

I have also examined and approved bills amounting, in the aggregate, to about \$6,736.51, for repairs to heating apparatus of various kinds, incurred under the direction of the Trustees of the several wards, and chargeable to the sums set apart for incidental repairs.

Respectfully submitted,

JOHN DUNHAM,

Engineer.

REPORT

OF THE

Superintendent of the Nautical School.

N. Y. NAUTICAL SCHOOL-SHIP *St. Mary's*, }
NEW YORK, Dec. 31st, 1875. }

To the Honorable Board of Education:

GENTLEMEN—I have the honor to submit the Second Annual Report of the New York Nautical School.

At the close of last year the *St. Marys* was secured to the wharf at the foot of E. 23d street, and such alterations and additions as were necessary to adapt her to the uses of a School-Ship were being made. By the 11th of January these preparations, though not completed, were sufficiently advanced to admit of the reception of boys, and on that day (26) twenty-six, who had previously been examined, were enrolled. The numbers gradually increased until June 3d, when the maximum (123) was reached. The average monthly attendance was as follows:

MONTH.	AVERAGE.	MONTH.	AVERAGE.
January.....	58 ¹⁴ ₃₁	July.....	102 ¹⁴ ₃₁
February.....	85 ¹⁶ ₂₈	August.....	95
March.....	105 ⁶ ₃₁	September.....	92 ²¹ ₃
April.....	119 ¹⁰ ₃₀	October.....	87 ³⁴ ₃₁
May.....	116 ⁹ ₃₁	November.....	86 ²⁶ ₃₀
June.....	116 ¹⁸ ₃₀	December.....	84 ²² ₃₁
		For the year.....	97

The regulations of the Board governing the physical examination of candidates were strictly complied with, the examining surgeon having been careful to recommend for admission only boys who were constitutionally fit for a seafaring life.

On Feb. 2d an examination in Arithmetic, English Grammar and Geography was held, and the boys (70 in number) were classified according to their proficiency in those branches.

A programme of studies and exercises was then adopted and put into operation.

On May 29th the ship left the wharf, and was anchored in North River, off the Battery.

While at the wharf the boys were instructed and exercised in making knots and splices, and rowing boats, and were taught the names of the various spars and ropes. They were also exercised by gun's crews in handling a topsail and topgallant sail. While off the Battery the school course was continued, but to a limited degree, and more time devoted to the drills aloft. Here

the boys were exercised together in loosing, furling and reefing, and in sending up and down light yards.

On the 9th of June the ship was visited and inspected by several members of the Board of Education.

On July 22d she left her anchorage off the Battery for a summer cruise in Long Island Sound. During this cruise the boys were exercised in all the manœuvres usually performed at sea. They were carefully instructed in steering a ship and in heaving the lead. At all times, while under way, four boys were stationed at the wheel and two at the lead. Seamen were detailed to instruct them, and an officer constantly occupied in questioning them, and in imparting such information about the compass, wheel and lead as appeared, from their answers, to be necessary. The operations of getting underway, anchoring, tacking and wearing were frequently performed, by which the boys were familiarized with the uses of all the gear employed in working ship and handling sails.

On the 8th of October the ship returned to New York, and on the 15th was inspected by the "Council of the Nautical School" of the Chamber of Commerce.

Vacation was given from the 15th of October to the 15th of November. On the latter day, the boys returned, and the school was reopened.

It will appear from the Surgeon's Report, herewith submitted, that the health of the students has been very good. This has been mainly due to the strict attention paid to keeping the ship

in good order ; to the regular and cleanly habits which the boys are required to observe, and to the care and watchfulness of the Surgeon in arresting, in their incipency, such diseases as have appeared.

The progress made in Academic Studies has been satisfactory. The system of teaching pursued tends to develop the reasoning powers of the students, rather than to encourage them to depend upon their memories.

The text-books used in the school are :

In Seamanship—Luce's Young Seamen's Manual.

In Arithmetic—Robinson's Progressive Practical Arithmetic.

In Grammar—Brown's English Grammar, with Analysis.

In Geography—Colton's Common School Geography.

The following table will show the progress made in the several branches.

Divisions.	Seamanship.	Arithmetic.	Grammar.	Geography.
First.....	Page 123	Page 220	Page 108	Page 58
Second.....	" 118	" 205	" 102	" 55
Third.....	" 87	" 116	" 59	" 39
Fourth.....	" 55	" 73	" 55	" 17

One hour each week is devoted to exercises in reading from the American Educational Reader, and one to the practice of Penmanship.

It has been the aim of the Instructors to interest the boys in their studies, and that they have been successful with the higher

divisions at least, is evident from the care with which the lessons are prepared, and the strict attention paid in the recitation-room,

It is intended that the ship shall leave on her next practice cruise about the 1st of May, and remain away until the 1st of October. At the expiration of this cruise about forty (40) boys will be entitled to first-class certificates of proficiency, and discharged to sea.

As was to be expected, many difficulties that could not be foreseen have been met with in organizing the school and conducting it during the first year of its existence. Not the least of these has been that of finding suitable persons to fill the subordinate positions of petty officers and seamen. It is requisite that these men should be sober, industrious and competent seamen, who are qualified to assist in instructing the boys in knotting, splicing &c., and to lead them in the exercises aloft. Although the number of the crew, including cooks, stewards and firemen, is limited to twenty (20), great difficulty has been experienced in keeping up the complement. A large number have been shipped and discharged for incompetency or irregular habits. The men now on board seem to be well suited to their places, but a large majority of them are foreigners. It seems to me that no stronger argument in favor of the necessity of this school can be urged, than the fact that of the many who have applied for positions on board this ship, not six American seamen of fair capacity and good habits could be found.

Appended are—

The Report of the Surgeon, marked A.

Statement of expenses, marked B.

Monthly routine, marked C.

A copy of the Report of the Council of the Chamber of Commerce, marked D.

In conclusion, I take great pleasure in calling the attention of the Board to the fidelity with which the officers have performed their delicate and arduous duties—duties requiring a degree of patience and zeal rarely called for in the ordinary pursuits of life.

Respectfully submitted,

R. L. PHYTHIAN,

Supt. N. Y. Nautical School.

A

N. Y. N. S. "St. MARYS," NEW YORK, *Dec. 31st, 1875.*

Sir :

I herewith submit the following Report of Sick for the year ending Dec. 31st, 1875, for the N. Y. Nautical School :

By the tabulated statement appended it will be seen that the health of the school has been unusually good. There has been no death nor any serious accident or epidemic. The prevailing diseases have been those incident to the seasons, and have readily yielded to proper care and treatment.

It has been the aim of the medical officer to admit only those boys of good physical condition, carefully rejecting those unfit for service by reason of disease or infirmity, hereditary or acquired. As soon as boys are received on board they are required to keep their persons clean, and their bedding and clothing neat and in order. Being daily inspected, they soon acquire habits of cleanliness, and learn to care for themselves.

Especial precaution has been taken to adopt all sanitary measures possible to prevent disease. To this end the decks are kept neat, the bilges are frequently cleaned, and disinfected when necessary, and the holds and decks are ventilated as much as the circumstances will allow.

The ration, which is similar to that of the navy, though more varied, is plain, good, and conducive to health.

With boys of good physical condition, with good food and clothing, and with proper sanitary regulations, it is to be expected that the health of the school would be good. That the expectation has been realized the following statistics will show :

REPORT OF SICK.—*New York Nautical School St. Marys, from January 11th, 1875,
to January 1st, 1876.*

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DISEASE.	Admitted.	Dis- charged to duty.	Remain- ing.	REMARKS.	DISEASES.	Admitted.	Dis- charged to duty.	Remain- ing.	REMARKS.
Catarhus.....	26.	26	.....	.....	Brought up.....	98	98	.....	.....
Erysipelas.....	1	1	.....	.....	Haemorrhoids.....	1	1	.....	.....
Febris Simp. Contin.....	7	7	.....	.....	Tonsillitis.....	33	33	.....	.....
" Intermittens.....	12	12	.....	.....	Archieitis.....	1	1	.....	.....
Rheumatismus Ac.....	7	7	.....	.....	Abcessus.....	3	3	.....	.....
Cephalalgia.....	2	2	.....	.....	Furunculus.....	10	10	.....	.....
Epilepsia.....	1	1	.....	.....	Contusio.....	3	3	.....	.....
Conjunctivitis.....	2	2	.....	.....	Vulnus contusum.....	3	3	.....	.....
Otalgia.....	2	2	.....	.....	" incisum.....	3	3	.....	.....
Odontalgia.....	3	3	.....	.....	" scelopetium.....	1	1	.....	.....
Palpitatio.....	1	1	.....	.....	Fractura.....	1	1	.....	.....
Colica.....	2	2	.....	.....	Luxatio.....	1	1	.....	.....
Diarrhoea Acuta.....	29	29	.....	.....	Stremma.....	13	13	.....	.....
Enteritis.....	3	3	.....	.....				.....	.....
Total.....	98	98	.....	.....	Total.....	171	171	.....	.....

Arm—fell from
main tops' l yd.
to top.

Average No. Boys, 98. Total No. sick days, 482. Daily average No. of Patients, 1.35. Crew of ship not included.

Respectfully submitted,

To Commander R. L. PHYTHIAN, U. S. N.
Superintendent N. Y. Nautical School.

DANIEL C. BURLINGH,
Surgeon and Instructor N. Y. Nautical School.

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B.

Statement showing the expenses of the N. Y. Nautical School
for the year 1875:

Salaries of officers and crew.....	\$10,324 34
Provisions for boys and crew.....	7,488 09
Clothing and outfit of boys.....	1,382 65
Fuel for cooking and heating.....	821 77
Lights.....	166 58
Ship-chandler's stores.....	1,524 96
Painting.....	50 05
Water while off Battery and cruising.....	116 35
Towing and pilotage.....	515 40
Diver to examine ship's bottom.....	125 00
Soup.....	55 62
Repairs.....	144 10
Hardware, tinware, and cutlery.....	152 84
Text-books in seamanship.....	200 00
Record books, and stationery.....	48 55
Dry goods.....	71 76
Drugs.....	130 85
Total.....	\$23,318 91

C.
MONTHLY ROUTINE NEW YORK NAUTICAL SCHOOL "ST. MARYS."

Divisions	Hours	SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
1	1			Recite Arithmetic.	Recite Sea-manship.	Reading.		Recite Grammar.	Recite Sea-manship.	Recite Geography.		Recite Arithmetic.	Recite Sea-manship.		
	2			Writing.	Study Sea-manship.	Study Grammar.		Study Geography.	Study Sea-manship.	Study Arithmetic.		Study Arithmetic.	Study Sea-manship.		
2	1					Arithmetic.		Grammar.		Study Geography.		Study Arithmetic.			
	2			Reading.	Recite Sea-manship.	Recite Arithmetic.		Recite Grammar.	Recite Sea-manship.	Recite Geography.		Recite Arithmetic.	Recite Sea-manship.		
3	1			Recite Sea-manship.	Recite Arithmetic.	Recite Grammar.		Recite Sea-manship.	Recite Arithmetic.	Reading.		Recite Sea-manship.	Recite Geography.		
	2			Study Sea-manship.	Study Grammar.	Study Arithmetic.		Study Sea-manship.	Writing.	Study Geography.		Study Sea-manship.	Study Arithmetic.		
4	1					Study Grammar.				Study Arithmetic.			Study Geography.		
	2			Recite Sea-manship.	Recite Arithmetic.	Recite Grammar.		Recite Sea-manship.	Reading.	Recite Arithmetic.		Recite Sea-manship.	Recite Geography.		

Fire Quarters. Tuesday, A. M. Scrub Hammocks. 1st Monday in month
 Hair Cutting. Thursday, P. M. " Mattress Covers. 3d "
 Wash Clothes. " " 1st Hour, A. M., 9.30 to 10.30
 Sling Clean Hammocks. Friday before 1st Monday in month (6.30 P. M.) 2d " " 10.30 " 11.30
 Air Bedding. Thursday, P. M. 1st " P. M. 1.30 " 2.45
 Inspect Bags " " 2d " " 2.45 " 4.00
 Practical Exercise in place of Seamanship Recitations when weather permits

D.

REPORT OF THE COUNCIL OF THE CHAMBER OF COMMERCE.

To the Chamber of Commerce :

Your Committee, appointed to serve as a Council of the Nautical School, respectfully submit the following, their report :

Under the Act of the Legislature, authorizing a Nautical School as part of the State System of Education, the Board of Education was charged with the duty of organizing and responsible control. And the duties of your Committee, as defined by the Act, are to advise and to co-operate with the Board, and to visit and examine the school, and make reports to the Chamber, which may transmit them, or an abstract of them, to the Superintendent of Public Instruction, with such recommendations as may be thought advisable.

The Board of Education, in accordance with the provisions of the Act, appointed an Executive Committee for the care, government and management of the School. With this Committee, of which Mr. David Wetmore is chairman, your Committee has freely communicated. And we bear cheerful testimony to the untiring zeal and to the prudence and sagacity with which the work of organization and maintenance has been prosecuted by the gentlemen to whom it was so intrusted.

The preliminary difficulties will be readily appreciated. It was the proper aim of the Executive Committee to secure the utmost

efficiency and substantial good with the least practicable expenditure. But the plan was, in this country at least, new and untried, the sailors being almost the only class of citizens for whom this great commercial city had wholly failed to provide instruction. There was need of concerted action by separate State, national and municipal authorities, between whom differences of opinion might naturally arise. And the adjustment of details, with due reference to selection and regulation of pupils, as well as to their instruction, involved questions as to which there was doubt and solicitude.

It is due to the Executive Committee, and to the officers engaged by them, to say that their success in overcoming these difficulties has exceeded the expectation of your Committee.

By the joint effort of the two Committees, with the aid of Hon. Henry J. Scudder, and other members of Congress and friends of the movement, passage of an Act of Congress was obtained, empowering the Secretary of the Navy to detail for use of nautical schools, in this and other seaports, vessels not needed for other service, and authorizing the President to detail officers of the navy for service as superintendents and instructors.

Through the prompt and judicious exercise of these powers, the sloop "St. Marys" was detailed as the school-ship at this port. And the Executive Committee secured the services of Commander R. L. Phythian as Superintendent, and of Lieutenant-Commander Geo. H. Wadleigh and Lieutenants G. W. DeLong and W. H. Jaques as instructors. The first named officer had been an instructor in the Naval Academy, and the other officers are graduates of that institution.

Under these auspices the school was opened in December, 1874, from which time it has been in successful operation. The reports show an average attendance, or membership of about 100 young pupils receiving daily lessons and training. Their life on board ship has tended to familiarize it to them as a home and a scene of future labor. The course of elementary instruction is thorough, and adapted to the needs of intelligent seamanship, and it is calculated to equip, for future advancement in the science of navigation, all such as have the patience and energy requisite for such advancement.

Daily exercise in the handling of sails and other evolutions, relieving the routine of study, is efficient training for practical sea duty. And regularity of hours and diet, and the exact discipline of the navy, tempered to the altered circumstances of the case, promote sound health, orderly habits, and aptitude for intelligent obedience, and, as a consequence, for responsible command.

In aid of your Committee, in its visitorial duty, Messrs. Ambrose Snow, Charles H. Haswell, and James Parker, all of whom are competent judges, recently made a careful inspection of the School. Their report is herewith submitted. Their commendation of the organization, and of the proficiency of the scholars has strongly confirmed your Committee in the favorable opinion entertained by them.

It is proper to add that the report of Dr. Burleigh, the surgeon in charge, indicates a sanitary condition which few assemblages of boys upon shore can favorably compare with.

The expense account, which has been kept far below the estimates, forms no considerable burden upon the funds raised for educational purposes. Indeed, there is good reason to expect, in the restraint of the spirit of adventure within safe and lawful bounds, an ultimate pecuniary gain far exceeding the costs. And no danger of excess is to be apprehended if the conservatism of the present Executive Committee, aided by the combination with the naval system can be continued in force.

Your Committee cordially commend the School and its management to the favor of the Chamber, and bespeak for them a continuance of its interest in their prosperity. The immediate achievement of striking results was not to be expected. But the progress made gives promise of great and far-reaching good, in the correction of lamentable ignorance and disorder in the merchant marine, and the assimilation of it to other reputable and trained professions, and to the orderly discipline of the Navy.

Your Committee would further respectfully recommend,

1. That a copy or abstract of this report, if approved, be transmitted by the Chamber to the Superintendent of Public Instruction.
2. That the Secretary of the Chamber be authorized to receive from respectable shipowners and merchants, and transmit to the Executive Committee or Superintendent, applications for graduates, or pupils of the School, to be taken into active service in the merchant marine.

If the latter recommendation be acted upon, due precaution needs to be taken, on the part of employers and teachers, to place

these young sailors under command only of just and humane masters. This precaution is needful, not with a view to undue favoritism, but as a safeguard against such treatment as will tend to repel from the service, and react disastrously upon the School itself.

Respectfully submitted,

JOHN D. JONES,
JOHN K. MEYERS,
HENRY A. BARLING.

NEW YORK, Dec. 6, 1875.

NEW YORK, November 15th, 1875.

Messrs. JOHN D. JONES, JOHN K. MEYERS,
HENRY A. BARLING,

Council of the N. Y. Nautical School:

GENTLEMEN: We have to state, that, in compliance with your request contained in your letter, we have made an examination of the New York Nautical School Ship, *St. Marys*. The day selected was Friday, October 11th, 1875, and invitations were issued by the Chamber to merchants and others interested in shipping, a large number of whom were present.

1st. Condition of the vessel.

The *St. Marys* is an old-fashioned sloop of war of the navy, with two decks, and a third light deck over; and has substantially the same fittings that pertained to her when she was in service. The rigging and sails are better suited to a full crew of men than a light crew of boys; the ropes being large and

blocks small; the spars and sails heavier than would be the case with those of a merchant vessel of the same size; and there are none of the labor-saving appliances found on board merchant vessels.

The vessel is very clean and well-ventilated; and there are good arrangements for the comfort and care of the scholars, including lighting, and heating by steam.

2d. The Superintendent, Commander R. L. Phythian, U. S. N., is a gentleman of experience as an instructor at the Naval Academy; and his assistant, Lieutenant-Commander George H. Wadleigh, and Lieutenants G. W. DeLong and W. H. Jaques are graduates of that institution, and are all well fitted for their present duties.

The Examination consisted,

1st. Of an inspection of the scholars.

When so many boys are to be kept together, great attention is necessary to give them good habits in regard to personal cleanliness. This inspection shows that this duty has been well performed. All the boys were well clad, and very clean, and orderly in their personal appearance.

2. Of the proficiency of the scholars in the performance and knowledge of the evolutions.

The Exercises consisted,

- a. Loosing sails.
- b. Making sail.
- c. Reefing and hoisting.

d. Shaking out reefs

e. Furling sails.

f. Use of boats and oars.

The sails handled, were fore, main, and mizzen top-sails, and topgallant sails.

As already stated, the day was exceedingly unpleasant; and, although it did not rain hard, the weather was just wet enough to stiffen up cordage and sails, and make the decks slippery; but notwithstanding this, all the above evolutions were performed within one hour; which, under the circumstances, would have been fair work for a reasonably drilled crew of men.

3d. Making knots, splices and bends, worming, parcelling and serving; and generally doing such things as are required in the daily experience of the sailor, with the cordage and hauling lines of the vessel; also touching their knowledge of the different parts of the sails and the use of those parts; heaving the lead, use of compasses; marks on lead and log-lines, &c., &c.

In all these the boys seemed well-instructed; displaying more or less proficiency, according to the length of service, and aptness for such work.

4th. Inspection of the Provisions, Dispensary, and Hospital Arrangements.

Upon this subject we have to say, that the rations were all of the best quality, and ample in quantity; and the cooking, and mess arrangements are ample and well ordered.

A report, showing the amount and kinds of food issued, is attached hereto. -

The dispensary and hospital arrangements are under the direction and care of Dr. D. C. Burleigh, of the Navy, and are of the same character as those of the United States Naval Service. Nothing can be desired in this particular; and the general health of the ship during the past year, as exemplified by the Report of the Surgeon hereto attached, is the best criterion by which to judge.

5th. General Efficiency and Discipline.

In these respects the ship is well ordered. The various evolutions were characterized by promptness. The boys seemed respectful towards the Superintendent and his assistants; and from personal inquiry of the boys, we are well satisfied, that the discipline of shipboard life has been tempered with proper consideration for the governed.

The boys expressed themselves satisfied, and content with their experience in the past; and are looking hopefully forward to their future.

Upon the whole, we are of the opinion, that the Council should be gratified with the progress made; and that, in the future, New York will have ample cause to be proud of her Nautical School.

Very Respectfully,

AMBROSE SNOW,
CHARLES H. HASWELL,
JAMES PARKER.