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EXECUTIVE DOCUMENTS

OF THE

HOUSE OF REPRESENTATIVES

FOR THE

SECOND SESSION OF THE FIFTY-THIRD CONGRESS.

1893-'94.



IN THIRTY-ONE VOLUMES.

WASHINGTON:  
GOVERNMENT PRINTING OFFICE,  
1895.

C

53D. CONGRESS, } HOUSE OF REPRESENTATIVES. { Ex. Doc. 1,  
2d. Session. } Part 2.

REPORT

OF THE

SECRETARY OF WAR;

BEING PART OF

THE MESSAGE AND DOCUMENTS

COMMUNICATED TO THE

TWO HOUSES OF CONGRESS

AT THE

BEGINNING OF THE SECOND SESSION OF THE FIFTY-THIRD CONGRESS.

IN FOUR VOLUMES.

VOLUME I.

WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1893.



B—Position and distribution of troops by Departments, taken from the

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.															
			Number of companies.	Regiments.	General officers.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-General.	Bureau of Military Justice.											
DEPARTMENT OF THE COLUMBIA.																				
Headquarters.....	Denver, Colo.....	Brig. Gen. A. McD. McCook	1	Department staff.	1	1														
Fort Apache, Ariz.....	90 miles from Holbrook	Brig. Gen. Henry Carroll	4	1st Cav. and 11th Inf.																
Fort Bowie, Ariz.....	Bowie Station.....	Brig. Gen. Thomas McGregor	2	2d Cav.																
Fort Grant, Ariz.....	27 miles from Wilcox	Col. A. K. Arnold	5	1st Cav.																
Fort Huachuca, Ariz.....	Huachuca Station.....	Col. F. M. Crandall	6	2d Cav. and 24th Inf.																
San Carlos, Ariz.....	Prescott.....	Col. A. L. Myer	3	1st Cav. and 11th Inf.																
Whipple Barracks, Ariz.....	Prescott.....	Col. J. D. DeLussay	4	11th Inf.																
Fort Bayard, N. Mex.....	Near Silver City.....	Col. Z. R. Bliss	6	1st Cav. and 24th Inf.																
Fort Stanton, N. Mex.....	9 miles from Lincoln	Col. E. P. Pearson	2	10th Inf.																
Fort Wingate, N. Mex.....	Wingate Station.....	Col. A. H. Hainbridge	5	10th Inf.																
Fort Logan, Colo.....	Near Denver.....	Col. G. G. Hunt	7	2d Cav. and 10th Inf.																
Fort Douglas, Utah.....	Near Salt Lake City	Col. H. C. Merritt	6	7th Inf.																
Fort Du Chene, Utah.....	Near Utah Agency	Col. M. M. Munt	6	16th Inf.																
		Adj. J. P. Randall	2	9th Cav.																
Total, Department of the Colorado.....			35		1	1														
DEPARTMENT OF THE COLUMBIA.																				
Headquarters.....	Vancouver Barracks, Wash.	Brig. Gen. W. P. Carrin		Department staff.	1	2	1													
Fort Sherman, Idaho.....	Cour d'Alone.....	Lieut. Col. H. C. Cool	5	4th Cav. and 4th Inf.																
Boise Barracks, Idaho.....	Boise City.....	Brig. Gen. Michael Cooney	4	4th Cav. and 4th Inf.																
Fort Gandy, Wash.....	North of Columbia River	Capt. J. R. Brinkley	5	4th Cav. and 4th Inf.																
Fort Spokane, Wash.....	Near Spokane Falls	Capt. G. O. Webster	4	4th Inf.																
Fort Towner, Wash.....	Fort Townsend	Capt. John Murphy	1	4th Inf.																
Vancouver Barracks, Wash.....	Vancouver.....	Col. W. M. Anderson	7	4th Cav. and 14th Inf.																
Fort Walla Walla, Wash.....	Walla Walla.....	Col. C. E. Compton	3	4th Cav.																
Total, Department of the Columbia.....			23		1	2	1													

MAJOR GENERAL COMMANDING THE ARMY  
latest returns on file in the Adjutant-General's Office, 1893—Continued.

PRESENT.	PRESENT.										ABSENT.				AGGREGATE.														
	Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers.	Captains.	Subalterns.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.		
3	2	2	1	2	1	1	1	1	1	1	1	1	1	1	2	16	14	30	6	4	24	51	55	85	38	38	128	1,349	1,477
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	212	7	219	2	6	8	8	15	15	15	212	227		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	112	6	118	1	2	3	3	9	9	112	121			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	299	16	315	3	4	7	7	23	23	299	322			
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	8	334	13	347	1	2	4	7	7	20	334	351			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	198	6	204	1	1	4	6	11	11	198	209			
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6	241	15	256	3	4	7	7	22	22	241	263			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	369	21	390	2	3	5	10	10	31	31	369	400		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	136	10	146	2	4	6	6	16	16	136	152			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	116	7	123	1	1	2	2	2	2	116	125			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	9	421	21	442	2	1	7	10	10	31	31	421	452		
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	11	363	52	365	4	5	6	6	31	31	363	394			
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	14	523	27	550	1	3	6	10	10	37	37	523	560		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	123	9	132								123	132		
3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	57	3,463	193	3,656	6	4	24	51	55	85	278	3,463	3,741		
3	1	1	3	1	1	1	1	1	1	1	1	1	1	1	13	17	32	2	2	2	2	4	4	21	17	13	32		
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	266	17	312	2	2	2	2	4	4	21	17	266	316		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	105	6	111	2	2	2	2	2	2	8	105	113			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	110	3	113	4	4	4	4	4	4	9	110	119			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	163	8	171	2	2	3	3	5	5	13	163	176			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50	3	92	1	1	1	3	4	4	7	50	60			
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	422	22	444	8	9	9	9	9	9	31	422	453			
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	180	12	192	1	2	2	2	10	10	22	180	202			
3	1	1	3	1	1	1	1	1	1	1	1	1	1	1	321	340	90	1,430	8	12	23	23	38	38	321	1,349	1,477		

The White Mountain Apaches have nothing in common with the San Carlos Indians. The country they inhabit is separated from the latter Indians by high ranges of mountains. These Indians are very nearly self-supporting, whilst the San Carlos tribes are not; hence under these conditions and circumstances, it is earnestly recommended that the White Mountain Apaches be separated for administrative purposes from the San Carlos tribes, having for their agent the commanding officer of the post. Repeated recommendations have been made to this effect while I was commanding the former department of Arizona. One of the objections made was that there were no funds available from the Indian appropriation. This objection is not tenable now, as an officer of the Army can perform the duty of agent. It is inconvenient and unfair for the agent at San Carlos to be responsible for the property pertaining to the sub-agency at Fort Apache.

#### FORT BOWIE.

Fort Bowie is located on the northwest spur of the Chiricahua Mountains, 14 miles south of Bowie Station, on the Southern Pacific Railroad. During the late Apache wars it was an important point to hold on account of its geographical location and of the springs of water from which the station is supplied. During times of peace, as now enjoyed by the Territory of Arizona, Bowie as a military post ceases to be of such military importance, and can now be abandoned, when proper shelter can be provided for its garrison at other posts in the department. The present garrison consists of two troops of cavalry.

#### FORT GRANT.

So long as the Apaches, Yumas, Mojaves, and Tontos are concentrated in and about San Carlos, Fort Grant will continue to be an important military post. It is now garrisoned by the headquarters and five troops of the First Cavalry.

#### FORT HUACHUCA.

This post is 14 miles north of the boundary between Mexico and the United States, and 9 miles from a station on the Sonora and Guaymas Railroad. The present garrison of this post consists of two troops of the Second Cavalry and four companies of the Twenty-fourth Infantry. It is an important post and should be maintained.

#### SAN CARLOS.

This is the only post in the department where the temperature is extreme. It is situated on the Gila River, 106 miles from Wilcox, on the Southern Pacific Railroad. The heat in summer is intense and continuous, averaging 110 degrees during June, July, and August. Fortunately the troops here are considered in the field, their tour of duty being limited. The officers are sheltered in small but comfortable adobe houses; but the enlisted men remain in their canvas sheds, and are most uncomfortable.

It is understood that efforts will be made to remove these Indians from this desolate country and place them in a more favorable location as regards temperature and lands.

General depots, independent posts, etc., and departments.	TRANSPORTATION OF THE ARMY.						BARRACKS AND QUARTERS.						
	Advertising and printing.	Reimbursement of traveling expenses.	Boxes, crates, barrels, etc., for stores shipped.	Lumber, rope, and miscellaneous articles.	All expenses not otherwise enumerated.	Total amounts.	Shooting galleries and ranges—construction and repairs, etc., of.	Hire of quarters for officers and enlisted men.	Hire of offices.	Hire of store-houses.	Hire of stables and grounds.	Advertisements.	Hire of mechanics and other employes.
<b>Department of Texas.</b>													
Headquarters, San Antonio, Tex.	\$111.23	\$270.16		\$552.20	\$1,190.36	\$81,062.31	\$108.63	\$2,950.00	\$90.00		\$1,370.83	\$123.75	
Fort Bliss, camp, etc., Tex.					1,010.81	1,010.81	1.15				90.00		
Fort Hancock, Tex.					216.00	1,196.68							
Fort Bliss (and Ft. Bliss), Tex.					2,393.00	10,670.15							
Fort Sam Houston, Tex.				119.58	312.00	10,914.20							
Camp Pecos Colorado, Tex.					450.40	6,857.00	81	165.00					
Fort Ringgold, Tex.		13.75			1,771.75	9,032.24	10.50	96.00					
Fort McIntosh, Tex.		8.87			440.00	2,410.83	46.65						
Fort Clark, Tex.													
Fort Brown, Tex.													
Total	111.23	392.78		671.78	8,003.51	130,416.61	167.76	3,115.06	461.00		1,460.83	123.75	
<b>Department of California.</b>													
Headquarters, San Francisco, Cal.	61.68	163.20			2,103.14	39,671.30		144.00	11,000.00		564.00	43.41	
Presidio of San Francisco, Cal.					43.50	11,302.14	400.43						
Fort Mason, Cal.					8.00	1,380.73	13.38						
Alcatraz Island, Cal.						1,033.13	3.00						
Angel Island, Cal.						1,245.65	2.75						
Pentagon Barracks, Cal.						1,732.07							
Fort Bidwell, Cal.					237.50	702.65							
In the field.													
Total	61.68	163.20			2,394.14	57,067.49	431.56	144.00	11,000.00		564.00	43.41	
<b>Department of Arizona.</b>													
Headquarters, Los Angeles, Cal.	64.59	170.20	\$90.30	695.08	11,666.54	71,691.88	245.36	924.00	7,012.50	\$168.00	330.00		
Whipple Barracks, Ariz.				1,511.07		4,853.50	151.11						
Fort Huachuca, Ariz.					201.38	4,536.93	5.55						
Fort Wingate, N. Mex.						7,091.74	54.40						
Fort Bayard, N. Mex.		7.00			430.00	4,707.41							
Fort Stanton, N. Mex.						5,192.83							
San Carlos, Ariz.		66.00			5,202.16	5,512.67	31.56						
Fort Apache, Ariz.						6,621.22	7.20						
Fort Grant, Ariz.						1,073.00	6.00						
Fort Bowie, Ariz.				9.00	32.00	4,167.86	2.78						
San Diego Barracks, Cal.				917.54	337.00	1,484.05	20.50	1,871.20	160.00				
Fort Miley, Ariz.					34.00	6,830.08	76.29	463.60	160.00				
In the field.													
Total	64.59	243.20	90.50	3,133.29	13,011.82	127,414.40	610.42	3,238.80	7,202.50	165.00	330.00		
<b>Department of the Columbia.</b>													
Headquarters, Vancouver Barracks, Wash.	69.70	152.60		368.66	1,024.00	22,429.20	123.63		102.00	38.00			
Portland, Oregon		6.00		384.13	165.04	8,637.31	38.30		1,090.00	490.00			
Fort Walla Walla, Wash.				320.45		7,470.83	2.09		330.00				
Boise Barracks, Idaho				133.66		6,441.64	56.50						
Fort Sherman, Idaho				18.83		2,258.05	35.22						
Fort Townsend, Wash.				18.00		1,285.15	7.75						
Fort Canby, Wash.				53.16		4,520.44	6.02	43.00		55.00	10.00		
Fort Spokane, Wash.				218.75		306.85					118.67		
In the field.													
Total	69.70	158.60		904.85	1,820.45	57,274.01	269.20	43.00	1,522.00	583.00	178.67		1,360.00

C.—Statement showing in detail the amounts expended from the various

appropriations made for the Quartermaster's Department, etc.—Continued.

	BAKES AND QUARTERS.					HOSPITALS.					CLOTHING AND CAMP EQUIPAGE.					Hospital quarters—construction and repairs, etc., of.
	Construction and repairs.	All expenses not enumerated.	Total amounts.	Construction and repairs.	Advertising.	Extra duty pay of enlisted men.	All expenses not otherwise enumerated.	Total amounts.	Purchase of material.	Maintenance.	Advertising.	Employees.	All expenses not otherwise enumerated.	Total amounts.		
<i>Department of Texas.</i>																
Headquarters, San Antonio, Tex.	\$36,274.62	\$17.38	\$36,816.58	\$219.97		\$10.50	\$219.97					\$27.50	\$27.50			
Engle Pass, camp at, Tex.	231.52		231.52	48.90			280.80					0.00	0.00			
Fort Hancock, Tex.			71.00									0.00	0.00			
Fort Bliss (and El Paso), Tex.	2,981.89		2,981.89											\$305.00		
Fort Sam Houston, Tex.	122.59		122.59													
Camp Pecos Colorado, Tex.	71.67		71.67	1,136.80			1,136.80									
Fort Rueschell, Tex.	486.17	150.00	636.17													
Fort McIntosh, Tex.	131.53		131.53													
Fort Clark, Tex.	377.93		377.93											203.00		
Fort Brown, Tex.																
Total	30,212.13	167.38	35,513.09	1,405.07		10.50	1,415.57					36.50	36.50	203.00		
<i>Department of California.</i>																
Headquarters, San Francisco, Cal.			11,708.00												68.00	
Presidio of San Francisco, Cal.	3,026.75		3,070.16									38.00	38.00			
Fort Mason, Cal.	802.90		802.90									6.00	6.00			
Alcatraz Island, Cal.	1,391.00		1,391.00	410.50			310.50					19.00	19.00			
Angel Island, Cal.	3,598.00		3,598.00	81.13			81.13									
Berkeley Barracks, Cal.	1,535.95		1,535.95	50.00			50.00									
Fort Bidwell, Cal.	162.75		162.75	30.80			30.80									
In the field												63.00	63.00	58.00		
Total	10,540.35		22,291.76	472.33			472.33					63.00	63.00	58.00		
<i>Department of Arizona.</i>																
Headquarters, Los Angeles, Cal.	17,604.15	91.00	26,219.65	637.57			567.57									
Whipple Barracks, Ariz.	338.69		338.69	290.78			290.78									
Fort Huachuca, Ariz.	4,014.70		4,014.70													
Fort Wingate, N. Mex.	1,335.90		1,335.90													
Fort Hays, N. Mex.	1,147.82		1,147.82	203.71			203.71									
Fort Stanton, N. Mex.	799.74		799.74	599.65			597.77									
Fort Chino, Ariz.	599.65		599.65	215.04			215.04									
Fort Apache, Ariz.	4.80		4.80	54.23			54.23									
Fort Bowie, Ariz.	1,868.82	3.00	1,871.82													
San Diego Barracks, Cal.	1,233.20	730.00	3,854.40													
Fort McCoy, N. Mex.	4,912.63		4,912.63													
In the field																
Total	33,266.82	817.00	45,070.12	1,590.12		7.00	1,576.12									
<i>Department of the Columbia.</i>																
Headquarters, Vancouver, British Columbia, Wash.	8,002.10		9,502.19	111.50		21.34	134.84									
Portland, Oregon	5,849.40		7,429.49	173.26			173.26							10.00		
Fort Walla Walla, Wash.	493.50	1.50	758.00			97.50	190.00									
Boise Barracks, Idaho	1,071.02	27.00	1,485.76	110.13			110.13							9.75		
Fort Sherman, Idaho	1,099.97		1,699.97	108.25			108.25									
Fort Lewis and Clark, Wash.	2,071.95		2,071.95	132.90			123.00									
Fort Cheney, Wash.	225.50	19.00	2,599.50				19.88									
Fort Spokane, Wash.		2.00	173.67													
In the field														19.75		
Total	10,212.30	49.50	22,950.56	629.08		60.84	181.38					8.00	8.00	19.75		

O is an alphabetical list of the military reservations that have been turned over by the War Department to the Interior Department, or otherwise disposed of by the War Department, since 1853, with date of relinquishment, authority therefor, etc.  
 D is an alphabetical list of military reservations, showing location, size, how occupied, accommodations for officers, men, etc., on June 30, 1893.  
 Very respectfully,

OSCAR F. LONG,  
 Captain and Assistant Quartermaster, U. S. Army.  
 THE QUARTERMASTER-GENERAL, U. S. ARMY.

A.—Expenditures authorized for water, sewerage, plumbing, etc., chargeable to the appropriation for Army transportation for 1892-93.

Station.	Amount.	Station.	Amount.	
<i>Department of the East.</i>				
Fort Porter, N. Y.	\$911.63	Fort Logan, Colo.	\$735.77	
Fort Niagara, N. Y.	2,510.13	Fort McKinney, Wyo.	1,280.75	
Fort Ontario, N. Y.	1,177.40	Fort Niobrara, Neb.	4,326.75	
Madison Barracks, N. Y.	57,693.35	Fort Robinson, Neb.	1,622.78	
Plattsburg Barracks, N. Y.	12,071.83	Fort D. A. Russell, Wyo.	3,000.39	
Fort Preble, Mo.	1,031.62	Fort Sheridan, N. Y.	1,651.11	
Fort Warren, Mass.	8,537.59	Fort Slocum, N. Y.	113.52	
Fort Adams, R. I.	1,473.98	Fort Yankton, S. D.	120.40	
Fort Franklin, Conn.	883.59	Camp Pilot Point, Wyo.	20.75	
Fort Hamilton, New York Harbor	1,143.07	Camp Duquesne, Mich.	133.44	
Fort Wadsworth, New York Harbor	1,730.07	Fort Donkey, Neb.	2,302.80	
Fort Columbus, New York Harbor	5,150.70	Fort Crook, Neb.	13,424.90	
Fort Schuyler, New York Harbor	2,365.40	Total	28,002.70	
Fort Wood, New York Harbor	30.00	<i>Department of the Missouri.</i>		
Fort McHenry, Md.	787.63	Fort Brady, Mich.	7,127.61	
Fort Mifflin, Pa.	787.72	Fort Leavenworth, Kans.	3,784.69	
Washington Barracks, D. C.	32,533.73	Fort Leavenworth, Mich.	4,326.75	
Fort Myer, Va.	8,591.47	Fort Reno, Mich.	95.75	
Fort Monroe, Va.	5,271.43	Fort Sherman, Mich.	0,898.30	
Fort Mifflin, Pa.	7,251.96	Fort Sheridan, Ill.	5,097.47	
St. Francis Barracks, Fla.	22,231.56	Fort Sibley, Minn.	50,810.00	
Fort Mifflin, Pa.	14,681.70	Fort Sherman, Kans.	215.30	
Monk, Vernon Barracks, Ala.	3,150.95	Fort Sibley, Minn.	593.93	
Jackson Barracks, Ky.	88.53	Fort Supply, Ind.	1,678.42	
Newport Barracks, Ky.	1,896.18	Fort Wayne, Mich.	24.00	
Fort Thomas, Ky.	273.00	Total	50,245.45	
Fort Meade, Md.	2,513.60	<i>Department of Texas.</i>		
Fort Meade, Pa.	15.00	Fort Bliss, Tex.	6,229.37	
Fort Monmouth, N. J.	38,322.58	Fort Brown, Tex.	654.66	
Fort Monmouth, S. C.	5.00	Fort Clark, Tex.	728.06	
Total	239,433.09	Fort Hancock, Tex.	99.33	
<i>Department of Dakota.</i>				
Fort Assiniboine, Mont.	294.10	Fort Hancock, Tex.	702.41	
Fort Buford, N. Dak.	642.91	Fort McIntosh, Tex.	1,749.46	
Fort Custer, Mont.	654.96	Fort Ringgold, Tex.	3,305.50	
Fort Keogh, Mont.	831.84	Fort Sam Houston, Tex.	5,308.46	
Fort Keogh, S. Dak.	1,531.62	San Antonio, Tex.	388.90	
Fort Missoula, Mont.	214.08	Del Rio Pass, Tex.		
Fort Snelling, Minn.	3,181.55	Total	19,816.28	
Fort Sully, S. Dak.	474.52	<i>Department of Arizona.</i>		
Fort Tule, N. Dak.	3,903.42	Fort Apache, Ariz.	886.39	
Fort Yellowstone, Wyo.	174.30	Fort Bowie, Ariz.	309.17	
Camp Poplar River, Mont.	3.05	Fort Bayard, N. Mex.	600.94	
St. Paul, Minn.	2,236.00	Fort Grant, Ariz.	6,602.77	
Bismarck, N. Dak.	25.00	Fort Huachuca, Ariz.	1,530.58	
Fort Famban, N. Dak.	512.48	Fort Navajo, N. Mex.	977.86	
Total	14,757.80	San Diego, Cal.	51.40	

A.—Expenditures authorized for water, sewerage, plumbing, etc.—Continued.

Station.	Amount.	Station.	Amount.
<i>Department of Arizona—Continued.</i>			
San Carlos, Ariz.	\$1,955.74	Fort Sherman, Idaho	\$405.72
Fort Stanton, N. Mex.	6,729.40	Fort Spokane, Wash.	1,601.41
Whipple Barracks, Ariz.	2,400.42	Fort Townsend, Wash.	876.39
Fort Wingate, N. Mex.	3,123.61	Yanconover Barracks, Wash.	1,489.91
Los Angeles, Cal.	22.00	Fort Yalla Yalla, Wash.	496.74
Total	23,892.04	Total	6,500.16
<i>Department of California.</i>			
Presidio of San Francisco, Cal.	2,613.61	<i>Independent posts.</i>	
Fort Alamo, Cal.	330.30	Jefferson Barracks, Mo.	12,124.46
Fort Bidwell, Cal.	22.66	Darwins Island, New York Harbor	3,455.54
Fort Harney, Cal.	1,793.48	Corbin Barracks, Ohio	5,057.40
Alcatraz Island, Cal.	634.23	St. Louis Depot, Mo.	178.52
Bancroft Barracks, Cal.	412.37	West Point, N. Y.	755.00
Angel Island, Cal.		Widens Point, New York Harbor	3,332.03
Total	5,736.55	Philadelphia Depot, Pa.	12.90
<i>Department of the Columbia.</i>			
Boise Barracks, Idaho	\$13.34	Total	24,955.85
Fort Canby, Wash.	576.65	Aggregate	413,899.08

B.—Expenditures authorized for lighting, heating, etc., chargeable to the appropriation for regular supplies for 1892-93.

Station.	Amount.	Station.	Amount.
Fort Adams, R. I.	\$75.00	Fort Sidney, Neb.	\$33.00
Fort Brandy, Mich.	3,403.13	Fort Robinson, Neb.	15.00
Fort Sargent, N. Y.	318.00	Fort Logan, Colo.	17.00
Fort Porter, N. Y.	220.05	Fort Sherman, Idaho	12.00
Fort Mifflin, Pa.	222.50	Fort Tule, N. Dak.	30.00
Fort Hamilton, Ga.	1,217.75	Fort Ellsford, Tex.	5,480.86
Fort Monroe, Va.	364.52	Columbus Barracks, Ohio	34,773.35
Fort Hamilton, New York Harbor	930.50	Washington Barracks, D. C.	11,425.00
Fort Schuyler, New York Harbor	6,013.57	Darwins Island, New York Harbor	2,558.24
Fort Eban Allen, Va.	517.38	Yanconover Barracks, Ind.	1,903.59
Fort Sheridan, Ill.	1,043.84	Widens Point, New York Harbor	4,095.00
Fort Leavenworth, Kans.	8,976.73	Yanconover Barracks, Wash.	31.50
Fort Wayne, Mich.	80.00	Washington Depot, D. C.	1,053.60
Fort Reno, Okla.	26.40	Delaware State Depot, Ind.	20.00
Fort Reno, Kans.	3,571.86	New Orleans, La.	19.50
Fort Mifflin, Pa.	60.00	Chicago, Ill.	422.59
Fort Mifflin, N. Mex.	25.00	St. Paul, Minn.	83.80
Fort Vancouver, Wash.	400.00	Total	123,353.60
Fort Bliss, Tex.	8,203.05		
Fort Crook, Neb.	24,627.74		

diction by State act of June 9, 1842. Not garrisoned. In charge of ordnance sergeant.

*Hamilton, Fort, N. Y.*—Latitude,  $40^{\circ} 37'$ ; longitude,  $74^{\circ} 1'$ . On shore of Long Island,  $5\frac{1}{2}$  miles south of New York City, commanding the Narrows. Post-office and telegraph station, at the post. City railroad from Brooklyn, distance 6 miles. Reservation, 98 acres. In addition thereto 55 acres have recently been acquired by condemnation proceedings. Cession of jurisdiction by State acts of March 20, 1807, March 18, 1808, November 27, 1824, April 17, 1826, February 14, 1851, April 18, 1861, February 20, 1862, and (as to water-covered land) May 7, 1880, and commissioner's deed of November 16, 1812. Present garrison, headquarters and 4 companies artillery. Accommodations for 21 officers (2 in casemates) and 250 men; 4 barracks; 1 artillery stable. Water supply from Brooklyn City waterworks. Sewer system.

*Hancock, Fort, Tex.*—Latitude,  $31^{\circ} 20'$ ; longitude,  $105^{\circ} 55'$ . Situated on the Rio Grande,  $5\frac{1}{2}$  miles southeast of El Paso and  $1\frac{1}{2}$  miles from Hancock Station, on the Southern and Texas Pacific Railroad. Post-office, at the post. Telegraph and railroad station, Fort Hancock Station, distance  $1\frac{1}{2}$  miles. Reservation, 469.2 acres. Cession of jurisdiction by State act of December 19, 1849, and governor's deed of October 8, 1883. Present garrison, 1 company cavalry. Accommodations for 4 officers and 63 men; 1 barrack; 1 cavalry stable. Water supply pumped from a well near the Rio Grande into settling tanks and distributed by iron pipes. Tile drains leading to cesspools; no other sewerage.

*Harrison, Fort, Mont.*—Latitude,  $46^{\circ} 33'$ ; longitude,  $111^{\circ} 58'$ . Situated near the city of Helena, in Lewis and Clarke County. Reservation, 1,040 acres, acquired by donation to the United States by citizens of Montana, under act of Congress of May 12, 1892. Cession of jurisdiction by State act of February 14, 1891. Plans for the post are in course of preparation.

*Huachuca, Fort, Ariz.*—Latitude,  $31^{\circ} 33'$ ; longitude,  $110^{\circ} 16'$ . In Cochise County, 7 miles from Huachuca siding, on the New Mexico and Arizona Railroad. Post-office and telegraph station, at the post. Daily buckboard from Huachuca siding. Reservation, 70 square miles. Present garrison, 2 troops cavalry and 4 companies infantry. Accommodations for 20 officers and 420 men; 6 barracks; 5 cavalry stables. Water supply piped from springs 3 miles distant to distributing reservoirs. Sewer system.

*Independence, Fort, Mass.*—Latitude,  $42^{\circ} 21'$ ; longitude,  $71^{\circ}$ . On Castle Island, Boston Harbor, 3 miles from Boston, which is the post-office, telegraph, and railroad station. Government tug from Boston. Reservation, 12 acres. Cession of jurisdiction by State act of June 5, 1788. Not garrisoned. In charge of ordnance sergeant. Accommodations for 1 field and 6 company officers in cottages outside the fort, and for 2 men, 2 batteries in casemates.

*Independence, Fort, La.*—Latitude,  $29^{\circ} 21'$ ; longitude,  $89^{\circ} 26'$ . Situated on the Mississippi River, 3 miles from New Orleans. Post-office, telegraph, and railroad station. Slaughter house, St. Bernard Parish, La. Street cars from New Orleans pass the post. Reservation, 87.87 acres. Cession of jurisdiction believed to be covered by general State act of July 6, 1882. Present garrison, 2 companies infantry. Accommodations for 11 officers and 96 men; 4 barrack buildings accommodate 24 men each. Water supply pumped from the Mississippi River. Surface drainage by brick-lined drains.

*Jackson, Fort, La.*—Latitude,  $29^{\circ} 21'$ ; longitude,  $89^{\circ} 26'$ . Seventy-three miles from New Orleans. Post-office, Neptune, La. Telegraph station, Quarantine, La. Steamer triweekly from New Orleans. Reservation, 740.97 acres. Cession of jurisdiction by State act of June 1, 1846. Not garrisoned. In charge of ordnance sergeant.

*Jefferson Barracks, Mo.*—Latitude,  $38^{\circ} 28'$ ; longitude,  $90^{\circ} 17'$ . In South St. Louis, on the Mississippi River. Post-office, telegraph, and railroad station, at the post. Reservation, 1,379.06 acres, with 118.15 acres in adverse possession by different parties. Cession of jurisdiction by State act of March 18, 1892. Recruiting depot. Accommodations for 18 officers; 7 barracks. Four sets officers' quarters in course of construction. Water supply from St. Louis waterworks. Sewer system.

*Jefferson, Fort, Fla.*—Latitude,  $24^{\circ} 38'$ ; longitude,  $82^{\circ} 52'$ . Garden Key, 71 miles from Key West. Post-office and telegraph station, Key West, Fla. Boat from Key West to post. Reservation, 5 acres. Cession of jurisdiction believed to be covered by general State act of July 24, 1845, though there is no record of any formal deed of cession by the governor (see XIII Op. Att. Gen., 411). Not garrisoned. In charge of ordnance sergeant. There are two substantial three-story brick buildings; one for officers' quarters, 63 rooms; the other for soldiers, 50 rooms.

*Johnston, Fort, N. C.*—Latitude,  $34^{\circ}$ ; longitude,  $78^{\circ} 5'$ . Twenty-six miles from Wilmington. Post-office and telegraph station, Southport, N. C. Steamer daily from Wilmington. Reservation, 43,560 square feet. Cession of jurisdiction by State acts of July 17, 1794, December 8, 1804, December 17, 1807, and December 19, 1809. Not garrisoned. In charge of ordnance sergeant. One set of officers' quarters used as signal office. No barracks.

In a few places there remain the old Mott flat back, jipped, cinnelined iron urinals. All connections with the sewer are made by means of 1 1/2-inch pipes intercepted by simple S traps. There are no grease traps.

The waste of the engine house is discharged, not into the general sewerage system, but through its own pipes into the river.

The cost of the material and labor required for the construction of the system of fluid sewerage was approximately \$3,275.

By the combined methods described all the waste products of the post are promptly, involuntarily, and hygienically removed. The system works smoothly and satisfactorily, and may be said to be an unquestionable success.

The subject of sewerage at Forts Clark and Washakie is under consideration. A contour map of the former post has been made by the engineer officer of the department, and the Quartermaster's Department is engaged in planning a system of sewers. Meanwhile the open drains are kept in good condition by flushing and the occasional use of sulphate of iron. At Fort Washakie an adequate provision for the disposal of sewage has been urged with more or less earnestness for many years. At the present time this is regarded as the greatest sanitary need of the garrison. The Major-General Commanding is of the opinion that the troops can not be withdrawn from this place for many years to come, and that the post should be put into condition for indefinite occupation. It is hoped, therefore, that favorable action will be taken in this case. In March the post surgeon of Fort McIntosh urged the introduction of a system of sewerage to be disposed of by intermittent filtration to purify it in part before turning it into the river. In the future, when Laredo has a sewerage system, it would be well to sewer this post connecting with the city outfall, but it is unlikely that the sewerage could be run into the river now above the intake of the city's water supply. Estimates are understood to have been forwarded by the post quartermaster. Capt. B. D. Taylor has made several efforts to have favorable consideration given to the need for sewerage at Fort Sill. This post is built in the form of a hollow square on a square plateau 50 to 80 feet high, with Medicine Bluff Creek at its base on the north. The officers' quarters on this side and two sets on the east have a sewer which enters the creek below the post. The other buildings on the east, those on the south, and the barracks and hospital on the west, have sewers which run into a main at the southwest angle, having its outfall in a cesspool in an open drain. There are besides from certain houses four other drains which issue on the surface. All this system is for waste water; but the 4-inch drain tiles are too small; they are badly cemented and have no traps nor manholes. Moreover, the fall is insufficient, only 4 inches in 100 feet. As a result of attempts to flush the water backs out into some one's yard or the pipes burst and there is a constant necessity for digging up and repairing. Capt. Taylor's recommendation for a new sewer system was approved last year by the Surgeon-General. On inquiry at the present time it is found that the subject is under consideration in the office of the Quartermaster-General awaiting a decision of certain points which will settle the question of improvements as between Fort Sill and Fort Reno.

Attention was called to defects or insufficiency of the sewerage system by the medical officers of a few posts. Among the faults noted by Maj. T. E. Wilcox in the new system at Fort Huachuca were imperfect cementing of joints, sections not strictly on grade, and small pipe inserted between joints of larger size. Extensive repairs were made to this system, the grades corrected, and new pipes laid. As the reports

from Fort Wingate characterized the sewers as defective, a letter was sent to the post surgeon calling for a report in full on the subject, with specific recommendations for improvement where such in his opinion were called for. Meanwhile it appears that instructions had been sent from the office of the Quartermaster-General to have plans and estimates prepared, giving careful consideration to the latest information relating to the condition of the sewerage system. These were forwarded, and having been approved the funds necessary to effect the improvements were allotted. At Angel Island a line of earthenware sewer pipe runs along each side of the parade ground and, uniting at the foot of the slope, is continued by an iron pipe into the bay below low-water mark. These carry off rain and all wastes, including discharges from the water-closets of the post. Ventilation is by the rain leaders, which are untrapped at their junction with the sewers. The men's privy is a deep vault or cesspool, which can not be kept free from odor by flushing. The department commander directed the commanding officer of the post to present an estimate for what would be necessary to remedy the defects of the system. The following is from the report of Capt. W. R. Hall from this post:

The drainage during the rainy season is somewhat defective. There are some open cement drains, but not nearly enough, and more attention should be paid to running off the water from numerous springs situated near the stable and between the hospital and officers' quarters. A ditch should be constructed to drain the two upper sets of barracks. The sewerage system, a most faulty one, may be described as follows: There is a double line of earthenware pipes, one beginning back of the bar house and the other in the neighborhood of the stable, both of these points being toward the summit of the ascent upon which the post is situated. The sewers, one running on each side of the parade ground, unite at the foot of the hill to empty, by means of an iron pipe, into the bay below low-water line. They carry off all sewage from water-closets and kitchen sinks, also waste water of every description, including the rain water from the roofs. The only ventilation of these sewer pipes, as far as I have been able to discover, is through the rain-water pipes which empty directly into the main sewer without any trapping, and of course any accumulation of gases escapes from the open ends of these pipes, or, in other words, the sewers are directly vented onto the roofs of the dwellings. Undesirable as this may seem it has in reality proved a safeguard for without these outlets any unusual pressure in the sewers would force gas through the badly trapped or untrapped house drains into the various buildings. In this connection attention is invited to the men's privy. This is practically a large cesspool. There is a deep vault into which sewerage pipes empty, and out of which runs a drainage into the main sewer. Into this vault, more or less filled with water, are discharged the excrement and urine of nearly 300 soldiers. The air in the building is always contaminated by the foul gases emanating from this unventilated cesspool, and at times the odor of it is perceptible from the road. Attempts are made to clean this vault by flushing it with water several times a day. The accuracy of the foregoing statements may seem incompatible with the acknowledged good health of the command, but this apparent inconsistency is readily explained by the superb climate of Angel Island, which encourages a life out of doors and tends to keep open both doors and windows, so that the fresh air blows freely through the dwellings.

A new sewerage system was provided for Fort Barrancas during the year. The details of the system are thus reported by Lieut. R. S. Woodson, assistant surgeon on duty at that post:

The sewer system is composed of 6 and 8-inch cylindrical vitrified earthenware pipes, with hub and spigot joints closed with mortar cement. The pipes are laid hubs up, in straight trenches 3 feet deep in true alignment. All changes in direction are effected by means of large manholes built of brick, with tight-fitting ventilated iron covers. Three manholes are placed near the three single hydrant nozzles mentioned above for flushing purposes, one in rear of hospital, one in rear of noncommissioned staff quarters, and one in rear of officers' quarters No. 13. The flushing is accomplished by means of a 4-inch rubber hose connected with the fire hydrants. Besides these there are numerous manholes placed at suitable intervals for purposes of inspection. The lines are so run as to produce the greatest possible fall. The three 6-inch sewer mains converge to a common manhole (6 feet deep) situated

*Disposal of garbage, etc.*—The usual method is to collect in closed barrels or galvanized iron pails and transport to a dumping ground in the vicinity of the post. For convenience, ground near the inhabited area is selected, and the accumulations of years become so extensive as to be a nuisance and a reproach. Ashes and cinders may be utilized on roads or in filling, and if not required for such purposes their deposit is not injurious. Stable manure also can generally be used upon gardens; but there is at every post much unavoidable solid waste that should be destroyed, and a crematory of moderate size should be built at all the modern and permanent posts. Where the reservation is small and surrounded by civil communities it is imperative to dispose of the wastes in this way. A crematory was built at Fort Columbus in 1885, and rebuilt on a larger scale two years ago on plans of Lieut. H. J. Reilly, Fifth Artillery. It consists of a fire-brick chamber divided into three spaces by iron gratings which support the garbage. A tall chimney gives a powerful draft and the combustion is almost perfect. There is no offensive odor and the smoke is ordinarily scarcely perceptible. No special provision is made for consuming the products of combustion, but those living on the island have experienced no inconvenience from them. A furnace was built at the dumping ground at Columbus Barracks several years ago, but it proved inefficient and was disused. Now, however, there need be no uncertainty as to the efficiency of a garbage crematory. They have proved successful in many instances. It is understood that one will be built soon at Davids Island and another at Madison Barracks. One, having a capacity of 35 cubic yards, has been erected at Fort Sam Houston and one, of 8 cubic yards' capacity, at Fort Sheridan; Fort McPherson also has a crematory.

## WATER SUPPLIES.

The subject of water supply has been agitated earnestly during the past year at many of the posts, with the result in most instances of carrying out or instituting improvements. The water wagon is now practically a thing of the past. It exists only at Fort Du Chesne and Eagle Pass. At the former it brings water from the Uintah River; at the latter from the hydrants of the neighboring town. In the east the analogue of the water wagon is found at only one post, Fort Wood, where, when the cistern supply of rain water becomes exhausted, purchases are made from the Croton Water Works Company and transported to the island in boats; similar conditions are found at Alcatraz Island in San Francisco Harbor.

At many of the posts no recommendations were made during the year, the water supply being understood to be satisfactory both as to quantity and quality. Among these were posts supplied from various sources, as rain-water cisterns, springs, ponds, running streams, wells, artesian wells, and city supplies, as follows:

*From cisterns.*—Jackson Barracks, Key West Barracks, and Fort Wood, just mentioned. Jackson Barracks has also a supply for police, fire, and other general purposes from the Mississippi River.

*From springs.*—Angel Island, Forts Huachuca and Mackinac, Mount Vernon Barracks and Forts Niobrara, Robinson, Sherman, Snelling, Supply, Townsend, and Walla Walla.

*From ponds.*—West Point.

*From running streams.*—Forts Assiniboine, Bidwell, Brown, Buford, Canby, D. A. Russell, McKinney, Missoula, Pembina, Ringgold, Sill,