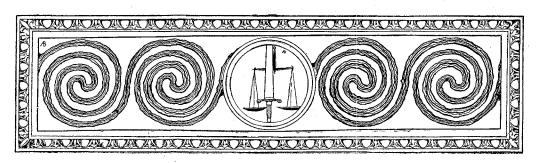
who had retained me when he did not particularly require my services, but, as he said, in order not to separate me from my wife, had his revenge for our leaving him, since matters fell out so adversely that I found myself alone in New York, and my wife by herself in the South. In consequence of the financial trouble of 1858, business at the theater was not good, and the money paid to us was of such doubtful value that I felt anything but cheerful; so that when Mrs. Stoddart wrote that an actor who had been engaged to play the second old man in Mr. Duffield's company (Humphrey Bland was playing the first old man) had disappointed the manager, and asked if I would care to take the position, I immediately wrote that I would do so.

As salaries were not promptly paid at Laura Keene's Theater just then, I knew, or suspected, that if I told Mr. Lutz, our treasurer, that I was about to leave, my chances of getting any money would be small; so I made known my plan to my brother George, and said that I intended to leave on a Saturday night. I forget the play then current, but my part in it was unimportant, and I knew that my absence would not distress the great kindness and consideration.

management. As I depended on my week's salary to get to Montgomery, which was my destination, I was much distressed when Mr. Lutz informed me he could give me only a portion of it; but I was determined to make the start. My brother offered to break to Miss Keene the news of my departure after I had gone, but I thought this would be unpleasant for him, and so I addressed a note to that lady, endeavoring to explain that I had missed Mrs. Stoddart much, that a position had been offered to me at the Mobile and Montgomery theaters, where she was, that I had determined to join her there, and that I hoped Miss Keene would forgive me.

When I rejoined her, years afterward, she told me that she did not think the manner of my leaving her had been either considerate or honorable, but, as I had been married only a short time, and was naturally desirous to be with my wife, she would forget and forgive; and she added that if my married life had been of a longer duration, perhaps I should not have made so precipitate a departure. We were with her for a long time afterward, and she treated us with

(To be continued.)



LONGEVITY IN OUR TIME.

BY ROGER S. TRACY.

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OME one has said recently that no one reads Swedenborg until he is sixty, which is another way of saying that when a man finds the decline of his physical

powers (which probably began ten or fifteen years before) unmistakably forced upon his attention, he begins to wonder how rapidly it will go on, and what will happen to him when the machinery stops. It is mainly persons who have passed the meridian who

ask themselves the question, What are my chances of living to a good old age? Are they any better than those of my forebears?

It seems to be an appropriate time, at the opening of a new century, which, we vaguely surmise, is going to be one of extraordinary enterprise and progress, to inquire whether there is any solid foundation for the belief that longevity increased during the nineteenth century.

At the very outset we are confronted with

the uncertainty attached to the word longevity. What do we mean by increased longevity? That all men live longer than they did a century ago? That, for instance, if the expectation of life has increased, as the statisticians say, we are to understand that every man lives longer than he would have lived under the conditions existing in the eighteenth century? Or do we mean that a larger proportion of men live to the age of seventy or eighty or one hundred? Or do we mean that the average age at death is greater?

When the question is put in this way, most persons will find that their ideas of the subject are somewhat nebulous, and chiefly based upon the undeniable fact that the death-rate—that is, the number of deaths that occur annually in every thousand of the population—has been decreasing, of late years, in all civilized countries. And this decrease means, of course, the continuation of many lives that, in former years and under other conditions, would have been earlier blotted out. In the city of New York, for example, the average annual number of deaths during the decade 1850-59 was 22,223, and the death-rate 35.2 per thousand living. Forty years later, during the decade 1890-99, the average number of deaths annually was 41,802, and the death-rate 22.9. If the death-rate of the former decade had prevailed during the latter, there would have been 64,170 deaths a year instead of the actual number, so that there has been a saving of nearly 225,000 lives during the ten years; and if a life is considered to be worth \$500, a saving to the community of more than \$110,000,000, enough to pay the expenses of sanitary administration for a hundred years.

There can be no doubt that this saving of human life has been brought about by improved sanitation and by the great advances in medicine and surgery, which have been truly extraordinary. Beginning with the general use of vaccination as a mild and useful prophylactic against smallpox, and ending with the practical demonstration that some of the most destructive epidemic diseases are communicated by the bites of insects, and so are in a way to be guarded against with comparative ease and certainty, the progress of medicine, and especially of preventive medicine, has been a triumphal march. And to the members of the medical profession it has been a source of constant pride that they alone, among all the workers of the world, have labored and studied, and risked and even sacrificed their lives, to the end that the ground should be taken from beneath their own feet, that the very source of their emoluments should be dried up, that the daily bread should be taken from the mouths of their own wives and children, in order that others may live.

But what has been done during the century to encourage the belief that the duration of human life has been lengthened? Most important has been the development of modern sanitary methods: the recognition of the importance of cleanliness, municipal and personal; of pure air, food, and water; the sanative influences of sunlight; and the discovery of the causes of, and, as a corollary, of the methods of controlling, contagious and infectious diseases. The introduction of anæsthesia, both local and general, has rendered possible surgical operations that could not have been undertaken before. It has not only diminished suffering, but has plucked many a hapless being from the very jaws of the tomb. Tumors of the brain, the victims of which once were hopeless, are now, thanks to the labors of the bitterly reviled vivisectionists, precisely located and removed, and the patient restored to health. The use of aseptic and antiseptic methods has rendered possible another class of operations once considered utterly impracticable. Thirty years ago a penetrating wound of the intestines was looked upon as inevitably fatal, and the opening of the abdominal cavity was only to be considered as the very last resort in the most desperate cases, to give a dying person a last faint chance of life. Now, not only are intestinal wounds closed with excellent chances of entire recovery, but incurably diseased portions of these most essential organs are entirely resected, and as for any fear of opening the abdomen, it is occasionally done merely to find out what is the matter. In recent years the surgeon has even presumed to venture into the very citadel of life, and to close wounds of the heart itself, the organ the cessation of the function of which brings on immediate death. These are a few of the marvels of the art. There is now not a single portion of the body that is looked upon with awe as a place where the scalpel is barred.

The triumphs of medicine, as already said, are mostly in the line of prevention. The discovery of the true nature of epidemic diseases has removed almost the last trace of the superstitious fear which their presence engendered even fifty years ago. Never

again will the black death destroy its millions of victims in the civilized portions of the world; never again will men fold their hands while hundreds of thousands are dying around them, call it a visitation of God, and await their own fate in helpless terror. The mask of what men thought was the angel of death has been torn away, and in the phantom face behind it we recognize the projection of our own hideous ignorance and supineness.

Hand in hand with these vast improvements in medicine and surgery have come more rational views upon cognate matters ventilation, light, food, drink, and personal habits. People are better fed, better clothed, cleaner in person, in the air they breathe, and in their entire environment. We know more of the importance of purity in the maintenance of health, and the great progress that has been made in dentistry has extended the period of utility of our organs of mastication up to the very end of life, so that the natural failure of the digestive powers with advancing years is not hastened by the loss of those organs, but is considerably retarded by the perfection of the artificial aids now available in every hamlet.

Surely these seem to be ample reasons for believing that the period of human life has been appreciably lengthened. If men are furnished with the knowledge and the means for improving or maintaining their health when well, and for relieving sickness, even to the point of averting imminent death, they will avail themselves of such means, and will consequently be actually healthier, stronger, and more resistant to the slow sapping of their energies during the progress of years, which, although it can be postponed, cannot be entirely averted. It seems reasonable that there should be more men and women still active in their life-work at an advanced age than there have been in the past. Men no longer retire at fifty, and are no longer called venerable if they die, as did the Venerable Bede, at sixty-two. Reports of living centenarians are printed almost daily; centennial birthday celebrations and personal reminiscences of living persons about events that occurred early in the last century are not uncommon, and in the city of New York alone half a dozen reputed centenarians die every year. During the decade 1871–80 there were 126 such persons, and from 1890 to 1899 inclusive there were 68, including, in 1892, one of one hundred and eighteen and one of one hundred and twenty-four. There is a Dr. John P. Wood of Coffeyville, Kansas, now past his hundredth year, and still engaged in the practice of his profession. On the Piscataway poor-farm in New Jersey lives Noah Raby, said to be one hundred and twentynine years old. Such cases can be multiplied almost indefinitely, if one cares to look for them. All things considered, it would be strange indeed if the opinion were not as wide-spread as it is that longevity increased during the nineteenth century.

But to this question, as to all others, there are two sides. The great advances in medicine and surgery have shortened some lives, while lengthening others. The use of anesthetics and the introduction of antiseptic methods have encouraged both surgeons and patients in the undertaking of remedial operations which, under other conditions and in former times, would not have been risked. A certain proportion of patients die who might otherwise have lived, even though in pain and misery, for some time longer. Persons with disfiguring tumors or congenital defects, not in themselves fatal, who seek to have them cured by operation, may die under the knife. Others who might still have lived, with incurable ailments, for a year or two longer, have their lives cut short in the same way. Improvements in dentistry have, . to some extent, enabled and encouraged the aged to eat food unsuitable to the enfeebled condition of their digestive organs, and so hasten degenerative processes which an enforced regimen of gruel and pap might have put off for a time.

Moreover, the causes of disease and death which have hitherto been brought more or less under sanitary control do not affect, in any important degree, the health of those who have reached middle life. The contagious and infectious diseases, and those of a diarrheal nature, do not make up five per cent. of the causes of death in persons more than forty-five years of age. On the other hand, the deaths of persons over forty-five from alcoholism, cancer, phthisis, diabetes, old age, apoplexy, diseases of the heart and blood-vessels, of the respiratory and digestive organs, of the kidneys and bladder, and from violence, constitute about ninety per cent. of all such deaths. In fact, the deaths from some of these causes, in spite of all our modern sanitation, have increased at such a rate as to create much misgiving.

In the city of New York the death-rates from cancer and from diseases of the kidneys (commonly known as Bright's disease) have doubled in thirty years, having been .36 and .93 per thousand respectively during the five years 1868–72, and .66 and 1.85 in 1898–99; so that, in some respects, the saving of life among the young, by the partial suppression of contagious and septic diseases, tends to be counterbalanced by an increased mortality after middle life from diseases which depend more upon personal habits than upon external causes.

Besides all this, some of the diseases in which surgery has its greatest triumphs are so uncommon that, even if they could be cured, having previously been very fatal, the general death-rate of the population would be little affected. Thirty years ago the so-called idiopathic peritonitis, i.e., a peritonitis for which no assignable cause could be found, was extremely fatal. Within a few years it has come to be recognized that most of such cases are due to appendicitis, and surgery comes, with marked success, to the patient's relief. But in 1869 there were 224 deaths in New York from peritonitis and not one from appendicitis, and in 1899 only 78 deaths attributed to peritonitis, with 299 from appendicitis, while the death-rate from both combined, having been .21 per thousand in 1868-72, had only declined to .20 per thousand in 1898-99, or one thousandth of one per cent.

The fact is that few people ever have to undergo any surgical operation more severe than pulling a tooth or the opening of an abscess, and although, if an operation of a severe nature must be performed, the chances of recovery are immensely greater than they used to be, the mortality-rate of the community or the nation is not much

affected thereby.

Amid all these pros and cons there is no sure footing, no solid and enduring basis for comparison, excepting statistics, collected as carefully and on as large a scale as possible. The larger the numbers dealt with, the less liability to serious error. A mistake or a misstatement may make for one side or the other of a question, but when the totals are very large, errors tend to counteract one another around a mean which can be taken as pretty nearly correct.

What, then, have figures to say on this subject? In the first place, there is the decline in the death-rate. Now, a crude death-rate, as usually given, while it serves a purpose in the comparison of one year with another in the same community, is not well adapted to serve as a basis for comparing different countries or different periods of time far apart, for the reason that the gross

comparison of total deaths and total populations, under a deceptive appearance of accuracy, really conceals a compounding of dissimilar ratios, which is wholly inadmissible excepting under certain conditions and with proper reservations.

The mortality in any community varies greatly at different ages. In infancy it is very high, in childhood very low, from ten to fifteen years of age lower than at any other time of life, continuing low, though increasing gradually, until middle age, and then rising rapidly in every succeeding decade.

It is plain, therefore, that in a town where the proportion of infants and old persons is large, the mortality will be higher than in one where these elements of the population are fewer and the proportion at what may be called the healthy ages is larger. Suppose, for example, that in two towns, each having a population of 100,000, A has 20,000 children under five years of age and B has only 15,000. Now suppose the death-rate to be, in each town, 100 per thousand for the children, and 15 per thousand for the remainder of the population. Then the deathrates of the two towns would be, respectively, 32.00 and 27.75 per thousand, the difference being entirely due to the different age-distribution, and not to the sanitary conditions.

We cannot, therefore, arrive at any definite conclusion by comparing the deathrates of the century with another, or of the early part of the century with its close.

By the common agreement of statisticians the only fair means of making such comparisons is the life-table, by which is ascertained the expectation of life at each year of age. Such tables are the basis of all the calculations of insurance actuaries, and are constructed from the mean population for a series of years at the various ages, and the mean annual number of deaths at the corresponding ages. The construction of such a table, although not difficult, requires great care and patience, and is a very tedious task, and too technical for description here.

Unfortunately, our data for comparisons of this kind are, for the most part, lacking, excepting for about two thirds of the nineteenth century. A census giving the ages of the living population is a comparatively modern institution, the first one in England having been taken in 1841, and in the United States in 1851.

The accurate registration of deaths, moreover, begins in the nineteenth century, England leading in 1837. For the purpose of this article the English statistics are the best, because they have been more carefully collected and collated than any others cov-

ering so long a period.

The table which follows gives the English life-table for males prepared by Dr. William Farr from the deaths for seventeen years, 1838–54, and the censuses of 1841 and 1851; the latest English life-table for males, prepared by Dr. Tatham from the deaths for ten years, 1881–90, and the censuses of 1881 and 1891; and the Massachusetts life-table for males prepared by Dr. Samuel W. Abbott from the deaths for five years, 1893–97, and the State census of 1895.

MEAN AFTER-LIFETIME (EXPECTATION OF LIFE).

A	GE.		ENGLISH TABLE No. 1.	ENGLISH TABLE No. 3.	MASSACHU- SETTS TABLE.
0		•	39.91	43.66	44.09
5			49.71	52.75	52.88
10			47.05	49.00	49.33
15			43.18	44.47	45.07
20	٠.		39.48	40.27	41.20
25			36.12	36.28	37.68
30			32.76	32.52	34.28
35			29.40	28.91	30.87
40			26.06	25.42	27.41
45			22.76	22.06	23.93
50			19.54	18.82	20,53
55			16.45	15.74	17.33
60			13.53	12.88	14.38
65			10.82	10.31	11.70
70			8.45	8.04	9.34
75			6.49	6.10	7.37
80			4.93	4.52	5.70
85			3.73	3.29	4.31
90			2.84	2.37	3.16
95			2.17	1.72	2.22
100		• ,	1.68	1.24	1.21
			!	!	Į.

From these tables, which similar ones for other countries confirm in the main, it will be seen that the expectation of life for males at birth has increased nearly four years during the last fifty years. That is to say, in the words of Dr. Tatham, "A male exposed throughout life to the rate of mortality obtaining in England and Wales in 1881-90 would, on an average, live 3.75 years longer than he would have lived had he been subject to the rates prevalent in 1838-54." The expectation of life in Massachusetts, it will be noticed, is from one to two years greater at each age than in England, the excess being the greatest from twenty years upward, and this is the usual showing of American life-tables.

While this increased expectation of life is true of the infant, a close examination of the expectations at different ages will show that from the age of thirty-five upward the reverse is true, and that in the later years of life especially the expectation is lower than it was fifty years ago. The following table makes the cause of this difference clear.

MEAN ANNUAL MORTALITY PER THOUSAND LIVING, ENGLAND AND WALES.

	AGE.	184150.	1881-90.	PER CENT. INCREASE OR DECREASE.
0		66.03	56.82	-13.9
5		9.03	5.29	-41.4
10		5.27	3.02	-42.7
15		7.46	4.35	-41.7
20		9.28	5.61	-39.5
25		10.25	7.53	-26.5
35		12.85	11.42	-11.1
45		17.03	17.06	+.2
55		29.86	31.33	+4.9
65		63.59	64.65	+1.6
7 5		162.81	153.67	-5.6

It will be readily seen that the greatest diminution in the mortality has been in the earlier years of life, especially between five and twenty years, and that after forty-five there has actually been an increased mortality up to extreme old age.

There can be no question that the lessened mortality in early life is chiefly due to what is called "improved sanitation," for the methods in use for this purpose, from their very nature, produce more effect upon the health of infants and small children than upon adults, their tissues being soft, undeveloped, and plastic, and the processes of nutrition and growth being easily diverted in one direction or another. The main causes of mortality in the early years of life are those affecting the organs of digestion (diarrheal diseases, malassimilation, etc.), and contagious diseases, like scarlet fever, diphtheria, and measles, which seldom attack adults. These are the very diseases which modern sanitary methods have done the most to prevent, while the diseases producing the greatest havoc in later periods of life are not yet fairly under control, and most of them are not likely to be for many years to come.

The rosiest outlook is that for the diminution of the ravages of consumption, the "great white plague" of temperate climates; but the vast majority of the diseases which

carry off adults, being the result of personal habits of life and mostly connected with the control of animal appetites, may never be greatly diminished. Few people have enough self-control to become centenarians. The game for them is not worth the candle. But the saving of so many lives among the young has important bearings upon the general viability of a community. It results in throwing forward into the later periods of life a large number of weakly persons, and the average stamina of the population is consequently reduced, so that when the decline of life begins, and the physical powers decay, this undue proportion of weakly lives tends to increase the mortality at advanced ages.

The lowering of the general death-rate of communities, therefore, and the corresponding increase in the expectation of life, do not necessarily imply increased longevity of the race. The careful preservation and nurture of the invalids, the weaklings, and the cripples may not, in the long run, conduce to the well-being of a nation. There are even now some piping voices of warning, here and there, crying out that the inexorable laws of nature are the best, and that man gains nothing in the end by striving to change the balance of forces which those laws tend to bring about. They point out that what is wanted in the world is strength and vigor, physical and mental, and that if things are left to work themselves out alone, the survival of the fittest, even if there be some waste in the process, will most surely bring about the strength and energy that both rulers and peoples most desire. Instead of allowing nature to take her course in this way, we thwart her efforts in both directions by carefully guarding the weakly ones against her ruthless methods and prodigally wasting the strong in destructive wars.

Although improved sanitation has probably been the chief agent in the diminution of mortality among civilized nations in recent years, other causes have also been at work, the most notable of which perhaps has been the decreasing birth-rate. In the stress of modern life, the constant struggle for wealth, and the increasing love of ostentation in classes of the population that formerly were contented with frugal and uneventful lives, marriage is contracted later and later, and for that and other reasons the birth-rate has been quite generally decreasing.

Now, a decrease in the birth-rate implies a decrease in the number of persons at the age when mortality is heaviest, and therefore causes a proportionate decrease in the deathrate of a community taken as a whole, i.e., the general rate, the one in common use. Vital statistics, then, do not fully substantiate the claim that longevity increased much during the nineteenth century. The death-rate has been lowered largely by the preservation of undesirable elements, as the price of pepper may be reduced by the addition of ground nutshells.

If we pass now from the consideration of the longevity of the community as a whole to that of the single individual, and inquire whether there is a larger proportion of old people now than formerly, we find that our means of forming a judgment are very inadequate. There have been centenarians in every age, or at least persons who claimed to be and were believed to be such. Those who have been mentioned in an earlier part of this article can almost be called young in comparison with Henry Jenkins, aged one hundred and eighty-five, or Thomas Parr, aged one hundred and fifty-two, who died more than two hundred years ago. Mr. Thoms has shown how fallacious most of such claims are, and how readily old people deceive themselves and others when their minds become enfeebled. Moreover, there seems to be a natural and almost irresistible tendency, after one has reached an age when wrinkles and white hair render it no longer possible to dissemble, to overstate one's age, so as to be congratulated upon such admirable preservation. Sometimes, indeed, the very old appear to guess at their age, and make it greater or less according to some inscrutable passing whim. A ludicrous illustration of this is given in the report of the New York State census of 1875. Mr. C. W. Seaton, the superintendent, had the records of three previous censuses searched for the names of those persons who were returned in 1875 as being one hundred years old or more. Forty-eight such were found, and a few of the records are given here as samples:

AGES AS RETURNED AT FOUR CENSUSES.

No.	1860.	1865.	1870.	1875.
1	79	83	96	102
8	82	80	94	100
9	80	100	94	108
22	78	86	96	101
36	78	90	97	105
14	56	70	70	100
46	65	90	97	102

The difficulty, under such circumstances. of procuring trustworthy statistics relating to persons of advanced age without prolonged and tedious investigation is very apparent, and although there are undoubted instances of very old age in individuals, which can be easily authenticated, all statements in the gross of ages above eighty-five must be taken with considerable allowance for error.

It is doubtful if sanitary improvements have produced much effect in the prolongation of life to an advanced age, which, after all, is what most persons have in mind when they speak of increased longevity. Weakly persons who have been preserved amid the dangers that assail early life are not likely to possess much of that innate power of resistance to toxic influences that characterizes those who live to be old. And yet, even if their inherited vitality be insufficient to put them on an equality with the favored few, their preservation beyond the unreasoning age gives them an opportunity of profiting by experience, and, without a doubt, enables them, by conforming their way of life to well-established hygienic laws, to live much longer than they would have done at a time when ignorance of such matters was the rule. The muscular, fullblooded person who laughs at doctors, and thinks his appetites great gifts of nature, to be satisfied rather than satisfied, does not always outlive the valetudinarian who counts his grapes and stops at one glass of wine. So it may be said with truth that the saving of lives at the earlier ages brings a large number of persons to a point where they can look out for themselves, and however deplorable the general neglect to do this may be, it is certain that the average man has a did before in the history of the world.

Those who live to an extreme old age are probably the result of a long series of selected lives, further fortified by exemplary personal habits, like the Jews, who, for two thousand years, have been compelled to live in crowded quarters of cities, with a minimum of air and light, until nature's selective processes, together with their rigid adherence to the admirable sanitary code of Moses, have produced a stock that can endure almost anything with little apparent injury. The Ghetto in Rome was the healthiest quarter of the city, and at the present day the Jewish quarter of New York, the most crowded and, until recently, the dirtiest part of the town, has the lowest deathrate.

Persons with such constitutions, being, in a large measure, proof against morbific influences, are generally injured only by their own excesses, and it will be found, as a rule, that centenarians have been persons of this class, who have seldom been ill in their lives, who have had the contagious diseases of childhood lightly, if at all, who have always been temperate in all things, light eaters and drinkers, slow to wrath, able to control their passions and emotions, and usually leading a placid, uneventful life. Such conditions can be brought about by sanitary laws only as a result of long-continued teaching and pressure extending over many generations, and may not be perceptible in the race for a hundred years to come. Our first parents were driven from the Garden of Eden for fear they would become immortal, and their descendants have lost so much ground that only one out of millions is able to reach the physiological limit of life, which certainly should be one hunbetter chance of living long than he ever dred years, and possibly one hundred and twenty.





DE CAPTAINE OF DE "MARGUERITE."

[ILLINOIS FRENCH-CANADIAN DIALECT.¹]

BY WALLACE BRUCE AMSBARY.

WITH PICTURES BY FRANK VER BECK.

vant to know who 't is I am? You 're stranger man, I see. I don' min' tell to you som't'ing concern' de life of me. My fadder 's com' from Canadaw, 'long vit Père Chiniquy, 'Vay in de early fifty year, to lan' of libertee. An' I am born here on de State, an' rose soon high to be De captaine of de Marguerite, dat sail de Kankakee.

De people all is know me here. Ven I vent down de street, Vit moch respec' dey 's bow at me, venever dem I 'd meet. De ladies call me "Captaine," de men is call me "Cap," De childern ovère de hull place dey 's mos'ly call me "Pap." I 'm "caractère publique," dey say. Vatever dat may be, I 's captaine of de Marguerite, dat sail de Kankakee.

An' ven de var is outbreak in de spring of Nanty-Ate, I's grow so patriotique, an' I am so moch elate To haf de chance to go to front, I vill be brave, bold man, An' fight de Spanish grandee; but I 'll fight not on de lan'. I'll go opon de gentlemen-of-var, I say to me; I 'm captaine of de Marguerite, dat sail de Kankakee.

An' den I put de Marguerite in dry-dock for a vile. I gat me to Chicago town. My face is all on smile. Dey mak' recruit for navee dere; for seaman advertise. De officère he 's dress lak doode, say I 's 'mos' undère size. "Vat experance it is you haf, my man?" he say to me. Den I tol' him 'bout de Marguerite, dat sail de Kankakee. ¹ See "De Cirque at Ol' Ste. Anne" in THE CENTURY for March, 1902.

