

Messenger and Visitor.

THE CHRISTIAN MESSENGER,
VOLUME LXIV.

THE CHRISTIAN VISITOR
VOLUME LIII.

Vol. XVIII.

ST. JOHN, N. B., WEDNESDAY, SEPTEMBER 24, 1902.

No. 39.

Oil as Fuel on Steamships. The Navy Department at Washington has made public the report of Lieut. Ward Winchell, U. S. N., the expert who was detailed to investigate and report upon the efficiency and installation of the oil fuel system as fitted to the Oceanic Steamship Company's steamer *Mariposa*. The report contains information which is believed to be of great value to the shipping and naval world. The gross displacement of the *Mariposa* is 3,100 tons. The average horse power developed was about 2,481. The average distance made each day by the ship was 351 knots, giving a mean speed of 13.53 knots an hour. There were consumed each day about 278 barrels of oil, which gave an average consumption of 12 pounds of oil per hour to secure a horse power, and while this result has been secured on shore in highly efficient engines, the consumption is practically 50 per cent. less in weight of combustible than would be required of coal. The ship required 262 hours to make the voyage from San Francisco to Tahiti, while only 260 hours was required to make the return trip. By the use of oil as a fuel the complement of the ship was reduced from 81 to 55, thus decreasing the force in the engine room from 36 to 20 men. The crude oil was atomized by means of an air compressor, which had a capacity of a thousand cubic feet of air per minute compressed to thirty pounds. The *Mariposa* has 18 furnaces in her boilers, only 12 of which were used. Two burners were installed in each furnace, although all the burners were not in use except at short intervals when the engines were run at full power. The engineer experts at the navy departments are most interested in the fact that careful inspection does not show any effect of the flame on any part of the boilers. Upon reaching Tahiti, after the run, the tubes were swept by scrapers, and all the refuse collected barely filled two ash buckets, and some of this came from the coal which had been used on one of the preliminary trips.

The Tobacco Habit. That the use of tobacco by young men and boys has become in this generation a great and a growing evil, is a fact which cannot have escaped the notice of observant persons. It is an evil so great in its proportions and so injurious to physical, intellectual and moral manhood that everyone who cares for the highest well-being of the nation ought to be aroused to efforts to secure reform in this matter. Instances may of course be adduced of habitual smokers who have enjoyed good health all their lives and have lived to an advanced age, and it may be admitted that the use of tobacco in reason and moderation, as when a man smokes a pipeful or a cigar after his meals, is not always detrimental to health. But probably the great majority of tobacco users do not indulge their appetite for the weed in moderation. One sees men smoking at all times and in all places. It would seem as if many young men now-a-days cannot walk the streets without a pipe or a cigar or a cigarette in their mouths. They smoke after breakfast on their way to their work, and they smoke on their way home to the mid-day meal, and morning, afternoon and night it is the same story. It seems impossible that so strong a narcotic as tobacco can be continually taken into the system, and especially when taken on an empty stomach, without serious consequences. Men of weak constitutions and of sedentary habits will especially suffer, and even the robust are not likely to escape with impunity. The slave to the weed suffers for his indulgence in enfeebled vital organs, and he is likely to transmit enfeebled constitutions to his children. But great as are the evils resulting from

the indulgence of grown men in the inordinate use of tobacco, the most alarming feature of the vice is the smoking of cigarettes by half grown youths and boys. This vice has become sufficiently prevalent among the boys of Canadian towns and cities to demand the most serious efforts for its abatement, and in the United States the evil has become still more prevalent and disastrous.

Boys and Cigarettes. An investigation into the effects of cigarette smoking upon boys, was lately made in connection with a New York public school of about 500 pupils, and the results, as published by Mr. P. L. Lord in a recent number of the *School Journal*, afford clear and definite evidence of the terribly injurious effects of the cigarette habit upon boys. The investigation extended over several months of close observation of twenty boys who it was known did not use tobacco in any form, and twenty boys known to be 'cigarette fiends.' The following account of the investigation, which is from the *New York Times*, shows that it was conducted in a thorough manner, and is highly suggestive of the results which may be expected for the present and coming generations if the growing habit of cigarette smoking among boys shall be allowed to prevail: "The non-smokers were drawn by lot. The report represents the observation of ten teachers. The pupils investigated were from the same rooms in the same school. No guesswork was allowed. Time was taken to get at the facts of the case on the twenty questions of inquiry—hence the value of the report. The ages of the boys were from ten to seventeen. The average age was a little over fourteen. Of the twenty smokers twelve had smoked more than a year and some of them several years. All twenty boys used cigarettes, while some of them also used pipes and cigars occasionally. The following table shows the line of investigation:

	Non-Smokers.		Smokers.	
	No.	p. c.	No.	p. c.
1. Nervous	14	70	1	5
2. Impaired hearing	13	65	1	5
3. Poor memory	12	60	1	5
4. Bad manners	16	80	2	10
5. Low deportment	18	90	1	5
6. Poor physical condition	12	60	2	10
7. Bad moral condition	14	70		
8. Bad mental condition	18	90	1	5
9. Street loafers	16	80		
10. Out nights	15	75		
11. Careless in dress	12	60	4	20
12. Not neat and clean	12	60	1	5
13. Truants	10	50		
14. Low rank in studies	18	90	3	15
15. Failed of promotion	19	95	2	10
16. Older than average of grade	19	95	2	10
17. Untruthful	9	45		
18. Slow thinkers	19	95	3	15
19. Poor workers or not able to work continuously	17	85	1	5
20. Known to attend church or Sunday school	1	5	9	45

*Times.
"The following personal peculiarities were noted in the smokers: Twelve of the cases had poor memories and ten of the twelve were reported as very poor, only four had fair memories and not one of the twenty boys had a good memory. Eighteen stood low in deportment, only one was good, and none was excellent. Seven of them were low, being constantly in durance vile because of their actions. Twelve of the boys were in a poor physical condition, six being subject to 'sick spells' and were practically physical wrecks. Eight were reported as being in a fair or good condition, but none were excellent. The table shows that the average boy in this school who had never used cigarettes is represented by about ninety-five per cent., or in

other words, out of a hundred such boys, ninety-five of them are reasonably sure of getting at least a good common school education."

Ballooning over the Sahara. The French War office is reported to be about to institute some experiments with balloons in exploring the Sahara. An attempt is to be made to send a balloon across the desert. It is not proposed to man the balloon, so that no human life will be sacrificed in the experiment. The sole living occupants of the balloon will be six pigeons which will be placed in the lower compartment of a small car, so arranged that if the balloon should come to the earth the car will be opened and the pigeons escape. Water ballast will be carried in a tank suspended by wire ropes below the car. Attached to the valve is a brass wire twelve metres long, bearing a steel ball weighing twenty kilos, which will keep the valve closed, except when the weight of the steel ball is removed, as when it touches the ground. The valve will then open, the water will flow, and the balloon will go up again. Even after a loss of a portion of the water the valve will remain closed so long as the steel ball is suspended. The upper division of the car is provided with a camera, which is capable of taking a photograph every fifteen minutes. The car will also carry a hydrometer, a barometer and thermometers. All the instruments are capable of working five days.

A Great Establishment. A notable event in connection with the industrial life of Canada is the establishment at Hamilton, Ontario, of the extensive works of the International Harvester Company. This company is a development of the Deering Harvester Company of Chicago, and its establishment in Canada is a part of the scheme of consolidation recently carried out among the leading implement makers of the United States. The establishment at Hamilton, if completed according to the Company's declared intentions, will be on an immense scale. The buildings now in course of erection would accommodate a large manufacturing industry and these are to be doubled in extent and capacity. Forty acres of land have been purchased by the company, and this land, it is said, will be virtually covered with its buildings, leaving only room for necessary roads between them. There will also be about four miles of railway tracks, sidings and switches about the works. The building and other preparatory work is so far advanced that the managers confidently expect to commence work in about two months time with a force of 600 hands, a force which is to be augmented as the work advances, with the expectation that after a time 1000 or 1200 hands will be permanently employed. The *Toronto Globe*, noting the establishment of this industry, says editorially: "If the tariff is precipitated into the arena of political discussion, this establishment of a branch of an American firm in Canada will no doubt be used as an object lesson on both sides of the argument. The protection advocates will point to it as a result of their system, and as a positive benefit which we would not have obtained without a restriction on imports. The free traders will argue that under their system the Deerings would have been forced to move to Canada long ago, as it would have been impossible for them to have manufactured under the costly system of protection in the United States and sold at free trade prices to the Canadian farmers. They will also point to the anomaly of the American and Canadian branches of the firm each asking protection against the other. What might have happened if something else had not taken place is an endless theme for argument. The only certainty in the matter is that the industry has been established under the existing circumstances."