

1125-259
Opinions on the Health Story Reader from distinguished Medical Officers.

I. FROM THE HON. COL. HENDLEY, I.M.S.,

Sanitary Commissioner, Punjab.

"Your Health Story Reader should I think be of the utmost use for teaching the elementary principles of hygiene in Indian School. You have I consider, succeeded in giving the essentials while the story remains connected and interesting. The illustrations add to the value of the book."

II. FROM LT.-COL. S. A. HARRISS, M.B., I.M.S.,

Sanitary Commissioner, United Provinces, Superintendent-General of Vaccination, and Special Malaria Officer.

The book is well suited for children of school-going age. Urdu and Hindi translations will suit the lower classes in the vernacular department of Government, Aided, and other schools.

Most of the important diseases and the precautionary and preventive measures together with other useful information on the subject of Hygiene, have been dealt with in story form.

The language is easy and the illustrations—e. g., a properly constructed well; a sweetmeat stall, and plates showing the different kinds of bacteria—are well designed to impress the subject of hygiene and its importance on young minds.

III. FROM LT.-COL. JENNINGS, M.D., I.M.S.,

P. M. O. Sixth Division, Poona.

"I was very much interested in your little book and congratulate you on the idea and the result, and am certain it will prove very interesting as well as entertaining. There is no doubt that the best way of impressing scientific truths on the young mind is by imparting them in an interesting manner and nothing can beat the narrative form."

HEALTH STORY READER

MACMILLAN AND CO., LIMITED

LONDON • BOMBAY • CALCUTTA

MELBOURNE

THE MACMILLAN COMPANY

NEW YORK • BOSTON • CHICAGO

DALLAS • SAN FRANCISCO

THE MACMILLAN CO. OF CANADA, LTD.

TORONTO

HEALTH STORY READER

BY

E. MARSDEN, B.A.

INDIAN EDUCATIONAL SERVICE (RETIRED)

WITH NUMEROUS ILLUSTRATIONS

MACMILLAN AND CO., LIMITED
ST. MARTIN'S STREET, LONDON

1916

COPYRIGHT.

GLASGOW: PRINTED AT THE UNIVERSITY PRESS
BY ROBERT MACLEHOSE AND CO. LTD.

NOTE

THE 'HEALTH STORY READER' has been written, more or less, on the lines of an excellent little Health Primer compiled by Major Perry of the I.M.S. for the Punjab Educational Department, and may be used as a continuation of that book, of which it may be regarded as a supplement. The style, the wording, and even the narrative, are, however, very different, so that it may also be used independently. The 'Health Primer' does not deal with temperance in eating and drinking, and this is the main subject of the 'Story Reader.' It contains the substance of the official syllabus of the Lessons on Temperance for Schools by the Board of Education in England. In issuing this syllabus, the Board lays down the rule that "instruction in the elementary rules of personal health should be included in the curriculum of every school," and observes that "the subject should be dealt with, as far as possible, by question and answer." It is on this principle that the 'Health Story Reader' has been written. The last lesson is mainly a reproduction of a 'Catechism of Hygiene for use in Elementary Schools,' issued by the Madras Government.

E R R A T A.

- P. 43, line 24 and p. 45, line 4, *for Health read Plenty*
P. 76, lines 30 and 32, *for heart read lungs.*
P. 101, line 9, *for Diwan's read Doctor's.*
P. 101, line 20, *for Prince read Diwan.*
P. 101, line 21, *for three hours read one hour.*

CONTENTS

CHAP.	PAGE
1. DARBAR OF THE RAJAH OF THE LAND OF PLENTY -	1
2. THE PRINCE VISITS THE COUNTRY OF HEALTH -	6
3. THE PRINCE DRIVES ROUND THE CITY OF HEALTH AND VISITS THE MEDICAL COLLEGE - - -	11
4. THE PRINCE VISITS THE MEDICAL COLLEGE AGAIN -	17
5. THE PRINCE VISITS THE HOSPITAL - - - -	22
6. THE PRINCE RETURNS TO HIS OWN COUNTRY - -	28
7. ARRIVAL OF THE DOCTOR - - - - -	33
8. THE DOCTOR TAKES LEAVE OF THE RAJAH AND HIS COURT - - - - -	37
9. THE DOCTOR RETURNS TO THE LAND OF PLENTY -	41
10. THE DOCTOR ATTENDS THE DARBAR. THE TREASURER GETS DRUNK - - - - -	51
11. TEMPERANCE, OR THE STORY OF CYRUS THE GREAT -	58
12. THE DIFFERENT KINDS OF FOOD - - - -	65
13. WHY WE EAT AND DRINK - - - - -	72
14. EAT SLOWLY - - - - -	78
15. ALCOHOL A POISON - - - - -	83
16. STORIES OF ALEXANDER THE GREAT - - -	87
17. EVILS OF STRONG DRINK - - - - -	91
18. THE BOYS ARE EXAMINED IN THE DARBAR - -	101

HEALTH STORY READER.

1. Darbar of the Rajah of the Land of Plenty.



DARBAR OF THE RAJAH.

THERE was once a Rajah who ruled over a large country which was known as the Land of Plenty. It was a fair and fertile country, watered by many rivers. The rainfall was good, the climate was pleasant, the crops scarcely ever failed ; on the green pastures grazed large herds of cattle and great flocks of sheep and goats, for the grass of that land was good. The Rajah ruled

his realm wisely and well, and he had skilful and prudent councillors and officers to help him. The raiyats were well off, many of them were rich and all of them loved their Rajah and obeyed his orders cheerfully. His forefathers had ruled the land for hundreds of years, and not one of that long line of kings had ruled badly or oppressed his subjects.

But shortly before the time to which this story relates, trouble came upon the land. Plague broke out in some of the villages and cholera visited others. Reports kept coming in of numerous deaths from malarial fever and consumption ; and small-pox seemed to be spreading from town to town. Day after day, from week to week, the heart of the good Rajah was grieved as his Secretary read to him one report after another of the state of the country. He pondered over the matter deeply and anxiously, but saw no remedy for the evils which had arisen. At last he determined to call together his chief officers and ask their advice. "In the multitude of councillors," he thought to himself, "there is safety." He summoned the members of his council of state to a darbar. To it came the Diwan or Prime Minister, the Treasurer, the Chief Secretary, the Chief Judge, the Court Vakil, the Registrar, the General of the army, and many more. The Prince, who was the eldest son of the Rajah and the heir-apparent, was there too.

As each councillor came in, he made his salaam to the Rajah and sat down in his usual place. The Chief Secretary then read out to the council the latest reports that had reached his office. When this had been done, the Rajah said, "You have all heard, my friends, the reports that have reached us, of the terrible ravages

that plague and small-pox and fever and cholera have caused in our country. Can nothing be done to root out these dreadful diseases? If this goes on, very few people will be left alive: soon we shall be all dead men. I have called you together to ask you for your advice."

When the Rajah had said this, there was much talk in the darbar. After a while the General, who was a Muhammadan, stood up. Stroking his beard he observed, "I do not see what we can do. This is our fate. If we are to die, we shall die; if we are to live, we shall live. We are in the hands of God." When the Registrar heard this, he jumped up. "I do not agree with you," he exclaimed. "I too am a Musalman, but I believe that it is our duty to save our own lives, if we can, and not yield to despair. God helps those who help themselves. If an enemy were to invade our country, would you, sir, sit down with folded hands and say, 'If we are to die, we shall die?' No! everyone knows that you are a brave and gallant soldier! You would fight the foe with all your might. You would fight for your country and your king. These diseases are enemies. It is our duty to fight them and drive them out of our country if we can." With these words the Registrar sat down, and all the other councillors cried, "Well said! Well said!" Then the Diwan stood up. "No doubt we ought to drive these diseases out of our country," he said, "and with the help of God, we will do so. But the question now is, How are we to do this, what means are we to adopt? This is what the Rajah wants to know. Can anyone here advise us how to act?"

By chance a merchant was present. He was the brother of the Registrar and had come to court with him, to pay his respects to the Rajah. He was a wise old man who had visited many countries in the course of his life, for he was a very busy trader. This merchant stood up and said, "If the Rajah grant me leave to speak, I will say a word or two, although I am not a councillor. If I have done wrong in making this request, I beg to be pardoned." "Pray give us your advice," replied the Rajah, graciously. "You need not ask for pardon. We shall be only too pleased to hear anything you may have to say. The country is, as you know, in dire straits. I hope you can tell us what to do in this time of trouble and distress."

"In the course of my travels," said the old merchant, "I once visited a land which is very much like this country of ours. It had the same soil and the same climate. The same crops grew there that grow here, and there is very much the same rainfall. But what struck me most was that the people were strong and healthy, and there were many old men seventy and eighty years of age, still hale and hearty. No one ever seemed to get ill. Such diseases as plague and cholera, small-pox and malarial fever seemed to be unknown."

"What is the name of that land?" asked the Rajah, "and tell me, does no one ever die there?"

"That country," replied the merchant, "is known as the Country of Health. Men die, it is true, but they die a natural death when they have grown old and grey. As a ripe fruit falls from a tree, so the men and the women in the Country of Health fall asleep, as it were,

and pass peacefully and painlessly away from the land of the living, after they have reached the full age up to which man may live on this earth."

"Tell us," exclaimed the Diwan, "how it is that the people there are so healthy. The country, you say, is in every way like our country. How is it that the diseases, which are killing so many of us, are unknown there ? "

"The reason is," replied the merchant, "that the people, in the Country of Health, observe certain rules of health which they have found out and follow very carefully. Their ruler is a mighty Maharajah who is celebrated for his wisdom, and he has around him many wise and learned men. Among them there are Doctors of medicine and skilful Surgeons who have studied diseases all their lives, and learned how to cure them and how to prevent them. They get their medicines from every country in the world, and whenever anyone in any other country discovers any new medicine or remedy or any new way of curing a disease, these doctors find out all about it and introduce it into their own country. They have made their rules of health the laws of the land, so that everyone must observe and follow them. This indeed the people of the country do of their own accord, cheerfully and gladly, for they know how good these rules are and how they preserve them in health. My humble advice to the Rajah is this. Send the Prince with some officers to the Court of the Maharajah of the Country of Health with a letter, asking him to lend us, for a time, the services of one of the best of his Doctors, so that he may tell us what to do and what rules and laws we ought to make to save our country from disease

and death." Having said this, the merchant salaamed to the Rajah and sat down behind his brother the Registrar.

The advice seemed so good that the Rajah and his Council at once resolved to follow it. The Prince was delighted to have the opportunity of visiting the Country of Health. No time was lost, and the very next day the Prince and his retinue set out. With them went the old merchant, to show them the way, for he was an experienced traveller and knew what the best roads were, and what arrangements to make for the comfort of the Prince and his officers.

2. The Prince Visits the Country of Health.

IN due time the Prince reached the Country of Health. The Maharajah held his court at his capital, which was called the City of Health ; and to that city the Prince now travelled. He found that all that the merchant had told him was quite true. There were no signs of sickness or disease anywhere. The people all looked strong and well. Among them were many old men who had reached the age of sixty, seventy and eighty years, but were still healthy and active.

As he went through the country from town to town and from village to village, he was welcomed everywhere, for the people were polite and well-mannered and were glad to hear that a foreign prince was paying a visit to their Maharajah. The merchant, indeed, was well-known to them, for he had often been that way before.

Wherever he went, he talked to them about the object of the visit and praised their laws and customs and admired their country. The Prince was struck with the cleanness of the villages, the purity of the water that was brought to him to drink, and the absence of bad smells and flies in the bazaars. The towns through which he passed had wide roads which were well kept, there was scarcely any dust in the streets, for they were well watered and swept; the houses were lofty and well built, no dirt could be seen anywhere. He himself felt better than he did in his own country, for the air that he breathed was pure and seemed to give him new strength and vigour.

At last he came to the City of Health in which the great Maharajah dwelt. While he was still at some distance, a number of the officials of the court met him and greeted him, for swift runners had taken the tidings of his visit on to the capital before him and the Maharajah had made all arrangements to welcome his distinguished visitor. He had prepared a suite of rooms in his palace for the residence of the Prince during his stay.

On his arrival at the Palace, the Maharajah greeted him warmly. "I am very glad to see you," he said. "I have often heard of your country, the Land of Plenty, and of the Rajah, your good father. All men praise his wisdom and his justice. Consider yourself to be my son while you are here. The longer you stay, the better I shall be pleased. It is now late, and you have come from far. The Contrroller of my household is in waiting, to show you the rooms in which you are to stay. He will attend upon you every day and make all arrangements for your comfort. I have summoned

the chief officers of my court to a darbar at noon tomorrow, that I may introduce them to you. Perhaps you will now like to retire, to refresh yourself and to rest." The Prince then took leave of his kind host



THE PRINCE PRESENTS THE LETTER FROM HIS FATHER TO THE
MAHARAJAH.

and retired to his apartments, where he found everything so comfortable that he felt as if he were at home.

The next day, at noon, he attended the darbar that was held in his honour. The Maharajah was seated in state on the *gadi* or throne, with his sword across his knees as the custom of that country was. The Prince advanced to the carpet in front of the throne and made

three low salaams. Behind him was his Secretary, who did the same. Then he presented his father's letter to the Maharajah and asked him to accept the two elephants which he had brought with him as presents from his father. They were standing outside, as you may see in the picture, laden with valuable gifts of various kinds, shawls and jewels and other costly articles.

The Maharajah graciously accepted the presents and directed his Chief Secretary to read the letter aloud. When this had been done, he said, "I will gladly help your worthy father, the Rajah of the Land of Plenty, in this matter. I and my officers are all deeply grieved to hear of the evils that have befallen your country. The very same diseases, which are afflicting your people, once prevailed everywhere in this country too, in the time of my great grandfather. But that wise monarch, whose memory is revered all through my dominions, took such wise steps to better the health of his people that even in his time there was a very great improvement. My grandfather carried on the good work, and these diseases nearly 'all disappeared. In fact, the country became so healthy that our visitors from other lands were astonished and called it *The Country of Health*, and by this name, as you are aware, it is now known everywhere. In the reign of my father, the various rules that had, from time to time, been made for the cure and prevention of diseases were given the force of laws, and these laws are very popular. No one objects to them, for everyone knows how needful they are. One of these laws, of which you will hear a good deal, is that which makes *vaccination* compulsory. In consequence of this law, no one has died from small-

pox for many years, whereas that dreadful disease formerly killed thousands of people and blinded and disfigured thousands more. We are always sending to other countries and finding out new ways of curing or preventing various diseases. Before the days of my great-grandfather, no one had ever heard of vaccination.



DR. E. JENNER.

One of our doctors went all over the world to find out whether there was any cure for small-pox. He went to England, and there he heard that a wise and skilful doctor had discovered how to stamp out small-pox completely. He was Doctor Jenner, and his method was called *Vaccination*.

Our doctor studied this method very carefully, and when he came back to us it was introduced everywhere.”

The Maharajah than introduced the Prince to the chief nobles and officers of the state. When this ceremony was over, he summoned before him three of his most skilful doctors, who were in waiting. “These gentlemen,” he said to the Prince, “will conduct you over the large hospitals in this city and the medical college and schools, that you may see for yourself how we treat those who are ill, and how we prepare medicines

and train young men to be doctors. They will also describe to you more fully what we do to keep the country healthy. They will attend upon you whenever you please."

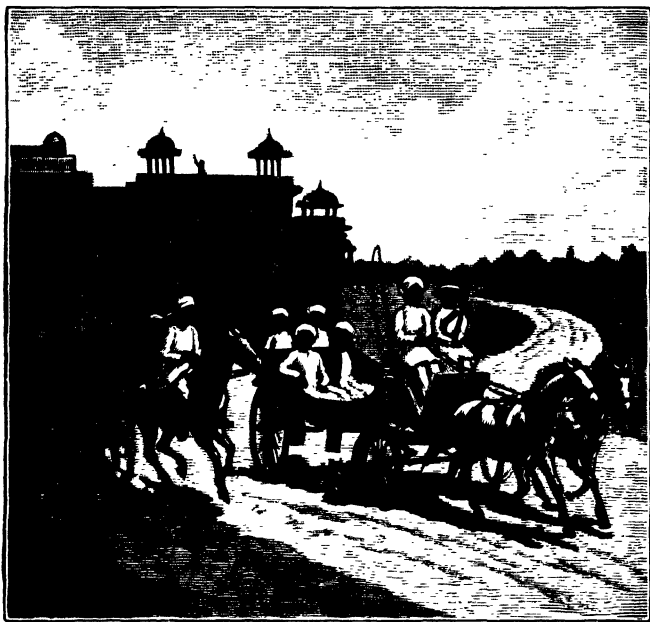
The Prince then thanked the Maharajah for his kindness, and the darbar broke up.

3. The Prince Drives Round the City of Health and visits the Medical College.

THE Prince spent quite a fortnight in the City of Health. The chief doctor drove him round everywhere in a large 'carriage and pair.' Two 'syces' or grooms stood behind, a belted 'chobdar' or mace-bearer sat on the driver's seat, next the driver, and a mounted 'Duffadar' or police officer rode beside them on horseback. They visited the Public Offices, the Medical college, the Engineering and other colleges and large schools, the Hospitals, the Museum and other places of interest. They also drove round the suburbs of the city, and one day they drove into the country to see some of the villages. But what chiefly interested the Prince was the large Medical college in the middle of the city. He went to it every day for a week. He listened to the lectures given to the pupils by the Professors. He examined the books studied by the students. The Doctor who went with him explained everything to him, and the Principal of the college and the Professors were all delighted to answer his questions.

In one room, a Professor was lecturing on malarial fever. "Is there any certain cure for this disease?"

asked the Prince. "Yes," replied the Professor. "We know both how to prevent malarial fever and we know how to cure it. Formerly no one knew how to cure this disease. The cure was first discovered, about



THE PRINCE DRIVES ROUND THE CITY OF HEALTH.

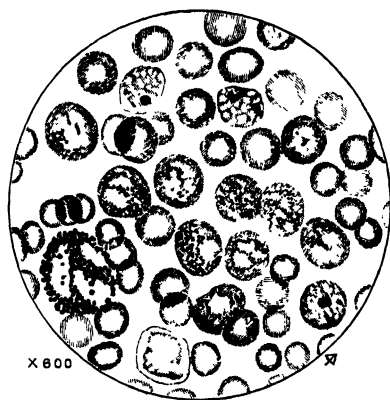
300 years ago, by a Portuguese gentleman¹ in Peru in South America. He found that the people of that country used to cure themselves of malarial fever by eating the bark of a certain tree that grows in the

¹ An interesting story of the discovery is told in *Life, Light and Cleanliness*.

jungle. In their language, they called it *quina*, i.e. bark. Out of this bark is now made the medicine called quinine. It has a very bitter taste, but it kills the germs of malarial fever in the blood of a man who is ill of that disease."

"Germs!" said the Prince, "germs! what are germs?"

"Germs," answered the Professor, "are tiny creatures, like seeds, that get into the blood and breed there."



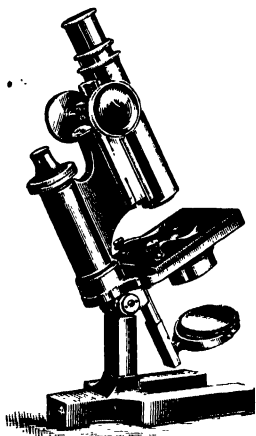
MALARIA GERMS MAGNIFIED 600 TIMES.

They are so small that you cannot see them with the naked eye. There you see a picture of malarial germs on the wall. They look like little eggs, do they not?"

"But you said that germs were so small that we could not see them," exclaimed the Prince. "I can see these germs clearly enough."

"Pardon me," replied the Professor, smiling. "I said we could not see them *with the naked eye*. To

see them, we must use a large microscope. Here is a microscope on this table." As he said this, the Professor led the Prince to the table and asked him to put his hand below the magnifying glass of the microscope, and look down through it. The hand of the Prince was beautifully smooth and well-shaped. He put it where he was told. "Now, what do you see?" asked



A MICROSCOPE.

the Professor. "I see some thick, coarse skin," replied the Prince, "with what look like pieces of rope standing on it." "That skin is the back of your hand," said the Professor, "and those pieces of rope are the hairs upon it. The microscope 'magnifies' objects placed under it, *i.e.* it makes them look much larger than they do to the naked eye. Those malarial germs have been magnified under a powerful microscope to 600 times

their size in the blood. Quinine is poison to these fever germs. It kills them and so cures the fever. When a man has fever on him and takes quinine regularly every day for two or three weeks, he is cured. And if he is in a feverish place where other persons have fever, he may keep himself from getting fever by taking a little quinine every day."

"But how does a man catch fever? How do these germs get into his blood?" asked the Prince.

"Do you see that picture over your head?" asked the Doctor. As the Prince looked up, he continued, "That is a picture of Doctor Ross, now Sir Ronald Ross. He was a doctor of the Indian Medical Service, and he first gave us an answer to the questions you have just asked me. In the year 1898, he found out that malarial fever is caused by the bite of a certain kind of mosquito. He examined a great many mosquitoes under a microscope and discovered these malarial germs in their bodies. He found that these mosquitoes carry fever from one person to another. If one of them first bite someone who has fever



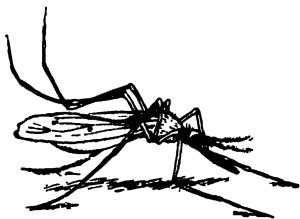
SIR RONALD ROSS.

and then bite someone else who is quite healthy, the second person gets fever too. The mosquito carries the fever from the one to the other. If there were no mosquitoes there would be no malarial fever. To prevent fever in any place, we must first kill the mosquitoes."

"But mosquitoes are countless in number," observed the Prince. "How can we catch them?"

"That is very true," replied the Doctor. "It is no doubt very hard to catch mosquitoes. But we can

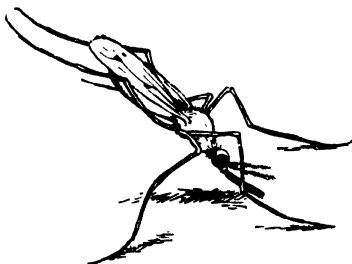
prevent them breeding. Mosquitoes lay their eggs in standing water, like the water in a tank, or in a puddle in the road, or even in a tin can or a pot full of water if left in the same place for a few days together. The eggs



HARMLESS MOSQUITO.

hatch into tiny worms which turn into mosquitoes in about ten days. If they cannot find any standing water; they cannot lay their eggs. Therefore in our country no one allows any water to stand anywhere near houses.

And if a little kerosine oil be poured on standing water in a tank every ten days or so, the oil spreads over the surface of the water. If there be any mosquito worms there, then the worms, not being able to breathe, die. In this way, many places, where people could not live because of the fever, have been made quite healthy. The land along the Suez Canal, *e.g.*, and the country in Central America through which the Panama Canal has lately been cut, have been rid of the fever mosquito in this way.



FEVER MOSQUITO.

“You said that *one kind* of mosquito carries fever about,” said the Prince. “Is the bite of other kinds of mosquitoes harmless, and how are we to tell a fever mosquito from a harmless mosquito?”

"Here are pictures of both kinds, side by side," replied the Professor. "Do they look quite alike?"

"Well," said the Prince, "I see that each has six legs. But the fever mosquito looks as if it were standing on its head, with its two hind legs in the air. The other mosquito is standing on four legs and its hind legs are held straight over its back."

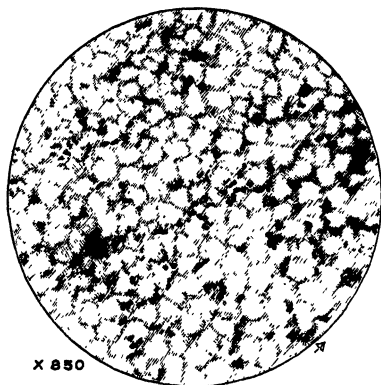
"Another difference between the two," remarked the Professor, "is this. The fever mosquito has spotted wings and makes no noise as it flies. It may bite you without your knowing it. The other kind has no spots and it makes a singing noise as it flies. As one cannot always see these mosquitoes, especially in the dark, it is best to consider all mosquitoes as harmful and to kill them when you can. Usually mosquitoes fly about in the dusk or in the dark, and not in the daytime. Most Europeans, when they live in hot climates where mosquitoes are found, always sleep under 'mosquito curtains' made of thin net, which keep out mosquitoes and insects of all kinds, but admit air freely. It would be well if all persons, who can afford to buy these nets, did the same. This would make them quite safe from mosquitoes and therefore from fever."

4. The Prince Visits the Medical College again.

THE next day the Prince visited the Medical College again. This time he entered a room where another Professor was lecturing on *Plague*. "In my country," said he to the Professor, "the people die of plague

by hundreds in a very short time. No disease is held in greater terror. When it breaks out in a village or in a town, the inhabitants run away into the jungle or flee to other towns. But I am told that in your country there is no plague."

"No, thank God! there is no plague now. We have stamped it out. But thousands and thousands



PLAGUE GERMS.

of people died of it many years ago," answered the Professor.

"How did you manage to stamp out plague?" asked the Prince.

"Plague, like fever," said the Professor, "is caused by germs in the blood. Here you see a picture of them in which their size has been magnified 850 times. They look like little black spots. And as fever is carried from one person to another by mosquitoes, so plague is carried from house to house and from village to village

by rats. Plague is a disease which attacks rats, as it does men, and countless rats die of plague. The skin of a rat swarms with fleas. If a flea, that has bitten a rat which has plague, bites a man, that man gets plague, for the germs breed and multiply in his blood. If there were no mosquitoes there would be no fever, and if there were no rats there would be no plague."

"If that is the case," observed the Prince, "I suppose that the first thing to do is to kill the rats in a town or village if plague break out anywhere near it."

"Just so," said the Professor. "The first thing to do is to kill the rats. And if by chance there should be a single case of plague in any house, all the people in that house should leave it and live in the fields in mat huts. Every room in the house should be cleansed by fire, so as to kill all rats and fleas in it. And no one should be allowed to go from a village in which there is plague to any other village, for there is always the chance that he may carry germs with him or have fleas in his bedding or clothes."

"Besides this, it is well known that in a clean and well-built house, there are no rats and no fleas. If every house in a village be kept clean, and no dirt be allowed anywhere, either in the houses or in the streets, there is very little fear of plague getting into it."

"Is there no way of curing people who have the plague," asked the Prince, "and is there no medicine that will prevent them from getting it?"

"Indeed there is," answered the Professor. "Just as vaccination prevents people from getting small-pox, so *Inoculation*, which is very much like vaccination, will

prevent them from getting plague, or will weaken the attack so much, if they do get it, that they will recover and not die.

"And anyone who is suffering from plague should not be kept in a dark room, but should be put on a bed in the open air, where he should lie still and be given plenty of simple but nourishing food, such as milk, to keep up his strength, for plague makes a man very weak. Light and fresh air will help to cure plague."

"Thank you for telling me all this," said the Prince. "We must try to do, in our country, what you have done in yours."

But, before leaving the room, he looked carefully round it, and there, on one of the walls, he saw the picture of someone. "Who is that?" said he to the Professor.

"That," replied the Professor, "is the picture of a very famous European doctor named Pasteur."

"What did Dr. Pasteur do," inquired the Prince, "to make himself so famous?"

"He discovered how to cure a dreadful disease called *Hydrophobia*,¹ or madness caused by the bite of a mad dog or mad jackal," replied the Professor. "A mad dog tries to bite other dogs or anyone that comes in his way, man or woman or child. Anyone, whom he bites, gets mad too, after a time, it may be days or it may be weeks afterwards. If a person who is bitten by a mad dog is treated in time, in the way discovered by Dr. Pasteur, he will not get mad. This treatment

¹ *Hydro-phobia*, from the Greek, *Hydor* = water + *phobos* = fear. A person who has hydrophobia is in great dread of water, and trembles at the sight of it.

can only be given in special hospitals known as Pasteur hospitals. They are always in the hills, because a cold climate is wanted for the treatment. Anyone who is bitten by a mad dog should go at once to one of these hospitals."



DR. L. PASTEUR.

"Can you tell me the names of any places in India with Pasteur hospitals?" asked the Prince.

"There is one in the Punjab, in N. India, at *Kasauli*," replied the Professor, "and there is another at *Coonoor* in the Nilgiri hills in S. India."

"I will certainly get a Pasteur hospital opened in my country," exclaimed the Prince, "for there are many hills in the Land of Plenty."

As it was late, the Prince thanked the Professor for his kindness, and he and the Doctor went home.

5. The Prince Visits the Hospital.

"TO-DAY," said the Prince to the Doctor when he came to drive him out again, "I should like to visit that large hospital we passed yesterday. It is truly a splendid building. It must have cost a great deal of money."



THE HOSPITAL.

"It is one of the finest buildings in our city," said the Doctor, "and it cost lakhs of rupees. But our Maharajah does not mind how much money the State spends on hospitals. 'Is not this the Country of Health?' he says. 'Is not health the greatest blessing my subjects can enjoy? How can money be spent better than on preserving the people in health?' We will visit the hospital, certainly. I will show you over it. But let

us pay one more visit to the Medical College. You have not yet seen one of the professors who is my brother. He lectures on diseases of the stomach and will tell you how we keep cholera out of our country." "Certainly," said the Prince, "let us go to the Medical College first and after that to the hospital."

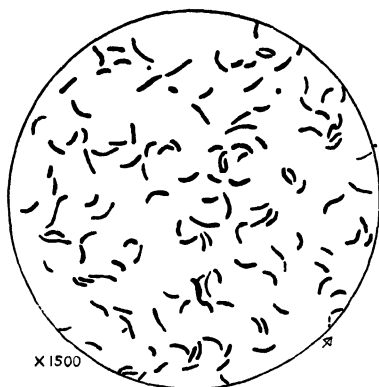


DR KOCH.

The Prince then drove to the College with the Doctor, who took him into his brother's lecture-room. Here he noticed at once a large portrait hanging on the wall over the lecturer's table. "Here is another picture," he exclaimed. "I suppose this must be some famous doctor too. You seem to have pictures of all the famous doctors in the world in this College."

"Well," replied the Professor, "we have a good many. We all feel very grateful to these wise and

learned men who have taught us so much, and we like to look at their faces and imagine they are speaking to us. Their names ought never to be forgotten. This is a picture of the great Doctor Koch who, about fifty years ago, discovered the germs or seeds of cholera after years of careful and patient work in his study."



CHOLERA GERMS.

"Are there cholera germs too," asked the Prince, "as there are of fever and plague, and has every disease its own germs?"

"As we learn more and more of diseases," said the Professor, "we find that nearly every disease has its germs, although we have not yet succeeded in discovering them all. Here I have a picture of cholera germs magnified 1500 times under a microscope. They look like tiny worms, very different from the plague germs that you saw in the other room. If these germs get

into the body of anyone, they breed there and give him cholera. They may be in the water a man drinks or they may be in the food that he eats."

"What puts these germs into food or drink?" asked the Prince, "where do they come from?"

"When a person has cholera, it makes him vomit and purge," replied the Professor. "The germs swarm in the vomit and in the purge. If these be left on the ground, rain may wash them into a tank or well or stream of water, and that water will give anyone, who drinks it, cholera. If a pot or if clothes be washed in water like this, the germs will be in the pot and in the clothes. If fruit or rice be washed in it, the germs will get into them. Therefore the vomit or purge of anyone who has cholera should be buried in the earth with quicklime, which will kill the germs, and his clothes should be burnt. On no account should the clothes be washed in any tank or stream. If cholera should by chance break out anywhere, it is a good thing to eat only well-cooked food and drink only water or milk that has been boiled, for heat kills the germs. Flies also carry the germs about, and flies breed in dirt. If there be no dirt about a place, there will be no flies."

"The information you have given me is very valuable," said the Prince. "I am much obliged to you for it. I will tell my father all that you have said, and I hope that we shall be able to put a stop to the cholera that is now raging in our country."

The Prince and the Doctor now went on to the hospital. Here they were received by the chief surgeon who was in charge of the hospital. He first took them into his

private room to have a little conversation. Here the Prince at once looked round for pictures, and, sure enough, there was a fine picture of a man, with a kind face, on the wall. "I wonder who is this," he said. "Did he too discover the germs of some deadly disease?"



SIR JAMES Y. SIMPSON.

"No," said the surgeon, "he is not famous for the discovery of germs but for the discovery of *Chloroform*. That is Sir James Simpson. We surgeons especially hold him in high honour, for he has shown us how to perform the most severe operation, *e.g.* cutting off a man's leg, without his feeling any pain. Chloroform puts a man into a deep sleep when he smells it and breathes it—sleep so sound, so *deep*, that he feels nothing and knows nothing while he is in that deep

sleep. Even if his arm were cut off, he would feel no pain nor know anything about it. The surgeon can do his work leisurely and thoroughly, for he knows that his patient feels nothing. There need be no haste, no hurry."

"That was truly a wonderful discovery," said the Prince. "I now see why you hold Sir James Simpson in such high honour."

They then went over the rooms of the hospital. One was the 'Operating room.' Here the Prince saw an operation on the eye of a blind man. He had been given chloroform and was lying on a table in a deep sleep. "There is a kind of thin skin," said the surgeon, "that very gradually spreads over the pupil of the eye and blinds a man. I will take this skin off, and the man will feel no pain while I am doing it, not so much as the prick of a pin. I will then bind up the eye and in a few days the man will see quite well again." When the operation was over, the patient woke up and was astonished to find that he had felt no pain.

During the rest of the fortnight, the Prince visited all the places that had been mentioned by the Maharajah, including the Museum, and many other fine buildings. Having accomplished the object of his visit, he took leave of his kind host, who said to him, on parting, "In a week or two, I will send the same Doctor, who has shown you over the city, to your father, the Rajah of the Land of Plenty. I would send him with you now, but he wishes to go quietly disguised as a trader, so that he may see for himself the state of your country, and be able to give you good advice."

The Maharajah then gave the Prince many valuable presents, in return for those he had brought, and sent him away very pleased with his visit.

6. The Prince Returns to His Own Country.



THE PRINCE RETURNS TO HIS OWN COUNTRY.

THE Prince then set out for his own country, the Land of Plenty. He rode on an elephant. At his side his Rajput secretary rode on a horse. Everywhere, he found that careful arrangements had been made for his comfort. The old merchant did not accompany him, for he had business of his own to attend to.

At length he came to his own land. He now noticed the difference between the two countries. In the Land of Plenty there was, indeed, *plenty* of food of every kind, but there was also *plenty* of dust and dirt. Flies filled the air in many of the bazaars; along the village streets there were little heaps of dung dropped by animals, and dirt of other kinds. The wells were mere deep holes in the ground. They had no walls around them, or covers to keep leaves and dust and the droppings of birds from falling into them. He could see that if ever there should be heavy rain, dirt and rotten leaves would be washed into the wells and dirty the water; near many wells, too, there were heaps of cow-dung and rotten straw and leaves. As he noticed all this, he could not help thinking of two lines which he had seen printed on a board hung on the walls of a school in the City of Health. They were :

DIRT IS THE MOTHER OF DISEASE.

CLEANLINESS IS THE MOTHER OF HEALTH.

Nearly all the houses in the villages were low and dark. When the doors were shut at night, no air could get in. In many houses, cows and buffaloes were kept in the verandahs, and in some places they were kept inside the house. In the large towns and cities he observed that many of the streets were narrow, so that no sunlight could shine between them; the houses too were dark, and there were few windows to let in light and air. He thought of the Engineering College that he had visited in the City of Health. Here men were taught how to build houses and make roads and canals. On the walls there were plans of houses

both for towns and villages. The rooms were large and airy, and there were windows in every room. Underneath one plan of a town-house was written :

LIGHT IS LIFE.

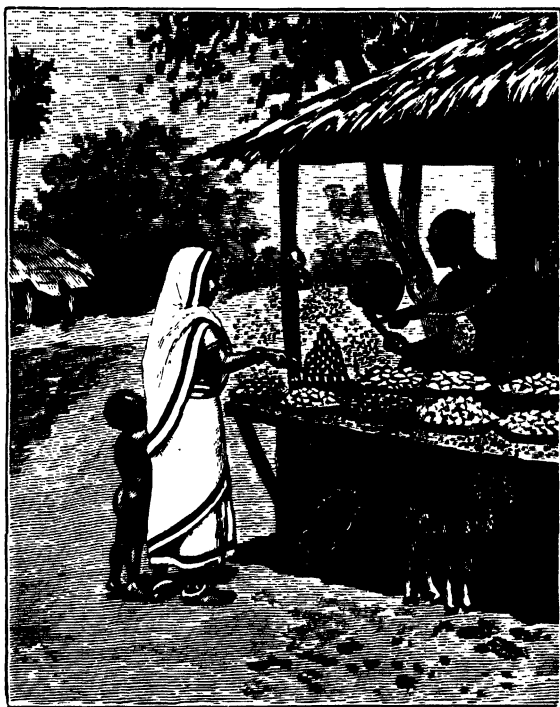
DARKNESS IS DEATH.

In the large villages which he had often visited before, he had never noticed the swarms of flies in the sweet-meat shops. Now he could not help seeing them. They reminded him of a line which he had seen written up on the blackboard in another school which he had visited in the City of Health. The boys were writing it down in their copy-books. It was :

FILTHY FLIES BREED FOUL DISEASES.

One day, he halted on the road to rest a little. Not far off, there was a large village, and his Secretary reminded him that shortly before he had left home to go to the City of Health, a report had come in to the Rajah from the headman of this very village, stating that there had been an outbreak of cholera and that thirty villagers had died. "Do you think it wise or safe," said the Secretary, "to halt so near this village?" "No doubt there is some risk," replied the Prince, "but we brought some water with us from our last stage. We need not drink any of this village water. See that none of our people go into the village. But I should like to see for myself how the villagers get their drinking water." The village headman had come to pay his respects to the Prince. Taking him with him, the Prince walked towards the village. When they

got near it, he said to the headman, "Where do your villagers get their drinking water?" "Here," he replied, pointing to a tank near a large tree. "I will



FLIES IN A SWEET-MEAT STORE.

sit down under the tree," said the Prince, "for a little while and talk to you." As they were talking, two of the village women came down to the tank and washed their dirty clothes in it. Then a herd of buffaloes came

up and walked into the water, dirtying it and defiling it. "And this is the water the villagers drink!" said the Prince. "Yes," said the headman, "it is very good water. We and our fathers have drunk it for



THE VILLAGE TANK.

fifty years." "No wonder your people get ill and die," replied the Prince. "We must get you a good well at once. Orders will be sent about this as soon as I reach home."

A few miles from the City of Plenty, the Prince got off his elephant and sat in a palki which had been sent

to meet him by his father. He was glad to get into it, for it was a more comfortable way of travelling than on an elephant.

In the afternoon he reached home about four o'clock. He went straight to his father, who was delighted to see his son once more, safe and sound, for it was a long journey from the City of Plenty to the City of Health and back again. There was not much time that evening for lengthy conversation, but during the next three or four days, the Prince gave his father a very full account of all that he had seen and heard.

7. Arrival of the Doctor.

About three weeks afterwards the Doctor arrived. He had come disguised as a trader and had made careful notes of all that he saw on his journey through the Land of Plenty. The Rajah received him very graciously, and thanked him for coming. The Prince looked upon him as an old friend, and said that he was his special guest. He gave him a fine house to stay in and provided him with every comfort. He went to see him every day, and drove him to the palace, where he had long conversations with the Rajah and the chief officers of State.

In these conversations, the Doctor gave the Rajah very full accounts of the arrangements that had been made in his own country for the health of the people, and the cure and prevention of diseases, especially fever, plague, cholera, and small-pox. He had brought with him a large supply of medicines, with books describing

them and instructions for their use. He repeated all that the Prince had already heard on these matters, and he added a great deal more. He made tours through the villages and towns in every direction with the Prince, and pointed out to him what ought to be done.

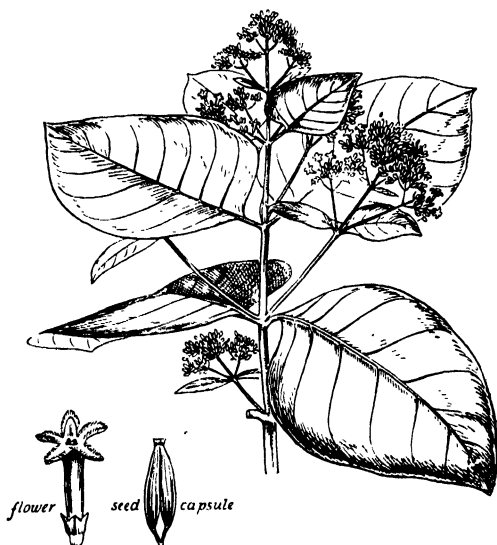
"Above all," he said to the Rajah, "it is very necessary to put the rules of health into little books for children. I see you have many schools in your country. The children are taught to read and to write and to count; they have books on history and geography and Readers of many kinds, but I have not seen 'Health Readers' anywhere. The rules of health are few in number and simple. They are easy to understand and to remember. Here is a 'Health Reader' which we use in our schools. Get copies of this book printed and let the children read them. You will find that they will not only try to follow these rules themselves, but tell their parents about them.

"There are hills and forests in the Land of Plenty, but I am told that in them there are no *cinchona* trees, the trees from the bark of which quinine is made. This tree will grow in the hills. You see I have brought you a large bag full of seeds that you may grow plantations of *cinchona* and be able to make quinine for use by the people. Here you see is a picture of the leaf and flower and seed of the *cinchona* tree. Lose no time in growing the tree. This is just the proper season for it. I have brought you a large quantity of the quinine powder. But you will want a thousand times as much as this, and a great deal more besides, if you are to stamp out malarial fever.

"If you will send some people back with me, to my

country, with a couple of elephants, I will send back as much quinine and medicines of other kinds as we can spare, but you must learn how to make your own medicines as soon as possible.

“The Professors in our Medical College have told the



LEAF, FLOWER, AND SEED OF THE CINCHONA.

Prince, and I now tell you again, that if your people are to be *healthy*, they must be *clean*. Your houses must be clean, your streets must be clean, your villages and towns must be clean, your clothes must be clean and your persons must be clean. Above all, the water that you drink must be clean. See, here is a picture I have made for you to look at.

"What is this a picture of? Can you guess?"

"I know," said the Prince. "I saw some pictures like this in the Medical College. These are germs of some dreadful disease."

"This is a picture," replied the Doctor, "of two tiny drops of water—of water which I took out of a tank



DROPS OF DIRTY WATER MAGNIFIED.

just outside your city. Men and women were taking it home to drink. It is full of all sorts of germs. This is what your people drink. Is it any wonder that they get ill! You must get a good well made in every village, such as the Prince saw in our country, and the people must be ordered not to drink the dirty water out of tanks."

8. The Doctor takes leave of the Rajah and his Court.

The Doctor then said to the Rajah,

"I have now done all that I came to do. I have told the Rajah what rules he ought to make in his country to save his people from cholera and plague and malarial fever and small-pox. These are the chief diseases that kill people. I have no doubt that the Rajah will follow the advice that I have given him and that the people will be healthy and happy.

"Now I wish to return to my own country. If the Rajah permit me, I will start to-morrow, for all my preparations are made. I only now await the orders of the Rajah to set out."

When the Rajah heard this, he was very sorry, for he had hoped that the good Doctor would stay with him much longer. Still, he did not wish to keep him against his will. He replied,

"Both I and my people are very thankful to you, my dear Sir, for all the good advice you have given us. All your instructions have been written down and they will be very carefully followed. I know that it would not be right or fair to keep you here any longer, far from your own country and people. But I hope that you will make me this one promise. Promise me, that after five years have passed, you will come back and stay here for a short time. I shall then have several other things to ask you. And you will be able to see for yourself how far we have followed the advice you have given us and whether our people are more healthy than they used to be."



THE DOCTOR DISMISSED WITH HONOUR BY THE RAJAH.

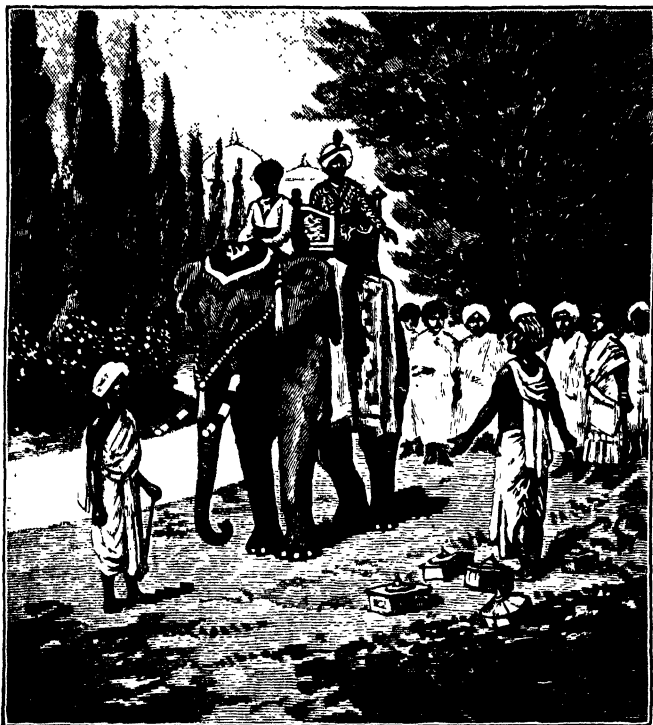
"Certainly," replied the Doctor. "If I am alive and well, and if the Maharajah will grant me leave, I will gladly pay you another visit, after five years have passed, and help you in any way I can. Now I beg leave to go."

Then the Rajah put a valuable Kashmir shawl over the shoulders of the Doctor with his own hands. He also gave him rich silk cloths and a fine Arab horse and jewels of gold and silver. The Prince, the Diwan, the Registrar, and all the nobles of the court saluted him and bade him farewell, and all of them said that they hoped he would come again.

The day after the Doctor had departed, the Prince set out on a tour through the country at the request of his father. "We must lose no time," said the Rajah. "Let us do, what we can, immediately. Go to the large towns, my son; see the headman of every large village, and give him careful instructions. Give orders for the making of good clean wells; as soon as a well is ready for use in any place, the drinking of water from tanks must be stopped. Take quinine with you and leave a supply in the places where the people are suffering from malarial fever, and tell them that a further supply will soon be sent. Carry out all the instructions of our good friend the Doctor as far as you can. No doubt it will take some time to root out disease from our country, but we must make a beginning without delay."

The Prince obeyed the orders of his father with great care. To him, indeed, the work was a labour of love. He distributed the quinine in fever-stricken villages, and in two hill stations he gave orders that a cinchona plantation should be started at once with the seed which he took with him. He gave strict orders for the sweeping

and cleaning of the streets and the removal of all standing water, pools, and puddles, that the mosquitoes should not be able to breed and spread malarial fever. He



THE PRINCE DISTRIBUTES QUININE.

directed the village officers to see that no dirt or dung should be allowed to stand in the streets or near houses, so that flies might not be able to breed and take the germs of disease into houses. He made careful arrange-

ments for vaccination, so that the people might be protected from small-pox. He ordered that the rats should be killed everywhere, so that plague should not be carried from house to house. And he directed the masters in all the schools to teach their boys the rules of health. He promised to send them 'Health Readers' as soon as they could be prepared.

Having done all this, the Prince returned home, after a tour of four months.

9. The Doctor Returns to the Land of Plenty.

When five years had passed, the Doctor remembered his promise. He went to the Maharajah and obtained leave of absence for three months, to enable him to go once more to the Land of Plenty. Various rumours had, from time to time, reached him of great improvements in that country. It was said to be even richer than it had been, and was now famous for the health of the inhabitants.

The Doctor sent back his elephant when he reached the boundary of his own country, and travelled in a palankin borne by six bearers. As he passed through the Land of Plenty, he saw many proofs that the advice he had given had been carefully followed. One village he remembered very well. It was the same village where the Prince had rested for a few hours, on his return to his own country from the court of the Maharajah, and had seen the villagers drinking the dirty water from the tank in which clothes were being washed and

buffaloes were bathing and defiling the water. Now there was a good deep well with a wall round it. A man was drawing water with a rope and wheel. There was no dirt anywhere near. "How long has this well been



A GOOD WELL.

in use ? ” he asked a villager. “ For nearly five years,” replied the man ; “ it was made by the orders of our Prince, who built it at the expense of the State.” “ There used to be a good deal of cholera in the village,” continued the Doctor. “ Are there any deaths from

cholera now ? ” “ Oh, no,” answered the villager, “ the cholera ceased soon after this well was made, and there has been none since then.”

As the Doctor proceeded through the country, he noticed that the streets in all the villages were carefully swept clean. There was no dirt to be seen anywhere. Flies did not swarm in the bazaars, as they used to do, for, as there was no dirt or dung for them to breed in, they had disappeared. The musquitoes, too, had gone. There were no pools or puddles of water in the towns or villages in which they could lay their eggs.

One day, as he went along in his palankin, he passed through another village which he also remembered very well, for plague was raging there on his first visit, and he had been obliged to camp in a grove outside lest his attendants should catch it. In the main street he met a boy who was going to school, with a book under his arm. He was the son of the village headman and looked bright and intelligent. He made a salaam to the Doctor as he passed. The Doctor was so struck by the bright smile of the lad and his politeness that he stopped the palankin to talk to him.

“ Good morning, sir,” said the boy, “ I know who you are. Are you going to the City of ~~Health~~ to see our Rajah ? ”

“ Where did you see me before ? ” said the good Doctor, smiling, “ and how do you know who I am ? I cannot remember you.”

“ Oh, yes, sir,” said the boy. “ I saw you five years ago. That was the year of the great plague, when so many people died in our village. I was then six years old ; I am now eleven years old, but I remember your



THE DOCTOR IN HIS PALANKIN.

face very well. My father went to see you in your camp in the grove. He took me with him, and I was there, holding his hand. You said you were going to the City of Health to see the Rajah. I made a salaam, and you returned my salaam. Do you not remember ? ”

“ I am afraid I cannot recollect your salaam,” replied the Doctor, “ though I remember the visit of your father very well. But what book is that you have, and where are you going now ? ”

“ I am going to school,” said the boy. “ This book is our ‘ Health Reader.’ We read it three times a week, and to-day we have to read it as our first lesson.”

“ The last time I came here,” said the Doctor, “ the village was full of plague and that was why I camped outside. Is there any plague here now ? ”

“ Oh, no ! ” said the boy ; “ when we killed all the rats there was no more plague.”

“ And how did you manage to kill the rats ? ” asked the Doctor.

“ Well,” said the boy ; “ an order came from the Rajah that the rats were to be killed because they caused the plague. My father did not know what to do. Just at that time my uncle was here, staying with us. He is a very rich man, worth lakhs of rupees ; in our village he is known as the Sowcar. ‘ I will rid your village of rats in a week,’ said he to my father. ‘ If you do that,’ said my father, ‘ I shall never be able to thank you enough.’ ‘ Send for the village watchman,’ said my uncle. My father sent for him, and he soon came. ‘ Go round the village,’ said my uncle, ‘ and cry aloud in every street, “ the Sowcar will pay one thousand rupees to the man who kills most rats in a week. The

dead rats will be counted every evening at six o'clock. The number of rats brought in by every man, and the name of the man who brings them in will be entered in



CHASING THE RATS.

a list, and whoever has killed most rats at the end of the week will be given a reward of one thousand rupees.”

“When this news was noised abroad, nearly every man and every boy in the village ran about killing rats. Hundreds were killed the very first day. At night,

when rats come out of their holes to run about, scarcely anyone slept, for everyone was chasing them. Dogs and cats killed a great many when they were hunted out of their holes. Traps were set in every house, and in this way a great many more were caught. The noise and bustle was so great that no one could do any work. The whole village thought of one thing only, and that was—to kill rats. A great pit was dug in the waste land of the village, and every night, after the dead rats had been counted before the Sowcar, and the name of the men who had brought them in had been entered in his list, they were thrown into the pit and quicklime and earth thrown in on the top of them. Thousands of rats were killed in this way; not one was left in the village. Three men killed many more than anyone else, and the numbers were so nearly equal that the Sowcar gave three prizes of one thousand, five hundred, and two hundred and fifty rupees. When the Rajah heard the news he was very pleased, and he sent my uncle a special letter of thanks.”

“Well done!” said the Doctor; “and so the plague ceased when all the rats were killed, did it?”

“It did,” said the boy, “and the story was put into our ‘Health Reader.’ Here it is, and a picture of our villagers killing the rats.”

“Does your ‘Health Reader’ tell you anything about keeping cattle in sheds and not putting them into rooms in the house where people sleep?” inquired the Doctor.

“Oh, yes,” answered the boy, “there is one lesson on houses and how to keep them clean. The Prince came to visit our village three years ago, and he was so

pleased with our house that he had a picture made of it and put it into the 'Reader.' Here it is. You see the cows tied up in a shed in our back yard, outside the back door. There is my mother taking them some food to eat. There are the big jars filled with rice



A HEALTHY HOUSE.

standing in another shed. Each of them has a cover on, but you cannot see the covers in the picture. And there are three pigeons on the floor, picking up a few grains of rice that my mother has put there for them. You can also see the window in the back room to let in fresh air when the back door is closed at night. It has bars to keep out dogs and cats."

"I am very glad to see that you have such a nice, clean house," said the Doctor. "There is one thing more I will ask you : Do you know what quinine is ?"

"Yes," said the boy. "It is a white powder made out of the bark of the cinchona tree. It is a cure for malarial fever. There is a lesson on it in our 'Health Reader,' with a picture of the tree and a piece of the bark. Here you see it. The powder is very bitter ; I have tasted it. My father keeps a supply of it and gives it to anyone who may get fever. But scarcely anyone gets fever now, for there are no mosquitoes, and my 'Reader' tells me that fever is caused by the bite of mosquitoes. There is a plantation of cinchona trees in the hills in the north of our country, and quinine is now made there. I have never had fever even once."

"I am very glad indeed to hear it," said the Doctor. "I can tell, from your looks, that you are in very good health. I will tell the Rajah that I saw you and spoke to you. Now, good bye."

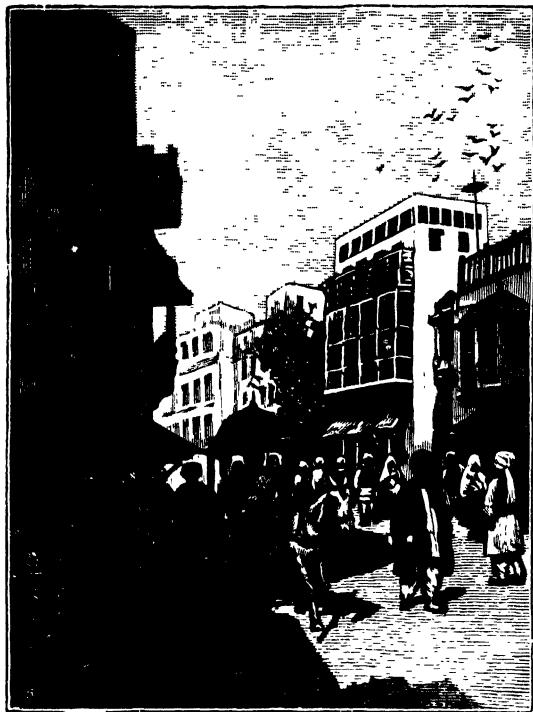
"Good bye, sir," said the boy, making another salaam, and the Doctor went on in his palankin.

The last day of his journey he had to pass through a small town not far from the City of Plenty. When he last saw it, on his previous visit, the houses were low and dark, and had no windows. The streets were narrow and the sunshine could not reach the rooms in



CINCHONA TREE
AND BARK.

the lower stories of the houses. Opposite the front door of nearly every house there was a heap of dirt which had been swept out of the house and left in the street. No



A WIDE, WELL-LIGHTED STREET.

one ever took it away. There were bad smells everywhere, and swarms of flies were sitting on the heaps of dirt.

Now all was changed. The Doctor could scarcely

believe his eyes. He passed along a wide, well-lighted street. The sunshine lit up one side of the street in the morning and the other side in the afternoon, and reached to the bottom of every house. The fronts of the houses had good windows. The street had been well made and was carefully swept by the town-sweepers every morning, and all dirt was carried away and put on distant fields, where the ryots used it as manure. There were no bad smells. The air felt fresh and pure. The Doctor was delighted when he saw all this. "My visit was not in vain," he said to himself; "it has borne good fruit."

10. The Doctor attends the Darbar. The Treasurer gets Drunk.

At length the Doctor reached the City of Plenty—the chief city of the Land of Plenty. His coming had been announced by swift runners. The Diwan went out to meet him and to conduct him to the house which had been provided for him. When he had eaten and drunk and felt refreshed, he went on to the darbar of the Rajah in a fine "carriage and pair" that had been sent for him.

When he entered the darbar, he saluted the Rajah, who welcomed him with great kindness. After he had paid the usual compliments and made the usual inquiries as to the health of the Rajah, the Doctor observed that he was delighted to see that the people everywhere looked well and healthy. "No doubt this is due," he said, "to the rules the Rajah has made for their welfare."

"Yes," replied the Rajah, "we all feel as if we were a new people and as if new life had been given to us. Nearly all the sickness and disease that used to trouble

us has gone. There was not a single case of plague last year, and there were very few cases of cholera. It is true that there are still a few cases of malarial fever here and there, but nothing like so many as there used to be, and people who get the fever do not always die.

"All this," continued the Rajah, "is due to your kindness and the good advice you gave us. We cannot thank you too much. Now, as you have come from far and need rest, we will not keep you any longer to-day. But we hope that to-morrow you will kindly come to the darbar after you have had breakfast. I wish to have your advice on several other matters."

The next day the Rajah went to his darbar early, for he had some business to do and he wished to get it over before the Doctor came. He received the daily report of the Diwan and gave orders upon it. Then the Chief Secretary came and he too gave in his report. After this, the darbar was opened, and the nobles and officers of the court came in and took their seats, each in his proper place. But one of the officers of the court was not there. He was the Treasurer. The Rajah saw that his seat was empty. "How is this," he remarked, "Why is our Treasurer not here to-day? We expect our honoured guest, the famous Doctor, and all the nobles of the court ought to be present to do him honour."

"It is not quite time yet," replied the Diwan. "It is not yet twelve o'clock. Doubtless the Treasurer will be here soon."

But the Rajah and the nobles sat in the darbar for two hours and neither the Doctor nor the Treasurer came. At last, at two o'clock, the carriage drove up



THE DOCTOR ATTENDS THE DARGAR.

with the Doctor. He came in and saluted the Rajah and sat down in his place.

"Why are you so late?" asked the Rajah, "I hope you are well. I trust nothing has happened to you."

"Pardon me," replied the Doctor, "I know I am late, and I am very sorry to have kept you waiting. But it is not my fault. The cause lies with one of the officers of your court and I do not want to get him into trouble. If I tell you all about it, will you promise me that he shall not suffer in any way?"

"Certainly," replied the Rajah. "I will gladly pardon him for your sake, for I wish to please you in every way. But if he has committed any crime, I cannot pardon him. The law must take its course and the Judge must try him."

"No," replied the Doctor, "he has hurt no one but himself. I will now tell you what happened."

The Diwan, the Secretary and the other officers now leant eagerly forwards to listen to what was coming, for this matter concerned them all. They wondered which of them was to blame.

"As I was on my way to the darbar this morning," said the Doctor, "I met the servant of one of the officers of your court. He said his master was the Treasurer, and he had sent him to call me, for he was very ill; the servant added that his brother, who lived with him, was very ill also. They were too ill to write, so they had sent the servant with the message.

"When I heard this, I told the servant to get into the carriage and ordered the driver to make the horses go as fast as he could. It took some time to get to the

Treasurer's house, for it is at the other end of the town. When I went in, I found him sitting on his bed with his head between his hands and groaning. Round his head a wet cloth was tied. The servant touched him and said, 'Here is the Doctor come to see you.' With a deep groan he replied, 'Doctor, I am dying. My head is aching as if it would burst. I cannot speak.' When he had said this, he began groaning again. Just then his son, a young man about twenty years old, came into the room. He too looked pale and ill and kept holding his head with his hands.

"'What is the matter?' I said. 'What has happened?'

"'I will tell you, Sir,' replied the son. 'Yesterday we were both invited to a wedding. The daughter of one of our friends was married to the son of Rāmlāl, the richest sowcar in the city. There was a grand procession through the streets and then there was a great feast. We all ate a good deal. There were a great many dishes made of rice and ghee and sugar and piles of sweetmeats. Also there was much to drink. The sowcar had bought dozens of bottles of wine and brandy and other strong drinks from some of the shops in the city. My uncle did not drink very much, but he kept on eating every dish there was in the room. He is a very fat man and he ate till he could eat no more. I and my father both drank a good deal. At last we drank till we became insensible. I do not know how we got home, but I suppose we were carried, for we could not walk. I got up very late this morning with a bad headache, but my poor father drank much more than I did and he has been groaning for the last



THE DOCTOR VISITS THE TREASURER.

two hours. He thinks he is dying. Can you, Sir, cure him ? ' ' "

"I see," observed the Rajah, while the officers of court looked at one another, "my Treasurer was drunk. This was very disgraceful and it brings disgrace on the whole court. But what was the matter with his brother ? ' ' "

"I made the Treasurer lie down," replied the Doctor, "and put some ice to his head. Then I gave him some soothing medicine to put him to sleep. But he was a long time going to sleep and he would not let my hand go, but held it in his. At last he dropped off to sleep and then I went to his brother. He seemed to be in a worse state than the Treasurer. He was very pale ; he had been vomiting and purging all the morning and he thought he had cholera. His pulse was very low and he seemed unable to speak. ' Do not speak,' I said to him, ' I know all about it. Lie quite still and after a time you will feel better. I will not give you any medicine. You do not want it. But I will stay here for an hour, and see whether you vomit again. Do not be afraid. You will be all right in the evening. Try to go to sleep.' "

"When I saw that both brothers were asleep, I left the house and came to the darbar."

When he had said this, the Doctor sat down. The Rajah replied, "I am indeed very sorry to hear what you say. But I am afraid the Treasurer is not the only one of my officers who gets drunk. This is one of the things I want to talk to you about. I have many questions to put to you. You have told us how to cure many diseases. And now I want you to tell me

about eating and drinking. What sort of food ought I and my people to eat, and what ought we to drink, so as to keep in health? Also what ought we *not* to eat and what ought we *not* to drink, so as to keep from getting ill? Many of us get ill and many of us die although we may not have fever, or plague, or cholera, or small-pox."

The Doctor answered, "All this I will tell you, for in the Country of Health, from which I come, we have studied all these things and our wise Maharajah has made many rules about them. You see how ill your Treasurer made himself by drinking too much of brandy and other strong drinks. This is the first thing I will tell you about. You have also heard how ill his brother was, because he ate, not wisely, but too much. But let me first ask you whether any of the officers now in the darbar can tell us what he himself knows of the evils that come upon men by drinking too much."

When the Doctor said this, the Chief Secretary rose up from his seat and spoke. He was a very learned man and was held in high esteem by everybody. He said,

"The Rajah knows that in my youth I studied at a great college for many years and learned many things. But the subject I liked best was history. I read the history of many countries and among them I read the history of Persia. In olden times the Greeks were very learned men and one of them wrote certain tales about the ancient kings of Persia. One tale that I read was about Cyrus the Great. If you permit me, I will relate it."

"Is the tale long?" inquired the King. "If so, I think you had better relate it to-morrow, for it is

now late. And to-morrow I hope my Treasurer will be here. I should like him to hear the tale too. Perhaps it may do him good."

Then the Doctor stood up and said, "If the Rajah permit me, I will make one more request before we leave the darbar."

"Say on," replied the Rajah. "What is your request?"

"If the Rajah will pardon me for being so bold as to offer my advice, it is this. If the Treasurer is here to-morrow, in the darbar, as I hope he will be, I beg that no mention may be made openly of what I said to-day either by the Rajah himself or by any of the nobles. Let everyone look upon this as a secret and confidential matter. The Rajah may tell him whatever he likes in private. But the Treasurer is an old servant of the state and his feelings will be hurt if his fault be mentioned in public. He will be put to shame and be in great grief."

"I see that you are a kind and considerate man," said the Rajah. "Your advice is very good. I will not say anything in public to the Treasurer, but I will send for him and give him some good advice in private. Now the darbar is dismissed. We will meet at one o'clock to-morrow."

II. Temperance, or The Story of Cyrus the Great.

The next day all the nobles and officers were present at the darbar. The Treasurer too was present. He

was not looking well, his eyes were red and his hands trembled. He felt very anxious, for he was afraid that everyone there knew what he had been doing, and he feared that the Rajah would rebuke him publicly. No one, however, said anything, and the Rajah returned his salute as if nothing had happened.

Then the Chief Secretary stood up and said, "With the permission of the Rajah, I will now relate a tale of Cyrus the Great."

Cyrus the Great, who lived about 2,500 years ago, was one of the most famous kings of ancient time. He reigned over Persia and many other countries in Western Asia. The Persians called him Khusru. Cyrus founded the Persian Empire.

As a boy, Cyrus was brought up at the court of his father, who was King of Persia. It was then a small kingdom and the people were simple shepherds. Close by, lay a rich and powerful kingdom called Media. The King of Persia had married the daughter of the King of Media, who was thus the grandfather of Cyrus.

Cyrus was brought up by a very strict master who did not fail to punish him when he did wrong. He was trained to live a very simple life and was taught to speak the truth and to be polite to everyone, and be just in all that he did. His tutor also taught him to wrestle, to race, to use the arms of those days, to shoot with a bow and arrow, to hurl a spear, and to use the sword and the shield. He had to hunt wild beasts on foot, for the Persians of that time had no horses. He grew up to be a very strong and handsome boy.

When Cyrus was about twelve years old, his grandfather, the King of Media, sent for him, for he had heard

much about him and longed to see him. When the boy arrived at court, he was amazed at the grandeur, and the splendid robes of the nobles, at their necklaces and bracelets and costly jewels. He had never seen anything like it before.

A month or two after his arrival, the King gave a grand dinner to all the nobles and great men of the court, to celebrate the Queen's birthday, and invited the young Prince to it. On the table there were a great many gold and silver dishes containing the most delicious food of every kind and golden cups filled with rare and costly wines. Before the Prince were placed a dozen golden dishes and several cups of wine. The King thought that his young grandson would be very pleased and would eat and drink heartily. But, to his surprise, Cyrus took scarcely anything. The wine he did not touch at all, he did not even taste it.

"Is not this feast much grander and more splendid," said the King, "than any you ever had in Persia? Why do you not eat and drink and enjoy yourself?"

Cyrus replied that it seemed to him to be too much trouble to eat a little of so many different dishes. "In Persia," he said, "we do much better."

"Indeed!" exclaimed the King, smiling, "and how do you do in Persia?"

"In Persia," answered the Prince, "we have only one dish of plain wheat bread and meat, and we drink one cup of water out of a jug. We only eat when we are hungry and drink when we are thirsty. This keeps us strong and healthy. We seldom get ill. This is what I am accustomed to."



CYRUS AT THE BANQUET OF HIS GRANDFATHER, THE KING OF MEDIA.

His grandfather laughed heartily and exclaimed, "By all means, do as you please here. Eat only bread and drink only water and go back to your country strong and healthy. But what am I to do with all these splendid dishes that I have got for you?"

"Give them to me," said Cyrus.

"Very well," said the King; "but, if you are not going to eat the food, what will you do with the dishes?"

"I will reward all those who have been kind to me since I came here," said Cyrus.

"Do as you please," said the King.

Then Cyrus called up the attendants, one by one, and gave each of them one or two costly dishes of gold and silver. "This," he said to one man, "is for you, because you taught me to ride." "This," he said to another, "is for you, because you gave me a spear." "This," to a third, "because you serve my grandfather well and faithfully." "This," to a fourth, "because you serve my mother." But to the chief servant, a man of high rank, who was dressed in splendid robes, he gave nothing. The man was the cup-bearer of the King, and it was his duty to taste the wine before he gave the cup to the King. He did not put his own lips to the cup, but poured a little of it into another cup and drank it, before handing the full cup to the King.

"Why do you leave my cup-bearer out?" asked the King.

"He does not serve you well," replied the Prince, "he puts poison into your wine."

Now this was the very thing the King had been

afraid of, for years. He always feared that he might be poisoned. "What! What!" he cried, as he started back in great alarm. "Why do you say that? How do you know he poisons my wine? Did you see him put poison in? How much did he put in? When did he do it?"

"No," replied Cyrus, "I did not see him put the poison in, but I know that he must have done so, because I saw the effect of the poison on you and your nobles, at the feast you gave the other day, on your own birth-day."

"Why? What happened then?" cried the King, still alarmed.

"The wine that you drank," replied the Prince, "made you all crazy. The things you do not let us boys do, you did yourselves. Some of you were rude and noisy. You all bawled out together, so that no one could hear what anyone else said. You sang silly songs and laughed at nothing. You all tried to tell tales together, and nobody listened to what anyone else said. Then you got up and tried to dance, but you could not even stand up without sitting down again immediately, and some of you tumbled down upon the floor. You all seemed to forget who and what you were. The guests paid no regard to you, their King, but treated you with disrespect, and you treated them the same way. In short, you all acted as if you had lost your senses. This is how I know that this cup-bearer put poison into your wine, and is why I will not give him any present."

"Is that all?" exclaimed the King, much relieved, "but have you never seen such things before? Does

not the King, your father, drink wine until it makes his heart merry ? ”

“ No, indeed,” replied Cyrus, “ he drinks only water when he is thirsty, and then only enough to quench his thirst. I never saw him act as you and your nobles did. He has no cup-bearer.”

“ That is a very good story,” observed the Maharajah, “ I have often read about Cyrus the Great, but I never heard this tale about him before. No wonder he became such a great and famous king and conquered so many countries.”

“ I, too, know the story,” said the Doctor. “ I am glad the Chief Secretary has told it to us. It shows us very clearly what harm excessive drinking does, and what foolish things men do when they are drunk.”

All this while the Treasurer felt very ill at ease. He was afraid even to look up. Now and then he stole a glance at the Rajah, when he thought he was looking another way. But there was no frown on his face, nor did he seem in any way displeased. The Doctor, too, made no allusion to what had happened the day before. And the nobles of the court greeted him in the usual way. “ I will never,” he said to himself, “ touch a drop of liquor again. Truly I have had a narrow escape. I might have lost my place at court, I might have been dismissed in disgrace. But I am glad the darbar is over.” Then, when his turn came, he saluted the Rajah, who returned his salute with his usual kindness.

12. The Different Kinds of Food.



THE PRINCE RETURNS TO THE CITY OF PLENTY.

When the darbar opened on the next day, the Prince too was present. He was out on a tour through the country when the Doctor arrived ; the Rajah had sent a special messenger to summon him and he had hastened back with all speed. The Doctor, after saluting the Rajah, said :

“ I am now ready to tell the Rajah, the Prince, and the nobles, all that I know of the rules of health in regard to eating and drinking. These rules are indeed very important. In my own country, the Country of Health, these rules are taught in all the schools, so that the children know them. But first let me know what classes and castes of people live in this country and

what sort of food they eat. Perhaps the Diwan will tell us this."

"In this country," replied the Diwan, "there are many different classes and castes of people. There are Brahmins of many sects, there are Sudras also of many sects, there are Muhammadans, there are Christians, and there are a few Parsis. As to food, each caste has its own rules. But, in general, Brahmins eat only vegetables and fruits but no animal food, some Sudras do the same, but many Sudras eat meat also ; the Muhammadans eat meat and vegetables and fruits, and so do the Christians. The grains everyone eats are rice and millets, such as jowār or cholam and rāgi. There are many fruits in our country, such as the mango and plantain and custard-apple. And everyone eats sugar when he can get it."

"I understand," said the Doctor. "In our country, too, we have all these castes and we eat the same kinds of food, for the climate of our country is the same. And, after all, although there are many castes and each caste has its own rules, yet the bodies of men are very much the same and they must eat very much the same kind of food. You said that Brahmins never eat any animal food, did you not ? You said that they only eat vegetables, grain and fruit ? "

"Yes," said the Diwan, "I am a Brahmin, and from the day I was born, up to the present moment I have never eaten any animal food."

"Are you quite sure of that ? " asked the Doctor.

"I am perfectly certain of it," replied the Diwan. "If I had done this, I should have lost caste. All the town knows that I am a good Brahmin."

"Indeed!" replied the Doctor smiling, "and do you never drink milk? Do you never eat sweetmeats made of milk and sugar? Do you never drink butter-milk or curds? Do you never use ghee?"

"Of course I do," replied the Diwan; "everyone knows that the food of a Brahmin is, very largely, milk and things made of milk and sugar."

"Then," replied the Doctor, "you have been eating animal food all your life, and that no doubt is one reason why you are looking as well and healthy as you do now. Milk is animal food. It is not a vegetable, nor a fruit, nor a grain. It is the best and most nourishing of all foods. Little children, as we know, drink nothing else. They live on their mother's milk. That too is animal food, and so is the milk of a cow or of a goat."

"When I said animal food," replied the Diwan, "I meant meat and fish and eggs and such things; I did not mean milk. But no doubt what you say is true. Milk comes from an animal and it must be animal food."

"No doubt," said the Doctor, "all milk is animal food, and without some kind of animal food no one could live for any length of time."

"Let us know, then," said the Prince, who had listened to the conversation very carefully, "into what different classes or kinds all food may be divided. Can you tell us this?"

"Yes," answered the Doctor. "Learned men, who have examined all foods very carefully, have found out that all foods may be divided into four great classes. The first of these classes is called *Meats*.

"The term 'Meat' does not mean only the flesh of animals, although that is the meaning of the term in common talk. It includes also what I called 'animal food,' for example, milk, cheese, eggs, as well as flesh."

"If that is the case," observed the Prince, "all castes eat animal food or 'meats,' as you call it. I am a Rajput and our friend the Diwan is a Brahmin, but we both eat animal food. I suppose he drinks more milk than I do, for I eat flesh and he does not, and you say that all men must eat some animal food to keep in health. But what is the second kind of food, I wonder. You said every man must eat all four kinds."

"Yes," replied the Doctor, "that is quite true. The second kind of food is called *Fats*."

"Well, I am quite sure I never eat any fat," remarked the Diwan. "Fat is a part of the flesh of animals, and I never eat flesh."

"I am afraid you are wrong again, my friend," said the Doctor. "It is true you never eat the fat that is found with flesh; but, just as there are many kinds of meats, so there are many kinds of fats. You eat ghee, do you not? and cream and butter. All these are fats. Everyone must eat some kind of fat to keep in health."

"Strange!" exclaimed the Diwan, "but what you say is no doubt quite true. I see that I have been eating fat all my life. I eat ghee every day."

"Well, what is the third kind of food that we must eat to keep in health?" asked the Prince.

"The third kind of food," said the Doctor, "includes *Starches* and *Sugars*. All of us know what sugar is, and how nice it is. All castes eat sugar. In this country sugar is made from the sugar-cane, but in Europe sugar

is very largely made from beet-root, and in America from the sap of a tree called the maple tree. All sweet fruits, too, have sugar in them. In dried grapes or raisins, as they are called, you can see the sugar in lumps. Plantains, too, have plenty of sugar in them, and so have many other fruits eaten in this country."

"This we know," observed the Diwan, "but I never heard of starches. What are they? Do I eat starches, I wonder? I thought I ate no animal food, but you showed me that milk is animal food. I thought I had never tasted fat. But you say ghee is one kind of fat. Perhaps you will now say that I have been eating starches all my life."

"So you have," replied the Doctor. "You have been eating rice all your life, have you not? Rice is one of the starches. So is wheat. From wheat, bread is made, and bread is the chief food of people all over the world, especially Europe. Rice only grows in hot countries, and in cold countries people eat other grains, such as wheat and barley. The grains we call millets, too, such as rāgi and cholam and Indian corn, all contain starch. All grains are starches, some roots too, such as the potato, are full of starch."

"It seems to me," said the Prince, "that starch is only another term for grain."

"The terms 'Grain' and 'Starch' are not exactly the same," replied the Doctor. "For example, potatoes are not grains, and yet they are made up largely of starch. We may say that grains *contain* starch. It is the business of men called 'Chemists' to find out of what substances all things are made. They give different names to different substances, and they have

given this name, 'starch,' to the substance which is the chief part in all grains. Grains contain other things besides starch, and this makes them taste differently. Rice has not the same taste as wheat and yet both are chiefly starch."

"That is very clear," said the Prince. "Now tell us the fourth kind of food."

"The fourth kind of food," answered the Doctor, "we call *Salts*. There are many different kinds of salts. The most common kind is common salt, which we get from sea-water or from salt mines. Salts are found in many kinds of fruits and vegetables. Even in milk there is salt as well as sugar. Everyone must eat salt in some shape or other if he is to keep in health."

"If this is the case," said the Rajah, "and I have no doubt that what you say is quite correct, for you are a learned man and have carefully studied all these things, then some of the things that we eat contain all four kinds of food you have mentioned, viz. meats, fats, sugars, starches and salts."

"They do," replied the Doctor. "Most kinds of food do contain more than one of these things. Milk contains all, and as milk is the only food that young children can take, they are drinking all these four things which every man or woman or child must eat or drink to keep in health. But some of the things that we eat do not contain all four substances. Some food contains more and some contains less. For this reason we ought to take many different kinds of food. Some castes are not allowed to eat flesh or fish. They ought therefore to take more milk or cheese than people do who eat eggs and flesh and fish, for they cannot keep

well or strong if they eat only grains and vegetables and fruits."

As it was now late, the Rajah rose, for he had much business of the State to do that day. "To-morrow," he said, "is a holiday, so we hold no darbar. But the next day we shall all be here and I hope the good Doctor will tell us more about food. I am sure we have all learned a good deal to-day." When the Rajah had said this, every one arose and went home.

After the darbar had broken up, the Rajah sent for his Treasurer. He came with fear and trembling. "Now," he thought, "I shall be dismissed. The Rajah has, no doubt, heard something, for many people were at that wedding feast."

The Rajah saw him in his private room and talked to him kindly but firmly. "You are an old servant of the State," he said; "you have served me well and you served my father before me. I have a high regard for you, I know you would never do anything mean or dishonourable. I hope you will continue to be my Treasurer for many years to come. Yet it is my duty, as your Rajah, and the Rajah of this State, to warn you that you must not give way to this bad habit of drinking." Then the Rajah went on to tell him of all that the Doctor had said, and how he had pleaded for him. "You know full well," he continued, "that all the members of my court and of my government must be men of good character and well spoken of. For your sake, for my sake, for the sake of your wife and children, for all our sakes, I, your Rajah and your friend, beg of you to give up drinking."

When he heard this, the Treasurer was much affected.

"I had already made a vow," he said, "never to drink again. But now that my sovereign so kindly begs me to drink no more for *his* sake, I promise him, before God, never to drink again." "That will do," said the Rajah, "I believe you. May God help you. But listen carefully to what the Doctor will tell us all when he speaks again to us about drinking, for he will no doubt describe to us very fully why and how it is that drinking hurts the body and hurts the mind. And do not be afraid that I or any member of the court will ever mention this matter to you again, nor shall we speak of it to anybody else." "I certainly will listen to the Doctor," replied the Treasurer. "He is a wise and a kind man and his advice is very good. I will not forget anything." "That is right," said the Rajah; "now you may go home."

13. Why We Eat and Drink.

The next day everyone came to the darbar in good time. The Treasurer was there before anybody else. He felt much brighter and happier than he had been for a long time. He had now no secret fear. His King had forgiven him and he was happy. Also, after he had left the Rajah the day before, he had told his son all that the Rajah had said. Then he took his son to his temple and there both of them, the father and son, took a vow to their God that they would never drink a drop of any strong drink again.

At this darbar there were present, besides the former members, the Court Vakil, who had just returned from

"If the Rajah will permit me," said the Vakil, who was very fond of talking and could argue very well, "I will ask one question."

"By all means," said the Rajah. "Ask as many questions as you please. We are all here to learn."

"What I want to know," said the Vakil, "is why we eat at all and why we drink at all?"

"I eat," observed the Prince, "because I should die if I did not."

"I drink," added the Diwan, "for the same reason."

"No doubt," said the Vakil. "You need not tell us that. We all knew that before. What I asked was *why* we eat and drink?"

"I will do my best to tell you," said the Doctor. "Look at the size of a baby one year old. How much larger it is than it was when it was first born! And see how it has grown in size when it is a boy five years old. The boy gets taller and bigger and grows up to be a young man. His hands are larger, his legs are longer, his whole body is bigger and heavier than it was. Where does this increased size of his body come from? It comes from the food that he eats. Every time he eats he is adding a little to his own body. His body is made up of the food that he has eaten."

"Yes," said the Vakil, "I see that very clearly. But I have one objection to make. At the age of twenty years or so, a man stops growing, yet he does not stop eating. Why is this? Why does he not get taller? What is the use of his going on eating? At the age of twenty-one I was about 5 feet 5 inches

high. I am now sixty years old. Why am I not 16 feet 3 inches high? I have been eating food all the while." As he said this the Vakil looked very wise.

"God has so made us," replied the Doctor, "that we do not grow taller after we are full grown. Trees too do not grow after they have reached their proper height. But there is another reason why we must eat even after we have grown up."

"Well, what is that reason?" asked the Vakil.

"The reason is," replied the Doctor, "because the body is constantly wearing away, although we may not notice it. Just as a candle wastes away as it burns, so the body wastes away continually. The body too is burning. The body has been well called a 'Living Stove,' that is, a fire-place in which fuel burns."

"What! what!" cried the Vakil, amazed. "Do you mean to tell me that my body is burning? If so, where is the smoke? We all know that where there is fire there is smoke."

"Yes, yes," exclaimed the General. "If his body is burning, where is the smoke? Tell us that."

"A body may burn without smoke," replied the Doctor. "The smoke that you see from burning wood merely shows that some of the wood is not being burnt. The smoke is made up of tiny bits of wood rising into the air. Green wood makes more smoke than dry wood because it does not burn so well. A charcoal fire gives very little smoke because it is burning better. If you burn spirits, you will see scarcely any smoke at all. The better the burning, the less the smoke. And the burning in the body is so good that there is no smoke

at all, *i.e.* none that you can see. The smoke is invisible.

"The burning goes on inside, and as long as a man lives, he is burning. This is why he feels warm. A dead body is not burning. It feels cold. The harder a man works, the faster the fire in his body burns and the hotter he gets. When you sit still you feel cool, because the fire does not burn so fast.

"We all know," continued the Doctor, "that no fire will burn without fuel. It may be wood or charcoal or coal or oil, but fuel it must have, or it will go out. In the same way, the body too must have fuel. This fuel is food. We must have food to make up for the waste parts of our bodies that are being burned up every moment. If we stop eating, we get thinner and thinner. The body burns *itself* away if you do not give it food to burn."

"That is quite true," observed the Diwan. "In the great famine we had, about thirty years ago, I saw thousands of poor people looking like skeletons, and a great many died because they had no food to eat."

"You know how hot the body gets," said the Doctor, "when a man has fever. This is because the body is burning too fast. If the fever be not cured, it will burn him up. He will die."

"Is this burning in the head or the stomach?" asked the Treasurer.

"The burning," replied the Doctor, "goes on all over the body. The fire-place, if I may use the term, is in the ~~heart~~. That is where the hottest fire burns. All the waste parts of the body, the 'ashes,' so to speak, are brought by the blood to the ~~heart~~. There

they are made into a kind of gas and breathed out into the air through the mouth. This is the invisible smoke I mentioned before. The blood is made fresh and pure and warm by the fresh air that is breathed in, and away it goes, all over the body, warming it, giving it fresh food and taking back to the heart all the waste parts of the body. The fresh blood that goes out from the heart is bright red ; the dirty blood that comes back to the heart is dark red ; the darkness being due to the waste parts of the body, the burnt-up parts, the 'ashes,' as we may call them, of the inside of the body."

"All this is wonderful," exclaimed the Prince ; "it is most wonderful. You have now given us two reasons why we eat food. Is there any other reason ? I suppose that when I feel hungry, my body is saying to me 'Give me food, for my fire is going out.'"

"Just so," replied the Doctor ; "you have put it very well. Hunger is the cry of the body for food ; the hungrier you get, the louder is the cry. A child, as you know, cries out aloud for its food. A man indeed does not cry out aloud, but his body gives him no rest till he supplies it with food.

"The third reason why we want food is to keep us warm. The air around us is, as a rule, a little cooler than our bodies. The heat from our bodies is always passing into the air. We must supply the fire within us with fuel to keep it burning and so to keep us warm. In every fire we see that fuel is burnt up and heat is thrown out. So it is in the body."

The Rajah, who had all this time said nothing, now remarked, "I now see clearly why we need food. But

is there any other reason for this besides the three you have mentioned ? ”

“ There is, indeed,” replied the Doctor. “ We need food to enable us to work hard or to work at all. Whether we work with our brains, like the Diwan ; or with our bodies, like the General, who is always riding and exercising his troops ; or with our tongues, like the Vakil, who is always talking and arguing ; or even like the raiyats, who work from morning to night on their fields ; whatever we do, we are using up our strength, and sooner or later we get tired and cannot go on working without fresh strength. This we can only get by eating food, which gives us new energy and power to work, to make up for that which we have lost.

“ You must not think from this that I mean we ought not to work hard. On the contrary, hard work is necessary for the health of the body.

“ Yes ! yes ! ” observed the old Brahmin Diwan. “ I am quite sure that work is a good thing for the health of the body. That man is perfect who has a *sound mind in a sound body*, as our old headmaster used to tell us. ‘ Play as well as work, my boys,’ he would say. ‘ Take plenty of exercise, for unless your body is strong and well, your brain and your mind cannot work, and you cannot study properly.’ ”

“ But remember,” continued the Doctor, “ that although we should always eat enough food to keep us strong and well, we should never take more than is enough for this purpose. If we eat more food than we ought to do, we hurt ourselves. Our bodies can only use a certain amount of food. If we put more than this into the body, we get ill. Poor people are not

likely to eat too much, because they can buy only a little food. But among the rich, over-feeding causes more harm than under-feeding."

"But," said the General, "how am I to know when I have eaten enough? If you, sir, were living with me, I could ask you, for you know all about these things."

"Ah!" replied the Doctor, "you have another doctor who is always with you, and he can tell you much better than I can when to eat and when to stop eating. His name is *Doctor Hunger*. He knows all about this. Eat only when you are hungry and stop eating the moment you feel no longer hungry. If you follow this rule, you cannot go wrong. It is even better to stop when you are still a little hungry, than to go on eating when you are not hungry. And do not forget that old men do not want so much food as young men, and those who work hard in the open air require more food than those whose work is reading or writing or keeping accounts, and who sit still all day.

14. Eat Slowly.

The next day when everyone had come to the darbar and saluted the Rajah and taken his seat, the Vakil was not present. "Let us wait a few minutes," said the Rajah. But he had scarcely said this when the Vakil came in, in a great hurry, wiping the perspiration off his face with his handkerchief.

"Pardon me," he said to the Rajah, "for being late. All the morning I was busy looking through some papers in a case that is going on, and so the hours passed. I

had just time to eat my breakfast and come here as fast as I could."

"You are not looking well," observed the Doctor. "What did you have for breakfast and how long were you eating it?"

"I had a large dish of rice and curds and three or four plantains," replied the Vakil, "and it took me just three minutes to get through it, although I ate as fast as I could, because I was afraid of being late."

"How do you feel now," asked the Doctor.

"I must confess," replied the Vakil, "that I am not well. I feel as if there were lumps of lead in my chest."

"It is your own fault," replied the Doctor. "Now you had better obtain the permission of the Rajah to go home at once before you get worse. Call at my house on your way and give this paper to my assistant who is in charge of my medicines. Then take the medicine which he will give you and go home and lie down." As he said this, the Doctor wrote something on a piece of paper and gave it to the Vakil, who was looking very pale and ill. With the permission of the Rajah he departed.

"What made the poor man so ill?" asked the Prince. "Rice and curds and plantains are very simple food."

"There was nothing wrong about the food," replied the Doctor. "It was not the food itself, but the way in which he ate it, that made him ill. Did you not hear him say that it took him just three minutes to eat it? He must have swallowed nearly all that food without chewing it. The lumps of lead that he felt inside him were lumps of plantain. Even rice and curds should be slowly and carefully chewed. That

is what our teeth are for. Any food that you eat should be made by the mouth into a very soft pulp like cream before it is swallowed. It should be well mixed by the tongue with the saliva which pours into the inside of your mouth when you are eating. When food is properly chewed in this way, it will slip down your throat without your knowing it. As my old teacher used to say, 'You need not swallow it, it will swallow itself.' Instead of three minutes, the Vakil ought to have taken at least twenty minutes. There was a famous Prime Minister of the good Queen Victoria in England who lived to be a very old man and was always in good health. When someone asked him how it was that he kept so well, he said that one reason was that he chewed every bit of food that he ate *thirty-two times* before swallowing it. His name was Gladstone."

"I well remember," said the Diwan, "that my little boy, who was then twelve years old, got very ill one day just as the Vakil did. He was learning his lessons all the morning and, being afraid of going late to school, he ate his breakfast very fast. It was milk and rice and a custard-apple. His mother kept telling him not to eat so fast, but he said that his schoolmaster would be angry with him if he went late to school. But he very soon came back from school quite ill, and was ill all that day and had to take much medicine."

"If you find that you have no time to eat your usual meal," said the Doctor, "it will be best for you to eat only a very little of it, but eat it slowly."

"There is one thing that is not very clear to me," said the Rajah. "You told us that all food may be divided into classes which you called meats, fats, starches,

sugars and salts, and that we ought to eat all these. Why should I not eat one kind of food only, namely, the kind I like best, rice, for example ? ”



WILLIAM EWART GLADSTONE.

“ Each kind of food has its own work to do in the body,” replied the Doctor. “ Meats help the body to grow in youth, and to keep strong and able to work in adult age. For this reason you ought to eat some kind of meat. If you are a Brahmin and cannot eat

flesh or fish or eggs, then milk and curds and butter, or ghee or cheese, should form a part of your food. Sugar and starch also help to keep the body strong and fit for work, and they warm it too. The fats also keep the body warm and prevent it from getting thin. People who live in very cold countries in the north of the world have to eat a great deal of fat and oil which they get from the whale and the seal, which they catch in the sea. We who live in a hot country do not need so much of this kind of food. Besides these foods, we should eat fruits and green vegetables, because they keep the body in health, for they contain salts and acids which the body needs."

"I remember," remarked the Prince, "reading in some book that sailors, who made long voyages in sailing ships, like Columbus who discovered America, used to get ill, because, in those days, it was not possible to store enough fresh fruits and vegetables in ships to last the whole voyage. The sailors often died for this reason. In these days, there are very large ships and steamers which always carry fresh fruits and vegetables."

"Yes," said the Doctor, "we must eat a little of several kinds of food if we are to keep well and strong, but we should never eat anything that is useless or likely to do the body harm, even though it should taste nice."

"Now," said the Rajah, rising, "the darbar is closed to-day. Each of you has his work to do. We have heard a good deal about food and about eating. Our kind friend and guest, the learned Doctor, will, I trust, tell us to-morrow something about drink."

15. Alcohol a Poison.

The next day, when everyone had come to the darbar, the Rajah said to the Doctor, "We all heard the story of Cyrus the other day, and it showed us, as indeed we all knew before, what an evil habit drinking strong drink is. But can you tell us more about it? Why should strong drink affect a man in this way? There are many kinds of drink. What is there in strong drink that makes a man lose his senses? Cyrus said there was poison in it. Is this true?"

"What Cyrus said is quite true," replied the Doctor. "There are many kinds of poison. Some very deadly poisons kill a man at once, in a minute or two. Some act slowly, they are slow poisons. A man may take a little and not feel it. But if he keeps on taking it and takes more and more of it, it will kill him at last. Some poisons drive a man mad. He may not die, but he loses his senses.

"Some poisons, too, are only poisons when taken in large doses. In small doses they act like medicines, and are often given by doctors to their patients. And there are also poisons which do not kill a man, but injure his health and make him stupid and dull and heavy.

"One of these poisons is known as *Alcohol*. There is more or less of alcohol in all those drinks which are called 'strong-drinks,' such as wine, beer, brandy, gin, whisky, toddy and arrack."

"Please tell us something about this thing alcohol," said the Diwan. "What does it look like? What does it taste like? And what does it smell like?"

"Pure alcohol," replied the Doctor, "has no colour and looks like water. It has a strong smell of its own, while good water, as you know, has no smell. If you taste it, it burns the tongue like fire. It cannot quench the thirst like water. It will take fire and burn if a lighted match be held to it. Indeed, one form of it, known as 'methylated spirit,' is used for spirit lamps and to drive motors, because it burns so well, giving great heat and no smoke."

"If this is the case," said the Rajah, "no wonder you called it a poison. I should think that pure alcohol would kill a man if he drank it. It would burn his mouth and his throat and his stomach."

"It would, indeed," replied the Doctor, "and therefore no one ever drinks pure alcohol. There are strong drinks, nevertheless, which contain a good deal of alcohol, and they will also take fire and burn if lighted, for example, brandy and whisky and arrack will burn in this way. These drinks are called 'Spirits.' Other strong drinks which contain less alcohol will not burn in this way. Wine and beer and toddy will not burn."

"How much alcohol does each of these strong drinks contain?" asked the General.

"Beer contains least," replied the Doctor. "There are many different kinds of beer. They contain from one part of alcohol in twenty-five parts of beer to one part in twelve. There are also many kinds of wine. They contain about one part in ten. But spirits are about one-half pure alcohol. For this reason men usually mix them with water, so as to make them weaker. When weakened in this way, they do not poison a man as pure alcohol would. But they do harm even

in this weakened form, especially if they be taken frequently."

"Are these drinks of any use as food?" asked the Rajah, "and if not, why do people take them?"

"People drink them because they get to like the taste of them," replied the Doctor. "They are of no real use as food, because they cannot make us grow, nor keep the body from wearing away, nor make it strong. They contain no starch, no fats, and only a little sugar. And they can do actual harm to the body by preventing real food from being taken into the blood.

"They do not quench thirst, like water, but make people more thirsty than they were before, for the alcohol in them has the property of taking away water from the body. When we drink water, it dissolves the food in the stomach and makes it fit to become blood. This alcohol cannot do. On the contrary, it makes vegetables hard and tough and useless as food. As it draws out the water from the inside of the body and mixes with it, making it useless, the body wants more water, and this is why a man who takes strong drink gets thirsty."

"Does alcohol have any other evil effect on the body?" inquired the Prince. "You said it was a kind of slow poison. How does it poison the body?"

"There are many ways in which alcohol injures the body," answered the Doctor, "I will tell you some of them, which I have myself noticed in patients whom I have attended.

"In the first place, alcohol prevents the growth of the body in young people. If they drink it in any form, they will not grow up tall and big, but remain short.

Even plants are hurt by alcohol. If seeds be put into water with only one part of alcohol in 100 parts of water, they will be killed. And if growing plants be watered with water mixed with alcohol they do not grow properly. If fishes be placed in water with a little alcohol in it, they die. If the young of dogs or cats be given water with a little alcohol in it, to drink regularly, they do not grow up strong and big. Some foolish people who are very fond of drinking beer and spirits themselves, sometimes give these drinks to their children, and these children seldom grow up strong and big."

"That is very sad," observed the Diwan. "A drunkard knows well enough how drink injures him. It seems to me that he would at least wish to keep his children from the evil habit. But what other bad effect has strong drink on grown-up people?"

"It makes the body weak," replied the Doctor, "and unable to resist disease. This I have often noticed. When I treat men for fever or any other disease, say, consumption, I find the man who never drinks anything but water is twice as likely to recover as the man who drinks brandy or arrack regularly. And I also find that sores or cuts will not heal so quickly or so easily in a person who drinks spirits as they would in a person who drinks water only. This is because the blood is made impure and unhealthy by the drinking of spirits."

The Chief Secretary here remarked, "Yes. I remember one very well-known instance in history of what you say."

"Tell us about it," exclaimed the Prince.

"I am afraid we cannot wait longer to-day," said the Rajah. "I have some very important business to do in the afternoon. The darbar is now dismissed, and we shall meet to-morrow at the usual hour. The Chief Secretary may then tell us his story. It is sure to be interesting."

16. Stories of Alexander the Great.

When the darbar opened the next day, all the members were in their places when the Rajah arrived. "Now let us hear your story," he said to the Chief Secretary, "but let us first know where you got it from."

"I read it," replied the Chief Secretary, "in the same book in which I read the story of Cyrus the Great. A still more famous king than Cyrus was Alexander the Great, King of Macedonia in Greece. He was a very brave and skilful general. He became king at the age of twenty years. In his days, the Persian Empire had grown to be very large, but the Persians had lost the simple habits of their forefathers. Their kings ate rich food and drank strong wines and lived in great luxury. Alexander led a small army of Greeks into Asia and conquered the Persian Empire. He even invaded India, but did not get further than the Punjab. He shared all the hardships of the common soldiers and fought with them on foot. They all loved him. Once in a great battle when everyone was tired and worn out with thirst, a soldier brought to him his steel helmet filled with water which he had got with great difficulty. But Alexander would not drink it. He poured it out

on the ground as an offering to the gods. 'Shall I drink and quench my thirst?' he exclaimed, 'while my soldiers are all thirsty: I will suffer with them.'

"After his great successes, the nature of Alexander changed. He became proud and haughty. He married



ALEXANDER THE GREAT.

a Persian Princess, and liked to listen to the flatteries of the Persian nobles, who told him he was a God. He made great feasts and drank strong wines very heavily. Once he offered a prize to whichever noble should drink most. The noble who won the prize drank eight large bottles of wine and died in two days. Forty

noblemen who had also drunk a good deal, died a week afterwards.

“At another feast, when he had drunk a great deal of wine, a Greek woman named Thais, who hated the Persians, said, ‘Burn down the great palace of the Persian King Xerxes. This will make you famous for ever.’ The drunken King and his drunken nobles seized torches and set fire to the splendid palace. It was burnt to the ground with the beautiful carvings and priceless treasures it contained.

“Many of the Greek chiefs were disgusted with their King. At a feast when the King had drunk deep, some of the Persians called him a God. He was very pleased and said, ‘Yes, I am a God. My father was the Great God Jupiter, the King of Heaven.’ A brave Greek who was one of Alexander’s dearest friends was there. He grew very angry. ‘Your father was Philip, King of Greece before you,’ he exclaimed. ‘Are you ashamed of him, that you say you are the son of Jupiter?’ Alexander ordered him to stop speaking. ‘I am a free Greek,’ he replied, ‘I am not a Persian slave. I will speak the truth. Did I not save your life in a great battle? You are a king, it is true, but you are a man and not a God.’

“Alexander then flew into a fury and threw a spear at his friend, who was named Cleitos, and killed him. When he became sober and saw what he had done, he was filled with grief, and neither ate nor drank for two days. He had killed his best friend, to whom he owed his life.

“This great King who had conquered many countries and founded great cities, one of which, named *Alex-*

andria, is the great port of Egypt at this day, died at the early age of thirty-two, from the bite of a tiny mosquito. The learned Doctor told us long ago how malarial fever is caused by the bites of mosquitoes, and every child in our country now knows this. The death of Alexander the Great is a very famous and striking instance of this. He wished to make Babylon, a great and famous city in Mesopotamia, his capital, and he spent some time in the malarial marshes of the river Euphrates looking after the building of a grand palace himself. One night he drank deeply at a banquet and went to sleep in his tent. He was bitten by a mosquito and a day or two afterwards he had malarial fever. His constant drinking had made his blood so impure that his body had no strength to resist the disease. Day by day he grew worse and then died."

"Do you think he would have recovered, if he had not been a drunkard?" asked the Rajah.

"I cannot say that for certain," replied the Doctor. "But a strong man, at the early age of thirty-two, had every chance of recovering. A drunkard would have no chance at all.

"And I may mention one more evil which is caused by the habit of drinking and which this story of Alexander the Great recalls to my mind. It is this. There are some diseases which often descend from father to son. They are called *hereditary*. The craving for strong drink is one of these. It has often been found that the children of drunkards show this strong craving while other children are free from it. Thus a drunkard not only ruins his own health, but the health of his

children who may be born after he has formed the evil habit.

“The father of Alexander was Philip, who founded the kingdom of Macedonia. He was a notorious drunkard. It is said that he would get drunk after a battle and dance like a madman on the battle-field, between the corpses lying there. On one occasion, a poor woman came to him, to ask for justice in some case. But Philip had been drinking and would not hear her. She bravely said to him, ‘You are drunk. I will come again when you are sober. “I appeal from Philip drunk to Philip sober.”’ The old woman’s saying has passed into a proverb.”

“It is now time for us to go home,” said the Rajah. “We will meet to-morrow at 11 o’clock and I hope the learned Doctor will tell us some more about the evils of drinking.” The darbar then broke up. The Treasurer, as he went home, said to himself, “I did not know before what injury I was doing myself by drinking. I am very glad I have given up that bad habit.”

17. Evils of Strong Drink.

The next day there was a full darbar. The fact was, that one or two of the Rajah’s ministers, besides the Treasurer, had been in the habit of drinking, more or less. No one had ever been drunk like the Treasurer, it is true, but still they had been gradually getting into the habit. What the Doctor had said had sunk deep into their minds. No one had ever told them before about alcohol, in fact they had never heard the

word. They grew alarmed at what they had heard and longed to hear more. Even the other courtiers who had never tasted liquor were surprised at what they had heard and wanted to find out something more. So everyone came, full of curiosity, eager to listen to the great Doctor.

The Rajah returned the salaams of everybody as he walked in and took his seat. "I am glad to see everyone is here," he remarked, "for I have often felt that it was my duty to do something to stop this evil habit of drinking, which I hear has been spreading among my subjects lately. Until our friend here told us so much about it, however, I did not know clearly in what way it injured the body. We have done much in this country to keep the people free from deadly diseases, such as plague and small-pox and cholera; but it now seems to me that this drinking is also a disease, and that it must kill some people and make many more weak and unable to resist disease. But tell me," he added, turning to the Doctor, "do you know if any other Rajah or king in any other country has ever done anything to stop drinking among his subjects?"

"Yes," replied the Doctor. "I can give your Highness one very remarkable instance which has only lately occurred. We have all heard of the terrible war that is now being waged in Europe, between the savage and brutal Germans and their allies against the British, French, Russians and their allies. The Germans have no sense of honour, justice, truth, or morality. They break the most solemn treaties and call them mere 'scraps of paper.' In this war they kill unarmed men, women, and children, they destroy churches and

hospitals, they poison the streams of drinking water, they murder their prisoners in cold blood, they commit other crimes too horrible even to mention. They can no longer be counted among civilised nations, but must be regarded as cruel savages.

“The Emperor or Czar of Russia reigns over a larger empire than any in the world excepting King George, who rules over England and India and many other countries. He has absolute power in this vast empire. He is a brave and good ruler, ever seeking to do his subjects good. The Russians were, for hundreds of years accustomed to drink a very strong spirit called *Vodka*. The Russian government used to derive a large revenue from the sale of the *Vodka*, on which there was a tax. But the good Czar, or Emperor of Russia—knowing the evil that *Vodka* was causing—when this war broke out, abolished the making of *Vodka* throughout his dominions by one stroke of his pen, although his government lost crores and crores of rupees of revenue by this act.”

“But,” said the Diwan, “what has this to do with the war that is being waged?”

“It has very much to do with it,” replied the Doctor. “The Czar knows very well that his soldiers will fight much better without *Vodka*, and that is why he has abolished the making of it.”

The General, who had listened to this story with great interest, here said, “Does anyone know a story of any Indian king who did something like this when he was at war?”

“Yes,” replied the Registrar, “when I was at school I read my Indian history very carefully. I remember

a tale in it about the Emperor Babar. He was the first of the Mogul Emperors, and was a brave and gallant gentleman with many good qualities, but he was very fond of wine, although he was a Muhammadan, and therefore by the rules of his religion he ought not to have even tasted strong drink of any kind. Once when he was at war with the Rajputs, he found that he stood in great danger, for he was nearly surrounded by an army which was larger and stronger than his own. A great battle was to be fought that day and he knew that if he should be defeated he might lose his empire. A caravan of camels had just arrived laden with wine. Babar's officers had been looking out for this caravan for some time, for they thought that when it came they would have a grand drinking feast. But to their great surprise, the Emperor spread his prayer carpet on the ground in sight of his assembled troops. Then, kneeling down upon it, he prayed to God to give him the victory, and vowed that from that time he would never taste another drop of wine. Then he sent for all the gold and silver drinking cups and wine jars in camp. He caused them to be broken into pieces and directed that the gold and silver pieces should be given to the poor. He poured out on the ground all the wine that had just arrived by the caravan. The soldiers, who were all Muhammadans, were very glad to see him do this. Even the officers loudly applauded him and took the same vows themselves. The troops now thought that God was on their side. They fought with the greatest bravery and won the battle."

"Explain this matter to us more clearly," said the General. "I have often read and heard that soldiers

fight better and more fiercely when they are half-drunk. I have been told that many generals give their soldiers liquor or bhang or something of that kind to drink or to eat just before a battle, because it makes them fight better."

"That is true," answered the Doctor, "but it has been found to be a great mistake. In our days no good general does this. I will explain why this is so.

"The drinking of spirits weakens the power of the heart and of the whole body, so that it cannot do work properly. Many experiments have proved this. Two gangs of men were set to do some hard work such as cutting down grain or making a road. One gang was allowed to drink beer, the other was not allowed to drink anything. The former got tired out before the latter. The next day the same two gangs were made to do the same work, but the second gang was given beer to drink and the first gang had nothing. Now the first gang beat the other gang easily, though they had been beaten by it the day before.

"In the great South African War, fought a few years ago between the British and the Boers or Dutch settlers in South Africa, it was found that soldiers who drank spirits got tired on a long march much sooner than those who drank nothing.

"When men are training for races in England, either boat-races or foot-races, where the strongest men will win, they are not allowed to taste a drop of wine or even beer while they are being trained, because it is well-known that they will not be so strong nor keep their strength so long if they drink beer or spirits. They are only allowed to drink water.

“A great many experiments have shown that men who have to work hard do their work more easily and get tired less quickly than men who are accustomed to drink.”

“Has drinking any effect on food?” asked the Diwan.

“It has,” replied the Doctor, “when alcohol is taken into the stomach it burns and hurts the skin of the stomach, which is very thin and easily injured. And, as we saw before, the alcohol makes any vegetable substance tough and hard by taking all the water out of it. The food in the stomach, therefore, cannot be changed into blood easily if alcohol be mixed with it. And it has been found that drunkards lose their appetite for food and gradually waste away.”

“At any rate,” observed the Vakil, who was always trying to find some argument against what anyone else was saying, “at any rate, there is one thing that drink does, you cannot deny that it makes the body warm. Have you never seen how hot a man looks when he has been drinking?”

“Ah! my friend,” replied the Doctor, “that kind of heat is not good. It is a false heat. The effect of alcohol is to make the heart beat very fast and send blood all over the body—more blood than the body wants. The skin gets hot, and the face looks red, and the man no doubt feels warm all over. But this feeling soon passes away and the man feels cold. The heart which has been beating so fast now beats too slowly. What happens if you run very fast? Soon you must stop. You are so tired that you cannot even walk. If you had not run, you would have been able to walk

a long time. Drinking spirits is like beating a horse to make it go faster. It does go faster for a time, but then it tires and goes slower. The man who drinks hard is, as it were, beating his own heart to make it go faster.

“When the skin gets hot, it rapidly loses its heat, which goes into the air all round it. Then the body gets cold. This is so well known that sailors who have to sail in the Arctic seas, or travellers who go over the ice and snow in the Arctic regions to ‘explore’ the country, never take alcohol in any shape or drink any spirits. They know that it would make them colder in the end, and also weaken them. Often a drunken man dies when he is exposed to the cold, while the sober man endures the cold and escapes with his life.

“A party of brave sailors recently went for the first time into the icy continent called Antarctica. They got as far as the South Pole, to which no one had ever been before. They took no strong drink of any kind with them. If they had done so, they would never have reached the South Pole.”

“Yes,” said the Vakil, “I admit now that I was wrong when I said that alcohol did the body good by warming it. But does it not quicken the action of the brain? I have heard men say that men think more clearly and compose verses more easily after drinking wine.” The fact was that the Vakil had himself drunk spirits now and then before going into Court, thinking that it would enable him to argue better. But he was ashamed to confess this before the darbar.

“Alas!” said the Doctor, “it is the same mistake over again, that men make when they think that alcohol

warms them. It does quicken the action of the brain very much, only too much. It quickens the action of the heart and the heart sends a wave of blood to the brain. But this is for a short time only. Soon the effect passes off and the brain is worse off than before. And a supply of too much blood destroys and weakens the nerves. The brain gradually loses its control over the nerves. One sure sign that a man drinks is that his hand becomes unsteady and shakes. However he may try, he cannot keep his hand steady. This was well proved by a number of experiments in shooting. In this exercise, soldiers hold a gun in their hands and shoot at a small mark far away, say half a mile away. If the hand shake ever so little, the gun will not shoot straight and the bullet will not hit the mark. A dozen soldiers, who had taken a little brandy and water, shot at a mark. Then another dozen, who had taken nothing, shot at the same mark. The second dozen hit the mark far oftener than the first. The next day the same men shot at the same mark, but the first dozen this time had nothing to drink and they easily defeated the second dozen, who were given the same quantity of brandy and water. The reason was that the brain and the nerves acted better without the spirits than with them. The sight, the touch, the smell and the hearing are all weakened by the use of alcohol in any shape. *That man can hear best, see best, smell best, and think best who has never tasted liquor of any kind."*

"That story we heard about Cyrus," observed the Rajah, "was a very good one. Cyrus described to his grandfather how he and his nobles behaved when they were drunk, and this made the boy think they had

taken some kind of poison. They did not seem to know what they were doing."

"Indeed they did not," said the Doctor; "that story showed us how alcohol affects the understanding, the reason, and the will. It also affects the memory, for it weakens the brain, and the brain is the seat of memory. The King of Media and his nobles had quite lost the power of reasoning. They acted as if they were mad. We heard what Alexander the Great did when he was drunk, how he set fire to the beautiful palace of Xerxes and killed his best friend. He did not know what he was doing. When men get very drunk their brains have lost all power. They are, as it were, dead. They are, indeed, said to be dead-drunk. They lie on the ground like logs of wood, and while the effect of the liquor lasts, they may be considered as dead—sight, hearing, seeing, thinking, all are gone. Often they die in this state. And sometimes they go mad and never recover their reason.

"And the worst of drinking spirits is, that the habit grows upon a man. If he does it regularly, his brain gets weaker and weaker. He knows very well that he is hurting himself, but he cannot stop; he has lost the power of resistance, and he takes more and more. At last he becomes a confirmed drunkard, a disgrace to his family, despised by everybody.

"Another evil effect of drinking spirits," continued the Doctor, "is, that it injures the brain so much that a man is no longer able to distinguish between right and wrong. He no longer sees that it is wrong to tell a lie. He seldom speaks the truth. He deceives others. You cannot trust him. He sees nothing wrong in taking

what belongs to others. He loses his temper and angry for no reason. He treats his wife and children badly, a thing he would never have done before drinking had destroyed his reason. He gets less and less inclined to work, in fact, he is unable to work. It is said that the evil habit of drinking has brought more misery into the world than anything else."

"Well," said the Rajah, "we all know now what an evil thing the drinking of spirits is. I know well, as I said before, that many of my subjects give way to it. How may I let them know how to free themselves from it?"

"One thing I advise you to do," replied the Doctor. "When I returned to your country this time, I observed that even the children in the schools had learned the rules of health that I gave you on my first visit. Now let all that I have told you this time about food and drink be written down and put into little books for children to read. Call them 'Health Readers,' and order that they be read in all schools. The children, no doubt, will tell their parents what they read, and they themselves will observe these rules of health when they grow up."

"I have one favour to ask," said the Diwan, rising in his place as he spoke; "it is this. I have a little son aged twelve years. So far, he has learned all that we have heard, for I have taken down notes and written them out every day after I have gone home. I suppose that we shall have one final darbar at which we shall bid farewell to our good friend the Doctor, who has been so kind to us. But before he goes away, I should like to take him over all our buildings, schools, and

ly promised me yesterday that if I would send my son to him every day for an hour during the next week, he would teach him a little more about health. So if your Highness will kindly postpone the next darbar to this day week, I shall consider it a great favour."

"I too have a favour to ask," said the Registrar. "Let my little boy, who is also just twelve years old, go to the Diwan's house to be taught with his son at the same time."

"Certainly," said the Rajah. "I grant both your requests with much pleasure. And perhaps the two boys may be allowed to come before the next darbar and be examined by someone, that we may see what they have learned. I dare say our friend the Vakil will undertake that duty."

The darbar then broke up, the next and final darbar being fixed for that day week.

18. The Boys are examined in the Darbar.

The week at length passed away. Every day the two boys, the sons of the Prince and the Registrar, went to the house of the Doctor for three hours, and he taught them the rules of health from the beginning, both what he had said in the darbar at his first visit and what he had said during the second visit.

On Friday the darbar opened at 11 o'clock. Every one of the Rajah's officers came to it, including several who had not been there before, for the Rajah wished

to do the good Doctor as much honour as possible. He knew that this was the last time he should see him. The two boys also were allowed to come. Each came with his father. They knew they were to be examined. The name of Diwan's son was *Venkata*; the name of the Registrar's son was *Ananda*. The Vakil, too, was ready. He had prepared a number of questions and written them on a paper.

When everyone had saluted the Rajah and taken his place, the Rajah said,

"Let the two boys stand forward and let the Vakil proceed with his examination. This is our first business to-day."

When the two boys stood up before the Rajah, they felt timid. They felt as if they were witnesses being cross-examined in court by a skilful lawyer. The Rajah, seeing this, spoke kindly to them. He said,

"We are all friends here, my boys, *Ananda* and *Venkata*. Do not be afraid. If you answer the Vakil's questions well, I will give each of you a prize." The Doctor also smiled kindly at them, so that they took heart and lifted their heads up, ready to answer the questions. The Vakil said, "I will ask each boy a question alternately, if I may."

"Yes," said the Rajah. "Do so. Now begin."

Then the Vakil began :

Vakil. What is the chief cause of disease ?

Ananda. The chief cause of disease is dirt.

Vakil. Why is that ?

Venkata. Because most diseases are caused by "germs" or living seeds, which breed in dirt.

Vakil. What are germs ?



THE TWO BOYS ARE EXAMINED IN THE DARBAR.

Ananda. Germs are tiny worms, so small that they cannot be seen with the naked eye. Yet they can do great harm to the body.

Vakil. How do they do harm ?

Venkata. Cholera germs breed rapidly in the bowels and so cause inflammation and colic ; malarial germs enter the blood, thus poisoning the blood and causing fever ; other germs act in other ways, but all cause harm and often death.

Vakil. Why do you say that dirt causes disease ?

Ananda. Because these germs hide themselves and breed in dirt. If there be dirt in the house or on the person, they easily find their way into the body and so cause disease.

Vakil. What are the best ways of avoiding or getting rid of dirt on the person ?

Venkata. The clothes and the body should be frequently washed in clean water.

Vakil. What should be done if clean water is not available ?

Ananda. The water should be boiled and then used.

Vakil. What is the use of boiling ?

Venkata. Boiling the water kills all germs contained in it.

Vakil. Is it sufficient to make the water warm ?

Ananda. Certainly not, that is worse than useless.

Vakil. Why ?

Venkata. Because warming the water is like giving the germs in it a warm bath. This merely makes them more fresh and lively just as a warm bath refreshes a man.

Vakil. What, then, is the use of boiling ?

Ananda. Because the boiling scalds them to death, just as a bath of boiling water would kill a man.

Vakil. What is the best way to get rid of dirt in the house and backyard ?

Venkata. All dirt which will burn should be burnt, but at a distance from houses, so as to avoid giving annoyance to neighbours.

Vakil. What should be done with dirt which cannot be burnt ?

Ananda. It should be taken to a piece of dry land at a distance from houses and buried in trenches about a foot deep and then covered with earth.

Vakil. Will not this spoil the dry land ?

Venkata. On the contrary, it will make it rich and fertile, and the land will bear splendid crops.

Vakil. But will not the earth and the crops it produces be dirty ?

Ananda. Oh, no ! On the contrary, the dirt will mix with the soil and improve it, and so become good soil.

"That is enough about dirt," said the Rajah. "Now examine them about Cholera and how to prevent and cure it."

"Now I will ask you about Cholera," said the Vakil.

Vakil. What is the cause of cholera ?

Ananda. Cholera is caused by germs which get into the bowels through the food that we eat or water that we drink, and there cause inflammation and pain and death.

Vakil. How do these germs usually come to us ?

Venkata. These germs generally come to us through water, especially during the times of the first freshes and rains.

Vakil. Why is that ?

Ananda. Because, in the dry season, the beds of our rivers and tanks have been used for all kinds of dirty purposes, and when the rains and freshes come they bring down this dirt into the water ; and cholera germs live in this dirt.

Vakil. Then how can we avoid cholera at these seasons ?

Venkata. By boiling all water before we use it. It is also best to boil milk and to eat only cooked food.

Vakil. Why is this ?

Ananda. Because in this way, if any germs have got into our milk or our food, they will be killed by the cooking before they enter our stomachs.

Vakil. What steps should be taken when cholera visits a village ?

Venkata. Houses and backyards should be kept clean, all dirt being burnt or buried at a distance. All food should be cooked and all the water should be boiled ; if anyone should be suffering from looseness of the bowels, some medicine may be taken to stop it.

Vakil. What medicine ?

Ananda. It is best to take only medicine given by a Doctor or the Hospital Assistant or sent by the Sirkar.

Vakil. But if that is not available, what can we do ?

Venkata. A mouthful of vinegar flavoured with chillies is a good preventive, but it must not be given to young children or invalids.

Vakil. Why not to them ?

Ananda. Because it might kill them.

Vakil. Is there anything else to be done at cholera times ?

Venkata. Yes, it is most important to keep up one's

spirits and not be afraid. If a man keeps cheerful and goes about his work bravely, the cholera germ rarely catches him.

"I see," said the Rajah, "that the Doctor has taught the boys all about cholera. Now ask them about Malarial fever."

Vakil. What causes malaria or malarial fever ?

Ananda. It is caused by germs which are put into our blood by mosquitoes.

Vakil. How can this be prevented ?

Venkata. By killing mosquitoes and their larvae.

Vakil. What are larvae ?

Ananda. After a young mosquito leaves the egg, it does not become a full-blown mosquito at once, but turns into a sort of caterpillar which lives in water.

Vakil. How can this be killed ?

Venkata. By draining all pools and puddles of standing water near dwelling-houses and keeping all the surroundings of the houses dry and clean.

Vakil. What good will that do ?

Ananda. The larvae will have nowhere to live, for they can only exist in pools and puddles of still water, and the mosquitoes will have no dark, dirty places in which to hide, and so they will go away.

Vakil. What is the best cure for malaria ?

Venkata. The best cure is quinine.

Vakil. How should it be taken ?

Ananda. A dose of 5 grains every day may be taken in water until the fever subsides. A smaller dose must be taken by boys.

Vakil. What is the use of quinine ?

Venkata. It mixes with the blood so that the malarial germ cannot live in it. Quinine poisons these germs.

"Well done! Ananda and Venkata," observed the Rajah. "You have not missed a single question. But I wonder if the Doctor has taught them anything about other diseases, such as stomach-ache and diarrhoea and dysentery."

"Ask them," said the Doctor.

"I am sorry," said the Vakil, "that I have not prepared any questions about these things. I beg that someone else may ask them. I think the best person to do this is the Doctor himself."

"I think so too," said the Rajah. "Will you, sir, ask the boys these questions?"

"Certainly," replied the Doctor. He then began.

Doctor. Ananda, What is the chief cause of diseases of the bowels and stomach?

Ananda. The chief cause of such diseases is unsuitable food.

Doctor. What is the cure?

Venkata. To eat only plain food, such as plain rice and gruel or *kanji* and milk for several days until we feel well again.

Doctor. May we eat curry or ghee?

Ananda. Oh, no! at such times they are little better than poison.

Doctor. Then what condiments may be taken?

Venkata. None at all, except salt. Until the body is restored to health, only plain rice and milk and gruel should be taken.

Doctor. But what if a man cannot eat food without condiments?

Ananda. It will do him good to fast until he can.

Doctor. Is any medicine required in such cases ?

Venkata. As a rule, none, so long as a man observes these rules about diet.

Here the General stood up and said,

“ If it please your Highness, I too should like to ask these boys some questions about cuts and wounds and sores. Many of my soldiers get cuts and wounds when they go through their exercises. But perhaps the Doctor did not tell them about these things.”

The Doctor smiled and replied, “ Ask the boys, but do not let your questions be very hard. If your questions be simple, I have no doubt they will be able to answer them.”

General. What is the most important thing to do in treating cuts, wounds, and sores ?

Ananda. To keep them clean.

General. Why is that ?

Venkata. Because such hurts heal of themselves very rapidly if they be kept clean.

General. Why then do some wounds fester or become sore and painful ?

Ananda. Simply and solely because they have not been kept clean, and so germs have got into the body through the open wound and made it worse.

General. What, then, must be seen to, in treating cuts and wounds ?

Venkata. They must be washed with clean water and bound up with clean cloths.

General. How can we get clean water ?

Ananda. By straining it through a clean cloth and then boiling it.

General. Is straining sufficient ?

Venkata. No, it must also be boiled.

General. Why ?

Ananda. To kill the germs.

General. How can we get clean cloths to bind up the wound ?

Venkata. By boiling them in water and hanging them up in the sun to dry.

General. May we not lay them on the ground to dry ?

Ananda. Certainly not.

General. Why ?

Venkata. Because the earth contains many germs which may cling to the cloth and so enter the wound and cause trouble.

General. Is any other treatment necessary ?

Ananda. A little gingelly oil may be applied to the wound so that the cloth may not irritate it ; but the gingelly oil must be pure.

General. How can we be sure that it is pure ?

Venkata. We can never be sure ; but if the oil be first strained and then boiled and allowed to grow cool in a bottle, it will probably be harmless.

General. What, then, is needed for the treatment of wounds and sores ?

Ananda. Clean water, clean cloths, and clean oil.

The General here sat down and said, " These are all the questions I had to ask. I am quite satisfied with the answers."

The Rajah then said, " I will myself ask the boys some general questions as to how to prevent all diseases."

Rajah. What is the best preventive of all diseases ?

Ananda. Cleanliness.

Rajah. Is it sufficient to keep the person clean ?

Venkata. No, it is most important to see that the house and the backyard are equally clean.

Rajah. If we keep our house and backyard clean, is that enough ?

Ananda. No, there is one thing still more important.

Rajah. What is that ?

Venkata. Our drinking water-supply.

Rajah. Why ?

Ananda. Because most diseases are caused by bad water.

Rajah. What can we do ?

Venkata. We can see that our drinking-water tank or well is kept clean ; that no one uses it for bathing purposes or to wash clothes ; that no one spits or eases himself in the neighbourhood.

Rajah. Is that all ?

Ananda. We must be still more careful to do none of these things ourselves.

Rajah. But what is the use of taking all this trouble ?

Venkata. Well, the Doctor told us that some sixty or seventy years ago, cholera and malaria were as common in England as they are now in India.

Rajah. Is that the case now ?

Ananda. No, cholera and malaria are now as good as unknown in England.

Rajah. And what is the reason ?

Venkata. The people of England have learned to obey the Laws of Health, to drain their villages and keep them clean, and to purify their water-supply.

Rajah. May we also hope for the same result ?

Ananda. Yes, certainly. We must take trouble and

not be content with mere talking. Reading and talking only will do no good. We must *act*.

Rajah. What must we do ?

Venkata. We must ourselves observe the rules of health, and especially we must keep our persons and our houses and villages dry and clean, and must be careful to have everywhere a good supply of pure drinking water.

"That will do," said the Rajah. "You have both answered the questions that have been put to you very well. I will not ask you questions about food and drink, because it is very late and there is no time for this. Here is a present of fifty rupees for each of you."

The boys then came forward and received their prizes, and made a low salaam to the Rajah.

"What will you do with the money ?" said the Rajah.

Both boys then went up to the Doctor and making a low bow said, "Kind sir, be pleased to accept this money which the Rajah has given us, as our fee for your instruction."

"No, no ! my dear boys," cried the Doctor. "You are good boys, and I see your fathers have taught you very good manners. But I want no fee. It has been a great pleasure to teach you. Buy some good books with that money, and ask the good Rajah to write his name in them and keep them carefully all your lives."

"Now," said the Rajah, "it is very late. We ought not to keep our honoured guest any longer. I know that all his preparations are made to leave our town this evening.

“ We all thank you, sir, for your great kindness. We wish you could always stay with us and give us your good advice. But your own king and your own country need you. So we give you leave to depart, and we hope that you will have a safe journey back to your own country.”

Then the Rajah bestowed on the Doctor many rich gifts and dismissed him with great honour. He returned to his own country in safety.

