

HIGH SCHOOL TABLE.—*Concluded.*

SUBJECTS.	CLASSES.											Post graduate	Spe- cial.
	M.	N.	O.	P.	Q.	R.	S.	T.	U.	V.			
Music	149	108	11	5	3	1	5	4	2	9	.....	.....
Art .....	...	...	11	5	3	1	5	...	...	9	.....	.....
Sewing	77	56	...	...	...	...	...	...	...	...	.....	.....
Cooking	66	47	11	13	...	4	7	2	...	2	.....	.....
House Management and Organi- zation .....	...	...	...	...	...	...	...	...	8	13	.....	.....
Physiology.....	149	108	...	...	...	...	8	...	...	2	.....	.....
Household Physics.....	...	...	...	...	2	2	...	8	3	...	.....	.....
Freehand Drawing.....	96	85	13	13	...	...	...	...	...	...	.....	.....
Music, Chorus.....	...	...	155	71	17	18	32	13	37	17	.....	.....
Music, Orchestra.....	...	...	1	...	3	4	2	1	2	3	.....	.....
Elementary Science.....	149	108	56	23	...	...	...	...	...	...	.....	.....
Ancient History .....	...	...	54	25	...	...	...	...	...	...	.....	.....
Hist. Art .....	...	...	...	...	...	...	...	3	...	3	.....	.....
Electricity .....	...	...	...	...	...	12	8	...	...	...	.....	.....

SCHOLARSHIP TABLE.

SCHOOL.	Class.	Number of pupils attending.	Number of pupils A-or better.	Per cent. of A-pupils.	Number of pupils B-or better.	Per cent. of B-pupils.	Failed.	Left school.	Left school for good.	Fitting for college.	Per cent. of promotions.	Per cent. of failures.
High	V	64	4	6.25	37	57.81	0	1	0	11	100.00	.....
Group I	U	56	3	5.35	26	46.42	5	9	6	8	91.07	8.92
	T	36	3	9.30	40	46.51	2	11	6	18	97.67	2.32
	S	53	1	1.88	19	35.84	7	11	7	9	86.79	13.20
	R	102	4	3.92	29	28.43	14	12	5	15	86.27	13.72
	Q	59	2	3.38	24	40.67	10	14	9	6	83.06	16.94
Total		420	22	5.23	175	41.66	38	58	33	67	90.95	9.04
Parker	P	109	13	11.92	56	51.37	6	15	14	20	94.49	5.50
Group II	O	77	4	5.19	34	44.15	6	15	8	12	92.20	7.79
Total		186	17	9.13	90	48.38	12	30	22	32	93.54	6.45
Chandler	N	131	6	4.57	36	27.48	19	6	4	.....	85.49	14.50
Group II	M	90	4	4.44	31	34.44	9	11	5	.....	90.00	10.00
Total		221	10	4.52	67	30.31	28	17	9	.....	87.33	12.66
Walker	N	35	4	11.42	13	37.14	3	0	0	.....	91.42	8.57
Group II	M	52	0	.....	13	25.00	5	0	0	.....	90.38	9.61
Total		87	4	4.59	26	29.88	8	0	0	.....	90.80	9.19
Garrison	N	13	3	23.07	5	38.46	0	2	2	.....	100.00	.....
Group II	M	6	0	.....	0	.....	0	1	1	.....	100.00	.....
Total		19	3	15.78	5	26.31	0	3	3	.....	100.00	.....
Eastman	N	11	1	9.09	5	45.45	0	0	0	.....	100.00	.....
Group II	M	1	0	.....	0	.....	0	0	1	.....	100.00	.....
Total		12	1	8.33	5	60.00	0	0	1	.....	100.00	.....
Mountain	N	2	0	.....	2	100.00	0	1	1	.....	100.00	.....
Group II .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand H. S. Total		947	57	6.01	370	39.07	86	113	78	104	90.91	9.08

General average of high school entire, 80 per cent

ELEMENTARY SCHOOLS.

	L	170	14	8.23	67	39.41	5	7	5	.....	97.05	2.94
	K	142	5	3.52	26	11.26	14	6	4	.....	90.14	9.85
	J	181	9	4.97	44	24.30	13	6	1	.....	92.81	7.18
	I	146	1	.68	20	13.69	16	4	1	.....	89.04	10.95
	H	178	11	6.17	64	35.95	26	6	2	.....	85.39	14.60
	G	145	2	1.37	35	24.13	19	2	0	.....	86.89	13.10
	F	178	18	10.11	77	43.25	17	2	0	.....	90.44	9.55
	E	138	4	2.89	22	15.94	22	1	0	.....	84.05	15.94
Totals—Elementary.		1,278	64	5.00	355	27.77	132	34	13	.....	89.67	10.32
Grand Totals—High and Elementary...		2,225	121	5.43	725	32.05	218	147	91	104	90.20	9.79

STANDARDS.

Scholarship, 80% Number of A-pupils 10% Number of B-pupils, Failures 50% 10%

MANUAL TRAINING—TABLE OF ATTENDANCE.

SCHOOLS.	SEWING.			COOKING.			MECHANIC ARTS.		
	Whole number of different pupils enrolled during the year.	Left for various reasons.	Whole number of pupils attending during the entire year.	Whole number of different pupils enrolled during the year.	Left for various reasons.	Whole number of different pupils attending during the entire year.	Whole number of different pupils enrolled during the year.	Left for various reasons.	Whole number of different pupils attending during the entire year.
High	26	6	20	47	0	47	86	13	73
Parker	17	8	9	137	19	118	63	10	53
Chandler ..	105	22	83	111	8	103	67	3	64
Walker	107	13	94	39	2	37	46	2	44
Garrison .	28	1	27	10	0	10	19	1	18
Eastman	25	1	24	9	0	9	9	0	9
Rumford	80	4	76	.....	.....	.....	36	1	35
Kimball	78	10	68	.....	.....	.....	37	2	35
Penacook	26	0	26	.....	.....	.....	.....	.....	.....
Franklin	25	3	22	.....	.....	.....	.....	.....	.....
Dewey Training.	13	2	11	13	2	11	11	0	11
H. P. Dame.....	17	3	14	.....	.....	.....	1	0	1
Millville.....	17	0	17	.....	.....	.....	6	0	6
Mountain	4	0	4	.....	.....	.....	.....	.....	.....
Iron Works.....	4	0	4	.....	.....	.....	1	1	0
Riverhill	6	0	6	.....	.....	.....	.....	.....	.....
St. John's	20	1	19	9	0	9	14	1	13
Sacred Heart....	27	3	24	17	0	17	16	4	12
Total	625	77	548	392	31	361	412	38	374

UNION SCHOOL DISTRICT, CONCORD, N. H.

REPORT OF THE ATTENDANCE OFFICER FOR THE YEAR ENDING JUNE 27, 1919.

MONTHS.	Truancies.		Absent for other reasons.		Totals.	Found on street and taken to school.		Found on street and taken home.		Taken to court.		Left city.		Sick-ness.		Lack of clothing.		Kept out by parents.		Totals.
	City Schools.	Parochial Schools.	City Schools.	Parochial Schools.		City Schools.	Parochial Schools.	City Schools.	Parochial Schools.	City Schools.	Parochial Schools.	City Schools.	Parochial Schools.	City Schools.	Parochial Schools.	City Schools.	Parochial Schools.	City Schools.	Parochial Schools.		City Schools.
1918.					560.															560.
September.....	0	0	30	6	36	0	0	0	0	0	0	0	0	20	6	4	0	0	0	36
October	0	0	21	21	42	0	0	0	0	0	0	0	0	19	21	2	0	0	0	42
November.....	5	10	47	42	104	3	7	2	3	0	0	0	0	40	35	5	7	2	0	104
December.....	10	5	27	4	46	10	5	0	0	0	0	0	0	20	4	7	0	0	0	46
1919.																				
January.....	10	12	39	21	82	10	5	0	0	0	0	0	0	23	18	10	10	6	0	82
February.....	6	1	27	6	40	6	1	0	0	0	0	0	0	21	4	1	2	5	0	40
March.....	6	5	34	8	48	6	5	0	0	0	0	0	0	20	0	10	3	4	0	48
April.....	3	5	39	5	52	3	5	0	0	0	0	3	0	30	3	3	2	3	0	52
May.....	10	5	25	10	50	10	5	0	0	0	0	2	0	16	3	5	7	2	0	50
June.....	9	6	43	2	60	9	6	0	0	0	0	0	0	20	1	5	0	18	1	60

Respectfully submitted,
 ARTHUR J. TAYLOR, Attendance Officer.

UNION SCHOOL DISTRICT CENSUS, 1919.

SUMMARY OF WARDS.

	Primary Class.	Boys.	Girls.	Total.
Number of children enumerated.....	1,365	1,520	1,609	3,129
Increase since 1918.....	....	....	....	212
Number attending school since 1918.....	22	18	40	
Number attending public schools.....	1,215	1,270	2,485	
Number attending parochial schools.....	285	293	578	
Number attending private schools.....	20	46	66	
Number of children enumerated between the ages of 5 and 16 inclusive.....	1,500	1,573	3,073	
Number between the ages of 5 and 8 not regis- tered in the district or elsewhere.....	7	11	18	
Number between the ages of 8 and 14 not regis- tered in the district or elsewhere.....	1	1	2	
Number between 14 and 16 not registered in the district or elsewhere.....	1	0	1	
Number between 5 and 16 not attending school regularly.....	0	0	0	
Number between 5 and 8 not attending school regularly.....	4	1	5	
Number between 8 and 14 not attending school regularly.....	3	3	6	
Number between 14 and 16 not attending school regularly.....	1	1	2	
Number 10 to 16 not able to read and write the English language correctly.....	1	0	1	
How many of these were born in New Hamp- shire.....	0	1	1	
Elsewhere in the United States.....	0	0	0	
In foreign countries.....	0	0	0	
Moved into the district since 1918.....	40	46	86	

NATIVITY OF PARENT.

American born	1,112
Foreign born	504
Russia	16
West Indies	1
Italy	35
New Brunswick	7

England	49
Poland	1
Sweden	63
Roumania	1
Ireland	53
French Canadian	153
English Canadian	26
Denmark	3
Turkey	1
Germany	8
Norway	1
Nova Scotia	17
Prince Edward Island	18
Finland	20
Scotland	16
Albania	1
Austria	1
Switzerland	1
Greece	2
Australia	1
Newfoundland	2
Cape Breton	1
Iceland	1
Asia	1
Armenia	4

NATIVITY OF CHILD.

	Boys.	Girls.	Total.
American born	1,472	1,549	3,019
Foreign born	48	62	110
Russia	1	2	3
Italy	4	1	5
England	7	9	16
Sweden	4	4	8
Ireland	0	1	1
Armenia	2	1	3
French Canadian	20	26	46
English Canadian	4	7	11
Scotland	1	5	6
Greece	2	0	2
Finland	1	5	6
Newfoundland	1	0	1
New Brunswick	0	1	1
British Columbia	1	0	1

**THIRTY-SECOND ANNUAL ELOCUTIONARY
CONTEST.**

BY THE

PUPILS OF THE PUBLIC SCHOOLS

OF UNION SCHOOL DISTRICT, AT HIGH SCHOOL HALL, TUESDAY
EVENING, MARCH 9, 1920, AT EIGHT O'CLOCK.

PROGRAM.

March, "American Union," *Beyer*
High School Orchestra.

ORIGINAL DECLAMATION—HIGH SCHOOL.

1. The Present Day Need of Education,
Germaine Beatrice Scully, Class 1922.
2. Heroes,
Harold George Donovan, Class 1920.
3. The Goddess Duty,
Georgia Marion Osgood, Class 1921.
4. The Boy Scout Movement,
Laurence Ilsley Duncan, Class 1923.

Waltz, "Stars Brightly Shining," *Bronto*
Girls' Glee Club.

FORENSIC DECLAMATION.

1. "Good Citizenship," *Roosevelt*
Malcolm Percival Toone, Garrison School.
2. "The National Flag," *Beecher*
Guy Webster Mann, Eastman School.
3. "Extract from the Flag Day Address," *Wilson*
John Edward Jackman, Chandler School.
4. "The Two Banners of America," *Johnson*
Cyril Pentreath Datson, Walker School.

MISCELLANEOUS DECLAMATION.

- March, "March of the Guard," *Geibel*
Boys' Glee Club.
1. "How Girls Study," *McDonald*
Ruth Virginia O'Malley, Chandler School.
2. "Up Primrose Hill," *Wilkins*
Annie Bertha Evans, Walker School.
3. "Aunt Doleful's Visit," *Dallas*
Doris Lillian Robinson, Garrison School.
4. "A Timely Visit," *Rice*
Arlene Mae Stuart, Eastman School.
- Selection, "Melody of Love," *Englemann*
High School Orchestra.

AWARD OF PRIZES.

ORIGINAL DECLAMATION—HIGH SCHOOL, GROUPS 1 AND 2.

- First Prize, \$15. Awarded to Georgia Marion Osgood.
Second Prize, \$10. Awarded to Harold George Donovan.

FORENSIC DECLAMATION.

- First Prize, \$6. Awarded to Cyril Pentreath Datson.
Second Prize, \$4. Awarded to Guy Webster Mann.

MISCELLANEOUS DECLAMATION.

- First Prize, \$6. Awarded to Ruth Virginia O'Malley.
Second Prize, \$4. Awarded to Doris Lillian Robinson.

BOARD OF JUDGES.

- David F. Dudley, Esq., Penacook, N. H.
Mr. Maro S. Brooks, Deputy Commissioner Education, Concord, N. H.
Mr. Walter M. May, Director of High Schools, Concord, N. H.

SCHOOL REPORT.

107

PRIZE SPEAKING ACCOUNT.

RECEIVED.

Balance from last year's account,	\$3,047.43
Interest on the same,	114.26
Sale of 496 tickets at 35 cents,	173.60
	<hr/>
	\$3,335.29

EXPENDED.

Henrietta C. Bemis, professional,	\$60.00
Prizes including books,	51.75
English Prize Composition expense,	82.50
Miscellaneous expense, including printing, selling, taking tickets, music, ushers, judges, janitors, etc.,	12.10
Cash on hand as a guaranty fund for future contests,	3,128.94
	<hr/>
	\$3,335.29

**ANNUAL CONTEST IN ENGLISH COMPOSITION
FOR HIGH SCHOOL PUPILS.**

HELD AT THE PARKER SCHOOL, MAY 3, 1919.

SCHOOL.	No. Pupils Enrolled in the School.	No. Pupils Taking part.	Per cent. of Pupils in the Contest.	Average Rank of Pupils.	Average Per cent. on Essays.
Parker,	187	37	19.7	40	59
Eastman,	12	2	16.66	70	34
Walker,	53	7	13.2	53	51
Chandler,	145	17	11.6	36	64
Garrison,	13	1	7.6	68	40
High,	423	13	3.7	21	72

PRIZES.

GENERAL PRIZES.

<i>Prizes.</i>	<i>Awarded to</i>	<i>Class</i>	<i>Subjects.</i>
First, \$6	Helen E. Ryan, Senior High School.	R	Life at Pegotty's.
Second, \$4	Doris E. Toone, Parker High School.	P	A Mediæval Tournament.
Third, \$2	Katharine Graves, Chandler High School.	N	The Gathering of the Clansmen.

CLASS PRIZES.

SENIOR HIGH.

Classes U, V.

<i>Prizes.</i>	<i>Awarded to</i>	<i>Class.</i>	<i>Subjects.</i>
First, \$3	Lois Rundlett,	V	Burke's Reasons for a Necessity of Conciliation.
Second, \$2	Stella Johnson,	U	Lincoln's Courage.
Third, \$1	Jennie Nute,	U	Going Down with Victory.

Classes S, T.

First, \$3	Leslie Dixon,	T	Why I Like John Ridd.
Second, \$2	Dorothy Scott,	T	Webster's Tribute to the Soldiers of the Revolution.
Third, \$1	Paul Bailey,	T	Why I Like John Ridd.

Classes Q, R.

First, \$3	Helen Ryan,	R	Life at Pegotty's.
Second, \$2	Helen Corrigan,	R	An Indian Village.
Third, \$1	Georgia Osgood,	R	The Hero I Most Admire.

JUNIOR HIGH.

Classes O, P.—Parker School.

First, \$3	Doris Toone,	P	A Mediæval Tournament.
Second, \$2	John Jones,	O	What Sir Launfal Learned.
Third, \$1	Helen Foster,	P	A Mediæval Tournament.

Classes M, N.—Chandler School.

First, \$3	Katherine Graves,	N	The Gathering of the Clansmen.
Second, \$2	Jean Gove,	M	The Story of Virginia.
Third, \$1	Doris Abbot,	N	The Gathering of the Clansmen.

THIRD ANNUAL ALBIN PRIZE MEDAL CONTEST.

HIGH SCHOOL HALL, JUNE 20, 1919, 8 P. M.

PROGRAM.

Piano Solo, "Spring Song," *Mendelssohn*
Lena Corser.

Order of Speakers:

Bessie D. Waldman,
Jeannette Belle Ryan,
Richard Abbott Henry,
Corinne M. Smith,
Margaret Hilda Wall,
Harriett Isabella Albee,
Joseph Thomas Gannon,
Marie Emma Trombly,
Frances Louise Wason.

Vocal Solo, "When You Smile," *Minor*
Margaret Lovejoy.

Trio, "In April,"

Martin Beggs, First Violin, Charles Pichette, Second Violin,
Edna Morrill, Piano.

Announcement of Award.

JUDGES.

Rev. W. Stanley Emery,
Fred C. Demond, Esq.,
Miss Harriet L. Huntress.

MEDAL WINNERS.

Margaret Hilda Wall, "The Self-Reliant Man."
Joseph Thomas Gannon, "The Future of Aerial Transportation."

WAR SAVINGS STAMPS.

Record of stamps sold by pupils of the public schools of Union School District from January 5, 1918, to February 27, 1920.

	Thrift Stamps.	Amount Paid.
High School,	6,860	\$1,797.47
Parker School,	21,327	5,573.90
Chandler School,	8,865	2,316.92
Walker School,	12,937	3,396.10
Garrison School,	10,287	2,674.41
Eastman School,	1,699	439.50
Rumford School,	14,207	3,693.31
Kimball School,	13,412	3,358.21
Penacook School,	5,673	1,468.47
Franklin School,	1,280	328.47
Dewey School,	6,200	1,602.91
Harriet P. Dame School,	1,248	324.20
Cogswell School,	2,089	538.62
Millville School,	1,222	314.67
Iron Works School,	272	70.64
	<hr/>	<hr/>
	107,578	\$27,897.80

TABLE OF TRANSPORTATION ROUTES.

Name of Driver.	Route.	Number pupils carried.	Distance.	Number horses.	Covered wagon.
Eugene H. Bickford.	Silver Hill to Iron Works Road, to Chandler, Parker and High Schools.....	11	6 m.	2	Yes.
Alfred H. Bourlay ..	Loudon line to Harriet P. Dame School	5	7½ m.	1	No.
Howard L. Denton..	Mr. Maynard's, Turtletown, to Eastman	6	6½ m.	1	No.
Harry R. Dunstane..	Fagan's Corner to Millville.....	6	6½ m.	1 and motor	No.
Judson F. Hoyt.....	Snaptown to Golf Siding	8	10½ m.	1 and motor	No.
John H. Plummer ..	Diamond Hill to Millville	6	4½ m.	1 and motor	No.†
Alfred Provo, Jr.....	Carter's Hill to Broad Cove and Riverhill.....	5	5 m.	1	No.
William S. Kaime...	East Concord to Parker and High	30	2 m.	4	Yes.
" "	East Concord to Gray's Garage.	5	1¾ m.	Motor	.....
" "	Millville to Chandler, Parker and High	25	5 m.	2	Yes.
" "	Plains to Parker, High and Chandler.....	30	3½ m.	2	Yes.
" "	Black Hill—Top of Pembroke Hill to Penacook, Cogswell, Rumford and Chandler.....	18	5½ m.	2	Yes.
Mrs. Ballard	Ballard Hill to Dewey.....	3	4 m.	1	No.
Electric Railway	West Concord to High and Parker .....	.....	6 m.	.....	.....
Mr. J. M. George	West Parish to Garrison School.	2	4½ m.	1	No.

PUBLIC SCHOOLS OF UNION SCHOOL DISTRICT.

HONOR LIST—1919.

PUPILS WHO HAVE ATTAINED A MARK OF A— OR BETTER FOR THE ENTIRE YEAR.

HIGH SCHOOL.—Hazel Clement, Elizabeth Chalmers, Lois Rundlett, Marie Turgeon, Bessie Waldman, Sadie Ash, Elphege Couture, Freda Sargent, Aria Cooper, Leslie Dixon, Lillian Ranquist, Maude Robbins, Gertrude Rossell, Dorothy Scott, May Smith, Marion White, Henry Clough, Bernice Chase, Gertrude Conn, Percival Eveleth, Helen Ryan, Edward Sanel, Leonard Smith.

PARKER SCHOOL.—Everett Benton, Charles Brewster, Ruel Colby, John Jones, Harry Bartlett, Clotilda Comi, Whitney Corrigan, Joseph Couture, Lula Gordon, Martin Gurley, Hilda Gustafson, Helen Hutton, Grace Kelley, Olive LaHar, Katherine McAuley, Rita Spaulding, Doris Toone.

CHANDLER SCHOOL.—Mary Coleman, Rachel Hall, Marie Parker, Dorothy Wentworth, Grace Andrews, Warren Butterfield, Doris Dickey, Laurence Duncan, Laura Harvey, Lloyd Simpson.

WALKER SCHOOL.—Philip Guyol, Edward Lamprone, Pauline Oyston, Laura Plummer, Clyde Kimball, Helen Cheney, Sarah Hill, Edward Amsden, Carl Evans, Lawrence Tucker.

GARRISON SCHOOL.—M. Esther Cushing, Milo Lindgren, Louise Shepard, Paul Frost, Doris Robinson, Clara Henry, Henry Ekstrom, Alice Ericson, Harry Person, Harry Makin, Martha Dahlgren.

EASTMAN SCHOOL.—Hazel Maynard, Robert Cushing, Helen Maynard, Bernice Batchelder, Richard Cushing, Dorothy Reed, Helen Riley.

RUMFORD SCHOOL.—Eleanor Dutton, Ruth O'Malley, Nathalie Towle, Thelma Day, Cleon Roers, Marion Whalin, Lucy O'Malley.

KIMBALL SCHOOL.—Kinsley Batchelder, Barbara Everett, Charlotte Jackman, George Mowatt, Thomas Mulligan, M. Helene Wheeler, Dudley Orr, Mary Lake, Mildred Densmore, Kenneth Lane, Jerry Cook, Robert Foster, James Moran, Ruth Robinson, Madeline Calkin, Kenison Hill, Jans Carlen, Barbara Pearson, Doris Tappan, Robert Baker.

PENACOOK SCHOOL.—Richard Butterfield, Sara Brunel, Shirley Martin, Della Gilpatrick, Richard Morey, Edith Miller.

FRANKLIN SCHOOL.—Florence Conn.

DEWEY SCHOOL.—Frederick Knox, Sarah Jackson, William Saltmarsh, Katherine Foster, Clara Prowse, John Swenson, Grace Ballard, Charles Wirrell.

HARRIET P. DAME SCHOOL.—Rose Raduazo, Mildred Savoy.

MILLVILLE SCHOOL.—Robert Hurd, Arthur Clarke, John Crowley.

MOUNTAIN SCHOOL.—Dorothy Hadden, Eddella Mayo, Albert Mayo, Thomas Turner.

IRON WORKS SCHOOL.—None.

RIVERHILL SCHOOL.—None.

CONCORD HIGH SCHOOL.

GRADUATING CLASS, JUNE 27, 1919.

<i>Name.</i>	<i>Course.</i>
Harriett I. Albee,	Classical.
Elizabeth Benton,	Classical.
Aubrey M. Brown,	Mechanic Arts.
Agnes E. Callahan,	Academic.
Martha P. Carpenter,	Academic.
Elizabeth D. Chalmers,	Commercial.
Mary E. Champagne,	Commercial.
Lawton B. Chandler,	Academic.
Chadwick Connell,	Academic.
Rose M. Corriveau,	Domestic Arts.
Pauline A. Cutter,	Domestic Arts.
Alfred John Dagostino,	Academic.
Bertha E. Danforth,	Domestic Arts.
Laurence H. Danforth,	Mechanic Arts.
Carl G. Darrah,	Academic.
Josephine G. Dufresne,	Academic.
Amelia F. Fanny,	Commercial.
Joseph T. Gannon,	Academic.
Ruth F. Hannigan,	Commercial.
Paul E. Haynes,	Commercial.
Kathleen E. Heath,	Classical.
Richard A. Henry,	Academic.
Sadie F. Jewell,	Academic.
John C. Kilburn,	Academic.
Joseph A. King,	Commercial.
Pauline M. Lane,	Classical.
Ruth A. Leavitt,	Domestic Arts.
Margaret S. Little,	Classical.
Ruth Lyford,	Classical.
Bertha L. Marston,	Academic.
Payson S. Minor,	Mechanic Arts.
Helen A. Morgan,	Classical.
Helen I. Morrison,	Classical.
Charles F. Moulton,	Mechanic Arts.
James B. O'Brien,	Commercial.

<i>Name.</i>	<i>Course.</i>
William A. Odey,	Mechanic Arts.
Mary A. Otis,	Classical.
Field C. Perry,	Mechanic Arts.
Madeline B. Potter,	Commercial.
Robert W. Potter,	Mechanic Arts.
Arvilla E. Powell,	Domestic Arts.
Ruth L. Quinn,	Commercial.
Lois Rundlett,	Classical.
Harold N. Runnells,	Academic.
Jeannette B. Ryan,	Academic.
Doris C. Saben,	Academic.
Marion E. Shaw,	Commercial.
Beatrice L. Shreve,	Commercial.
Corinne M. Smith,	Commercial.
Dorothy M. Sullivan,	Academic.
Louise G. Timlin,	Classical.
Ada C. Trenoweth,	Domestic Arts.
Marie E. Trombly,	Academic.
Marie A. Turgeon,	Commercial.
Madeline V. Vose,	Academic.
Bessie D. Waldman,	Commercial.
Mary P. Walker,	Classical.
Margaret H. Wall,	Classical.
Frances L. Wason,	Classical.
Dorothea A. Wilcox,	Academic.
Milton F. Willard,	Commercial.
Harold G. Winslow,	Mechanic Arts.
Francis I. Wood,	Academic.
Alice E. Wilson,	Academic.

GRADUATING CLASS, JANUARY 23, 1920.

Arthur W. Andrews,	Mechanic Arts.
Sadie G. Ash,	Commercial.
Paul L. Bailey,	Academic.
Arlene M. Booth,	Commercial.
George L. Boulay,	Mechanic Arts.
Dorothy H. Clark,	Academic.
Elphege J. Couture,	Commercial.
Katherine E. Crabbe,	Academic.
Ruth E. Dearborn,	Domestic Arts.
J. Gray Estes,	Academic.

<i>Name.</i>	<i>Course.</i>
Florence E. Fulford,	Domestic Arts.
Sarah E. Grant,	Academic.
Helen G. Hadley,	Academic.
Grace M. Haskell,	Classical.
Paul W. Heath,	Commercial.
Mildred E. Hobson,	Academic.
Ruth L. J. Holmgren,	Academic.
Sarah A. Huston,	Domestic Arts.
Agnes E. Johnson,	Commercial.
Stella V. Johnson,	Classical.
Shirley W. Jones,	Academic.
William J. Limpery,	Academic.
Helen Mansur,	Academic.
Eugene C. Maxam,	Mechanic Arts.
Glenda E. Merrill,	Domestic Arts.
Raymond D. Moore,	Academic.
Edna E. Morrill,	Domestic Arts.
John O. Morton,	Mechanic Arts.
Edythe M. Nevers,	Academic.
Jennie G. Nute,	Domestic Arts.
Margaret L. Osgood,	Academic.
Mildred A. Patterson,	Domestic Arts.
Rena B. Plourde,	Commercial.
Nelson G. Pringle,	Academic.
Ellen M. Reardon,	Commercial.
Rose A. Reen,	Commercial.
Rhoda C. Reilly,	Academic.
Nellie M. Riford,	Academic.
Porter Roberts,	Academic.
Freda G. Sargent,	Commercial.
Nathaniel Sawyer,	Classical.
Willis J. Sawyer, Jr.,	Mechanic Arts.
Milton Shapiro,	Academic.
Lloyd W. Straw,	Mechanic Arts.
Louise M. Stuart,	Commercial.
Roger C. Tyler,	Mechanic Arts.
Edith M. Unwin,	Domestic Arts.
Mary A. Wood,	Classical.
Irene A. Young,	Academic.

ROLL OF HONOR.

HIGH SCHOOL.—Rachel George, Eva Hadley, Eunice Quinn, Altha Walker (10), Harriett Albee (12), Lois Rundlett, Louise Timlin, Grace Haskell, Glenda Merrill, Doris Batchelder (3), Gwendolyn Jones (3), Dorilla Levesque (2), Nora Murphy (2), Maurice Nelson, Lillian Ranquist (6), Emma Tucker (4), John Branswell, Harold Paige, Hazel Roy, Nellie Blake, Janet Chalmers (2), Katherine Chase (2), Helen Davis (2), Lura French (2), Dorothy Moberg, Oramel Swain (2), Grace Chase, Frances Currier, Marguerite Fernald, Bernice Morrill, Esther Muttart, Grace Rice, Beatrice Tremblay, Dorothy Twomey, Marion Wason, Raymond Kimball.

PARKER SCHOOL.—Mary E. Cate (2), Elinor Diversi (3), Ruth Ford, Vera Maxner, David Morrison (2), Florence Philbrick, Origen Phillips, Edward Putnam, Elizabeth Whalen.

CHANDLER SCHOOL.—Doris Abbott, Theresa Bombard, Ruth Cilley, Madeline Haggett (4), Kenneth Heath, Frank Houston, Ruth Lane, Ruth Lord, Harry Rosendale (3), Thomas Rowell, Dorothy Wentworth, Holton White.

WALKER SCHOOL.—Harold D. Bass, Robert A. Ritchie (2), Dorothy L. Weathers (2), Rebecca D. Chamberlin, Richmond H. Hoyt, Lawrence F. Ahern (1), Dorothy A. Flanders (1½), George M. Reilly (2), Engrid Rosendale (1).

GARRISON SCHOOL.—Lahja Williams, Nannie Peterson, Eric Anderson, Ernest Turnquist, Milga Peterson, Wilma Peterson.

EASTMAN SCHOOL.—Bernice C. Batchelder (3), Sadie E. Brown, Robert O. Cushing (2), Nellie J. French, Vesta P. Morrison (5), C. Pauline Tebbetts.

RUMFORD SCHOOL.—Clinton R. Brooks, Eben B. Hutton, Donald W. Saltmarsh, George W. Rice (2), Elizabeth A. Palmer (3), Letitia George (2), Paul A. Bergstrom (3), E. Danforth Gurley (2), Lester W. Holt (2), J. Carleton White.

KIMBALL SCHOOL.—Victor J. Martin.

PENACOOK SCHOOL.—Lloyd McClintock, Alfred Rowell, Rodney Levin, Paul Mudgett, Carl Ronn.

FRANKLIN SCHOOL.—None.

DEWEY SCHOOL.—Frederick R. Knox (2), Ruth M. Prowse, Lillian I. Wirrell (2).

HARRIET P. DAME SCHOOL.—Helen E. Curtis (2), Virginia E. Wentworth, Marguerite Chenette, George Shaw, Arthur Gagnon, Beverley Wentworth.

COGSWELL SCHOOL.—None.

MILLVILLE SCHOOL.—Hazel E. Frazier.

MOUNTAIN SCHOOL.—None.

IRON WORKS SCHOOL.—None.

RIVERHILL SCHOOL.—None.

EVENTS OF THE YEAR.

1919.

- Apr. 3. Annual Meeting of Union District.
7. Spring vacation begins.
- May 3. English Prize Composition Contest.
4. Mrs. Fannie E. Minot, Secretary of Board, died.
7. Schools close for Aeroplane display—Victory Loan.
20. Parents' Day at Garrison School.
21. Teachers' Social—Professor Wright speaks.
22. Parent-Teachers' Meeting at Walker School.
- June 5. Schools have one session on account of heat.
20. Albin Prize Medal Contest.
23-24. Sewing exhibit.
27. High School Graduation.
- Aug. 18-22. Superintendents' Conference at Plymouth.
- Sept. 2. Schools begin—Superintendent addresses teachers.
16. Garden Exhibits—Rumford School.
17. " " —Dewey School.
18. " " —Walker, Penacook Schools.
19. " " —Kimball, Cogswell, Garrison Schools.
23. " " —Millville School.
25. " " —Chandler, Parker, H. P. Dame Schools.
26. " " —Eastman School.
- Oct. 1. Garden Exhibit—High School.
2. Reception to Mr. Clayton and out-of-town new teachers.
6. West Concord people ask for transportation.
9. Superintendent Browne of East Orange, N. J., visits.
12. Columbus Day—observed 13th.
16. Meeting of State Board and Committees—Dinner at High School.
17. State Teachers' Convention at Manchester.
29. Professor Childs begins a series of lectures to College Extension Club.
- Nov. 4. One session of schools—snowstorm. Community Social, High School.
11. Armistice Day—No school, School Parade.
14. Parents' Night—High School.
19. First Concert—Teachers' Course. Gerardi Trio.

- Dec.** 5. College Club gives "Green Stockings" at Auditorium.
 11. Elizabeth Pooler Rice—Teachers' Course.
 12. Schools close.
 29. Schools begin.
 30. Superintendents in conference at Durham.
- 1920.
- Jan.** 6. Mr. John S. B. Davie speaks to class in Economics.
 12. Teachers' Institute at Nashua.
 22. Aurore La Croix, Pianiste—Teachers' Course.
 23. Miss Wooley, President Mt. Holyoke College, speaks to teachers.
 23. High School Graduation.
- Feb.** 2. Second Semester begins.
 12. Social—Americanization at High School Hall.
 13. One session of school—snow.
 17. Fifteen teachers, assistant superintendent, att. officer—out with la grippe.
 19. One session—snowy. Seventeen teachers and 400 pupils out with la grippe.
 20. Schools close—snow drifts and sickness.
 23. Holiday—Washington's Birthday.
 24. Schools reopen.
 25. No school—heavy snowstorm.
 26. Helen Stanley in Teachers' Course.
- Mar.** 8. No school in Garrison, Eastman, Dame, Riverhill, Mountain, and Iron Works—One session in all others, result of Saturday's blizzard.
 *26. Hon. E. W. Butterfield addresses the teachers.

ANNUAL SCHOOL MEETING WARRANT.

STATE OF NEW HAMPSHIRE.

*To the inhabitants of Union School District in Concord,
N. H., qualified to vote in district affairs:*

You are hereby notified to meet at the Auditorium on Prince Street, in said district, the third day of April, 1919, at 7.30 o'clock in the evening, to act upon the following subjects:

1. To choose a moderator for the ensuing year.
2. To choose a clerk for the ensuing year.
3. To hear and act upon the report of the Board of Education for the past year.
4. To choose three members of the Board of Education to hold office for three years to fill the vacancies arising from the expiration of the term of office of Harry H. Dudley, Lillian R. Shepard, and Harry F. Lake, and to choose one member of the Board of Education for two years to fill the vacancy caused by the resignation of Edward C. Niles.
5. To choose one or more auditors for the ensuing year.
6. To see what sum of money the district will raise and appropriate for the payment of the debts of the district.
7. To see what sum of money the district will raise and appropriate for the support of the schools for the ensuing year.
8. To see what sum of money the district will raise and appropriate for special repairs to school buildings during the ensuing year.
9. To see if the district will vote to authorize the Board of Education to sell by public auction or private sale such of the rural school buildings and land as they deem advisable

10. To transact any other business that may legally come before said meeting.

Given under our hands this tenth day of March, 1919,

HARRY H. DUDLEY,
OSMA C. MORRILL,
LILLIAN R. SHEPARD,
DENNIS E. SULLIVAN,
FANNY E. MINOT,
HARRY F. LAKE,
OMAR S. SWENSON,
CHARLES DUNCAN,
W. STANLEY EMERY,

Board of Education of Union School District.

I certify that on the twelfth day of March, 1919, I posted a copy of the written warrant, attested by the Board of Education of said district, at the place of meeting within named and a like attested copy at the Police Station in the city of Concord, N. H., being a public place in said district.

LOUIS J. RUNDLETT.

CONCORD, N. H., March 13, 1919.

Then personally appeared before me, on this date, the said Louis J. Rundlett, and made oath the above certificate by him signed, is true.

CHARLES W. BREWSTER,
Justice of the Peace.

A true copy of the warrant, return of service, and certificate of oath.

Attest:

LOUIS P. ELKINS,
Clerk of Union School District.

REPORT OF ANNUAL MEETING.

In accordance with the foregoing warrant a meeting of the legal voters of Union School District was held at the Auditorium on Prince Street, in Concord, N. H., on the evening of the third of April, 1919, at 7.30 o'clock.

The meeting was called to order by Louis C. Merrill, moderator.

On motion of Harry F. Lake, duly seconded, the moderator cast one ballot for Louis P. Elkins as clerk *pro tem*.

ARTICLE 1. On motion of Arthur Sturtevant, duly seconded, the clerk *pro tem* was ordered to cast one ballot for Louis C. Merrill for moderator for the ensuing year. Mr. Merrill was duly elected.

ART. 2. On motion of Harry F. Lake, duly seconded, the moderator cast one ballot for Louis P. Elkins for clerk for the ensuing year. Mr. Elkins was declared elected.

ART. 3. On motion of Arthur F. Sturtevant, duly seconded, the report of the Board of Education, as printed, was accepted and placed on file.

ART. 4. On motion of Henry H. Metcalf, duly seconded, it was voted to proceed to the election of three members of the Board of Education to fill the vacancies arising from expiration of term of office, and one member to fill vacancy caused by resignation of member of Board. It was declared polls would close at 8.15 P. M.

On motion of Henry Chamberlin, duly seconded, the moderator was ordered to name three tellers. The moderator named: Henry E. Chamberlin, Harry L. Alexander, and Percy R. Sanders.

John P. George moved that the meeting proceed to the consideration of the remaining articles of the warrant.

ART. 5. On motion of Dr. Charles Duncan, duly seconded, John P. George and Henry H. Metcalf were nominated for auditors for the ensuing year. Mr. George and Mr. Metcalf were duly elected.

ART. 6. On motion of Henry H. Metcalf the following resolution was adopted :

Resolved: That there be raised and is hereby ordered to be raised on the polls and ratable estates within Union School District, the sum of fourteen thousand seven hundred fifteen dollars (\$14,715) of which sum, six thousand seven hundred and fifteen dollars (\$6,715) shall be appropriated for the payment of the interest on its bonded indebtedness accruing during the year and eight thousand dollars (\$8,000) for the payment of the bonds of the district maturing July 1, 1919.

ART. 7. On motion of Henry E. Chamberlin the following resolution was adopted :

Resolved: That there be raised and is hereby ordered to be raised on the polls and ratable estates within Union School District for the support of schools for the ensuing year, such a sum, as in addition to the sum assigned to the district by the city of Concord out of its appropriation for schools, will amount to the sum of one hundred seventy-two thousand, five hundred and ten and thirty one-hundredths dollars (\$172,510.30).

ART. 8. On motion of Arthur Sturtevant the following resolution was adopted :

Resolved: That there be raised and is hereby ordered to be raised on the polls and ratable estates within Union School District for special repairs to school buildings during the ensuing year the sum of two thousand dollars (\$2,000).

ART. 9. On motion of Arthur F. Sturtevant, duly seconded, it was voted to authorize the Board of Education to

sell by public auction or private sale such of the rural school buildings and land as they deemed advisable.

(a) Whole number of votes cast.....244
Result of voting was as follows:

For three years:

Harry H. Dudley.....244
Lillian R. Shepard.....243
Harry F. Lake.....244

For two years:

W. Stanley Emery.....244

Scattering votes:

Martha H. Berry..... 1

Harry H. Dudley, Lillian R. Shepard, Harry F. Lake and W. Stanley Emery were declared elected to serve on School Board of Union School District.

(b) There being no further business, on motion of Dr. D. Sullivan, the meeting was adjourned.

A true record.

Attest:

LOUIS P. ELKINS,
Clerk.

State of New Hampshire, Merrimack SS

April 5, 1919.

Then personally appearing Lillian R. Shepard, Harry F. Lake, W. Stanley Emery took the oath of office by law prescribed as members of the Board of Education of Union School District.

LOUIS P. ELKINS,
Justice of the Peace.

WATER DEPARTMENT.

1919.

BOARD OF WATER COMMISSIONERS.

CHARLES J. FRENCH, Mayor, *ex-officio*.

OLIVER J. PELREN,	to March 31, 1923.
CHARLES R. WALKER,	to March 31, 1923.
HARRY H. DUDLEY,	to March 31, 1922.
NATHANIEL E. MARTIN,	to March 31, 1922.
BURNS P. HODGMAN,	to March 31, 1921.
JOHN B. ABBOTT,	to March 31, 1921.
FRANK P. QUIMBY,	to March 31, 1920.
GEORGE T. KENNEY,	to March 31, 1920.

NATHANIEL E. MARTIN, *President*.

BURNS P. HODGMAN, *Clerk*.

SUPERINTENDENT.

P. R. SANDERS.

CLERK.

ALICE G. COCHRAN.

FOREMAN.

JAMES T. DAVIS.

ENGINEER.

HENRY A. ROWELL.

CONSTRUCTION.

Cost of land damages, flowage and water rights:

Paid B. F. & D. Holden, for water rights,	\$60,000.00
Concord Manufacturing Co., for water rights,	83,000.00
W. P. Cooledge, for mill privilege and land,	5,500.00
Humphrey & Farnum, for kit-shop privilege,	5,000.00
flowage rights around Penacook Lake,	4,375.61
for land at Penacook Lake,	94,184.95
C. H. Amsden, water and flowage rights,	5,000.00
Cost of property and rights of Torrent Aqueduct Association, dam, gate-house and appurtenances,	20,000.00
conduit and gate-houses,	35,546.05
mains (low service main and pump main from the dam to Penacook Street, force main from the pump to the reservoir, fire main through North and South Main Streets, and high service main from Penacook Street to Stark Street, Penacook),	182,241.70
distribution pipe,	402,006.16
service pipe,	68,096.62
reservoir, including land,	45,044.09

Cost of pumping station, shop, stable and storehouse, including land,	\$29,743.35	
pumping machinery,	20,706.72	
engineering and superintendence,	14,913.12	
incidentals,	6,875.97	
		<hr/>
Cost of works, January 1, 1920,		\$1,113,053.28
Less amount received for lumber, land and buildings sold,		7,736.61
		<hr/>
		\$1,105,316.67

Bonds of the city have been issued to pay a part of said cost, of which the following are still outstanding:

When due.	Rate.	Amount.
Nov. 1, 1920,	3,	\$4,000.00
Nov. 1, 1921,	3,	3,000.00
April 1, 1921,	3½,	3,000.00
Jan. 1, 1922,	4,	323,000.00
Jan. 1, 1922,	3½,	8,000.00
April 1, 1922,	3½,	25,000.00
Jan. 1, 1923,	3½,	3,000.00
Jan. 1, 1924,	3½,	15,000.00
		<hr/>
		\$384,000.00

CITY OF CONCORD WATER-WORKS INCOME
INVESTMENT ACCOUNT.

Established by authority of an ordinance of the Board of Aldermen passed June 11, 1917. Principal and interest to be used in the reduction of the bonded indebtedness of the water-works system at the discretion of the Board of Water Commissioners.

Amount of capital, January 1, 1919,	\$35,846.00	
Added to fund, 1919,	3,000.00	
Amount of capital, January 1, 1920,	\$38,846.00	
Invested in		
City of Concord, N. H., 4% sewer refunding bonds,	\$5,000.00	
U. S. First Liberty Loan converted 4 $\frac{1}{4}$ % bonds,	10,000.00	
U. S. Third Liberty Loan 4 $\frac{1}{4}$ % bonds,	10,000.00	
U. S. Fourth Liberty Loan 4 $\frac{1}{4}$ % bonds,	10,000.00	
U. S. Victory Loan 4 $\frac{3}{4}$ % notes,	3,000.00	
U. S. War Savings Certificates, is- sue of 1918,	846.00	
		\$38,846.00

CITY OF CONCORD WATER-WORKS PROFIT
INCOME ACCOUNT.

Balance of income, 1918,	\$724.61	
Income received, 1919,	1,820.61	
	\$2,545.22	

Invested in

U. S. Second Liberty Loan converted 4¼% bonds, \$200,	\$193.52	
U. S. Third Liberty Loan 4¼% bonds, \$300,	288.69	
U. S. Fourth Liberty Loan 4¼% bonds, \$1,300,	1,229.61	
U. S. Victory Loan 4¾% notes, \$800,	799.22	
Deposited in Loan and Trust Savings Bank,	34.18	
	\$2,545.22	

**REPORT OF THE BOARD OF WATER
COMMISSIONERS.**

CONCORD, N. H., January 1, 1920.

To His Honor the Mayor and the Board of Aldermen:

The Board of Water Commissioners has the honor to submit to your Board and the citizens of Concord the annual report of the condition of the city water-works as reported in the detailed report of the superintendent.

The excellent condition thereof is manifest from the report, and little can be added thereto by us.

Nearly all the shore of Penacook Lake has been purchased and considerable shore land has been acquired during the past year. At the present time there is no risk of pollution of the water from any source. An electrical pump, fully equipped, has been installed with all necessary connections and is in successful operation. This manner of pumping for the high service is more satisfactory than the old system by steam and it can be done at some saving of cost.

For full and detailed facts, see the complete report of the superintendent, herewith returned.

Respectfully submitted,

NATHANIEL E. MARTIN, *President*,
HARRY H. DUDLEY,
FRANK P. QUIMBY,
CHARLES R. WALKER,
GEORGE T. KENNEY,
BURNS P. HODGMAN,
JOHN B. ABBOTT,
OLIVER J. PELREN,
CHARLES J. FRENCH, *ex-officio*,
Board of Water Commissioners.

REPORT OF THE SUPERINTENDENT.

To the Board of Water Commissioners:

I herewith present to you the forty-eighth annual report of the operations of this department, showing the receipts, expenditures and abatements, together with a statement of the extensions and improvements made during the year ending December 31, 1919.

RECEIPTS.

For water, from consumers by fixed rates,	\$10,843.96	
For water, from consumers by meter rates,	62,008.50	
From delinquents,	73.91	
For water for building purposes,	9.00	
pipe and stock sold and labor,	230.76	
old brass and iron sold,	36.50	
shutting off and turning on water,	2.00	
From wood and farm lands,	297.00	
insurance company in settlement of injuries,	230.00	
mileage refund,	5.23	
		\$73,736.86
Deduct abatements,		65.15
		\$73,671.71
Net receipts for 1919,		

There has also been furnished the city free of charge the following use of water:

Public buildings,	\$179.50
Parks and playgrounds,	60.00
Cemeteries,	108.00
Street department,	774.00

Drinking fountains and watering troughs,	\$280.00	
Sewer flush tanks,	45.00	
458 fire hydrants at \$25,	11,450.00	
	<u> </u>	\$12,896.50

EXPENDITURES.

MAINTENANCE ACCOUNT.

General care and maintenance :

Salaries and labor,	\$7,779.46	
Maintenance of team,	256.68	
Maintenance of autos,	1,170.16	
Teaming and livery,	21.50	
Miscellaneous supplies,	655.99	
Tools,	109.59	
Repairs of buildings,	344.16	
Telephones and lighting,	85.43	
Insurance,	557.41	
Incidentals,	131.77	
	<u> </u>	\$11,112.15

Office expenses :

Salary and clerical work,	\$1,104.85	
Postage and printing,	269.01	
Miscellaneous supplies,	106.32	
Telephone,	44.55	
	<u> </u>	1,524.73

Care and repair of hydrants :

Stock,	\$552.37	
Labor,	449.12	
	<u> </u>	1,001.49

Care and repair of meters:

Stock,	\$260.54	
Labor,	781.84	
	<u> </u>	\$1,042.38

Relaying service pipes:

Stock,	\$178.67	
Labor,	552.51	
	<u> </u>	731.18

Repairing leaks:

Stock,	\$4.02	
Labor,	190.72	
	<u> </u>	194.74

Work at lake,	744.65
Care of wood-lots,	253.60
Penacook Park,	164.89
Taxes, town of Webster,	68.00
New service truck,	679.46
New roadster,	1,260.00

Pumping station:

Salaries and labor,	\$1,996.81
General supplies and repairs,	165.78
Telephone and lighting,	60.71

Steam pump:

Fuel,	\$845.01	
Supplies and repairs,	145.42	
	<u> </u>	990.43

Electric pump:

Power,	\$588.00	
Supplies and repairs,	14.56	
Heating,	542.44	
	<u> </u>	1,145.00

 4,358.73

Total maintenance account, \$23,136.00

CONSTRUCTION ACCOUNT.

Distribution pipes:		
Stock,	\$327.18	
Labor,	100.31	
	<hr/>	\$427.49
Service pipes:		
Stock,	\$457.64	
Labor,	227.55	
	<hr/>	685.19
Hydrants:		
Labor,		25.79
Meters:		
Stock,	\$233.94	
Labor,	57.67	
	<hr/>	291.61
Installation of electric pump:		
Centrifugal pump, foundation and fittings,	\$2,415.22	
Motor and switchboard,	1,291.50	
Venturi meter,	1,406.16	
Heating apparatus for pumping station,	344.78	
	<hr/>	5,457.66
Total construction account,		<hr/> \$6,887.74

LAND AT PENACOOK LAKE.

George L. Hancock,	\$6,000.00	
Recording deed,	2.54	
	<hr/>	\$6,002.54
Total expenditures for 1919,		\$36,026.28

EXTENSIONS AND IMPROVEMENTS.

There has been laid during the year, 201 feet of 1¼-inch distribution pipe.

Total length of main and distribution pipes now in use, 374,780 feet, equal to 70.98 miles.

Total number of gates now in use, 1,049.

One new hydrant has been set, on north side of Washington Street, opposite Alert hose house.

Total number of hydrants, 458.

There have been laid during the year and connected with the main pipes, 19 service pipes consisting of 425 feet of ¾-inch pipe and 39 feet of 1-inch pipe, and one 6-inch fire connection. There have been discontinued, 19 services; total number at the present time, 3,883; total length of service pipes, 91,902 feet or 17.4 miles.

There have been relaid 48 services and 37 curbs have been placed on old services.

We have set 26 meters during the year; removed, 13; total number now in use, 2,589.

The following table shows the height of water in Penacook Lake on the first day of each month:

January,	181.40	July,	184.75
February,	181.40	August,	183.90
March,	182.10	September,	182.95
April,	184.60	October,	182.75
May,	185.00	November,	182.00
June,	184.80	December,	181.85

The lowest point reached during the year was 181.20, on January 18; the highest was 185.65 on June 14; mean height for the year was 183.32, which was 1.48 feet higher than the mean height for 1918.

The policy of relaying service pipes in streets that were to be rebuilt has been continued this year, and all services in South Main Street from Thorndike to Freight Street and in Warren Street from Fruit to North Spring Street

have been relaid where necessary and curb valves installed on all those that were without them.

We have had numerous applications to change the location of service pipes, the owner desiring to enter the property in a different location, and where this has been done, a charge has been made to cover the cost of the change.

There has been no call for extension of mains this year either in old or new streets, and we have had but few leaks on the cement-lined mains that are in service.

It is planned to relay in 1920, 1,200 feet of 6-inch cement-lined pipe on South Street from Bow Street to Bushey's farm with 10-inch cast iron pipe. This line was laid in 1882, and its condition, as shown by leaks during 1919, render the change advisable.

We have nearly 71 miles of main pipes in the system; of these, 11.3 miles, or 16%, are cement-lined. Following is a list showing the amount of cement-lined pipe in use January 1, 1920, with dates of installation:

- 1872. Washington Street, west from Rumford, 501 feet 6-inch pipe.
- 1882. South Street, 1,229 feet 6-inch pipe.
Rumford Street, junction North State and Rumford to Franklin, 3,290 feet 12-inch pipe.
Main from dam at Penacook Lake to junction North State and Rumford, 11,391 feet 18-inch pipe.
- 1885. Giles Street, Warren to School, 772 feet 4-inch pipe.
- 1886. Chestnut Street, Valley to High, 373 feet 6-inch pipe.
Valley Street, High to Chestnut, 879 feet 6-inch pipe.
High Street, Center to Valley, 461 feet 6-inch pipe.
Franklin Street, east from High, 120 feet 6-inch pipe.
- 1887. Main line from Lake Street, West Concord, to Penacook, 13,110 feet 14-inch and 1,221 feet 12-inch pipe.

Mains in Penacook, 17,244 feet of 4-inch, 6-inch, 8-inch and 10-inch pipe.
Rumford Street, from Franklin to School, 2,671 feet 12-inch pipe.
Rumford Street, School to Pleasant, 1,203 feet 10-inch pipe.

This pipe continues to give good service and much of it can in all probability be used for quite a few years yet. The line on Rumford Street from Wyman to School can be discontinued as it is paralleled by an 8-inch pipe to which all hydrants and services can be transferred.

An electrically-driven centrifugal pump built by the Worthington Pump and Machinery Corporation has been installed in the pumping station. This is driven by a 100 H. P., A. C., General Electric motor.

A 20 x 8 Venturi meter was also placed on the force main near the pumping station, and the indicator, recorder and register were placed in the station.

The pump is an 8-inch type "B S" slow speed, horizontally split casing, volute centrifugal pump, and was guaranteed to pump 2,100 gallons per minute against a head of 125 feet and to have an efficiency of 72%, approximately, when operated by a 100 H. P. motor running at a speed of 1,800 R. P. M. The power supplied by the Concord Electric Co. is the alternating current, 2,200 volts, 3 phase, 60 cycle.

The pressure on the suction end of pump when not running is 50 lbs., and on the discharge end 87 lbs. When the pump is started the pressure on the suction drops to about 37 lbs, and rises on the discharge end to 90 lbs., making an average net head pumped against of 122 feet.

The capacity of the pump when running at 1,800 R. P. M. against this head is 2,570 gallons per minute by Venturi meter measurement, and shows an efficiency of 83.9% figuring the motor efficiency at 90% and switchboard at 98%.

The two steam pumps will be kept in good condition and used for emergency work.

All pumping by electricity is done at night at hours regulated by the Concord Electric Co., but in case of fire, or other emergency, the pump may be operated during the daytime.

We have installed a small heater as it was not considered practical to run the large boilers simply to heat the building.

This change from steam to electricity has enabled us to run the plant with but one man, transferring the fireman to inspection work and other duties.

We have done a large amount of work clearing up around the shores of the lake and burning the brush when weather permitted. On account of the small amount of boating and the comparatively few cottages now on the shores, very little of a disagreeable nature was found.

Respectfully submitted,

PERCY R. SANDERS,
Superintendent.

REPORT OF ENGINEER AT PUMPING STATION.

PUMPING STATION, CONCORD WATER-WORKS.

P. R. Sanders, Superintendent,

SIR: I would report that the pumping machinery at the pumping station, including the boilers, is in good working condition.

Following is a statement of coal and other supplies used during the year, with tables showing the work for each month.

STATEMENT.

152.28 tons Beacon Smithing coal.
68 gallons valve oil.
5 gallons engine oil.
34 pounds waste.
12 pounds grease.
6 cords wood.
20 gallons perolin boiler compound.

ENGINE RECORD.—STEAM PUMPS.

MONTHS.	No. days pumping engine No. 1.		No. days pumping engine No. 2.		Total days pumping.	Total hours pumping.	Average time pumping.	Total gallons of water pumped.	Daily average pumped.	Total coal consumed.	Daily average coal consumed.	Total pounds of wood consumed.	Gallons pumped per pound of coal.
	H.	M.	H.	M.									
January	16	15	26	271:30	8:44	24,246,155	782,134	44,033	1,420	1,293	556		
February	13	15	24	248:	8:51	22,563,427	805,836	41,940	1,497	1,292	537		
March	12	20	26	263:	8:29	24,446,057	788,582	46,598	1,503	1,001	524		
April	16	14	22	233:30	7:46	20,442,721	681,424	39,043	1,301	1,273	523		
May	20	25	26	347:	11:21	30,966,687	998,925	57,176	1,844	912	541		
June	9	26	26	312:30	10:25	28,824,428	960,814	51,703	1,723	973	557		
July	6	27	27	285:	9:11	26,405,749	851,798	47,196	1,748	1,288	559		
August	8	1	7	74:	9:15	6,844,133	855,516	11,975	1,446	312	571		
September .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
October .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
November	1	1	2	6:45	3:23	619,768	345,884	1,442	721	.....	479	
December .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	101	114	186	2,041:15	.....	185,359,125	.....	341,112	.....	8,344	539
Daily aver'ge .....	.....	.....	.....	.....	10:10	889,027	.....	1,823	.....	.....	.....

Amount of equivalent coal consumed per thousand gallons pumped, 2.06.

RECORD OF MOTOR DRIVEN CENTRIFUGAL PUMP.

	Total days pumping.	Total hours pumping.	Average hours pumping.	K. W. H. monthly.	Daily average K. W. H.	K. W. H. per 1,000,000 gallons.	Total gallons pumped Venturi meter.	Oil.	Packing.	Waste.	Coal heating.
August	22	H. M. 103:20	H. M. 4:29	7,560	320	462	16,318,000	1 pt.	½ lb.	1½ lbs.	.....
September	30	128:10	4:13	10,350	340	527	19,631,000	2 "	1½ "	3 "	396 lbs.
October	31	151:10	4:52	11,210	360	526	22,328,000	2½ "	2 "	3 "	3,150 "
November	30	125:45	4:11	10,360	340	524	19,725,000	3 "	2 "	2 "	3,441 "
December	31	152:20	5:25	12,840	410	525	24,421,000	4 "	2½ "	2½ "	5,704 "
Total	144	660:45	.....	52,320	.....	.....	102,423,000	12½ pts.	8½ lbs.	12 lbs.	12,691 lbs.
Daily average .....	.....	.....	4:35	.....	360	*525.5	711,270	.....	.....	.....	100.8 lbs.

* Average figured on last four months.

Respectfully submitted,

H. A. ROWELL, *Engineer.*

APPENDIX.

RECEIPTS FOR EACH YEAR SINCE THE CONSTRUCTION OF THE
WORKS.

For the year ending January 31, 1874,	\$4,431.10
For fifteen months ending April 1, 1875,	17,535.00
For the year ending April 1, 1876,	16,921.24
“ “ “ 1877,	19,001.07
“ “ “ 1878,	20,763.03
“ “ “ 1879,	21,869.86
“ “ “ 1880,	22,451.53
“ “ “ 1881,	26,744.58
For nine months ending December 31, 1881,	25,534.01
For the year ending December 31, 1882,	27,243.06
“ “ “ 1883,	28,255.48
“ “ “ 1884,	28,915.65
“ “ “ 1885,	30,222.54
“ “ “ 1886,	30,862.64
“ “ “ 1887,	34,047.52
“ “ “ 1888,	38,441.32
“ “ “ 1889,	40,237.53
“ “ “ 1890,	42,133.41
“ “ “ 1891,	46,075.16
“ “ “ 1892,	48,351.52
“ “ “ 1893,	52,299.66
“ “ “ 1894,	53,230.10
“ “ “ 1895,	55,343.19
“ “ “ 1896,	56,557.81
“ “ “ 1897,	55,156.42
“ “ “ 1898,	59,147.54
“ “ “ 1899,	*53,953.13
“ “ “ 1900,	*57,003.71
“ “ “ 1901,	62,253.61
“ “ “ 1902,	63,430.85

* No hydrant rental this year.

WATER DEPARTMENT.

145

For the year ending December 31, 1903,		\$65,088.45
“ “ “ 1904,		68,570.48
“ “ “ 1905,		71,076.44
“ “ “ 1906,		73,063.45
“ “ “ 1907,		73,782.64
“ “ “ 1908,		71,362.67
“ “ “ 1909,		*67,307.84
“ “ “ 1910,		68,673.71
“ “ “ 1911,		71,881.34
“ “ “ 1912,		76,145.13
“ “ “ 1913,		76,154.45
“ “ “ 1914,		74,422.15
“ “ “ 1915,		78,940.06
“ “ “ 1916,		75,052.72
“ “ “ 1917,		77,092.10
“ “ “ 1918,		78,077.15
“ “ “ 1919,		73,671.71
		<hr/>
Total receipts for 47 years,		\$2,378,775.76

MEAN HEIGHT OF WATER EACH YEAR.

1873,	175.86	1884,	178.18
1874,	179.50	1885,	176.80
1875,	180.00	1886,	178.10
1876,	180.28	1887,	179.04
1877,	176.46	1888,	181.96
1878,	179.50	1889,	180.91
1879,	179.74	1890,	181.90
1880,	175.30	1891,	180.00
1881,	174.70	1892,	174.32
1882,	179.15	1893,	173.38
1883,	176.40	1894,	172.81

* No hydrant rental after 1908.

1895,	171.15	1908,	183.41
1896,	178.96	1909,	181.40
1897,	183.33	1910,	180.22
1898,	184.31	1911,	177.60
1899,	183.49	1912,	178.86
1900,	183.09	1913,	179.20
1901,	183.86	1914,	179.55
1902,	184.98	1915,	180.00
1903,	184.75	1916,	184.15
1904,	184.40	1917,	183.81
1905,	183.37	1918,	181.84
1906,	183.94	1919,	183.32
1907,	183.59		

SCHEDULE OF IRON AND CEMENT-LINED PIPES AND GATES.

STREETS.	BRICK CON- DUIT.	LENGTH AND SIZE OF IRON PIPE IN FEET.										Number of gates.				
		30- in.	24- in.	20- in.	18- in.	16- in.	14- in.	12- in.	10- in.	8- in.	6- in.		4- in.			
Conduit	2220															
Reserve main		282														
Low service main				331	1905	75										7
Pump main			13598	58	75	147										6
Gate-houses and layout																29
Force main		240	2962		42	20										5
Pumping station and layout																8
Abbott											23	349				2
Academy											458					1
Albin									785							1
Alleyways											450	505				1
Allison											2492					4
Auburn							2182									1
Avon											724					2
Badger											5	689				1
Beacon											2145					3
Blake											265	250				2
Blanchard											475					1
Blossom Hill											1781					1
Bow											590					1
Bowery Avenue												245				3
Bradley										1577						1
Bridge										327		1123				1
Broadway								2278	2052							3
Cambridge											6	154				1
Capitol										508		763				5
Carter											1077					2
Centre										3529	2690					14
Chandler											306					1
Chapel											585	56				2
Charles												516				1
Chestnut											265					1
Church											21	1600	547			7
Clarke											196					1
Clinton										1942	180	1663				3
Columbus Avenue						2100										1
Concord											1593	286				5
Court											670					2
Curtice Avenue											422					2
Dakin											19	836				2
Dartmouth											414					1
Depot											387	242				2
Donovan											456					1
Downing											1977	92				4
Dunklee											1195					3
Durgin											265					1
Eastman											400	400				1
Electric											550					1
Elm											270	607				4
Engel											388					1
Essex											587					2

