3 feet higher than the ground. A drill hole. (244.922 meters or 803.548 feet.)

888.9 (U.S.G.S.).—About 1.2 miles south along the Sandy River & Rangeley Lakes Railroad from the station at Reeds, Franklin County, halfway between two poles on the east side of the track, 14 feet west of the center line of the track, in the top of the north point of a rock ledge, about level with the track. A drill hole. (271.044 meters or 889.250 feet.)

R 30 (U.S.G.S.).—At Reeds, Franklin County, opposite the Sandy River & Rangeley Lakes Railroad station, about 11 yards west of the center line of the track, and about 9 yards north of the center line of a road, in the top of a large flat boulder, about level with the track. A United States Geological Survey standard disk, stamped "R 30 1928." (274.440 meters or 900.392 feet.)

1018.9 (U.S.G.S.).—About 1.0 mile north along the Sandy River & Rangeley Lakes Railroad from the station at Reeds, Franklin County, at the north end of a long curve, 20 feet east of the track, in the side of a large rock outcrop, about level with the track. A drill hole. (310.685 meters or 1,019.306 feet.)

1090.6 (U.S.G.S.).—About 1.1 miles south along the Sandy River & Rangeley Lakes Railroad from the turntable at Perham Junction, Franklin County, about 1.7 miles north of Reeds, about 7 rails north of a small bridge, and 10 feet east of the track, in the top of a 4-foot boulder, about level with track. A drill hole. (332.628 meters or 1,091.297 feet.)

R 29 (U.S.G.S.).—About 6.0 miles south along the Sandy River & Rangeley Lakes Railroad from Redington, Franklin County, at Perham Junction, about 25 yards south of an old wooden culvert, about 2 yards west of the center line of the track, and about 3 yards north of a pole. A United States Geological Survey standard disk, stamped "R 29 1928" and set in the top of a concrete post. (373.089 meters or 1,224.043 feet.)

1405.6 (U.S.G.S.).—About 3.6 miles southeast along the Sandy River & Rangeley Lakes Railroad from Redington, Franklin County, and about 2.4 miles north of Perham Junction, in the top of a boulder, about 1 foot higher than the track. A drill hole, painted "1405.6." (428.569 meters or 1,406.063 feet.)

R 28 (U.S.G.S.).—About 2.5 miles southeast along the Sandy River & Rangeley Lakes Railroad from Redington, Franklin County, about 1.3 miles south of a lumber camp, about 0.3 mile south of a siding, and about 3 yards east of the track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "R 28 1928." (407.486 meters or 1,333.744 feet.)

1620.4 (U.S.G.S.).—About 1.2 miles east along the Sandy River & Rangeley Lakes Railroad from Redington, Franklin County, about 100 yards south of a lumber camp, about 45 yards south of the south end of a culvert over a creek, and about 4 yards west of the track, in the top of a boulder. A drill hole, painted "1620.4." (494.050 meters or 1,620.890 feet.)

1636.5 (U.S.G.S.).—About 486 yards east along the Sandy River & Rangeley Lakes Railroad from the station at Redington, Franklin County, about 0.9 mile west of a lumber camp, and about 1 yard south of the track, in the top of a boulder. A drill hole, painted "1636.5." (498.932 meters or 1,636.913 feet.)

R 29 (U.S.G.S.).—About 0.9 mile west along the Sandy River & Rangeley Lakes Railroad from the station at Redington, Franklin County, at pole 35-12, about 10 yards north of the center line of the track, in the top of a 4- by 4-foot embedded boulder, about 3 feet higher than the rail. A United States Geological Survey standard disk, stamped "R 29 1927." (510.245 meters or 1,674.029 feet.)

1673.0 (U.S.G.S.).—About 0.9 mile west along the Sandy River & Rangeley Lakes Railroad from the station at Redington, Franklin County, at pole 35-12, about 3 yards south of the center line of the track, on the top of a jagged boulder, about 2 feet higher than the rail. A chiseled square, marked "R.B.M." (510.135 meters or 1,673.668 feet.)

1612.7 (U.S.G.S.).—About 2.4 miles west along the Sandy River & Rangeley Lakes Railroad from the station at Redington, Franklin County, about 1,500 feet east of pole 10-37, at a point where Redington Stream runs very close to the track, 40 feet west of a dry stream bed under the track, and 8 feet north of the center line of the track, on the top of a small boulder, about 1½ feet higher than the rail. A chiseled square, marked "1612.7." (491.863 meters or 1,613.721 feet.)

R 28 (U.S.G.S.).—About 1.9 miles east along the Sandy River & Rangeley Lakes Railroad from the station at Dallas, Franklin County, at pole 8-39, on the east end of a bridge over a small stream, 8 feet south of the center line of the track, in the top of the wing wall, about 2½ feet lower than the rail.

A United States Geological Survey standard disk, stamped "R 28 1927." (486.086 meters or 1,529.150 feet.)

D 26.—At Dallas, Franklin County, about 80 feet east of a residence at the Sandy River & Rangeley Lakes Railroad station, about 100 feet west of a sawmill, and 45 feet south of the center line of the track, in the top of a large boulder, about 10 feet higher than the track. A standard disk, stamped "D 28 1933." (464.029 meters or 1,522.402 feet.)

1517.0 (U.S.G.S.).—At Dallas, Franklin County, about 125 feet west of the Sandy River & Rangeley Lakes Railroad station, about 200 feet west of a sawmill, and about 6 yards south of the center line of the track, on the top of a 2- by 3-foot boulder, about level with the rail. A chiseled square, marked "1517.0." (462.658 meters or 1,517.904 feet.)

E 26.—At Dead River, Franklin County, about 450 feet west of the Sandy River & Rangeley Lakes Railroad station, 90 feet east of a highway crossing, and 18 feet south of the center line of the track, in the top of a 12- by 15-foot boulder, about 2 feet higher than the rail. A standard disk, stamped "E 26 1933." (489.877 meters or 1,606.549 feet.)

F 26.—At Rangeley, Franklin County, about 15 yards northeast of the northeast corner of the Sandy River & Rangeley Lakes Railroad station, about 40 yards north of the center line of Main Street, and about 15 yards east of the center line of the track, in the top of a boulder, about 1 foot higher than the track. A standard disk, stamped "F 26 1933." (468.486 meters or 1,537.024 feet.)

G 26.—About 1.6 miles west along State Highway 107 from the Sandy River & Rangeley Lakes Railroad station at Rangeley, Franklin County, at the top of a long steep hill, about 77 yards south of the southeast corner of M. H. Nile's dairy barn, about 12 yards north of the center line of the highway, and about 4 yards west of a 14-inch maple tree, about level with the highway. A standard disk, stamped "G 26 1933" and set in the top of a concrete post. (520.274 meters or 1,706.932 feet.)

H 26.—About 3½ miles west along State Highway 107 from the post office at Rangeley, Franklin County, and about 90 yards west of a farmhouse, at a bridge over the outlet of a pond, in the top of the south wing wall of the west abutment, about 8 yards south of the highway, about level with the highway. A standard disk, stamped "H 26 1933." (465.903 meters or 1,528.550 feet.)

1523.4 (U.S.G.S.).—At Oquossoc, Franklin County, about ¼ mile east along State Highway 107 from the Maine Central Railroad station, at the northeast end of a steel bridge over Rangeley Stream, about 5 yards north of the center line of the highway, in the bridge seat, about 2 feet lower than the highway. A United States Geological Survey standard disk. (464.338 meters or 1,523.416 feet.)

1533.3 (U.S.G.S.).—At Oquossoc, Franklin County, about 50 yards north of the Maine Central Railroad station, at the crossing of State Highway 107, on the same side of the track as the station, 15 feet from the center line of the track, on the top of a small embedded boulder, about 1 foot higher than the rail. A chiseled square, marked "1533.3." (467.055 meters or 1,534.298 feet.)

J 26.—At Oquossoc, Franklin County, about 115 yards south of the Maine Central Railroad station, about 35 yards west of the track, about 15 yards south of a storage tank, and about 3 yards southeast of the north end of a board fence, in the top of a large boulder. A standard disk, stamped "J 26 1933." (467.023 meters or 1,532.225 feet.)

1537.2 (U.S.G.S.).—About 0.7 mile south along the Maine Central Railroad from the station at Oquossoc, Franklin County, about 0.6 mile north of milepost K 12, and about 7 yards west of the center line of the track, in the top of a large boulder. A drill hole, marked "1537.2." (468.859 meters or 1,538.248 feet.)

R 21 (U.S.G.S.).—About 2.4 miles south, along the Maine Central Railroad from the station at Oquossoc, Franklin county, about 35 yards northeast of the northeast corner of the station at South Rangeley, and about 40 yards east of the track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "R 21." (463.446 meters or 1,520.489 feet.)

1544.3 (U.S.G.S.).—About 3.5 miles south along the Maine Central Railroad from the station at Oquossoc, Franklin County, about 0.1 mile south of the station at Macy Junction, about 275 yards south of milepost K 14, and about 10 yards west of the track, in the top of a large boulder. A drill hole, marked "1544.3." (470.982 meters or 1,545.213 feet.)

1578.9 (U.S.G.S.).—About 4.5 miles south along the Maine Central Railroad from the station at **Oquosoc**, Franklin County, about 275 yards south of milepost K 15, and about 8 yards west of the center line of the track, in the top of a large boulder. A drill hole, marked "1578.9." (481.583 meters or 1,579.994 feet.)

R 22 (U.S.G.S.).—About 3.8 miles north along the Maine Central Railroad from the station at **Bemis**, Franklin County, about 300 yards south of milepost K 16, and about 6 yards east of the track, in the top of a large boulder, about 1 yard higher than the track. A United States Geological Survey standard disk, stamped "R 22." (492.516 meters or 1,615.863 feet.)

1531.7 (U.S.G.S.).—About 1.7 miles north along the Maine Central Railroad from the station at **Bemis**, Franklin County, about 0.3 mile south of milepost K 18, and about 15 yards east of the track, in the top of a large boulder. A drill hole, painted "1531.7." (467.239 meters or 1,532.933 feet.)

R 23 (U.S.G.S.).—At **Bemis**, Franklin County, about 120 yards southeast of the Maine Central Railroad station, about 20 yards northwest of a corner of a house, and about 10 yards east of the track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "R 23." (452.613 meters or 1,484.948 feet.)

1483.6 (U.S.G.S.).—About 1 mile south along the Maine Central Railroad from the station at **Bemis**, Franklin County, about 20 yards west of milepost K 21, and about 10 yards west of the track, in the top of a large boulder. A drill hole, painted "1483.6." (452.570 meters or 1,484.807 feet.)

1568.5 (U.S.G.S.).—About 1.6 miles south along the Maine Central Railroad from the station at **Bemis**, Franklin County, about 0.6 mile south of milepost K 21, and about 10 yards east of the center line of the track, in the top of a rock outcrop. A drill hole, marked "1568.5." (478.478 meters or 1,569.807 feet.)

R 24 (U.S.G.S.).—At **Summit**, Franklin County, about 75 yards south of the Maine Central Railroad station, about 0.3 mile north of milepost K 23, and about 12 yards east of the main track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "R 24." (515.940 meters or 1,692.713 feet.)

1586.7 (U.S.G.S.).—About 1.1 miles south along the Maine Central Railroad from the station at **Summit**, Franklin County, about 0.2 mile north of milepost K 24, and about 15 yards east of the center line of the track, in the top of a large boulder. A drill hole, painted "1586.7." (484.039 meters or 1,588.051 feet.)

1482.3 (U.S.G.S.).—In Franklin County, about 3.7 miles northwest along the Maine Central Railroad from the station at **Houghton**, Oxford County, about 65 yards northwest of milepost K 25, and about 15 yards west of the track, in the top of a large boulder. A drill hole, marked "1482.3." (452.220 meters or 1,483.658 feet.)

R 25 (U.S.G.S.).—In Franklin County, about 3.0 miles northwest along the Maine Central Railroad from the station at **Houghton**, Oxford County, about 0.5 mile north of milepost K 26, and about 3 yards east of the track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "R 25 1928." (428.676 meters or 1,406.414 feet.)

R.M. R 25 (U.S.G.S.).—In Franklin County, about 3.0 miles northwest along the Maine Central Railroad from the station at **Houghton**, Oxford County, at a concrete culvert, in the center of the top of the east head wall. Character of mark unknown. (430.249 meters or 1,411.575 feet.)

1274.2 (U.S.G.S.).—In Franklin County, about 2.0 miles northwest along the Maine Central Railroad from the station at **Houghton**, Oxford County, at a concrete culvert over a brook, in the top of the north end of the east head wall, about 3 yards east of the track. A drill hole, painted "1274.2." (388.785 meters or 1,275.539 feet.)

1176.9 (U.S.G.S.).—About 1.1 miles north along the Maine Central Railroad from the station at **Houghton**, Oxford County, about 12 rails south of a small bridge over a brook, and about 10 yards west of the track, in the top of a large boulder. A drill hole, painted "1176.9." (359.121 meters or 1,178.216 feet.)

R 26 (U.S.G.S.).—At **Houghton**, Oxford County, about 250 yards north of the Maine Central Railroad station, about 150 yards north of the water tank, about 20 yards east of the main track, about 12 yards west of an old pump house, and about 1 yard lower than the track. A United States Geological Survey standard disk, stamped "R 26 1928." (323.564 meters or 1,061.560 feet.)

914.9 (U.S.G.S.).—At **Byron**, Oxford County, 90 feet south of the Main Central Railroad station, 20 feet south of the center of a dirt-road crossing, and 16 feet east of the center line of the track, on the top of a large boulder, about 2 feet higher than the rail. A chiseled square, marked "914.9." (278.951 meters or 915.192 feet.)

834.0 (U.S.G.S.).—About $\frac{3}{4}$ mile south along the Maine Central Railroad from the station at **Byron**, Oxford County, about $\frac{1}{3}$ mile south of milepost P 99, about 450 feet north of a road crossing, and 15 feet east of the center line of the track, on the top of a large embedded boulder, about 2 feet higher than the rail. A chiseled square, marked "834.0." (254.277 meters or 834.240 feet.)

744.33 (U.S.G.S.).—About 1.4 miles north along the Maine Central Railroad from the station at **Roxbury**, Oxford County, about $\frac{1}{2}$ mile south of milepost P 97, about 670 feet north of a road crossing, and about 120 feet south of a water tank, at a concrete bridge, on the top of the southwest corner of an abutment, 8 feet west of the center line of the track. A chiseled square, marked "744.33." (226.886 meters or 744.375 feet.)

MAC NO. 4 (U.S.G.S.).—About 1.3 miles north along the Maine Central Railroad from the station at **Roxbury**, Oxford County, about 0.6 mile south of milepost P 97, about 550 feet south of a water tank, about 240 feet north of a road crossing, and 10 feet east of the center line of the track, in the top of a large boulder, about 2 feet higher than the rail. A United States Geological Survey standard disk, stamped "MAC NO. 4." (228.156 meters or 748.542 feet.)

725.6 (U.S.G.S.).—About 0.5 mile southeast along the Maine Central Railroad from the station at **Roxbury**, Oxford County, about 0.5 mile north of milepost P 94, about 115 feet north of a road crossing, and 20 feet east of the center line of the track, on the top of a large, flat, embedded boulder, about level with the rail. A chiseled square, marked "725.6." (221.231 meters or 725.822 feet.)

K 26.—About 1.1 miles south along the Maine Central Railroad from the station at **Roxbury**, Oxford County, about 260 feet south of milepost P 94, at a highway bridge, 60 feet east of the track, and 8 feet west of the center line of the highway, in the top of the southwest wing wall, about $\frac{1}{2}$ foot lower than the highway. A standard disk, stamped "K 26 1933." (215.420 meters or 706.757 feet.)

MAC NO. 3 (U.S.G.S.).—About 1.5 miles south along the Maine Central Railroad from the station at **Roxbury**, Oxford County, about 0.6 mile north of milepost P 93, about 1,400 feet south of a road crossing, 45 feet east of a road paralleling the track, and 15 feet west of the center line of the track, in the top of a very large boulder, about 3 feet higher than the track. A United States Geological Survey standard disk, stamped "MAC NO. 3." (209.268 meters or 686.573 feet.)

605.8 (U.S.G.S.).—About 1.3 miles north along the Maine Central Railroad from the station at **Frye**, Oxford County, about 100 feet north of a road crossing, 50 feet south of a highway bridge over Birch Brook, and 20 feet west of the center line of the track, on the top of a solid rock ledge, about $1\frac{1}{2}$ feet lower than the rail. A chiseled square, marked "605.8." (184.696 meters or 605.957 feet.)

582.9 (U.S.G.S.).—About 0.3 mile north along the Maine Central Railroad from the station at **Frye**, Oxford County, about 0.4 mile south of milepost P 92, 75 feet west of a highway, and 50 feet east of the center line of the track, near a small clump of trees, on the top of a large boulder, about 3 feet higher than the rail. A chiseled square, marked "582.9." (177.738 meters or 583.120 feet.)

MAC NO. 2 (U.S.G.S.).—About 0.8 mile southeast along the Maine Central Railroad from the station at **Frye**, Oxford County, at a road crossing, 100 feet east of the track, southeast of Frank Lovejoy's barn, in the top of a rock ledge. A United States Geological Survey standard disk, stamped "MAC NO. 2 1925." (171.447 meters or 562.489 feet.)

L 26.—About 1.2 miles southeast along the Maine Central Railroad from the station at **Frye**, Oxford County, about 44 yards south of a farm-road crossing, and about 25 yards west of a highway culvert, at a concrete railroad culvert, in the top of the north end of the east head wall, about 3 yards east of the track. A standard disk, stamped "L 26 1933." (169.720 meters or 556.823 feet.)

558.4 (U.S.G.S.).—About 0.5 mile north along the Maine Central Railroad from the station at **Hale**, Oxford County, about 210 yards north of milepost K 43, about 25 yards northeast of a road crossing, and about 12 yards east

of the center line of the track, on the top of a large boulder. A chiseled square, painted "558.4." (170.278 meters or 558.657 feet.)

MAC NO. 1 (U.S.G.S.).—About 0.7 mile south along the Maine Central Railroad from the station at Hale, Oxford County, about 16 yards west of milepost K 44, about 25 yards west of the center line of a dirt road, and about 6 yards west of the center line of the track, in the top of a large boulder. A United States Geological Survey standard disk, stamped "MAC NO. 1." (150.169 meters or 492.679 feet.)

450.4 (U.S.G.S.).—About 1.5 miles north along the Maine Central Railroad from the station at Rumford, Oxford County, and about 130 yards north of milepost K 45, at a plate-girder bridge, on the top of the west wing wall of the south abutment, about 3 yards west of the center line of the track. A chiseled square, painted "450.4." (137.363 meters or 450.665 feet.)

463.3 (U.S.G.S.).—About 1.1 miles north along the Maine Central Railroad from the station at Rumford, Oxford County, about 0.4 mile south of milepost K 45, about 150 yards north of a road crossing, and about 3 yards west of the center line of the track, on the top of a large boulder. A chiseled square, painted "463.3." (141.296 meters or 463.569 feet.)

458.5 (U.S.G.S.).—At Rumford, Oxford County, about 85 yards north of the center of the Maine Central Railroad station, at the trestle to a bridge over Androscoggin River, in the top of the northwest wing wall, about 3 yards west of the center line of the track. A drill hole, painted "458.5." (139.900 meters or 458.989 feet.)

M 26.—At Rumford, Oxford County, in the east wall of the Maine Central Railroad station, about 8 yards west of the center line of the main track, about 6 yards south of the entrance to the waiting room, and about 5 feet higher than the platform. A standard disk, stamped "M 26 1933" and set vertically. (142.251 meters or 466.702 feet.)

N 26.—At Rumford, Oxford County, in the west face of the post office, about 20 yards south of the center line of Hartford Street, about 21 yards north of the Congress Street entrance, about 15 feet east of the center line of Congress Street, 1 foot south of the northwest corner, and about 5 feet higher than the ground. A standard disk, stamped "N 26 1933" and set vertically. (156.253 meters or 512.640 feet.)

P 26.—About 2.3 miles south along United States Highway 2 from the post office at Rumford, Oxford County, about 3.5 miles east along the highway from Rumford Center, and about 10 yards northwest of the center line of the highway, in the top of a large boulder, about 1 yard higher than the highway. A standard disk, stamped "P 26 1933." (188.896 meters or 619.736 feet.)

MAC NO. 16 (U.S.G.S.).—At Rumford Center, Oxford County, at the intersection of United States Highway 2 and a dirt road leading to Andover, about 85 yards west along the dirt road from the intersection, about 80 yards east of the Caroline Farnum residence, and about 4 yards south of the center line of the dirt road, in the top of a small boulder, about 1 foot lower than the dirt-road grade. A United States Geological Survey standard disk, stamped "MAC NO. 16 1925." (188.299 meters or 617.778 feet.)

614.4 (U.S.G.S.).—At Rumford Center, Oxford County, at the intersection of United States Highway 2 and a dirt road leading to Andover, about 25 yards west of the intersection, and about 6 yards south of the center line of the Andover road, at a concrete culvert, on the head wall, about level with the road. A chiseled square, marked "R.B.M." (187.375 meters or 614.746 feet.)

625.4 (U.S.G.S.).—About 0.2 mile southwest along United States Highway 2 from the intersection of the Andover road at Rumford Center, Oxford County, 90 feet east of the Jed F. Martin residence, and about 4 yards west of the center line of the highway, on the top of the north end of the bottom concrete step leading to the residence, about level with the highway. A chiseled square. (190.740 meters or 625.786 feet.)

Q 26.—About 2.6 miles southwest along United States Highway 2 from the intersection of the Andover road at Rumford Center, Oxford County, at the edge of a woods on the west side of the road, about 6 yards west of the center line of the highway, in the top of a jagged embedded boulder, about 8 feet higher than the highway. A standard disk, stamped "Q 26 1933." (193.059 meters or 633.394 feet.)

R 26.—About 4.6 miles west along United States Highway 2 from the intersection of the Andover road at Rumford Center, Oxford County, at the intersection of State Highway 219, at the sign reading "Ellis River-Rumford", on the northeast end of a concrete highway bridge over Ellis River, in the top of

the wing wall, about 5 yards east of the center line of the highway, and about $\frac{1}{2}$ foot lower than the highway. A standard disk, stamped "R 26 1933." (192.810 meters or 632.577 feet.)

S 26.—About 1.8 miles southwest along United States Highway 2 from Hanover, Oxford County, about 200 feet north of the Jim Gainor residence, and about 14 yards west of the center line of the highway, in the top of a very large boulder in a long rock wall, about 5 feet higher than the highway. A standard disk, stamped "S 26 1933." (201.830 meters or 662.335 feet.)

T 26.—About 2.2 miles east along United States Highway 2 from the intersection of State Highway 26 at Newry, Oxford County, about 25 yards southeast of the southeast corner of an abandoned frame school, and about 10 yards north of the center line of the highway, in the top of a boulder. A standard disk, stamped "T 26 1933." (208.335 meters or 683.512 feet.)

U 26.—At Newry, Oxford County, about 0.3 mile east along United States Highway 2 from the intersection of State Highway 26, at a bridge over Stony Brook, in the top of the south end of the east abutment, about 7 yards south of the center line of the highway, and about 1 foot lower than the highway. A standard disk, stamped "U 26 1933." (195.449 meters or 641.236 feet.)

Newry (U.S.G.S.).—At Newry, Oxford County, about 75 yards southwest along United States Highway 2 from the intersection of State Highway 26, at a concrete bridge over Bear River, in the west side of the west parapet wall, 1 foot south of the north end, and about 8 inches higher than the highway. A United States Geological Survey standard disk, set vertically. (196.028 meters or 643.135 feet.)

For additional bench marks in the vicinity of Newry, see below.

V 26.—About 0.4 mile southwest along United States Highway 2 from the intersection of State Highway 26 at Newry, Oxford County, at the top of a short steep grade, about 65 yards south of a farmhouse on the west side of the road, in a field, about 15 yards east of the center line of the highway, in the top of a large boulder. A standard disk, stamped "V 26 1933." (219.350 meters or 719.651 feet.)

W 266.—About 2.2 miles south along United States Highway 2 from the intersection of State Highway 26 at Newry, Oxford County, at a concrete bridge over Sunday River, in the top of the east end of the south abutment, about 5 yards east of the center line of the highway, and about 2 feet lower than the highway. A standard disk, stamped "W 26 1933." (197.110 meters or 646.685 feet.)

X 26.—About 1.6 miles north along United States Highway 2 from the Grand Trunk Railway station at Bethel, Oxford County, about 135 yards south of the Edward Bennett farmhouse, and about 50 yards north of pole 89, in a pasture, about 100 feet east of the center line of the highway, in the top of a boulder. A standard disk, stamped "X 26 1933." (203.901 meters or 668.965 feet.)

For additional bench marks in the vicinity of Bethel, see page 12.

LINE 13, NEWRY, MAINE, TO JEFFERSON JUNCTION, N.H. (PART)

[Second-order levelling]

This line follows State Highway 26 from Newry, through Upton, Maine, toward Colebrook, N.H. The field work was done, during October 1933, by a party in charge of W. M. Gibson, junior hydrographic and geodetic engineer.

For additional bench marks in the vicinity of Newry, see above.

Y 26.—About 2.9 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, at the north end of an apple orchard, between the two northernmost apple trees nearest the highway, 35 feet east of the center line of the highway, in the top of a rock ledge, about 3 feet higher than the highway. A standard disk, stamped "Y 26 1933." (225.018 meters or 738.247 feet.)

Z 26.—About 4.9 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, at the north

end of a meadow, about 8 yards west of the center line of the highway, in the top of the southernmost one of several rock ledges, level with the highway. A standard disk, stamped "Z 26 1933." (222.752 meters or 730.812 feet.)

A 27.—About 7.1 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, between poles 270 and 271, about 150 yards east of a large 2-story residence, in a meadow, about 17 yards north of the center line of the highway, in the top of a large ledge, about level with the highway. A standard disk, stamped "A 27 1933." (249.744 meters or 819.368 feet.)

B 27.—About 9.1 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, about 0.3 mile southeast of Screwauger Falls, by a stream near the highway, in a boulder-strewn meadow, about 15 yards south of the center line of the highway, in the top of a boulder, about 2 feet lower than the highway. A standard disk, stamped "B 27 1933." (289.572 meters or 950.037 feet.)

C 27.—About 11.1 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, at a bridge over a brook, about 7 yards southwest of the center line of the highway, in the top of the southwest end of the northwest abutment. A standard disk, stamped "C 27 1933." (431.860 meters or 1,416.861 feet.)

D 27.—About 13.3 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, about 7.8 miles southeast of Upton, about 0.5 mile northwest of a lumber camp, and about 4 yards north of the center line of the highway, in the top of a rock ledge, about 3 feet higher than the highway. A standard disk, stamped "D 27 1933." (469.259 meters or 1,539.561 feet.)

E 27.—About 15.5 miles northwest along State Highway 26 from the intersection of United States Highway 2 at Newry, Oxford County, at a concrete bridge over a river, 4 feet southeast of the northwest end of the southwest side, in the top of the southwest wing wall of the northwest abutment, about 4 yards southwest of the center line of the highway, and about 1 foot lower than the highway. A standard disk, stamped "E 27 1933." (446.618 meters or 1,465.279 feet.)

F 27.—About 3.2 miles southeast along State Highway 26 from Upton, Oxford County, about 100 yards northwest of a farmhouse, about 12 yards southwest of the center line of the highway, and about 5 feet higher than the highway. A standard disk, stamped "F 27 1933" and set in the top of a concrete post. (477.552 meters or 1,566.769 feet.)

G 27.—About 0.7 mile southeast along State Highway 26 from Upton, Oxford County, about 50 yards east of the apex of a V formed by the intersection of the road leading to Andover, about 18 yards north of the center line of the highway, and about 12 yards south of the center line of the road, in the top of a rock outcrop. A standard disk, stamped "G 27 1933." (541.881 meters or 1,777.821 feet.)

90 ME-N.H. (U.S.G.S.).—About 1.1 miles northwest along State Highway 26 from the schoolhouse at Upton, Oxford County, at the Maine-New Hampshire State line, about 9 yards northeast of the center line of the highway, and about 4 feet higher than the highway. A United States Geological Survey standard disk, stamped "90 ME-N.H. ATF." and set in the top of a granite post. (422.116 meters or 1,384.892 feet.)

This line continues into New Hampshire.

RAIL ELEVATIONS

The elevations in the following list were determined during the course of the leveling and refer to the top of the rail opposite the railroad station, except in cases covered by appropriate footnotes. These elevations are approximate only, since the track does not accurately maintain a constant elevation for any great length of time.

Place	Railroad	Elevation (feet)	Place	Railroad	Elevation (feet)
Agamenticus.....	B. & M. R.R.	96.4	Kennebunk.....	B. & M. R.R.	51.6
Allens.....	G. T. Ry.	679.8	Kingman.....	M. C. R.R.	335.2
Anson ¹	M. C. R.R.	263.8	Lake View.....	C. P. Ry.	447.5
Bancroft.....	do.	342.4	Lambert Lake.....	M. C. R.R.	427.3
Barnard.....	C. P. Ry.	744.6	Lewiston Junction.....	G. T. Ry.	249.2
Bates.....	G. T. Ry.	486.0	Locke Mills.....	do.	726.0
Benson.....	C. P. Ry.	742.6	Long Pond.....	C. P. Ry.	1,191.7
Biddeford.....	B. & M. R.R. ²	74.5	Mackamp.....	do.	1,173.4
Do.....	do. ³	74.5	Mechanic Falls.....	M. C. R.R.	303.4
Blair.....	C. P. Ry.	1,171.6	Do.....	G. T. Ry.	301.5
Bodfish.....	do.	772.5	Moosehead.....	C. P. Ry.	1,036.1
Boundary.....	do.	1,851.0	Morkill.....	do.	1,010.6
Brassau.....	do.	1,124.5	New Gloucester.....	G. T. Ry.	120.4
Brownville Junction ⁴	do.	390.7	North Berwick.....	B. & M. R.R.	141.0
Brunswick ⁵	M. C. R.R.	51.3	Old Orchard.....	do.	15.5
Bryant Pond.....	G. T. Ry.	710.0	Onawa.....	C. P. Ry.	636.5
Cherryfield.....	M. C. R.R.	52.2	Oxford.....	G. T. Ry.	334.1
Chester.....	C. P. Ry.	222.1	Pine Point.....	B. & M. R.R.	15.6
Columbia.....	M. C. R.R.	66.8	Portland.....	M. C. R.R.	26.0
Cumberland Center.....	do.	59.2	Pownal.....	G. T. Ry.	145.7
Danforth.....	do.	388.0	Ray.....	C. P. Ry.	714.9
Danville Junction.....	do.	206.4	Rockland ⁶	M. C. R.R.	61.7
Do.....	(G. T. Ry.)	204.9	Saco.....	B. & M. R.R.	66.0
Deering Junction.....	M. C. R.R.	103.5	Scarboro Beach.....	do.	15.4
Drew.....	do.	327.5	Sebois.....	C. P. Ry.	200.1
Dunns.....	G. T. Ry.	102.4	Somerset Junction.....	do.	1,036.8
East Machias.....	M. C. R.R.	45.2	South Berwick.....	B. & M. R.R.	98.0
Eaton.....	do.	407.9	South Paris.....	G. T. Ry.	392.5
Ellsworth.....	do.	115.6	Squaw Brook.....	C. P. Ry.	1,044.8
Ellsworth Falls.....	do.	125.8	Tarratine.....	do.	1,112.6
Empire Road.....	G. T. Ry.	277.7	The Elms.....	B. & M. R.R.	61.3
Forest.....	M. C. R.R.	444.3	Tomah.....	M. C. R.R.	382.3
Franklin.....	do.	72.1	Vanceboro.....	do.	403.2
Gilead.....	G. T. Ry.	715.4	Washington Junction.....	do.	195.8
Gilford.....	C. P. Ry.	221.5	West Falmouth.....	do.	42.2
Hardy Pond.....	do.	394.8	Williamsburg.....	C. P. Ry.	589.9
Harrington.....	M. C. R.R.	51.7	Woodard.....	do.	269.2
Holden.....	do.	202.8	Woodfords.....	M. C. R.R.	65.3
Jacksonville.....	do.	47.3	Wytopitlock.....	do.	355.8
Jewett.....	B. & M. R.R.	93.3	Yarmouth Junction.....	G. T. Ry.	90.2

¹ West rail, at crossing of U S 1, about 200 feet south of station.

² Eastern division.

³ Western division.

⁴ At crossing of the Bangor & Aroostook R.R.

⁵ At crossing of U S 1, about 3 miles east of the station.

⁶ At crossing of U S 1, about 0.6 mile southeast of station.

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