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TRIANGULATION AND PRIMARY TRAVERSE 1916-1918

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ILLUSTRATIONS.

MAP OF THE UNITED STATES SHOWING CONDITION OF ASTRONOMIC LOCATION AND PRIMARY CONTROL

to January 1, 1919

TRIANGULATION AND PRIMARY TRAVERSE, 1916–1918.[1]

C. H. BIRDSEYE, Chief Topographic Engineer.

INTRODUCTION.

PERSONNEL.

Field work.—The field work of primary control, the computed results of which are given in the following pages, was carried on during 1916 under W. H. Herron, acting chief geographer, with Frank Sutton, Glenn S. Smith, C. H. Birdseye, George R. Davis, T. G. Gerdine, geographers, in charge respectively of the Atlantic, Central, Rocky Mountain, Pacific, and Northwestern divisions.

During 1917 and 1918, when military mapping was carried on for the War Department, the assignments were as follows: Chief Geographer, R. B. Marshall; Southeastern, Northeastern, Central, Southern, and Eastern departments, W. H. Herron and T. G. Gerdine, geographers, in charge; Western Department, George R. Davis, geographer, in charge.

Credit is given to the various topographers, assistant topographers, and aids directly in charge under the headings of the several lists.

Computation.—The office computations were made under the supervision of E. M. Douglas, geographer. The results were computed by the following members of the topographic branch, detailed from time to time to this work: D. H. Baldwin, T. M. Bannon, E. C. Bebb, L. F. Biggs, D. S. Birkett, R. H. Blain, H. Dewhirst, George T. Hawkins, G. W. Hodgkins, Oscar Jones, C. B. Kendall, J. L. Lenovitz, S. G. Lunde, D. T. McNair, E. L. McNair, J. B. Metcalfe, jr., J. F. McBeth, F. J. McMaugh, A. W. Phelps, G. Risegari, H. S. Senseney, J. G. Staack, W. E. Trimble, C. F. Urquhart, J. H. Wilson, C. R. Wingate, jr., and B. H. Yoakum. The data were compiled for publication by S. S. Gannett, geographer.

DATUM.

Wherever practicable, and unless otherwise stated, positions have been computed on North American datum.

[1] Owing to unavoidable delay in publication it has been possible to include for some of the States results of work done in 1919 and 1920.

STATION MARKS.

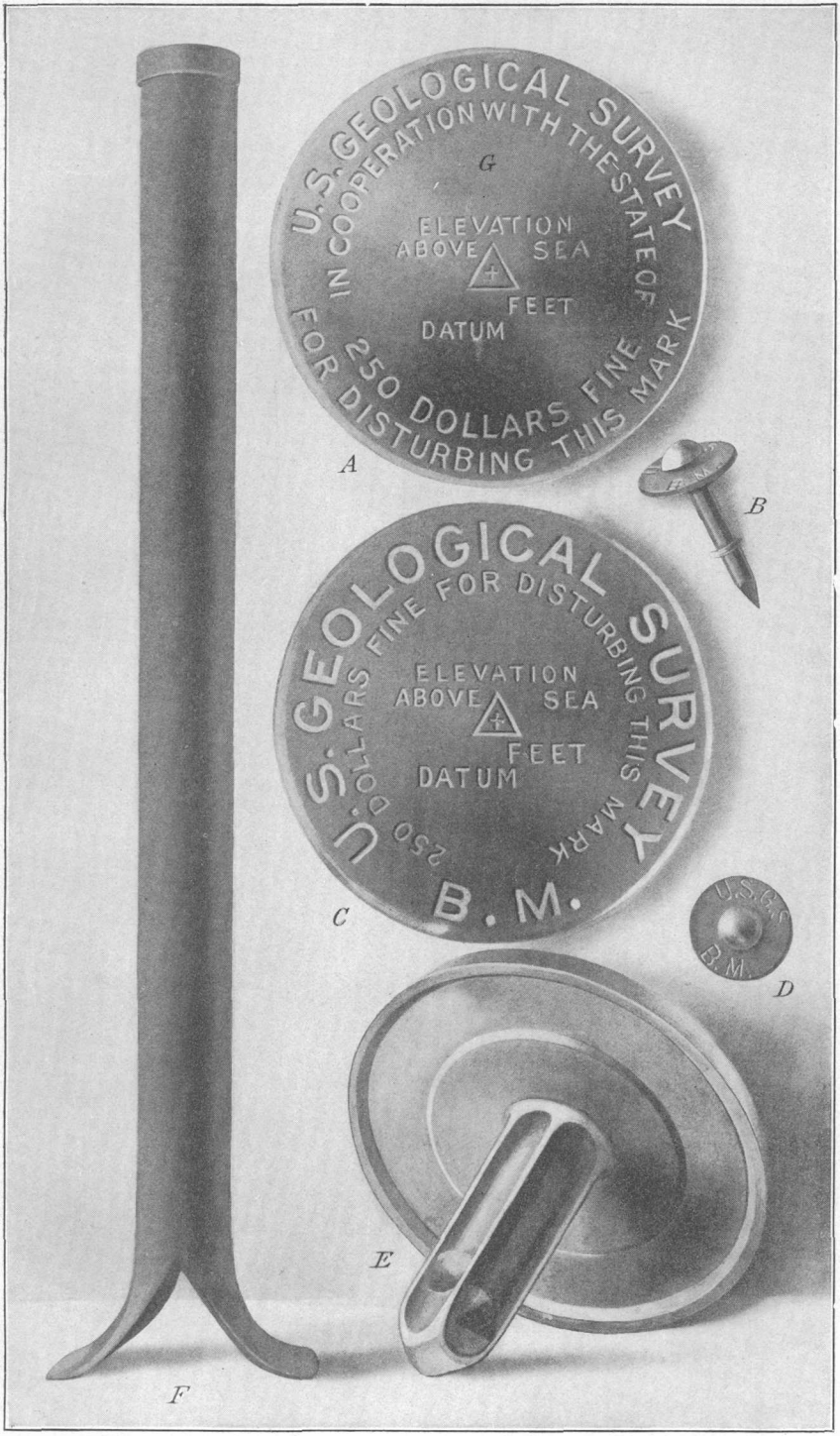
Permanent marks are placed at all occupied triangulation stations and at certain of the primary traverse stations, from 3 to 8 miles apart.

These marks are of the form adopted for leveling bench marks, and in many places the elevation as well as the latitude and longitude has been determined. The marks are of two forms. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. II), 3½ inches in diameter and one-fourth inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock, in the wall of some public building, bridge abutment, or other substantial masonry structure. The second form (*F*, Pl. II), set in the ground where no masonry or rock is available, consists of a hollow wrought-iron post 3½ inches in outside diameter and 4 feet long. The bottom is spread out to a width of 10 inches in order to give a firm bearing on the earth. A bronze or aluminum-bronze cap is riveted upon the top of the post. The tablets, as well as the caps on the iron posts, are appropriately lettered, and where States have cooperated in the work the fact of such cooperation is indicated by the addition of the State name (*G*, Pl. II).

SUMMARY.

Summary of triangulation and primary traverse, 1916–1918.

Locality.	Triangulation stations.	Traverse stations.
Arizona	5	.....
California	238	.....
Delaware-Maryland-West Virginia	17	259
Florida	.....	552
Georgia	.....	4,323
Idaho-Montana	38	.....
Illinois-Wisconsin	.....	619
Iowa-Kansas-Missouri-Nebraska-Oklahoma	.....	1,505
Kentucky-Tennessee	17	468
Maine-New Hampshire	99	.....
Michigan	.....	692
Nevada	14	.....
New Mexico	132	.....
New York	.....	365
North Carolina	15	572
Oregon-Washington	79	1,606
South Carolina	.....	5,400
Texas	127	229
Virginia	.....	2,927
Wyoming-Colorado	46	.....
	827	19,517



GEOLOGICAL SURVEY STATION MARKS.

A, Tablet used in cooperating States. The State name is inserted at *G*.
B and *D*, Copper temporary bench mark, consisting of a nail and copper washer.
A, *C*, and *E*, Tablets for stone or concrete structures.
F, Iron post used where there is no rock.