

Lists of elevations principally in that portion of the United States west of the Mississippi River / collated and arranged by Henry Gannett.

Contributors

Gannett, Henry, 1846-1914.
Royal College of Surgeons of England

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183 Euston Road
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DEPARTMENT OF THE INTERIOR.
UNITED STATES GEOLOGICAL SURVEY OF THE TERRITORIES.
F. V. HAYDEN, U. S. GEOLOGIST-IN-CHARGE.

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MISCELLANEOUS PUBLICATIONS.—No. 1.
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LISTS OF ELEVATIONS

PRINCIPALLY IN

THAT PORTION OF THE UNITED STATES

WEST OF

THE MISSISSIPPI RIVER.

THIRD EDITION.

=====
COLLATED AND ARRANGED

BY

HENRY GANNETT, M. E.
=====

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1875.

PREFACE

WILLIAM D. GARDNER

In this third edition of the "List of Elevations" I have been enabled to increase largely the list of towns, cities, etc. Most of these elevations are from railroad levels, and give the elevation of the town. For many of the elevations I am indebted to the University of Illinois, especially to the work of Dr. J. M. Foster. Many of them, especially of military use, are derived from the records of the medical department of the U. S. Army, while the remainder are barometrical measurements, drawn from various sources.

The list of mountain peaks has been largely increased, partly by extending the scope of the list, making it include the Appalachian system, the geography of this system has been thoroughly revised by F. V. Coville, and the elevations of the peaks in this system rest on his authority.

In addition to these, the elevation of a few of the best-known mountains in foreign countries are given.

The list of passes in high ranges has been doubled in size. The elevations have been made from various sources, which are specified in the list.

For purposes of comparison I have added to the list of heights in the United States a list of the best-known ones in foreign countries.

The list of lakes I have extended in order to include those in all parts of the country.

The table of elevation of the front of the growth of timber is not complete. Its elevation in Colorado and in parts of Wyoming and Montana has been determined by a different method of observation under different conditions to that given elsewhere. It is given in the United States observations are given for a few of the mountains.

Elevations at the water level of the Great Lakes are given in the number. On the Missouri the elevations are given in feet and a few are added.

The number of railroad miles has been largely increased. I am especially indebted in the preparation of this volume to the work of T. Gardner of the survey for the railroad route between Chicago and St. Louis, and to the work of the U. S. Army, especially to the work of Dr. J. M. Foster, in the preparation of the military elevations. I am also indebted to the work of the U. S. Army, especially to the work of Dr. J. M. Foster, in the preparation of the military elevations.

PREFACE.

In this third edition of the "List of Elevations" I have been enabled to increase largely the list of towns, cities, &c. Most of these elevations are from railroad levels, and give the elevation of the track. For many of the others I am indebted to the Dictionary of Elevations recently published by Dr. J. M. Toner. Many of them, especially of military posts, are derived from the records of the medical department of the U. S. Army, while the remainder are barometrical measurements, drawn from various sources.

The list of mountain peaks has been largely increased, partly by extending the scope of the list, making it include the Appalachian system. The orography of this system has been thoroughly studied by Professor A. Guyot, and the elevations of the peaks in this system rest on his authority.

In addition to these, the elevations of a few of the best-known mountains in foreign countries are given.

The list of passes, in high ranges, has been doubled in size. The additions have been made from various sources, which are specified in the list.

For purposes of comparison I have added to the list of plateaux in the United States a list of the best-known ones in foreign countries.

The list of lakes I have extended in order to include those in all parts of the country.

The table of elevations of the limit to the growth of timber is extremely incomplete. Its elevation in Colorado and in parts of Wyoming and Montana has been determined by a sufficient number of observations, under different conditions, to fix it quite accurately. But in other parts of the United States observations are very few, or entirely wanting.

Elevations at the water-level of rivers have been but slightly increased in number. On the Mississippi River several have been corrected and a few added.

The number of railroad profiles has been largely increased.

I am especially indebted, in the preparation of this edition, to Mr. James T. Gardner, of this survey, for his valuable assistance in collecting and arranging material; also to Professor Hayden, Professor A. Guyot, Professor William H. Brewer, Professor Thomas, and to railroad officials who have favored me with profiles of their roads.

SECTION I
MISCELLANEOUS TABLES

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SECTION I.

MISCELLANEOUS TABLES.

TABLE I.
ELEVATIONS OF TOWNS, CITIES, ETC.

Arkansas.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Beebe.....	235	Judsonia.....	209
Cabot.....	279	Little Rock..... R. R.	309
Camden.....	123	Madison.....	283
Campbell.....	223	McAlmont.....	263
Fayetteville.....	1, 350	Minturn.....	251
Fort Smith.....	460	Napoleon.....	142
Fulton.....	242	Newport.....	218
Gaines' Landing.....	757	O'Kean.....	261
Garner.....	211	Peach Orchard.....	276
Higginson.....	210	Pittsburgh.....	418
Holland.....	243	Preston.....	790
Hopefield.....	294	Russell.....	223
Jacksonport.....	214	Washington.....	660
Jacksonville.....	273		

Missouri.

Aurora.....	1, 350	Elston.....	715
Belmont..... R. R.	328	Ely..... R. R.	731
Bergen.....	515	Fairfield.....	977
Billings.....	1, 375	Farmer's City.....	885
Bottsville.....	763	Fayette.....	767
Bourbon.....	933	Franklin..... R. R.	480
Brookfield..... R. R.	802	Fredericktown.....	756
Brunswick.....	692	Gallagher.....	785
Buckland.....	889	Gasconade.....	483
Cadet.....	805	Glenallen.....	452
Calhoun.....	884	Glendale.....	568
California.....	864	Granby City..... R. R.	1, 063
Cameron..... R. R.	1, 067	Hannewell.....	740
Carbon..... R. R.	867	Harlem..... R. R.	782
Chamois.....	531	Hermitage.....	1, 037
Charleston.....	319	Hibernia.....	400
Chiltenham.....	458	Holden..... R. R.	854
Clarence..... R. R.	867	Independence..... R. R.	1, 034
Clinton.....	917	Ironton.....	912
Clarley.....	1, 627	Jefferson City..... R. R.	556
Deerfield.....	901	Kansas City..... R. R.	764
De Soto.....	494	Kingsville.....	924
Dixon..... R. R.	1, 168	La Clede..... R. R.	830
Dorchester.....	1, 275	Ladree.....	855
Doren.....	870	Lakeman..... R. R.	792
Dozier.....	455	La Monte.....	878
Dresden.....	806	La Plata.....	898
Dundee.....	536	Lathrop..... R. R.	1, 105

Missouri—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Fect.</i>		<i>Fect.</i>
Leasburgh.....	1, 022	Reelsville.....	599
Logan.....	1, 362	Ritchville.....	1, 060
Macon..... R. R.	919	Rockville.....	811
Marble Hill.....	411	Rolla..... R. R.	1, 201
Marquand.....	564	Roseville.....	595
Marshfield..... R. R.	1, 521	St. Genevieve.....	372
Meramac.....	435	St. Joseph..... R. R.	820
Mexico.....	790	St. Louis, City directrix..... R. R.	428
Middlebrook.....	1, 144	“ high water in Miss.	
Miller's Landing.....	508	“ river in 1844..... R. R.	436
Moneteau.....	904	“ low water (extreme)...	394
Monroe..... R. R.	794	St. Paul.....	428
Montgomery.....	790	Schell City.....	864
Morisson.....	522	Sedalia..... R. R.	889
Morley.....	338	Seneca..... R. R.	883
Moselle..... R. R.	955	Shelbina..... R. R.	718
Neelysville.....	298	Sleeper.....	1, 201
Neosho City.....	1, 015	Smithton.....	888
New Madrid.....	530	Springfield..... R. R.	1, 382
Newport.....	482	Stanton.....	1, 004
Niaugua.....	1, 420	Stewartsville.....	955
Oakland.....	611	Stockton.....	849
Ogden.....	500	Sullivan.....	959
Ohio City.....	505	Sulphur Spring.....	403
Osage City.....	541	Sylvania.....	477
Osborn.....	1, 033	Syracuse.....	944
Otterville.....	695	Taylorville.....	470
Pacific..... R. R.	480	Utica..... R. R.	796
Palmyra..... R. R.	694	Verona.....	1, 250
Piedmont.....	495	Warrensburgh..... R. R.	874
Pierce City..... R. R.	1, 225	Webster.....	525
Plattsburgh.....	914	Wellesbury.....	778
Plymouth.....	1, 356	Woodlawn.....	824
Prairie City.....	771	Yeatman.....	485

Iowa.

Ackley..... R. R.	1, 144	Calamus.....	720
Adel.....	1, 074	California Junction..... R. R.	1, 020
Afton.....	1, 223	Carroll..... R. R.	1, 272
Agency..... R. R.	809	Cascade.....	752
Albia..... R. R.	956	Casey.....	1, 208
Albion..... R. R.	946	Cedar Creek.....	616
Algona.....	1, 500	Cedar Falls.....	878
Alpine.....	622	Cedar Rapids..... R. R.	741
Ames..... R. R.	934	“ “ (Cedar River).....	719
Barnum.....	1, 173	Ceres.....	825
Batavia..... R. R.	648	Chariton..... R. R.	1, 041
Bearons.....	1, 238	Charles City.....	1, 037
Beaver Station..... R. R.	1, 039	Chelsea..... R. R.	798
Belfast.....	516	Chequaque..... R. R.	612
Belleplaine..... R. R.	831	Cherokee.....	1, 204
Big Creek.....	590	Chillicothe..... R. R.	654
Big Mound Summit..... R. R.	745	Clear Lake.....	984
Blainstown..... R. R.	850	Clinton, high water in Miss.	
Blencoe..... R. R.	1, 062	“ river in 1864..... R. R.	584
Bonaparte..... R. R.	565	Clinton bridge..... R. R.	602
Boone..... R. R.	951	Colfax.....	753
Boonesborough.....	1, 160	Colo..... R. R.	1, 055
Burlington, high water in Miss.		Comstock.....	684
“ river..... R. R.	529	Coon River.....	1, 017

Iowa—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Corning R. R.	1, 140	Julian	845
Council Bluffs R. R.	1, 000	Kellogg	821
Council Grove	1, 257	Keokuk R. R.	508
Crawfordsville	710	Kilbourne	591
Crescent R. R.	1, 009	Le Grand R. R.	949
Cresco	1, 858	Le Mars	1, 196
Cromwell R. R.	1, 233	Liscomb R. R.	1, 015
Croton	521	Little Sioux R. R.	1, 042
Danville R. R.	722	Lucas	857
Davenport, datum C., R. I. & P. R. R.	560	Lyons City	630
" high water in Miss.		Madison	600
river R. R.	570	Manchester	925
" low water in Miss.		Marshall R. R.	906
river R. R.	553	Melrose R. R.	863
Dennison R. R.	1, 269	Middletown R. R.	731
Des Moines	586	Missouri Valley Junction R. R.	1, 020
Dewitt	698	Mitchell	1, 195
Downing	665	Modale R. R.	1, 021
Dubuque, low water in Miss.		Moingona R. R.	919
river R. R.	599	Mona	868
Dunlap R. R.	1, 109	Mondamin R. R.	1, 031
Durant	714	Mount Pleasant R. R.	732
Dysart	438	Muscatine	586
Earlham	1, 088	Nashua	993
East Orange	605	Nevada R. R.	1, 013
East Side R. R.	1, 390	New Jefferson R. R.	1, 069
Eddyville	655	Newton	1, 400
Eldora R. R.	1, 022	Nodaway R. R.	1, 093
Elkadar	746	Norway R. R.	808
Fairbanks	1, 083	Oakland R. R.	1, 205
Fairfax R. R.	780	Onawa City R. R.	1, 068
Fairfield R. R.	775	Orford R. R.	864
Farley Junction	1, 141	Osceola R. R.	1, 134
Farmington	1, 128	Ottumwa R. R.	639
Fayette Village	1, 000	Paradise R. R.	1, 146
Floyd's Bluffs R. R.	1, 404	Pleasant Plain	950
Fort Atkinson	700	Quasqueton	888
Fort Croghan	1, 250	Red Oak R. R.	1, 048
Fort Des Moines	780	Rossville	1, 400
Fort Dodge	1, 024	Russell R. R.	1, 028
Fort Madison	550	St. Augusta	1, 197
Frederic R. R.	744	St. Mary's	1, 200
Fulton	741	Sac City	900
Given	499	Scranton R. R.	1, 089
Glendale R. R.	752	Sergeant's Bluffs R. R.	1, 114
Glenwood R. R.	996	Sheldon	706
Glidden R. R.	1, 238	Sibley	1, 485
Grove City	1, 253	Sioux City R. R.	1, 123
Guthrie	1, 251	Skunk River	905
Guttenberg	690	Sloan R. R.	1, 091
Hagar R. R.	1, 045	Stanwood	862
Harmony R. R.	1, 056	State Centre R. R.	1, 082
Harrisgrove	900	Steamboat Rock R. R.	1, 024
Hazard	1, 405	Thayer	1, 002
Hesper	720	Tiptop R. R.	1, 437
Highland R. R.	1, 311	Toledo R. R.	827
Homestead	848	Tyrone R. R.	829
Honey-creek Station	1, 020	Union R. R.	953
Independence	850	Vail R. R.	1, 272
Independent	614	Vallisca R. R.	1, 072
Iowa City R. R.	626	Vawtersgrove	1, 500
Iowa Falls	1, 070	Victoria	788
Jamesville	910	Walcott	741

Iowa—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
Walnut R. R.	<i>Feet.</i> 1,056	Westside R. R.	<i>Feet.</i> 1,339
Washington R. R.	757	Whitfield R. R.	685
Waubach	988	Woodbine R. R.	1,070

Minnesota.

Afton	950	Gorton R. R.	1,008
Aiken R. R.	600	Grand Crossing	626
Albany R. R.	1,187	Hancock R. R.	1,141
Aldrich R. R.	1,326	Hawley R. R.	1,150
Alexandria R. R.	1,382	Hayward R. R.	1,240
Anoka R. R.	869	Heron Lake R. R.	1,394
Atwater R. R.	1,198	Herman R. R.	1,054
Audubon R. R.	1,308	Hersey R. R.	1,465
Averill R. R.	918	Hinckley R. R.	1,023
Avon R. R.	1,116	Hobart R. R.	1,384
Bass Lake R. R.	921	Hospers	1,438
Beaver	1,600	Hutchison	1,050
Beaver Bay	1,270	Ida R. R.	1,402
Becker R. R.	963	Isinours R. R.	888
Belle Plaine R. R.	781	Itasca R. R.	856
Belleprairie R. R.	1,125	Kandiyohi R. R.	1,207
Bellevue R. R.	1,075	Kasota R. R.	853
Beltrami R. R.	903	Kettle River R. R.	1,112
Benson R. R.	1,033	Kimberley R. R.	1,231
Bigelow R. R.	1,603	Kirkhoven R. R.	1,095
Big Lake R. R.	921	Kittson R. R.	886
Bingham Lake R. R.	1,397	La Crescent	742
Blakeley R. R.	785	Lake Crystal R. R.	1,053
Bois Francs	1,238	Lanesborough R. R.	831
Borup R. R.	912	Langola R. R.	1,054
Brainerd R. R.	1,204	Le Mars R. R.	1,196
Breckenridge R. R.	948	Le Sueur R. R.	811
Burlington	645	Litchfield R. R.	1,116
Butterfield R. R.	1,163	Little Falls R. R.	1,109
Campbell R. R.	968	Long Lake R. R.	940
Chatfield	900	Lyle	1,306
Christina R. R.	1,219	Madelia R. R.	998
Clear Lake R. R.	984	Mankato R. R.	849
Clearwater	975	Manonim R. R.	833
Cockato R. R.	1,013	Marion	1,200
Crookston	881	Melrose R. R.	1,196
Crow Wing R. R.	1,181	Minneapolis R. R.	821
Darwin R. R.	1,118	Minneaska	1,600
De Graff R. R.	1,047	Minniesta	764
Delano R. R.	914	Moorhead R. R.	904
Detroit R. R.	1,362	Moose Lake R. R.	1,052
Doran R. R.	959	Morris R. R.	1,113
Douglass R. R.	1,112	Motley R. R.	1,220
Duluth R. R.	605	Mountain Lake R. R.	1,277
East Henderson R. R.	791	Muskoda R. R.	1,083
Elk River R. R.	894	New Ulm	1,500
Evansville R. R.	1,345	Norman R. R.	1,322
Felton R. R.	916	Oakdale R. R.	967
Forest Lake	904	Oakes R. R.	1,228
Fort Ridgley	1,230	Osakis R. R.	1,328
Fort Ripley R. R.	1,130	Ottowa R. R.	847
Fort Snelling	820	Owatona	1,204
Fountain R. R.	1,289	Perham R. R.	1,366
Frazee R. R.	1,409	Pillager R. R.	1,180
Glyndon R. R.	923	Pine City R. R.	944

Minnesota—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Rabbit Run..... R. R.	968	Sicottes..... R. R.	1,265
Ramsey..... R. R.	1,207	South Bend..... R. R.	866
Randall..... R. R.	1,036	Stanley..... R. R.	902
Red River Falls..... R. R.	1,122	Stillwater..... R. R.	756
Rolette..... R. R.	894	Stockton..... R. R.	849
Rush City..... R. R.	909	Swede Grove..... R. R.	1,177
Rushford..... R. R.	711	Thomson..... R. R.	1,027
St. Anthony..... R. R.	829	Tintah..... R. R.	982
St. Anthony's Falls..... R. R.	820	Tumuli..... R. R.	1,196
St. Cloud, west side Miss. riv. R. R.	1,025	Two Rivers..... R. R.	1,124
" low water Miss. riv. R. R.	953	Victoria..... R. R.	1,366
St. James..... R. R.	1,058	Wabashaw..... R. R.	850
St. John's..... R. R.	1,107	Wadena..... R. R.	1,349
St. Joseph..... R. R.	1,074	Watab..... R. R.	1,048
St. Oloff..... R. R.	1,335	Waverley..... R. R.	998
St. Paul, low water Miss. riv. R. R.	676	Wayzata..... R. R.	922
" high water Miss. riv. R. R.	697	West Union..... R. R.	1,323
" Depot..... R. R.	689	Wilder..... R. R.	1,423
St. Vincent, bank of Red riv. R. R.	792	Wild Rice..... R. R.	910
" high water 1866.. R. R.	787	Willmar..... R. R.	1,115
" usual wat'r surface R. R.	758	Windom..... R. R.	1,326
Sauk Centre..... R. R.	1,239	Winnebago City..... R. R.	1,089
Sauk Rapids..... R. R.	999	Withington..... R. R.	1,266
" Miss. riv..... R. R.	982	Worthington..... R. R.	1,563
Shakopee..... R. R.	845	Wyoming..... R. R.	897
Sibley..... R. R.	960		

Texas.

Alleyton.....	222	Fort Duncan.....	1,460
Austin.....	200	Fort Ewell.....	200
Benchley.....	306	Fort Gates.....	1,000
Benton.....	435	Fort Graham.....	900
Bluff.....	180	Fort Inge.....	845
Bonham.....	435	Fort Lancaster.....	2,350
Bremard.....	460	Fort Lincoln.....	900
Brenham.....	350	Fort Martin Scott.....	1,300
Camp Concordia.....	3,600	Fort Mason.....	1,200
Camp Verde.....	1,400	Fort McIntosh.....	806
Castroville.....	672	Fort McKavett.....	2,060
Cedar Grove.....	60	Fort Merrill.....	150
Chappell Hill.....	542	Fort Polk.....	15
Columbus.....	250	Fort Quitman.....	3,710
Corpus Christi.....	20	Fort Stockton.....	4,910
Cross Roads.....	672	Fort Terrett.....	1,320
Cypress.....	156	Fort Worth.....	1,100
Dallas.....	467	Frontera.....	3,796
Deloraine.....	960	Fulton.....	242
Edinburgh.....	422	Giddings.....	536
Elciario.....	3,607	Gilmer.....	950
Elgin.....	600	Goliad.....	50
Englewood..... R. R.	420	Gonzales.....	150
Ennis.....	547	Groesbeck.....	481
Eureka.....	69	Hammond.....	410
Fort Belknap.....	1,600	Harrisburgh.....	38
Fort Bliss.....	3,830	Harrison.....	526
Fort Brown.....	165	Hearne..... R. R.	310
Fort Chadbourne.....	2,120	Helena.....	600
Fort Clark.....	3,830	Hockley.....	225
Fort Croghan.....	1,000	Houston..... R. R.	50
Fort Davis.....	4,700	Howe.....	859

Texas—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Humboldt	887	Pecos Springs	3,098
Hutchins	470	Perry	483
Indianola	25	Piedro Runta	744
Jacksonville	R. R. 527	Plano	667
Jewett	R. R. 527	Presidio del Norte	2,779
Keche	R. R. 285	Quihi	856
Killgore	R. R. 371	Random	147
Lake	R. R. 315	Reagan	375
Laredo	806	Red River City	572
Larissa	755	Reynolds	R. R. 421
Lavaco	17	Rice	473
Ledbetter	464	Richardson	643
Leon Spring	2,807	Ringgold Barracks	521
Listerdale	1,000	San Antonio	600
Long View	R. R. 336	Seco	689
McKinney	700	Sherman	745
Mexia	537	Tehuacana	482
Miller	508	Thompson	121
Millican	300	Thornton	496
Navasoto	219	Tinge	892
Neches	R. R. 413	Troupe	R. R. 465
Oakwoods	R. R. 277	Union Hill	542
Ojo Escondido	2,311	Van Alstyne	803
Overton	R. R. 509	Waco	395
Paige	573	Webberville	394
Peach Creek	256	Wellborn	323

Indian Territory.

Atoka	574	Fort Washita	645
Caddo	723	Kingfisher	950
Choteau Station	646	McAllister	702
Fort Arbuckle	1,000	Perryville	528
Fort Gibson	560	Verdigris	480
Fort Towson	300		

Kansas.

Abilene	R. R. 1,173	Carbondale	1,089
Americus	1,177	Carlyle	R. R. 3,064
Ames	790	Chapman Creek	R. R. 1,132
Armstrong	R. R. 673	Chetopa	851
Atchison	R. R. 810	Cheyenne Wells	4,179
Aubrey	3,135	Cimmaron	2,655
Avon	775	Circleville	R. R. 1,124
Axtel	R. R. 1,371	Clinton	762
Baldwin City	947	Cottonwood	1,192
Barnard	687	Council Grove	1,000
Bavaria	R. R. 1,289	Coyote	R. R. 2,608
Baxter Springs	817	Cumming	1,015
Beattie	R. R. 1,302	Detroit	R. R. 1,153
Belleville	R. R. 1,544	Eagle Tail	R. R. 3,452
Belvoir	777	Edwardsville	R. R. 801
Blackwolf	R. R. 1,583	Ellinwood	1,759
Brookville	R. R. 1,366	Ellis	R. R. 2,135
Brick Creek	748	Ellsworth	R. R. 1,556
Buffalo	R. R. 2,793	Elm Creek	R. R. 1,586
Bunker Hill	R. R. 1,882	Elwood	775
Burlingame	800	Emporia	1,169
Camp Cirley	2,106	Fairfield	1,744

Kansas—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Fairbury	R. R. 1,324	Ogallah.....	R. R. 2,385
Fall Leaf.....	R. R. 827	Ogden.....	R. R. 1,078
Florence.....	1,363	Osage Mission.....	1,000
Fort Atkinson.....	2,330	Paola.....	875
Fort Harker.....	R. R. 1,600	Pardee.....	1,155
Fort Hays.....	2,019	Parker.....	921
Fort Leavenworth.....	896	Park's Fort.....	R. R. 2,463
Fort Riley.....	R. R. 1,090	Parson's.....	366
Fort Scott.....	1,000	Perryville.....	R. R. 870
Fort Wallace.....	3,203	Pierceville.....	2,800
Fort Zarah.....	1,870	Pond Creek.....	R. R. 3,291
Fossil.....	R. R. 1,850	Raymond.....	1,699
Frankfort.....	1,394	Reading.....	1,082
Gardner.....	800	Red Vermillion.....	R. R. 1,054
Godfrey.....	5,505	Richland.....	807
Gopher.....	R. R. 3,336	Ridgeway.....	903
Grantville.....	R. R. 895	Rockspring.....	R. R. 1,459
Grasshopper.....	908	Rossville.....	R. R. 951
Great Bend.....	4,226	Russell.....	1,734
Grinnell.....	R. R. 2,922	Ryan.....	R. R. 900
Hamlin.....	R. R. 991	Sabetha.....	R. R. 1,316
Hanover.....	R. R. 1,236	St. Francis.....	906
Hartford.....	1,106	St. George.....	R. R. 1,018
Hays.....	R. R. 2,009	St. Mary's.....	R. R. 973
Hepler.....	1,112	Salina.....	R. R. 1,243
Hiawatha.....	R. R. 1,102	Sand Springs Tank.....	R. R. 1,164
Hollenburg.....	R. R. 1,267	Sargent.....	3,425
Horton.....	1,204	Secondine.....	R. R. 809
Humboldt.....	954	Seneca.....	R. R. 1,162
Hutchinson.....	1,500	Severance.....	R. R. 910
Iola.....	854	Sheridan.....	R. R. 3,121
Junction City.....	R. R. 1,100	Sherlock.....	2,925
Labette.....	883	Sigel.....	753
La Cygne.....	725	Silver Lake.....	R. R. 933
Ladore.....	928	Skiddy.....	1,245
Larned.....	2,021	Solomon City.....	R. R. 1,193
Lawrence.....	R. R. 846	State Line.....	R. R. 764
Leavenworth, high wat'r Mo.riv. R.R.	789	Steele City.....	R. R. 1,277
" low wat'r Mo.riv.		Stranger.....	R. R. 807
(city datum).....	R. R. 764	Summit Siding.....	R. R. 1,672
Lecompton.....	825	Syracuse.....	3,247
Lenape.....	R. R. 799	Tecumseh.....	1,234
Louisville.....	R. R. 1,014	Tiblow.....	R. R. 811
Manhattan.....	R. R. 1,042	Topeka.....	R. R. 904
Manville.....	R. R. 980	Troy.....	R. R. 1,099
Marysville.....	R. R. 1,164	Vermillion Tank.....	R. R. 989
Medina.....	R. R. 871	Wakarusa.....	930
Meriden.....	993	Walker.....	R. R. 1,962
Monotony.....	R. R. 3,792	Wallace.....	R. R. 3,319
Monument.....	R. R. 3,199	Wamego.....	R. R. 1,018
Muncy Siding.....	R. R. 685	Washington.....	R. R. 1,324
Netawaka.....	R. R. 1,148	Wathena.....	R. R. 824
New Chicago.....	933	Wild Horse.....	4,340
Newman.....	R. R. 879	Williamstown.....	915
Newton.....	1,448	Williamsville.....	R. R. 869
North Fork Bend.....	R. R. 1,946	Wilson.....	R. R. 1,702
Norway.....	R. R. 1,049	Wyandotte.....	707

Nebraska.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Fect.</i>		<i>Fect.</i>
Alexandria..... R. R.	1, 416	Jefferson..... R. R.	2, 087
Alkali..... R. R.	3, 076	Julesburgh..... R. R.	3, 538
Antelope..... R. R.	4, 750	Juniata..... R. R.	1, 978
Ashland..... R. R.	1, 091	Kearney..... R. R.	2, 144
Barton.....	3, 421	Kearney Junction..... R. R.	2, 157
Belvidere..... R. R.	1, 509	Kenesaw..... R. R.	2, 057
Big Spring..... R. R.	3, 363	Ketchum.....	1, 272
Brady Island..... R. R.	2, 675	Lincoln..... R. R.	1, 154
Brownson.....	4, 200	Lockwood.....	1, 800
Brulé..... R. R.	3, 304	Lodgepole..... R. R.	3, 838
Bushnell..... R. R.	4, 898	Lone Tree..... R. R.	1, 724
Carlton..... R. R.	1, 562	Louisville..... R. R.	1, 029
Cayote..... R. R.	2, 478	Lowell..... R. R.	2, 074
Chapman's..... R. R.	1, 798	McPherson..... R. R.	2, 735
Chappel.....	5, 702	Nebraska City.....	1, 005
Clark's..... R. R.	1, 648	Newcastle.....	800
Coleraine.....	1, 518	Newton..... R. R.	1, 141
Colton.....	4, 042	Nichols..... R. R.	2, 920
Columbus..... R. R.	1, 470	North Bend..... R. R.	1, 297
Concord.....	752	North Platte..... R. R.	2, 827
Crete..... R. R.	1, 360	Nursery Hill.....	1, 266
Davenport..... R. R.	1, 668	O'Fallon..... R. R.	3, 014
Denton..... R. R.	1, 238	Ogalalla..... R. R.	3, 228
Dewitt.....	1, 255	Omaha, low water Mo. riv.....	978
Dexter.....	3, 000	" high water Mo. riv.....	997
Dorchester..... R. R.	1, 493	Omaha (Depot)..... R. R.	1, 060
Eden..... R. R.	1, 737	Omaha Junction..... R. R.	989
El Dorado.....	1, 692	Overton..... R. R.	2, 343
Elkhorn..... R. R.	1, 188	Papillion..... R. R.	1, 010
Elm Creek..... R. R.	2, 279	Pawnee..... R. R.	1, 945
Fairbury..... R. R.	1, 324	Pine Bluff..... R. R.	5, 064
Fairfield..... R. R.	1, 788	Pioneer Grove.....	1, 400
Fairmount..... R. R.	1, 648	Plattsmouth..... R. R.	972
Falls City.....	806	Plum Creek..... R. R.	2, 408
Fontenelle.....	1, 000	Potter..... R. R.	4, 408
Fort Calhoun.....	1, 327	Red Cloud.....	1, 650
Fort Clarke.....	1, 876	Richland.....	1, 350
Fort Kearney..... R. R.	2, 130	Rock Bluff.....	1, 100
Fort McPherson.....	2, 695	Rogers.....	1, 359
Fremont..... R. R.	1, 214	Roscoe..... R. R.	3, 143
Gannett.....	2, 752	Salem.....	817
Georgetown..... R. R.	1, 852	Schuyler..... R. R.	1, 373
Gibbon..... R. R.	2, 084	Sidney..... R. R.	4, 111
Gilmore..... R. R.	1, 014	Silver Creek..... R. R.	1, 572
Glendale.....	1, 300	South Bend..... R. R.	991
Grafton..... R. R.	1, 704	Stevenson..... R. R.	2, 208
Grand Island..... R. R.	1, 798	Summit Siding..... R. R.	1, 180
Greenwood..... R. R.	1, 130	Table Rock.....	932
Harvard..... R. R.	1, 807	Tecumseh.....	1, 015
Hastings..... R. R.	1, 944	Valley..... R. R.	1, 158
Herman.....	1, 067	Warren..... R. R.	2, 608
Highland..... R. R.	1, 419	Washington.....	1, 025
Idaho..... R. R.	2, 011	Waverley..... R. R.	1, 126
Inland..... R. R.	1, 887	Willow Island..... R. R.	2, 549
Ionia.....	3, 000	Wood River..... R. R.	2, 012
Jackson..... R. R.	1, 508		

Dakota.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Bois des Sioux.....	1,039	Fort Sully.....	1,398
Elk Point.....	1,180	Fort Union.....	1,970
Fort Berthold.....	1,873	Fort Wadsworth.....	1,896
Fort Buford.....	2,017	Richland.....	1,247
Fort Clarke.....	1,827	Square House.....	2,120
Fort Pierre.....	1,558	Vermillion.....	1,200
Fort Randall.....	1,245	Yankton Agency.....	1,900
Fort Ransom.....	1,438		

New Mexico.

Abiquin.....	6,500	Jemez.....	5,629
Aqua Fria.....	7,757	Lagoma.....	6,000
Alamosa.....	4,200	Laguna Colorado.....	4,586
Albuquerque.....	5,032	Laguna de los Caballos.....	7,615
Anton Chico.....	5,414	Las Vegas.....	6,418
Atrisco.....	5,033	Le Jarra.....	6,942
Bent's Cañon Rancho.....	4,820	Loma.....	7,000
Biyendante.....	5,406	Loma Parda.....	6,393
Cebolleta.....	6,200	Ojo del Pescado.....	6,551
Covero.....	5,880	Old Zuni.....	7,414
Elizabethtown.....	8,200	Payanda.....	4,833
El Moro.....	7,238	Pecos Village.....	6,366
El Paso.....	3,940	Peña Blanca.....	5,289
El Rito.....	5,784	Queletes.....	5,193
Fort Bascom.....	3,726	Rayado.....	6,946
Fort Bayard.....	4,450	Remances.....	6,185
Fort Conrad.....	4,576	San Antonio.....	6,409
Fort Craig.....	4,576	Sandia.....	5,056
Fort Cummings.....	5,126	San Domingo.....	5,100
Fort Defiance.....	6,500	San Felipe.....	5,171
Fort Fillmore.....	3,937	Santa Clara.....	6,511
Fort Marcy.....	6,846	Santa Fé.....	7,047
Fort McRae.....	4,500	Sheep Springs.....	5,310
Fort Stanton.....	5,000	Socorro.....	4,560
Fort Taos.....	8,000	Taos.....	8,000
Fort Thorn.....	4,500	Trinidad.....	5,725
Fort Union.....	6,670	Village of the Vegas.....	6,418
Fort Webster.....	6,350	Whetstone.....	6,360
Fort Wingate.....	6,649	Zandia.....	5,056
Isleta.....	4,768	Zuni.....	6,355

Colorado.

Acequia.....	R. R.	5,529	Box Elder.....	R. R.	5,546
Agate.....	R. R.	5,476	Breckenridge.....		9,492
Alma.....		10,868	Camp Loma.....		8,069
Arapahoe.....	R. R.	4,024	Cañon City.....		5,494
Aroya.....	R. R.	4,666	Caribou.....		9,167
Badito.....		6,530	Carlisle Springs.....	R. R.	4,952
Bent's Fort.....	R. R.	4,039	Carr Station.....		5,869
Bergen's Ranch.....		7,752	Cedar Point.....	R. R.	5,730
Berst's.....	R. R.	6,811	Central City.....		8,300
Bijou.....	R. R.	5,221	Cheyenne Wells.....	R. R.	4,295
Black Hawk.....		7,543	Christ Lake.....		7,186
Boonville.....	R. R.	4,497	Citadel.....	R. R.	6,122
Boulder.....		5,536	Colorado City.....		6,342

Colorado—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Colorado Springs..... R. R.	5,986	Kenosha House.....	9,840
Corlis Springs.....	5,975	Kiowa..... R. R.	5,514
Dayton.....	9,265	Kit Carson..... R. R.	4,307
Deer Trail..... R. R.	5,203	Labran..... R. R.	5,182
Denver..... R. R.	5,196	Lake..... R. R.	5,319
Denver Pacific Junction..... R. R.	5,211	Larkspur..... R. R.	6,665
Divide..... R. R.	7,208	Las Animas..... R. R.	3,967
Douglas..... R. R.	6,324	Little Buttes..... R. R.	5,370
Dudley..... R. R.	10,435	Littleton..... R. R.	5,361
Empire.....	8,583	Manitou, rock around Manitou spring..... R. R.	6,297
Eureka..... R. R.	4,263	Masonville.....	6,960
Evans.....	4,745	Meadows..... R. R.	4,801
Fairplay..... R. R.	9,964	Middle Boulder.....	8,067
Fall River.....	7,526	Mill City.....	7,826
First View..... R. R.	4,595	Mirage..... R. R.	4,859
Fort Collins.....	4,815	Missouri City.....	9,073
Fort Garland.....	7,681	Montezuma.....	10,113
Fort Lupton.....	5,027	Montgomery.....	11,005
Fort Lyon.....	3,874	Monument..... R. R.	6,354
Fort Massachusetts.....	8,365	Mosca.....	7,950
Fort Morgan.....	4,500	Mount Vernon.....	6,421
Fort Reynolds.....	4,500	Nevada City.....	8,800
Fort Sedgwick.....	3,600	Old Oro.....	10,071
Fountain..... R. R.	5,562	Oro City.....	10,528
Georgetown.....	8,412	Pierce Station.....	5,107
Godfrey..... R. R.	5,621	Plattville.....	4,960
Golden City, city and railroad directrix..... R. R.	5,729	Plum..... R. R.	5,834
Gold Hill.....	8,600	Pueblo (north)..... R. R.	4,701
Granite.....	8,707	Pueblo (south)..... R. R.	4,674
Grant..... R. R.	8,587	River Bend..... R. R.	5,511
Greeley.....	4,779	Saguache.....	7,632
Greenland..... R. R.	6,927	St. Charles.....	5,130
Hamilton.....	9,567	St. John's.....	10,625
Henry's..... R. R.	6,983	St. Vrain.....	5,256
Hermisillo.....	4,723	Salt Works.....	8,826
Hot Springs.....	7,725	Schuyler..... R. R.	5,354
Huerfano Junction.....	4,563	Spring Valley.....	6,647
Hughes.....	5,070	Swallow's Nest..... R. R.	4,860
Hugo..... R. R.	5,068	Tarryall.....	10,078
Huntsville.....	6,770	Valley Station.....	4,500
Husted's..... R. R.	6,599	Widefield..... R. R.	5,712
Idaho.....	7,330	Wild Horse..... R. R.	4,456
Jefferson.....	9,692	Wild Horse Spring..... R. R.	4,330
Johnson Station.....	5,006	Wood Valley.....	5,533

Wyoming.

Archer..... R. R.	6,038	Carbon..... R. R.	6,760
Aspen..... R. R.	7,825	Carter..... R. R.	6,535
Atlantic City.....	7,666	Cheyenne..... R. R.	6,075
Baxter.....	6,300	Church Buttes..... R. R.	6,303
Big Pond Stage Station.....	6,541	Como..... R. R.	6,692
Bitter Creek..... R. R.	6,681	Cooper's Lake..... R. R.	7,062
Black Buttes..... R. R.	6,595	Creston..... R. R.	7,030
Boleter.....	4,325	Dana..... R. R.	6,882
Bridger..... R. R.	6,760	Deer Creek Agency.....	5,000
Bryan..... R. R.	6,328	Egbert..... R. R.	5,310
Buford..... R. R.	7,810	Fillmore.....	6,885

Wyoming—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Fort Bridger.....	6, 215	Millis.....	6, 790
Fort Fetterman.....	5, 012	Miser..... R. R.	6, 824
Fort Halleck.....	7, 800	Otto..... R. R.	6, 756
Fort Laramie.....	4, 519	Pacific Springs.....	7, 144
Fort Phil. Kearney.....	6, 000	Percy..... R. R.	6, 958
Fort Sanders..... R. R.	7, 185	Piedmont.....	6, 528
Fort Stambaugh.....	7, 684	Pine Bluffs.....	5, 026
Fort Steele..... R. R.	6, 845	Point of Rocks..... R. R.	6, 484
Gilbert's Trading Post.....	7, 400	Rawlins..... R. R.	6, 735
Granite Cañon..... R. R.	7, 329	Red Buttes..... R. R.	7, 360
Granger..... R. R.	6, 257	Red Desert..... R. R.	7, 708
Green River..... R. R.	6, 130	Rock Creek..... R. R.	6, 703
Grenville..... R. R.	6, 564	Rock Springs..... R. R.	6, 272
Hallville.....	6, 590	St. Mary's..... R. R.	6, 757
Hampton.....	6, 500	Salt Wells..... R. R.	6, 353
Harney..... R. R.	7, 885	Separation..... R. R.	6, 901
Hazard..... R. R.	6, 363	Sherman..... R. R.	8, 271
Hillsdale..... R. R.	5, 629	Simpson..... R. R.	6, 907
Howell.....	7, 090	South Pass City.....	7, 857
Independence Rock.....	6, 167	Sulphur Springs.....	7, 690
Laramie..... R. R.	7, 143	Sweetwater Bridge.....	7, 000
Latham.....	6, 900	Table Rock..... R. R.	6, 887
Lawrence.....	6, 200	Three Crossings.....	6, 134
Leroy..... R. R.	7, 110	Walcott's.....	6, 800
Lookout..... R. R.	7, 185	Washakie..... R. R.	6, 697
Marston.....	6, 245	Wilcox.....	7, 033
Medicine Bow..... R. R.	6, 561	Wyoming City..... R. R.	7, 087

Montana.

Argenta.....	6, 337	Fort Ellis.....	4, 935
Bannack.....	5, 896	Fort Owen.....	3, 284
Beaverhead.....	4, 464	Fort Shaw.....	6, 000
Beavertown.....	4, 942	Gallatin City.....	4, 132
Big Horn City.....	2, 831	Helena.....	4, 266
Blackfoot Agency.....	3, 169	Jefferson City.....	4, 776
Boteler's Ranch.....	4, 825	Missoula.....	3, 900
Bouldertown.....	5, 000	Montana City.....	4, 191
Bozeman.....	4, 900	Sheridan.....	5, 221
Cantonment Jordan.....	2, 990	Virginia City.....	5, 824
Deer Lodge.....	4, 654	Whitehall.....	4, 639
Fort Benton.....	2, 780		

Arizona.

Anvil Rock.....	5, 170	Fort Whipple.....	5, 700
Aubrey City.....	398	Hualpais Spring.....	4, 258
Big Cañon.....	1, 426	Leroux Spring.....	7, 373
Camp Date Creek.....	3, 726	Navajo Spring.....	5, 626
Camp McPherson.....	3, 726	Peacock Spring.....	3, 170
Camp Skull Valley.....	5, 000	Pearl Spring.....	5, 315
Colorado Chiquito.....	4, 773	Saccaton.....	1, 066
Fort Buchanan.....	5, 330	Truxton Springs.....	3, 783
Fort Canby.....	6, 500	Tubac.....	3, 000
Fort Mojave.....	604	Val de Chino.....	5, 754
Fort Rock Spring.....	4, 972	Yampa Junction.....	5, 369

Utah.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
American Fork.....	4,596	Kanara.....	5,449
Beaver.....	5,927	Kelton..... R. R.	4,500
Blue Creek..... R. R.	4,360	Lake.....	4,223
Bonneville..... R. R.	4,310	Lehi.....	4,584
Bennington.....	5,798	Logan.....	4,557
Bovine.....	4,347	Lucin..... R. R.	4,400
Brigham City.....	4,226	Matlin..... R. R.	4,821
Buckhorn Spring.....	5,688	Mill Spring.....	6,504
Camp Douglass.....	4,800	Montpelier.....	5,793
Camp Floyd.....	4,860	Monument..... R. R.	4,290
Castle Rock..... R. R.	6,282	Mount Pleasant.....	5,875
Cedar City.....	5,726	Nephi.....	4,938
Centreville.....	4,233	Oak Creek.....	5,158
Circleville.....	5,624	Ogden..... R. R.	4,303
Copenhagen.....	4,999	Paragoonah.....	6,222
Corinne..... R. R.	4,294	Parowan.....	5,910
Cottonwood.....	4,200	Payson.....	4,541
Deseret City.....	4,642	Promontory..... R. R.	4,943
Devil's Gate..... R. R.	4,835	Provo.....	4,363
Draper.....	4,511	Richmond.....	4,641
Echo..... R. R.	5,507	Rozel..... R. R.	4,600
Ephraim.....	5,633	St. Mary's.....	6,200
Evanston..... R. R.	6,870	Salt Lake City.....	4,320
Fairfield.....	4,866	Session Settlement.....	4,183
Farmington.....	4,296	Silver City.....	6,369
Faust Station.....	5,296	Smithfield.....	4,616
Fillmore.....	6,025	Terrace..... R. R.	4,450
Fish Spring.....	4,269	Uintah..... R. R.	4,524
Fort Crittenden.....	4,860	Wahsatch..... R. R.	6,870
Franklin.....	4,552	Wanship.....	6,200
Gunnison.....	5,144	Weber..... R. R.	5,096
Hanging Rock.....	5,974	Wellsville.....	4,568
Hebron.....	5,474	Willard City.....	4,350
Hyde Park.....	4,553	Willow Spring.....	4,421
Iron City.....	6,099		

Idaho.

American Falls.....	4,320	Lapway.....	2,000
Cantonment Loring.....	4,700	Malade City.....	4,700
Cœur d'Alène Mission.....	2,280	Market Lake.....	4,795
Florence.....	8,000	Salmon City.....	4,030
Fort Boisé.....	2,100	Soda Springs.....	5,738
Fort Hall.....	4,754	Taylor's Bridge.....	4,627

Nevada.

Argenta..... R. R.	4,575	Carson City.....	4,720
Austin.....	6,451	Cedar.....	5,976
Battle Mountain..... R. R.	4,534	Clark's..... R. R.	4,290
Be-o-wa-we..... R. R.	4,717	Clifton.....	6,339
Bishop.....	5,423	Cluro.....	4,785
Brown's..... R. R.	3,955	Cottonwood Springs.....	3,449
Butterfield Springs.....	5,324	Coyote.....	2,440
Camp Halleck.....	5,600	Crystal Spring.....	4,718
Camp McDermot.....	4,700	Dayton.....	4,490
Camp McGarry.....	6,000	Deeth.....	5,340
Carlin..... R. R.	4,930	Elko..... R. R.	5,030

Nevada—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Fort Churchill.....	4,284	Pioche.....	5,942
Fort Ruby.....	5,922	Raspberry..... R. R.	4,354
Golgonda..... R. R.	4,419	Reno..... R. R.	4,525
Halleck..... R. R.	5,220	St. Thomas.....	1,600
Hiko.....	3,881	San Juan.....	8,075
Homer.....	5,823	Shoshone..... R. R.	4,665
Hot Springs..... R. R.	4,098	Star City.....	7,500
Humboldt..... R. R.	4,262	Stone House..... R. R.	4,449
Independence..... R. R.	6,115	Tecoma..... R. R.	4,600
Indian Springs.....	3,402	Toano..... R. R.	5,964
Kingston.....	6,247	Tulasco..... R. R.	5,418
Las Vegas.....	2,074	Tule.....	4,315
Loray..... R. R.	5,400	Tule Springs.....	2,366
Lovelock's..... R. R.	4,100	Union.....	6,160
Lyonsville.....	5,401	Verdi..... R. R.	4,915
Moleen..... R. R.	5,000	Virginia City.....	6,200
Montello..... R. R.	4,800	Vista.....	4,400
Nevada City.....	6,205	Wadsworth..... R. R.	4,104
Oreana..... R. R.	4,206	Wells..... R. R.	5,650
Osino..... R. R.	5,100	West Point.....	1,755
Palisade.....	4,841	White Plains..... R. R.	3,921
Pequop..... R. R.	6,180	Winnemucca..... R. R.	4,355

California.

Acampo.....	59	Dutch Flat..... R. R.	3,425
Alta..... R. R.	3,625	Elk Grove.....	53
Altamont.....	740	Ellis.....	75
Anaheim.....	262	Emigrant Gap..... R. R.	5,300
Anderson.....	433	Eureka.....	5,223
Anita.....	161	Florin.....	42
Arcade..... R. R.	76	Folsom City.....	180
Auburn..... R. R.	1,357	Fort Bidwell.....	4,680
Aurora.....	7,468	Fort Crook.....	3,390
Baker's Ranch.....	3,285	Fort Humboldt.....	50
Banta.....	30	Fort Jones.....	2,570
Battle Hill.....	2,389	Fort Miller.....	402
Benecia.....	64	Fort Reading.....	596
Berenda.....	256	Fort Ross.....	50
Blue Cañon..... R. R.	4,700	Fort Tejon.....	3,240
Boca..... R. R.	5,533	Fort Yuma.....	180
Borden.....	172	Fresno.....	292
Bronco.....	5,341	Georgetown.....	2,433
Camp Babbitt.....	384	Gilroy.....	193
Camp Far West.....	175	Gold Run..... R. R.	3,245
Camptonville.....	2,388	Goshen.....	286
Camp Union.....	54	Grass Valley.....	2,090
Capitan Grande.....	730	Gridley.....	97
Carizzo.....	431	Hamilton.....	260
Cascade.....	6,541	Hollister.....	284
Chico.....	193	Hooker.....	543
Cisco..... R. R.	5,911	Hubertville.....	980
Clayton.....	76	Illinoistown.....	2,234
Colfax..... R. R.	3,448	Independence.....	4,800
Colona.....	835	Jackson.....	934
Columbia.....	2,314	Junction..... R. R.	189
Cottonwood.....	423	Keyssville.....	2,558
Decoto.....	68	Kingston.....	1,118
Downieville.....	2,200	Lanes.....	2,664
Drum Barracks.....	32	Lathrop.....	48

California—Continued.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Latrobe	771	San Buenaventura	12
Lawrence	66	San Diego	30
Lincoln	161	San Felipe	2,456
Livermore	520	San Fernando Mission	1,043
Lone Pine	3,917	San Francisco	0
Los Angeles	250	San Jose	114
Macon	450	San Leandro	48
Marion	74	San Lorenzo	35
Mail Spring	3,793	San Luis Obispo	402
Martin's	1,982	San Luis Rey	20
Marysville	80	San Miguel	616
Mayfield	34	San Pascual	716
Melrose	18	San Pedro	30
Merced	171	San Raphael	0
Mesquite Wells	3,672	Santa Barbara	20
Midway	351	Santa Catalene	3,000
Mineral Bar	1,121	Santa Clara	98
Modesto	91	Santa Isabella	3,050
Monte	354	Santa Isabella Rancho	2,957
Monterey	140	Scheffer's Hot Springs	4,094
Montezuma	1,787	Shaw's Flat	2,270
Nevada	2,573	Sheridan	113
Newcastle	920	Shingle Springs	1,422
Niles	148	Soledad	3,213
Oakland	123	Sonora	1,971
Pajara	22	Soto	186
Paradise	125	Stockton	46
Penryn	624	Strawberry Valley	3,710
Pino	403	Sunoe	264
Pleasanton	3,153	Sutler	919
Placerville	2,109	Sycamore	302
Plainsburg	209	Tah-ee-chap-pi	4,017
Quiqual-mingo	1,084	Tamarac	6,209
Quincy	3,500	Tassett	83
Rawson	228	Tehama	222
Red Bluff	308	Tipton	275
Redding	566	Trinidad	5,820
Redwood City	10	Truckee	5,866
Rincon	2,050	Tulare	290
Roble	179	Tulloch	106
Rocklin	269	Vacaville	175
Rock Spring	4,898	Vallejo	0
Sacramento	82	Vina	211
Sackett's Wells	312	Warner's Ranch	3,022
Salinas City	42	Wheatland	84
San Benito	140	Yankee Jim's	3,185
San Bernardino	1,118	Yreka	4,000
San Bruno	16		

Oregon.

Albany	600	Fort Umpqua	8
Auburn	3,300	Lapwai	1,000
Dalles	200	Oregon City	200
Eola	500	Portland	150
Fort Dalles	350	Port Orford	50
Fort Klamath	4,200	Salem	382
Fort Lane	2,000	Wallamet	120
Fort Okanagon	810		

Washington.

Cities, Towns, &c.	Elevation.	Cities, Towns, &c.	Elevation.
	<i>Fect.</i>		<i>Fect.</i>
Camp Pickett.....	150	Fort Townsend.....	135
Camp Semiahmoo.....	11	Fort Vancouver.....	50
Cantonment Stevens.....	3,412	Fort Walla Walla.....	1,396
Fort Bellingham.....	88	Kalama.....	45
Fort Cascades.....	50	Olympia.....	300
Fort George.....	100	Steilacoom.....	1,300
Fort Steilacoom.....	300	Vancouver.....	0

R. R. indicates that the elevation was determined by railroad levels, and is the level of the track at the railroad station.

San Pedro.....	18	.....	.....
San Raphael.....	171	.....	.....
Santa Barbara.....	3,072	.....	.....
Santa Catalina.....	1,051	.....	.....
Santa Clara.....	1,131	.....	.....
Santa Lucilla.....	91	.....	.....
Santa Lucilla Rancho.....	304	.....	.....
Scheller's Hot Springs.....	140	.....	.....
Shaw's Flat.....	1,787	.....	.....
Sherman.....	2,573	.....	.....
Shimik Springs.....	920	R. R.	.....
Solbad.....	148	.....	.....
Sonora.....	123	.....	.....
Soto.....	32	.....	.....
Stockton.....	125	.....	.....
Sturtevant Valley.....	681	.....	.....
Sunco.....	403	.....	.....
Sutter.....	3,153	.....	.....
Sycamore.....	2,100	.....	.....
Tab-cé-chap-ka.....	209	.....	.....
Tamara.....	1,081	.....	.....
Taselt.....	3,000	.....	.....
Tobama.....	228	.....	.....
Tyton.....	308	.....	.....
Trinidad.....	555	.....	.....
Truckee.....	10	.....	.....
Tular.....	2,050	.....	.....
Tulloch.....	179	.....	.....
Vacaville.....	229	R. R.	.....
Valljo.....	4,208	.....	.....
Vina.....	82	R. R.	.....
Warner's Ranch.....	312	.....	.....
Westland.....	42	.....	.....
Yakoe Jim's.....	140	.....	.....
Yreka.....	1,118	.....	.....
.....	18	.....	.....

Oregon.

Albany.....	600	.....	.....
Adrian.....	3,300	.....	.....
Dallas.....	200	.....	.....
Eola.....	500	.....	.....
Fort Dallas.....	330	.....	.....
Fort Klamath.....	4,200	.....	.....
Fort Lane.....	2,000	.....	.....
Fort Okanogan.....	810	.....	.....

TABLE II.
MOUNTAINS IN THE UNITED STATES.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'm't.	Elevation.
					<i>Feet.</i>
Mt. Adams	White	N. H	Toner's Dict. of El.		5,794
Mt. Adams	Cascade	W. T	Vansant		13,258
Same			Peterman's map		9,570
Mt. Agamenticus		Me	Toner's Dict. of El.		673
Mt. Alexander	Alleghanies	N. C	Guyot—Am. Jour.		6,447
Mt. Antoro	Sawatch	Colo.	Hayden	b	14,245
Mt. Baker	Cascade	W. T	Peterman's map		11,100
Same			U. S. Coast Survey	b	10,760
Bald Mt	Alleghanies		Guyot		5,550
Mt. Baldy		Utah	Engineer Corps		11,730
Mt. Balley		Cal			6,357
Balsam Cone	Alleghanies		Guyot		6,671
Bear Butte	Black Hills	Dak	Peterman's map		3,500
Mt. Bechler	Wahsatch	Utah	Hayden	a	9,716
Mt. Belknap		Utah	Engineer Corps		11,894
Bergen Peak	Colorado	Colo.	Hayden	a	9,555
Big Craggy Mt	Alleghanies		Guyot		6,090
Big Stone Mt	Alleghanies		Guyot		5,614
Mt. Blackmore	Rocky	Mont	Hayden	b	10,134
Black Brother	Alleghanies		Guyot		6,619
Blackstock Knob	Alleghanies		Guyot		6,380
Blue Mt		N. H	Guyot		4,370
Bowlen's Pyramid	Alleghanies		Guyot		6,348
Mt. Brewer	Sierra Nevada	Cal	Whitney	b	13,886
Bridger's Peak	Rocky	Mont	Hayden	b	9,002
Mt. Buckley	Alleghanies	N. C	Guyot		6,599
Buckskin Mt	Park	Colo.	Hayden	a	14,296
Buffalo Peak	Park	Colo.	Hayden	b	13,541
Bull's Head	Alleghanies		Guyot		5,935
Bunker Hill (north p'k)		Nev	King		11,735
Bunker Hill (south p'k)		Nev	King		11,602
Mt. Byers	Rocky	Colo.	Hayden	b	12,778
Cameron's Cone	Colorado	Colo.	Hayden	t	11,460
Camel Hump	Green	Vt	Guyot		4,088
Mt. Canby		Colo.	Ruffner	b	13,100
Cannon Mt		N. H	Guyot		3,850
Capitol	Elk	Colo.	Hayden	t	13,992
Mt. Carlos	Coast	Cal	Whitney	b	4,977
Carrigain Mt		N. H	Guyot		4,678
Carr's Mt		N. H	Guyot		3,480
Mt. Carter	White	N. H	Guyot		4,830
Castle Peak	Elk	Colo.	Hayden	b	14,106
Castle Peak	Sierra Nevada	Cal	Peterman's map		13,000
Cattail Peak	Alleghanies		Guyot		6,611
Charleston Peak		Nev	Peterman's map		10,874
Checolsum Mt	Cascade	W. T	Peterman's map		5,706
Cheyenne Mt	Colorado	Colo.	Hayden	t	9,948
Chicorira Mt	White	N. H	Guyot		3,540
Chi-f	Colorado	Colo.	Hayden	b	11,833
Chilhowee Mt	Alleghanies		Guyot		2,452
Chimney Peak	Alleghanies		Guyot		6,244
Chimzy Knob	Alleghanies		Guyot		5,588
Chuchulum Mt	Cascade	W. T	Peterman's map		11,700
Mt. Clay	White	N. H	Guyot		5,553
Chugman's Mt	Alleghanies		Guyot		6,707

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas' in mt.	Elevation.
					<i>Feet.</i>
Clingman's Dome	Alleghanies.		Guyot.		6,660
Mt. Clinton	White.		Guyot.		4,320
Cloud Peak	Rocky	Mont	Peterman's map		7,300
Cockscomb Mt	Alleghanies.		Guyot.		5,426
Cold Mt.	Alleghanies.		Guyot.		6,063
Cold Spring Mt.	Alleghanies.		Guyot.		5,915
Mt. Collins	Alleghanies.	Tenn	Guyot.		6,178
Corner Knob	Alleghanies.		Guyot.		5,246
Craggy Pinnacle	Alleghanies.		Guyot.		5,945
Crawford Mt.	White	N. H	Guyot.		3,134
Crestones	Sangre de Cristo	Colo.	Hayden		14,233
Cross Knob	Alleghanies.	Tenn	Guyot.		5,931
Mt. Curtis	Alleghanies.	Tenn	Guyot.		6,568
Mt. Dana	Sierra Nevada	Cal.	Whitney	b	13,277
Mt. Davidson		Nev	King		7,827
Dawes Peak	Uintas	Utah	Peterman's map		13,300
Deer Mt.	Alleghanies.		Guyot.		6,233
Mt. Delano		Mont	Hayden	b	10,200
Monte Diablo	Coast.	Cal.	Whitney	b	3,856
Mt. Doane	Rocky	Wyo	Hayden		10,118
Double Mt.		Tex.	Peterman's map		3,824
Double Spring Mt	Alleghanies.		Guyot.		6,380
"E"	Elk	Colo.	Hayden	t	13,174
Echo Mt.	White	N. H	Guyot.		3,170
Mt. Elbert	Sawatch.	Colo.	Hayden	a	14,324
Electric Peak	Rocky.	Mont	Hayden	b	10,992
Mt. Ellis	Rocky.	Mont	Hayden	b	8,419
Emigrant Peak	Rocky.	Mont	Hayden	a	10,629
Mt. Emma		Nev	King		6,546
Engineer Mt.		Colo.	Ruffner	b	13,266
Engle Peak	Rocky.	Mont	Peterman's map		7,500
Equinox Mt.		Vt	Guyot.		3,872
Mt. Evans	Colorado	Colo.	Hayden	b	14,330
Fisher's Peak	Raton.	Colo.			7,759
Flat Mt.	Rocky.	Wyo	Hayden	b	9,704
Mt. Flora	Rocky.	Colo.	Parry	b	12,878
Mt. Franklin	White	N. H	Guyot.		4,904
Fremont's Peak	Rocky.	Wyo	Fremont	b	13,570
Galena Mt.		Colo.	Ruffner	b	12,978
Mt. Garfield	Rocky.	Idaho	Hayden	b	9,704
Gass Mt.		Nev	Peterman's map		6,200
Geneva Peak		Nev	King		10,994
Mt. Gibbs	Alleghanies.		Guyot.		6,591
Gilbert's Peak	Uintas		King		13,250
Globe Peak		Nev	King		11,237
Gothic Mt.	Elk	Colo.	Hayden	t	12,498
Grandfather Mt	Alleghanies.		Guyot.		5,897
Grafton Peak		Nev	Engineer Corps		10,964
Graybeard	Alleghanies.		Guyot.		5,448
Graylock		Mass	Guyot.		3,505
Gray's Peak	Rocky.	Colo.	Hayden	b	14,341
Same			Whitney	b	14,145
Great Bald Mt.	Alleghanies.		Guyot.		4,722
Great Frog Mt.	Alleghanies.	Tenn	Guyot		4,226
Great Hogback	Alleghanies.		Guyot.		4,792
Greenhorn Mt.	Wet	Colo.	Hayden	b	12,230
Grizzly Peak	Sawatch	Colo.	Hayden	b	13,962
Mt. Guyot	Alleghanies.	Tenn	Guyot.		6,636
Mt. Guyot	Rocky.	Colo.	Parry	b	13,223
Same			Hayden	b	13,565
Hairy Bear	Alleghanies.		Guyot.		6,610

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas' m't.	Elevation.
					<i>Feet.</i>
Mt. Hamilton.....	Coast.....	Cal.....	Whitney.....	b	4,440
Hangover Mt.....	Alleghanies.....		Guyot.....		5,600
Mt. Harvard.....	Sawatch.....	Colo.....	Hayden.....	b	14,384
Same.....			Whitney.....	b	14,270
Hayden Peak.....	Uintas.....	Utah.....	Peterman's map.....		13,500
Mt. Hayden.....	Teton.....	Idaho.....	Hayden.....	t	13,858
Mt. Henry.....	Alleghanies.....		Guyot.....		6,373
Herrick Mt.....	Green.....	Vt.....	Guyot.....		2,692
High Pinnacle.....	Alleghanies.....		Guyot.....		5,690
Mt. Hodges.....	Uintas.....		King.....		13,500
Holy Cross.....	Sawatch.....	Colo.....	Hayden.....	t	14,176
Mt. Holyoke.....		Mass.....	Toner's Dict. of El.....		1,120
Mt. Hood.....	Cascade.....	W. T.....	Williamson.....		11,225
Hoosac Mt.....		Mass.....	Toner's Dict. of El.....		2,510
Mt. Hope.....		Ariz.....	Peterman's map.....		6,321
Horseshoe Mt.....	Park.....	Colo.....	Whitney.....	b	13,806
Huckleberry Knob.....	Alleghanies.....		Guyot.....		5,484
Hunt's Peak.....	Sangre de Cristo.....	Colo.....	Hayden.....	t	12,446
Inyan Kara.....	Black Hills.....	Wyo.....	Peterman's map.....		6,600
Italia Mt.....	Elk.....	Colo.....	Hayden.....	b	13,431
James' Peak.....	Colorado.....	Colo.....	Hayden.....	b	13,283
Mt. Jefferson.....	White.....	N. H.....	Guyot.....		5,714
Mt. Jefferson.....	Cascade.....	W. T.....	Humboldt (quoted).....		15,500
Janaleska.....	Alleghanies.....		Guyot.....		6,223
Mt. Katahdin.....		Me.....	Toner's Dict. of El.....		5,200
Mt. Kate.....		Nev.....	King.....		6,187
Mt. Kaweah.....	Sierra Nevada.....	Cal.....	Toner's Dict. of El.....		14,000
Mt. Kearsage.....	White.....	N. H.....	Toner's Dict. of El.....		2,460
Killington Peak.....	Green.....	Vt.....	Guyot.....		4,221
Kinsman Mt.....		N. H.....	Guyot.....		4,200
Kioway Peak.....		Texas.....	Peterman's map.....		2,895
Mt. Lafayette.....	White.....	N. H.....	Guyot.....		5,290
La Plata Mt.....	Sawatch.....	Colo.....	Hayden.....	b	14,302
Laramie Peak.....		Wyo.....	Peterman's map.....		10,000
Lassen's Butte.....	Sierra Nevada.....	Cal.....	Whitney.....	b	10,577
Laurel Peak.....	Alleghanies.....		Guyot.....		5,922
Mt. Leconte.....	Alleghanies.....		Guyot.....		6,612
Lickstone Mt.....	Alleghanies.....		Guyot.....		5,707
Mt. Lincoln.....	Green.....	Vt.....	Guyot.....		4,078
Mt. Lincoln.....	Park.....	Colo.....	Whitney.....	b	14,124
Same.....			Hayden.....	l	14,297
Lone Peak.....		Utah.....	Peterman's map.....		10,713
Long's Peak.....	Colorado.....	Colo.....	Powell.....	b	14,050
Same.....			Hayden.....	b	14,271
Mt. Love.....	Alleghanies.....		Guyot.....		6,443
Lufter Knob.....	Alleghanies.....		Guyot.....		6,232
Mt. Lyell.....	Sierra Nevada.....	Cal.....	Whitney.....	b	13,217
Mt. Madison.....	White.....	N. H.....	Toner's Dict. of El.....		5,365
Mad River Peak.....	White.....	N. H.....	Guyot.....		4,397
Mt. Mansfield.....		Vt.....	Toner's Dict. of El.....		4,430
Mariposa Peak.....	Coast.....	Cal.....	Whitney.....		3,700
Maroon Mt.....	Elk.....	Colo.....	Hayden.....	t	14,000
Massive Mt.....	Sawatch.....	Colo.....	Hayden.....	t	14,368
Master Knob.....	Alleghanies.....	Tenn.....	Guyot.....		6,013
Mt. McClellan.....	Colorado.....	Colo.....	Hayden.....	t	13,423
Mt. McIntyre.....	Adirondacks.....	N. Y.....	Toner's Dict. of El.....		5,183
Mt. Mill.....	Elk.....	Colo.....	Ruffner.....	b	12,350
Mt. Mingus.....	Alleghanies.....		Guyot.....		5,694
Mt. Mitchell.....	Alleghanies.....		Guyot.....		6,582
Mt. Monadnock.....	White.....	N. H.....	Guyot.....		3,718
Moosehillock.....	White.....	N. H.....	Guyot.....		4,790

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'n't.	Elevation.
Mt. Morijah	White	N. H.	Guyot		4,653
Mud-creek Bald Mt.	Alleghanies.	Ga.	Guyot		4,705
Mt. Munroe	White	N. H.	Toner's Dict. of El.		5,384
Mt. Nebo		Utah.	Engineer Corps		11,992
Neighbor	Alleghanies.	Tenn.	Guyot		5,771
Mt. Ocona	Alleghanies.		Guyot		6,135
Mt. Olcott		Nev.	Engineer Corps		7,974
Old Baldy	Rocky	Mont.	Hayden	b	9,711
Old Field Mt.	Alleghanies.		Guyot		5,100
Otter Peaks of	Alleghanies.	Va.	Guyot		3,993
Mt. Ouray	Sawatch	Colo.	Hayden	b	14,043
Owl's Head		N. H.	Guyot		2,950
Panther Knob	Alleghanies.		Guyot		5,359
Park Cone	Elk	Colo.	Hayden	b	12,052
Parkview Mt.	Rocky	Colo.	Hayden	b	12,433
Parry's Peak			Parry	b	13,133
Peck's Peak	Alleghanies.		Guyot		6,232
Mt. Pemigawassett		N. H.	Guyot		4,420
Perry Knob	Alleghanies.		Guyot		5,026
Picacho Mt.		Ariz.	Peterman's map		4,754
Pico Mt.	Green	Vt.	Guyot		3,954
Pike's Peak	Colorado	Colo.	U. S. Signal Service.	l	14,147
Same			Parry	b	14,216
Pilot Peak	Sierra Nevada	Cal.	Peterman's map		7,500
Mt. Pinos	Coast	Cal.	Peterman's map		9,500
Mt. Pisgah	Alleghanies.		Guyot		5,757
Platte Mt.	Colorado	Colo.	Hayden	a	9,343
Mt. Pleasant	White	N. H.	Guyot		4,764
Point of Rocks		Nev.	King		9,610
Potatoe Top	Alleghanies.		Guyot		6,393
Mt. Powell	Park	Colo.	Hayden	t	13,398
Mt. Princeton	Sawatch	Colo.	Hayden	b	14,199
Mt. Prometheus		Nev.	King		8,256
Mt. Putnam	Portneuf	Idaho	Hayden	b	8,854
Quandary Peak	Park	Colo.	Hayden	t	14,269
Mt. Rainier	Cascade	W. T.	Coast Survey	b	14,444
Raven's Knob	Alleghanies.		Guyot		6,230
Rawhide Peak		Wyo.	Peterman's map		6,370
Mt. Ripley		Cal.	Peterman's map		7,500
Mt. Rito Alto	Sangre de Cristo	Colo.	Hayden		12,989
Roan Mt.	Alleghanies.		Guyot		6,306
Rockstand Knob	Alleghanies.		Guyot		6,002
Rocky Trail Mt.	Alleghanies.		Guyot		6,488
Mt. Rosalie	Colorado	Colo.	Hayden	t	14,340
Mt. Rose		Nev.	King		6,448
Mt. Rowter		Colo.	Ruffner	b	13,750
Mt. Safford	Alleghanies.	Tenn.	Guyot		6,535
Mt. St. Elias	Cascade	B. A.	Malespina		17,854
Same			La Perouse		12,661
Same			Eng. Hydro. Charts.		14,970
Mt. St. Helens	Cascade	W. T.	Humboldt		15,500
Same			Peterman's map		9,750
Mt. San Antonio		Cal.	Coast Survey	b	9,931
Mt. San Bernardino		Cal.	Whitney	b	11,600
San Carlos Peak	Coast	Cal.	Whitney	b	4,977
Mt. San Francisco		Ariz.	Pacific R. R. Report		12,052
San Juan Peak		Nev.	King		10,982
Mt. Shasta	Sierra Nevada	Cal.	Whitney	b	14,442
Mt. Shavano	Sawatch	Colo.	Hayden	b	14,093
Sheep Mt.	Park	Colo.	Hayden	a	13,432
Mt. Sheridan	Rocky	Wyo.	Hayden	b	10,420

Mountains in the United States—Continued.

Names.	Range.	State or Territory.	Authority or Reference.	Method of meas'm't.	Elevation.
Shrewsbury Peak	Green	Vt	Guyot		<i>Feet.</i> 3,845
Mt. Silliman	Sierra Nevada	Cal	Whitney	b	11,623
Mt. Silverheels	Park	Colo	Whitney	b	13,650
Same			Hayden	b	13,897
Skalahum	Cascade	W. T	Peterman's map		7,400
Skiotah	Rocky	Mont	Peterman's map		6,800
Skomekan	Cascade	W. T	Peterman's map		8,400
Snaky Mt.	Alleghanies		Guyot		5,195
Snow-Mass	Elk	Colo	Hayden	b	13,961
Sopris' Peak	Elk	Colo	Hayden	b	12,972
Standing Indian	Alleghanies		Guyot		5,518
Mt. Sugarloaf	Alleghanies		Guyot		6,403
Mt. Sugarloaf		Nev	King		6,164
Table Mt		N. H	Guyot		3,305
Tchopahk Mt.	Cascade	W. T	Peterman's map		7,200
Teocalli Mt	Elk	Colo	Hayden	t	13,274
Thermometer Knob	Alleghanies		Guyot		6,157
Three Broth'rs (high'st)	Alleghanies		Guyot		5,907
Thunderhead	Alleghanies		Guyot		5,520
Thunder* Knob	Alleghanies		Guyot		5,682
Mt. Tohwano	Uintas	Utah	King		13,500
Mt. Torrey	Colorado	Colo	Hayden	b	14,336
Same			Whitney	b	14,192
Tray Mt.	Alleghanies	Ga	Guyot		4,426
Tremont Mt.		N. H	Guyot		3,393
Tricorner Knob	Alleghanies		Guyot		6,188
Tri-pyramid		N. H	Guyot		4,086
Turkey Knob	Alleghanies		Guyot		4,740
Twin Mt.	White	N. H	Guyot		4,930
Mt. Tyndall	Sierra Nevada	Cal	Whitney	b	14,386
Uncompahgra Peak	Uncompahgra	Colo	Hayden	t	14,540
Ute Peak	Rocky	Colo	Hayden	b	11,968
Velie's Peak	Rocky	Colo	Parry	b	13,456
Mt. Wachusett		Mass	Guyot		2,018
Ward's Peak	Rocky	Mont	Hayden	b	10,371
Mt. Washburn	Rocky	Wyo	Hayden	b	10,388
Mt. Washington	White	N. H	Guyot		6,288
Wedge Mt.		Colo	Ruffner	b	13,350
Westener's Bald	Alleghanies		Guyot		5,692
Wheeler Peak		Nev	Engineer Corps		12,063
White-face		N. H	Guyot		4,030
White-rock Mt	Elk	Colo	Hayden	b	13,847
White-side	Alleghanies		Guyot		4,931
White-top*	Alleghanies	Va., N. C. & Tenn.	Guyot		5,530
Mt. Whitney	Sierra Nevada	Cal	Whitney	b	14,887
Willey Mt.	White	N. H	Guyot		4,300
Worthington Peak		Nev	Engineer Corps		8,400
Mt. Wright	Rocky	Colo	Parry	b	11,800
Mt. Yale	Rocky	Colo	Whitney	b	14,081
Same			Hayden	t	14,151
Yeates' Knob	Alleghanies		Guyot		5,975
Yellow Mt.	Alleghanies		Guyot		5,108

* At corner of the three States.

a. Aneroid barometer.
b. Mercurial barometer.l. Levels.
t. Trigonometrical measurement.

TABLE III.

FOREIGN MOUNTAINS.

Name.	Range.	Country.	Elevation. <i>Feet.</i>
Aconcagua	Andes	Bolivia	23,910
Antisana	Andes	Quito	19,137
Autuco	Andes	Chili	8,918
Arequipa	Andes	Bolivia	20,320
Mont Blanc	Alps	France	15,646
Mt. Buckland		Tierra del Fuego	4,060
Chimborazo	Andes		21,440
Chipicani	Andes	Peru	19,745
Chuquibamba	Andes	Bolivia	21,000
Cotopaxi	Andes	Quito	18,875
Coyambe	Andes	Quito	19,535
Mt. Darwin		Tierra del Fuego	6,800
Doga Bang	Himalayas		23,762
Doora Ghaut	Himalayas		17,750
Dwalalgi	Himalayas		26,826
Dyarmur	Himalayas		26,629
Mt. Erebus		South Victoria	12,400
Mt. Etna		Sicily	10,874
Mt. Everest	Himalayas		29,002
Mt. Hecla		Iceland	5,210
Himalayan Range*			
Ilinca		Ecuador	17,380
Illirani	Andes	Quito	21,149
Irasu		Guatemala	11,478
Itamba		Brazil	5,960
Iztaccituatl		Mexico	15,705
Jorullo		Mexico	4,265
Kamet	Himalayas		25,373
Kanchinjinga	Himalayas		28,156
Kilaueah		Hawaii	3,870
La Mesada	Andes	Bolivia	19,356
Malabar		Java	7,556
Mauna Loa		Hawaii	13,120
Mauna Kea		Hawaii	13,645
Merapi		Java	9,708
Mont Cenis		Savoy	6,778
Monte Rosa	Alps		15,208
Morne Garou		Antilles	5,007
Orizaba		Mexico	17,374
Perote	Andes		13,514
Pichincha	Andes	Quito	15,924
Pomerape	Andes	Bolivia	21,700
Popocatepetl	Andes	Mexico	17,717
Sahama	Andes		22,350
St. Gothard	Alps		6,976
Santiago	Andes	Chili	15,100
Sorato	Andes	Bolivia	21,290
Mt. Stokes		Patagonia	6,400
Stromboli			2,957
Teneriffe			12,182
Tolima	Andes	Quito	18,020
Toluco		Mexico	15,542
Tristan da Cunha			8,236
Ungarang		Java	7,100
Urchinskaja		Kamschatka	11,721
Vandama		Canary Islands	1,835
Vesuvius		Italy	8,479

* Up to 1870, thirteen peaks of elevations above 25,000 feet had been measured, and fifty-nine above 20,000, principally in the Western Himalayas, by the India Surveys.

TABLE IV.

PASSES.

Name.	Range.	State or Territory.	Authority or Reference.	Elevation.
Agate.....		Nev.....		<i>Fect.</i> 7,615
Argentine.....	Rocky.....	Colo.....		13,100
Beale's.....			K. P. R. R.....	5,127
Beckwourth.....	Sierra Nevada.....			4,682
Berthoud.....	Rocky.....	Colo.....	Parry.....	11,349
Same.....		Colo.....	Hayden.....	11,313
Big Creek.....		Nev.....	King.....	8,922
Boulder.....	Rocky.....	Colo.....	Hayden.....	11,613
Boundary.....	Rocky.....		P. R. R. Report.....	6,030
Cadotte's.....	Rocky.....		P. R. R. Report.....	6,044
Cajon.....	Sierra Nevada.....		P. R. R. Report.....	4,676
Campbell's.....			A. & P. R. R.....	7,152
Canon blanco.....			K. P. R. R.....	6,917
Cedar Mt.....	Utah.....		P. R. R. Report.....	6,364
Chemenevis.....			K. P. R. R.....	675
Cimmaron.....			K. P. R. R.....	6,166
Cochetopa.....	Rocky.....	Colo.....	P. R. R. Report.....	10,032
Costillo.....	Rocky.....		Palmer.....	9,520
Deer Lodge.....	Rocky.....	Mont.....	N. P. R. R.....	6,276
Ebbitt's.....			P. R. R. Report.....	8,793
Flathead.....	Rocky.....	Mont.....	P. R. R. Report.....	5,459
Flathead.....	Bridger.....	Mont.....	Hayden.....	6,769
Fremont's.....		Cal.....		7,200
Georgia.....	Rocky.....	Colo.....	Parry.....	11,487
Gore's.....		Colo.....	Peterman's map.....	9,000
Goshoot.....	Toano.....	Nev.....	U. P. R. R.....	6,065
Guadalupe.....			P. R. R. Report.....	5,717
Hamilton.....		Colo.....	Ruffner.....	12,370
Hastings.....	Peguop.....		U. P. R. R.....	6,220
Hoosier.....	Park.....	Colo.....	Whitney.....	11,364
Huaco.....		Cal.....	P. R. R. Report.....	4,812
Hum-pah-ya-mup.....		Cal.....	P. R. R. Report.....	5,351
Indian.....		Nev.....	King.....	9,057
Ives'.....			U. P. R. R.....	6,076
Jones'.....	Rocky.....	Colo.....	Parry.....	12,400
Kananaskie.....	Rocky.....	B. A.....	Palliser.....	5,985
Kutanie.....	Rocky.....	B. A.....	Palliser.....	6,000
Lake Creek.....	Sawatch.....	Colo.....	Hayden.....	12,329
Lewis & Clarke.....	Rocky.....	Mont.....	P. R. R. Report.....	6,323
Livermore's.....	Coast.....	Cal.....	Whitney.....	686
Long's.....	Rocky.....	Colo.....	Palmer.....	7,660
Lost Knife.....	Rocky.....	Colo.....	Palmer.....	8,400
Madelin.....	Sierra Nevada.....	Cal.....	P. R. R. Report.....	5,667
Madison.....	Rocky.....	Mont.....	P. R. R. Report.....	6,911
Marias.....	Rocky.....	Mont.....	P. R. R. Report.....	8,500
McCabe's.....	Cedar.....		U. P. R. R.....	5,019
Mechanic's.....	Blue.....		U. P. R. R.....	4,226
Mohave.....			A. & P. R. R.....	1,475
Mono.....	Sierra Nevada.....	Cal.....	Whitney.....	10,765
Musca.....		Colo.....	Ruffner.....	9,353
Navajo.....			K. P. R. R.....	7,177
New.....	Sierra Nevada.....		P. R. R. Report.....	3,164
Nugent's.....				3,256
Pacheco.....		Cal.....	Whitney.....	1,470
Panoche.....		Cal.....	Whitney.....	2,500

Passes—Continued.

Name.	Range.	State or Territory.	Authority or Reference.	Elevation.
Pequop			U. P. R. R.	6, 143
Piute	Wahsatch		K. P. R. R.	2, 579
Post Oak			Palmer.	7, 475
Puncho	Sawatch.	Colo.	Ruffner.	9, 353
Railroad		Ariz.	Ives.	3, 764
Raton		Colo.		5, 806
Red Dome.			U. P. R. R.	4, 720
Red Rock.	Rocky	Wyo.	Hayden.	7, 271
Reed's.	Humboldt.		U. P. R. R.	5, 850
Roubideau's	Rocky	Colo.	P. R. R. Report	9, 772
Runks			U. P. R. R.	4, 148
St. Vrain's.		Wyo.	Peterman's map	8, 000
San Fernando	Sierra Nevada	Cal.	P. R. R. Report	1, 940
San Francisco	Rocky	Colo.	Palmer.	8, 560
San Francisquito	Sierra Nevada	Cal.	P. R. R. Report	3, 718
San Gorgonio	Sierra Nevada	Cal.	P. R. R. Report	2, 800
Sangre de Cristo	Rocky	Colo.	P. R. R. Report	9, 186
Schenousky's	Pequop		U. P. R. R.	6, 355
Sitgreave's	Sierra Nevada	Cal.	Ives.	3, 652
Slate River.	Elk	Colo.	Hayden.	11, 579
Soledad		Cal.	A. & P. R. R.	3, 215
Sonora	Sierra Nevada	Cal.	P. R. R. Report	10, 115
South	Rocky	Mont.	P. R. R. Report	7, 490
South Nez Perce	Rocky	Mont.	P. R. R. Report	8, 000
Summit	Rocky	Oregon.	P. R. R. Report	5, 595
Tah-ee-chay-pah	Sierra Nevada	Cal.	P. R. R. Report	4, 008
Tarryall.	Park	Colo.	Hayden.	*12, 176
Teton	Sierra Nevada	Cal.	P. R. R. Report	5, 364
Tennessee	Sawatch	Colo.	Hayden.	10, 418
Teton	Teton	Wyo.	Hayden.	8, 464
Thompson's		Wyo.	Peterman's map	8, 190
Tonto		Ariz.	A. & P. R. R.	7, 529
Trinchera			K. P. R. R.	7, 079
Trout Creek	Park.	Colo.	Whitney	9, 320
Tuckee.	Sierra Nevada	Nev.	P. R. R. Report	7, 200
Uyghiee	Rocky	Wyo.	Hayden.	7, 063
Union	Rocky	Wyo.	Raynolds	*10, 000
Vermillion.	Rocky	B. A.	Palliser.	4, 944
Wahsatch	Rocky		P. R. R. Report	7, 820
Walker's	Sierra Nevada	Cal.	P. R. R. Report	5, 302
Vallapi	Rocky		K. P. R. R.	3, 473
Warner's	Sierra Nevada	Cal.	P. R. R. Report	3, 870
Veston's	Park.	Colo.	Hayden.	11, 676
Whipple's			K. P. R. R.	7, 206
Wild Flax	Rocky		Palmer.	8, 900
Yampa			K. P. R. R.	5, 241
Zuni		N. M.	K. P. R. R.	7, 926

*Approximate.

Fect.

TABLE V.

PLATEAUX IN THE UNITED STATES.	
Coteau des Prairies, Dakota.....	1,800 to 2,000
North Park, Colorado.....	average 8,000
Middle Park, Colorado.....	average 7,500
South Park, Colorado.....	8,000 to 10,000
San Luis Valley, Colorado.....	7,000 to 8,000
Animas Park, Colorado.....	7,000
Llano Estacado, Texas and New Mexico.....	3,200 to 4,700
Colorado Plateau, Arizona.....	average 5,500
Salt Lake Valley, Utah.....	4,200 to 4,500
Laramie Plains, Wyoming.....	average 7,000
Snake River Plain, Idaho.....	4,000 to 4,500
Sevier Lake Basin, Utah.....	4,700
Humboldt River Basin (Lassen's Meadows).....	4,200
Carson River Basin.....	3,800
Walker's River Basin.....	4,100
Mojave River Basin.....	1,100

TABLE VI.

PLATEAUX IN FOREIGN COUNTRIES.

(From Humboldt.)

Abyssinia, Africa.....	6,075
Antisana, South America.....	13,451
Auvergne, France.....	1,087
Axim, Abyssinia.....	7,034
Bavaria.....	1,663
Caracas, South America.....	3,070
Valley of Cashmir, India.....	5,346
Castile, Spain.....	2,238
Caxamarla, Peru.....	9,021
Desert of Gobi.....	4,623
Mexico.....	7,482
Mysore.....	2,942
Orange River, South Africa.....	6,395
Popayan.....	5,755
Potosi, South America.....	13,665
Province de los Pastos.....	10,231
Quito.....	9,528
Thibet.....	9,592
{ Upper Thibet.....	9,995
{ Middle Thibet.....	6,300
{ Little Thibet.....	11,977
{ Deotsuh.....	14,965
{ Sacred Lakes.....	13,429
{ Near Ladak.....	11,500
General elevation in Thibet between long. 73° and 85°.....	8,413
Santa Fé de Bogota, South America.....	12,853
Near Lake Titicaca, South America.....	

TABLE VII.

LAKES.

Name.	Elevation.	Name.	Elevation.
	<i>Feet.</i>		<i>Feet.</i>
Bear, Utah.....	5,931	Minnetonka, Minnesota.....	913
Carson, Nevada.....	3,840	Moosehead, Maine.....	1,038
Cass, Minnesota.....	1,402	Ontario.....	250
Champlain, New York.....	101	Osborn's, Colorado.....	8,821
Cœur d'Alene, Washington Ter.....	2,150	Pemidji, Minnesota.....	1,456
Devil's, Dakota.....	1,467	Pend Oreille, Idaho.....	2,093
Drummond, Virginia.....	21	Quinsigamond, Massachusetts.....	361
Erie.....	573	Rainy.....	1,100
George, New York.....	324	St. Clair.....	570
Graham, Minnesota.....	1,403	San Luis, Colorado.....	7,500
Great Salt, Utah.....	4,200	Sebago, Maine.....	270
Henderson, New York.....	1,936	Self's, Minnesota.....	842
Henry's, Idaho.....	6,443	Sevier, Utah.....	4,690
Heron, Minnesota.....	1,361	Shoshone, Wyoming.....	7,870
Huron.....	589	Superior.....	600
Itasca, Minnesota.....	1,575	Tahoe, California.....	6,700
Kaniskusahkee, Idaho.....	2,431	Traverse, Minnesota.....	1,456
Klamath, Oregon.....	4,131	Twin Lakes, Colorado.....	9,357
Lac qui Parle, Minnesota.....	946	Walker's, Nevada..... (estimated)	3,840
Lake of the Woods.....	1,040	Winnebago.....	748
Leech, Minnesota.....	1,330	Winnepiseogee, New Hampshire.....	518
Lewis, Wyoming.....	7,882	Winnepeg.....	630
Mahopac, New York.....	660	Yellowstone.....	7,788
Michigan.....	589		

TABLE VIII.

ELEVATION OF THE TIMBER LINE.

Latitude 45° to 46°:		Latitude 39° to 40°:	
Mt. Delano, Montana.....	8,800	Gray's Peak, Colorado.....	11,100
Ward's Peak, Montana.....	9,200	Mt. Evans.....	11,200
Mt. Blackmore, Montana.....	9,600	James' Peak.....	11,000
Latitude 44° to 45°:		Arapahoe Peak.....	11,000
Cascade Range.....	7,000	Mt. Byers, Colorado.....	11,300
Electric Peak, Wyoming.....	9,400	Mt. Powell, Colorado.....	11,500
Mt. Washburn, Wyoming.....	9,900	Mt. Guyot, Colorado.....	11,600
Latitude 43° to 44°:		Mt. Silverheels, Colorado.....	11,400
Mt. Hayden, Wyo., Teton Range.....	11,000	Mt. Lincoln, Colorado.....	11,900
Wind River Mountains.....	10,200	Massive Mt., Colorado.....	11,400
Latitude 41° to 42°:		Mt. Elbert, Colorado.....	11,700
Mt. Shasta, California.....	8,000	La Plata Mt., Colorado.....	11,900
Latitude 40° to 41°:		Grizzly Peak, Colorado.....	11,600
Gilbert's Peak, Uinta Mountains.....	11,100	White Rock Mt., Colorado.....	11,700
Long's Peak, Colorado.....	11,100	Latitude 38° to 39°:	
Mt. Audubon, Colorado.....	11,300	Pike's Peak, Colorado.....	11,500
Mt. Lillie, Colorado.....	11,000	Buffalo Peak, Colorado.....	11,900
Parkview Mt., Colorado.....	11,000	Mt. Harvard, Colorado.....	11,900
		Mt. Princeton, Colorado.....	11,300
		Cunningham Pass, Colorado.....	11,500
		Latitude 35° to 36°:	
		San Francisco Mt., Arizona.....	11,547

SECTION II.

ELEVATIONS AT WATER-LEVEL OF RIVERS.

Mississippi River.

	From mouth.	Eleva- tion.	Fall per mile.	Authority.
	<i>Miles.</i>	<i>Fect.</i>	<i>Fect.</i>	
Source.....	2,616	1,680	-----	Nicollet.
Lake Itasca.....	2,610	1,575	17.50	do.
Entrance to Lake Traverse.....	2,520	1,456	1.32	do.
Entrance to Lake Cass.....	2,475	1,402	1.20	do.
Mouth of Leech Lake River.....	2,395	1,356	0.57	do.
Head of Falls of Peckagama.....	2,347	1,340	0.33	do.
Mouth of Swan River.....	2,284	1,290	0.73	do.
Mouth of Sandy Lake River.....	2,246	1,253	0.95	do.
Mouth of Pine River.....	2,149	1,176	0.79	do.
Mouth of Crow Wing River.....	2,101	1,130	0.95	do.
Sauk Rapids.....	-----	982	-----	Railroad levels.
St. Cloud (low water).....	-----	953	-----	do.
St. Anthony (high water).....	-----	791	-----	do.
One-half mile below St. Anthony's Falls (low water).....	-----	711½	-----	do.
St. Paul (high water).....	-----	697	-----	do.
St. Paul (low water).....	1,944	676	2.93	do.
La Crosse.....	1,800	639	0.22	do.
Prairie du Chien.....	1,739	600	0.64	do.
Dubuque (low water).....	-----	599	-----	do.
Rock Island (high water of 1852).....	-----	567	-----	do.
Burlington (high water of 1851).....	-----	529	-----	do.
Keokuk (high water of 1851).....	-----	503	-----	do.
Keokuk (extreme low water).....	-----	482	-----	do.
Quincy (high water of 1851).....	-----	493	-----	do.
Quincy (low water of 1854).....	-----	472	-----	do.
St. Louis (high water of 1844).....	-----	436	-----	do.
St. Louis (high water of 1858).....	-----	432	-----	do.
St. Louis (high water of 1851).....	-----	431	-----	do.
St. Louis (extreme low water).....	-----	394	-----	do.
St. Louis (ordinary level).....	1,270	408	-----	do.
Cairo.....	1,097	322	0.50	do.
Columbus.....	1,076	310	0.57	do.
Memphis.....	872	221	0.44	do.
Jaines Landing.....	647	149	0.32	do.
Natchez.....	378	66	0.31	do.
Baton Rouge.....	245	34	0.24	do.
Mouth.....	0	0	0.14	do.

Red River of Louisiana.

Source.....	1,200	2,450	-----	-----
Preston.....	820	641	4.80	-----
Walton.....	595	242	1.80	-----
Head of raft.....	405	207	0.20	-----
Shreveport.....	330	180	0.36	-----
Mouth of Black River.....	30	58	0.41	-----
Mouth.....	0	54	0.14	-----

Canadian River.

	From mouth.	Eleva- tion.	Fall per mile.
	<i>Miles.</i>	<i>Feet.</i>	<i>Feet.</i>
Mouth of Spring Creek.....	2,678	.....
Mouth of Valley Creek.....	2,505	.....
Mouth of Wine Creek.....	2,454	.....
Mouth of Wolf Creek.....	2,319	.....
Epsom Springs.....	2,171	.....
Fort Smith.....	466	.....

Average fall per mile from the mouth of Pajarito Creek, for two hundred miles eastward, is about nine feet.

Kansas River.

Mouth of Saline River.....	.....	1,592	.....
Fort Riley.....	132	678	.....
Manhattan.....	115	624	3.18
Topeka.....	65	504	2.40
Lawrence.....	39	444	2.31
Wyandotte (mouth).....	0	382	1.59

Arkansas River.

Source.....	1,514	10,000	.....
Mouth of Fontaine qui Bouille.....	1,364	4,880	34.13
Mouth of Apishpa Creek.....	1,323	4,371	12.41
Twenty-four miles above Bent's Fort.....	1,313	4,091	28.00
Near Bent's Fort.....	1,289	3,672	17.45
.....	1,272	3,537	7.09
.....	1,249	3,328	9.08
.....	1,228	3,166	14.72
West line of Kansas.....	1,207	3,047	5.66
.....	1,184	2,852	8.47
.....	1,163	2,692	7.62
.....	1,141	2,556	6.18
Santa Fé Crossing.....	1,121	2,431	6.25
Near Fort Atkinson.....	1,095	2,331	3.85
Second Coon Creek.....	.....	2,244	.....
First Coon Creek.....	.....	2,004	.....
Mouth of Pawnee Fork.....	.....	1,962	.....
Mouth of Walnut Creek.....	.....	1,872	.....
Great Bend.....	992	1,658	.....
Near Fort Gibson.....	642	560	3.14
Near Fort Smith.....	522	418	1.18
Little Rock.....	250	252	0.61
Mouth.....	0	162	0.36

Platte River.

Junction of North and South Platte.....	.....	2,789	.....
Above Fort Kearney.....	88	2,750	.....
.....	65	2,500	10.87
.....	47	2,335	9.17
.....	11	2,075	7.22
Mouth.....	.....	966	.....

Average fall per mile throughout its length, about six feet.

North Platte River.

	From mouth.	Elevation.	Fall per mile.
	<i>Miles.</i>	<i>Feet.</i>	<i>Feet.</i>
Above the mouth of Ash Creek.....	135	4,250	
.....	110	3,985	10.60
.....	92	3,950	1.94
.....	75	3,820	7.64
.....	50	3,641	7.16
.....	42	3,575	8.25
.....	23	3,460	6.05
.....	0	3,325	5.87
Mouth (at North Platte).....		2,789	

Average fall per mile from Fort Fetterman to mouth, seven feet.

South Platte River.

	From Denver.		
Head, near Mt. Lincoln, Colorado.....	118	11,000	
Fairplay, South Park, Colorado.....	104	9,800	86
Foot of South Park, Colorado.....	68	7,990	50
Head of Cañon.....	60	7,747	30
Foot of Cañon.....	18	5,300	58
Denver, Colorado.....	0	5,000	17
Mouth.....		2,789	9 to 10

Missouri River.

	From mouth.		
Three Forks (head).....	2,824	4,100	
Mouth of Sun River.....	2,689	3,573	3.90
Foot of Falls.....	2,670	2,964	31.59
Fort Benton.....	2,644	2,845	4.56
Fort Union.....	1,894	2,194	0.88
Seven miles above the mouth of Muddy Creek.....	1,843	1,974	4.31
Fort Berthold.....	1,676	1,873	0.60
Three miles above La Fontaine Rouge.....	1,639	1,834	1.05
Fort Pierre.....	1,246	1,475	0.91
Shyenne Agency.....		1,415	
Fort Sully.....		1,398	
Sioux City (low water).....	842	1,104	
Sioux City (bed of river).....		1,094	
Omaha (high water).....		997	
Omaha (low water).....		978	
Omaha (bed of river).....		964	
St. Joseph (high water).....	484	820	
Kansas City (high water in 1844).....		771	
Mouth.....	0	416	

Yellowstone River.

	From mouth of Shields's River.		
Yellowstone Lake.....	105.5	7,788	
Top of Upper Falls (height, 140 feet).....	90.5	7,693	6.3
Top of Lower Falls (height, 397 feet).....	90.0	7,485	13.6
Mouth of Tower Creek.....	77.0	6,207	67.8
Mouth of Gardiner's River.....	54.0	5,360	53.6
Mouth of Cañon Creek.....	38.0	5,058	21.8
Head of Lower Cañon.....	8.0	4,643	12.2
Mouth of Big Horn.....		2,831	
Mouth.....		2,184	

Colorado R. Report. *Big Horn River.*

	From mouth.	Elevation.	Fal. per mile.
	Miles.	Feet.	Feet.
Source.....		7,527	
Mouth of Popo Agie.....		5,347	
Leaves Big Horn Mountains.....		3,534	
Mouth.....		2,831	

Jefferson River.

At head of Red Rock Creek, (main fork,) about.....		6,500	
At Beaverhead.....		4,888	
At mouth of Big Hole River.....		4,786	
At bridge.....		4,672	
At mouth of Hell Cañon Creek.....		4,598	
At mouth of Fish Creek.....		4,457	
At mouth of White Tail Deer Creek.....		4,351	
At mouth of North Boulder Creek.....		4,303	
At head of cañon.....		4,276	
At foot of cañon.....		4,219	
At mouth.....		4,100	

Big Hole River, (branch of Jefferson.)

At mouth of Divide Creek.....		5,499	
At cañon.....		5,311	
At mouth of Camp Creek.....		5,203	
At mouth.....		4,786	

Madison River.

Head, Madison Lake.....	170	8,301	
In Upper Geyser Basin.....	160	7,367	93.4
Mouth of East Fork.....	148	7,237	10.8
Mouth of Gibbon's Fork.....	142	6,808	71.5
Mouth of South Fork (head of Middle Cañon).....	116	6,567	9.3
Middle of Middle Cañon.....	103	6,348	16.8
Mouth of Indian Creek.....	66	5,494	23.1
Opposite Virginia City.....	55	5,026	42.5
Head of Lower Cañon.....	41	4,848	12.7
Foot of Lower Cañon.....	23	4,521	18.2
Mouth.....	0	4,129	17.0

Gallatin River.

Head.....	93	6,823	
Ten miles above cañon.....	67	6,149	26.0
Middle of cañon.....	52	5,586	37.5
Foot of cañon.....	4	5,215	41.4
Bridge.....	20	4,493	30.1
Mouth.....	0	4,098	19.8

Colorado River. (From Ives's Report.)

	From mouth.	Elevation.	Fall per mile.
	Miles.	Feet.	Feet.
Shallow Rapid.....	500	860	.....
Shallow Rapid.....	489	790	6.36
Deep Rapid.....	456	656	4.06
Mojave Valley.....	411	565	2.02
Mojave Cañon.....	382	524	1.41
Mouth of Williams's River.....	340	465	1.40
Beaver Island.....	322	440	1.39
Riverside Mountain.....	302	409	1.55
Halfway Bend.....	279	378	1.35
Long Shoals.....	260	350	1.47
Long Bend.....	239	322	1.33
Foot of Great Colorado Valley.....	210	282	1.38
Canebrake Cañon.....	188	252	1.36
Purple Hill Pass.....	175	234	1.38
Explorer's Pass.....	166	222	1.33
Fort Yuma.....	150	200	1.38
Cocopa Village.....	132	172	1.56
Cocopa Village.....	119	155	1.31
Cocopa Village.....	109	140	1.50
Cocopa Village.....	99	128	1.20
Cocopa Village.....	89	112	1.60
Cocopa Village.....	78	97	1.36
Cocopa Village.....	64	77	1.43
Cocopa Village.....	48	54	1.44
Robinson's Landing.....	10	0	1.42

Williams's River, (branch of Rio Colorado.)

Head.....	145	5,752	.....
.....	138	5,360	56.00
.....	128	4,812	54.80
.....	80	2,243	53.52
.....	71	1,945	33.11
.....	67	1,853	23.00
.....	62	1,657	39.80
.....	52	1,308	34.90
.....	40	1,184	10.33
.....	28	899	23.75
.....	17	693	18.72
.....	13	504	47.25
Mouth.....	0	578	9.69

Rio Puerco.

Navajo Springs.....	0	5,655	.....
Mouth of Leroux Fork.....	46	5,016	.....
.....	59	4,802	16.46
.....	67	4,735	8.38
.....	77	4,675	6.00
.....	86	4,618	6.33
.....	102	4,594	1.50

Gila River.

Authority	Fall per mile.	Part of course.	From mouth.	Elevation.	Fall per mile.
J. E. Ainsworth	0	From Lansing to the confluence of the Missouri.	Miles. 578	Feet. 4,347	Feet. 7.5
Railroad levels	1	From Sioux City to Council Bluffs	418	3,732	8.8
do.	2	From Fort Dodge to Ottumwa	390	3,147	20.9
do.	1	From Ottumwa to the mouth	327	2,674	7.5
do.	2	From forks of the river to its mouth	230	1,751	9.5
do.	4	From Jefferson to the forks	193	1,419	9.0
do.	2	From Colfax Station to Oakland	126	845	6.8
do.	1	From Oakland to the mouth	87	293	3.4
Mouth	0	From Falls to Iowa City	0	254	5.0
do.	2	From Iowa City to the mouth			
do.	2	From State boundary to Cedar Falls			
do.	2	From Cedar Falls to Moscow			
do.	2	From Moscow to the mouth			
J. E. Ainsworth	10	From Independence			
do.	4	From Manchester to the mouth			
Railroad levels	0	From Crane Creek to the mouth			
do.	0	From Decorah to the mouth			
Mojave depot camp	2	From Denver, Rock Island & Pacific		2,664	
Miles from above	2	Railroad to the mouth	20	2,227	
do.	2	From Chicago, Rock Island & Pacific	34	2,117	7.85
do.	3	Railroad to the mouth	58	1,820	12.38
do.	3	From Denison to the mouth	89	1,111	22.87
do.	2	From Charles to Smithland			
do.	0	From Smithland to the mouth			
J. E. Ainsworth	3	From fork of Willow Creek to the mouth			

Rio Grande River.

In San Luis Valley (about)	7,500
Peña Blanca	5,288
Mouth of Rio Galisteo	5,242
Albuquerque	5,026
Isleta	4,910
Socorro	4,560
Alamosa	4,200
El Paso	3,800

Mean fall per mile from Peña Blanca to Isleta, 5.86 feet.

Sacramento River.

	From Fort Reading.	
	170	4,472
	138	3,622
Mouth of Fall River	124	3,250
	110	2,867
	88	2,177
	80	1,730
	64	1,156
	49	1,078
Mouth of McCloud's River	33	922
	22	837
Fort Reading	0	675

Rate of fall of the principal rivers of Iowa.

Rivers.	Part of course.	Fall per mile.		Authority.
		Ft.	In.	
Mississippi	From Lansing to the confluence of the Missouri.	0	6	J. E. Ainsworth.
Missouri	From Sioux City to Council Bluffs	1	0	Railroad levels.
Des Moines	From Fort Dodge to Ottumwa	2	4	do.
Des Moines	From Ottumwa to the mouth	1	11	do.
Raccoon	From forks of the river to its mouth	2	11	do.
North Raccoon	From Jefferson to the forks	4	0	do.
Skunk	From Colfax Station to Oakland	2	2	do.
Skunk	From Oakland to the mouth	1	6	do.
Iowa	From Iowa Falls to Iowa City	3	1	do.
Iowa	From Iowa City to the mouth	2	4	do.
Cedar	From State boundary to Cedar Falls	3	7	do.
Cedar	From Cedar Falls to Moscow	2	5	do.
Cedar	From Moscow to the mouth	2	0	do.
Wapsipicon	From Independence to the mouth	2	10	J. E. Ainsworth.
Maquoketa	From Manchester to the mouth	3	4	do.
Turkey	From Crane Creek to the mouth	5	0	Railroad levels.
Upper Iowa	From Decorah to the mouth	8	6	do.
East Nishnabotany	From Chicago, Rock Island & Pacific Railroad to the mouth.	2	5	do.
West Nishnabotany	From Chicago, Rock Island & Pacific Railroad to the mouth.	2	8	do.
Boyer	From Dennison to the mouth	3	3	do.
Little Sioux	From Cherokee to Smithland	2	6	do.
Little Sioux	From Smithland to the mouth	0	4	do.
Floyd	From fork of Willow Creek to the mouth.	3	0	J. E. Ainsworth.

The average rate of fall of—

	Feet.
Bitter Root River	11.1
Blackfoot Fork	30.0
Clarke's Fork (of Columbia)	11.0
Pecos River	4.0
Snake River, from mouth of Ross Fork north	6.0

Mean fall per mile from Fort Blair to Lake, 5.86 feet.

Sacramento River

Point	Elevation	Point	Elevation
Head of Fall River	170	Head of Fall River	170
.....	138	.....	138
.....	121	.....	121
.....	110	.....	110
.....	88	.....	88
.....	80	.....	80
.....	64	.....	64
.....	49	.....	49
.....	33	.....	33
.....	22	.....	22
.....	0	.....	0

SECTION III.
RAILROAD PROFILES.
Atlantic & Pacific Railroad.

Eleva- tion.	Miles.		Eleva- tion.	Miles.	
7,152	1,366	Campbell's Pass	428	0	St. Louis (directrix)
6,622	1,382	Fort Wingate (2 miles south of fort)	480	37	Partridge
5,899	1,420	Arizona Boundary	955	49.2	Mosselle
4,700	1,521	Southern Crossing	1,201	113.75	Bolla
7,329	1,604	Tonto Pass	640	127	Gascouche River
6,908	1,624	Cedar Summit	1,168	132.5	Dixon
5,506	1,646	Partridge	1,521	217.58	Marshfield
5,520	1,650	Beale's Road	1,352	241.9	Springfield
6,308	1,674	Lain Summit	1,225	261.57	Harvey City
5,180	1,695	Andrew Valley	1,063	306.36	Granby
3,408	1,741	Foscock Mts.	883	330.25	Seneca
3,440	1,767	Wahapi Pass	892	331	Missouri State line
1,475	1,796	Mohave Gap		408	Vinita Junction (with the M. & T. R. R.)
355	1,817	Colorado River at the Needles	574	494	Arkansas River
2,579	1,835	Pinto Summit	950	614	Kingsber Creek
728	1,895	Ferry Basin	1,428	651	North Fork
1,990	1,932	Agua Azul	1,519	670	Canadian River Junction
2,300	1,947	Carter Pass	2,620	770	Texas Boundary
2,400	2,007	Mohave River	2,735	970	New Mexico Boundary
3,215	2,103	Solada Pass	3,726	1,021	Fort Hason
19	2,168	San Buenaventura	5,690	1,114	Anton Chico
10	1,204	Santa Barbara	6,960	1,152	Canon Blanco
1,561	2,301	San Luis Summit	5,100	1,199	San Domingo (valley of the Rio Grande River)
28	2,437	Walsenville	4,836	1,234	Albuquerque
48	2,537	San Francisco	4,708	1,247	Lalata (leave Rio Grande)

Kansas Pacific Railroad.

Eleva- tion.	Miles.		Eleva- tion.	Miles.	
951	83	Rossville			State line between Kansas and Missouri
973	90	St. Mary's	764	0	
989	98	Vermillion Tank	673	1	Armstrong
1,018	104	Wamego	685	8	Muncy siding
1,018	110	St. George	808	9	Secordville
1,042	119	Manhattan	801	13	Edwardsville
1,078	129	Ordan	811	16	Tiblow
1,000	135	Fort Riley	799	22	Lenape
1,100	138	Junction City	807	27	Stranger
1,132	150	Chapman Creek	827	31	Fall Leaf
1,153	157	Detroit			Lawrence and Leaven- worth Junction
1,173	162	Albion	832	35	Lawrence
1,164	166	Sand Spring Tank	846	38	Back Creek
1,193	171	Solomon	864	45	Williamsville
1,243	185	Salina	869	48	Perryville
1,289	194	Bavaria	870	51	Medina
1,366	200	Brookville	871	52	Newman
1,459	205	Rockspring	879	55	Granville
1,586	210	Elm Creek	895	60	Topeka
1,672	216	Summit siding	904	67	Silver Lake
1,609	218	Fort Harbor	923	77	

SECTION III.

RAILROAD PROFILES.

Atlantic & Pacific Railroad.

	Miles.	Eleva- tion.		Miles.	Eleva- tion.
		<i>Fect.</i>			<i>Fect.</i>
St. Louis (directrix).....	0	428	Campbell's Pass	1,366	7,152
Pacific.....	37	480	Fort Wingate (2 miles north of fort).....	1,382	6,622
Moselle.....	49.2	955	Arizona Boundary	1,420	5,890
Rolla.....	113.75	1,201	Sunset Crossing	1,521	4,760
Gasconade River.....	127	640	Tonto Pass.....	1,604	7,529
Dixon.....	138.5	1,168	Cedar Summit.....	1,624	6,908
Marshfield.....	217.58	1,521	Partridge	1,646	5,506
Springfield.....	241.9	1,382	Beale's Road	1,650	5,520
Pierce City.....	291.57	1,225	Laja Summit	1,674	6,308
Granby.....	306.56	1,063	Aubrey Valley.....	1,695	5,180
Seneca.....	330.25	883	Peacock Mts.....	1,741	3,408
Missouri State line.....	331	802	Wallapi Pass.....	1,767	3,440
Vinita Junction (with the M., K. & T. R. R.	403	-----	Mohave Gap	1,796	1,475
Arkansas River.....	494	574	Colorado River, at the Needles.....	1,817	355
Kingfisher Creek.....	614	950	Piute Summit	1,855	2,579
North Fork.....	651	1,428	Perry Basin.....	1,895	728
Canadian River Junction..	670	1,519	Agua Azul.....	1,932	1,999
Texas Boundary.....	770	2,020	Crater Pass	1,947	2,300
New Mexico Boundary...	970	2,735	Mohave River	2,007	2,400
Fort Bascom	1,021	3,726	Soledad Pass.....	2,103	3,215
Anton Chico	1,114	5,690	San Buenaventura.....	2,168	12
Cañon Blanco	1,152	6,960	Santa Barbara.....	1,204	10
San Domingo (valley of the Rio Grande River).....	1,199	5,100	San Luis Summit	2,301	1,561
Albuquerque.....	1,234	4,836	Walsunville	2,437	28
Isleta (leave Rio Grande)..	1,247	4,768	San Francisco.....	2,537	48

Kansas Pacific Railroad.

State line between Kansas and Missouri	0	764	Rossville.....	83	951
Armstrong.....	1	673	St. Mary's.....	90	973
Muncy Siding.....	8	685	Vermillion Tank.....	98	989
Secondine.....	9	809	Wamego.....	104	1,018
Edouardsville.....	13	801	St. George.....	110	1,018
Tiblow.....	16	811	Manhattan	119	1,042
Lenape.....	22	799	Ogden.....	129	1,078
Stranger.....	27	807	Fort Riley	135	1,090
Fall Leaf.....	31	827	Junction City	138	1,100
Lawrence and Leaven- worth Junction	36	832	Chapman Creek.....	150	1,132
Lawrence	38	846	Detroit.....	157	1,153
Buck Creek	45	864	Abilene.....	162	1,173
Williamsville.....	48	869	Sand Spring Tank.....	166	1,164
Perryville.....	51	870	Solomon.....	171	1,193
Medina	52	871	Salina	185	1,243
Newman.....	55	879	Bavaria.....	194	1,289
Grantville.....	60	895	Brookville.....	200	1,366
Topeka	67	904	Rockspring.....	205	1,459
Silver Lake.....	77	933	Elm Creek.....	210	1,586
			Summit Siding.....	216	1,672
			Fort Harker.....	218	1,600

Kansas Pacific Railroad—Continued.

	Miles.	Elevation.		Miles.	Elevation.
		<i>Feet.</i>			<i>Feet.</i>
Ellsworth.....	223	1,556	Arapahoe.....	452	4,024
Blackwolf.....	230	1,583	Cheyenne Wells.....	462	4,295
Wilson.....	239	1,702	First View.....	472	4,595
Bunker Hill.....	252	1,882	Eureka.....	483	4,263
Fossil.....	262	1,850	Kit Carson.....	487	4,307
Walker.....	274	1,962	Wild Horse.....	499	4,456
North Fork Bend.....	278	1,946	Aroya.....	510	4,666
Hays.....	289	2,009	Mirage.....	523	4,859
Ellis.....	302	2,135	Hugo.....	534	5,068
Ogallah.....	312	2,385	Lake.....	547	5,319
Park's Fort.....		2,463	River Bend.....	555	5,511
Coyote.....	336	2,608	Cedar Point.....	562	5,730
Buffalo.....	350	2,793	Godfrey.....	566	5,621
Grinnell.....	364	2,922	Agate.....	572	5,476
Carlyle.....	376	3,064	Deer Trail.....	583	5,203
Monument.....	386	3,199	Bijou.....	595	5,221
Gopher.....	397	3,336	Kiowa.....	608	5,514
Sheridan.....	405	3,121	Box Elder.....	617	5,546
Wallace.....		3,319	Schuyler.....	629	5,354
Pond Creek.....	422	3,291	Denver Pacific Junction.....	636	5,211
Eagle Tail.....	429	3,452	Denver.....	639	5,197
Monotony.....	437	3,792			

Arkansas Valley Railroad.

Kit Carson.....	0	4,307		46	4,039
Big Sandy Creek.....	1	4,297	Las Animas.....	50	3,967
	5	4,363		60	3,966
Rush Creek.....	8	4,262	Bent's Fort.....	66	4,039
Summit.....	12	4,462		70	4,052
	22	4,375		80	4,151
Wild Horse Spring.....	23	4,330		90	4,262
	24	4,380		100	4,328
	26	4,367		110	4,400
	29	4,425	Boonville.....	120	4,497
	34	4,445		130	4,622
	36	4,356	Pueblo.....	136	4,674

Leavenworth branch of the Kansas Pacific Railroad.

Junction (2 miles east of Lawrence)	832	Even slope down to the Missouri	
Undulating plateau summits not over	938	River.....	813
Valley of Stranger's River.....	718	Missouri Pacific Junction.....	778
Plateau summit.....	973	Leavenworth.....	783

Denver & South Park Railroad, (preliminary line.)

Denver.....	5,196	Kenosha House.....	9,702
Foot of cañon of the South Platte...	5,564	Kenosha Summit.....	10,001
Follows up the cañon of South Platte.		Jefferson Creek, South Park.....	9,592
Mouth of the North Fork.....	6,110	Michigan Creek.....	9,502
Follows up valley of the North Fork.		Tarryall Creek.....	9,849
Mouth of Elk Creek.....	6,337	Trout Creek.....	9,707
Mouth of Deer Creek.....	7,157	Beaver Creek.....	9,994
Trout Creek.....	7,567	Fairplay.....	9,964
Bailey's Rancho.....	7,742	Middle Fork South Platte.....	10,313
Hepburn's Park.....	8,237	Mouth of Mosquito Creek.....	10,328
Grant.....	8,587	Dudley.....	10,435
Godfrey's Rancho.....	8,982		

Denver & Rio Grande Railroad.

	Miles.	Elevation.		Miles.	Elevation.
		<i>Feet.</i>			<i>Feet.</i>
Denver	0	5,196	Widefield	84	5,712
Littleton	10	5,361	Fountain	89	5,562
Acequia	17	5,529	Little Buttes	94	5,370
Plum	25	5,834	North Pueblo	118	4,701
Citadel	31	6,122	South Pueblo	120	4,674
Douglas	35	6,324	Meadows	129	4,801
Larkspur	43	6,665	Swallow's Nest	134	4,860
Greenland	47	6,927	Carlisle Springs	141	4,952
Divide	52	7,208	Beaver Creek	143	4,999
Henry's	56	6,983	Labran	153	5,182
Berst's	58	6,811	Coal Banks	155	5,356
Husted's	62	6,599	Oil Creek	156	5,177
Monument	67	6,354	Cañon City	160	5,494
Colorado Springs	76	5,986			

Chicago & Northwestern Railroad, (Iowa division.)

Clinton, Iowa (high water in Miss. River in 1864)	584	Moingona	919
Clinton (bridge)	602	Beaver	1,039
Cedar Rapids (Cedar River)	719	Hagar	1,045
Fairfax	780	New Jefferson	1,069
Norway	808	Coon River	1,017
Blairstown	850	Scranton	1,089
Belleplaine	831	Glidden	1,238
Chelsea	798	Carroll	1,272
Toledo	827	East Side	1,390
Iowa River	847	Tip-top	1,438
Orford	864	West Side	1,340
Le Grand	949	Vail	1,273
Marshall	906	Dennison	1,270
State Centre	1,082	Paradise	1,148
Colo	1,055	Dunlap	1,111
Nevada	1,013	Woodbine	1,072
Skunk River	905	Missouri Valley Junction	1,020
Ames	934	Honey Creek	1,022
Boone	951	Crescent	1,009
Des Moines River	905	Council Bluffs	1,000

Burlington & Missouri River Railroad.

High water in Mississippi River at Burlington	529	Tyrone	829
Middletown	731	Melrose	863
Danville	722	Russell	1,028
Mt. Pleasant	732	Chariton	1,041
Skunk River (low water)	558	White Breast River	840
Chequaque	612	Osceola	1,134
Glendale	752	Oakland	1,205
Fairfield	775	Four-mile Creek (Thayer Station)	1,033
Whitfield	685	Grand River	1,017
Batavia	648	Highland Station (summit)	1,311
Agency	809	Cromwell	1,233
Otomwa	639	Corning	1,140
Des Moines River	614	Nodaway	1,093
Chillicothe	654	East Nodaway River	1,014
Frederick	744	Middle Nodaway River	1,015
Albia	955	Vallisca	1,072
		West Nodaway River	1,113

Burlington & Missouri River Railroad—Continued.

	Eleva- tion.		Eleva- tion.
	<i>Feet.</i>		<i>Feet.</i>
Middle Tarkeo River.....	1,108	Greenwood.....	1,130
Red Oak.....	1,048	Waverly.....	1,128
East Nishnabotany River.....	1,020	Newton.....	1,141
Walnut.....	1,056	Lincoln.....	1,154
Harmony.....	1,056	Denton.....	1,238
West Nishnabotany River.....	974	Highland.....	1,419
Glenwood.....	996	Crete.....	1,360
Pacific Station on Council Bluffs & St. Joseph Railroad.....	966	Dorchester.....	1,493
Missouri River (high water).....	960	Fairmount.....	1,648
Missouri River (low water).....	944	Grafton.....	1,704
Plattsmouth.....	972	Harvard.....	1,807
Omaha Junction.....	989	Inland.....	1,887
Louisville.....	1,029	Juniata.....	1,978
South Bend.....	991	Kenesaw.....	2,057
Ashland.....	1,091	Lowell.....	2,074
		Kearney Junction.....	2,157

Keokuk Northern and Iowa Northern Central Railroads.

Bonaparte.....	565	English River (low water).....	607
Big Mound Summit.....	745	Iowa River at crossing one mile below Iowa City.....	626
Summit near Salem.....	720	Brown Summit.....	864
Skunk River at Oakland (low water)	560	Cedar River.....	711
Burlington & Missouri River R. R. at Mt Pleasant.....	732	Chicago & Northwestern depot at Cedar Rapids.....	741
Summit west of Crawfordsville.....	737		
Washington.....	757		

Central Railroad of Iowa.

Crossing of Iowa River.....	922	Eldora.....	1,022
Albion.....	946	Eldora village.....	1,052
Albion village.....	971	Steamboat Rock.....	1,024
Liscomb.....	1,015	Steamboat Rock village.....	1,058
Liscomb village.....	1,025	Water in Iowa River at Steamboat Rock.....	1,008
Union.....	953	Ackley.....	1,144
Union village.....	953		
Crossing of south fork of Iowa River	943		

Sioux City & Pacific Railroad.

Missouri Valley Junction.....	1,020	Sloan.....	1,091
California Junction.....	1,020	Sargeant's Bluffs.....	1,114
Modale.....	1,021	Floyd's Bluffs.....	1,404
Moudamin.....	1,031	Sioux City.....	1,123
Little Sioux.....	1,042	Low water in Missouri River at Sioux City.....	1,104
Blencoe.....	1,062		
Onawa.....	1,068		

Hannibal & St. Joseph Railroad.

	Miles.	Eleva- tion.		Miles.	Eleva- tion.
		<i>Feet.</i>			<i>Feet.</i>
Hannibal.....	0	794	Macon.....	70	919
Palmyra.....	15	694	Brookfield.....	104	802
Ely.....	24	731	La Clede.....	109	830
Monroe.....	30	794	Utica.....	135	796
Lakeman.....	42	782	Cameron.....	171	1,067
Shelbina.....	47	718	Lathrop.....	187	1,105
Clarence.....	59	867	Harlem.....	223	782
Carbon.....	67	867	Kansas City.....	225	764

Missouri Pacific Railroad.

St. Louis (directrix).....	0	428	Warrensburg.....	218	874
Franklin.....	37	480	Holden.....	232	854
Gasconade Riv. (low wat'r)	88	496	Lee's Summit.....	259.5	1,054
Osage River (low water)...	117	521	Independence(fair gro'nd)	272	1,034
Jefferson City.....	125	556	Big Blue Riv. (low water)		718
Sedalia.....	188.5	889	Kansas City (levee).....	282	764

International and Houston & Great Northern Railroads.

Houston.....	0	50	Killgore.....	222	371
Neches.....	163	413	Longview.....	235	336
Dearne.....	175	310	Oakwoods.....	336	277
Jacksonville.....	179	527	Keechi.....	346	285
Reynolds.....	185	521	Jewett.....	363	527
Troupe.....	197	465	Lake.....	385	315
Overton.....	210	509	Englewood.....	395	420

St. Joseph & Denver City Railroad.

St. Joseph (high water in Missouri River).....	0	820	Beattie.....	98.5	1,302
St. Joseph (low water in Missouri River).....		800	Marysville.....	112	1,164
Wathena.....	4.5	824	Hanover.....	127.5	1,236
Troy.....	13	1,099	Hollenburg.....	136.5	1,267
A. & N. Junction.....	14.5	1,117	Steele City.....	141	1,277
Norway.....	18	1,049	Fairbury.....	152	1,324
Ryan.....	22	900	Alexandria.....	166.5	1,416
Severance.....	24	910	Belvidere.....	175.5	1,509
Wolf River Crossing.....	25	907	Carleton.....	183	1,562
North Robinson.....	33	957	Davenport.....	190.5	1,668
Manville.....	36.5	980	Eden.....	200	1,737
Hawatha.....	42	1,102	Fairfield.....	208	1,788
Hamilin.....	49.5	991	Georgetown.....	217.5	1,852
Sabatha.....	60	1,316	Hastings.....	226	1,944
Seneca.....	77	1,162	Idaho.....	234.5	2,011
Axtell.....	88.5	1,371	Jefferson.....	242.5	2,087
			Fort Kearney.....	261	2,130
			Kearney Junction.....	267	2,157

*Manhattan branch of the St. Joseph & Denver City Railroad,
(From near A. & N. Junction to Manhattan, Kansas.)*

	Miles.	Elevation.		Miles.	Elevation.
		Feet.			Feet.
Junction.....	0	1,124	Soldier Creek.....	57.5	1,148
Little Grasshopper Creek.....	25	976	Summit.....	65	1,400
Walnut Creek.....	29	974	Red Vermillion.....	72.5	1,054
Netawaka.....	36.5	1,148	Louisville.....	87.5	1,014
Circleville.....	51.5	1,124	Manhattan.....	102.5	1,042

*Branch of the St. Joseph and Denver City Railroad,
(From a point between Hanover and Hollenburg to the Republican River.)*

Little Blue River.....	0	1,234	Belleville.....	43.5	1,544
Washington.....	11.5	1,324	Republican River.....	53.5	1,439
Mill Creek.....	22.5	1,284			

Union Pacific Railroad.

Omaha (track at depot)...	0	1,060	Potter.....	433	4,408
Summit Siding.....	4	1,180	Antelope.....	451	4,750
Gilmore.....	10	1,014	Bushnell.....	463	4,898
Papillion.....	15	1,010	Pine Bluffs.....	473	5,064
Elkhorn.....	29	1,188	Egbert.....	484	5,310
Valley.....	35	1,158	Hillsdale.....	496	5,629
Fremont.....	47	1,214	Archer.....	508	6,038
North Bend.....	62	1,297	Cheyenne.....	516	6,075
Schuyler.....	76	1,373	Hazard.....	523	6,363
Columbus.....	92	1,470	Otto.....	531	6,756
Jackson.....	99	1,508	Granite Cañon.....	536	7,329
Silver Creek.....	109	1,572	Buford.....	542	7,810
Clark's.....	121	1,648	Sherman.....	549	8,271
Lone Tree.....	132	1,724	Harney.....	558	7,885
Chapman.....	142	1,798	Red Buttes.....	564	7,360
Grand Island.....	154	1,798	Fort Sanders.....	570	7,185
Pawnee.....	162	1,945	Laramie.....	573	7,143
Wood River.....	172	2,012	Wyoming.....	587	7,087
Gibbon.....	183	2,084	Cooper's Lake.....	602	7,062
Kearney.....	191	2,144	Lookout.....	606	7,185
Stevenson.....	201	2,208	Miser.....	614	6,824
Elm Creek.....	212	2,279	Rock Creek.....	623	6,703
Overton.....	221	2,343	Como.....	638	6,692
Plum Creek.....	230	2,408	Medicine Bow.....	645	6,561
Coyote.....	240	2,478	Carbon.....	656	6,760
Willow Island.....	250	2,549	Simpson.....	662	6,907
Warren.....	260	2,608	Percy.....	669	6,958
Brady Island.....	268	2,675	Dana.....	675	6,882
McPherson.....	277	2,735	St. Mary's.....	680	6,757
North Platte.....	291	2,827	Fort Steele.....	696	6,845
Nichols.....	299	2,920	Greenville.....	704	6,564
O'Fallon.....	308	3,014	Rawlins.....	709	6,735
Alkali.....	322	3,076	Separation.....	723	6,901
Roscoe.....	332	3,143	Creston.....	737	7,030
Ogallalla.....	342	3,228	Wash-a-kie.....	752	6,696
Brulé.....	351	3,304	Red Desert.....	761	7,708
Big Spring.....	361	3,363	Table Rock.....	775	6,887
Julesburg.....	377	3,538	Bitter Creek.....	785	6,681
Lodge Pole.....	397	3,838	Black Buttes.....	794	6,595
Sidney.....	414	4,111	Point of Rocks.....	805	6,484

Union Pacific Railroad—Continued.

	Miles.	Elevation.		Miles.	Elevation.
		Feet.			Feet.
Salt Wells	817	6,353	Piedmont.....	937	6,528
Rock Springs.....	831	6,272	Aspen	955	7,825
Green River.....	845	6,130	Wahsatch.....	966	6,870
Bryan.....	858	6,328	Castle Rock.....	975	6,282
Stranger.....	876	6,257	Echo.....	991	5,507
Church Buttes.....	887	6,303	Weber.....	1,007	5,096
Quarter.....	904	6,535	Devil's Gate.....	1,019	4,835
Bridger.....	913	6,760	Uintah.....	1,024	4,524
Veroy.....	928	7,110	Ogden.....	1,032	4,303

Central Pacific Railroad.

Ogden.....	0	4,303	Humboldt.....	460	4,262
Bonneville.....	8	4,310	Oreana.....	482	4,206
Corinne.....	23	4,294	Lovelock's.....	493	4,100
Blue Creek.....	41	4,360	Brown's.....	509	3,955
Promontory.....	52	4,943	White Plains.....	521	3,921
Rozel.....	60	4,600	Hot Springs.....	536	4,098
Monument.....	73	4,290	Wadsworth.....	555	4,104
Kelton.....	91	4,500	Clark's.....	570	4,290
Matlin.....	107	4,821	Camp 37.....	582	4,400
Terrace.....	121	4,450	Reno.....	590	4,525
Lacin.....	146	4,400	Verdi California.....	601	4,915
Tecoma.....	155	4,600	Boca.....	616	5,560
Montello.....	165	4,800	Truckee.....	625	5,866
Loray.....	174	5,400	Summit.....	639	7,042
Tomio.....	183	5,964	Cisco.....	652	5,911
Pequop.....	195	6,180	Emigrant Gap.....	660	5,300
Independence.....	204	6,115	Blue Cañon.....	665	4,700
Wells.....	219	5,650	Alta.....	674	3,625
Tulasco.....	227	5,418	Dutch Flat.....	677	3,425
Halleck.....	251	5,220	Gold Run.....	679	3,245
Osino.....	265	5,100	Colfax.....	690	3,448
Elko.....	275	5,030	Auburn.....	708	1,385
Moleen.....	287	5,000	Newcastle.....	713	920
Carlin.....	298	4,930	Rocklin.....	722	269
Be-o-wa-we.....	326	4,717	Junction.....	726	189
Shoshone.....	336	4,665	Arcade.....	736	76
Argenta.....	347	4,575	Sacramento.....	744	56
Battle Mountain.....	359	4,534	Stockton.....	792	46
Stone House.....	378	4,419	Livermore.....	835	520
Golgonda.....	402	4,419	San José.....	855	114
Winnemucca.....	419	4,355	San Francisco.....	882	0
Raspberry.....	440	4,354			

Saint Paul & Pacific Railroad.

	From St. Paul.	Elevation.
Low water in Mississippi River at Saint Paul.....	0	676
Saint Paul Depot.....	0	689
Base of the capitol, Saint Paul.....	0	782
Bluffs head of Robert street.....		901
Summit avenue bluff.....		910
Summit, between Saint Paul and Saint Anthony, 3 feet cut.....	5	
Junction at Saint Anthony.....	9.5	829
Mississippi River, low water, at Nicollet Island, Saint Anthony.....	9.5	791
Minneapolis Station.....	10.5	821
Mississippi River, low water, half-mile below Saint Anthony's Falls.....	9.5	711½

Saint Paul & Pacific Railroad—Continued.

	From St. Paul.	Eleva- tion.
	<i>Miles.</i>	<i>Feet.</i>
Self's Lake, water.....	17	842
Wayzata Station.....	24	922
Lake Minnetonka, water.....	25	913
Long Lake Station.....	28	940
Crow River crossing, track.....	40	914
Delano.....	40	914
Waverly Station.....	48.5	998
Twelve-mile Creek.....	51.5	986
Howard Lake.....	54	1,040
Smith Lake.....	57	1,040
Sucker Creek, track.....	59	1,043
Sucker Creek, water.....	60	1,063
Cokato Station, at Collingwood Creek.....	62	1,068
	64	1,013
	67.5	1,107
Level of marsh.....	68.5	1,078
	69.5	1,108
Darwin, Big Prairie.....	72	1,118
Litchfield Station.....	79	1,116
Swede Grove Station.....	86	1,177
Anderson's Hill, cut fifteen feet.....	89	1,202
Summit, Atwater.....	91	1,198
Cut 10½ feet.....	92	1,228
Highest point on line, cut three feet.....	95.5	1,255
Very rolling surface to Kandiyohi Station.....	98	1,207
Willmar, Foot Lake.....	105	1,115
Saint John's.....	110.5	1,107
Nearly level to Kirkhoven.....	118	1,095
Smooth surface to De Graff Station.....	127	1,047
Sharp summit, cut sixteen feet.....	132	1,052
Gradual descent, smooth surface, to Benson Station.....	134	1,033
Chippewa River, bridge track.....	135.5	1,021
Chippewa River, water.....	135.5	1,012
Gradual ascent, smooth surface, to Randall Station.....	141	1,036
Gradual ascent, smooth surface, to 147-mile post.....	147	1,060
Hancock Station.....	150	1,141
Summit.....	151.5	1,158
Pomme de Terre River, track.....	155.5	1,064
Pomme de Terre River, water.....	155.5	1,053
Morris Station.....	159	1,113
Summit 161-mile post.....	161	1,142
Smooth surface to Douglas Station.....	167.5	1,112
Gradual descent, smooth surface to Herman Station.....	178	1,054
Smooth surface to Mustinka Creek.....	184.5	1,012
Smooth surface to Gorton.....	185.5	1,008
Smooth surface to Tintah.....	194.5	982
Smooth surface to Rabbit Run.....	201	968
Smooth surface to Campbell Station.....	202	968
Smooth surface to Doran Station.....	209	959
Smooth surface to Breckenridge Station.....	217	948

*Branch line of the Saint Paul & Pacific Railroad,
(From Saint Anthony to Brainerd.)*

Junction at Saint Anthony.....	9.5	829
Manomin.....	17	833
Rice Creek, water level.....	17	807
Coon Creek, water level.....	21.5	817
Anoka.....	27	869

Branch line of the Saint Paul & Pacific Railroad—Continued.

	From St. Paul.	Eleva- tion.
	<i>Miles.</i>	<i>Feet.</i>
Rum River, water level.....	27.5	831
Itaska.....	34	886
Elk River Station.....	39	894
Elk River, water level.....	43	881
Big Lake Station.....	48	921
Becker.....	56	963
Clear Lake Station.....	63	984
Saint Cloud, east shore of Mississippi River.....	73.5	1,011
Saint Cloud, west shore of Mississippi River.....	75	1,025
Mississippi River at Saint Cloud, water.....		953
Mississippi River at Sauk Rapids, water.....		982
Sauk Rapids Station.....	76	999
Watab Station.....	82	1,048
Little Rock River, track.....	85	1,015
Little Rock River, water.....	85	1,002
Langola Station.....	89	1,054
Platte River, track.....	95	1,064
Platte River, water.....	95	1,054
Belleveue.....	96	1,075
Smooth surface to Little Falls, track.....	106	1,109
Smooth surface to Belle Prairie.....	111	1,125
Summit.....	118.5	1,167
Fort Ripley.....	120	1,153
Sokay River, water.....	120	1,134
Crow Wing.....	127	1,181
Buffalo Creek.....	133.5	1,198
Buffalo Creek, low water.....	133.5	1,167
Summit between Buffalo and Buckhorn Creeks.....	134.5	1,196
Buckhorn Creek, track.....	136	1,159
Buckhorn Creek, low water.....	136	1,141
Broken surface to Brainerd, Northern Pacific Junction.....	137	1,208

Saint Vincent branch of the Saint Paul & Pacific Railroad.

East Saint Cloud Station.....	74	1,011
Low water in Mississippi River at Saint Cloud.....	74	953
Vest Saint Cloud.....	75	1,025
Sauk River, track.....	78.5	1,034
Sauk River, first crossing, water.....	78.5	1,017
Sharp Ridge, cut fifteen feet.....	79	1,039
Saint Joe.....	82	1,074
Watab Creek, track.....	83.5	1,058
Sharp Ridge, cut seventeen feet.....	86	1,086
Broken surface to summit.....	87.5	1,136
Broken surface to Avon.....	90	1,116
Broken surface to Two Rivers, water.....	94.5	1,124
Broken surface to Albany.....	96.5	1,187
Broken surface to summit, near 99-mile post.....	99	1,236
Broken surface to Getchell's Creek, water.....	101	1,181
Broken surface to Oakes, a summit.....	103	1,228
Broken surface to Sauk River, second crossing, water.....	106	1,157
Broken surface to Melrose.....	108	1,196
Smooth surface to third crossing of Sauk River, second crossing, track.....	111	1,199
Third crossing of Sauk River, water.....	111	1,187
Broken surface to summit, cut fifteen feet, section 24, township 126, range 34.....	114	1,280
Broken surface to fourth crossing Sauk River, track.....	116	1,226
Sauk River, low water.....	116	1,243
Smooth surface to Sauk Center Station.....	117	1,239
Broken surface, cut of fourteen feet.....	120	1,293
Broken surface to summit, cut of seventeen feet.....	121	1,312

Saint Vincent branch of the Saint Paul & Pacific Railroad.—Continued.

	From St. Paul.	Eleva- tion.
	<i>Miles.</i>	<i>Feet.</i>
Creek, track.....	122.5	1,266
Undulating surface to West Union Station.....	125	1,323
Broken surface to Osakis Station.....	131	1,328
Summit, section 22, township 128, range 36.....	132.5	1,394
Broken surface to 135-mile post.....	135	1,327
Victoria.....	136	1,366
138-mile post.....	138	1,403
Broken surface to creek, track.....	139.5	1,359
Broken surface to Alexandria.....	142	1,382
Very broken surface to Ida Station.....	151	1,402
Broken surface to Chippewa River, track.....	158	1,360
Chippewa River, water.....	158	1,320
Evansville Station, cut twenty-eight feet, fill immediately of fifteen feet..	160	1,345
Very broken surface to summit, cut thirty feet.....	161	1,369
Very broken surface to Christina Station, cut and fill at Christina of forty-two feet.....	166	1,219
Very broken surface to summit, cut five feet.....	169.5	1,287
Very broken surface to Saint Oloff.....	173.5	1,335
Very broken surface to summit, cut three feet.....	176	1,357
Very broken descent to Pomme de Terre River, track.....	179	1,230
Pomme de Terre River, water.....	179	1,196
Pomme de Terre River, bottom.....	179	1,192
Broken surface to Tumuli Station.....	180	1,196
Broken and irregular descent to Red River Crossing, water.....	186.5	1,062
Red River bottom.....	186.5	1,017
Red River Falls Station.....	187	1,122
Undulating, slow descent to 192-mile post.....	192	1,099
Section 1, township 133, range 45.....	200	1,067
Smooth surface to 204-mile post.....	204	1,064
Section 15, township 135, range 45.....	210	1,096
Smooth surface to 212-mile post.....	212	1,105
Smooth surface to 216-mile post.....	216	1,029
Smooth surface to section 31, township 137, range 45.....	220	1,019
Smooth surface to Wilson River, track.....	222	1,003
Wilson River, bottom.....	222	988
Smooth surface, slow descent to Glyndon, N. P. R. R. Junction.....	238.5	923
Smooth surface to Buffalo River, track.....	241.5	919
Buffalo River, water.....	241.5	906
Buffalo River, bottom.....	241.5	901
Smooth, level surface, Averill Station.....	246	918
Smooth surface to Felton Station.....	253	916
Smooth surface to Borup Station.....	259	912
Smooth surface to Wild Rice River and Station, track.....	266	910
Wild Rice River, bottom.....	266	896
Wild Rice River, water.....	266	901
Smooth surface to Elm Creek, water.....	268	891
Smooth surface to Stanley Station.....	273	902
Smooth surface to Rolette Station.....	280	894
Smooth surface to Beltrami Station.....	285.5	903
Smooth surface to Sand Hill River, water.....	286	899
Smooth surface to Kittson Station.....	296	886
Smooth surface to top of first bluff, Red Lake River.....	302.5	862
Red Lake River, track on bridge.....	302.5	848
Red Lake River, water level.....	302.5	841
Red Lake River, bottom.....	302.5	824
Top of bluff on north side Red Lake River *.....	303	869
Smooth surface, gentle ascent to summit.....	308	889
Smooth surface to 310-mile post.....	310	904
Smooth surface to 320-mile post.....	320	886
Smooth surface to 330-mile post.....	330	843
Smooth surface to Snake Hill River, water.....	333.5	841

* The valley is just a mile across, with single well-defined bluffs.

Saint Vincent branch of the Saint Paul & Pacific Railroad.—Continued.

	From St. Paul.	Eleva- tion.
	<i>Miles.</i>	<i>Feet.</i>
Smooth surface to 340-mile post	340	851
Smooth surface to Middle River, track	343.5	847
Middle River, water	343.5	834
Middle River, bottom	343.5	831
Smooth surface to section 8, township 157, range 48	350	839
Smooth surface to Tamarack River, track	351	830
Tamarack River, water	351	817
Tamarack River, bottom	351	815
Smooth surface to south branch of Two Rivers, track	375	815
South branch of Two Rivers, water	375	803
South branch of Two Rivers, bottom	375	787
Smooth surface to north branch of Two Rivers, track	380	801
North branch of Two Rivers, water	380	787
North branch of Two Rivers, bottom	380	781
Smooth surface to 392-mile post	392	798
Slow, irregular descent to the immediate bank of Red River, track	394	791
Saint Vincent, bank of Red River	394	792
Saint Vincent, bottom of Red River	394	744
Saint Vincent, high water of 1866	394	787
Saint Vincent, usual water-surface	394	758

NOTE.—From mile-post 131 to 188 there are frequent fills and cuts.

Saint Paul & Sioux City and Sioux City & Saint Paul Railroads.

Belle Plaine	47	781
Blakeley	52	785
East Henderson	58	791
Le Sueur	63	811
Ottawa	69	847
Kasota	77	853
Mankato	86	849
South Bend	90	866
Lake Crystal	100	1,053
Madelia	110	998
Saint James	121	1,058
Butterfield	130	1,163
Mountain Lake	137	1,277
Bingham Lake	143	1,397
Windom	148	1,326
Wilder	154	1,423
Heron Lake	160	1,394
Hersey	170	1,465
Worthington	178	1,563
Bigelow	188	1,603
Sibley	196	1,485
Le Mars	245	1,196

Saint Paul, Stillwater & Taylor's Falls Railroad.

Saint Paul (low water in Mississippi River)	0	676
Saint Paul (high water in Mississippi River)	0	697
Junction with Saint Paul & Pacific Railroad	1.5	762
Crossing, Lake Superior & Mississippi Railroad, Phalen's Creek, track		817
Grade of Lake Superior & Mississippi Railroad here is twenty feet lower		797
Phalen's Creek, (bottom,) third crossing	2	791
Broken surface to second crossing of Phalen's Creek, track	3	841
Phalen's Creek, second crossing, bottom	3	826

Saint Paul, Stillwater & Taylor's Falls Railroad—Continued.

	From St. Paul.	Eleva- tion.
	<i>Miles.</i>	<i>Feet.</i>
Broken surface to first crossing of Phalen's Creek, track.....	3.5	859
First crossing of Phalen's Creek, bottom.....	3.5	841
Broken surface to creek at Ames's farm, track.....	4.5	911
Creek at Ames's farm, bottom.....	4.5	880
Broken ascent to beginning of descent to the Mississippi River, cut fifteen feet.....	6	976
Broken surface to Tamarack Swamp, track.....	6.5	966
Tamarack Swamp, natural surface.....	6.5	961
Summit one-half mile west of Oakdale Station, cut ten feet.....	8	996
Oakdale Station.....	8.5	967
Broken surface to the level of Lower Bass Lake.....	12	874
Level of Upper Bass Lake.....	12	888
Bass Lake Station.....	12	921
Nearly level and smooth surface to Weir's Station.....	13	911
Summit four miles from Stillwater.....	15	917
Crossing West Wisconsin Railroad, cut seventeen feet.....	15.5	875
Broken descent to marsh, bottom.....	17.5	741
Center of gravel ridge one and a half miles from Stillwater, cut fifty feet.....	17.5	761
Broken descent to high water at Stillwater.....	19	675
Low water in Saint Croix Lake at Stillwater.....	19	655

Lake Superior & Mississippi Railroad.

	From Duluth.	Eleva- tion.
Surface of Lake Superior at Duluth in 1870.....	0	600
Duluth.....	0	605
Thomson, Dalles of the Saint Louis River.....	24	1,027
Highest point on entire line, both of grade and natural surface.....	33	1,166
Moose Lake Depot.....	45	1,052
Kettle River Depot, ground a little to the north and south fifteen to twenty feet higher.....	60	1,112
Hinckley, at Grindstone River.....	78	1,023
Lowest place between Hinckley and next summit.....	80	1,005
Summit.....	86	935
Summit, 20 feet higher than at one-half mile to the north or south.....	90	944
Pine City, at Snake River.....	97	978
Two and a half miles south of Snake River, at summit.....	101	908 [†]
Rush City, at creek*.....		886
Goose Lake.....		915
Between Goose Lake and North Branch.....	113	883
North Branch, at creek.....		906
Between North Branch and Wyoming.....	125	887
Wyoming, at the river.....	125	897
Wyoming Depot.....	129	904
Forest Lake Depot.....	132	953
Summit between Forest Lake and Rice Creek.....	133 [‡]	916
Rice Creek†.....	138	927
Centreville Depot.....	143	920
Junction at White Bear Lake.....	145 [‡]	959
Summit between White Bear Lake and Saint Paul, eight feet cut.....	151 [‡]	870
Between Phalen's Lake and Saint Paul.....		
Lowest known water in Mississippi River at St. Paul (extreme range twenty-one feet).....	155	676
Highest known water in Mississippi River at Saint Paul.....	155	697

* Descending gradually from Rush City to Goose Lake.

† Country generally level for five miles south of Rice Creek.

Northern Pacific Railroad.

From Duluth.	Eleva- tion.
Duluth, level of Lake Superior	0 600
Junction, natural ground.....	24 1,079
Junction, grade.....	24.2 1,080
Otter Creek, bed of creek.....	27 1,126
natural ground.....	34 1,333
Norman, grade.....	34.1 1,322
Kettle River, bed of river.....	41.7 1,285
natural ground.....	44.7 1,329
Island Lake, grade.....	46 1,305
Tamarack River, bed of river.....	51.7 1,285
natural ground.....	51.9 1,309
natural ground.....	55.2 1,278
Sicottes, grade.....	58.1 1,265
Hay River, bed of river.....	62.2 1,222
natural ground.....	62.8 1,238
Sandy River, bed of river.....	65.4 1,213
natural ground.....	72.3 1,212
natural ground.....	73.8 1,260
Kimberly, grade.....	76 1,231
Rice River, bed of river.....	76.5 1,203
natural ground.....	80.8 1,248
Sisabagama Creek, bed of creek.....	83.5 1,200
natural ground.....	85.3 1,235
Aiken, grade.....	87.1 1,202
Mud River, bed of river.....	87.7 1,186
natural ground.....	90.2 1,218
Cedar River, bed of river.....	91.8 1,193
natural ground.....	97.5 1,299
Withington, grade.....	98.2 1,266
natural ground.....	103.6 1,297
Brainard, grade.....	115 1,204
Mississippi River, bed of river.....	115.5 1,138
Banks of the Mississippi River, grade.....	120.6 1,199
Frenchman's, grade.....	120.9 1,206
natural ground.....	120.9 1,206
Gull River, bed of river.....	122.5 1,161
natural ground.....	124.7 1,204
Pillager Creek, bed of creek.....	127.6 1,166
Pillager, grade.....	128.2 1,180
Pillager, natural ground.....	135.5 1,222
Brow Wing River, bed of river.....	136.5 1,197
Motley, grade.....	137.1 1,220
natural ground.....	141.5 1,250
Jayden's Branch, bed of creek.....	143.3 1,224
natural ground.....	150.9 1,342
Aldrich, grade.....	151.3 1,326
Cartridge River, bed of river.....	151.5 1,304
natural ground.....	155.3 1,347
Ving River, bed of river.....	156.5 1,312
natural ground.....	158.2 1,357
Union Creek, bed of creek.....	161.3 1,320
Nadena, grade.....	161.9 1,349
natural ground.....	164.1 1,354
Leaf River, bed of river.....	166.4 1,307
Grabee, grade.....	174.8 1,409
natural ground.....	177.2 1,431
Butter Tail River, bed of river.....	183.4 1,318
Perham, grade.....	185.5 1,366
natural ground.....	190.7 1,379
Butter Tail River, bed of river.....	192.6 1,335
Robart, grade.....	195.4 1,384
natural ground.....	196.1 1,402
Butter Tail River, bed of river.....	196.2 1,353

Northern Pacific Railroad—Continued.

	From Duluth.	Eleva- tion.
	<i>Miles.</i>	<i>Feet.</i>
Otter Tail River, natural ground.....	201.4	1,420
Pelican River, bed of river.....	205.8	1,337
Detroit, grade.....	206.6	1,362
natural ground.....	210.7	1,406
Oak Lake, grade.....	210.9	1,367
Audubon, grade.....	213.6	1,368
natural ground.....	214.7	1,267
natural ground.....	217.0	1,348
Lake Side, grade.....	219.2	1,333
Hay Creek, bed of creek.....	224.2	1,200
Hay Creek, bed of creek.....	226.6	1,167
Buffalo River, bed of river.....	227.4	1,150
Buffalo River, bed of river.....	230.1	1,132
Hawley, grade.....	230.4	1,150
natural ground.....	231.4	1,195
Muskoda, grade.....	234.9	1,083
Buffalo River, bed of river.....	238.3	938
Red River Flats, natural ground.....	242	978
Glyndon, grade.....	243.2	923
Moorhead, grade.....	252	904
Red River, bed of river.....	252.2	857
Red River Banks, natural ground.....		902
First Cheyenne crossing.....	258	900
Summit between two crossings.....	306	1,445
Second Cheyenne crossing.....	311	1,230
Lake Eckelson.....	329	1,418
Summit between Cheyenne and James Rivers.....	342	1,495
James River.....	346	1,393
On Coteau du Missouri.....	366	1,861
Divide on Coteau du Missouri.....	387	1,795
On Coteau du Missouri.....	425	1,873
Missouri River, at mouth of Heart River.....	440.5	1,700

Southern Minnesota Railroad.

Grand Crossing, Mississippi River, opposite La Crosse.....	626
Rushford.....	711
Lanesborough.....	831
Isinour's, section 20, township 103, range 10.....	888
Fountain.....	1,289
Grand Meadow, section 24, township 103, range 15.....	1,325
Section 13, township 103, range 16.....	1,402
Ramsey, grade Milwaukee & Saint Paul Railroad.....	1,207
Hayward.....	1,240
Winnebago City.....	1,089
Water in Blue Earth River, one mile west of Winnebago City.....	1,004
Section 25, township 104, range 30.....	1,106
Section 1, township 103, range 33.....	1,215
Section 25, township 104, range 36.....	1,381
Water in Des Moines River.....	1,280
Heron Lake.....	1,361
Graham Lake.....	1,403
Section 3, township 102, range 22.....	1,315
Section 33, township 101, range 21.....	1,250
Section 36, township 101, range 24.....	1,222
Section 31, township 101, range 24.....	1,245

SECTION IV.

BAROMETRIC PROFILES.

Section across the table land of Mexico, (Humboldt.)

	Miles.	Elevation.
		<i>Feet.</i>
Direction, north 65° west:		
Vera Cruz.....	0	0
Cerro Gordo.....	42	224
Xalapa.....	57	479
San Miguel el Soldado.....	62	581
Parage de Carros.....	69	7,392
Las Vigas.....	72	7,821
El Manzanillo.....	78	7,879
Rio Frio.....		7,661
Direction, south 52° west:		
Cruz Blanca.....		7,699
Perote.....	85	7,724
El Porta Chuello.....	95.5	7,839
Venta de Sotto.....	100.5	7,686
Venta de el Ojo de Agua.....	112.5	7,469
El Pinal.....	123	8,364
Acaxete.....	130	7,277
Cocosingo.....	137	7,603
Direction, north 76° west:		
El Puebla de los Angeles.....	152	7,200
San Francisco Ocotlan.....	162.5	7,680
Saint Martin.....	178.5	7,712
Venta de Tesmelucos.....	187.5	8,269
Venta de el Agua.....	191	9,476
Venta de Rio Frio.....	194.5	10,123
Baraucas de Joannes.....	196.5	10,487
Venta de Cordoba.....	205.5	8,697
Venta de Chalco.....	212.5	7,711
City of Mexico.....	230	7,469
Direction, south 14° west:		
San Augustin de las Cuevas.....	239	7,615
La Cruz del Marques.....	251	9,821
Guchilaque.....	261	8,013
Cuernavaca.....	265	5,429
Puentita de Istla.....	288	3,223
Tepecuacuilca.....	312.5	3,319
Fuente d'Estola.....	331.5	2,699
Mescala.....	356	1,695
Sopilote.....	365	3,306
Sampango.....	374	3,587
Chilpansingo.....	379	4,527
Masatlan.....	386	4,169
Acaguisotla.....	391	3,223
Alto de Caxones.....	393	3,741
Venta de la Moxonera.....	402	2,539
Venta de Tierra Colorada.....	407	1,311
Val del Papagayo.....	409	627
Alto del Peregrino.....	411	1,138
Val del Peregrino.....	413	544
Alto de los Pozuellos.....	417	1,471
El Exido.....	433	1,362
Acapulco.....	442	0

Plateau of Mexico—Line from the City of Mexico to Santa Fé, N. M.

Elevation	Miles		Miles.	Elevation.
Mexico		Humboldt		<i>Fct.</i> 7,469
Tula		Humboldt		6,733
San Juan del Rio		Humboldt		6,490
Queretaro		Humboldt		6,362
Celaya		Humboldt		6,017
Salamanco		Humboldt		5,761
Guanaxuato		Humboldt		6,836
Silaó		Burkart		5,911
Villa de Leon		Burkart		6,133
Lagas		Burkart		6,376
Aguas Calientes		Burkart		6,261
San Luis Potosi		Burkart		6,090
Zacatecas		Burkart		8,038
Fresnillo		Burkart		7,244
Durango		Oleiza		6,848
Parras		Wizlizenus		4,985
Saltillo		Wizlizenus		5,240
El Bolson de Mapini		Wizlizenus		4,100
Chihuahua		Wizlizenus		4,638
Cosiquiriachi		Wizlizenus		6,273
Paso del Norte		Wizlizenus		3,810
Santa Fé		Wizlizenus		7,047

Survey of the Mexican boundary, by Major W. H. Emory.

Fort Brown, Texas	165
Ringgold Barracks	522
Edinburgh	422
Fort McIntosh	806
Fort Duncan	1,461
San Antonio	579
Castroville	672
Qaibi	856
Rio Seco	937
Comanche Creek	924
Camp near Fort Inge	911
Camp near Nueces	932
Elm Creek	1,094
Zoqueté Creek	983
San Felipe	818
Painted Caves	952
San Pedro River	1,810
Second crossing San Pedro River	1,843
Head of San Pedro River	1,681
Howard's Spring	2,054
Live Oak Creek	2,083
Pecos	2,027
Escondido Spring	2,806
Leon Spring	3,098
Limpia	4,004
Head of Limpia	4,688
Eagle Spring	4,536
Station near Presidio del Norte	2,779
Rio Bravo (where road from San Antonio strikes it)	3,484
San Elceario	3,607
Initial point on Rio Bravo (parallel 31° 47' N.)	3,684
Frontera	3,796
Neides's Spring	4,310
Cook's Spring	4,777
Santa Rita del Cobre	6,106

Survey of the Mexican boundary, by Major W. H. Emory.—Continued.

	Miles.	Elevation.
		<i>Feet.</i>
Ojo de Vaca.....		4,989
Carrizalillo.....		4,455
Espia.....		4,028
Ojo de Inez.....		5,293
Ojo de Perro.....		4,692
Alamo de Hueco.....		4,650
Ojo de Picacho.....		4,694
Salt Lake (parallel 32° 22' N.).....		3,994
Salt Lake Spring (Playa de los Pimos).....		4,194
Quercus Cañon.....		4,170
Camp on Gila, near Mount Graham.....		2,976
Summit of San Luis Mountain.....		5,819
Ojo de San Luis.....		5,044
Guadalupe Cañon.....		4,448
San Bernardino.....		3,677
Agua Prieta.....		4,017
Spring at head of Rio San Pedro.....		4,384
Rio San Pedro (near parallel 32° 22' N.).....		3,718
Summit of pass near Santa Cruz.....		5,470
Santa Cruz.....		4,498
Los Nogales.....		3,836
Junction of Gila and Colorado.....		275
New initial point on Colorado.....		156

Route of Lieutenant Emory, from Fort Leavenworth, Kansas, to San Diego, California.

	Miles.	Elevation.
Fort Leavenworth.....	0	
Camp 2, on Stranger's Creek.....		1,044
Camp 3, on Kansas River.....		850
Camp 4, Oregon Trail, on the Makurissi.....	43	781
Camp 5, on the Santa Fé road.....		1,060
Camp 6, on 110 Creek.....		1,179
Camp 8, at Big John Spring.....	124	1,456
Camp 9, at Diamond Spring.....	144	1,511
Camp 10, on Cottonwood Stream.....	173	1,372
Camp 12, on Little Arkansas.....		1,695
Camp 13, on branch of Cow Creek.....	231	1,703
Camp 14, on Arkansas River where the Santa Fé road first strikes it.....	253	1,642
Camp 15, on Arkansas River.....		1,840
Camp 16, on the Pawnee Fork.....	288	1,932
Camp 19, on the Arkansas.....		2,196
Camp 20, in Jackson Grove.....	352	2,519
Camp 21, on the Arkansas.....		2,652
Camp 22, on the Arkansas.....		2,940
Camp 23, on the Arkansas.....	418	2,988
Camp 24, on the Arkansas.....		3,268
Camp 25, on the Arkansas.....		3,319
Camp 26, on the Arkansas.....	482	3,396
Camp 27, on the Arkansas.....		3,594
Camp 28, on the Arkansas.....		3,779
Camp 29, on the Arkansas.....		3,862
Camp 30, near Bent's Fort.....	564	3,942
Camp 31, on the Timpa.....		4,523
Camp 32, on the Timpa.....	598	4,761
Camp 33, at Hole in the Prairie.....		5,560
Camp 34, on the Purgatory.....	651	5,896
Camp 35, in the valley of the Raton.....	668	7,169
Summit of the Raton.....		7,754
Camp 36, on the Canadian.....	685	6,112

Route of Lieutenant Emory, from Fort Leavenworth, &c.—Continued.

	Miles.	Elevation.
Camp 38, on Cummaron Citon	715	6,027
Camp 39, on the Ocaté		6,946
Camp 40, at the Pools	765	6,670
Camp 41, on the Sapillo		6,395
Camp 42, at the village of the Vegas	792	6,418
Camp 43, at Vernal Springs	811	6,299
Camp 44, one-half mile south of the Pecos		6,346
Camp 45, on the Pecos, near Pecos Village		6,366
Camp 48, two miles below San Felipe		5,158
Camp 51, near Pualta		4,862
Camp 58, on the Rio del Norte, where the road strikes it		4,910
Camp 59, one mile south of San Dia		4,846
Camp 61, seven miles below Albuquerque, on the Rio del Norte		4,756
Camp 62, seven miles below Isoletta, on the Rio del Norte	959	4,636
Camp 63, nine miles below Tomé		4,670
Camp 66, near Socorro		4,563
Camp 70, on the east side of the Rio del Norte		4,241
Camp 75, in the mountains, between the Rio del Norte and the copper mines	1,154	5,426
Camp 76, near the copper mines		6,167
Camp 78, on the Gila	1,209	4,347
Camp 79, on the Gila		4,096
Camp 80, on the Gila		3,989
Camp 81, on the Gila	1,259	3,732
Camp 82, on the Gila		3,615
Camp 83, on the Gila	1,297	3,147
Camp 84, on the Gila		2,969
Camp 85, on the Gila		2,852
Camp 86, on the Gila	1,360	2,674
Camp 87, on Rio San Francisco, two miles from its mouth	1,369	2,557
Camp 89, on Disappointment Creek	1,390	3,781
Camp 90, on the Gila		2,172
Camp 91, on the San Pedro	1,428	2,115
Camp 92, on the Gila		2,122
Camp 93, on the Gila	1,457	1,751
Camp 94, Carson's Plains, on the Gila		1,596
Camp 95, Carson's Plains, on the Gila	1,494	1,419
Camp 96, in the Pimos Village, on the Gila		1,308
Camp 99, on the Gila	1,561	845
Camp 100, on the Gila		501
Camp 101, on the Gila	1,600	293
Camp 102, on the Gila		231
Camp 103, on the Gila	1,639	236
Camp 104, on the Gila		248
Camp 105, on the Gila	1,665	253
Camp 106, on the Gila, near its mouth	1,687	254
Camp 108, on the Jornada		210
Camp 109, on the Jornada		176
Camp 110, at a salt lake on the Jornada		52
Camp 111, on the Jornada	1,786	445
Camp 112, Valla Citron	1,802	1,539
Divide		2,670
Camp 114, at Warner's Agua Caliente	1,837	3,013
Camp 115, Santa Isabella, on Captain Storer's Ranch		3,050
Camp 117, San Pascual		716
San Diego	1,916	30

Route of Lieutenant Parke, from San Diego, California, to Gila River.
(Pacific Railroad Report, Vol. VII.)

	Miles.	Elevation.
		Feet.
Bay of San Diego	0	0
Mission of San Diego	7	64
Outlet Cajon Gap	10	101
Head Cajon Gap	12	283
Cajon Rancho	20	412
Capitan Grande (Indian village)	32	730
Head Oakwood Cañon	47	2,985
Santa Isabel Rancho	49	2,957
Santa Isabel Summit	51	3,360
San José	55	2,768
Warner's Rancho	59	3,022
Warner's Pass	64	3,630
San Felipe	75	2,455
Mouth of cañon (desert valley)	80	1,920
Gorge of valley	87	1,476
Base of mountain (Colorado Desert)	99	680
Arroyo of Carriso Creek (Colorado Desert)	110	50
Arroyo of New River (Colorado Desert)	130	—100
Near Cook's Well (Colorado Desert)	171	500
Mouth of Yuma River (at Fort Yuma)	189	180

Route of Captain Pope. (Pacific Railroad Report, Vol. II.)

Red River, near Preston		641
Preston	0	790
Big Mineral	15	1,228
East edge of Lower Cross Timbers	24	1,365
Clear Fork of Trinity	46	1,370
Elm Fork of Trinity	57	1,602
East edge of Upper Cross Timbers	65	1,783
West Fork of Trinity	131	1,524
Divide between Brazos and Trinity Rivers	138	1,707
Clear Fork	187	2,119
Divide between Colorado and Brazos Rivers	285	4,237
Colorado River	308	3,989
Sulphur springs near border of Llano Estacado	352	4,277
East margin of Llano Estacado	355	4,430
Summit of Llano Estacado	443	4,707
West margin of Llano Estacado	474	4,144
Pecos at mouth of Delaware Creek	476	4,069
Head-springs of Delaware Creek	507	4,172
Summit of Guadalupe Pass	531	5,717
Ojo del Cuerbo	554	3,893
Sierra de los Alamos	589	4,568
Summit of Hueco Pass	605	4,812
Hueco Tanks	612	3,935
Molino, on Rio Grande (near El Paso)	636	3,830

Route of Lieutenant Whipple. (Pacific Railroad Surveys, Vol. IV.)

Napoleon, Arkansas		142
Little Rock, Arkansas		351
Fort Smith	0	466
Camp Creek (from Fort Smith)	23	568
First camp on Sans Bois Creek	49	552
Santa Rita Creek	64	680
La Honda	79	632

Route of Lieutenant Whipple—Continued.

	Miles.	Elevation.
		<i>Feet.</i>
Shawnee Village	117	812
Head of Boggy River	146	917
Topofki Creek	164	1,132
Beaversville	177	1,083
Little Creek	194	1,199
First camp on Walnut Creek	207	1,137
Second camp on Walnut Creek	218	1,440
Branch Creek	235	1,402
Deer Creek	249	1,392
Deer Creek Spring	259	1,692
Natural Mound Creek	277	1,735
Gypsum Creek	292	1,711
Comet Creek	305	1,619
Silver Creek	316	1,803
Oak Creek	329	1,748
Epsom Spring	343	2,171
Sweet Water Run	355	2,214
Canadian River	372	2,162
Mouth of Wolf Creek	385	2,319
Mouth of Wine Creek	403	2,454
Mouth of Valley Creek	414	2,505
Mouth of Spring Creek	428	2,678
Llano Estacado:		
Last camp on Canadian River	447	2,847
Highest intermediate point		3,276
White Sandy Creek	463	3,184
Divide		3,389
Shady Creek	482	3,265
Divide		3,536
Beautiful View Creek	498	3,405
Divide		3,804
Rincon de la Cruz	515	3,778
Divide		4,070
Rocky Dell Creek	540	3,932
Divide		4,056
Cañada Truxillo	559	3,938
Divide		4,253
Branch of Tucumcari Creek	582	4,125
Tucumcari Creek	601	4,262
Laguna Colorado	620	4,587
Arroyo Cuerbito	639	4,848
Hurrah Creek	651	5,047
Sheep Spring	671	5,464
Anton Chico	678	5,373
Cañon Blanco	698	6,320
Laguna Blanco	713	6,796
San Pedro Pass	731	6,251
San Antonio	753	6,409
Albuquerque	769	5,026
Atrisco	771	5,033
Isleta (on river bank)	783	4,910
Isleta (top of bluff)		5,052
Divide		5,575
Rio Puerco (in river bed)	804	5,193
Divide		5,705
Rio San José (near ruins of Rita)	822	5,556
Covero	835	5,880
Hay Camp	848	6,081
Campbell's Pass		6,952
East slope of Sierra Madre	865	7,031
Summit (on the road)		8,076
Agua Fria	872	7,757
Inscription Rock (El Moro)	888	7,238

Route of Lieutenant Whipple—Continued.

	Miles.	Elevation.
		<i>Fect.</i>
Ojo del Pescado.....	902	6,551
Tuni River.....	912	6,336
Arch Spring.....	921	6,350
Cedar Forest.....	932	6,162
Jacob's Well.....	951	5,973
Navajo Springs.....	958	5,655
Carriso Creek.....	961	5,550
Lithodendron Creek.....	980	5,500
First camp on Flax River.....	1,003	5,016
Eighth camp on Flax River.....	1,060	4,594
Cosnino Caves.....	1,087	6,139
Near San Francisco Springs.....	1,098	6,666
Laroux's Spring.....	1,107	7,378
San Francisco Peak.....		12,052
Junction of Cañon Diablo and Flax River.....		4,594
Lava Creek.....	1,139	6,318
Partridge Creek.....	1,156	5,122
Val de China (near Picacho).....	1,172	4,734
Pueblo Creek.....	1,189	5,203
First camp on Williams's River.....	1,201	5,752
Fourth camp on Williams's River.....	1,218	4,814
White Cliff Creek.....	1,244	3,526
Fifth camp on Williams's River.....	1,267	2,243
Tenth camp on Williams's River.....	1,295	1,308
Thirteenth camp on Williams's River.....	1,310	1,014
Sixteenth camp on Williams's River.....	1,329	694
Mouth of Williams's River.....	1,346	378
First camp on Colorado River.....	1,350	398
Last camp on Colorado River.....	1,397	430
Yucca Grove.....	1,437	4,382
Rock Spring.....	1,444	4,896
Near Marl Spring.....	1,461	3,793
Soda Lake.....	1,488	1,002
First camp on Mohave River.....	1,501	1,216
Fifth camp on Mohave River.....	1,560	2,474
Northeast slope of San Bernardino Mountain.....	1,583	3,442
Summit Cajon Pass.....		4,560
Cajon Creek.....	1,597	2,527
Cocomungo Creek.....	1,611	1,223
San Gabriel Creek.....	1,635	249
Near Los Angeles.....	1,647	352
Los Angeles.....	1,649	250
San Pedro.....	1,673	30

Route of Captain Gunnison and Lieutenant Beckwith. (Pacific Railroad Report, Vol. II.)

Low-water mark at St. Louis, Missouri.....	0	375
Three miles west of Westport.....	3	990
Pawnee Fork.....	297	1,962
First Coon Creek.....	318	2,004
Second Coon Creek.....	337	2,245
Near Fort Atkinson, Arkansas River.....	365	2,331
Camp 22, on Arkansas River.....	391	2,431
Camp 23, on Arkansas River.....	410	2,556
Camp 24, on Arkansas River.....	433	2,692
Camp 25, on Arkansas River.....	454	2,852
Camp 26, on Arkansas River.....	479	3,047
Big Timbers, on Arkansas River.....	501	3,166
Camp 28, on Arkansas River.....	521	3,328

Route of Captain Gunnison and Lieutenant Beekwith—Continued.

	Miles.	Elevation.
		<i>Feet.</i>
Camp 29, on Arkansas River.....	544	3,537
Near Bent's Fort	559	3,671
Camp 32, ford of Arkansas River.....	593	4,371
Apishpa River.....	621	4,860
Camp 35, plain near Apishpa River.....	636	5,702
Camp 36, plain near Cuchara River.....	653	5,851
Camp 37, on Cuchara River	664	6,109
Huerfano River, near the butte.....	674	6,099
Camp 39, on Huerfano River.....	688	6,976
Base of the Sierra Blanca	696	7,463
Camp 41, in Sangre de Cristo Pass	701	8,757
Top of the mountain		9,852
Summit of the pass.....		9,396
Camp 42, Sangre de Cristo Valley.....	705	9,041
Camp 43, Sangre de Cristo Valley.....	711	8,412
Near old Fort Massachusetts.....	721	8,365
White Mountain Springs.....	732	7,829
Near Roubideau's Pass	745	7,638
Near Williams's Pass	755	7,723
Chatillon's Creek	764	7,593
Leroux's Creek	777	7,698
Homan's Creek	782	7,548
Sahwatch Creek.....	797	7,567
Foot of Cochetopa Pass.....	824	8,960
Summit of Cochetopa Pass.....	828	10,032
Camp 55, near Camp Rock.....	850	8,515
Cochetopa Creek	866	7,681
Gunnison River	880	7,428
Camp 58, Gunnison River.....	894	7,293
Summit of right bank of Lake Fork.....		8,171
Lake Fork (on stream).....	902	7,236
Mountain Creek	907	8,054
Summit of mesa		8,286
Cebolla Creek, first branch.....	920	7,026
Crossing of Cedar Creek.....	929	6,962
Camp 65, Uncompahgre River.....	949	6,085
Camp 66, Uncompahgre River	967	5,332
Kahnah Creek.....	996	4,764
Camp 69, Grand River.....	1,010	4,449
Camp 70, Grand River.....	1,019	4,410
Little Salt Creek	1,033	4,274
Bitterwater River	1,055	4,486
Rainwater Creek	1,071	4,454
Camp 75, Rainwater Creek	1,093	4,642
Camp 77, Green River	1,122	3,873
Camp 78, Green River	1,123	3,828
Akanaquint Spring.....	1,139	4,457
Camp 80, Dry Creek.....	1,155	4,753
White River	1,165	4,592
Clever Creek.....	1,174	4,958
Standingwater Creek.....	1,198	5,719
San Rafael Creek, second branch	1,211	5,429
Garambulla River.....	1,223	5,729
Dividing ridge	1,230	6,246
Big Rock Creek	1,236	5,958
Oak Springs	1,252	6,789
Summit Wahsatch Pass.....	1,258	7,820
Salt Creek.....	1,263	6,977
Swambah Creek.....	1,268	7,623
Ungottahbikin Creek.....	1,276	6,551
Sevier River.....	1,291	5,019
San Pete Creek.....	1,303	4,960
Camp 94, Sevier River	1,322	4,868

Route of Captain Gunnison and Lieutenant Beckwith—Continued.

	Miles.	Elevation. Feet.
Camp 95, north bend, Sevier River.....	1,324	4,783
Summit of ridge north of Lake Valley.....	1,329	5,376
Lake Valley.....	1,336	5,237
Summit of ridge south of Lake Valley.....	1,339	5,871
Cedar Springs.....	1,348	5,131
Camp 98, Sevier River.....	1,374	4,692
Pioneer Creek.....	1,420	4,921
Nephi.....	1,473	4,938
Payson.....	1,498	4,541
American Fork.....	1,531	4,596
Willow Creek.....	1,547	4,733
Cottonwood Creek.....	1,558	4,241
Salt Lake City.....	1,568	4,351

*Route of Lieutenant Beckwith, from Salt Lake City to Green River.
(Pacific Railroad Report, Vol. II.)*

Salt Lake City.....	0	4,351
Session Settlement.....	10	4,183
Weber River.....	29	4,430
Weber River (Camp 2).....	37	4,842
Dry Creek.....	58	5,419
White Clay Creek.....	64	5,692
Sulphur Creek.....	104	7,495
Divide between Bear and Muddy Rivers.....	110	8,133
Muddy River.....	116	7,779
Divide of Muddy and Black's Forks.....	121	8,374
Black's Fork.....	125	7,880
Henry's Fork.....	156	7,137
Dry Timber Creek.....	163	7,025

*Route of Lieutenant Beckwith, from Green River to Salt Lake City.
(Pacific Railroad Report, Vol. II.)*

Green River.....	0	4,351
Pass between Smith's and Henry's Forks.....	32	7,530
Smith's Fork.....	54	6,971
Divide between Muddy and Black's Forks.....	65	7,447
Muddy Creek.....	70	6,964
Bear River.....	94	7,196
White Clay Creek.....	105	7,009
White Clay Creek.....	114	6,535
Weber River.....	146	5,672
Weber River, Kamas Prairie.....	158	6,320
Divide on Kamas Prairie.....	.....	6,505
Bank of Timpanogos River.....	167	6,243
Timpanogos River.....	172	6,056
Head of cañon of same.....	188	5,485
Timpanogos River.....	199	5,057
American Fork.....	213	4,596

*Route of Lieutenant Beckwith, from Salt Lake City to Fort Reading, Cali-
fornia. (Pacific Railroad Report, Vol. II.)*

Salt Lake City.....	0	4,351
Mountain Creek.....	71	4,444
Dry Creek.....	81	5,470
Summit of Cedar Mountain Pass.....	88	6,364

Route of Lieutenant Beckwith, from Salt Lake, &c.—Continued.

	Miles.	Elevation.
Fish Creek.....	154	5,077
Franklin River.....	239	6,004
Franklin River.....	254	6,061
Pass in Humboldt Mountains.....	264	6,579
Pass in Humboldt Mountains.....	331	6,848
South Fork of Humboldt River.....	357	6,066
Summit of Quartz Mountain.....	395	7,615
Agate Pass.....	396	5,006
Humboldt River.....	524	4,141
Humboldt River Crossing.....	531	4,147
Lassen's Meadows.....	534	4,152
Valley of Mud Lake.....	632	4,134
East base of Sierra Nevada.....	642	4,118
Foot of Madelin Pass, Smoky Creek.....	661	4,370
Madelin Pass.....	674	4,914
Summit of Madelin Pass.....	684	5,668
Broad Summit of Sierra Nevada.....	686	5,620
Sacramento River.....	746	4,472
Head of upper cañon of same.....	765	4,154
Foot of upper cañon of same.....	779	3,622
Head of second cañon (mouth of Fall River).....	792	3,250
Foot of second cañon.....	802	2,937
Mouth of Canoe Creek.....	806	2,867
Sacramento River.....	829	2,177
Sacramento River.....	836	1,730
Sacramento River.....	863	1,156
Sacramento River.....	868	1,078
Dribblesby's Ferry.....	878	954
Mouth of McCloud's River.....	883	922
Sacramento River.....	895	837
Fort Reading.....	918	675

Route of Lieutenant Beckwith, from Mud Lake to Fort Reading, via Nobles Pass.

Mud Lake.....	645	4,079
Honey Lake.....	703	4,095
Willow Creek.....	714	4,080
Roop's Ranch.....	723	4,181
Divide between Susan River and Summit Creek.....	743	5,454
Divide between Summit and Pine Creeks.....	752	5,802
Black Butte Creek.....	767	5,085
Wolf Creek.....	791	5,983
Western summit of Sierra Nevada.....	793	6,074
Battle Creek.....	798	5,825
Fort Reading.....	841	675

Route of Lieutenant Williamson, from Martinez, near Benicia, to Fort Yuma, California. (Pacific Railroad Report, Vol. V.)

Martinez.....	0	
Livermore's Ranch.....	40	
Entrance to Livermore's Pass.....	44	481
Summit of Livermore's Pass.....	48	686
Elk Horn.....	55	89
Grayson, on San Joaquin River.....	82	
Fort Miller, on San Joaquin River.....	194	402
Summit of Tejon Pass.....	386	5,364
Eastern base of Sierra Nevada.....	393	3,483
Summit of San Francisquito Pass.....	411	3,437

Route of Lieutenant Williamson, from Martinez, &c.—Continued.

	Miles.	Elevation.
		<i>Feet.</i>
Summit of San Fernando Pass	434	1,940
Mission of San Fernando	440	1,048
San Bernardino	535	1,118
Summit of San Geronio Pass	562	2,808
Hot Spring	588	572
Deep Well	598	160
Cobuilla Village	614	85
Salt Creek	656	-70
San Diego	0	.....
Summit of Warren's Pass	69	3,780
San Felipe (Indian village)	79	2,176
Divide between San Felipe and Carrizo Creeks	88	.....
Last water in Carrizo Creek	116	431
Big Laguna	140	-70
Alamo Mocho	164	-70
Cook's Wells	186	62
Algodones	197	46
Camp near Pilot Knob	202	115
Fort Yuma (75 feet above river)	208	108

Route of Lieutenant Williamson, from Benicia, California, to Fort Vancouver. (Pacific Railroad Report, Vol. VI.)

Benicia	0	.....
Camp 2, near Cordelia	15	69
Camp 3, near Vacaville	26	304
Cache Creek	53	295
Camp 5, near Nicholas	76	289
Camp 6, opposite Marysville	94	281
Camp 7, near Feather River	100	252
Camp 8, near Hamilton	115	260
Chico Creek	137	308
Deer Creek	157	363
Antelope Creek	176	420
Fort Reading	200	518
Mouth of McCloud's River	235	922
Camp 19, near Pit River	314	2,784
Summit of Stoneman's Ridge	320	4,080
Camp 20, near mouth of Fall River	325	3,304
Camp 21, near Upper Cañon	338	3,346
Last camp on Pit River	369	4,212
Spring Branch	380	4,876
Wright Lake	410	4,470
Camp 26, near Natural Bridge	435	4,014
Divide	460	4,177
Upper Klamath Lake	476	4,131
Camp 31, Klamath River	506	4,437
Camp 34, Klamath Marsh	523	4,526
Water-hole	541	4,864
Des Chutes River	560	4,411
Near source of Des Chutes River	577	4,592
Summit Pass (through Cascade Mountains)	585	5,595
Middle fork of Willamette River	600	2,788
Camp 46, middle fork	626	1,154
Camp 48, first settlement	650	738
McKenzie's Fork	674	512
Jalapooya Creek	691	440
North Fork of Santiam River	721	448
Opposite Portland	779	66
Opposite Vancouver	786	105

*U. S. Geological Survey of the Territories—Prof. F. V. Hayden.
From Ogden, Utah, to Fort Ellis, Montana.*

	Miles.	Elevation.
		<i>Feet.</i>
Ogden, camp	0	4,517
Water Tank, near Saline Springs	12	4,191
Willard City	16	4,350
Second bridge over Box Elder Creek	25	4,762
Copenhagen	27	4,999
Divide between Box Elder Creek and Bear River	31	5,615
Wellsville	40	4,568
Logan	49	4,557
Hyde Park	55	4,553
Richmond	64	4,641
Franklin	70	4,552
Bear River Bridge	81	4,543
Clifton	87	4,893
Oxford	93	4,862
Divide between Bear and Port Neuf Rivers	94	5,042
Red Rock Ranch	101	4,711
Divide between Ross Fork and Blackfoot Fork	171	5,072
Taylor's Bridge, over Snake River	203	4,627
Market Lake	223	4,795
Desert Wells	236	4,816
Camas Creek Ranch	246	4,722
Dry Creek stage station	263	5,689
Pleasant Valley stage station	276	6,086
Continental Divide	286	6,480
Junction stage station	294	6,329
Divide between Willow and Red Rock Creeks	296	6,268
Red Rock Creek	299	6,041
Divide between Red Rock and Big Sage Creeks	303	6,307
Divide between Big Sage and Black-tail Deer Creeks	316	7,044
Black-tail Deer Creek	323	5,973
Divide between Black-tail Deer and Stinkingwater Creeks	330	6,657
Mouth of Sweetwater Cañon	334	5,872
End of Sweetwater Cañon	336	5,607
Divide between Stinkingwater and Alder Creeks	356	6,492
Nevada City	359	5,548
Virginia City	360	5,713
Divide between Madison and Jefferson Rivers	364	6,857
Madison River	372	5,177
Meadow Creek	381	5,086
Divide between Meadow and Hot Spring Creeks	384	5,836
Hot Spring Creek	387	4,804
Madison River Bridge	397	4,342
Divide between Madison and Gallatin Rivers	411	4,834
West Gallatin River Bridge	418	4,618
Middle Gallatin River	419	4,587
Bozeman	426	4,655
Fort Ellis	430	4,789

*U. S. Geological Survey of the Territories—Prof. F. V. Hayden,
From Fort Ellis, Montana, to Fort Bridger, Wyoming.*

	Miles.	Elevation.
		<i>Feet.</i>
Fort Ellis.....	0	4,789
Hamilton.....	22	4,357
Allen's Ranch.....	42	4,396
Divide between Willow Creek and South Boulder River.....	61	4,948
South Boulder River.....	64	4,565
Fish Creek stage station.....	83	4,134
Parson's Bridge over Jefferson River.....	84	4,083
Beaverhead Rock stage station.....	114	4,464
Beaverhead River Ford.....	149	5,130
Horseplain Creek.....	171	6,252
Divide between Horseplain and Red Rock Creeks.....	182	7,405
Continental Divide.....	198	7,255
Soda Springs.....	363	5,529
St. George.....	383	5,771
Bennington.....	390	5,798
Montpellier.....	394	5,793
Bear River Bridge.....	397	5,744
Ovid.....	400	5,760
Paris.....	404	5,836
Bloomington.....	407	5,905
St. Charles.....	412	5,932
Fish Haven.....	417	5,932
South boundary of Idaho.....	420	.....
Lake Town.....	433	6,001
Randolph.....	454	6,442
Evanston.....	487	6,835
Fort Bridger.....	528	6,656

Route of W. W. De Lacy, from Helena to Salmon City, Montana.

Helena.....	0	4,296
Summit between Helena and Montana City.....	.....	4,353
Montana City.....	8	4,191
Ten-Mile Station.....	10	4,244
Crossing of Big Prickly Pear Creek.....	.....	4,356
Clancy Creek.....	.....	4,457
Second crossing of Big Prickly Pear Creek.....	.....	4,780
Jefferson City.....	.....	4,776
Beavertown.....	24	4,942
Herrett's.....	.....	5,217
Bouldertown.....	.....	5,000
Boulder Creek.....	.....	4,997
Captain Cook's, on Little Boulder Creek.....	34	4,995
Basin Station.....	44	5,437
Whitehall.....	58	4,639
Pipestone Creek.....	.....	4,463
Right bank of Jefferson River.....	.....	4,565
Fish Creek.....	.....	4,570
Jefferson Bridge.....	78	4,672
Gaffney's.....	87	4,838
Meridan.....	.....	5,221
Virginia City.....	.....	5,778
Sorraine's.....	.....	4,992
Beaverhead Station.....	102	4,888
Novell's.....	126.5	5,465
Argenta.....	140.5	6,337

Route of W. W. De Lacy, from Helena, &c.—Continued.

	Miles.	Elevation.
		<i>Feet.</i>
Goodrich's house at Bannack.....	155.5	5,896
Divide between Bannack and Horse Plain Creek.....		6,056
Mart. Barrett's, on Horse Plain Creek.....	167.5	5,665
Pomaine's.....	170.5	5,826
Hamilton's, at mouth of Jeff. Davis Gulch.....	187.5	6,536
Summit of Rocky Mountains.....	193.5	7,796
Stevenson's Junction, Limhi Valley.....	205.5	6,084
Hall's.....	235.5	4,996
Salmon City.....	255.5	4,030

Route of Lieutenant Warren, from Fort Pierre to Fort Kearney.

Fort Pierre.....	0	
Little Missouri River.....	5	1,478
Medicine Creek.....	33	2,220
White River.....	52	1,580
Two-Tail Creek.....	72	1,760
Dog's-Ears Creek.....	87	2,230
Turtle Hill River.....	101	1,995
Rapid River.....	125	2,115
Les Buttes de Sable.....	160	2,330
Muddy Creek.....	235	2,393
Platte River.....	290	2,075
Fort Kearney.....	301	2,000

Route of Governor Stevens, from Fort Benton to Umatilla River. (Pacific Railroad Report, Vol. XII.)

	Between Stations.	
One-half mile above Fort Benton.....		2,769
On Missouri River.....	35	2,480
On Missouri River at Cracon du Nez.....	37	2,752
Milk River, two miles below trading-house.....		2,388
Crossing of Marias River.....	60	2,683
Teton River.....	14	3,109
Teton River.....	52	3,692
Sun River, on bluff.....	8	4,309
Junction of Forks of Sun River.....	1	4,114
Top of Divide.....	17	4,954
Valley of Dearborn River.....	1	4,665
Lewis and Clarke's Pass.....	12	6,537
Big Blackfoot, below mouth of Lander's Fork.....	15	4,610
Mouth of Salmon Trout Creek.....	21	4,426
Near Mouth of Big Blackfoot.....	51	3,247
Mouth of Saint Regis de Borgia River.....	57	2,894
Left bank of Bitter Root River.....	7	2,763
Left bank of Bitter Root River.....	1	2,530
Saint Regis de Borgia River.....	15	3,020
Kamas Prairie.....	73	2,867
Lapwai, at Craig's.....	53	1,240
Fork of Clearwater and Snake Rivers.....	16	612
Touchet River, at Fork.....	47	2,046
Walla-Walla River, at mission.....	32	579
Tamallamp Creek.....	4	532
Wild Horse Creek.....	12	1,704
Umatilla River.....	15	1,020
Umatilla River, six miles above agency.....	18	583

Route from Lake Superior to Winnipeg Lake. (Hind's Exploring Expedition.)

	Miles.	Elevation.
		<i>Feet.</i>
Fort William.....	0	600
Pointe des Meurons.....	10	604
Nicollet Portage.....	33	845
Portage des Maitres.....	48	944
Great Dog Lake.....	66	1,311
Barrière Portage.....	96	1,317
Savanne Lake.....	107	1,469
Thousand Lakes.....	143	1,433
Cannibal's Lake.....	159	1,386
Pickereel Lake.....	183	1,281
Sturgeon Lake.....	208	1,156
Lac la Croix.....	233	1,117
Grand Falls Portage.....	245	1,066
Lake Nameaukan.....	257	1,045
Rainy Lake.....	301	1,035
Manitou Rapids.....	336	996
Lake of the Woods.....	453	978
Grande Décharge.....	487	950
De l'Isle Portage.....	510	901
Chute à Jacques Portage.....	533	885
Roche Brûlée Portage.....	544	843
Otter Falls.....	560	810
Bonnet Lake.....	585	744
Silver Falls Portage.....	597	656
Winnipeg Lake.....	616	628

Route of Governor Sturgeon from Fort Benton to Foulton River. (Pacific Railroad Report, Vol. VII.)

Station	Miles	Elevation
Fort Benton	0	1,200
.....	10	1,150
.....	20	1,100
.....	30	1,050
.....	40	1,000
.....	50	950
.....	60	900
.....	70	850
.....	80	800
.....	90	750
.....	100	700
.....	110	650
.....	120	600
.....	130	550
.....	140	500
.....	150	450
.....	160	400
.....	170	350
.....	180	300
.....	190	250
.....	200	200
.....	210	150
.....	220	100
.....	230	50
.....	240	0

PROFILES FROM THE
NINETY-FIFTH MERIDIAN TO THE PACIFIC OCEAN

The following table exhibits six approximate profiles across the country from the 95th meridian west of Greenwich to the Pacific coast, along the 32d, 35th, 38th, 41st, 44th, and 47th parallels of latitude.

The elevations given are the mean elevations, as nearly as they can be determined, of the country lying between the two meridians, one degree apart, and in the neighborhood, that is, within about 1/2 of the parallel.

These do not assume to be accurate profiles, but, as the material at hand seems to warrant me in making a beginning in this direction, I have prepared these, with the intention of correcting them as I obtain more material and a more intimate knowledge of the country.

PROFILES FROM THE
NINETY-FIFTH MERIDIAN TO THE PACIFIC OCEAN.

The following table exhibits six approximate profiles across the country from the 95th meridian west of Greenwich to the Pacific coast, along the 32d, 35th, 39th, 41st, 45th, and 48th parallels of latitude.

The elevations given are the mean elevations, as nearly as they can be determined, of the country lying between the two meridians, one degree apart, and in the neighborhood, that is, within about 15', of the parallel.

These do not assume to be accurate profiles, but, as the material at hand seems to warrant me in making a beginning in this direction, I have prepared these, with the intention of correcting them as I obtain more material and a more intimate knowledge of the country.

Degrees of Longitude.	32d Parallel. Mean elevation.	35th Parallel. Mean elevation.	39th Parallel. Mean elevation.
	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>
95 to 96...	500	650	1,000
96 to 97...	800	800	1,000
99 to 98...	1,000	1,200	1,200
98 to 99...	1,200	1,500	1,500
99 to 100...	1,500	1,900	2,000
100 to 101...	2,000	2,500	2,500
101 to 102...	3,000	3,500	3,500
	Llano Estacado.	Llano Estacado.	
102 to 103...	4,500	4,000	4,000
	Llano Estacado.	Llano Estacado.	
103 to 104 ..	4,000	4,100	5,000
	Llano Estacado.	Llano Estacado.	
104 to 105...	4,000	4,500	6,000
	Valley of Rio Pecos.	Head of Rio Pecos.	
105 to 106...	4,500	5,000	9,000
			Colorado Range and So'th Park.
106 to 107...	4,000	5,500	11,000
	Valley of Rio Grande.		Sawatch and Elk Ranges.
107 to 108...	4,500	7,000	8,000
	Sierra Madre Plateau.	Zuni Mountains.	Elk Range.
108 to 109...	5,000	6,500	4,500
	Sierra Madre Plateau.		Plateau of the Upper Colorado.
109 to 110...	5,000	5,500	4,500
			Plateau of the Upper Colorado.
110 to 111...	4,000	5,000	4,800
		Colorado Plateau.	Plateau of the Upper Colorado.
111 to 112...	3,000	6,000	5,500
		San Francisco Mts.	Wahsatch Range.
112 to 113...	3,000	5,000	5,000
			Great Interior Basin.
113 to 114...	Enters Mexico.....	4,000	5,000
			Great Interior Basin.
114 to 115...	.....	1,500	5,500
		Valley of Rio Colorado.	Great Interior Basin.
115 to 116...	.....	2,500	6,000
			Great Interior Basin.
116 to 117...	.....	2,000	6,000
			Great Interior Basin.
117 to 118...	.....	2,500	5,500
			Great Interior Basin.
118 to 119...	.....	4,500	4,500
		Sierra Nevada Range.	Plateau of Walker Lake.
119 to 120...	.....	3,000	6,000
		Coast Range.	
120 to 121...	.....	0	7,500
			Sierra Nevada Range.
121 to 122...	.....		500
			San Joaquin Valley.
122 to 123...	.....		1,500
			Coast Range.
123 to 124...	.....		0
124.....	.....	
Mean eleva- tion of Section		3,500	4,500

41st Parallel. Mean elevation.	45th Parallel. Mean elevation.	48th Parallel. Mean elevation.
<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>
1,000	1,000	1,500
1,200	1,000	1,200
		Valley of Red River.
1,600	1,500	1,500
	Coteau des Prairies.	
2,000	1,500	1,500
		Devil's Lake.
2,300	2,000	1,500
	Coteau du Missouri.	
2,600	1,500	1,500
	Valley of Missouri River.	Coteau du Missouri.
3,000	2,000	2,000
		Coteau du Missouri.
3,500	2,500	1,800
		Valley of Missouri River.
4,500	3,000	2,000
		Valley of Missouri River.
6,000	2,500	2,000
		Valley of Missouri River.
8,000	3,000	2,100
Laramie Range.		Valley of Missouri River.
8,000	3,000	2,200
North Park and Main Range.		
7,000	5,000	2,500
7,000	5,000	2,500
	Big Horn Mts. and Valley.	Little Rocky Mountains.
6,000	7,000	2,500
	Yellowstone Range.	
7,500	7,000	2,500
Uintah Mountains.	Valley of Yellowstone River.	Valley of Missouri River.
6,000	7,000	3,000
Wahsatch Range.	Valley of the Madison River.	Valley of Teton River.
4,200	6,500	4,000
Great Salt Lake.	Valley of the Jefferson River.	
5,000	6,500	5,000
Great Salt Lake Desert.	Main Range and Valley of the	Main Range.
	Salmon River.	
6,000	5,000	3,000
Great Interior Basin.	Salmon River Plateau.	
5,000	4,000	3,000
Great Interior Basin.	Salmon River Plateau.	
4,500	3,000	2,500
Great Interior Basin.	Snake River Plateau.	
4,500	2,000	2,500
Great Interior Basin.		
4,500	3,500	1,500
Great Interior Basin.	Blue Mountains.	
5,000	2,500	1,000
Great Interior Basin.		Valley of Columbia River.
5,500	2,000	1,500
	Valley of Des Chutes River.	
4,000	3,000	1,000
Valley of Sacramento River.		
5,000	1,500	500
Sierra Nevada Range.		
1,000	1,000	1,000
Valley of Klamath River.	Coast Range.	
0	0	0
4,300	3,200	2,300

MEAN ELEVATIONS OF THE STATES AND TERRITORIES WEST OF THE MISSISSIPPI RIVER.

State or Territory.	Elevation.	State or Territory.	Elevation.
	<i>Fect.</i>		<i>Fect.</i>
Arizona	4,200	Missouri	800
Arkansas	350	Montana.....	3,950
California.....	2,800	Nebraska.....	2,550
Colorado	6,600	Nevada	4,900
Dakota.....	1,950	New Mexico.....	5,400
Idaho	3,800	Oregon.....	2,700
Indian Territory.....	1,250	Texas.....	1,870
Iowa.....	925	Utah.....	5,100
Kansas.....	1,780	Washington.....	1,800
Minnesota	1,050	Wyoming.....	6,450

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