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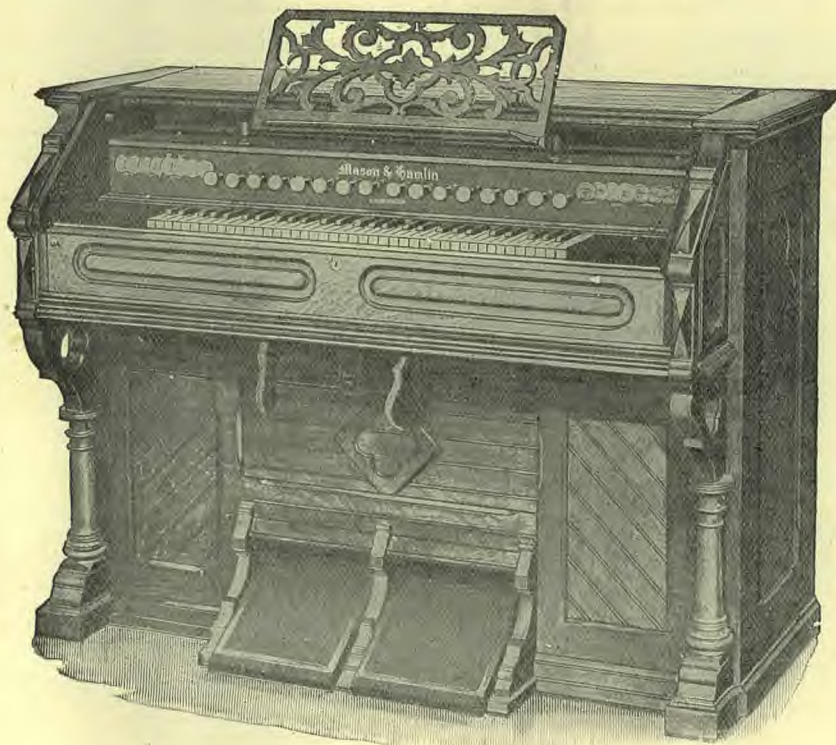
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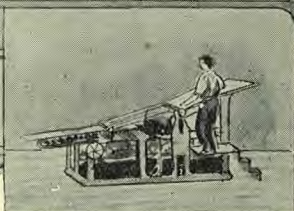
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THE TALK OF THE OFFICE



*"Temperance is the parent of health,
cheerfulness, and old age."*

IT is fitting that a journal having the ideals of LIFE AND HEALTH should devote considerable attention to the question of the need of better housing for the people. Therefore we offer no apology for devoting so much of our editorial space to the consideration of this very vital question. Some of the statistical matter which we have culled from various sources is truly startling; but we can assure our readers that the figures are reliable, as the information has been gathered from official sources. The amount of human misery, physical suffering, and disease which is being generated through the overcrowded, unhealthful buildings in which millions of men, women, and children are now forced by circumstances to live, or to be accurate, *to die*, is appalling.

Believing that this subject is timely, we purpose to give our readers in subsequent issues more information along the same line.

What Some of Our Readers Think of "Life and Health"

From all parts of the Commonwealth of Australia and the Dominion of New Zealand we are receiving appreciatory letters from our subscribers. It is gratifying to know that the Magazine is really fulfilling its mission, and that numbers of families have derived real benefit from information which has been imparted by LIFE AND HEALTH.

Here are a few extracts taken at random from our letter files:—

"I am very well pleased with LIFE AND HEALTH, and am sure we often pay a guinea to a doctor for less valuable advice than is contained in one issue of the journal."

"I have just received a copy of LIFE AND HEALTH, and am delighted with it. This work deserves the increasing support it is receiving. May its mighty influence for good continue to spread. One little article in this copy, 'How to Extract a Splinter,' is worth much more than the cost of the whole copy. I also like very much the class of advertisements inserted, and wish you to send me a copy of each, 'Almost a Man,' 'Almost a Woman,' and 'Colds.'"

"We find it not only a most interesting book, but one full of valuable information, a book which ought to be read and studied in every household."

"Yours is a first-class paper, and well deserves its success. As you say, the 'Chats with the Doctor' is worth far more than the subscription price."

"I will with pleasure take the LIFE AND HEALTH for another year. I quite look forward to the time of receiving it every two months. The matter is A1. Mrs. Newing has got a lot of information *re* cooking, as we have given up eating meat. Wishing the book every success for the coming year."

"I have learned from its pages, and I trust it will have a successful career. I feel sure I am not the only one who now voices its praises."

"I appreciate the LIFE AND HEALTH journal very much, as it is filled with up-to-date matter on health topics, and I believe by following instructions contained therein many persons will receive great benefit."

"The literary objective of the work is good, and I appreciate its contents immensely."

"The June-July copy arrived last week, and we heartily congratulate you. Most instructive and readable, not a dull line from cover to cover. A splendid publication. It grows better and better every number."



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Vol. 2, No. 5

Melbourne, Victoria, Australia

October-November, 1912

Wanted—More Light and Air

ACRY is going up from the great cities of the world for more light and air. Human greed and avarice, coupled with amazing ignorance, have contrived to shut out from the lives of great masses of people these beneficent and essential things. There is just as much light and air available for every person as ever, provided no impediments are permitted to shut out these bounteous gifts of nature. An ample supply of light and air is available for every man, woman, and child in the world. A beneficent Creator has hung in the heavens a light-bearer with power sufficient to pour its rays into every nook and corner, and has enveloped the whole earth with an immense volume of air which is the chief essential to all organic life. From an insufficiency of air an individual will die sooner than from any of the other essentials of life. Man may live without solid food for several weeks, provided that he is given water at frequent intervals; but, without air, he will live but a few minutes.

Of all things, therefore, that a man stands most in need of, fresh air may be

said to be the principal thing. Notwithstanding this, there are large numbers of people who regard fresh air as an enemy, for they nail up their windows, seal up every crack in their houses which they are afraid might admit this life-giving element, and even place sandbags against the doors to prevent any air from entering their houses. One would think that air was a dangerous intruder which should be prevented by any and every means from gaining an entrance into the house. For fear that this intruder might seek to enter surreptitiously through any of the small ventilators in the walls, these are securely closed lest the inmates might "take cold."

How true the old proverb is! "The people perish for lack of knowledge." To avoid disease exclude neither light nor air from your homes. Open the doors and windows. Burglars are less dangerous than impure air. Let the winds of heaven play freely in the house, and permit no obstacle to prevent the bright beams of old "Sol" from penetrating every corner of each and every room. A. W. A.



BEFORE the advent of the modern statistician the world was blissfully ignorant of many important facts, the truthfulness of which has been amply demonstrated by the careful compilation and classification of statistics. What was formerly known as "political arithmetic" came into existence in England in the middle of the seventeenth century. In 1666 Captain John Graunt, of London, published a work entitled "Natural and Political Annotations made upon the Bills of Mortality." This book, which attracted considerable attention and ran through several editions, and which dealt with London mortality only, may be considered as the pioneer in the realm of statistical investigations and the forerunner of the multitudinous volumes which have since been published in the interests of the study of vital statistics. This valuable branch of knowledge has received increasing interest and attention through the intervening three centuries, and not only have politicians and men engaged in scientific research gained considerable profit therefrom, but the whole world has benefited thereby.

To-day many social reformers are endeavouring to bring forcibly before the minds of the people the dreadful results of overcrowding in large cities. As Professor Muirhead has remarked, "The problem of the last generation was to

provide gas and water; the problem of the next is to provide light and air."

Upon such an important theme mere theorising is not sufficient. Aside from the unanswerable logic of comparative statistics which the statistician has made available for our use and instruction, it is very doubtful if the world at large could be made to realise the dire results, physically, mentally, and morally, which inevitably follow from the overcrowding which is going on in all large cities.

The Slum the Result of Greed and Ignorance

In the old world there may be some little excuse for the aggregation of huge masses of people in over-populated cities, with narrow, badly-drained streets, and dark, ill-ventilated houses. Centuries ago, when these cities were in the process of formation, men did not understand, as they now do, the necessity and importance of providing ample space for pedestrian and vehicular traffic, areas for playgrounds for the children, recreation reserves for the use of the public, and parks for breathing spaces, as well as for the development in the people of a love for the beautiful things of nature. City land, apparently, seemed useful only for the purpose of erecting shops and dwelling-houses upon it. The more houses or shops that could be erected upon a given piece of land, the more income could be

derived from it. Whether the erection of ten or a dozen houses, and the housing of forty or fifty families upon a piece of land only large enough, perhaps, for one decent villa, was conducive to the healthfulness or otherwise of the community never entered into the calculations of the land-owner. How much rent could be produced by the property was a question which overshadowed every other consideration.

The world is now reaping the penalty of such grasping greed. In some parts of London where people are herded together like rabbits in a warren, the death-rate is five times greater than in suburban districts of the same city where each household possesses sufficient light and air. One million people in London live in one and two-roomed tenements. The evil effects upon the health and morals of those hundreds of thousands of families who live, eat, and sleep in one or, at the most, two rooms is appalling. Comfortless, cheerless, inhospitable shelters (we cannot honour such places with the name of home), is it any wonder that the poor wretches seek a little comfort and conviviality at the attractive drink shops which stand at the corners of nearly every street in the slum areas?

A Profitable Field for the Liquor Traffic

To the drink trade the slum is a splendid harvest-field, as it is also to the unscrupulous landlord who invests his money in slum property. One English municipal authority says: "Slums are gilt-edged securities. People who want to get rich quickly, and who do not care very much what methods they adopt to attain that end, buy slums. The worse the slum, the better the owner's chances of realising huge profits on his investments." The bodies and souls of their tenants are of little consequence to the owners of slums. Rent overshadows every other consideration. Humanitarianism makes no appeal to such men. In fact, they regard the efforts of philanthropic men and social reformers who regard the slum as an offensive excrescence upon twentieth century civilisation, and

desire its abolition, as a gross interference with the liberty of the subject. Slave-owners indulged in the same kind of talk a century ago, but their protestations against the efforts of the noble men who fought hard to win freedom for the down-trodden negro slaves were all in vain. Manufacturers who carried on their businesses in unhealthy, ill-lighted, and unventilated buildings also regarded the demands of the factories' laws for such things to be remedied as an invasion of the liberty of the subject. But the community upheld the law, and rightly demanded that healthful workrooms should be provided for employees with necessary and suitable sanitary conveniences.

Now that the attention of the community is being directed towards the abolition of the slums and the proper housing of the people, shall we heed the protestations about vested interests?—Nay, verily. No more heed should be paid to the greedy protests of the slum owner than was paid to the wail of the slave owner or the cry of the manufacturer who sought to evade his responsibilities and to make himself rich by the sufferings of those who toiled for him. If a man requires a healthy workroom and proper sanitary accommodation in the place where he spends only eight hours out of the twenty-four, he surely needs a cheerful and sanitary home where he lives and eats and sleeps. And, moreover, if it is the duty of the State to regulate his hours of labour and his wages, and the conditions under which he works, he is surely entitled to expect some supervision over the kind of building in which he eats and sleeps. If we were asked to state which was the most important of the two, a healthful factory or a healthful home, we should unhesitatingly say the latter. Yet the State insists that even a Chinese cabinet maker shall work in a healthy factory; but, strange to say, he may sleep in a vile cellar without much fear of being disturbed.

The Need for Legislation

Surely it is high time for the State to legislate against the creation of any more slums. If those that at present exist

cannot be wiped out immediately, it is a simple matter to prevent the further expansion of this evil. In all future subdivisions of land the authorities should not permit the creation of any more "pocket-handkerchief allotments." The inordinate greed of land-owners has surely demonstrated itself sufficiently to show to

streets and "pocket-handkerchief allotments" upon our remote ancestors.

In the principal Australian cities there should never have been a single district where it was possible to create a slum area. But, notwithstanding the splendid opportunities that were offered to build model cities, the greed of man has con-



SPRING STREET, MELBOURNE

our legislators and municipal councillors the imperative necessity of restraining this evil thing. In a young country like this there should not be such a thing as a slum to be found. What excuse can we offer in this sparsely populated continent for our overcrowded cities? We cannot go back centuries into the past and lay the responsibility for narrow, unhealthy

streets and "pocket-handkerchief allotments" upon our remote ancestors. In the principal Australian cities there should never have been a single district where it was possible to create a slum area. But, notwithstanding the splendid opportunities that were offered to build model cities, the greed of man has con-

Conditions in Melbourne

In Melbourne, notwithstanding its wide streets and its numerous and spacious park lands, we have a good example of how the selfishness of men has defeated

the noble aims of the original designers of the city. For its broad thoroughfares and beautiful park lands we have to thank those who had foresight enough to attempt to correct the evils which prevailed in older countries. But with the rapid increase of population land became valuable, and the original, roomy allotments

hideousness. We rejoice to know that attention is being called to this evil in many quarters, and trust that drastic steps may soon be taken to prevent the creation of any more overcrowded areas.

Speaking in Wesley Church, Melbourne, upon this question, the Rev. Alex. McCallum said:—



Sears, Photo., Melbourne

BLE THOROUGHFARE

were subdivided in order to meet the growing demands of the population, and to gather in the enhanced rent which these subdivisions made possible. Thus the hygienic and sensible lines upon which the city was originally planned were thrown aside, and the old-world evil of overcrowding, which could, and should, have been prevented, is now here in all its

There were many things about Melbourne of which the citizens might properly be proud, but within the last few weeks public attention had been called to conditions of which they had not only no reason to be proud, but had grave reasons to be ashamed. No phrase could be too strong for the public spiritedness with which *The Age* had given its columns to the campaign against the slum areas and the disgraceful conditions that prevailed. His visits to those areas had satisfied him that the overcrowding was simply dreadful. If there was no room in the State or in the Commonwealth they might understand it, even

though they might deplore it, but as they all knew that was not so. There was wicked overcrowding, not only in the areas they had come to regard as slums, but in areas that were in no sense slums. The trouble was brought about principally by poverty, vice, crime, and last, but not least, the greed of land owners—men, who, for the sake of greater gain, cut up allotments into sizes that were a disgrace to any civilised community.

The first thing that became evident to anyone who looked through Melbourne, Mr. M'Callum said, was that it was not scientifically planned. They were proud of the fact that all the streets lay at right angles, and that they were nice and wide, but when they looked to the immediate suburbs, the haphazardness and want of system were soon manifest. It seemed as if the owners of land had put down streets just where they liked. He had walked through the small streets of North Melbourne, Carlton, Fitzroy, Collingwood and Richmond, and the first thing that impressed him was the number of children playing in the streets because there was no room in their homes or in their back yards. The second fact was the dreadfully small allotments upon which houses were erected. He had paced the frontages of the allotments upon which some of the houses were built. In North Melbourne there were houses right on the road with frontages of only 10 feet. In Richmond two cottages were on a block only 24 feet wide and no more than 60 feet in depth. In a splendid street in North Fitzroy he saw terraces of single story cottages each with a frontage of 13 feet. He dreaded to think of the condition of the people who were compelled to live on such pocket handkerchief allotments. Church workers who had visited the places said there were practically no back yards at all. This shocking condition of affairs was not confined to the poorer suburbs. At Toorak there were places for which 25/- per week was charged which had back yards only 10 feet square.

Darker Sydney

In Sydney, conditions are even worse. No less than 200,000 inhabitants dwell in what the Rev. S. Y. Yarrington, Secretary of the Anglican Home Mission Society, referred to in a recent lecture as "Darker Sydney." "For the children," he said, "the only playground was the street, where scenes which tended to degrade even the strongest were of daily occurrence. They pitied the people who had to live in those wretched hovels, but they should weep for the man who drew rents from them. A truly civilised people would not let animals live in such habitations."

Truly one-half the world does not know how the other half lives. But it is the duty of those who are living in comfort to find out how others live, and to endeavour to ameliorate their unhappy conditions. The welfare of the whole com-

munity is affected by the degradation of the poor who live in the wretched slums of our great cities.

Startling Figures from England

Possibly a few facts and figures culled from English authorities may serve to illustrate the menace of the slum. In a Parliamentary report of the condition of slum life in London, most awful facts were brought to light. In central London no less than thirty-one persons were found to occupy one small room. "Six rooms in Clerkenwell were occupied by six families, as many as eight persons occupying one room. A small house in Allen Street was inhabited by thirty-eight persons, seven of whom lived in one room. In another place six occupied an *underground kitchen*. In Swan Alley, in an old house, partly wooden and decayed, there were three rooms occupied by seventeen persons. At Derry Street the first-floor room was inhabited by a family of nine, who had only one bed among them. In Spitalfields there was a house of nine rooms, with an average of seven in each room, and with only one bed in each of the rooms; and seventeen in a single room in Camberwell."

The sanitary arrangements of these hovels are simply vile. The report of the Royal Commission mentions one case in Westminster "where there is only one closet for all the houses in the street, thirty or forty people inhabiting each house."

"Not only do we hear of houses, tenements, and single rooms divided and subdivided to find shelter for the homeless, but the very beds are let out at so much per night or day, night-workers using the same bed in the daytime which serves for day-workers during the night. Some are hired out on the eight hours' system to three different sets of sleepers in the twenty-four hours. Others, again, sleep actually *under* the beds; and there are "'appy dossers" who crowd on staircases and in passages of houses, the street doors of which are left open all night, to snatch

if possible a little sleep in this way during the weary hours of the night.

"The main cause of all this is the deplorable concentration of large bodies of men and women in the metropolis and

tenement dwellings and the proportion of families living in them." In one house in London, which was inordinately overcrowded, the death-rate was calculated at 129 per 1,000.

In some parishes in London the death-rate reaches from 50 to 70 per 1,000. Contrast these abnormal figures with the average death-rate for England and Wales which is only 14.5; and the awful results of overcrowding, apart from the discomfort and cheerlessness of life in the slums, is startlingly apparent.

Poor Housing in Rural Districts

Not only are unhealthy conditions of housing the people followed in the cities, but the same is true of the country. Population is increasing far more rapidly than house accommodation is being furnished. Thus two or more families are forced to crowd into one small house to the detriment of all concerned. It would appear to be almost as sensible for two or more persons to attempt to use the same shoes as for two or more families to occupy a small cottage, the dimensions of which are too small for even one family. And yet this unhappy condition of life is

being forced upon many people because they cannot get suitable house accommodation. In England the conditions of the cottages which are available in many rural districts is deplorable, while a recent inquiry into conditions in Scotland showed that 22 per cent of the people are restricted to one room to live in, "eating,



A Slum Alley in Liverpool

In such a street the death rate is very high

other large towns."—*The Housing of the Working Classes and of the Poor.*

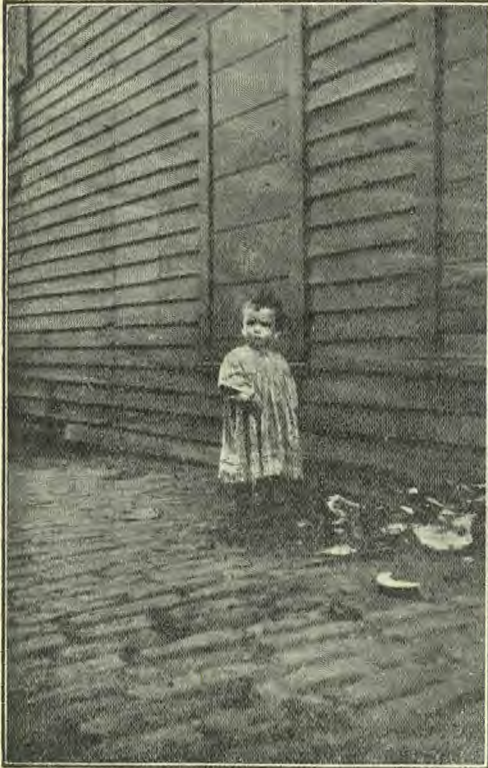
Effect upon the Death Rate

Under such conditions the death-rate rises to an appalling figure. Statistics show that "the death rate rises in proportion to the increase of single room

sleeping, washing, dressing, cooking, suffering illness, dying, and being born."

Overcrowded German Cities

On the Continent the same unhappy conditions may also be found, for in Berlin "one-third of the population live in overcrowded dwellings; 738 persons out of every 1,000 live in dwellings consisting of only one or two rooms, 367,000 families



Nowhere to Play! An Appeal for Playgrounds

occupying 21,000 buildings; on an average seventeen families live under one roof; whilst no one family in six hundred has a house of its own; 7 $\frac{3}{8}$ per cent live in cellar dwellings." In Breslau, Dresden, Magdeburg, and Danzig one-half of the population live in one-roomed dwellings. This is, doubtless, the direct result of the huge manufacturing business which has developed during the last thirty years in Germany, and which has attracted hun-

dreds of thousands of the people from the rural districts to the cities. In order to stem the immigration to the cities, the German Government is offering inducements to workmen and small tradesmen to remain in the country. Advances are granted to those who desire to build their own houses, and cheap transit is being provided in order to lessen the attractions of the towns. It has even been advocated that free travelling should be granted to workmen who desire to live outside the cities, "on the ground that such a measure would be for the benefit of all the citizens, in the promotion of health and vigour throughout the community."

[A World-Wide Problem

From these facts it will be seen that the "house famine" is almost a world-wide problem. Here, in almost every city in Australia, the people are faced with the difficulty of securing adequate house accommodation. Not only in the cities, but in many of the rural districts, a newcomer finds it impossible to rent a house at any price. With our foreign immigration policy this unfavourable condition is becoming worse. Landlords are taking advantage of the scarcity of houses to raise the rents. This, together with the scarcity of houses, forces two or more families to divide a house between them in order to provide accommodation at a reasonable expense.

Some shocking revelations were recently brought to light concerning certain slum districts in the city of Melbourne. In one district near the centre of the metropolis small two-roomed houses have been built upon right-of-ways only *three feet wide*. What have our "City Fathers" been doing to permit such buildings to be erected? It is time that the responsibility for the creation of such unhealthful habitations should be sheeted home to some responsible body, and a vigorous campaign be entered upon to uproot this menace to the peace and happiness of the community. Unless something is speedily done to remedy this state of affairs old-world conditions will soon pre-

vail here with the consequent degradation of the people and the increase of the death-rate. At present, notwithstanding the overcrowding in some of our city centres, our death-rate is very low compared with other countries.

Diphtheria and Its Treatment

IT is difficult to imagine that anyone would think one size of boots would fit everybody, yet there are many people who think one kind of medicine will fit all kinds of diseases. Every year there are children who are dying because of the ignorance of parents about this thing. To quieten their babies mothers often give them medicine which does not remove the cause of trouble, but simply drugs them to sleep. Children with diphtheria have often lost their opportunity of getting well through parents wasting precious time in using patent medicines or treating the case as one of croup or tonsillitis, etc.

Diphtheria is a disease which requires prompt and careful attention. Where there is the least doubt, it is always advisable to obtain the advice of your usual medical attendant.

Insanitary surroundings predispose. Dry, dusty weather with wind aid in the spread of bacilli, and favour the production of an epidemic. But it is noted that all rules are violated, and the disease is found to exist in all kinds of weather and conditions. I believe there is no disease having a wider variance in times of appearance, localities, and conditions.

Children from three to five years of age are said to be more likely to become victims, but this rule is often violated, it occurring in babies of a few weeks old up to late adult life. In some families there is an undoubted predisposition to the disease, they becoming victims to an attack at the least exposure, and having repeated attacks. There are those who may be exposed thousands of times, and yet never develop the disease, their natural resisting power preventing its contraction.

Clothing will hold the deadly germ for an indefinite period. In one of my cases a blanket was responsible for a severe attack after the blanket had been packed away for seven months and came some distance, there being no other means of exposure.

The discharges, whether blown out of

Death Rates* of Various Countries.

Country	Year	Crude Death Rate
New Zealand	1910	9.7
Commonwealth	1910	10.4
Denmark	1909	13.1
Norway	1909	13.5
Sweden	1909	13.7
Netherlands	1909	13.7
Canada (Ontario)	1908	13.9
England and Wales	1909	14.5
United States (reg. area)	1910	15.0
United Kingdom	1908	15.1
Scotland	1909	15.3
Switzerland	1908	16.2
Belgium	1908	16.5
Finland	1909	16.7
Ireland	1909	17.2
German Empire	1908	18.1
France	1909	19.3
Japan	1908	21.0
Italy	1909	21.4
Jamaica	1909	21.7
Austria	1908	22.3
Spain	1909	23.4
Bulgaria	1908	24.3
Hungary	1909	25.1
Rumania	1909	27.8
Servia	1909	29.3
Russia, European	1903	30.0
Ceylon	1909	30.3
Chile	1909	31.5

* Number of deaths per 1000 of mean population

With the abolition of the slum areas in the cities, and the better housing of the poor, both in urban and rural districts, there is no reason why even our present low death rate should not be diminished very considerably. Any effort to increase the healthfulness and longevity of the people is worth infinitely more than it costs.

A. W. A.

“It is true I cannot prevent the introduction of the glowing poison. Gain-seeking and corrupt men will, for profit and sensuality, defeat my wishes, but nothing will induce me to derive a revenue from the misery and vice of my people.”
—Emperor of China.

the mouth or nostrils in the act of coughing or otherwise, are sufficient to transmit the infection to another, especially if there be in the second party a predisposition to affections of throat and nose.

Symptoms

The attack begins with soreness, pain or swelling of the throat, a tired feeling, headache, and a rise of temperature never higher than 103° F. and quite irregular in its course, pulse rapid and feeble; a pronounced constipation, child does not pass much water, the prostration and pallor are often out of all proportion to the rise of temperature.

In young children who do not ordinarily make complaint of sore throat the local trouble may be overlooked. In one case the father brought to my office a child suffering from diphtheria: In the laryngeal form, with its rasping cough, croupy, metallic with huskiness, or even absence of voice—the so-called membranous croup; harsh breathing with a steady increase of dyspnoea (difficult breathing), every muscle being brought into play to assist in forcing air through the narrowing lumen of the larynx or trachea—this is accompanied with a progressive cyanosis, death resulting from asphyxia. There is nothing more distressing to behold than such a case, yet the father thought he was only bringing in a bad case of croup. Another case could be given in which the father thought the child playing on the floor had placed something in the mouth, causing the obstruction.

That which marks the case one of diphtheria is the greyish-white membrane over the back of throat; this when stripped off leaves a raw bleeding surface, and is soon followed by a similar deposit. Cases are by no means uncommon in which death results from the intensity of the constitutional infection with very little local trouble.

Patients convalescent are liable to palsies which may involve the muscle of swallowing and sometimes affect the eyesight; the heart has in some cases been

affected, causing death or slowing of the pulses.

Many cases are mild, and end in recovery in the course of ten days or two weeks; more severe cases may terminate favourably after a sickness of three or four weeks.

Treatment

In the treatment of a case of diphtheria the child must be isolated and placed at absolute rest for four to six weeks, or until the germ is no longer found in the throat. Select a large, airy room, and remove all floor coverings. The plain boards should be scrubbed with a dilute disinfectant at least once daily. Have the room well ventilated, but see there is no direct draught on the patient. A sheet can be hung up at the door, this should be wrung out daily in a solution containing a teaspoonful of lysol or Jeyes fluid to a quart of hot water. Have separate utensils for use of patient; boil well after using. Be careful of the hands after attending to the patient; scrub them well in a solution of two per cent lysol, or carbolic lotion, one to sixty. Good carbolic and lysol soaps can be secured for this use.

Medical testimony is in favour of the use of antitoxins, and as early in the case as possible. The serum treatment should not displace other measures. If gargling is impracticable (as in small children), the throat must be swabbed with boro-glyceride every morning. If the throat is too tender to be swabbed, gargles internally, with inhalations (two or three crystals of menthol in boiling water) and fomentations externally, afford immediate relief.

The nose and throat may be kept clean by antiseptic sprays, or douches, using dilute listerine or dilute hydrogen peroxide. The constipation should always be removed. A warm enema may be given. Relieve the rise of temperature by urging the patient to drink freely of hot water. See that the feet are warm—moist heat preferred; if necessary immerse in hot footbath without uncovering

the patient. Sponging the patient with hot water is always an advantage to reduce temperature.

A nutritious diet should always be given, consisting of milk and milk foods, such as gruels, thin granola and gluten, or barley water, malted nuts, malted milk, and butter-milk preparations, good fruit and fruit juices may be given.

Any tendency to nausea must be regarded with concern, lest it be due to the heart, and immediate measures should be taken to prevent its recurrence by taking nothing but sips of iced fluid through the mouth and nutritive enemas.

Convalescence should be slow; and when the patient leaves the sick room all bed clothes, patients' and nurses' clothing should be thoroughly fumigated either by sulphur (two pounds to a room ten feet square) or by an alformant lamp, containing four or five tablets of formalin to the same sized room. They should be hung up and well spread out so as to allow the fumes to penetrate the folds, and afterwards well boiled; articles unable to be boiled should be hung in the room during disinfection.

P. M. K.

An Hour from Sleep Not an Hour Gained

AT the present age the process of "speeding up" has been gradual. Thus it is that those who are in the whirlpool are not able to appreciate the breaking strain which is gradually being applied to them. They cannot see that every day life is being lived faster, and is becoming more and more exciting.

Houses are no longer built gradually from foundation up; ten, twenty, and more stories are rapidly elevated by the aid of steam and crane; the roof is often put on before the basement is completed. The speed limit is removed, the old signs "Stop, look, and listen" are removed.

"Among the ancient Greeks there was a running match in which each participant carried a lighted torch. The prize was awarded not to that one who crossed the line first, but to him who crossed the line first with his torch still burning. It

is important that we should advance, but the vital thing is not that we should simply get somewhere—anywhere—quickly, but that we should arrive at a definite goal with the torch of good health and safety still ablaze."

With the speeding up comes the call for the "nervines," and the widespread use of those things which whip up rather than build up the nervous system. The woman shopping must have her afternoon tea: the men find themselves calling for alcoholics and tobacco.

Nature's chief restorative to the overworked human organism is sleep. Like any other machine which is overworked, or too rapidly worked, there is a wearing out and constant breakdown of the whole organism through the increased speed of thought and action.

Sleep is a natural process which is a periodical necessity in order to maintain health. While it lasts there is a stoppage of the voluntary use of mind and body. The involuntary portions of the body obtain rest by working less actively, the pulse is less frequent, the respiration slower; with less activity there is less breakdown.

Rest is required more so in early life. All children up to the age of six years should be made to lie down for rest in the middle of the day, especially if inclined to be nervous or delicate. The ordinary healthy adult should have six to eight hours' sleep.

Air supplies the oxygen which is necessary to maintain life and build up the body. During sleep—provided the body and extremities are warmly clad, and the sleeper not exposed to direct draughts—cold air and fresh air will do no harm.

By the time we reach sixty we have spent some twenty years—about one-third of our lives—in bed. We are particular about retaining healthy positions during two-thirds of our lives—why be negligent about one-third. Many bad positions are formed during sleep. Some assume an attitude which cramps the chest and impairs respiration, thereby doing much harm to health. The shoulders should

not be drawn forward, nor the arms folded tightly over the chest. Lie as straight as possible; if the knees are doubled up, circulation in the legs is impeded.

Sleeping on the right side is best, then the stomach can the more readily empty itself.

The inability to sleep may be caused by pain, such as headache, ear, or tooth troubles; or some diseases, as asthma and bronchitis. To produce sleep in these cases means removing the cause of the trouble.

Certain substances in the blood prevent sleep, such as uric acid, tea, and coffee. This makes it necessary for the patient to follow a carefully selected diet, eliminating the use of flesh foods, tea, and coffee. Emotional disturbances, such as worry and grief, are often factors in preventing sleep. With the speeding up the most prominent cause of sleeplessness is that of nerve exhaustion, often called neurasthenia.

Treatment for Insomnia

Before retiring the patient should always make an effort to have feet warm and head cool. To obtain this effect the ordinary hot foot-bath is a help. In some cases it is an advantage at the same time to give a set of three fomentations to the spine. It is better for the patient to partake of no food just before going to bed, but a drink of plain, hot water is a help.

Neptune's girdle is an excellent adjunct to a sedative treatment. This consists of an inside part of one thickness of linen or three or four of gauze eight or nine inches wide. This is wrung out almost dry in warm water; over this is placed a dry flannel girdle about twelve inches wide of same length; this should be dry or nearly dry by morning. This treatment is not always a source of comfort to the patient, and if this be so, should be discontinued.

The next best thing is the neutral bath, and it certainly has wonderful power to put people to sleep. I have used it a great many years, and with very great success. The principle on which the neutral bath operates is this: While the

person is in the neutral bath, all the external irritants are shut off. The bath is neither hot nor cold—a temperature of 92 to about 96°. At that temperature there is no sensation of heat or cold; there is no stimulation of the nerves; the nerves of the skin absorb water, become water-soaked, and in that way they lose their sensibility. Water is absorbed into the system also to some degree, which aids the kidneys in carrying off the poisons; so this bath really becomes a powerful therapeutic measure.

The best treatment for insomnia is to avoid the causes, and run the race of life sanely. To secure a maintenance of health and efficiency do not take any time from your necessary period of sleep.

F. K.

Avoid Alcohol for Health and Efficiency

ACCORDING to Prof. Irving Fisher's report to the United States Government 600,000 lives are sacrificed annually in the United States, and these deaths, he says, can be prevented by preventive measures.

The National French League against Alcohol, with headquarters in Paris, makes a special appeal to the industrialists, on the ground that the habitual use of alcohol lessens the skill of the workman. By depriving him of self-control he becomes clumsy in his movements, whereby the tendency to accidents is augmented, not only for himself but for his fellows. Alcoholism attacks all the organs of the body, especially those which have the least power of resistance. The workmen who indulge in the use of alcohol are more liable to tuberculosis and disorders of the nervous system. Alcoholism takes away money which should go for food, clothing, and shelter of the family. It is, therefore, in the interests of the workman, his family, industry, and society that the evils of alcoholism should be combated. As means to this end, the League recommends: Verbal hints and suggestions to the workmen; anti-alcoholic posters in the workrooms; annual

lectures in the factory itself for the workers; prohibition of all alcoholic drinks during the hours of labour; sale of low-priced, non-alcoholic beverages; establishment of temperance societies among the workers; and the provision of temperance restaurants.

Every year the State of New York receives into its State asylums 6,000 lunatics, a large percentage of whom are the victims of alcoholism.

Healthy family life is the basis of a sound nation, State, and community. That this is being accepted universally is shown by the various measures for the promotion of healthful living. At first efforts were made for the restoration of the sick; now *prevention* is the rule of action.

When the strength is used up it is not enough merely to add to it, but reserve force must be stored up. This is best accomplished by periods of rest for mind and body. Only a comparative few recognise this and have the means to do it. The great majority of the community do not appreciate this, and are in no position to avail themselves of periods of rest and recreation.

Mr. Carnegie, when speaking to students of Aberdeen University, said:—

"There is, no doubt, among you here a class which intends to enter the domain of business to win Dame Fortune's golden smiles by assiduously waiting upon her—would-be millionaires. This was the class in which I toiled, not at the University, unfortunately, but in the home of poverty; which, however, was never inclined to hang its head, I assure you. My experience with young men pursuing their careers soon led me to the conclusion that the use of liquor was the rock upon which more were hopelessly wrecked than on any other. The rule for the young men of Scotland—'Touch not, taste not, handle not'—I hope is becoming more popular each succeeding year. One rule I have often suggested to youth, Remain teetotallers until you have become millionaires. Certain am I that this would greatly accelerate their victory. Believe

me, the young man who drinks or smokes voluntarily handicaps himself in the race of life. That he does either or both shows that he lacks something; he does not know how best to train himself for the race. The coming man leaves nothing to chance; nor, mark you, does he spend his slender means foolishly; certainly not if he is to prove the coming millionaire. You find him stripped for the race, carrying no superfluous weight in the day of trial. Trifles these, no doubt some of you may be thinking—especially smoking—but, remember, we have seen it is almost impossible to know what are trifles. In the race of life a foot ahead wins the race; a pin turns the scale."

Davies, in the *British Medical Journal*, of August 8, 1908, asserts that, as an article of food, alcohol cannot be considered necessary, or even from a dietetic point of view. There are some special conditions that need to be considered in regard to its use, especially from a military service standpoint. These are:—

- (1) Extremes of heat and cold.
- (2) Excessive labour, bodily or mental.
- (3) The peculiar fatigues and exposures incident to war.

(1) **Extremes of Cold.** Sir John Ross wrote, "The most irresistible proof of the value of abstinence was when we abandoned our ship, and were obliged to leave behind us all our wine and spirits. It was remarkable to observe how much stronger and more able the men were to do their work when they had nothing but water to drink." Dr. John Rae maintained that "the greater the cold, the more injurious is the use of alcohol."

Extremes of Heat. The amount of disease ascribed to intemperance was described by Dr. J. Maclellan as "Something appalling;" one-tenth of all the admissions to hospitals for sickness in Bombay were on account of delirium tremens or drunkenness; the numbers admitted for these causes were greater than for any other disease, except fever; and as to deaths, "alcohol destroyed more than either fever, hepatitis, or diarrhoea, and nearly as many as cholera."

(2) **Excessive Labour.** A German observer, Schneider, has recently (1907) examined 1,200 mountain climbers, and found that, according to their testimony, as long as continuous efforts and difficulties are to be expected no alcohol should be taken.

(3) **Fatigues and Exposure Incident to War.** The experiences of the British forces in Egypt in 1800 when a body of troops under Sir David Baird marched across the desert from the Red Sea to the Nile (Kossier to Keneb); Of the Red River expedition in Canada in 1870; of the Ashanti campaign in 1874; and of the Nile expedition in 1885—the three latter under Lord Wolseley—all prove that very great exertion and exposure to extremes of temperature can be better borne without alcohol than with it, and that arduous campaigns can be carried on without the use of alcoholic drinks of any kind.

F. K.

The Next Step We Should Take

WE are learning fast to live and play outdoors, says an exchange. Now one step farther: let us learn to sleep outdoors. Many do, but more should, particularly the children. No matter how or where you are situated, find some place where you can try the wonderful

experiment; on a verandah, in a tent. Wonders are in store for the experimenter who has never tried it—wonders of the clearer mind, the brighter eye, the happier spirit, the keener health. If the sun wakes you earlier forget not that six hours' sleep in the open is equal to eight hours' inside. And this is the time to begin a practice filled with the joy that is born of fresh senses and clean lungs.—*Ladies' Home Journal.*

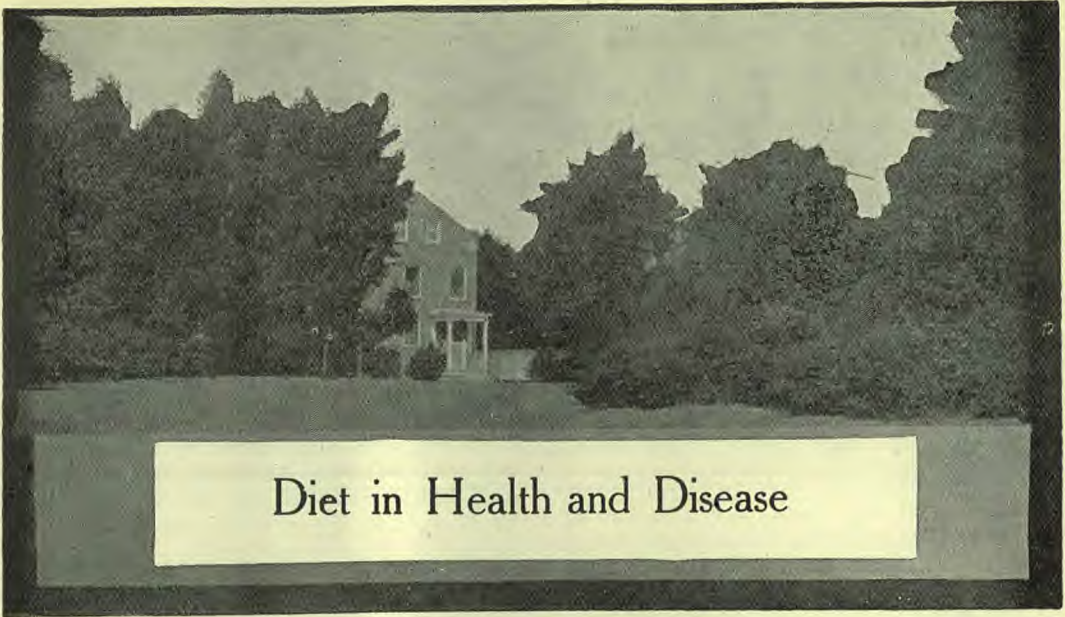
Things You Don't Want

HAVE you ever met a person whose principal topic of conversation seems to be his or her dislikes? If so, you have probably found a rather sour, morose, pessimistic, and fault-finding sort of a person.

On the contrary can you think of one who is apt to speak of his or her likes? Such a person is apt to be joyous, companionable, and a visitor you are glad to see.

The lesson is: Turn away from your eternal contemplation of the things you don't want. Break up the habit of your mind which would run around and around in a circle because it is hypnotised by some negative thought. Get interested in working for the things you do want.—*Selected.*





Diet in Health and Disease

What Everyone Should Know about Foods

FOOD is set before us at least three times a day. It looks appetising, smells likewise. We recognise it is soup, savoury, or dessert. Beyond this knowledge we care little. We have eaten it. That is the end of it. It has satisfied the present needs, and there is a feeling of well-being. It does not occur to us that what we eat to-day will be thinking and working to-morrow. If it did, perhaps we would manifest as much interest as in external adornment.

When contemplating the purchase of a suit of clothes or a dress we are careful to make investigations as to the durability of the material. Is it cotton or wool? Will it be warm and serviceable, etc.? It behoves us to pay as much attention to our inner apparel. The farmer is well informed regarding the feeding of his stock. It is the only way he can get good results. To the well-being of the human family is not given as much attention as to the development of horses, sheep, and cattle.

Let us go into any dining-room or restaurant and ask a number of people what is essential to nourish the body. There would be few who would know what are the necessary elements for proper nutrition.

Having a knowledge of foods and their value enables one to choose wisely of what to partake. First we must become familiar with a few names and definitions. They may seem hard, but they are no more difficult than the names of dress material, such as crepe de chine, taffeta voile, pear de soir, etc., or the horse that won the last race.

What is a food?—A food is any substance taken into the body which supplies energy and builds and repairs tissue.

A food is made up of various elements. What is a food element?—It is any substance that is a food which cannot be made more simple and still be a food. It is the simplest substance that we can have in the shape of food. White of egg is a *food* element. No matter how it is

analysed, it is still white of egg. Gold is a *chemical* element. No matter how it is analysed, it is still gold.

How many food elements are there? What are their names? There are five food elements as follows:—

1. Proteine.
2. Fats.
3. Carbohydrates (which include all starches and sugars).
4. Salts or mineral matter.
5. Water.

With few exceptions all foods contain these elements in varying proportions. Let us make this clearer. We have a cake before us. We call it a cake. Cake is a combination of eggs, flour, currants, etc., but after the cook has mixed these ingredients together in varying proportion, it is called a cake. Some cakes are richer in eggs than others. Some contain more currants, and so on. In like manner nature has made foods containing all the food elements in varying proportions.

As stated before, there are few foods which contain only one element. White of egg is pure proteine. Butter and olive oil are pure fat. Sugar is pure carbohydrate.

It would be impossible to subsist on any one of these foods. A proper proportion of all the food elements is absolutely essential for the nourishment of the body. This being so we must learn the value of each food element and the foods which will furnish that element.

Let us consider *proteine*. This is the body builder and repairer. Of this we require just sufficient to keep the body in repair; extra material is cumbersome. It is like clinkers in a stove which prevent the fire from burning. Less proteine is needed than was formerly supposed. We have the best authority for saying that an average man requires from one and a half to two ounces per day.

Foods Which Are Rich in Proteine

Meat: Poultry, 21 per cent; lean beef, 19 per cent; lean mutton, 18 per cent.
Fish, 18 per cent.

White of egg, 20 per cent.

Legumes: Peas, beans, lentils, 18 to 25 per cent.

Gluten, 20 per cent.

Cheese, 22 per cent.

Nuts, 14 to 25 per cent.

Practical Points about Proteine

This food element is found in both animal and vegetable life. Vegetable proteine is just as nourishing, and latest authorities state as easily digested as that obtained from animal food. So we need not fear that the body will lack essential nourishment if animal food is discarded.

In families where some of the members are vegetarians, legumes—peas, beans, and lentils—appear on the menu as well as meat, and the non-vegetarian partakes of both. This in time will result in harm, as proteine is being used in excess.

If a vegetarian diet is chosen, do not think it absolutely necessary to have peas, beans, or lentils, or eggs *every* day for dinner. Remember that other foods, although not highly proteine, contain a fair percentage. Wheat, barley, oats, and corn contain 10 per cent. Brown bread also contains 10 per cent.

Once a day is quite sufficient to use a highly proteine food. In fact, many persons enjoy better health by partaking of such food only twice or three times a week.

One of the greatest errors in choosing food is that of taking too much proteine. It should not form the chief food of the meal. Bread and grain products should be the staple food around which all other articles upon the bill of fare are grouped. Choose sparingly of proteine in the day's ration. Eggs for breakfast, meat or beans for dinner, fish for tea, is using this element to excess.

The cook should plan to weaken the value of proteine food by the addition of rice and potatoes. Where meat is used for dinner, desserts should be chosen that do not contain eggs.

Fats

These produce heat and energy. About three ounces a day is sufficient for an

average man. If taken in excess it hinders digestion in the stomach.

Foods Which Are Rich in Fats

Butter, cream, olive oil, ripe olives, nuts, yolk of egg.

Fat as found in nuts, milk, legumes, egg yolk, and ripe olives, is in a state of fine subdivision which makes it easily digested. Nuts should not be eaten between meals. Hard-boiled egg yolk will agree with persons suffering with acidity.

Foods fried in fat are rendered less digestible. When fat is subjected to great heat it is split up into irritating substances which affect the digestive tract.

Practical Points about Carbohydrates

These furnish heat and energy to the body. All sugars and starches are included under carbohydrates. They should form the staple food around which all other articles upon the menu are grouped. About sixteen ounces is the amount required for an average man per day.

Foods Which Are Rich in Carbohydrates

Sugar; honey; all grains—wheat, rye, barley, oats, rice; fresh fruits, especially bananas, grapes; dried fruits—prunes, raisins, figs, dates; breads, biscuits; macaroni; potatoes.

Ordinary table sugar should be used sparingly. It is a pure carbohydrate, and is too concentrated. If used to excess it causes catarrh of the digestive organs. All cereals or grains should be very thoroughly cooked, and they should be well masticated, as the first process in their digestion begins in the mouth. Fresh, ripe fruit is already digested, requiring only absorption, hence its refreshing qualities. Bread if baked crisp in the oven is more easily digested than otherwise.

If honey causes acidity mix with equal parts of butter.

Rice is the most digestible of all the cereals. It is said to supply the principal food for nearly one-third of the human race.

Many people are of the opinion that

potatoes contain little nourishment and cause indigestion. If potatoes are properly cooked and thoroughly masticated they will agree with most people. If in conditions of acidity they disagree, this can be remedied by using butter with the potato. They are rich in salts, which are good for the blood. They contain about 28 per cent of carbohydrate element.

Salts or Mineral Matter

These are supplied to us through fruits and vegetables. They purify the blood. Spinach is especially rich in iron. Fresh, ripe fruit or salads of some kind should be eaten every day. Vegetables do not contain much nourishment. Their value lies in the salts and water they furnish. They also serve an important purpose by giving bulk to the food.

Water

Is nature's greatest solvent. It bathes the tissues and washes away all waste matter. As the human body is about two-thirds liquid, we can readily see the importance of supplying this amount. Not only the amount obtained from our food, but about three pints should be taken daily in beverages.

Exceptions

There are conditions in which the above rules cannot be applied. The diabetic patient should use but little carbohydrate. The person suffering with Bright's disease must use proteines sparingly. Wasting diseases call for more proteine foods, others require more fat. In these cases the patient must be guided by his physician. E. M. H.

IF death catches me he'll find me busy. If I were to die to-morrow, I would plant a tree to-day.—*Stephen Girard.*

"A NEGLECTED mouth means less money in the bank and more for the dentist and physician. Money buys false teeth, but they are not good chewing tools."

The Rejuvenation of Age

By Alexander Hing

ANCIENT philosophers endeavoured to discover the elixir of life, that substance thought to be capable of indefinitely prolonging life; but their efforts were in vain. Man obeys, and in this world must always obey, the divine mandate, "Dust thou art, and unto dust shalt thou return." All who have read the beautiful elegiac lines of Gray must have been forced to acknowledge their truthfulness—

"The boast of heraldry, the pomp of power,
And all that beauty, all that wealth e'er gave,
Await alike the inevitable hour:
The paths of glory lead but to the grave."

However, among the many wonderful discoveries of the remarkable nineteenth century, at least one signal advance in the study of vital economics claims our attention. We refer to the establishment upon a scientific basis of the principles of "Fletcherism"—the thorough mastication of food; which principles have been demonstrated to augment capacity for working by increasing strength and endurance, to rejuvenate age, and to heighten efficiency.

Horace Fletcher was in the middle period of life when the subject of chewing first attracted his attention; he was forty years of age: and yet, instead of having just entered upon his very best years, as should be the case of the normal man of forty, he was comparatively an old man and rapidly on the decline. He weighed 217 pounds, which was at least fifty pounds more than the average weight for a man of his height—five feet six inches; he had an attack of influenza about every six months; he suffered with indigestion, and was afflicted with "that tired feeling." He applied for a life-insurance policy, but was refused by the examiners as being a "poor risk." And so, though only forty years of age, Horace Fletcher had neither youth nor health, without even an apparent prospect of getting them; and he

seemed to be fast on the road to become a subject of the great king of terrors.

But Fletcher determined he would live, and not die; and relinquishing his life-cherished project of residing in Japan, of which he and his wife and daughter were passionately fond, he gave himself up to the search for the golden fleece of health—to finding, somewhere in the world, a "cure" that would enable him to live.

The Principles of Fletcherism

It was to some extent accidental, though not wholly so, that Fletcher found himself upon the right track. From a healthy, vigorous friend in Southern Louisiana, who was a follower of Gladstone, the great British statesman, in the practice of chewing each mouthful of food some thirty odd times, Fletcher derived suggestions of the possibilities of arresting his decline. But it was not till some years later, in 1898, that, having tried the famous cures of the world and found them failures, he took seriously to the study of eating and its effects upon the health.

He began to experiment upon himself. "I chewed my food carefully," he says, "until I had got everything out of it that was in it and until it slipped unconsciously down my throat. When the appetite ceased, and I was thereby told I had enough, I stopped, and I had no desire to eat any more until a real appetite commanded me again. Then I again chewed carefully—eating always whatever the appetite craved."

From his investigations Fletcher developed five rules, which cover all that there is to the fundamental requisite of Fletcherism. These rules are as follows:—

"First: Wait for a true, earned appetite.

"Second: Select from the food available that which appeals most to appetite,

and in the order called for by appetite.

“Third: Get all the good taste there is in the food out of it in the mouth, and swallow only when it practically ‘swallows itself.’

“Fourth: Enjoy the good taste for all it is worth, and do not allow any depressing or diverting feeling to intrude upon the ceremony.

the more he persevered with his experiments, the more he became convinced that he had found the true source of good health.

Gaining Converts

Like all other reformers Fletcher found that he had to encounter a great deal of scepticism, prejudice, and ridicule. With him it was the old story over again of



THE RIALTO, VENICE

“Fifth: Wait, take and enjoy as much as possible; nature will do the rest.”

For five months Fletcher followed these principles, and found, at the end of that time, that “he had worked out his own salvation.” He had lost sixty pounds of his superfluous fat; his head had become clear and his body springy; he had lost the “tired feeling;” he felt better than he had for twenty years: and

unbelief to be met and overcome. Still he persisted, though “the frost became more and more repellent and benumbing.” At length, after some years, he secured his first convert in Dr. Van Someren, of Venice, Italy, who was both ill and discouraged. In three weeks after beginning the new experiments, however, the sick physician had lost all his acute ailments, and had become an enthusiastic advocate

of the new teaching. Then Dr. Van Someren wrote a paper for the British Medical Association, and Fletcher's views were thus brought under the notice of Sir Michael Foster, then Professor of Physiology at Cambridge University. The outcome was that a test of the new theories was organised by Sir Michael Foster, and conducted by Professor Francis G. Hopkins. The result was a triumph for Fletcherism, which began to attract world-wide attention.

Leading scientific men in the United States now turned their attention to the question—Dr. Bowditch, for instance, of the Harvard Medical School, the dean of American physiologists, and Professor R. H. Chittenden, of Yale University, New Haven, the leading physiological chemist in America. At the latter's instance Horace Fletcher spoke before the American Physiological Association at its annual meeting in Washington, but ineffectually, it seems, for at the close of the meeting Professor Chittenden said to him:—

"Fletcher, all the men you have met at our meeting like you immensely, personally, but no one takes much stock in your claims, even with the endorsement of the Cambridge men; the test there was insufficient to be conclusive. If, however, you will come to New Haven, and let us put you through an examination, our report will be accepted here. You will be either justified or disillusioned; and—I want to be frank with you—I think you will be disillusioned."

To Yale, New Haven, Fletcher accordingly went, and submitted to laboratory examinations, and also to tests by Dr. William G. Anderson in the university gymnasium. The results strikingly confirmed the findings of the Cambridge physiologists. Fletcher, though his muscles were untrained and below the average in size, was found to possess strength and endurance superior to the best college athletes.

Professor Chittenden now became intensely interested, and proposed an experiment on a large scale, in order to test the universality or otherwise of the

new principles. General Leonard Wood and Surgeon General O'Reilly, of the United States army, became interested, and through them President Roosevelt, and permission was given to the surgeon-general to use the War Department, including the hospital corps, in the proposed experiment.

Fletcherism Marvellously Increases Endurance

Tests in endurance, conducted by Professor Irving Fisher, of Yale, were made



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MAJOR-GENERAL LEONARD WOOD

upon college athletes, students of sedentary habits, and members of the staff of the Battle Creek Sanitarium, and all went to prove abundantly the great superiority of the Fletcherisers, and to show that wonderful results might be attained even though the adoption of the new practice did not extend over any long period of time. John H. Granger, for instance, a member of the Battle Creek Sanitarium staff and a vegetarian, performed the "deep knee-bending" test—squatting on the heels and then lifting the body to a

full height as many times as possible—more than 5,000 times consecutively, and finished fresh. Dr. Wagner, also of the sanitarium and a vegetarian, held his arms out horizontally for three hours and twenty minutes, and then stopped not because of fatigue, but because of the weariness of those who were watching the clock and counting the minutes.

On his fiftieth birthday, some years after beginning his experiments, Fletcher rode a bicycle two hundred miles on French roads, and next day, instead of being confined to his bed as might be supposed, he cycled fifty miles before breakfast.

At the age of fifty-eight, in the Yale University gymnasium, and under the observation of Dr. W. G. Anderson, Fletcher lifted on an endurance-testing machine devised by Professor Irving Fisher, 300 pounds dead weight more than 350 times with the muscles of the right leg below the knee. The record number of consecutive lifts was 175, made by one of the college athletes. Only two men had made more than 100 lifts, the lowest number was thirty-three, and the average eighty-four. Without training, therefore, Fletcher had more than doubled the world's record at this form of endurance; and at this time he was living on only two meals a day, at a cost of five-pence halfpenny per diem.

Fletcherism has been endorsed by leading scientific men in Europe and America, and more than 200,000 families, it is said, live according to its principles. Even apart from health and efficiency grounds, which are themselves of the highest importance, Fletcherism should appeal to many families in the land on account of the saving it makes in the food bill, a factor of considerable interest in these days when the cost of living is so high.

“NEVER bear more than one trouble at a time. Some people bear three sets of troubles, all they have had, all they have now, all they expect to have.”

Chew It

By Bert Atkinson

Chew your food and masticate it.
Food not chewed may damage do.
It can't be assimilated,
Swallowed down without a chew.

Chewing food is half the battle;
Why our teeth if not to chew?
Chew all well, and Indigestion
Will a stranger be to you.

Rushing, bustling; mind agoing;
Scarcely time to eat the meal.
Must do this and that at one time—
Ah! go easy! or you'll feel

Like the weary worn dyspeptic,
Reaping now what He has sown.
Do not try the whole day's duties:
Keep the moment's work its own.

“Gladstone gave”—so some one has it—
“Every mouthful thirty chews.”
One may do the same to profit;
Oh be wise; this method use.

So in quiet of mind and spirit,
Eat to make the body strong.

“Right is might,” so keep on chewing,
Or you'll certainly go wrong.

When again some food you're having,
Don't forget what you have read—
Chew and chew and chew each mouthful
Well before you go ahead.

What, and How Much Should We Eat

THERE was a time when man followed his natural inclination as regards his food, and as long as he lived under natural and healthful conditions, this was by no means the most unreliable guide, but as during the lapse of centuries, the custom and manner of living have become more and more abnormal and depraved, the desire has been created to satisfy unnatural cravings, which makes it necessary to return to the old paths, and thus through the recognition of natural law ascertain which is the best way to live, for as Cicero says, “If we take nature for our guide, we will never go astray.”

It is by this means that we have learned that albumen is an essential part of human food, and that the formation of tissue is an impossibility without albumen. This food element is found in the greatest quantities in nuts, milk, eggs, legumes, fish, and flesh, and in lesser quantities in

grains, fruits, and vegetables. In fruits the largest quantity of albumen is found in figs, dates, and bread fruit.

When, during the past century, the discovery was made that albumen was an essential element in human food, its importance was very much over-estimated by the otherwise meritorious German chemist, Liebig. It is absolutely impossible to determine by an analysis of the human body how much albumen man requires, and at that time the mistake was made of taking for granted that vitality and energy for work are derived entirely from albumen. This we now know definitely is not the case, and inasmuch as Liebig's albumen theory has to a large extent been the means of encouraging an extensive use of flesh foods, it has done much harm; but as on the other hand it has most likely been the direct cause of a closer investigation of the true relation of albumen to nutrition, this theory may also be said to have been most useful.

The following tables, the result of scientific investigation, show the separate elements, as well as the composite material which constitute the human body. It must, however, be self-evident that these figures can only be approximate, for doubtless the quantity will vary with different individuals, but it is nevertheless of special interest for us to know the quantities as discovered by scientific research.

By this we find that a man who measures sixty-seven inches in height, and who weighs one hundred and fifty pounds, consists of the following elements in the stated quantities:—

Oxygen	...	...	53,125	grams
Carbon	...	...	9,060	"
Hydrogen	...	...	7,000	"
Nitrogen	...	...	2,350	"
Calcium	...	...	1,852	"
Phosphorus	...	...	840	"
Sulphur	...	...	230	"
Chlorine	...	...	130	"
Kalium or potassium	...	...	112	"
Fluorine	...	...	110	"
Natrium or sodium	...	...	108	"
Magnesium	...	...	78	"
Iron	...	...	4	"
Silicon	...	...	1	"

Besides these, the brain tissue and the blood contain two other elements in smaller quantities; namely, the metals manganese and copper. With the exception of oxygen and nitrogen these elements are rarely found entirely separate in the body, and then only in very small quantities. They are chiefly found as composite materials in chemical combinations.

Possibly it will be interesting to the reader to note these elements in their composite condition. The human body is chiefly composed of the following combined materials in quantities as stated:—

Water	...	...	52,800	grams
Pure albumen	...	...	8,100	"
Phosphate of lime	...	...	4,260	"
Bone tissue (ossein and gluten)	...	...	2,550	"
Keratin or kerasene	...	...	2,050	"
Chondrine	...	...	735	"
Hematein (blood-colouring matter)	...	...	735	"
Carbonate of lime	...	...	520	"
Nerve tissue	...	...	410	"
Calcium fluorine	...	...	230	"
Phosphate of magnesia	...	...	220	"
Salt	...	...	220	"
Inosite and glycogen	...	...	98	"
Natron salt	...	...	70	"
Alkaline	...	...	70	"
Acid	...	...	2	"

By the study of the quantities of these different composite materials found in the body, Liebig was led to adopt the theory that the system requires much albumen, because such a large extent of the body consists of albumen, but he failed to take into consideration that the various elements absorbed in the tissue are not used up with equal rapidity, nor at the same time, and that the waste of tissue depends very much upon how far the individual concerned is well or poorly nourished.—*J. Ottosen, in Rationel Ernärning, translated for Life and Health.*

“WHEN standing by the graves of their children, the afflicted parents look upon their bereavement as a special dispensation of Providence, when by inexcusable ignorance their own course has destroyed the lives of their children.”



Memories of God's Great Out-of-Doors

By George Wharton James

MEMORY is one of the wonderful faculties of man's mind, by means of which he brings back to his present ken past stages of consciousness. He can sit, when a grey-haired old man of eighty, close his eyes, and by means of memory bring back a series of pictures that make him forget his grey hairs, his wrinkled face, his feeble steps, his dim eyes, and his imperfect digestion. He can see a beautiful woman—*one whose face was almost divine to him*—leading a tiny, curly-headed boy by the hand into the house of prayer. He feels again the loving touch of her hand upon his head as he knelt in reverence and prayed God's blessing upon him before he retired to his baby bed. He can see the loving smile in her eyes as she kissed him good night, and can smell the peculiar odour of a bunch of violets she once wore when she was going out with his papa, that proud-faced man who was always so gentle and kind to her curly-headed boy. Picture after picture comes, until at length he sees a fair maiden standing in the garden near the rose-bush. Her lips were more beautiful to him than the red of the deepest American Beauty rose, her cheek more attractive than the daintiest Gold of Ophir rose. How his heart thrilled as he felt that he

loved her and wanted to make her his wife. Then he saw her again, and this time he stood by her side before the sacred altar while the minister pronounced those words that told the world they were husband and wife.

Later pictures showed him this same dear maiden, now his wife and the mother of his child, as they lived their happy days together. Then came sad pictures of sickness and death. Yet blessed pictures, because of the love that manifested itself between them even in those hours of the long separation.

So, the old man sits, and lives again in the past, now that his bodily infirmities render it impossible to go about much in the present.

Reader, you may live to a ripe old age. Some day you may want to sit down and live over sweet memories of the past. What kind of memories are you storing in your mind, to be recalled should those quiescent days ever come to you? Recently I had a letter from a friend. It described an automobile ride through a valley that I have known for nearly thirty years. My friend had also known it that long. In the years that have elapsed, it has changed wonderfully. But let me quote from the letter itself:—

“The country is surely a land of won-

der and delight just now. I do not know that I have ever seen this valley and the surrounding hills and mountains more beautiful. The place is changing, however, as it is settled up. I used to love its broad sweep, unbroken and wild, except for grain fields and sheep-ranches, and with the quiet hazy line of hills in the far distance. It all had a charm and fascination about it that appealed very strongly, for some reason, to my growing

means a great deal in later life to have had some kinds of experiences in one's childhood."

What kind of memories are you putting into your child's life and into your own? If you are living in a city, do you spend all your time and spare cash in cheap vaudeville shows, and in gaudy, garish places; in dances and card-parties, where you and your child are storing up memories for later life? What kind of mem-



DONNER LAKE, CALIFORNIA

and uncrowded mind, and fed my imagination with all sorts of wonderful dream-like things. I do not suppose I shall ever get over the effect of those first impressions, no matter what added things, of beauty or otherwise, I may see now. It will always be to me a land of dreams, and will wear a halo of mystery. I am so glad and thankful for those wonder-filled days of freedom when I roamed the fields and a wild ravine, with a little white-and-yellow dog as my only companion. It

ories will they be? Will there be any joy or comfort in them? Why not get out into God's open air whenever you can, into the green, flower-bespangled fields and onto the side-hills; into the cool, deep, shady woods, where a babbling stream merrily flows on to the sea; by the seashore; into cool ravines, where in deep clefts here and there tiny springs trickle forth, nourishing sweet-smelling mosses and maidenhair ferns? Who could have imagined that the child, who

in after-years wrote this letter, was storing such impressions and memories, such pictures and feelings? What a rich treasure-house is a memory so stored.

Can I ever forget the first time I saw the gulls on the Great Salt Lake, in Utah, and went out to their island? It seemed there were hundreds of thousands of them. I watched them fly, rise, and fall, skim down upon the water and float there as easily as they did in the air, and I wondered where they all got food. Somehow God provided for them, for they all seemed well nourished. Equally vivid are certain pictures of great flocks of sand-hill cranes, of blue and green herons, of pelicans, and of wild swans that I have seen at different times on my trips down the Colorado River. They are pictures of wonderful sights that will remain as long as memory has its power.

Then, too, these flocks bring back to my memory the flights of the swallows that I used to watch from the window when I was a child in England. How they would gather from every direction, making the eaves and roofs of our old church their rendezvous! When, finally, all were assembled, they would start off in battalions for their winter quarters.

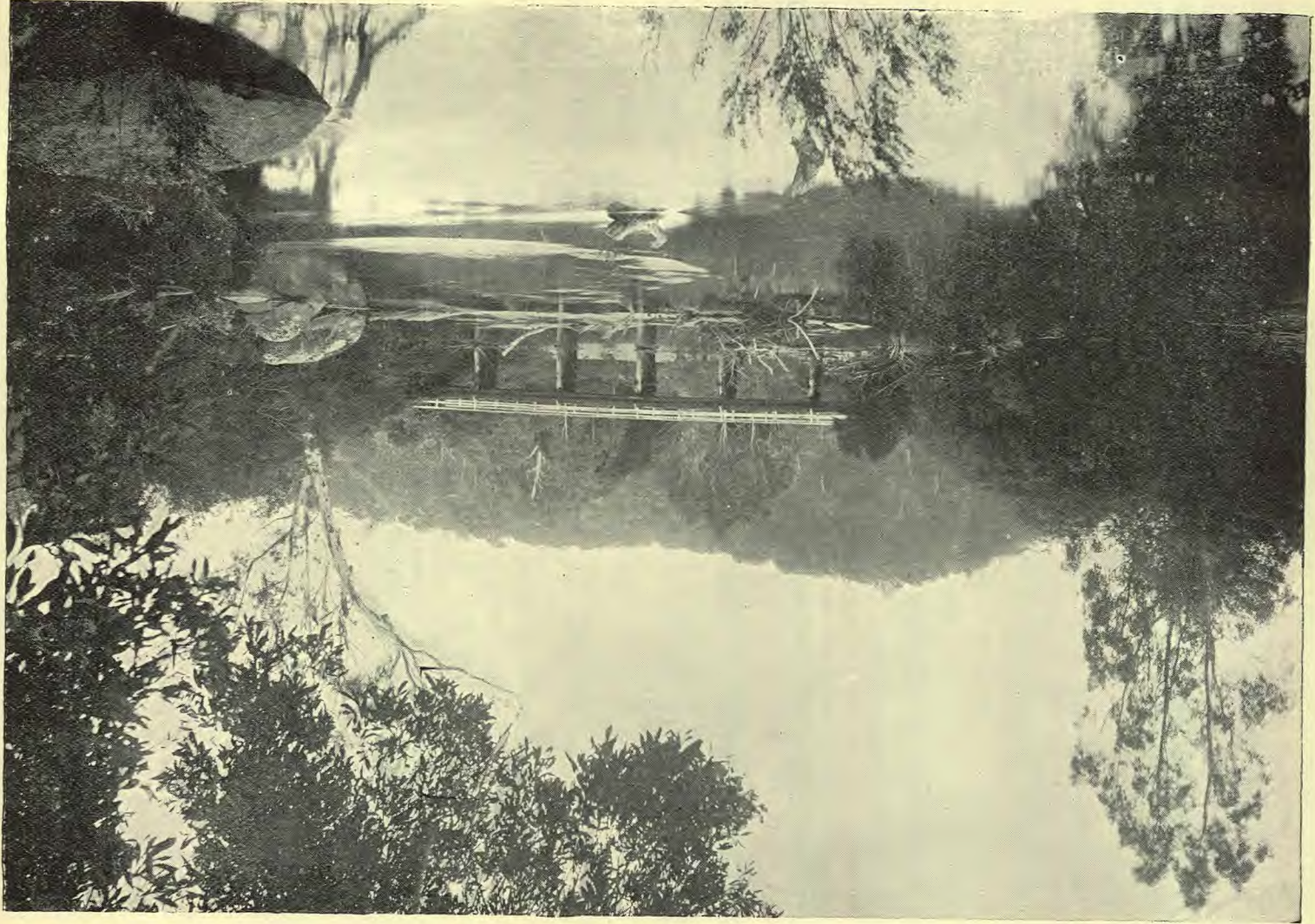
One of the vivid pictures I can never forget is of Donner Lake, nestling calmly in the heart of the eastern slope of the great Sierra Nevada range, in California. It is over thirty years since I first saw it, yet the picture is as vivid and clear to-day as ever. Two or three years later I camped by its side, swam in its waters, and then learned the terrible tragedy that gave it its name. The Donner party was one of the early immigrant parties that started for California from Illinois, three years before gold was discovered. Its originator was a well-known citizen of Springfield, Ill., James F. Reed by name, a fellow soldier with Lincoln, and a good man. Two brothers named Donner joined him, with their families, and it was from one of these, who was afterward chosen leader of the party, that it received its name. Their number was increased to over eighty long before they reached

what is now Utah. Here they met with misfortunes,—not one but many,—sad and terrible, which seemed to foreshadow the awful one that finally met them at the side of this exquisitely beautiful lake. As they neared the foot of the Sierras after crossing Nevada, and began the ascent, the fierce snows of winter began to fall, and they were ultimately hemmed in here. Provisions were scarce before they arrived, and yet the storms compelled them to remain here for several long months. The result was that half the number—over forty—died of starvation.

Among the survivors was a girl twelve years of age, now one of my most honoured and dear friends, living in San Jose, Cal. Many years ago she told me of her life at Donner, and of her rescue, and I am now writing this life for publication in book form. What must her memories of Donner Lake be? Some time ago it reached her ears that a movement was on foot to make of it a pleasure resort. She then wrote to me:—

“Donner Lake a pleasure resort! Can you understand for one moment how strange this seems to me? I must be as old as Rider Haggard’s She, since I have lived to see our papers make such a statement. It is years since I was there, yet I can feel the cold and hunger and hear the moan of the pines, those grand old trees that used to tell me when a storm was brewing, and seemed to be about the only thing there alive, for the snow could not speak. But now that the place is a pleasure resort, the moan of the pines should cease.”

It was natural that her memories should be of the sad tragedies of the place, though they were experienced sixty years before. Yet combined with these memories are two other powerful thoughts that materially alleviate them; namely, that the sufferings even of those who died are past and gone, and that the human heart is so constituted that it can live on and triumph over every tragedy that may come upon it. There is no conceivable circumstance that can compass a life about that cannot be conquered. Life is



N. J. Cairne, Photo., Melb.

NATURE'S MIRROR

given to us for this very purpose—to triumph, to conquer; for God assures us that He will *never* leave nor forsake us.

I thank God daily for memory. When two years ago an accident sent me to a hospital bed for two months, how memory came to my aid! I could not read, but I could lie and watch the pictures in the marvellous panorama of the mind. I saw the "thirty-armed silvery Trent" of my birthplace; the old church opposite which I was born; and the great cathedrals of England and Europe. I stood again before Notre Dame, in Paris; I viewed again the wonders and glories of the Mediterranean. I was bicycling through France, into the Auvergne Valley, and up the Rhine and down the Rhone. I saw sunset and sunrise on the Lakes of Killarney, and I chatted with John Ruskin in classic Oxford, Tyndall in London, Carlyle on Battersea Bridge, and Sir John Millais at the Royal Academy. Then I crossed the Atlantic, and revelled in the wild waste of ocean, and a storm which blew away sheets and masts. I recalled the first glimpse of New York, and the various cities as I first crossed the continent, of the prairies, the Rocky Mountains, Pike's Peak, the plateaus of Nevada, the Sierra Nevadas, and the lakes embowered in their sheltered heights. Very many delightful memories flooded my mind, and gave me comfort, consolation.

The thought I wish most strongly to impress upon my readers, in conclusion, is this, and to me it is one of the most important lessons of life: Enjoy to the full, now, while you are in the midst of God's beautiful out-of-doors; seize every opportunity you can to enjoy the things of nature; train yourself to see and be conscious of all the rich beauty they present, that should you at any time need to call upon your memory for occupation during a time of pain, confinement, or enforced idleness, God's great gift of remembrance may be a joy and a blessing to you, instead of a torture of emptiness and a lashing whip of remorse because of lost opportunities.

Cold on the Chest, or Bronchitis

By G. H. Heald, M.D.

THIS is an inflammation of the mucous membrane lining the air-tubes in the lungs. It often follows cold in the head, or may begin as a cold on the chest or in the throat. It is usually attributed to some exposure, the phrase "catching cold" undoubtedly perpetuating the error. It is probable that no amount of exposure of itself will cause an attack of bronchitis; but when other conditions are present—a non-resistant or susceptible organism, the presence of infectious germs in the air-passages, etc.—the exposure may be the "last straw" that does the work, and consequently it gets the blame. Perhaps nearly every one knows that sometimes a severe exposure is not followed by a cold, when at another time some trifling indiscretion brings on a severe attack.

As is the case with cold in the head, so here there is a vast difference in individual susceptibility. Some persons never suffer from "cold," no matter what they do, and others are hardly ever free from colds. In the latter case there is often a chronic condition present. In fact, the damage from the first cold is never fully repaired, and there is a weakness left which is ever afterward manifested by increased susceptibility to cold on the slightest exposure.

Among the causes of cold may be mentioned, as above, individual susceptibility, changes in weather, faulty housing, ventilation, dressing, poor general health; and after all these, which may be classed as favouring causes, we must mention the germ, which through these causes is enabled to set up the inflammation.

In the prevention of colds the most important procedure is care of the general health. Excesses or indiscretions in the matter of diet, an impoverished diet, insufficient sleep and exercise, sex indulgence, errors in clothing, insanitary surroundings, and the like—all weaken the organism, and make it less able to withstand germ enemies. To prevent colds we should avoid everything which tends to depress the

physical powers, and we should by exercise, cool bathing, and careful dietary attempt to build up the general health, and above all, should avoid exposure to those who have a cough; for while it is true that nearly every one has in his own air-passages germs which under favourable circumstances may cause a cold, the germs fresh from a patient with a cold are more virulent, and may give a foothold where a less virulent germ would not.

Remember always the two factors in a cold: the body itself and the germ.

Grapes for a Small Country Home

AFTER the apple, which needs too much room for our smaller homesteads, there is no fruit that is so indispensable as the grape. You can grow nothing else in such quantities in a small space, nor is there anything else more wholesome and food-full. It is our vegetable beefsteak.

You need not plant a vineyard unless you have room for it; but you can grow tons of grapes all over your house, all over your barns, climbing some of your trees, covering rockeries, shading arbors, and in your small garden a few vines can be tied to posts. I never yet saw a home that had not room for a grape vine. Growing on a house it does not create dampness, but will prevent dampness; only, do not nail the vine to the boards, but tie it to wires that are stapled across the side of the house. Do the same with your barn. A small family can almost live on grapes, with eggs and milk. At any rate, whatever else you leave out in your country home-making, do not leave out a full supply of grapes.

Both the setting and the trimming of grapes are simple affairs, not demanding anything like the fussing that is advised at times. Grapes will grow perfectly in good garden soil. You can plant old bones and old leather and all the rest of such stuff around the roots and also without doing any good. Keep the ground well stirred, and if you mulch continuously, I

do not know a better material than ashes—anthracite coal ashes with a mixture of common wood ashes. The trimming of grapes requires sharp cutting back, to one bud the first year; to two or three buds the second year, and after that you may train your limbs to trellises, or let them go hand over hand up the trees. In the autumn it will be quite enough for you to cut back the arms to about one or two feet, and let the canes fall to the ground. In



the spring tie them up again. Of course, your grapes that climb trees must take their own sweet will, and as a consequence will give you less perfect bunches, but plenty of them.—*E. P. Powell.*

“TALK with an abler person than you are every day, read a good poem every day, and laugh at a good joke every day.”

CULTIVATE reverence for greatness. Teach it to your children. Cultivate perception of it—the double blessing of pattern and power.—*Phillips Brooks.*



The Aim of Poetry

BY ERNEST A. ROBINSON

The golden fringe of every lowering cloud,
The beauteous forms that cold, grey mists enshroud,
The good 'neath seeming ill the Muse exalts,
And finds some grace in all apparent faults;
In every rugged, uninviting place
Some rare, peculiar beauty she can trace.
Her glowing pictures lead the duller mind
To see how lavishly has Nature lined
The rudest way with beauty, if it seeks
To listen when with gentle voice she speaks.
It is her privilege to celebrate
Heroic deeds of men; to estimate
Great lives at their true worth; in stirring song
To praise the virtues that would brook no wrong.
With her kind aid may timid lovers tell
Their passion to its object; if the spell
Avail not 'gainst an unresponsive heart,
Her solace then can blunt the erring dart.
To her enduring and inspiring page
The lofty thoughts and hopes of every age
Have been committed, that the world may learn
To love the best, and thus to virtue turn.
No phase of beauty can elude her eye,
Of lake or stream, of ocean, land, or sky,—
She paints them all, that those who cannot see
These for themselves may all possess a key
That will enable them to understand
That in all simple things is something grand.

High Prices Not All a Calamity

WE should not allow ourselves to take too one-sided a view of the present high prices of living. They are not altogether agreeable: there is no arguing that point for a moment. But they have their good side. They have brought about results that could hardly have been brought about as effectively in any other way. Many a housekeeper has been driven into her kitchen to see more closely that the high-priced foods were not spoiled by ignorant cooking. Many a woman has had to figure more closely, and thereby has learned lessons in food values and domestic economy that she would never have learned had prices been kept down. Physicians on every hand concede that people are paying more attention to their eating, to their way of living, to sanitation, to cleanliness. General health is a more vital question to-day than it ever would have been if prices of foodstuffs had not soared. Scores of people were told for years by writers and doctors that they were eating too much meat; that red meats are not so necessary to healthful living as they have been believed. But not until the prices of meats got beyond the average purse did they heed. The high prices of produce have sent thousands of men and women into their gardens to raise their own vegetables, and health has been the result for them. Many a man has by this simple process forgotten that he had indigestion, and many a woman has lost her "nerves" in the sunshine and fresh air of her vegetable garden. The higher cost of living isn't by any means all a calamity. As in all other things in life, there is no loss without its compensating gain. Those who see clearly are already beginning to realise, and thousands will also see a little later that what was at first regarded as a national calamity will yet be regarded as a national blessing. Blessings have a way of coming in disguise more often than we think. — *Edward W. Bok.*

Lime in the Home Garden

MANY kitchen gardens would be improved by the addition of lime, although the amateur seldom thinks of using it. Repeated experiments have shown the value of lime, not only to sweeten the ground, but to release certain elements of plant food in the soil, particularly potash. It tends to loosen clay soils and to stiffen sandy ones.

The most common use of lime, though, is to correct the acidity of sour soils, and is often necessary for best results when green crops are repeatedly ploughed under. A large amount is not needed as a rule. Probably two hundred pounds will prove enough for a garden of average size. It may be applied with a drill or broadcasted and harrowed in, and may be used at almost any season when convenient, although it is customary to apply it in the autumn.

There is a very simple method of ascertaining whether the soil is sour and consequently in need of lime. All drug stores sell blue litmus paper, and a few cents' worth will be enough to make a test. The paper is cut into strips and pressed into the soil when the last named is moist. If the land is sour, the paper will turn from blue to red in a few minutes.—
Homes and Gardens.

A Suggestion for the Relief of Whooping Cough

WHOOPING cough is by no means a joke, especially in winter, and where a number of children in the household are its victims.

Dr. J. M. French of Milford, and other physicians, are on record as being very sure that calcium sulphide will prevent the development of the disease. If the disease has begun, they say that it will lessen the severity of the whooping cough and shorten the case.

Calcium sulphide is to be given in quantity sufficient to give the strong smelling breath due to the drug. A half

grain four times a day, or a twelfth grain every hour, until the breath smells, will give your patient decided relief.

If the case has had no treatment of this sort, and the attacks are those characteristic of the disease, the addition of atropine sulphate, 1-500 grain morning, noon, and night, will control the spasm to a noticeable degree, while the sulphide is getting in its work.

Calcium sulphide has a wide range of application, and is worth the attention of every practitioner of medicine. You must be sure of the quality of your drug. It is hard to keep, under most conditions, unless put up in perfect pill form. It must smell "rank" when dissolved in the mouth, or when the pill is freshly broken open.—*Selected.*

Grafting a Cornea on a Blind Eye

DR MAGITOT has been engaged upon interesting work at Paris in the way of grafting of the human cornea upon the eye of a blind man. A young man of fifteen years had almost lost the sight of one eye from a burn by quick-lime, and an opaque layer covered all over the cornea so that all light was cut off from the retina. Seven months ago Dr. Magitot cut in the middle of the opaque tissue an opening of about one-fifth inch square, and then fitted in a miniature window pane in the shape of

a square piece of transparent cornea. This he had taken from the eye of another person eight days before. The tissues joined up completely about a week after, and the person thus partially recovered his sight. It is to be remarked that the piece of cornea was preserved in the living state before the grafting process according to a method similar to the one followed in America by Dr. Carrel.—*Scientific American.*

The Land Where Many Grow Old

THE German Bureau of Statistics states that Bulgaria has 3,883 centenarians. This is more than half the number in all Europe. Roumania and Servia between them have 1,677; England has but 92, and the whole German Empire but 76; while Denmark has only two. The fact that there were so many centenarians in Bulgaria was one of the causes of Professor Ilya Metchnikoff's research to find out what food they lived on; and he decided that the milk as the Bulgarians "doctor it" is largely the cause of their longevity. He recommends bonny-clabber and buttermilk also. All the drug stores have modifications of his prescription. It is highly probable that the climate, the exercise, and the pure air in the mountains have as much to do with the length of days of the Bulgarians as milk in any form.



"MOUNTAIN GRAND," WARBURTON, VICTORIA



How One Mother Reared Her Girls and Why

TRULY experience is a good teacher. One could not wish to look upon two finer girls. They are tall and well developed, and possess all the charms that rightly belong to the healthy young woman. And this heritage of health and beauty they owe to the wisdom of their experience-taught mother.

The time was when the mother herself was a young girl, fair and full of life. But unfortunately she fell a victim to the practices and customs of her day.

Just as she was entering the realm of womanhood her mother and grandmother and aunts all insisted that she must wear corsets—and to wear corsets in those days meant to “tight-lace.” They did not exactly say that her success in life depended upon her having a small and shapely waist, but they certainly implied as much. So the young girl who up to this time had enjoyed a life of freedom, fun, and frolic was now speedily transformed into a very stiff and proper young lady. At first she protested from time to time against the discomforts and limitations of her new life, but the forces allied against her were too great. What young girl could withstand the united force of her mother, grandmother, aunts, and other female relations? So at last she yielded, but with many secret longings for the freedom of her childhood days.

Months passed by, during which the many women relations were oblivious to

the changes gradually taking place in their young charge. She who had once been so full of life and health became languid and listless. Her eyes lost their sparkle and her cheeks their roses. She began to complain of frequent headaches, indigestion, and a number of other maladies to which she had hitherto been a stranger.

As time passed the young woman's condition became worse, and at last the relations, becoming alarmed, called in the family physician. The physician being a wise and discreet old man, ordered the invalid away from home—not, however, without first giving her sound advice as to her manner of living while away. Being thus escaped from that unfavourable condition at home the young woman began a struggle for life and health. But to recover the health and vigour that had been lost was an uphill task. She lived a simple, natural life, as much in the open as possible. Wholesome meals, vigorous exercise with her body untrammelled by tight clothing, and an abundance of refreshing sleep were all-important items in her daily programme. At last she began to reap the reward of her right living. Healthy blood began to bound once more through her veins, and she felt all aglow with life and energy.

It was not until she had fully regained her health that she consented to marry the man who had sought her for his wife.

For, sensible girl that she was, she determined that she would not bestow upon her children a heritage of ill-health.

Thus it happened that when the young wife rejoiced in two bonnie little daughters she carefully avoided in their rearing the mistakes that had caused her such a dear experience. As they approached womanhood, this wise mother did all in her power to guard her daughters' health.

Other girls were permitted to keep late hours, to wear the fashionable evening dress on cold nights, to wear corsets and "pinch in," to indulge in sweets and other tit-bits between meals, and to eat all manner of things at meals. But these sensible daughters of a sensible mother were encouraged to scorn all of these fashionable customs that undermine the health of women. They established a fashion of their own—the fashion of radiant health.

Health is a contagious thing, and before long these two young girls enjoyed the distinction of being the leaders of their social circle. Other girls came to envy their rugged beauty, and to inquire into the secrets of their unfailing charm. The result of these numerous confidential chats was the establishment in their town of a Girls' Health Club. All girls were eligible to membership who were willing to abide by the laws ordained by the girls themselves to govern their habits of life.

The following are some of the most important points which were observed by these young seekers after health.

1. The eating of plain, wholesome food at suitable and regular times.
2. The avoidance of tea, coffee, and other stimulants.
3. Open windows in the sleeping-room winter and summer.
4. Daily exercise in the open air, if possible to the point of perspiration.
5. The daily bath, including special attention to the teeth.
6. The wearing of becoming but healthful clothing. (Corsets discarded.)
7. The daily performance of simple bedroom exercises to develop the chest

and increase the vigour of the abdominal organs.

8. The study of suitable health literature.

9. Refusal to marry a man who uses



CONVENTIONAL STYLE OF DRESS OF OUR GRANDMOTHERS

tobacco or alcohol, or who is not *clean* physically and morally.

10. The cultivation of a cheerful disposition.

Thus it happened that through this Girls' Health Club great good came to the entire community.

The girls became so enthusiastic in their health culture that they fairly

bubbled over with life and spirit. Soon their fathers and mothers, their brothers and friends began to consider the matter seriously. If conscientiously observing a few simple laws had wrought such wonders for the girls, might it not accomplish as much for them? Certainly it was worth trying.

The final outcome of the matter was a vigorous health campaign in the town.

Moral Education in the Home

THE importance of moral education, especially that phase known as "sex hygiene," is becoming obvious, says *Good Health*, London, especially in the last decade. In Germany this subject has been taught for some time to graduating classes, with such satisfactory results that it is now recommended that instruction



AN OUT-DOOR CONFERENCE OF THE GIRLS' HEALTH CLUB

The citizens asked for cleaner streets, a purer water supply, a better sewerage system, inspection of the food supplies, medical inspection of factories and public schools.

They were willing to pay their share toward these improvements, but they insisted upon having them, and they got them.

E. S. R.

"LUXURY destroys every class or nation that practises it. Nothing fails like success; it kills off families more surely than any oppression that falls short of slavery."—Dean Inge.

in sex hygiene shall be a part of the regular curriculum of the elementary schools.

In Switzerland the teaching of sex hygiene is official in the high schools. In a certain congress where there were nineteen papers read, the concensus of opinion was that the proper place for sex education is in the homes. As soon as a child's curiosity is aroused to ask a question regarding its nature and origin, it should be truthfully and carefully answered; but the instruction should be graded, and as the child grows older should be supplemented by instruction in the school and by the family physician.

The Sure Way to Teach Nature Study to a Child

By Frances G. Wickes

HAVE you ever thought what your sensations would be if you should suddenly be dropped into a foreign land, among a strange and alien people whose manners and customs were quite unknown to you, and should be expected to take your place quietly as one of their number? It would be alarming, wouldn't it? Yet to a greater or less degree this is the situation which confronts your Tommy when he enters school, unless you have been preparing him somewhat for this new world. Even then the adjustment is hard. In the home world he was the centre of a universe, now he is merely one of many. The old order has passed away, he must adapt himself to the new; and every familiar thing that he finds in this new world makes the transition period so much easier. It is a simpler problem for the mother than it was a few years ago, for the school has come halfway, or more than halfway. Teachers everywhere are studying the child as an individual, and are trying to cultivate his individual qualities of independence, self-respect, original research, and natural enjoyment.

It is because of this desire to cultivate the child himself that nature study has taken so large a place in many of our schools, especially in city schools: not formal nature study, but the type that takes a child outdoors to observe, to think, and to do; that gives him something of his own to care for, and stimulates his imagination through natural beauty and story, and his mind and body through investigating and acting for himself. This is one of the present school problems, but for its best solution the mother must lay the foundation for the school work.

Two Things for Mothers to Remember

Mothers are afraid of "educational movements." They hesitate because they

have not time for courses of study. But you don't need that here. Don't bother your head with books on "lesson plans" and "early outlines." They are the dry husks. All you need is the living kernel, the spirit; the rest comes with the doing.

Remember two things: First, you yourself must respect all life and love all beauty. Second, you cannot begin too early to lay the foundations of this love and respect in the heart and mind of your child. From the moment baby can smell a rose, grasp a fragrant blossom in his chubby hand, or cuddle "kitty, kitty," he is old enough to begin nature study. He can be taught to stroke pussy and make her purr, to pat the big dog and hail him as a friend, and to put a flower in water for a drink. A flower enjoyed for a moment and then thrown carelessly aside to wither is a positive injury to a child. Remember, he is storing up impressions long before he can express himself. What you do carelessly and impulsively will make the same impression upon him as your most carefully planned act. Anything that arouses his attention leaves its imprint on the growing brain, and you cannot make the most perfectly planned lessons annul the imprint made by your daily acts. Be careful, therefore, in showing your likes and dislikes, your affections and aversions.

In all these relations teach love, not fear. Most fears are bred, not born. A child does not shrink from a spider, a caterpillar, or a snake until an aversion has been bred in him. Fear is a highly contagious disease and one to which a child is especially susceptible. Guard well your own fears, then; do not show aversion to things harmless simply because you do not happen to like them. There are, of course, some types of fear traceable to inherited instinct. They manifest themselves in children under favourable conditions as easily as do the instincts of

affection or self-preservation, but only under favourable conditions. They are a heritage from the dark ages, like the instincts of cruelty; they are dormant and often remain so throughout life; or, if awakened, may frequently be inhibited almost at their birth by getting the child into normal relations and arousing in him right interests.

For example, I knew a small boy in whom no dread of the dark had been bred. One night he had a bad dream and tumbled out of bed to find "mother." In his bewilderment he took the wrong direction, and before his mother, who was still downstairs, could reach him, fear of the unknown had descended upon him, and terror of the darkness had him in its grip. It was very real and all the more awful for its unreasoning suddenness. At last he fell asleep comforted and reassured, but the next night he was afraid of the dark. His mother did not argue nor reason. Instead, she moved his little bed close to the window, and, pulling up the curtain, showed the stars and the lady moon in the wonderful vault of heaven. Together they studied the beauty of the night till terror had given place to delighted interest. After this it was simple: a few minutes' talk as the bedclothes were being tucked in, a star story or verse, the bed left in its station by the window—and night terrors ceased. The stars, beautiful and kindly, were guardians of the dark. Nor did the fear return on cloudy nights, for by then it was a forgotten bugaboo; and instead of the stars there was the wind that sang songs around the house and gathered the clouds that there might be rain to-morrow to water the garden.

Let Love Come First, Knowledge Afterward

All this is the broad foundation of nature study—the love of the wide, wide world with its wind and its clouds, its sun and its rain, its stars and silvery moon. In childhood much of the appeal comes through the imagination, a linking of this world with the land of story and fancy. Let the story hour come sometimes at sunset,

watch with the child as the glory floods the sky, but don't talk too much about it; be content to let the impression come gradually. Watch the white clouds—"the white sheep on the blue hill;" listen for the different songs of the wind and the murmur of the leaves as they dance; be glad for the red of the opening peach buds and the softness of the pussy willow.

Be content with God's sequence. Let love come first, knowledge afterward. A child loves his human mother long before he analyses her motives and acts of sacrifice. Why should he not begin by just loving his Mother Earth? If you implant interest, courage, affection, and capacity to enjoy, it will not be long before they lead to observation, questioning and experimental investigation. Then give your assistance in the field of knowledge and follow the inclination of the child.

This brings me to another phase of nature study: the live world. Dearest of all to the heart of a child is the world of life, and especially that bit which is his to watch and care for. Every child should have a garden and a pet—even if the garden is in a small box and the pet is a tadpole in a tumbler.

Consider the garden first: For best interest start with something comparatively easy to grow. A first success inspires to further effort, while initial failure may add indifference to disappointment. Of course many of the best lessons of gardening are learned through repeated failures, but for a beginning don't make the odds too great. Decide carefully on your place for the garden. If you have no ground outdoors you must, at least, have some windows. Choose one where the "garden" may remain, and where you will not mind if a little water is slopped over when the plant has its daily attention from the owner—a playroom, or, if mother is also the maid, a kitchen window is often better than one in the living-room or dining-room. Some sun each day is the only absolute requisite.

In the spring begin a real garden, if you have any plot of ground no matter

how tiny, in front yard or back. Window boxes are a poor substitute, lacking both in interest-arousing and health-giving properties; yet they are better than nothing. Let the child help select his own plot, and discuss with him the favourable situations as to sun, wind, exposure, etc. When the plot is selected the tools must be provided. A small rake, hoe, spade,



A Youthful Gardener

or shovel, and a watering-pot are needed. These the child must care for himself and put in their proper place after every garden hour; they must not be allowed to rust. Examine the tools carefully when you buy them. They may be cheap, but they must be strong.

The tools and plot having been selected, proceed to the selection of the seeds. In this be ready with help and suggestion, but don't dictate. Remember this is the child's property. Encourage a vegetable garden by all means, and, whatever is planted, have enough to supply the family for at least one meal. This must be either the spontaneous gift of the owner or a purchase from him. It must not be taken as a right. Rhubarb, lettuce, onions, and carrots are all comparatively easy to raise, and are all things that a child himself can eat. Radishes grow well, but are indigestible.

The child must do his own work in the garden. This is much easier to accomplish if several children have gardens near together; or, failing this, if the father or mother should enter the competition the work will be doubly valuable.

Whatever the Child Plants is His Own

Don't attempt too much at once. Spading, planting, watering, and weeding mean work—wholesome work, but tiring; and it is better to have a few well-cared-for vegetables and a plant or two that reach blossoming, rather than a large, half-cared-for garden, or one that has to be abandoned because of too hard work. But the cardinal rule for parents is: Whatever the child plants, remember it is his own.

Charles had planted a lettuce patch. He worked faithfully until the lettuce was heading well. Then, one day, just before the luncheon hour, the unexpected guest arrived and the expected grocer did not. Mother, hurried and worried, ran into the garden and pulled several of the finest heads of lettuce for a salad. When Charles came home and saw the gap in his neat row of lettuce he was furious. Temper was his besetting sin, and this time it had full sway. Mother, mortified and indignant, punished him for impertinence and selfishness; and she and her guest talked long



Every Child should have a Garden

of how hard it is to teach children self-control.

Well, who really first lacked self-control, I wonder? If Charles had robbed a neighbouring orchard, or had cut up his father's new harness to make reins for his goat carriage, the temper of the father or of the neighbour would have been "righteous indignation." Children usually love to contribute their share to a "party."

If Charles's mother had waited until his return, even though it made luncheon a few moments late, Charles would proudly have given those heads of lettuce for the feast, and would thereby have added to his garden gains a little knowledge of the joy of hospitality. Instead, he nursed a very real injury. His rights had been disregarded and his property taken from him.

Unwittingly Charles's mother had robbed him of something far greater than the mere fruit of his labours. She had taken from him his respect for the rights of others. The garden had worked to do him harm. So never forget the sacredness of ownership; strengthen the boy's pride in his own property.

It is on this pride and respect that civilisation is based; through this we develop the type of selfishness which is later the foundation of unselfishness. First comes our work to own, to build up, to improve, and to cultivate. Then comes the sharing of our own with others, which is the only true giving.

If the child starts out from the home with habits of industry, independent thought, quickness of interest and courage of heart and brain, have we not given him a fair start in the new school world?—*Ladies' Home Journal*.

Feeding the Baby

The Care of the Bottle

FROM the day of my baby's birth I had feared that she might have to be a bottle baby. So fearful was I that, before my nurse left, I had her tell me explicitly how to care for bottles, and these directions I wrote in my notebook. "Sterilising," "pasteurising," "bottles *absolutely* clean—no germs," "nipples in borax water"—she used these terms commonly; it seemed so difficult, this task of bottle-feeding. The nurse told me that it was. That nothing but eternal vigilance and the greatest care could healthfully make bottles take a mother's place.

When baby was four months old the

worst had happened: bottles had become a necessity! That first preparation of modified milk—shall I ever forget it? I had bought eight nursing bottles with nipples, a jug that held two quarts, a box of sugar of milk, and some limewater, and, with this outfit and the formula my physician had given me, I prepared the milk with his help:—

Bottles washed with bottle brush in hot borax water, then rinsed and boiled.



Nipples ditto; put in covered glass when boiled.

Small new granite kettle for sole purpose of boiling water for baby.

I purchased certified milk from a dairy which made a specialty of milk for babies. This milk had the cream well risen, and, removing the first ounce with a teaspoon, I then used my cream dipper to dip the remaining necessary ounces of cream, putting it in the jug with the milk sugar, boiled water, and plain milk, mixing all

together. Each bottle was then filled; stoppered with absorbent cotton, and "pasteurised," which was done in this way: a high granite kettle was half filled with boiling water, the bottles quickly placed in this to remain thirty minutes, then set in ice water to chill rapidly. In this way enough food for a day was prepared at one time, and had only to be warmed when needed. As each bottle was emptied it was immediately rinsed, then filled with water and put aside for the next morning's washing. The nipple was at once put in borax water.

After this first preparation I drew a long breath; with my doctor to give me a new formula every month I felt that I could overcome the dangers of bottles. But worse was yet to come. Baby refused to take a bottle! For one whole week we struggled with her, trying her at each feeding, day and night. She cried until she could cry no more, until she was hoarse. Bottles were a necessity; what was to be done? She was losing weight daily. The doctor was called in at the end of the week. I was shut out of the nursery, and by main strength he forced her to take the bottle! A simple expedient would have prevented all this.

Had she from birth been given drinks of water daily from a bottle there would have been no trouble. No mother can tell how soon it may happen that her baby will have to become a bottle baby; and this hint ought never to be forgotten. —*Lola D. Wangner, in Ladies' Home Journal.*

The Child and His English

NOTHING is picked up so readily by children as language, and if they lack words it is because they have not heard them. Nobody should ever under any circumstances talk down to a child. The best of English is none too good for the smallest person. The fear that he will not understand is an insult to his intelligence and an injury to his development. How did he get the words he does know? How if not by hearing them? He will get every word in his mother's vocabulary in precisely the same way if she is thoughtful enough to give him the chance. And give it to him she should before she sends him off to school; and give it to him she would if she knew what a help it would be to him.—*Selected.*





Harmless Pain-Killers

IT is so easy, if one has a pain, to send into the chemist's shop for one of the many pain remedies which are certain to be kept in stock. These remedies are popular because they are easy to obtain, pleasant to take, and so effective in relieving pain. And are they not guaranteed to be quite safe and harmless?—Yes, unfortunately, they are.

We say *unfortunately* for two reasons. The first is that this statement which is *guaranteed* is untrue; the second, that being untrue, the people are led to marked carelessness in the use of drugs which are dangerous except when administered under the personal observation of a physician.

The majority of patent pain-killers contain either opium in some form, or one of the carbon compounds as phenacetin, acetanilid, or antipyrin.

The dangerous nature of opium is well known, but most people know nothing of phenacetin, acetanilid, and antipyrin. While these drugs are all effective in relieving pain, they have a depressing or weakening effect upon the heart and nervous system. Disturbed breathing, a feeble and irregular pulse, vomiting, profound prostration and collapse sometimes follow the taking of even ordinary medicinal doses of these drugs. A standard authority in speaking of antipyrin says:

“Many deaths have been caused by this drug; it has been stated that during one epidemic of influenza in Vienna seventeen persons were killed by it.”

While these drugs are regarded by physicians as powerful remedies that should be prescribed only by physicians and administered only under their supervision, they are used indiscriminately in the preparation of patent pain remedies.

It has been ascertained by the scientists commissioned by the government to investigate the nature and ingredients of patent medicines and nostrums that the various headache powders and pain-remedies contain large and varying doses of the dangerous drugs just mentioned. For example, the analysis of one popular and well-known headache remedy revealed the fact that the individual powders contained acetanilid in amounts varying from four and one-half to eleven grains. This particular drug is ordinarily prescribed by physicians in doses varying from two to five grains—yet these so-called harmless headache powders which are sold indiscriminately to an unsuspecting public contain as high as eleven grains of this dangerous drug to a powder.

The analysis of other much advertised pain remedies might be given, but the example mentioned may be taken as a type of this class of remedies.

The intelligent person who desires to guard his life and health will certainly refuse to take any nerve medicines or pain remedies which are not prescribed for him by his physician.



Fomentation Cloth

There are, however, a number of simple and effective measures for the relief of pain which may be safely employed by anyone. These measures are effective, because in a majority of cases they remove the cause of

the pain. One of the most useful of these measures is the fomentation or hot compress well known to many of our readers. The fomentations consist of a flannel usually a yard square, wrung dry from boiling water and enclosed in a dry flannel. This is placed over the painful area, the wet flannel being wrung again from boiling water as soon as it cools slightly. To wring the flannel without burning the hands, fold it several times lengthwise, then grasp the ends with the hands, dipping the middle portion into the boiling water. The fomentation, either alone or suitably combined with cold compresses, and the hot foot bath, may be employed in the relief of many painful conditions. A few illustrative conditions are given below.



Wringing Fomentation Cloth

Headache

For *headache* due to congestion or fullness of blood in the head apply very cold

compresses to the head, face, and neck, a large hot fomentation to the abdomen and a hot foot bath. Continue the treatment for ten or fifteen minutes. The hot applications lessen the blood in the head by drawing a large amount of blood into the legs and abdomen, while the cold compresses to the head, neck, and face lessen the flow of blood to these parts.

Toothache

For *toothache* due to inflammation of the gum, apply a very cold compress to the side of the neck, and at the same time a hot fomentation to the affected side of the face.



Applying Fomentation

Neuralgia

Neuralgia of the face or any other part is usually best relieved by very hot applications to the affected part, as fomentations or the hot water bottle. In some cases the pain is more promptly relieved by cold treatments. Cold compresses frequently changed, or the ice bag may be used for fairly long periods, until the acute symptoms begin to subside, after which, alternate hot and cold compresses may be applied.

Earache

Earache may often be relieved by a hot foot and leg bath and fomentations over the affected ear and the side of the head. If there is an abscess in the ear the patient should, if possible, be under the care of a doctor.

Pleurisy

The pain of *pleurisy* is best relieved by prolonged hot applications, as the fomentation, hot water-bottle, or hot poultices. Cold applications usually increase the pain in acute pleurisy.

Gall-Stone and Kidney-Stone Colic

A person suffering from either of these conditions should certainly be under the care of a physician, but as the pain is often intense and the doctor's arrival sometimes delayed, it is well that something be done to alleviate the patient's suffering. Very large hot fomentations may be applied to the abdomen, covering as large an area as possible, or, better still, the patient may be given a hot trunk pack. The trunk pack consists of a large piece



Placing in Dry Cloth

of blanket flannel wrung from hot water and wrapped right around the body. It should reach from the armpits to well below the hips. Several dry blankets should then be wrapped round the patient, these being well tucked in around the shoulders and legs. Two or three hot bottles may be slipped in next to the wet flannel to maintain the heat of the pack for some time or until the pain is relieved. The feet should be warmed by means of a hot bottle or a hot foot bath. If there is a bath in the home and some means of heating water quickly, a full hot bath will be quite as effective and perhaps easier to administer successfully. The patient's head and neck should be kept cool by means of cold compresses applied during the bath. The bath may be continued from five to ten minutes, or even a little longer, provided the head is kept cool and the bath is not excessively hot (about 105° to 107° or 108° F).

Rheumatic Fever

In this disease the inflamed joints are usually extremely painful. This pain may, in many cases, be relieved by hot fomentations, the treatment being repeated two or three times a day. In case

the elbows, knees, and other joints in the limbs are affected, the fomentations should be wrapped right round the painful part. The application must be very hot and of fairly long duration (from fifteen to thirty minutes) in order to accomplish the desired results. Some patients find the use of prolonged and very cold applications more effective in alleviating the pain. Iced compresses, or, better still, the ice bag should be applied to the inflamed joints.

Sprains

Very cold compresses may also be applied to a sprained joint during the first few hours after the injury. Later on alternate hot and cold applications may be made several times in the day. This treatment greatly lessens the swelling and inflammation in the injured joint.

One has only to try these simple measures to realise that they are quite as effective and much more safe than the patent pain remedies so largely employed at the present time.

E. S. R.

Cuts

THE cut made by the surgeon should always be kept absolutely free from germs; if infection occurs, we



Applying Compress

know that someone has blundered. Accidental cuts, on the other hand, are almost invariably infected.

The germs of disease are everywhere; no matter how small the cut may be, or how brief its exposure to the air, germs are almost certain to enter. If an acci-



Cold Compress

dental cut is to heal quickly and well, all germs must be carefully removed at the first dressing.

When we consider how many are the ways in which a cut may become infected, we can understand why such precautions are necessary. Infection is often introduced by the very implement that makes the wound. Only surgeons use sterilised instruments; a knife or a pair of scissors, or a piece of glass or crockery is almost certain to plant germs in the furrow it ploughs. Germs may also enter from the clothing, from the hands of whoever rushes to help, from the first piece of cloth or handkerchief used to stanch the flow of blood, or from the water used for the first washing.

Since the avenues of danger are so numerous, it is safest to assume that infection has occurred. It follows that every family should understand some of the simplest methods of sterilisation. Heat is the simplest of all. The mother of a family should keep a supply of soft linen rags that have been thoroughly boiled. She should keep them not on an open shelf with towels or other cloths, but done up in a carefully closed, oiled paper bag, or protected from the air in some other equally effective way. For washing the wound, she should use only

water that has been boiled. When the doctor comes he will add some kind of chemical antiseptis, and it will be proved once more that a clean cut can do nothing but heal.—*Youth's Companion*.

Hiccough

OF all the modified respiratory movements hiccough is the only one which does not to some extent, at least, come under the control of the will. Hiccough is caused by a sudden and quick contraction of the diaphragm, the chief muscle of breathing. At the same time the larynx closes so that the air produces a characteristic sound when entering the narrowed opening. Most attacks of hiccough are due to indiscretions with both diet and drink, such as rapid eating, and usually are readily relieved, causing but little disturbance. Occasionally hiccough becomes painful and difficult to get rid of. In the case of an adult, holding the breath quietly a sufficient length of time will usually bring speedy relief. Sipping cold water slowly is another simple remedy. In persistent cases the application of fomentations or even cold compresses to the stomach affords relief.

—A. B. Olsen, M.D.





THE CHILDREN'S HOUR

Home Life of Birds

SHARP, ringing cries of alarm, then of terror, coming from a pair of robins one summer's morning, caused me to drop my work suddenly, dash out of doors, and follow the sound through the garden, across the lane to a meadow where a vagrant cat, with a now-or-never desperation, made a leap through the grass even as I approached, and, before my very eyes, snapped up a baby robin in its cruel jaws. With as frantic a leap upon the cat, I quickly pried its jaws apart and released the limp and apparently dead bird. Three other young robins, which had fallen out of the same nest in the cherry tree when a heavy thunder shower weakened its mud-plastered walls the night before, were squatting dejectedly on the ground, unable to fly. So I gathered them up in my arms, too, lest they fall a certain prey to the cat, and deposited the little family in an improvised flannel nest on a sunny upper balcony.

One might have supposed that the parents would find them here, within fifty yards of their cherry-tree home, and come to feed them. Strangely enough, the old

birds' cries of distress were the last sign from either of them in the neighbourhood. Did they flee the place in despair, thinking their babies foully murdered by the cat and me? After waiting in vain for some response from them to the incessant, insistent *cheep, cheep*, from the balcony nursery, I could resist the cries of hunger no longer. Even the baby which had been literally snatched from the jaws of death had now recovered from his fright, not having received so much as a scratch, and was clamouring for food as loudly as the others, jerking himself upright with every *cheep*, as if stamping both feet with impatience at delay.

A Sixteen-Hour Working Day

From that hour my preconceived ideas of bird life were radically changed. Once I had shared the popular notion of birds as rather idle creatures of pleasure, singing to pass the time away, free from every care while they flew aimlessly about in the sunshine, fed from the abundant hand of nature. But bringing up those four feathered waifs taught me that birds doubtless work as hard for their living as

any creatures on earth. At about four o'clock every morning sharp, hungry cries from the balcony wakened me. Perhaps it was because I was only a step-mother that I refused to go out on the lawn then in search of early worms. Another nap was more agreeably purchased by stuffing each little crop full of the yolk of hard boiled egg and baked potato mashed into a soft paste, the lumps washed down with a tiny trickle of fresh water from a stylographic pen-dropper. Such gaping yellow caverns as were stretched aloft to be filled while the little birds trembled with excitement, jostled one another and scrambled for first turn! Every hour regularly throughout the long day those imperious babies had to be satisfied. Ants' eggs from the bird store, a taste of mocking-bird food mixed with potato and an occasional cherry or strawberry agreed with the little gourmands perfectly. A small boy, who was subsidised to dig earth-worms for them, called the bargain off after one day's effort to supply their demand. Sixty worms had not been sufficient for creatures which eat at least

completely enslaved; all other interests were forgotten; not for anything would I have gone beyond their call. But real motherly joy in them came when their pin feathers fluffed out, their legs became stout enough to climb and hop over the



A full crop distended his speckled, thrush-like vest

wistaria vine on the balcony, stubby little tails fanned out pertly and full crops distended their speckled, thrush-like vests. When, after about two weeks spent on and around the balcony, the last of the quartette spread his strong wings and flew off to the strawberry patch to pick up his own living thenceforth, I realised as never before why the alert, military-looking, red-breasted robin of the spring becomes more and more faded and dejected as summer advances, and the joyous song of courting days diminishes until it ceases altogether after the father has helped his mate raise two broods. Yet with my utmost care I had probably not done half for those fledglings that their parents would have done.

What It Means to Rear a Brood

In a state of nature, what would a pair of robins do for their family? After the building of the nest—of itself no small labour—there follow fourteen long weary days and nights of confinement upon the eggs before they hatch. Thenceforth on the average of every fifteen minutes daily from dawn till dark both parents visit the



A thunderstorm weakened its mud-plastered walls

their weight of food every twenty-four hours.

Doubtless they were spoiled babies from the first. At any rate they had me

nest, usually bringing in their bills food which they often travel far and work hard to find—earthworms, grasshoppers, locusts, beetles, the larvæ of insects, choke cherries, or other small fruits to be crammed with sharp but painless thrusts into the ever hungry mouths. The second an old bird alights on the home branch, up spring the little heads, every one agape, like Jacks-in-the-box. In their loving zeal, the parents themselves often forget to eat. After every feeding, the nest must be inspected and cleaned, the excreta being either swallowed or carried away. Then the fledglings are picked over lest lice irritate their tender skins. Very many young birds die from this common pest of the nests, especially those whose cradles are lined with chicken feathers, which are nearly always infested.

Birds, like all wild creatures, live in a constant state of fear, but parenthood develops courage amazingly, just as it develops all the virtues. When climbing cats, snakes, small boys, hawks, owls, crows, and other foes do not threaten the baby robins' safety, either heavy rains, high winds, or fierce sunshine may require the patient little mother to brood over her treasures. Before they are a week old their education begins. On the eleventh day, if all goes well, it is usually the mother who utters low endearing baby talk, coaxing the little fellows to hop out of the nest and about it. Coming near an ambitious youngster she stands, but does not deliver a tempting morsel held just beyond his bill. Luring him with it farther and farther away, hopping and flying from branch to branch, she tantalises the hungry baby, perhaps, but she educates him with no loss of time. When finally the young are able to trip lightly, swiftly over the grass after their parents, have learned to cock their heads to one side and listen with the intentness of veterans for the stirring of worms beneath the sod, to capture their own food and fly swiftly out of the presence of danger, their education is considered complete. The remainder they must acquire by ex-

perience, for even now their parents may be repairing the old nest or building a new one to receive a second brood.—*Neltje Blanchan.*

How Animals Dress Themselves

By Uncle Herman

WHEN you see your pet pussy rubbing her rough tongue over her furry coat, of course you know she is having her daily wash. But pussy cats are not the only animals that like to look clean and nice. Nearly all dumb animals take a pride in at least some portion of their body, just as some people are very particular about wearing nice hats or smart shoes, or having their hair well brushed and neatly arranged.

Don't think that when an animal wakes up in the morning it is ready at once for work or play. Most animals would no more think of beginning a day without washing and dressing themselves, than any of the boys and girls who read this would think of going to school without a clean face, tidy hair, neat dress, and shiny shoes.

Of course, animals do not have to put on jackets and hats and shoes and stockings as we do, but they like to have a bath, smooth their fur or arrange their feathers as the case might be. And most animals are not at all satisfied until they have done this.

Not only do these dumb creatures spend hours dressing themselves, but, like ourselves, many of them prefer to do it when nobody is watching them, and where they can be quite private. Some are very shy indeed, and will seek the loneliest spots in the morning in order to make their toilet. ☞☞

Have you noticed how smart and smooth and pretty most birds look? They are as neat and prim as any members of the animal world. A great many birds will have their bath at least once a day. "Some birds use water, and some dust, and others use both water and dirt." Those birds who like a full bath every

day are rather particular about the kind of water they use.

You surely must have noticed that your pet canary will not take its plunge unless the water in his bath-tub is perfectly clean. Neither will he take his bath if anyone is watching him. He cannot bear to be watched while he is bathing, especially by strangers. After his morning dip he will arrange his feathers and then eat his breakfast.

What a good example he is to those careless, lazy people who, though they are strong and well, form the habit of having their breakfast in bed before even washing or dressing!

The swiftly-flying swallow and the martin do not take a bath every day. Do you know why? Because they will use nothing but fresh rain-water, and of course during the dry weather they cannot get it; so they are obliged to put off their bath until the rain comes and gives them a supply of soft water.

I am sure you will all agree with me that the swallow and the martin have very good taste, for there is nothing so soothing and refreshing as plenty of fresh rain-water to wash in.

Even tame ducks seem very fond of rain water. When a shower falls they ruffle up their feathers so that the rain can soak in. Then like the rest of the bird family they smooth down their feathers with the help of some oil which our all-wise Heavenly Father has provided them with.

Now you may be surprised, but even wild ducks that live by the salt sea will take long journeys over the land in order to get fresh water.

Some birds, as we have seen, wash in the earth or dust. "But," you ask, "can they clean themselves by taking a dirt

bath?" Oh, yes, and when they have finished shuffling backwards in the earth and shaking the dirt all over their bodies until their feathers are full of it, then shaking it all out again, they are as fresh and clean as any boy or girl who comes out of the bath. Now you understand why your next-door neighbour's chickens often make a hole in the ground and scatter the dust all round them. Larks, sparrows, and partridges, as well as chickens, all clean themselves in this way. Members of the cat family, we are told, such as lions, tigers, and leopards, and



The swallows find a good place for a morning bath

many others, spend more time in washing and dressing themselves than those of any other tribe.

Perhaps, too, you have often noticed a horse and a cow in a field together, licking each other in turn; and no doubt you have thought that they were just greeting each other in a friendly way. But the truth is they were helping each other to wash. Even dumb animals teach us lessons of kindness and thoughtfulness and how we ought to help one another.

Many animals of the forest, such as the tall giraffe, the deer, and the antelope, help one another to wash; also the larger insects, ants, and bees help to bathe one another. The wasp, however, has to wash herself. No matter how dirty a wasp may get, no other wasp will come to her aid. "A naturalist once smeared

the wings and body of a wasp and a bee with honey and then set them both free. Other bees at once came to the aid of their sister: but although others of her kind were flying about near her, the poor wasp was left alone in her misery."

We are apt to think that rats and mice are rather dirty little animals; but they are not, at any rate so far as their own bodies are concerned. They take almost as much pains in washing and brushing themselves as cats.

Now I am sure the great and wise God who made all these creatures wishes every boy and girl and every man and woman to learn from them lessons of neatness, tidiness, and cleanliness. Cleanliness brings comfort, health, and happiness. Some say it is next to godliness. At any rate it is very important to form clean habits. But of course it is very much more important to see that we are clean inside as well as out. If we pray to the Lord as King David did, and say to our Heavenly Father, "Create in me a clean heart, O God," He will gladly do it if we let Him into our hearts.

The Value of a Smile

TWO boys answered an advertisement the other day, applying for a job in one of the big newspaper offices of the country; that is, the choice simmered down to the two; and the manager didn't know which one to choose. Each was neat-looking and bright, each seemed to have plenty of brains and to know how to use them; but finally the manager turned to them and said, solemnly:—

"I guess I'll set you to work shovelling coal, and whichever gets the most done by noon will get the job!"

At this, one of the boys looked glum, as if shovelling coal didn't appeal to him much; but the other smiled all over his face, and replied:—

"All right, sir! Hard or soft coal?"

"You have it!" said the manager. "Take off your coat right now!"

When two boys are about equal in every way, the fellow that smiles is bound to get the job every time. There's nothing like a smile to make the work fly; not a silly, meaningless kind of grin, but an honest, cheerful smile that makes every one around you feel good. Don't you know lots of fellows like that yourself?

A smile has a whole lot of value, however, besides its value while you are at work. You can't smile to order; it ought to come natural, be spontaneous: and this kind of smile works in two directions. When you start out in the morning feeling as if you could turn the earth over and play ball with it, you get through the day well; the more you smile at difficulties' the easier they seem. That is one way it works on you; the more cheerful you are, the better you feel, every time.

The other way is on everybody around you. I met a messenger boy in the street yesterday whom I knew, and he gave me a smile about a foot wide—a regular "Good morning!" kind of smile, full of cheeriness and good will. Why, I remembered that smile all day, and I forgot all about having troubles of my own. That's the way it works on other people.

The boy who smiles, who isn't afraid of spoiling his good looks by a little good humour, is the boy who will win out in the end. People are always willing to help along a chap who looks sunny; but they haven't any time to waste on a gloomy-looking fellow, one who seldom smiles.

It pays you better every way to smile. Did you ever know a really popular boy who couldn't smile, and didn't understand a joke? It is good humour that makes the sportsman, too; look at the baseball players in the big league. The men who can't take a joke, who fight the umpire, whose coaching is "mean" instead of funny, are the ones who are disliked everywhere they go; it is the cheerful, jolly players who are the popular ones.

Smile! It won't hurt your looks a bit, fellows! If you have a dog, try it on him; even dogs like boys that smile. Try it, if you don't believe me; smile!—S. E. Kiser, in *Boys' World*.

Carl's Gift

Is there some little boy who wants to make a gift for his mother?

This is what one little boy did. Carl's mother is very fond of plants, and when she needed to tie a plant to a stick, because its stalk was not strong enough to hold it up straight, she used to go into the wood-shed and get an old shingle, and split off a piece with the carving-knife. This gave Carl his idea.

He got a piece of soft wood, and split it carefully into slender sticks, some a foot long, some longer, and a few very long for tall plants.

With his pen-knife he sharpened one end to a long point, so that it would go into the ground easily, and rounded off all the corners the whole length of the stick as well as he could with his knife.

Then his patient little fingers rubbed each stick with sand-paper until every splinter was gone and the sticks as smooth as glass.

When they were all done, Carl sorted the sticks into three little bundles, according to their length, wrapped each bundle in white tissue-paper, and tied a bright ribbon round it.

All through the year his mother said that no present she had was more useful or gave her greater pleasure than her plant sticks.—*Alice M. Farrington.*

My Little Hero

EARTH'S bravest and truest heroes
Fight with an unseen foe,
And win a victory grander
Than you or I can know.
We little dream of the conflict
Fought in each human soul,
And earth knows not of her heroes
Upon God's honour roll.

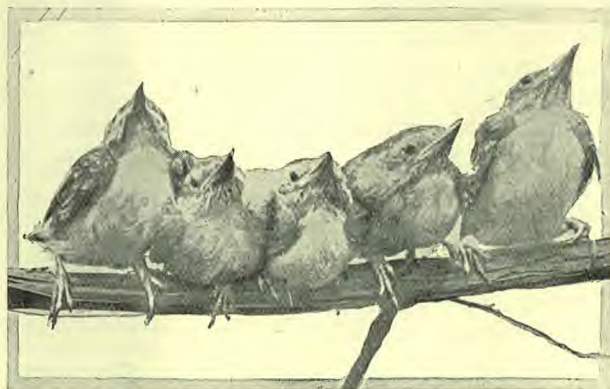
One of earth's little heroes
Right proud am I to know;
His name for me is Mother,
My name for him is Joe.
At thought of a ten-year-old hero
Perhaps have many smiled;
But a battle-field's a battle-field
In the heart of man or child.

There were plans of mischief brewing;
I saw, but gave no sign;
For I wanted to test the mettle
Of this little knight of mine.
"Of course you must come and help us,
For we all depend on Joe,"
The boys said; and I waited
For his answer—yes, or no.

He stood and thought for a moment;
I read his heart like a book:
For the battle that he was fighting
Was told in his earnest look,
Then to his waiting playmates
Outspoke my loyal knight:
"No, boys; I cannot go with you,
For I know it wouldn't be right."

How proud was I of my hero
As I knelt by his little bed,
And gave him the bedtime kisses,
And the good-night words were said!
True to his Lord and manhood
May he stand in the world's fierce fight,
And shun each unwonted action,
Because it "wouldn't be right."

—*Eben E. Rexford, in the Christian Union.*





Potato Cookery

THE Food and Cookery Publishing Agency, London, has recently published a cookery book dealing only with the potato. This book, the title of which is "Potato Cookery," contains recipes for no less than three hundred ways of preparing and cooking potatoes.

We take the liberty of quoting the following paragraphs from the author's preface to this most interesting and useful cookery book:—

"It has often been asserted by the highest authorities that the woman who can cook a 'potato to perfection' can cook anything. It would thus seem that there are so many potato cooks gifted with the knowledge to prepare and cook potatoes for the table, no special manual would be required. I am, however, aware that this knowledge in many cases is limited to only about half a dozen varieties of cooking potatoes; indeed I fear there are a good many who only know but two or three ways.

"Realising that this common vegetable, the potato, which was once regarded as a luxury, has now become our cheapest and most used vegetable, a manual which gives directions for its preparation for table in three hundred ways, will be both welcome and appreciated.

"Although opinions differ somewhat as to the dietetic value of the potato, the fact remains that it appears upon the family board in some form or another at least twice a day, and in some households

oftener. Indeed, we know that among the poor, in certain parts, the potato often forms the staple food.

"The potato is, as I have said, known as a common vegetable, cheap and plentiful at all times, but we must not forget that the common things of every-day life are often the most precious, and perhaps for that reason the most despised; such may, I think, be justly said about the potato. There are probably few other foodstuffs so persistently badly cooked as the potato. Its preparation is unfortunately looked upon by some cooks as so elementary a science and art of cookery, that it seems to be felt less of a discredit to him or her to cook it badly than to own to ignorance concerning it. This to my mind is a deplorable error, for a little consideration will convince anyone that the proper preparation and cooking of the potato forms the most important branch of vegetable cookery."

From the three hundred recipes, we cull the following:—

Boiled Potatoes.—Wash and scrub the potatoes in plenty of water to remove the mould. Place them in a saucepan and cover with cold water; add salt to taste, and allow to boil, keeping the lid on. After the water has come to the boil, leave it simmer for half an hour. When the potatoes are cooked, which can be tested with a fork or skewer, drain them well, turning the saucepan upside down, and using the cover to keep in the vegetables. Then shake them over the fire for a few minutes to ensure their being perfectly dry. They should never be left in water after they are cooked, and must not be allowed to boil too quickly.

If the potatoes are of good quality, they should be white and mealy, and will peel quite easily. In order

to have them all evenly cooked, the potatoes should be of even size and be well covered over with the water.

Steamed Potatoes.—The usual way of cooking is by steaming. For this purpose a utensil called a steamer is employed; its construction is very simple, and it well answers the purpose. It consists of a kind of boiler made of cast iron, provided with a large handle; into this part of the steamer boiling water is poured. Fitting into the top of this boiler is placed another very similar, the difference being that it is perforated with numerous holes. The steamer is placed over a good fire, the steam collects and passes through the little holes into the upper part of the steamer containing the potatoes which cook in the steam. For steaming, potatoes can be left in their skins or else peeled. They are first sprinkled with salt before cooking.

Steamed Potatoes (Ancient Method).—In former times the steamer was not used to cook potatoes; they were steamed by the following method: The potatoes, in their skins, were placed in an earthenware or cast-iron saucepan at the bottom of which was a little water, then sprinkled over with salt, and covered over with a damp cloth, the saucepan being tightly closed. By this method potatoes were steamed.

Great care must be taken in always keeping sufficient water in the saucepan to produce the steam, so as to prevent the vegetables from burning.

New Potatoes.—When potatoes are quite new, they are never peeled. The peel is removed by scraping the potato lightly with the blade of the knife. When the potatoes are getting old it is better to steam them, then remove the skins after they are cooked. They can either be served with a sauce, butter, or else cream. In England a sprig of green mint is generally added to the water when boiling new potatoes.

Potatoes in Their Jackets.—This refers to potatoes cooked in their skins; whether they are steamed, baked in hot ashes, or in the oven. They are served, eaten with fresh butter and a little salt. When potatoes are cooked in their jackets in the oven, it is most important that the skins should be pricked, otherwise very mealy potatoes are liable to burst. It often happens when they are shaken about when hot, or even sometimes when they are quite lightly pressed with the hand. The steam collects under the skin, and the hot potato-pulp bursts out like a bomb in all directions, causing often serious burns on the face and hands of the one who takes them out of the oven. The same thing occurs in baking chestnuts, when they are not pricked before cooking.

A Few Recipes for Vegetarian Cookery

By Mrs E. G. Fulton.

Lentil Fritters.—Lentils, 1 cup; rich milk, $\frac{1}{4}$ cup; egg, 1; butter, 1 tablespoonful; flour, $\frac{3}{4}$ cup.

Cook lentils until tender, drain, press through a colander, add the milk, butter, flour, salt, and beaten yolk. Mix thoroughly and add the stiffly-beaten white. Drop in spoonfuls on oiled girdle, and brown on both sides, or bake in the oven. Garnish with parsley, and serve with marmalade or apple sauce.

Walnut Lentil Patties.—Cooked lentils, 2 cups; eggs, 2; chopped walnuts $\frac{3}{4}$ cup; granola, or breadcrumbs.

Rub the lentils through a colander and add the chopped walnut meats, one egg, and a pinch of salt. Thicken with breadcrumbs or granola. Form into patties, roll in egg and buttered crumbs, and bake. Serve with gravy.

Lentil Patties on Macaroni.—Lentils, 1 cup; eggs, 2; chopped parsley, 1 teaspoonful; minced onion, 2 tablespoonfuls; olive oil, 2 tablespoonfuls; bread-crumbs.

Cook the lentils until tender and put through a colander. To this pulp add the rest of the ingredients, using sufficient breadcrumbs to make stiff enough to form into patties. Dip the patties in egg and crumbs. Brown in the oven. Serve on a platter with creamed macaroni.

Rice Mould.—Rice, 1 cup; milk, $\frac{1}{2}$ cup; lemon or vanilla flavouring; egg, 1; sugar, 2 tablespoonfuls; stewed fruit.

Wash clean and boil the rice in two quarts of water until done. Drain off the water well. Add, while hot, a custard made of the egg, milk, and sugar. Flavour with lemon or vanilla. Form into moulds, and serve with stewed prunes, peaches, or any other kind of fruit.

Rice and Banana Compote.—Rice, $\frac{3}{4}$ cup; milk, 3 cups; vanilla; bananas, 6; sugar.

Bring the milk to a boil, thicken with flour, and add sugar to taste. Simmer the bananas in this sauce for half an hour. Add vanilla.

Rice for bananas: Cook the rice in two and one-fourth cups of water in a double boiler till done. The rice should be soft and each grain standing out separate when done. Make a layer of the rice, and serve the bananas on it.

Rice and Egg Scramble.—Rice, 2 cups; eggs, 4; milk, 4 cups.

Thoroughly wash the rice and boil in salted water until tender, and drain. Scramble the eggs in the milk, add salt when nearly done, mix with the rice, and serve hot.

Macaroni with Tomato.—Stewed tomatoes, 2 cups; butter, 2 tablespoonfuls; hard-boiled eggs, grated or rubbed through a colander, 1 cup; salt; vegetable stock, 2 cups; macaroni, 2 cups.

Boil the macaroni till tender, drain, and add the stock and tomatoes not strained (they should be put on a sieve and allowed to drain, as the stock will afford sufficient liquid), but chopped, and there should not be enough of them to allow the tomato taste to predominate. Now add to this the hard-boiled eggs, grated or rubbed through a colander. Mix all together, and add a little salt. Pour into a baking-pan about four inches deep, and bake until the mixture is thick.

Vegetarian Hamburger Steak.—Protose, 1 pound; sage, $\frac{1}{2}$ teaspoonful; eggs, 2; nuttolene, $\frac{1}{2}$ pound; grated onion, 1 tablespoonful; granose biscuits powdered fine, 2.

Mix thoroughly, form into patties, and fry. Serve with tomato sauce.

Vegetarian Sausage.—Boiled rice, 3 cups; grated onion, 6 teaspoonfuls; protose, 1 pound; salt, $1\frac{1}{2}$ teaspoonfuls; oil, 3 tablespoonfuls; sage, 6 teaspoonfuls; egg, 1.

Form into patties, and roll in gluten or browned flour, and bake in a frying-pan. If browned in the oven, put a small piece of butter on top of each.

Chats with the Doctor

[Send questions for this department to the Editor, LIFE AND HEALTH, Warburton, Victoria.]

NOTICE.—Subscribers sending questions to this department should invariably give their full name and address, not for publication, but in order that the Editor may reply by personal letter if he so desires. Because of this omission several questions have not been answered.

70.—Bright's Disease; Vegetables; Fasting; Enema or Purgatives.—Are the following vegetables harmful or helpful: Parsnips, turnips, artichokes, pumpkin, carrots, and all green vegetables?

Ans.—The vegetables enumerated by you, namely, parsnips, turnips, artichokes, and carrots are too coarse for one whose digestion is not strong. Pumpkin is more easily digested, so also are many green vegetables. None of these vegetables if well digested are harmful in Bright's disease.

Ques.—Do you consider fasting advisable in this complaint?

Ans.—Fasting is not to be recommended in the treatment of Bright's disease as the end to be attained is not starvation, but merely the avoidance of highly nitrogenous foods, such as flesh foods for instance, which greatly overtax the kidneys.

Ques.—One of the strictest instructions I have is to keep the bowels in activity. To do this, which do you consider best, purgatives or enema?

Ans.—Regular action of the bowels is essential, as elimination of poisons through this avenue is encouraged. The skin also should be kept active, and poisons eliminated through the lungs by the practice of deep breathing of pure air.

As to which is best, purgatives or the enema, both are helpful or harmful according to how they are employed. A small dose of sodium sulphate, say, from thirty to sixty grains in a half glass of hot water may be taken on rising. The enema, too, may be employed once or twice weekly as required.

71. Conjunctivitis.—What treatment would you recommend for sore eyes? They water frequently, and night and morning are most troublesome. I can't read or sew after tea, and they keep continually pricking until I go to bed, and in the morning they discharge very much, it being some time before I can get the use of them properly. They don't trouble me very much in the day, except the lids seem to keep clicking like something that wants oiling.

Ans.—The proper treatment for this is thorough repeated washing with cold water to which salt in the proportion of a teaspoonful to a pint has been added. Add the salt before the water is boiled. The eyes should be thoroughly washed by allowing the solution to flow through them, and the washing should be done both morning and night, and once or twice during the day if possible. At night when you have retired you may drop into the eyes the following lotion:—

Boric acid, 20 grains
Zinc Sulphate, 2 grains
Boiled water, 4 ounces

In addition to using this lotion you would do well to apply a little ointment to the edges of the lids. Plain boiled vaseline is useful for this purpose.

After a week of this treatment you may leave off the zinc and boric acid, continuing simply with the cold salt water. After a week or two continue the zinc and boric acid treatment again.

72. Kidney Trouble.—"I would be very pleased to know the best thing for kidney trouble. I suffer much at times. I take nitre sometimes with good effect; at other times no good in the least."

Ans.—The best remedy for kidney trouble is free water drinking between meals. Water stimulates the kidneys and helps them in the performance of their work. The juices of fruits are also

beneficial. You should by no means take nitre. A quick and efficient way of stimulating the kidneys is by means of the hot saline enema. This should be preceded by a cleansing enema, after which a pint of warm water containing a level teaspoonful of salt is introduced into the bowel and permitted to remain and be absorbed. This water acts upon the kidneys, causing free secretion of fluid and poisons which are present in the blood when the kidneys are inactive. Another simple method of stimulating the kidneys is by means of hot and cold applications across the back over the kidneys. You should take no tea and but little meat. Your diet should also include an abundant supply of fruits and fruit juices.

73. Thread Worms.—"How can I effectively get rid of thread worms and prevent them troubling me again? They cause me a lot of trouble, restless nights, and all kinds of dreams."

Ans.—To get rid of thread worms take daily an enema composed of two or three pints of water containing one tablespoonful of salt to each pint. Continue this treatment for about ten days, taking a small dose of salts each morning during this time to secure free action of the bowels.

Your diet during this time should consist largely of fresh ripe fruits with moderate amounts of toasted cereal foods such as granose biscuits.

74. Pain in the Back and Side; Flatulence; Irritating Cough.—"I have lately become a subscriber to LIFE AND HEALTH, am interested in your column, and will be pleased to have your advice. I have lately been troubled with pain across the lower part of the back in the hips, and sometimes in the groin on the left side, which seems to make me very tired and weak. I sleep and eat fairly well, but am always troubled more or less with the

belching up of wind no matter what I eat. This at times causes a great deal of pain in the stomach."

Ans.—The pain in the back and side from which you suffer may be wholly accounted for by the indigestion from which you evidently suffer, or it may be due to some other ailment of perhaps a more serious nature, such, for example, as chronic appendicitis. You ought really to undergo a thorough examination by a competent physician. You may have some pelvic ailment. These ills and others must be thought of, though as already suggested indigestion may be responsible for all your symptoms. I would advise you to give careful attention to your diet. Relieve the pain with fomentations, hot sitz baths, and douches, and secure a daily free action of the bowels. Report results from this treatment, or go shortly to your medical attendant to be thoroughly examined.

Ques.—"My husband is always troubled with a short, dry, irritating cough. He often gets a cold in the head, but I think the trouble does not go beyond the throat, as he has very good health otherwise. This little cough is of long standing. Is there anything to allay the irritation?"

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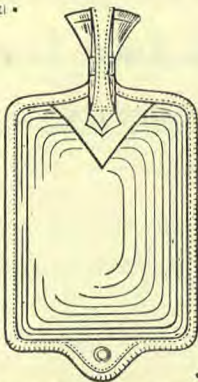
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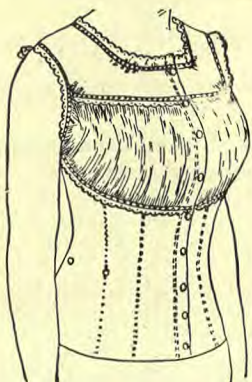
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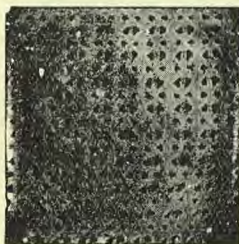


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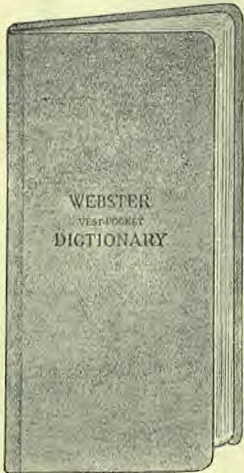
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