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Frederic Graff Jr. Scrapbook, 1854-1857**

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stroke of the pump of four and a half feet, a diameter of sixteen inches, and the wheel making eleven and a half revolutions in a minute. Five have been put in operation since, some of which make thirteen revolutions in a minute, with a little more water fall, and force 1 1/2 million of gallons in twenty-four hours. 9-1

The wheels being sunk below the usual line of high water, it might be supposed that they would be obliged to stop at that time; but this seldom happens, except in the spring tides, at the full and change of the moon, when it is found that they are not affected until the back water is about sixteen inches on the wheel.

The first four pumps were made by Messrs. Rush & Muhlenburg, and the two last, by Messrs. Levi Morris & Co., in accordance with the designs of Mr. Graff, and are worked by a crank on the water wheel attached to a pitman connected with the piston at the end of the slides. They are fed under a natural head of water, from the forebays of the water wheel, and are calculated for a six feet stroke, but they are generally worked with not more than five feet. They are double forcing pumps, and are each of them connected to an iron main of sixteen inches diameter, which is carried along the bottom of the race to the rock at the foot of Fair Mount, and from thence up the bank into the new reservoir. At the end of each pipe there is a stop cock which is closed when needful for any purpose. The shortest of these mains is two hundred and eighty-four feet long; the others are somewhat longer. The water is elevated into the reservoirs 102 feet above the level of the tide in the Schuylkill. 9-2

The lowest estimate of the quantity of water afforded by the river in the dry season, is four hundred and forty millions of gallons per twenty-four hours. The average quantity of water raised by each wheel and pump is about 530,000 gallons daily, but when the whole six are called into service they can furnish a supply of over six millions of gallons daily, and that quantity may be increased to eight or nine millions, by the erection of two more wheels and pumps, which will complete the original design, and fill up the present mill buildings. The average daily supply of water for the city and Liberties is estimated for the present year at about four millions of gallons, being an average of 177 gallons for each permit granted. The demand during the summer months is nearly one third more than in the winter months.

According to the above estimate therefore, the population of our city will have to be more than doubled before there will be any scarcity of water, even with the present works; after which time it is contemplated to erect works at Flat Rock, on the Schuylkill, six miles above the city, and carry the water from thence by large iron pipes or a stone aqueduct to the neighborhood of the Girard College, where receiving reservoirs will be constructed. It is presumed that in this work the Liberties will unite with the city. The difference in fall between Fairmount and Flat Rock is ten feet in favor of the latter, and works can therefore be constructed there to supply any amount of water required.

The elevation of ground at Girard College is eighteen feet above the reservoirs at Fairmount. It is intended therefore that the College shall be supplied with water from Fairmount by the means of a small pump to be attached to the present works, designed by Mr. Graff, which will also supply the Eastern Penitentiary, the water for which being now obtained from natural springs in the earth, by means of a steam engine, it being too high to receive its supply from the reservoir at Fairmount. The water for the College will be forced into tanks on the top of one of the out houses, whence it will be distributed to the other buildings. It will require 6000 feet of pipe to convey the waters to the College, and the new pump, wheel, &c. which is to be constructed at the north end of the mill buildings for that purpose, will cost about \$12,000.

**NOTICE.**—In Pursuance of the Provisions, of the 11th section of an Act of the General Assembly of the Commonwealth of Pennsylvania, passed the 27th day of July, A. D. 1842, the Commissioners of the County of Philadelphia publish the annexed Statement of the value of all property assessed for State purposes, the number of Watches, and the assessment of persons, trades, occupations and professions, posts of profit and emoluments of office, and moneys at interest, as returned by the Assessors of the several Wards and Townships. So much of said Act as provides that the whole amount of taxes assessed in each Ward and Township shall be furnished, cannot be complied with so far as regards the County tax, inasmuch as the rate per centum has not been fixed by the County Board.

WILLIAM FAUNCE,  
WILLIAM S. ALLEN,  
JOS. L. SMITH, } County Commissioners.

COUNTY COMMISSIONERS' OFFICE,  
Philadelphia, Feb. 9, 1854.

WARDS AND TOWNSHIPS.	Real Estate.	Occupations.	Furniture.	Moneys at Interest, Stocks, Loans, Debts due by Solvent Debt- ors.	Emoluments of office.	Horses and Cows.	Carrriages.	WATCHES.		
								Gold Levers.	Plain Gold and Silver Levers.	Plain Silver.
Cedar .....	1,837,500	66,500	8,550	62,283	4,000	3,825	1,770	14	1	...
Chesnut .....	6,997,600	12,750	3,000	66,175	3,000	1,160	210	160	6	...
Lower Delaware .....	3,657,065	27,575	24,400	319,620	...	6,275	5,610	71	26	...
Upper do .....	2,895,867	38,025	24,400	143,991	...	3,077	1,955	56	5	...
Dock .....	4,040,406	32,400	101,500	4,279,588	...	5,175	10,745	250	55	...
High .....	6,454,455	60,400	312,550	279,892	...	3,700	3,360	83	3	...
Locust .....	7,833,819	40,350	163,100	1,685,819	...	13,500	10,075	18,365	233	137 28
Middle .....	1,873,605	34,925	68,975	795,258	...	14,400	12,940	9,085	180	30 1
Lombard .....	3,368,157	73,575	96,650	275,259	...	9,600	8,180	2,955	94	61 5
North .....	4,211,694	58,116	136,200	1,312,649	...	542	13,505	5,950	226	22 10
South do .....	5,367,750	78,475	139,050	1,081,724	...	18,815	11,040	284	46	47 1
North .....	2,199,750	32,280	23,350	121,594	...	2,000	3,160	3,435	37	27 9
New Market .....	2,186,755	28,750	49,750	227,611	...	2,700	2,300	2,385	27	9 9
Pine .....	3,391,371	35,100	307,850	1,538,890	...	17,390	17,705	18,478	345	11 1
South .....	3,614,367	28,780	170,150	782,794	...	9,300	6,900	8,060	182	17 2
Spruce .....	4,280,760	11,000	30,000	506,453	...	1,300	1,890	375	98	14 2
Walnut .....	789,650	24,715	1,400	7,350	...	1,500	5,300	5,230	7	2 2
1st, Kensington .....	678,525	30,545	800	3,666	...	690	900	900	2	3 3
2d do .....	1,027,945	58,075	800	...	...	4,005	900	...	11	9 9
3d do .....	726,475	30,725	1,100	2,850	...	4,320	1,100	...	7	16 1
4th do .....	1,343,960	49,875	200	1,000	...	2,750	290	...	7	16 1
5th do .....	743,600	50,200	...	...	...	4,010	500	...	10	10 1
6th do .....	1,008,314	34,475	300	500	...	4,600	250	...	2	...
7th do .....	924,470	20,950	...	5,000	...	3,760	100	...	1	...
8th do .....	495,287	24,500	300	2,300	...	2,670	...	...	3	...
1st, Moyamensing .....	1,146,025	44,275	1,300	11,550	...	40	...	...	6	1 1
2d do .....	573,801	28,240	...	...	...	2,160	...	...	7	...
3d do .....	943,912	24,550	...	...	...	4,470	...	...	7	...
4th do .....	700,501	16,970	296	106,797	...	6,360	450	...	...	...
5th do .....	1,436,645	20,795	4,200	108,797	...	2,640	875	...	16	...
1st, Northern Liberties .....	1,276,450	21,305	9,700	163,015	...	2,005	1,415	...	25	9 1
2d do .....	1,216,000	28,325	500	56,500	...	1,490	3,75	...	14	...
3d do .....	1,495,900	28,600	40,170	240,081	...	4,475	3,725	...	95	46 3
4th do .....	1,371,830	35,980	3,000	5,703	...	2,920	905	...	9	1 1
5th do .....	1,259,590	39,135	12,400	13,530	...	2,115	850	...	27	10 2
6th do .....	1,422,695	63,750	4,300	3,550	...	2,590	1,170	...	12	...
7th do .....	1,500,115	36,015	3,560	226,800	...	2,815	655	...	27	...
1st, Southwark .....	1,046,055	38,145	1,300	8,000	...	4,130	...	...	8	37 1
2d do .....	616,800	27,900	...	6,000	...	910	60	...	1	...
3d do .....	1,045,285	34,180	2,100	3,550	...	1,500	2,615	...	425	6 1
4th do .....	1,043,175	33,350	800	1,300	...	6,175	475	...	12	8 10
5th do .....	1,042,680	35,300	600	700	...	2,400	510	...	5	...
6th do .....	1,673,266	36,200	29,580	83,585	...	2,350	1,300	...	75	6 1
1st, Spring Garden .....	1,874,338	42,485	39,425	108,836	...	2,765	2,375	...	98	62 7
2d do .....	2,710,450	71,450	25,800	146,258	...	6,010	3,570	...	37	90 14
3d do .....	1,902,375	30,125	6,300	11,800	...	4,820	1,180	...	24	21 2
4th do .....	1,917,800	58,550	7,000	14,190	...	6,380	2,405	...	59	16 6
5th do .....	2,677,870	61,100	24,650	1,000	...	8,470	3,300	...	30	7 2
6th do .....	2,279,795	41,020	2,000	3,000	...	6,985	4,510	...	14	2 2
7th do .....	1,687,445	29,885	1,130	10,040	...	3,500	...	...	10	24 4
Penn District, 1st Ward .....	1,071,950	29,925	5,100	4,150	...	1,265	...	...	1	1 1
do 2d do .....	976,524	12,300	4,500	28,980	...	3,630	3,190	...	6	...
do 3d do .....	790,945	19,000	1,200	4,900	...	6,830	620	...	18	...
West Philadelphia, 1st Ward .....	775,490	14,580	8,050	59,113	...	8,132	2,935	...	16	...
do 2d do .....	463,245	7,700	1,800	4,600	...	2,560	910	...	16	16 1
do 3d do .....	1,603,170	47,025	90,675	691,009	...	9,735	4,270	...	70	109 8
German town Borough .....	676,984	12,190	5,200	123,962	...	13,500	2,332	...	22	12 1
Upper do .....	398,188	17,325	1,000	5,000	...	1,720	445	...	19	11 1
Lower do .....	297,510	16,125	...	...	...	1,520	545	...	1	2 1
Belmont .....	651,421	8,640	1,900	41,554	...	13,915	1,120	...	17	20 1
Brookley .....	490,689	6,725	1,820	40,921	...	13,375	1,740	...	13	14 1
Bridesburg .....	413,774	6,775	1,400	22,550	...	3,690	50	...	8	...
Bristol .....	643,540	27,825	0,750	239,102	...	19,050	3,805	...	28	28 5
Berry .....	343,260	6,565	59,327	69,277	...	11,488	2,055	...	12	12 1
Delaware .....	708,000	11,425	9,900	106,200	...	12,200	2,610	...	7	7 1
Fankford Borough .....	644,866	29,660	900	133,323	...	8,290	1,225	...	15	6 1
Kingessing .....	656,288	10,195	2,050	65,944	...	1,000	1,120	...	16	4 2
Lower Dublin .....	494,672	7,905	600	186,900	...	12,240	2,060	...	13	7 1
Moreland .....	178,064	1,740	...	...	...	4,455	645	...	6	...
North Penn .....	1,039,044	15,985	9,900	69,400	...	700	16,040	...	7	19 2
Oxford .....	697,107	6,800	1,800	36,722	...	45	4,855	...	4	...
Passyunk .....	706,322	4,800	700	7,900	...	14,720	1,285	...	1	...
Richmond .....	2,594,920	21,625	1,550	...	...	6,780	3,075	...	16	1 8
Roxborough .....	745,235	11,750	6,650	98,211	...	500	12,390	...	18	14 1
Unincorporated Northern Liberties .....	858,940	16,310	4,300	32,100	...	16,650	2,200	...	25	11 2

  

DISTRICTS, &c.	Real Estate.	Occupations.	Furniture.	Moneys at Interest, Stocks, Loans, Debts due by Solvent Debt- ors.	Emoluments of office.	Horses and Cows.	Carrriages.	WATCHES.		
								Gold Levers.	Plain Gold and Silver Levers.	Plain Silver.
City .....	67,539,426	701,585	1,678,375	13,764,154	102,782	126,592	113,738	2,639	511	76
Kensington .....	7,242,969	299,560	4,100	20,356	1,500	31,535	8,370	29	72	9
Moyamensing .....	3,864,580	141,235	1,800	13,650	...	15,900	450	15	4	...
Northern Liberties .....	9,747,010	237,935	74,270	594,806	1,608	17,825	8,380	193	77	10
Southwark .....	6,164,140	204,390	8,300	47,350	1,500	19,045	2,145	66	56	10
Spring Garden .....	14,737,383	340,930	136,315	392,320	1,000	38,230	16,000	323	214	32
Townships, &c. .....	20,022,440	392,190	110,145	1,047,380	22,780	271,037	57,623	350	315	22
Feb 13th 1854	129,347,948	2,524,325	2,013,305	16,880,026	131,062	519,564	206,691	3,630	1,249	155

**9-3** **Watchers and Anxious Inquirers.**  
**CONSOLIDATION.**—According to Mr. Fernon's report to the Legislature, in 1850, the area of the old city proper is 1402 1/2 acres; Southwark, 508 1/2 acres; Northern Liberties, 320 acres; Spring Garden, 1100 acres; Kensington, 1238 acres; Moyamensing, 1483 acres; &c. &c. boroughs, 1384 acres; twelve townships, 63,000; total, 74,239 acres. The estimates vary from this amount to 77,000 acres. The city extends from Darby creek on the south to Poughessing creek on the north, a distance of twenty two miles, and up the Schuylkill measuring from Kensington about ten miles. It is estimated that there are one hundred and twenty square miles in the city. According to the calculation of the Consolidation Committee in November last, the debt of the city, county and districts, was \$14,961,735. To this, \$4,500,000 since contracted, should be added—making the aggregate near nineteen millions and a half. The property of the various corporations in stocks, real estate, &c., is valued at about \$14,000,000. This pays an annual interest on the amount. The actual burden is therefore about five millions and a half. The population at this time is probably 475,000. The value of taxable property at last assessment was \$155,260,000.