TEXT BOOK

OF

INDIAN CITIZENSHIP

VOLUME I: JUNIOR

STAGE 1: MAN, WHAT HE IS AND WHAT HE CAN DO

BY

ERNEST WOOD

PRINCIPAL, SIND NATIONAL COLLEGE; FOUNDER, MADANAPALLE COLLEGE; HON. SEC., THEOSOPHICAL EDUCATIONAL TRUST

MADRAS

GANESH & CO., PUBLISHERS

FOR

THE PROMOTION OF NATIONAL EDUCATION

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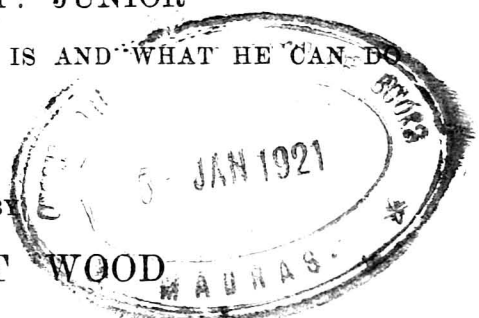

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INTRODUCTION FOR TEACHERS

THE teaching of Civics, the Science of Civilization (defined in Stage III, Chapter IX) can be expected to make a clear and permanent impression upon the mind of the pupil only if its subject-matter is brought into relation with his actual life and experience, and if it is taught with feeling as well as knowledge. The teacher must have a definite purpose in view throughout the whole course—to impart information and at the same time to awaken the social sense of the pupil through the emotions. The Teacher who feels the value of his subject in the life of the individual and the community will be most successful in this, for it is necessary to feel and to exhibit feeling without reserve in order to affect the character of the pupil. The attempts that have been made in several countries to teach Civics to school children in a purely academic atmosphere have produced poor results, leaving no permanent impressions in the life of the growing citizens. So treated, the subject takes its place along with many others which the student never relates to practical life, but merely memorises in a perfunctory or parrot-like way, and drops from his mind as soon as the examinations are over. The

present book aims at a progressive appeal to the awakening and developing social instincts of the boy or girl, leading him gradually from thought and feelings about the affairs of his own life to the larger questions of his relation to humanity, his place in the series of men, and the larger interactions of social groups.

The Junior Course, consisting of the first three stages, is intended for the training of boys and girls of ages approximating twelve to fourteen. It can be used for teaching younger children also, if the teacher simply employs the book as a guide for lessons to be framed by himself, suitable to the needs of the children whom he knows; but below the twelfth year I should not recommend that the book be put into the student's hands as a text-book, or even as a reading-book. It is, however, suitable, and indeed necessary for older students, and even for grown-up persons whose education along these lines has been neglected. The teacher in all cases knows his pupils and their environment, and it should be his care to introduce a great many illustrations from within their experience, so that the matter of the lessons may be clear and vivid to them. Grown-up people are apt to forget that words mean much less to a child than to themselves, and the teacher often fails to realise how far are the thoughts of the child from the ideas that he is seeking to convey. The child's mind is, however, very vivid

with regard to its own limited world of experience, and the teacher, like a pedlar with his basket of wares, can always gain entry there when he brings something appropriate and seasonable. New ideas can only be grasped when they are related to knowledge and experience already within the mind. They cannot be tacked on to nothing, and any attempt to force them in can only result in dimming the brilliance of youthful imagination, and destroying the natural and healthy eagerness for knowledge which is found in nearly every child.

In the Junior Course, it is assumed that the emotions of the pupils predominate over the intelligence, which is awakened and developed only when the emotions are first interested. These three stages must therefore serve chiefly as a training for the emotions, and the teacher's work is to awaken and encourage these. This he can do only by feeling them strongly himself, and letting the pupils see that he feels them. He (or preferably she) must constantly show pride and dignity in the possession of human qualities of brain, head and hand. Kindness must be taught kindly, with gentle words and patient manner, dignity with dignity, human achievements with reverence, human brotherhood with enthusiasm. The class room must be full of enjoyable feeling, Civics, of all subjects, can never be taught by what are called disciplinary methods. A sense of dignity and a realisation of the power of kindness have to be

coaxed into expression from within the child's soul, and any outrage of the child's dignity by harsh words or rough manner, or any threat or rule of fear, which demonstrates the failure of kindness, ruins the lesson.

The feelings to be awakened and the information to be given in the different Stages will be evident from the table of contents, and will become clearer as the study proceeds. Much of the information is more in the nature of illustration than of instruction, and must be kept subordinate to the main purpose of awakening social desires and the true spirit of civilization. How they lead up to the studies in the Senior Course may be seen by reference to the Synopsis of the latter at the end of the Contents pages. Hygiene and Sanitation are an important branch of Civics, but are very briefly treated here as they are usually taught as a separate subject. With reference to Stage One, it may be noted that most people, strange to say, do not realise that they are men, and this is partly the reason why many so easily degrade themselves below the human lot. The Rig-Veda states that minerals exist, plants feel, and animals know, but know not that they exist, feel and know; while man exists feels and knows, and also knows that he exists, feels and knows. But it is to be feared that this knowing is sadly imperfect among our citizens the world over, and civic life consequently suffers. The knowledge of what it means to be a man must

become a constant realisation, coupled with a sense of human dignity and worth. If animal motives are frequently breaking out among men, the community is bound to suffer, for true civic life, or civilization, implies human motives in the citizen, and the abiding emotions of manliness and womanliness which can become permanent in character as a result of the studies outlined in this first stage.

I have assumed that the average school works for thirty-six weeks in the year, and that two lessons in this subject will be given each week to each class. Allowing for time taken by occasional holidays and revision, I have estimated that sixty-six lessons will be given in the year. Each one of the twenty-two chapters of the first stage, which is the first year's course, may be made the subject of three lessons. If only one longer lesson is given in each week I should recommend the teacher to mark out eleven of the chapters which seem to him the simplest; using each of these for one lesson, and each of the remaining chapters for two lessons, he will thus make up thirty-three lessons for the year's course. If the entire book is introduced into the school as a four years' course, beginning perhaps with the thirteenth or fourteenth year, I should advise that each chapter be taken for one week's work, so that the three stages will be covered in two years.

Adyar, Madras
June, 1920

ERNEST WOOD

NOTE

I TENDER my thanks to the proprietors of "Bibby's Annual," "The Scientific American," and "Leslie's Weekly," Messrs. Becker & Co., and others, for their kind permission to reproduce a number of the pictures which appear in this book.

E. W.

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TEXT BOOK

OF

INDIAN CITIZENSHIP

VOLUME II: SENIOR. (IN PREPARATION)

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STAGE I

MAN, WHAT HE IS AND WHAT HE CAN DO

PART I

MAN AND HIS ENVIRONMENT

1. Our Life.
2. Other Lives.
3. The Unity of Life.
4. Man and the Animal World.
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CHAPTER I

OUR LIFE

WHEN we rise in the morning, refreshed by the night's sleep, what do we do, and what do we see and feel before we once more retire to rest at the end of the day? Our daily life in the world is made up of two kinds of living, namely, sensing and acting. It is said that we have five senses in the body, so that we are able to see, hear, feel, smell, and taste something of the world around us. There are also said to be five organs or instruments of sense, namely, the eyes for sight, the ears for hearing, the skin for touching or feeling and for the sense of heat and cold, together with the muscles for sense of pressure or weight, the tongue for taste, and the nose for smell. From all these organs little threads called nerves, which act like telegraph wires, carry to the brain information about the things that exist in the world around us. In addition to organs of sense we have organs of action, so that we are able to walk, to pick things up, to speak, and to do many other things which we call actions.

What takes place in our lives by means of the organs of sense and action is called our outer life,

but we have an inner life also, which is made up of our emotions, such as love or anger, our thoughts, and our will. When impressions have been carried by the nerves to the brain and have entered our inner life also, we are able to think about the things that we see, and with the aid of our imagination we can live a life of thought inside our own minds. For example, when we are lying in bed we can imagine that we are playing in a field, sitting in school, talking to friends, or building a house. We can think over the things that happened yesterday, last year, and even many years back, because we have memory; and we can form some judgment about what is likely to happen to-morrow, next year, and even many years hence. For example, we know that after many years boys and girls will be grown up men and women, living a life something like that which is lived by their fathers and mothers now.

While we have thus an outer life and an inner life of our own, we live among other beings who have also inner and outer lives of their own, and many of these have sense-organs and instruments of action which are also something like ours. For example, horses and cows have eyes, ears and so on, but they have not hands with which to lift things or to work. Our outer life is combined with that of all the beings and objects around us—we cannot live separately. And all the time we are affecting the world around us (including men and women and children, animals,

plants and all kinds of objects and things) by doing various acts with our limbs and other parts of our bodies. For example, we breathe the air into our lungs, and then breathe it out again in an altered condition; we pour water over our bodies when we bathe; we drink and eat, taking into our own bodies food from outside; we cover our bodies with clothes made from plant fibres or wool from animals; we speak to people and touch them; we read books and letters and write letters for other people to read; we walk and run and play, and perh ps we make things with our hands or with tools. Indeed, in the course of the day we do a great many things which affect the lives of other beings and the condition of objects in the world. The lives of other people, as well as animals and plants, become different because of our existence and our actions.

Our own life is also affected by our actions, and by the actions of others. When we see something new our thoughts become different, and our inner life is changed. When we are told something new also there is a change in our minds, and we are happy or sad on account of these things. Whenever we see a beautiful sight, such as the colours of the sunset, or the rich green fields of paddy or the yellow ones of corn, or the glorious mountains in their strength, or the powerful ocean, our inner life is made more beautiful, richer and stronger. When we listen carefully to delightful music, it calms our

feelings and perhaps increases our devotion. So also the smell of roses, jasmines and many other flowers, produces a change within our minds.

Without our inner life of thinking and willing, our outer life of action would become foolish and even impossible. Without these it would not be safe to walk about; we should tumble down steps and walk into people in the street, and we should not know that a chair is meant to sit on or a table to write at. We should not know how to unbolt a door, and we should turn over our cup without knowing that the water would run out. We should not know where to go or what to do. But as it is, the inner life is the seat of all our enjoyment, and as good citizens we must understand that all the people and animals about us have inner lives and outer lives, and it is our duty to do nothing that will harm either of these.

In order to live this life of ours we find that certain things are necessary. The body, with its sense-organs, has to be kept alive and well. First of all, we must have food and drink. Our bodies are wasting away all the time, in breathing out heavy gases, in perspiration and in other ways, and we have to make up for the waste by eating and drinking every day. So we have to think about food, and where and how it is to be obtained, and we have to work for it. Then, our bodies are not hard and coarse objects, like lumps of wood or stone. They

are machines delicately made of very soft material, and we have to take care to keep them in good order, or they will become ill and be a trouble instead of a help to us. We have to take even more care of them than we should do of a new bicycle. For example, we must not leave them out of doors all night in the rain, where they may get wet or chilled. We must put them in a clean, safe, dry place, before we go to sleep. So also in the day-time, we must not expose our bodies all the time to the fierce heat of the sun. Therefore we need shelter for the body from the rain and the extreme heat of the sun, and sometimes from excessive wind, and we require a safe clean place for it. That is why we have houses and we have to think about houses, and to work to build houses. We have to cover the body also with suitable clothing when necessary, sometimes to keep it warm in the cold weather, sometimes to protect it from the heat of the sun, and sometimes for the sake of customary appearances.

Notice then, that our outer life has three chief necessities—food, shelter and clothing. Animals, birds, insects and even trees have to work for food, and many of them also for shelter. But even when our three necessities are satisfied, there are the necessities of our inner life, which will make it strong, rich in material, and beautiful. These are kind feelings, strong and clear thoughts, and deep devotion.

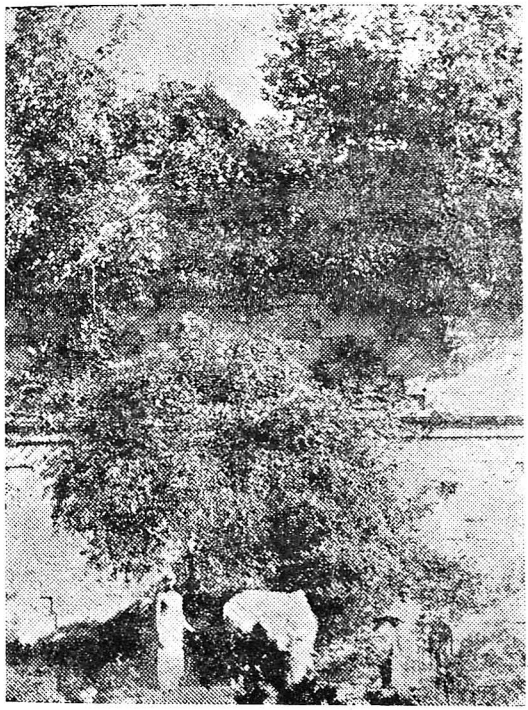
CHAPTER II

OTHER LIVES

WHEN we look about us in the fields, in the forests, or on the mountains, we see many kinds of creatures living in this world of ours. Indeed, if we call it our world, we must think that the word 'our' includes all these creatures, not only men; for man is only one of the many different creatures for whom the world exists as a place for living in, and it would be a mistake to think that the world exists for man alone. Some writers of ancient books have said that there are more than eight lakhs of different kinds of bodies, which they have described in two great classes, the moving and the unmoving. All these beings form a great family to which we belong.

When we look at a tree, for example, we might think that it is an unmoving creature, and that is true, in so far as it cannot walk or fly about from one place to another; but it is able to move in a very limited way, able to send out roots in search of moisture and food in the soil, able to stretch up its branches and leaves to the sunshine. When you plant the seed of a tree in the ground, it often

shows a great deal of what in a human being we should call intelligence. Soon after the little sprout appears, it turns itself up through the earth towards the surface of the soil, where it will find the sunshine for which it seems to be always seeking. How does it know, buried in the dark earth, which way to grow to find the light? If you take the little seed that is beginning to sprout upwards, dig it up and re-bury it with the sprout pointing downwards, presently it will begin to turn once more upwards towards the surface of the earth. Next consider the strength within the seed. So long as the young plant receives water and food from the earth, and light and air that it needs, it will often go on growing in a crack in a wall, and it is so strong that it can lift up the stones of huge temple walls. At Chidambaram, in the South



TEMPLE WALL, CHIDAMBARAM

of India, there is a temple built of enormous blocks of stone, some of them being as big as a hut, very closely fitted together, and in some places the high walls built of many stones have been lifted and cracked by small growing plants. So the tree or the plant is only unmoving when compared with ourselves, for we can walk and run about on the surface of the earth.

Consider the birds that are able to fly for a very great distance high in the air, which we cannot do. They are able to move about more freely than we are. Some of them travel thousand of miles every year. They set up their winter homes in warm countries, and when the hot weather comes they fly away in a large band, and set up their summer homes in a cool country, so that they are never troubled with great heat or great cold. If these birds were able to speak to us they might call us unmoving creatures as compared with themselves. In the matter of the senses we often find a difference between man and other creatures. Many dogs have a keen sense of smell of which man can form but little idea, but the sense of smell of various insects it still more powerful and varied. Some of them can smell each other at a distance of miles—for example, the Oak Eggar moth. A naturalist developed one of these out of the cocoon from which it comes in a little box in his room in the middle of a large town, and before very long other moths of the kind came fluttering into

the room from the moorlands miles away. They did not come at other times, and even a contrary wind could not deter them. By wonderful powers of smell or some other sense of which we know nothing they knew of their imprisoned friend and came to visit her. We human beings live mostly with our eyes—they give us our outlook upon life; but with the ants it is different—their 'outlook' is probably that of smell or some other sense connected with the movable antennæ which they bear like horns upon their heads.

What advantage, then, has man? In the outer world he has hands with which he can work and make things, and his inner life, made up of his thoughts and feelings and will, is richer and stronger than those of any other creature, as we shall see in later lessons.

Every good citizen must be ready to enter into the life around him in a spirit of comradeship, especially with men, but even with the animals and plants which come prominently into his life. He must always act with the full knowledge that life consists of giving and taking among all beings. Nearly all the creatures that we see have bodies like our own in some respect, and all enjoy their life as we do. All have bodies; all have selves within the bodies. There are many differences—birds have wings; men have hands and feet; horses, bulls, elephants, deer, and many other animals go on four feet; snakes glide

along the ground on their muscles; fishes swim in the water with fins and tails; trees stand in their places by means of roots—but all have their inner and outer life, and all have need of food and protection. We shall study something of kindness to animals in our next lesson, but meantime let us follow the thought of this verse from Kālidāsa's *Shakuntalā*, spoken by a hermit to king Dushyanta when he was hunting:

Now heaven forbid this barbed shaft descend
Upon the fragile body of a fawn,
Like fire upon a heap of tender flowers.
Can thy steel bolts no meeter quarry find
Than the warm life-blood of a harmless deer?
Restore, great Prince, thy weapon to its quiver,
More it becomes thy arms to shield the weak,
Than to bring anguish on the innocent.

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A GOOD SHEPHERD

"White Sheep winding slow their way" [To face page 13

CHAPTER III

THE UNITY OF LIFE

He spake
Of life, which all can take but none can give,
Life which all creatures love and strive to keep,
Wonderful, dear, and pleasant unto each,
Even to the meanest; yea, a boon to all
Where pity is, for pity makes the world
Soft to the weak and noble for the strong.

A STORY is told of the Lord Gautama, the Buddha, who lived in India about two thousand five hundred years ago, that once, when he was wandering in search of spiritual knowledge, he came upon a flock of goats and sheep which were being driven down the hill side at high noon. Among the flock was a ewe with two little lambs, and one of these was limping, on account of a wound in the leg; and the mother was running anxiously from one to the other of the lambs, fearful of losing either of them. The holy man, full of pity for the mother sheep, picked up the wounded lamb, and walked with the flock, carrying it on his shoulder; and as he talked with the herdsman he learned that the animals were being driven down into the town for a sacrifice which was to be held by king Bimbisāra. On

arriving in the great hall where the sacrifices were being made, Gautama spoke to the king and the people with such words of compassion and persuasion that they stopped the sacrifice, and the king issued an order that no more animals should be slaughtered either for sacrifice or for meat, "seeing that life is one and mercy cometh to the merciful". The beginning of Gautama's noble speech appears in the words at the head of this chapter, and the following are the reasons which he gave for kindness to animals:

(1) We cannot give life, and we have no right to take it unnecessarily;

(2) All creatures love their lives, even the little ant, the worm and the fly, and life is very pleasant to the weak if they are treated with kindness, and a great joy to the strong when they feel the happiness of helping and protecting the weak;

(3) Man prays to God; let him not be unkind to those weaker creatures to whom he is as a god;

(4) Especially should man not be cruel to the animals which have given him milk and wool, which have worked for him and have put their trust in him, for that is ingratitude;

(5) All these creatures are beings like ourselves, though not so far advanced in knowledge and the power to work; they have to learn by living, and to kill them is to stay their progress, which is a sin against the unity of life;

(6) If the gods are good, they will not be pleased with blood or cruelty; if they are evil we should not serve them; and

(7) Man will surely have to pay in suffering for the pain which he inflicts upon others weaker than himself, since the whole world is governed by the laws of God, who is perfectly just.

Then he went on to teach

> How fair
> This earth were if all living things be linked
> In friendliness and common use of foods,
> Bloodless and pure; the golden grain, bright fruits,
> Sweet herbs which grow for all, the waters clear
> Sufficient drinks and meats.

It is one of the first duties of a good citizen to see that in his life there is no cruelty to man or beast. There should be no unnecessary pain or hardship inflicted upon the animals which work for him—carts must not be overloaded, bulls must not be heavily laden on the back, cattle must not have head tied to leg, birds and rabbits and other small animals must not be shot for amusement, and animals must not be beaten or starved or uselessly deprived of liberty.

We can all see that trees and plants have some kind of a life of their own. We see them droop in the dry season and revive when the rain comes, and that this is not merely a lifeless action has been proved by the great Indian scientist, Sir Jagadish Chandra Bose. The plant has not such highly developed organs as we have; it has not an eye like

ours, for example, but it has something corresponding to an eye in a less developed form—it has foliage sensitive to light. Even the commonest vegetable is sensitive, and all plants have a simple nervous system which does for them what our nerves connected with our sense organs do for us, that is, they transmit the impressions from outside. Of course, plants have not so much intelligence as animals, but they are beings capable of feeling pleasure and pain in a small degree. Some are very ready to show feeling, like the Sensitive Plant, which if touched, folds up.

By means of a fine silk thread fastened to the leaves of a plant and connected with an electric pen, Dr. Bose has been able to show that all plants are sensitive. If a plant is suddenly pinched or cut, or touched with a hot wire, the stalk winces and then recovers, just as our arm would do if it were suddenly pinched; and though these motions are too small to be seen by our eyes, they can be seen by means of Dr. Bose's scientific apparatus. Strange as it may sound, the plant also gives a little start when there is a sudden noise, like the banging of a door, just as we should do ourselves. Dr. Bose has arranged for some of the trees in his new garden in Calcutta to keep a record of every cloud that passes across the sun.

Any one who has been very ill and has had to lie in bed for weeks or months, knows how weak the muscles become through disuse. If you tied your

arm at your side and did not use it for a long time, you would find that the muscles had become weak from want of exercise. Dr. Bose found that this was the case with the mimosa plant, which he kept in a glass case, so as to protect it from outside shocks. When he came to experiment with it, its system was so enfeebled that it could not transmit shocks—it was what we should call numb in the case of an arm. Then he gave the plant a number of rapid knocks as though to wake it up, and presently it got back its lost activity and was able to use what we may call its nerves. By many experiments it has been proved that plants can be made numb with cold, made drunk with alcohol (the spirituous liquor that is in toddy and other drinks which intoxicate men), put to sleep by certain gases (such as chloroform), suffocated by bad air, depressed by gloomy weather and too much rain, shocked by blows, and killed by poisons or by violence. It has been shown also that all plants die suddenly when their heat is raised to a temperature of 140° F. They give a sudden little jump which is their death spasm and after that they cannot again be brought to life or made to give a response to touches, knocks, pinches or cuts.

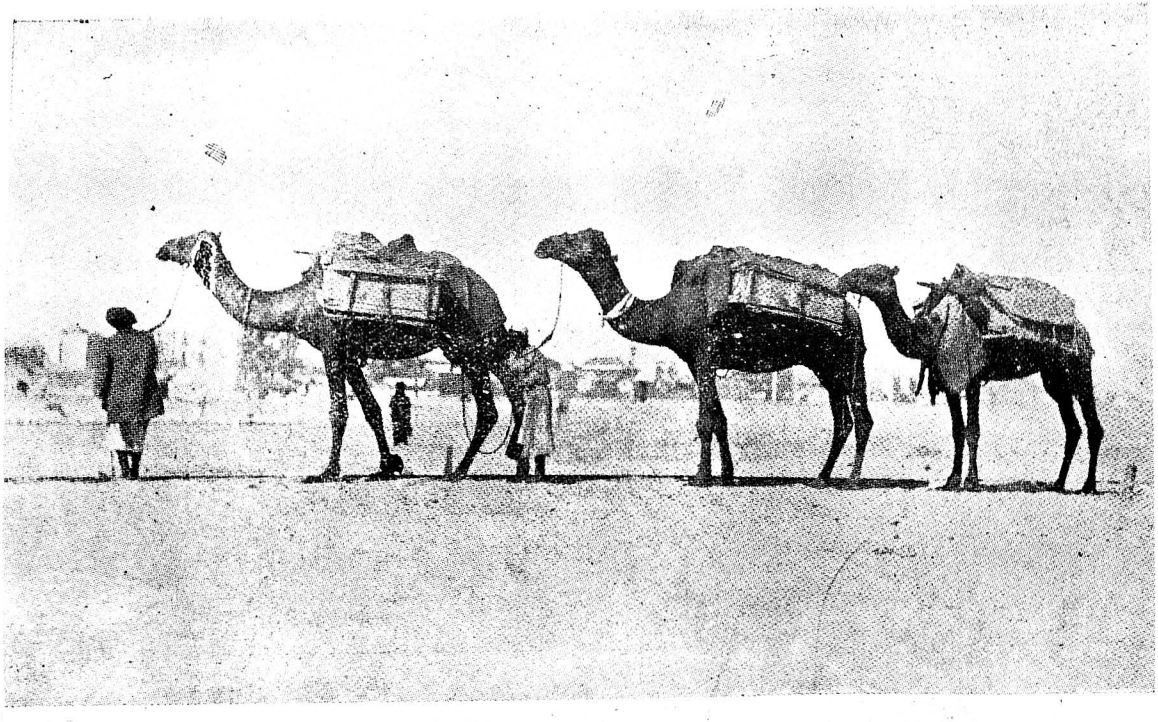
It is one of the duties of a good citizen to do no unnecessary damage to beautiful old trees, or to the flowers and plants which grow in our gardens, parks and fields, and by our road-sides, to see that forests are not cut down unless new ones are also planted,

to preserve shade trees along the roads, and to have about his own dwelling some trees and plants, so that he may live on good terms with the vegetable as well as the animal kingdom during his life.

Not only are men, animals and plants living—there is no dead matter in the whole world. The same great scientist has demonstrated what many ancient spiritual teachers have told us—that even a piece of iron or a grain of sand has a simple condition of life. He found that pieces of metal would become torpid when frozen. He found that they could be sent to sleep by certain medicines, and afterwards revived by others. He found that if he pinched them suddenly they gave an electric twitch, just as the muscle of your arm would do. He found that they become tired by overwork, and grew well again after a rest. He found that they could be poisoned with certain drugs, and afterwards cured by suitable medicines. So a machine, for example a watch, can become tired if it is constantly worked, and it will do its work better if it is allowed an occasional rest. We are not able to see the response of metals with our eyes, but it is shown by the delicate apparatus which the doctor made.

It has thus been shown that life is all one. This is what Dr. Bose said in one of his speeches: "It was when I came upon the mute witness of the self-made records, and perceived in them one phase of a pervading unity that bears within it all things—it was

To face page 18] Collie Dog and Lambs



PACK CAMELS

[To face page 19

then that I understood for the first time a little of that message proclaimed by my ancestors on the banks of the Ganges thirty centuries ago: *They who see the One in all the changing manifestations of this universe, unto them belongs eternal truth—unto none else, unto none else.*"

CHAPTER IV

MAN AND THE ANIMAL WORLD

FROM the Vedas, the Itihāsas and the Purānas we learn that in ancient times men valued their cattle, especially cows and bulls, as their most cherished possession. So highly indeed were animals esteemed in ancient days that people took pleasure in the thought that they were useful not only to man but even to the Devas, and delighted in the pictures of Siva with his bull and serpent, of Vishnu with his eagle, of Ganesh, the elephant-headed, with his rat, and of Subrahmanya riding upon his peacock, and in the thought of Hanumān and Sugriva, the monkeys, and Jatāya and Sampāti, the eagles, as dear friends of Rāmachandra, the Divine King. In the Purānas the roads of heaven are described as beautified by the presence of swans and other water-fowl, and splendid elephants and horses descended from divine families of Airāvata and Uchchaishrava. In Sanskrit when it is desired to say that something is the best of its kind, we sometimes all it Vṛishabha or Ṛishabha, as in the case of Arjuna, whom

Shri Krishna repeatedly calls Bharatarshabha, which means "bull among Bhāratas," or "best of the Bhāratas".

Animals are thus cherished for their usefulness, their beauty and their companionship for man. Just as Shiva and Vishnu rejoice in Nandī and Garuda, so do men in their lesser regions love their animal friends, and very often a strong friendship grows up, as between Shakuntalā and her deer in Kālidāsa's immortal play. The Bedouin Arab so loves his horse that it shares the same tent with him and is almost a human companion.

The animals serve us in a great variety of useful ways. The cow, the buffalo and the goat give us their milk. The bull ploughs our fields, stamps out the grain on the threshing floor, works our oil-mills and draws our carts. The sheep give us their wool, and even the humble worm provides silk which is prized by kings. The horse carries us and our loads swiftly along the roads and through the mountain passes. Elephants in Burma and on the Mangalore coast lift up and arrange the logs of timber that we use all over India for building purposes. The camel carries us hundreds of miles over the desert, where without it we dare not go. The domestic dog guards our property. Even jackals, hyenas, vultures, beetles and other creatures which seem unpleasant to man clear up decaying rubbish and dead bodies that would otherwise smell bad and make us ill, and

the white ants (so destructive in our houses) turn over the soil and ventilate it, making it yield rich crops. In colder countries the humble earthworm does this useful work, and in every acre of land there are about fifty thousand of these burrowing creatures, continually busy in the work of providing soluble earth-foods for the roots of plants, letting the air into the earth, and draining it, and drawing decaying leaves and other matter under the surface, where they enriche the soil. Though they do harm sometimes, these little creatures are of inestimable use, as without them the soil would lose much or nearly all of its fertility.

Just as the living creatures that share the world with us serve us, so we serve them, sometimes with intention, and sometimes unknowingly. Man enriches their lives, their feelings and their thoughts, by providing them with experience which awakens their affections, intelligence and moral power. The ploughman, for example, thinks of the harvest that is to come, and has thus a reason for what he does, but the bull which helps him to plough does not understand why it works. It may be beginning to understand, but that is all. Yet it is learning to obey his directions and to understand them, and as a result of kindly treatment it is learning to appreciate kindness and to develop a little gratitude. It is just so with man, who does not understand why he lives, but is beginning to learn a little of it from the great

To face page 22] Elephants carrying logs

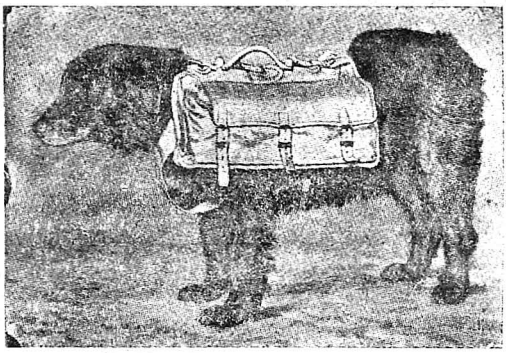
Mounting an Elephant

[To face page 23

religious teachers, the sacred books, and association with the wise.

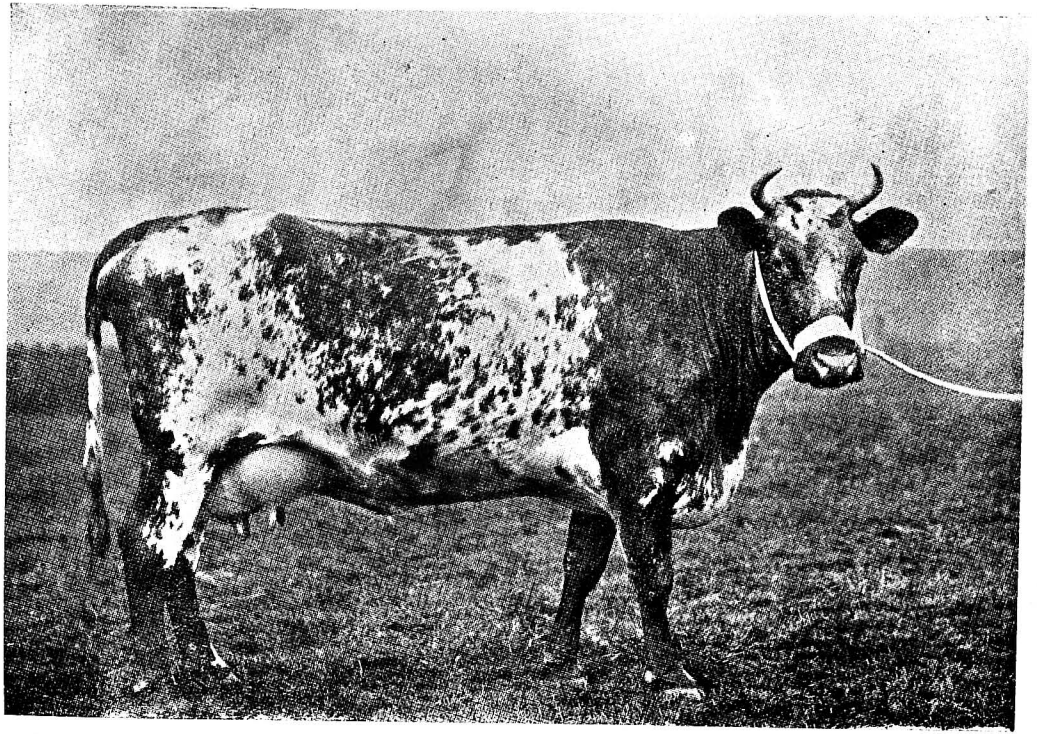
Many animals have capacity for very quick mental and moral growth in the company of man, who has thus the duty of raising them in evolution in return for their services to him. Horses, bulls, camels, elephants and other creatures soon learn to understand the tones of the human voice and the meanings of the cries of driver, rider or cowherd. Some of the most intelligent domestic animals, such as dogs, get to know their own names, so that they will come when they are called, and even learn to understand a number of words and sentences in the language of their masters. Perhaps the best example of this is the sheep dog, which knows its duties and obeys the shepherd's words. Sometimes the shepherd has two dogs, one of which drives the sheep along while the other collects them together and keeps them from straying far away, and so clever are these animals that if their master calls to them to turn to the right or to the left they do so at once. Sometimes competitions are held on sports' days, when a number of little flags, some red and some white, are placed in a field and the intelligence of the dogs is tested. The master, standing a long way off, calls out "Round the red flag, between the two white ones," and so on, while the dog turns his little flock of sheep accordingly. The dog understands also the expression of its master's face, the meaning of his

gestures, and whether he is pleased or angry, glad or sorry, happy or sad. It is this high intelligence of the dog that made it so useful in the recent Great War that some were employed as sentries, others to bear written messages across dangerous ground where no man could have passed unseen, and others to carry food and ammunition to men in the front line. Training schools for dogs were soon established; stray dogs were collected and sent to these, and many were the lives saved by their work.

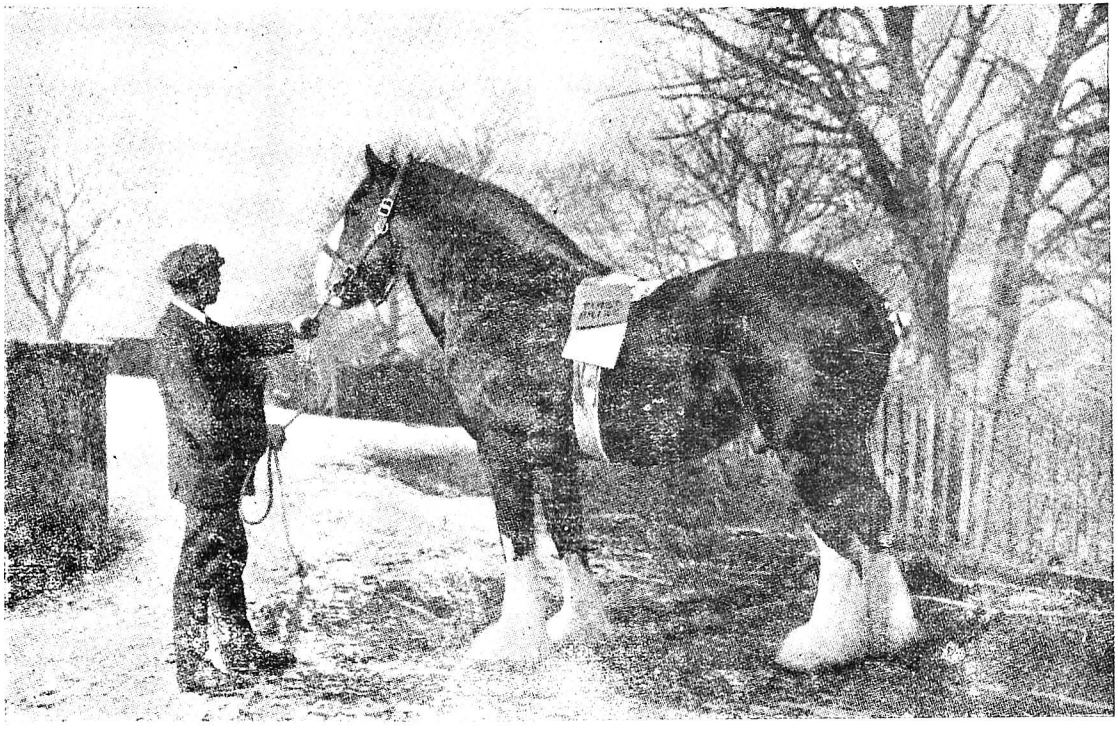


A WAR DOG

While the animal advances very rapidly in intelligence in association with man, it grows still more rapidly in moral sense and power. Thus the domestic dog learns to be affectionate, gentle, faithful and clean, and it develops a sense of shame and a quality of patience, and willingly sacrifices its own pleasures and passions in its devotion to the behests of its superior companion, man. A pretty story is told of a dog which grew very old in the service of an ungrateful master, who decided that he would drown the animal which was no longer of use to him. So dog and man went out in a boat. But it happened that



To face page 24] A PRIZE COW



A PRIZE HORSE

[To face page 25

the boat capsized and the man could not swim, and he would have been drowned but for the brave and intelligent animal, which brought him safely to land, and made him thoroughly ashamed of his ingratitude and cruel selfishness.

Another way in which man helps the animal kingdom is by deliberate breeding, by which farm stock (cows, sheep, pigs and other animals, and fowls) have been raised to a high pitch of physical perfection by means of careful selection, as will be seen in the accompanying pictures of an English cow and a splendid heavy horse or stallion; while the mule, a cross between a horse and a donkey, is very serviceable for transport and work in which great endurance is required.

In civilised countries there are laws which prevent cruelty to animals, but the good citizen will not need such restraints, for his own good heart will make him kind, and his understanding will help him to know how to assist his dumb friends to grow in affection, intelligence and moral power.

CHAPTER V

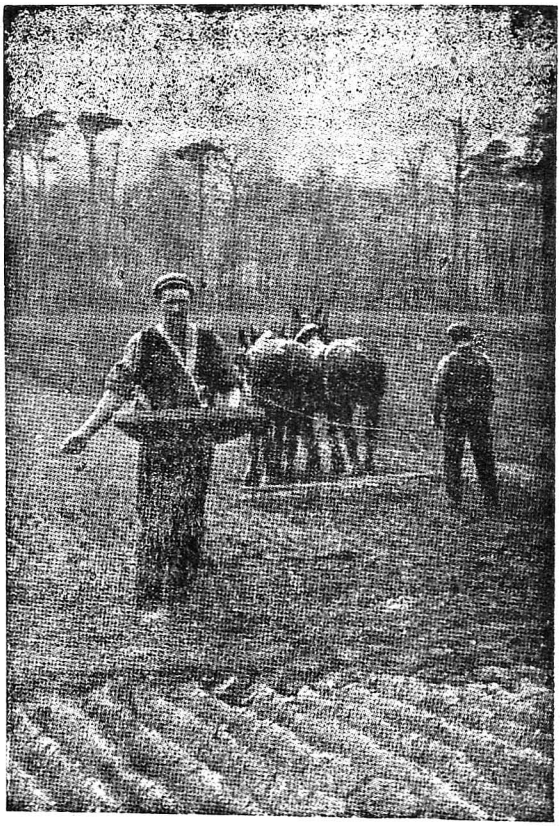
MAN AND THE VEGETABLE KINGDOM

If you were to stand on a high mountain, such as the hills at Kodaikanal in South India, from which you could see over many miles of the plains lying below, you could not fail to notice that in the great brown extent of sun-scorched land there are large patches of green connected by long thin lines, which look mere coloured threads in the distance. The patches of green are the tracts round towns and villages where man is living in company with the vegetable kingdom, irrigating the land for food, and cultivating fruit trees and shrubs and flowers. The long thin lines are the great main roads, distinguished by rows of splendid shade trees on either side.

There are four main things that man does for the vegetable kingdom, which includes the vegetables, grasses, shrubs and trees, and generally all those creatures which live with roots in the earth. He *selects*, *protects*, *nurses*, and *cultivates* them. In return for this the vegetable kingdom provides him with food, clothing, shelter, and hundreds of things

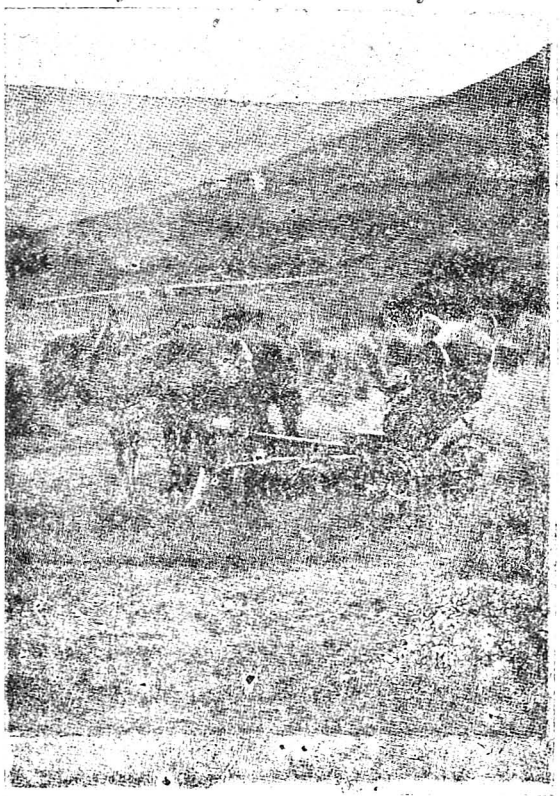
of usefulness and beauty which make our lives rich and happy.

The *selection* that man makes consists very largely of choosing the best seeds and cuttings—thus the farmer who grows paddy or cotton will always keep aside a quantity of the best grain or seed for sowing. In this way he is constantly improving the quality of the plant. He *protects* them by weeding the ground in which they are planted, clearing the undergrowth in the case of trees, and guarding them against destructive animals and plant diseases. Small weeds grow up in every field and these must be removed or dug into the soil before they become seedy, for if



SOWING

they are left too late they will produce many more weeds in the next season. Weeds rob the crop of the plant-food that is in the soil as well as of water; they cut off light and heat, and collect injurious insects; sometimes they grow over the crop and drag it down or fix themselves upon it and suck out its vitality, while many are poisonous; and when they abound, let us say in a field of potatoes, the result often is that the crop is reduced by half, and that that half are not so large and rich as they would have been. Yet all these plants that we call weeds are of use to man, for making medicines and many other things, and even for enriching the soil when they are dug in: they are



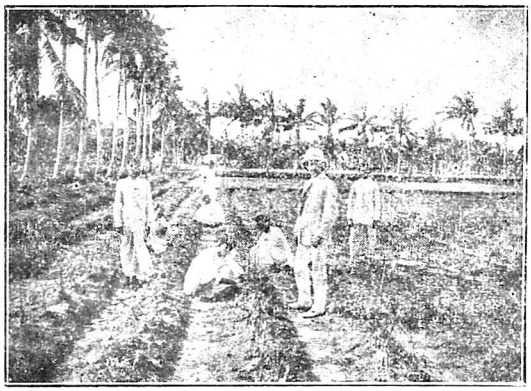
REAPING

only injurious among the crops when they exist in the wrong place and at the wrong time.

Man *nurses* the plants and crops by providing them with water and manure in suitable quantities, by sowing the seed at the right time or season, in the soil that is best suited for the crop, and in the climate in which it will naturally flourish, and by varying the plants sown on the field each year, by what is called rotation of crops. He has studied these things and he knows what soil is suitable for cotton, what for paddy, and so on, and what quantity of water and manure is necessary for each. Many plants and flowers have been raised to a high state of culture with his aid, for he has learned not only to select, nurse, and protect, but also to combine or breed these rooted creatures, so as to produce types of greater richness and beauty. Thus from the combination of the seeds of inferior grasses he has produced grains, and by culture of the wild roses with their single row of petals he has helped Nature to bring forth the beautiful many-petalled roses of the gardens.

Much as we thus do for the vegetable kingdom, it is little as compared with what the vegetable kingdom does for us. It provides us with food and the fuel that is required to cook it—grains like rice, wheat, corn, oats, barley, ragi; vegetables that grow below and above ground, such as potatoes, turnips, brinjals, peas, beans, cabbages; sugarcane; oils;

fruits such as the plantain, orange, lime, mango, apple, date, fig; nuts like the cashew and the coconut. It gives us cotton, jute, hemp, and other fibres for making cloth, string, rope and paper, and the material for making them beautiful with colour in the form of vegetable dyes, grass mats for our floors, timber for doors, windows, rafters and furniture, thatch for the roofs of houses and cottages, and many forms of musical instruments and other objects of delight. Consider, for example, how much can be made from the coconut tree. Its fruit provides for us a nourishing food and a valuable cooking oil. Its leaves make excellent roofing material, its bark in parts is a natural cloth.



AGRICULTURAL STUDENTS AT WORK

STUDENTS AT WORK

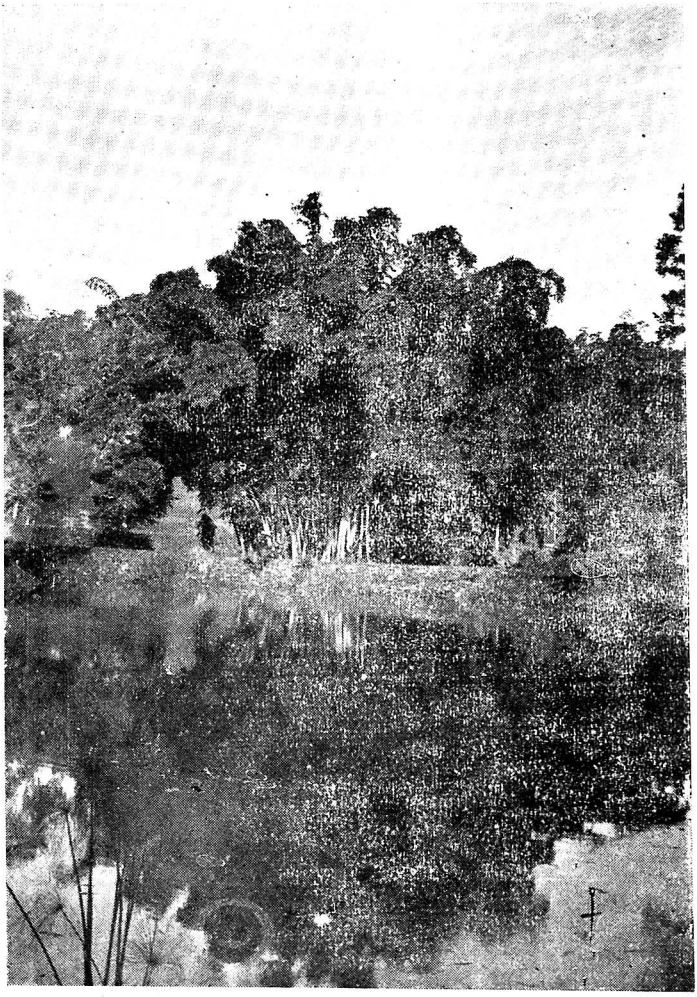
The covering of its nut is good for ropes and mats, and its trunk is suitable for posts and for aqueducts or water-bridges.

For use and beauty, therefore, is the vegetable kingdom dear to man. How unhappy should we be without the beauty of the green fields of paddy and other crops, and the delightful shade of the glorious trees. What dear friends are these, with whom we live in harmony, as part of the same great world of life. The Sages of India loved the trees and ever spoke of the forest of Naimisha and the all-sufficing gardens of Nandana. One western philosopher, Emerson, was so fond of the trees in his garden that he used to shake hands with their lower branches when he returned home after a journey, saying that he could feel that they were glad of his return, and his Indian counterpart is Dr. Rabindranath Tagore, who sees in communion with Nature one of the greatest uplifting forces for man, and will have none of that modern theory which supposes man and Nature to be in perpetual conflict.

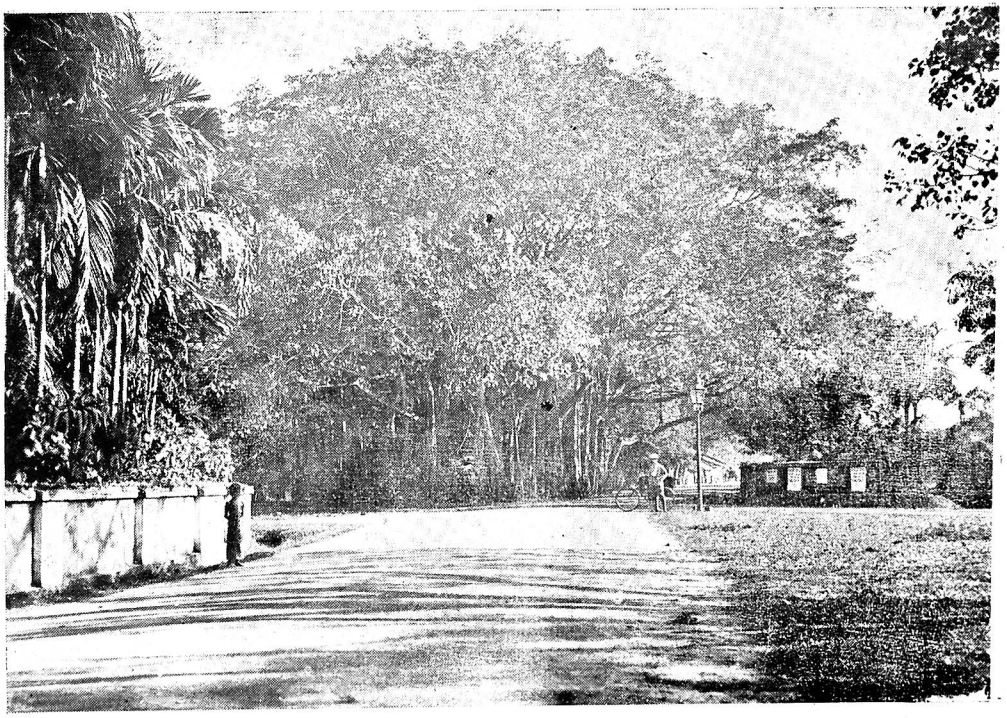
CHAPTER VI

MAN AND THE DEVAS

In the last two lessons we have considered man's relation to the world of moving creatures in two classes, called the animal and the vegetable kingdoms. Before we turn to the study of the unmoving or unorganised creatures, we must observe that there are many other kinds of moving beings about whom we learn something in the course of our religious studies. There are millions of beings that we cannot see with our physical eyes, because their bodies are constructed only of subtle matter, but we find them mentioned and sometimes described in the religious books. The Muhammadans speak of them as jinns and angels of different kinds; the Christian scripture speaks of them as angels, archangels, seraphs, cherubs, principalities, powers and dominions; but it is in Hinduism that one finds the fullest account of those millions of invisible beings who are classed under the general name of Devas, who live in the various *lokas*, move about unseen among men, and animate all the varied forms of Nature, helping in their growth and taking part in all their changes



A GIANT BAMBOO [To face page 32



A Large Banyan Tree

[To face page 33

according to the definite laws which govern all states of being and change. Some of them are spoken of as superhuman, in various grades of splendid power and knowledge, reaching right up to those who are the direct ministers of the Ruler of our world, and among these are men who have finished their human destiny and have gone on to live a more glorious life in the invisible world. Some are the equals of man, while myriads of others, which are specially connected with animals and plants and minerals, are not yet equal to humanity in intelligence and power.

Some people think that to be a good citizen it is not necessary to know about these beings, and that is true in the case of all those whose hearts are kind and full of an instinctive love for animals and plants and for the beauties of Nature. Where that is not the case there is always the danger that man will fall into error, and break the concord that should exist between him and the devas. To take only one example—a person who carelessly destroys flowers and damages beautiful trees, or who is cruel to animals and kills them when it is not absolutely necessary, is outraging the feelings of those invisible beings who are building up the vegetable and animal forms, and are working, like artists, to make the world full of beauty and perfection. Imagine how you would feel if some ruthless person were to throw ink over your book or your clean clothes, and roughly crumple and tear them, or how a man who has spent years of his life carving stones

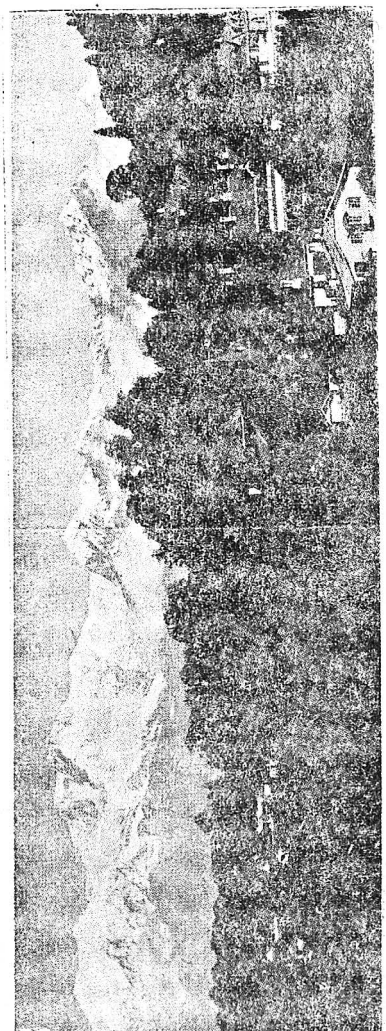
and building them into a beautiful shrine would feel if some rough giant were to come and smash them up with a hammer, and then you will see how the best of the invisible builders will be anxious to leave the neighbourhood of cruel and destructive people, and how this rupture between devas and men would ultimately reduce the quality and richness of nature's gifts to those men, producing inferior crops and less favourable seasons. But when man takes the ripened crops for food, with thankfulness in his heart, then surely the devas are glad to be near him, to co-operate with him, and are pleased indeed to minister to his needs and his happiness, whether they live in the air, in the growing things, in the sunshine, or in the bountiful clouds and rain.

It must not be supposed, however, that man's efforts and knowledge do not count in the production of rich crops. On the contrary, they are essential. As a result of his study of the laws of nature, man has learned that what he sows he will also reap, that rice will bring forth rice and corn will produce corn. More than this he has learned, that if he tills the ground with right good energy, chooses the best seeds, plants them rightly in their proper season, and nourishes and protects his growing crops, his harvest is likely to be good, for he has obeyed the laws of Nature. It is because he respects those laws, because he reverences them, trusts them, has faith in them, that he has studied them, learned to know them, been willing to co-operate with them and spend his energy and time in working in obedience to them.

This is worship, whether the man knows that it is so or not; but to perfect his reverence and to complete his success, he must add feeling to his knowledge and his energy, and realise that all these things of Nature with which he works and among which he lives are things to be loved as living companions in a great creation of which he himself is only a little part. Thus he learns to work for the good and the happiness of living beings, taking his own good and happiness joyfully in exchange and happy in the consciousness that he lives in a world which is right for him, where there is no need for fear or anxiety so long as he does his own duty, which consists in study, love and work.

This great truth about the harmony of the devas with humanity is taught in the religious books, and people are reminded of it when they perform simple ceremonies to the devas, such as that of pouring ghee into the fire or of offering fruit and flowers on the shrine of Satyanārāyana. Truly there is only one Supreme Being, but of his ministers and those who do his will who can count the number?

It must not be supposed, however, that human contact with the devas is confined to ordinary work connected with life's material necessities. The greater beings who are the ministers for different qualities, such as the minister of beauty, the minister of law, the minister of power and many another, reveal to us the divine qualities in the grander things of Nature, such as the beauty of the sky and clouds, the profundity of the ocean, the strength of the

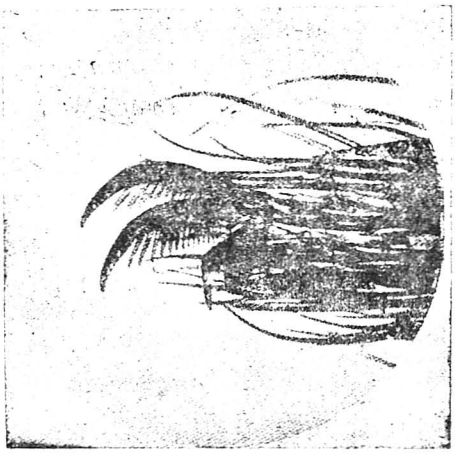


THE HIMĀLAYAS, NEAR DARJĪLING

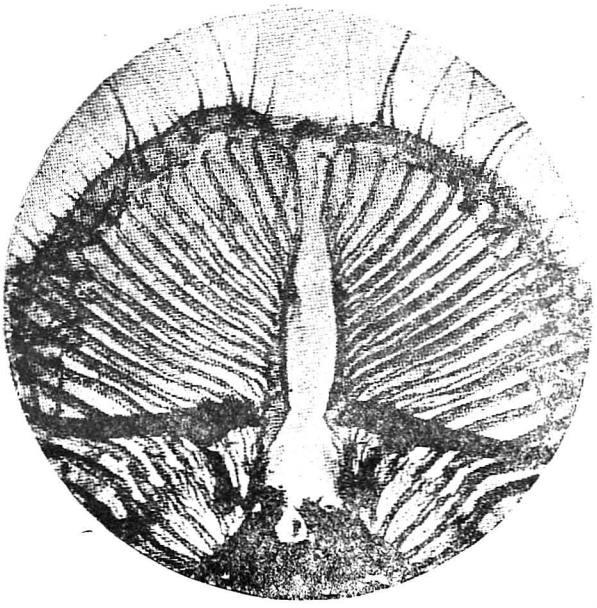
mountains, the purity of the Himālayan snows, and also in a wonderful perfection of detail, as in the nose of a mosquito (which contains a whole set of tools, including a borer, saw and suction tube), where we see the rare qualities of accuracy and patience. In a story told by a great Russian writer, there is an incident in which a man pays a visit to a goddess, and finds her bending very assiduously over her work. He asked her what she was doing and received the reply, "I fashion the hind leg of a flea!" The pictures of a leg of a tiny garden spider and the nose of a fly illustrate this wonder of detail.

The wonders and beauties of Nature in the large form and in the minute are an avenue of approach to

the Supreme Being, who writes by the hand of his angels or devas the splendid lessons of beauty, strength, love, peace, joy, plenty and many other qualities in the magnificent book of Nature. Contemplation is the key to the language of this book, by which it is at once understood in the soul of man.



FOOT OF A SMALL GARDEN SPIDER, MAGNIFIED 400 TIMES



PROBOSCIS OF A BLOW-FLY, MAGNIFIED 60 TIMES

CHAPTER VII

MAN AND THE MINERALS

We come now to what is called the unmoving creation. This term must be understood as meaning those things which are not organised, which have no organs or machinery within them by which they can move of their own impulse, without being pushed or pulled from outside. Man and the animals move according to their desires and will, and even the trees grow and make many movements by an inner impulse. Thus, for example, many of the plants which climb up trees and walls turn the upper surfaces of their leaves towards the light, while the tendrils which hold up the stem seek the dark crevices, though originally they also must have turned to the light, for they are themselves modified leaf-buds. But the clouds drift across the sky on account of the wind and the attraction of the mountains; the wind blows about because of the heat of the sun and the revolution of the earth; waves and tides of the sea are produced by the wind and the earth's turning, and by the attraction of the sun and moon. Even the mighty mountains and the earth's crust are very, very slowly rising and falling,

owing to changes in the interior of the earth, so that even the Himālayas were once under the sea. Thus everything in creation moves either slowly or quickly, but some move from within and others are moved from without. Even the animals and man are moved by many outward necessities, by the need of food, clothing and shelter, and by the attractiveness of objects, so that the difference between man and the mineral is only one of degree, not of kind. Only one being has perfect volition and does not act under the compulsion of outer forms, and that is the Supreme Being. Hence is God, often called Swayambhū, the self-existent or self-becoming, He who is dependent only upon Himself for life and action.

In this order of creation we find five great states of existence, all of which we class together as matter. They are the earthy, the watery, the fiery, the aery and the etheric or skyey, for which the ancient Samskrit names are Prithivi, Apas or Jala, Tejas or Agni, Vāyu, and Ākāsha. These words cannot be translated into English without explanation, for in their scientific sense they do not mean simply earth, water, fire, air, and sky, but all things that are similar in nature to these. Prithivi exists for our use in the hard and soft forms of rocks and soil. The solid surface of the earth enables us to walk and run by resisting the pressure of our feet, and by its magnetic attraction (which we call the law of gravitation) it keeps us and our houses and belongings from floating

off into space like meteoric stones. With its rocks we erect temples and other buildings, and with its softer soil, and its clay and lime, we make bricks and mortar for our houses. From its depths we procure iron, gold, silver, copper and other metals from which we make girders for building roofs and large bridges, machines such as railway locomotives and other engines, gold and silver and other ornaments, copper vessels, and thousands of other useful things.

Jala appears in the great oceans, in lakes, ponds, wells and rivers, clouds and rain; in oils and saps, in milk and blood. Agni appears when things are warmed and lighted up by the sun, as the cooker of our food, the ripener of our crops, the giver of light and warmth, the power within the engine of the railway train, the motor-car, the steamship and the aeroplane, that carry us and our goods about, in the lights that burn or glow for us at night, and in the furnace fires where we smelt and shape our metal and bake our pottery and bricks. Vāyu is the air we breathe, the winds that cool us and bring the clouds over the land, and it converts the power of agni into motion in our steam and heat engines. Ākāsa is the etherial airless sky, which gives us and all matter space in which to move, which is the seat of electricity and magnetism and light, and many other wonderful forces known only to the true rishis and yogis. It enables us to see, hear, feel and think, because it resides within the heart and brain. Indeed our

bodies are made up of these five things; they are sustained by them and work among them. Such is

SOUTH INDIAN GIRLS

the kinship of man with the whole world. Such has been the giving and receiving in life and death from immemorial times. So may we have perfect confidence in the great goodness and benefit of Nature and of life.

CHAPTER VIII

CLOTHING AND SHELTER

DURING the course of long ages man has developed his body, so that it has become a delicate and sensitive instrument for his use, though hundreds of thousands of years ago man on earth was more like the lower animals, and his body was fit for rough usage and was a suitable instrument for the coarser life and work of those days. To do good writing we need a fine pen, not a bar of iron, which would be more suitable to poke a fire or make a hole in the ground; we require a delicate compass needle on our ships to swing truly to the magnetic north; and to weigh accurately in the course of a scientific experiment we use a sensitive chemical balance, not a railway station weighing machine. So does man require a refined and sensitive body for the gentle and cultured life of our civilised days.

In human life it is quality that is more important than quantity—size does not mark our worth, and even strength depends more upon the quality of our muscles than upon the bulk of our flesh. The tallest buildings in the world are made of steel

network, and some of them are nearly eight hundred feet high. It would be impossible to build to such a height buildings with walls of common bricks and mortar, however thick, for the bricks near the bottom would be crushed to powder by the weight of other bricks and floors and roofs above. Thus unnecessary weight is a useless burden and it is quality of material that is important, not thickness and quantity. The human body is now an instrument of very high quality, a delicate machine, a precious possession which ought to receive great care and attention. Many of the Purānas emphasise its value and the need for keeping it in good working order, and they state that he who has been so fortunate as to obtain one should guard it as his greatest material wealth, and use it to attain the highest objects of human life. A famous Western philosopher has similarly said, "Health is the first wealth," meaning by health a good condition of the body as regards its organs, nerves and muscles alike.

It has already been mentioned that food, clothing and shelter are important needs of the body, and pure air for breathing and good water for bathing must be added to these. Food and air have to do with the internal mechanism of the body; clothing and shelter with its protection from the outer world. Man is not well provided with clothing by Nature, and is not so strong in proportion to his size as many other creatures are, and this causes him to use his thinking

powers and his brain more than they do to overcome what are sometimes called the difficulties of his life. It is his destiny to develop his mind by use, and by this means he is taught to use it, instead of to rely upon brute strength in order to obtain what he wants. The brain grows and the mind develops by exercise, just as the muscles of the arm increase by being exercised with dumb-bells.

It is interesting to notice that little creatures like ants are much stronger than man in proportion to their size, for they often carry loads which are bigger and heavier than themselves; and animals such as horses, bulls, tigers and lions are each as strong as a great many men. A Belgian scientist has found out by experiment and observation that a crab can lift nearly five hundred times its own weight, and that a fly lifting a match stick was like a man lifting a beam of wood fourteen feet long and two feet six inches square, and he discovered also a tiny little insect which could pull six matches along.

One curious effect of man's independent mental development is his loss of what is called instinct. If we watch animals, birds and insects, we shall find that they instinctively do many things without being taught, and without knowing why they do them. They all know, for example, what foods to eat; but the human baby does not, and will try to eat pieces of wood and swallow coins and other little things if it is not watched. You will often see a dog turn round

several times before lying down—that action dates from the time when its forefathers had to trample down the grass in order to make a comfortable place, and the dog never understood why it performed that action and it does not now understand that it is no longer necessary. In countries where people have been cruel to birds they instinctively avoid human beings, but in India they come into our houses and schools and make nests in the rafters without fear. Spiders make wonderful webs; birds make marvellous nests, and some of them fly to distant countries for change of climate in the proper season; some ants breed and protect little insects called aphides, which they milk as we milk cows, and others deliberately sow and reap little fields of grain fourteen or fifteen feet in extent near their holes; and we have all seen the little clay pots which are made by builder wasps in the corners of our windows and doors, behind our books and underneath our tables, which the industrious insects sometimes line with little neatly cut leaves before they lay in them their eggs, and stuff into them caterpillars intended as food for the future young.

But each man has to develop his own intelligence and he makes many mistakes in the process. The savage or primitive man is constantly being deceived by his senses, because he thinks that things are what they seem to be. He thinks, for example, that the earth is still and that the sun is going round it, whereas it is

relatively the other way about. To him a river or a lake seems at sight shallower than it really is. He thinks that the stars are small and near, yet they are thousands of millions of miles distant. So also it seems to a baby that the moon is near, and he tries to grasp it in his hands. Yet, when the mind of man is once developed, with its aid he can do wonderful things, which no animal with its accumulated hereditary knowledge can ever hope to do. These wonderful things will be the subject of later lessons.

Animals, birds, and insects are already provided by Nature with suitable covering, which serves for the three purposes of clothing—warmth, protection and beauty. Fur and feathers, scales and shells, have all their own uses. In cold weather for example, we see cats fluff up their fur so as to make it thicker and thus keep in the warmth of their bodies. Crows and other birds ruffle up their feathers and often when they settle down for sleep they make themselves look almost like feather balls. Some creatures have defensive covering, as the quills of the porcupine and the hard shell of the crab or the tortoise.

In other cases the protection given by their covering is of the nature of camouflage, making it difficult for them to be seen. Thus grass snakes are green, and exactly the colour of grass; the stick and leaf insects look exactly like withered leaves and twigs and they even dodder on their legs as though

swayed by the wind; the chameleon changes colour to resemble the tree or plant or rock on which it stands; butterflies look like flying flowers, with their variously coloured wings; the arctic hare and the arctic fox, which live among brown heather in summer, have brown fur, which changes to white when the winter snows arrive. One very curious example is that of certain crabs which live sometimes among seaweed and at other times among sponges. When among the weeds they plant pieces on their backs, by scratching the shell vigorously with their claws and then pressing the rootlets of seaweed into the rough places until they stick there. Thus they cover themselves with growing vegetation. But the most interesting point is that if one is removed from the seaweed and put among the sponges it will pull the weed off its back and plant sponges instead, or if it is moved from sponges to seaweed it will remove the sponges and plant the weeds. This creature has nothing that could be called a brain, and evidently works by a very strong instinct. Men need not hide themselves in any such way except in battle, when they wear khaki clothes the colour of the ground, and often cover themselves with leaves and branches of trees, and paint their motor-cars, aeroplanes, guns and other such things so that they look like shrubs in the distance. It may be noticed, however, that most men and women prefer the uniform or fashion of dress of their time so that they may not be

conspicuous. The third object of clothing, that is, beauty, appears in the animal and vegetable kingdoms mainly for attraction, as in the case of the wonderful feathers of the peacock's tail, which are much appreciated by the peahen, and the brightly coloured flowers to which insects are drawn.

Very little clothing is needed for man in the plains of India, except in winter in the north, but warm things are required for the hills. Even then, the purpose of warm clothing is not so much to make the man feel warm as to keep the organs of the body at a normal temperature. We often find, however, that people consider what is called a fashionable appearance more than comfort or health; for example, many men make the mistake of wearing hot coats and head covering, which become very uncomfortable and dirty. This is not wise, for clothing should always be light, comfortable and airy, as well as tidy and clean. Bed clothing especially should be frequently washed, lest the body should absorb diseases while we are away from it during sleep.

Very little need be said in this lesson about shelter, but it should be emphasised that, like clothing, it ought to be adapted to the climate. We find animals using burrows and holes, such as the rabbit, the fox and the crab; nests are built by squirrels, mice, most of the birds and some fishes; lions and tigers prefer caves, while elephants are fond of the long grass. Some men in the past have lived in caves, in huts

made of leaves, and in underground hollows, but now they live in huts and houses. When we build our houses in India we have to think mainly of coolness, dryness, and good ventilation in the sleeping quarters. We have the problem of shutting out the blazing sun and admitting as much as possible of the precious cooling breezes. The ideals of the cultured and educated people of India have never been to have gorgeous private houses. Here again quality is more important than quantity. Houses should be simple, comfortable and convenient, with good floors and roofs, and especially good bathing and kitchen arrangements; and the residential part should be ornamented with beautiful carved doors and beams, not with cheap and gaudy plaster work. Gorgeousness was always left to the palaces and public buildings, which were intended largely for show, and personal grandeur in this matter, as in that of clothing, was always considered unworthy of a wise and sober gentleman.

CHAPTER IX

PLAY AND WORK

WHEN food, clothing and shelter have been provided, man still needs active exercise for his body, and mental 'food' and exercise for his mind. In these modern days we have so perfect a means of getting food, clothing and shelter that only part of our time is taken up in working for them, and when the day's work is done we still have leisure and energy for other things, unless we are very unfortunate. Thus there are for most people spare hours in the day or at the end of the day, and spare days at the end of the week, as well as occasional holidays; and a good part of this spare time is generally given to what is called play when we are speaking of young people and recreation when we allude to elders.

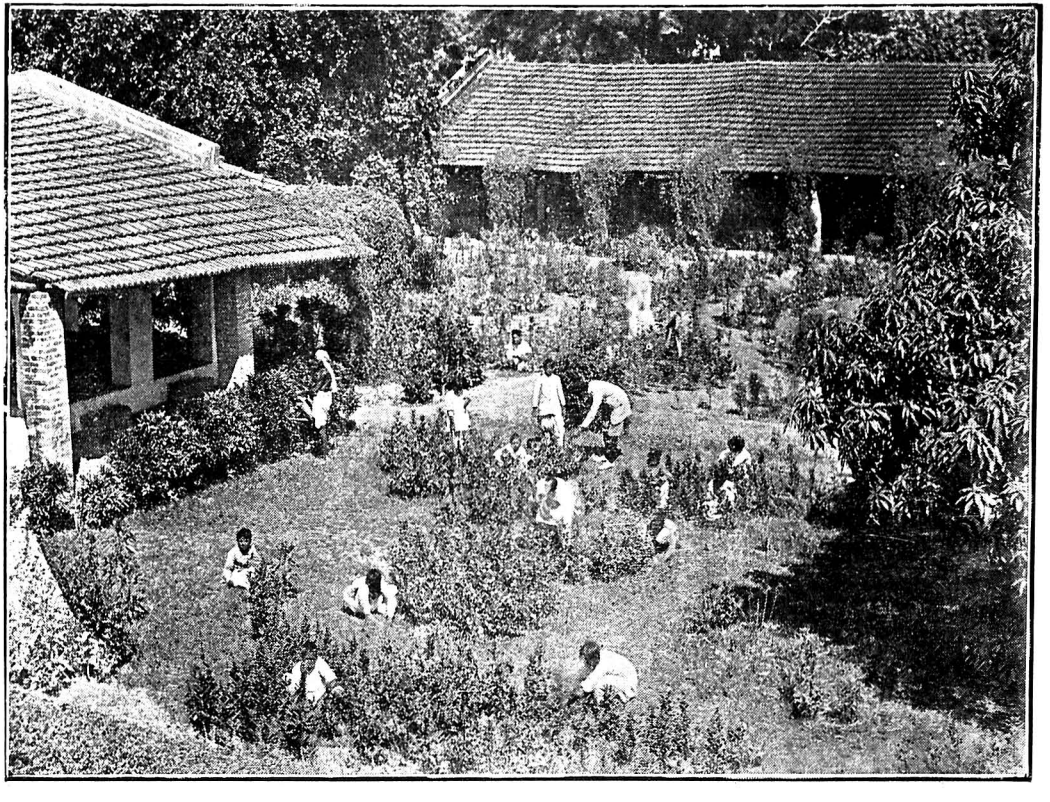
The characteristics of play are two. It gives us the pleasure of using our power and enjoying healthy sensations, and it stops short at the point when fatigue becomes uncomfortable. The delight of riding a good bicycle, for example, gives us a feeling of added power, which comes from the smooth and swift gliding motion, and the exhilarating sensation

of air rushing past and objects flitting by, together with an enhanced glow of life in the body on account of the healthy vigorous exercise. If we are tempted to go a long distance we may become very tired on the return journey; then all pleasure disappears and we only wish that we were back at home. It is no longer play; it is drudgery, if we have to continue making efforts beyond the point of healthy tiredness. Walking, running, jumping, swimming, singing, bari, and various kinds of ball games such as cricket, foot-ball, tennis, badminton and golf, are all favourite forms of play; they give us the pleasure of using power and skill, enhanced by a healthy physical glow, unless they are overdone. It is a good rule, in play as in eating, to stop before we are fully satisfied. All creatures that are not by nature sluggish, and are not overworked or underfed, share with mankind this delight in play, which is so necessary for the health of the body that two or three hours should be given to it each day. We see young lambs and calves frisking about in the fields, and hear the birds enjoying themselves with song, and those who are familiar with wild monkeys will have noticed what delight they take in chasing one another among the trees and gambolling together on the ground, pulling, one another's tails and jumping and leaping over one another's heads.

Recreative play is especially necessary for those who are deeply engaged in study, which tires the

eyes and nerves and leaves the muscles weak and flabby; and it is wonderful how great is the benefit to brain as well as body when there is sufficient play. In South India for several generations boys and young men have not played enough, being too intent upon study; but we found at the Madanapalle College, where many people thought that we gave too much time to games, that the brains of the students were so much brightened by the flow of good blood resulting from healthy exercises, that in less time and with less effort than usual the students achieved rare success in their studies, and shone brilliantly in the University examinations.

The brain as well as the body requires recreation, especially when both body and brain are tired owing to ill-balanced living, and under these circumstances good recreation can be obtained by reading stories and good novels with some emotional interest of love or adventure, and by playing indoor games such as chess. So much was thought of chess in the middle ages in England that it was considered an essential part of the education of every youth of good family. But games such as cards should be rigidly avoided if we find that they tempt us, beyond the limits of due recreation, to waste time that ought to be spent in study, work or healthy outdoor recreation, or in other duties. This warning is necessary, when many people are led to waste precious hours, because games of chance create unhealthy excitement, even when



To face page 52] SCHOOL BOYS GARDENING

School Boys sending Sugarcane

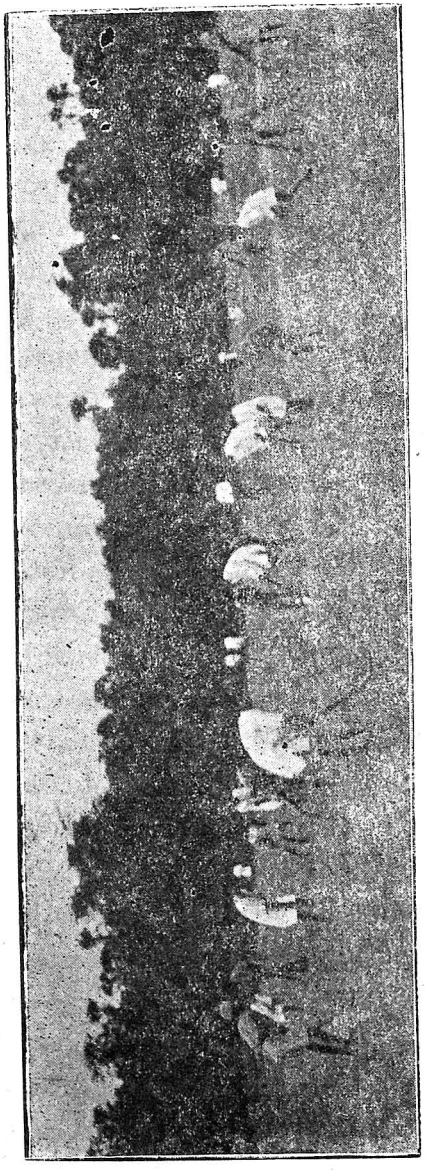
[To face page 53

they do not lead to gambling; which is not the case with games of skill, such as chess.

Great pleasure is to be found in what are called hobbies, all of which imply more or less art and skill. Music, poetry, painting, modelling and chiselling, mechanics, fretwork, wood carving, lace work, gardening, the collection and arrangement of natural specimens such as rocks, shells and dried leaves, the direct study of the habits of birds, insects and animals —all give a delightful expansion of experience and knowledge, if not carried beyond the point of fatigue.

In an ideal life work and recreation would become all one, as all its details would be well arranged, there would be no hurry or strain, and each detail would be interesting because of its relation to the whole. Few people have the opportunity to organise their work in this way, so that it would never be carried beyond the point of fatigue, and would never become monotonous, because it would always be full of skill and progress.

It is very important that we should not spoil our play by taking it too seriously and being ambitious in it. An instance of this is the growing feeling that music in the home is generally so much inferior to the professional music of the public concerts that it loses its attraction. But really the music and singing of those we love at home is far more restful and pleasant than that which our critical faculty so much approves in the concert hall, though it may be very



A MODERN GAME—HOCKEY

far from perfect. The game of cricket is another example; as long as boys play with a ball and bat on any piece of ground that is available there will be pleasure, but the joy often goes when they become ambitious and spend their energy in worrying for a perfect field (which few can have) of the dimensions and kind prescribed by the professionals who make a work of the game.

CHAPTER X

TYPES OF MEN AND THEIR FOOD

ANIMALS, men and other creatures desire happiness, but what that happiness is depends entirely upon the nature of the individual concerned. Some are sluggish, and much enjoy sleeping and dreaming their time away; others are full of activity in their pursuit of pleasures of the senses; others again find their enjoyment in the search for knowledge, happy companionship with family and friends, or a life of active public work. In a school, for example, some boys or girls are lazy and take no interest in either outdoor games or study, others are fond of play and neglectful of their books, others again are studious and have but little liking for active physical games. Each one is following the thing which gives him happiness. But they do not know what it is that would give them the greatest happiness; they are following what seems to them to do so. Therefore wise men have called many of these pursuits pleasures, having distinguished them from real happiness, and they have told us that these things called pleasures are followed by beings who are

tāmasic or sluggish, and those who are rājasic or full of restlessness. Only those wise men who are sāttwic, whose energies are strong but self-controlled and guided by wisdom (that is, by knowledge and love) are on the road of true happiness.

Men in whom this sāttwic nature predominates are often said to be becoming god-like, for it must be remembered that the very nature of God is ānanda, or happiness, and this happiness is to be found in the activity with which God creates the world, the love with which he sustains it, and the law and order with which he determines its course and the adjustment of its parts. The question has often been asked why God created the world, and some great Christian devotees have said that God is full of love, but as love cannot exist without some object of affection, he created the world of beings so that his love should flow out upon them. A still fuller answer is given in the life of Shrī Krishna recorded in the *Mahābhārata*, the *Shrimad Bhāgavatam* and other works. He, as representative on earth of Brahman, is full of vigorous activity in well-doing, full of love and knowledge of what is best; and when the question is raised in the *Bhagavad-Gītā* he replies that there is no need for him to mingle in a world of action on account of any duty imposed upon him, or anything that he could possibly gain. He created the world of beings, and sustains and manages it according to law, because if he did not do so it would fall into

confusion and ruin, and the progress of living beings would come to an end. Here we find the divine bliss or happiness expressing itself in creative activity, in love of beings, and in law and order. Thus the happiness of the sāttwic or god-like man is found in creative activity or productive work, love for all beings, and knowledge of the laws of life. These three kinds of happiness are permanent. To give only one example, the painter or sculptor never tires of his work, but the pleasures of eating and drinking soon die away, and if much sought after soon change to pain.

Animals seek food, and men seek clothing and shelter also, not only because these things are necessary, but because they give pleasure. Food is very satisfying to the hungry body, and sometimes it is highly tasteful. For the satisfaction of hunger the tāmasic creature is made to exert himself in the search for food, but when he has stilled his appetite by eating he likes best to go to sleep until hunger moves him again. The rājasic nature is more highly developed. After much experience he has developed a keen memory of the pleasure of eating, so he seeks food not to satisfy his hunger but for the pleasures of taste, and when his appetite is satisfied he will seek to stimulate it again by strong spices. He lives for the sake of eating. But the sāttwic man eats for the sake of living ; he knows that taste is a pleasure that soon passes away, and he has come to find his

happiness in the productive work by which he has earned the right to eat. The pleasures of the senses are intended to tempt the sluggish soul into making efforts, and only after some time will the lesson be learned that it is the effort that is joyful, not the pleasure which it at first mistakes for happiness. While the seeker of food is learning to be active and useful, he is also learning to use his mind, to think, and when he becomes a sāttwic man he rejoices also in a knowledge of the laws of life.

The ancient books give the following list of foods for the three types of human beings :

Sāttwic : foods that augment vitality, energy, vigour, health, joy and cheerfulness, which are delicious, bland, substantial and agreeable ; including wheat, rice, barley, milk, ghee, sugar-candy, butter, honey, dry ginger, cucumber, various vegetables and beans and good water.

Rājasic : foods that are bitter, sour, salty, very hot, pungent, dry and burning, and which ultimately produce pain, grief and sickness ; including sesamum, mustard, liquors, fish, flesh of animals, curds, butter-milk, gram, oil cakes, assafoetida, garlic, betelnut and leaves, tamarind, chillies, etcetera.

Tāmasic : That which is stale and flat, putrid, corrupt, leavings and unclean.

In the matter of clothing and shelter, the tāmasic man seeks ease, comfort and luxury. He does not like to walk when he can ride ; he is very fond of

soft pillows and beds, and unless he is rich and surrounded by servants these things, like his own body, will be far from tidy and clean. The rājasic man is full of show and pomp; his clothes and houses are rich and impressive, and his manner is self-assertive and even arrogant.

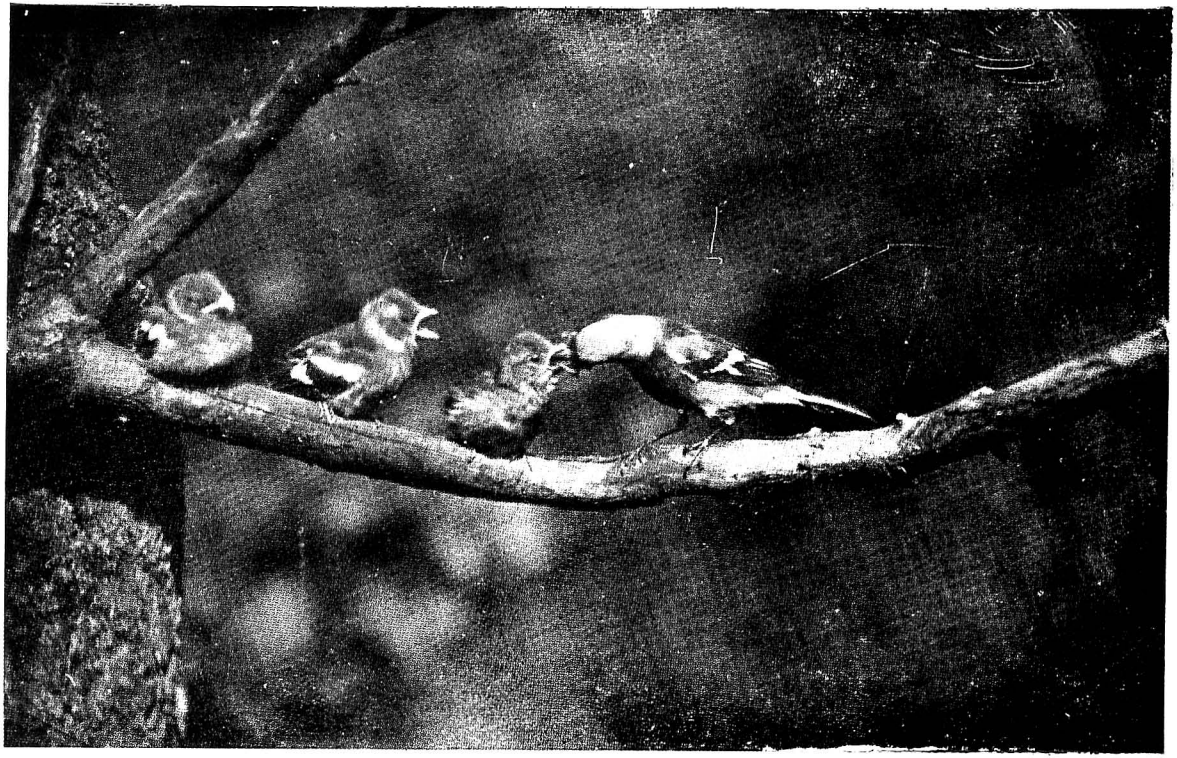
The sāttwic man knows that his body is but an instrument with which the soul works, just as a musician plays upon his vīnā or as a boy rides upon his bicycle. He gives it the comfort, the nourishment, the exercise and rest that it needs, looking after its health and condition as one would after that of a splendid and valuable horse, and in return he expects it to serve him well in his pursuit of the true ends of human life—work, love and knowledge.

We must not forget to mention at this point that among animals and plants, as well as men, even in the case of those who are tāmasic and rājasic, love of offspring appears, and induces them to labour for the food and shelter of the young in many ways, and for their establishment in life, as we shall see in the next lesson.

CHAPTER XI

FAMILY LIFE

It is useful for us to notice at this stage of our study how frequently love of family appears in the animal kingdom, and how important it is for the preservation of the various species. If it were not for the attraction between father and mother nearly all the higher wild animals, such as lions, tigers, wolves and elephants would soon disappear from the face of the earth—and if it were not also for the care that they take of their offspring while they are still too young and weak to take care as themselves. The same principle is true in the case of mankind, and it is sometimes considered a religious duty to bring into the world one son and one daughter if one has a healthy body and good ancestry. It is, however, desirable in the interests of the nation in which we live, that those who have bad diseases such as consumption and leprosy should remain single and without children, for such diseases are passed on to the children and are spread by contagion or infection to other people with whom they come in contact. It



To face page 60] Bird feeding young ones

"I do wish mamma would come." [To face page 61

is desirable also that marriage should take place at a ripe age, for science has proved that the children will be stronger and brighter than those born of parents who are very young.

It has been said that there are few things in life which can do so much to improve the minds and hearts of a woman and a man as the effort to make themselves a centre of helpfulness and joy to a family of growing children, and certainly it is one of the things that all who are strong can do for the benefit of their nation and of humanity. It is not difficult to see how it can bring out the best in man and woman. For example, the ambitious rājasic man, whose great desire in life is to push himself into prominence and shine out superior to his neighbours, if not by merit, then by pulling down those who are climbing near him, either by evil tongue or otherwise—though he desires to excel all others, yet wishes that his own son should rise superior to himself. It may be said, indeed, that the greatest wealth a man and woman can have is a family of really good children, and one of the best things a boy or girl can do is to try to achieve the goodness and progress that his parents desire for him, for his own sake as well as for their happiness. Children carry on the family into the infinite future, while most of the other works of man entirely perish; and the parents of good children in their old age have the extreme happiness of feeling that their lives have not been in vain.

A family life similar to that of man is often seen among the lower creatures. Animals such as the lion, tiger, bear and wolf, most of the birds and all the higher monkeys and apes take only one wife or husband. An interesting account is given, in one number of Mr. Bibby's excellent Annual, of the housekeeping of the higher apes of Borneo. The father, with careful and far-sighted industry, builds a snug home among the branches of a lofty tree, and there establishes his wife after paying court to her, and in due time their offspring come into the world. Then, with touching fidelity, he himself descends the tree and sleeps on the ground, ready to fight any foe who may try to climb up and molest his family. This pair remain united for life, and are attached to each other with almost human devotion. In the same article it is said that the Chinese people, in their marriage ceremonies, pay special reverence to the goose, because it is strictly monogamous and mates for a whole lifetime.

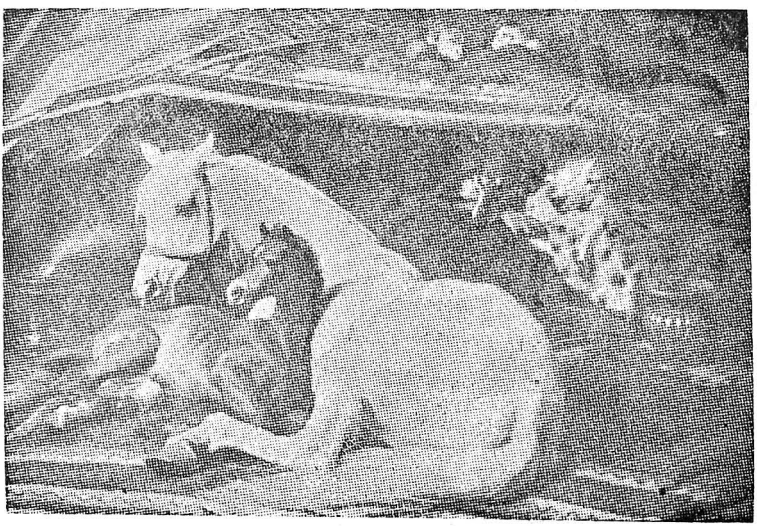
Another interesting case is that of the salmon. The father fish comes up the stream first, and forms a kind of nest among the pebbles and sand. Then the mother arrives and deposits her eggs in the nest, after which the father adds his fertilising element to the eggs. Then the two spend their time in close companionship, and together take care of the young. This case is taken to show that association for the care of the young is a very old instinct.

In the animal kingdom this tendency to family love often extends itself to the herd or the flock, and there are many cases of special friendship involving mutual help. One of the most interesting examples is that of the cranes and the larks. When the cranes fly across the sea for change of habitation they allow larks to accompany them, and sometimes the small weak bird has been seen riding on a crane's back when tired. We have all seen birds standing on the backs of oxen and relieving them of troublesome flies while getting a good meal for themselves, and a funny example of the same kind is that of the friendship between the rhinoceros and a little brown bird which always lives and rides about on his back when not engaged in building her nest and looking after her young. It happens that the rhinoceros cannot see very well, as his eyes are small and deeply set in his head, and their vision is obstructed by the large horn near his nose. So in time of danger the little bird with her keen sense of sight soon gives a warning cry, and if the old fellow is asleep she catches hold of his ear with her beak and pulls it till he wakes up and attends to the pressing business of the physical world.

In this section of our study we ought to have learnt that as citizens of the world we must recognise the co-citizenship of other living creatures, and act towards all in a spirit of kindness and comradeship. The following verses show the true attitude of mind :

If you sit down at set of sun,
And count the acts that you have done,
And counting, find
One self-denying act, one word
That eased the heart of him who heard—
One glance most kind
That fell like sunshine where it went;
Then you may count that day well spent.

But, if through all the live-long day
You've cheered no heart by yea or nay,
If through it all
You've nothing done which you can trace
That brought the sunshine to one face,
No act most small
That helped some soul and nothing cost;
Then count that day as worse than lost.



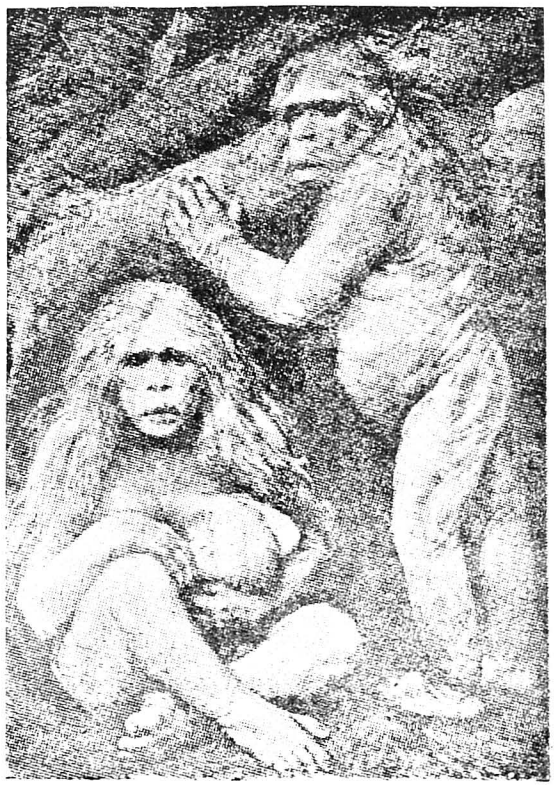
PART II

WHAT MAN CAN DO

CHAPTER XII

PHYSICAL SPECIALITIES OF MAN

During the last century scientists in Europe have paid a great deal of attention to the comparison of human and animal bodies, and have conclusively shown that all the features of the human form are to be found also in animal bodies of one kind or another. The form which is nearest in structure to that of man is the body of the monkey,



PROBABLE APE-MAN FAMILY

and especially of the highest types of monkeys, which are called manlike apes, such as the chimpanzee, the orang-outang and the gorilla. Anatomically, man is the same as the ape, bone for bone and muscle for muscle.

It has therefore been concluded that man and the ape had a common ancestor, from which both have developed, just as one road may branch off into two going in different directions. This does not mean that the vulgar notion that man has descended (or ascended) from the ape is correct, and as a matter of fact the difference between the lowest man and the highest ape is too great to admit of the possibility of one being the direct descendant of the other, and the course of evolution (or unfoldment of powers and qualities) of the individual ape shows us that the ancestor from whom they have descended was more man-like than themselves. The individual ape is more human when young than when older; when it is young it is intelligent and good-natured, but as it grows it becomes more stupid and its skull begins to recede, while its facial bones and jaws develop, producing a far more animalised being, both anatomically and mentally. With man the reverse is the case, for as he advances in age he develops his intelligence, expands the upper and frontal part of the brain, and becomes more and more human and spiritual. Individual development is the key to the evolution of ancestors, and we may well conclude that the apes have really made a descent while we have made an ascent from our common ancestor.

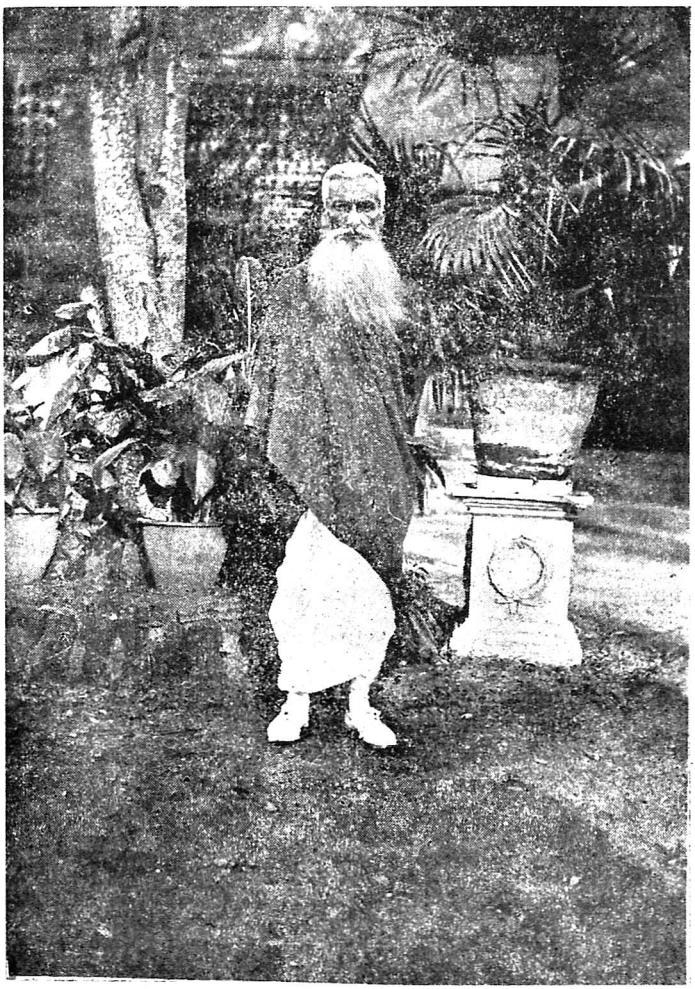
The ancient books speak of man as the 'straight-backed,' while the animals are called the 'sloping-backed,' and this is the fundamental bodily distinction between man and the ape. A second distinction is to be found in the important fact that man has a far larger brain; and here there is a great gulf between the two, for the brain of the highest ape (the gorilla) has a capacity of only thirty to fifty-one cubic inches, while that of the Australian aborigine (almost the lowest type of man on earth) amounts to over ninty-nine cubic inches, or roughly three times as much. Even the newly-born human baby has a brain twice as large as that of the full-grown ape. All other animals, such as the elephant and horse, have brains still smaller, and there is nothing in nature to fill the huge gap between the ape and the human brain, nor in any old skeletons that we have been able to find. The oldest known human skeletons have been lying in the earth for at least a lakh of years, and they show no special similarity to the ape type of brain, and their skulls are no nearer in shape or capacity to that of the gorilla than are those of many men who live at the present time.

Another distinction lies in the hand, which is the most perfect working instrument in nature. The ape is considered to be highly favoured in this particular, for it has hands, while all other animals have to do their work with less adaptable instruments. The bird has to use its beak for building its nest as well as for taking in its food; the elephant has to use its

long nose for lifting objects; nearly all creatures are restricted as far as constructive work is concerned to the use of their jaws. With such instruments only the roughest of creative work is possible for them, and the use and development of tools is an impossibility. Although the monkey shares with man the privilege of the hand, there is here again a great difference, for man has a useful thumb, placed in opposition to his fingers for grasping and holding purposes. If you look at the hand of an ape you will see that it has but a tiny, weak and almost useless thumb, far down near the wrist, and placed in a line with the fingers, not in opposition to them. Among men, indeed, the size of the thumb in proportion to the length of the hand marks out character, will and intelligence, and a man can really be judged by the measure of his thumb.

It must be clearly understood that the quality of the human body is entirely superior to that of the apes; it is altogether more refined and sensitive. This is to be seen in the texture of the skin and hair and in other particulars; and has something to do with the fact that man has a more perfect instrument for speech. The shape and mobility of the lips and mouth, the flexibility of the tongue and of the vocal cords in the throat, under the control of the will, help man in the expression of his thoughts and feelings through language. Articulate speech is one of the supreme powers of man; far beyond the ability which the apes have, like many other animals, to express their feeling by inarticulate sounds. These

then are five of the main physical features of human distinction and superiority: the erect posture, the large and well-shaped brain, the hand with its



A BENGALI GENTLEMAN

useful thumb, and the mouth and throat organs required for articulate speech.

CHAPTER XIII

WHAT MAN CAN DO WITH HIS BRAIN

We have distinguished five physical specialities of man—his erect posture, his brain, his thumb, his sensitive nervous system and his organs of speech. These are all organs which have come into being to express the developing powers of the human soul. Just as the human hand will shape iron and wood into the forms of chisel and hammer, so that it may afterwards hold them and use them as tools or instruments to increase its power, or as it will form out of cane a flute on which the lips can play sweet music, so has the human soul in the course of ages gradually shaped out of the matter of the body the brain, the thumb, the nerves and other instruments or organs that it needs for its use, and for the expression of its will, its thoughts and its feelings.

This fact is expressed in the scientific phrase 'function precedes organ'. The function of the mouth is partly to speak, and the function of the legs is to carry the body along by pushing against the earth. Yet it is not because we have a mouth and legs that we are compelled to speak and to walk;

but because we had a desire to express ourselves and to move about we gradually formed these organs for the purpose. The primitive creature has the functions, but not yet the specialised organs; when it wants to move it puts out a foot, and when it wants to eat it makes a hole in itself near the piece of food, so as to take it inside. The function is there, though the organ is not yet specialised. It is by the pressure of will and ideas that bodies with their organs 'like all machines' have been made.

The brain is the instrument of thought, and man's development and use of this organ is seen in his three superior powers: (1) to acquire knowledge, (2) to store it up in his memory, and (3) to apply it. You will find that most men who are not idle are engaged in at least one of these activities. There are the Scientists, who study the different kinds of matter and objects in the world and the forces which move them, who have discovered most wonderful things, such as the weight of the earth, the size of the sun, the distance of the stars, how human and animal bodies are made up, and what functions are performed by the blood, bones, skin, nerves, lungs, heart, and nearly all the rest of its parts, how to use the powers of fire, steam, electricity and ether, and many other things. There are the Psychologists, who study thoughts and feelings in order to know about man; and the Philosophers and Sages, who study the science of life and the unity of all things.

There are the Authors of books, Teachers and Lecturers, who are concerned with the storage and the spread of knowledge. There are the Inventors, Architects, Artists, Builders and Manufacturers of all the lakhs of useful and beautiful things that mankind has been able to create. These last are concerned with the application of knowledge.

Each one of us finds himself able to exercise the four qualities of thought: (1) to discriminate one object from another, as a door from a wall (chitta); (2) to recognise the quality that belongs to an object, such as sweetness pertaining to honey and fluidity pertaining to water (ahamkara); (3) to hold these objects and qualities before the mind's eye or in the memory while comparing them (manasa); (4) to deduce the unseen from what is seen or the unknown from what is known (buddhi), as when one judges that there is a man round the corner because his shadow is seen, or that a stranger has come walking from a distance because he has much new dust upon his clothes and his feet. The mind working as a whole, as though it were a sixth sense-organ, also unites the various sense impressions, as when we know an orange we think of its colour, roughness, shape, size, weight, taste, etcetera, all in one.

The developed mind gives man new power of enjoyment, for he can sit down and think about the past and future. He has memory, so that he can mentally recall pictures of what has happened in his

life, and he can judge what is likely to happen in the future. Thus a boy or girl can enjoy over again in his mind a pleasant journey or pilgrimage, a musical party, or a game, and can enjoy in anticipation the pleasures which are to come next week or next year.

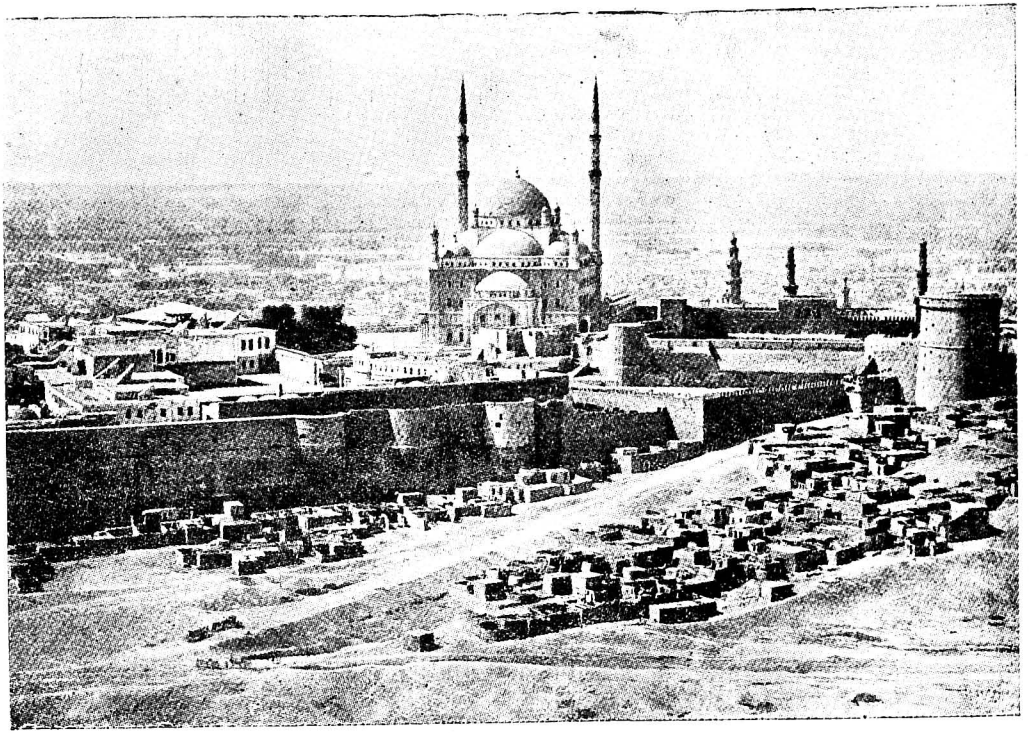
The mind is thus a great power and, as it can be used for wrong as well as right, it is dangerous, like a knife, which is a very useful tool, but may do great injury in wicked or careless hands. A small boy who has a knife to sharpen his pencil may cut his own finger or injure his neighbour; so a boy who is fond of food may remember the tasty objects when he is not hungry, and be thereby tempted to think too much about eating and thus to stimulate himself to overeat and to make himself ill. Animals in a state of nature are generally saved from that danger, because they are moved to eat by the needs of the body, not by the stimulus of thought. In the same way a wicked man may be worse than a tiger in cruelty, because he uses his mind to injure. No animal hunts for the pleasure and excitement of killing, unless like the hunting dog it is taught to do so by misguided man. When men make the horrible mistake of going into battle against each other they use their minds for mutual injury, and they do not fight with natural weapons as bulls with their horns, but they make frightful guns and bombs, torpedos and shells of gas, and many other almost incredible instruments of destruction. Yet there is no height

that man cannot attain by the right use of his mind.

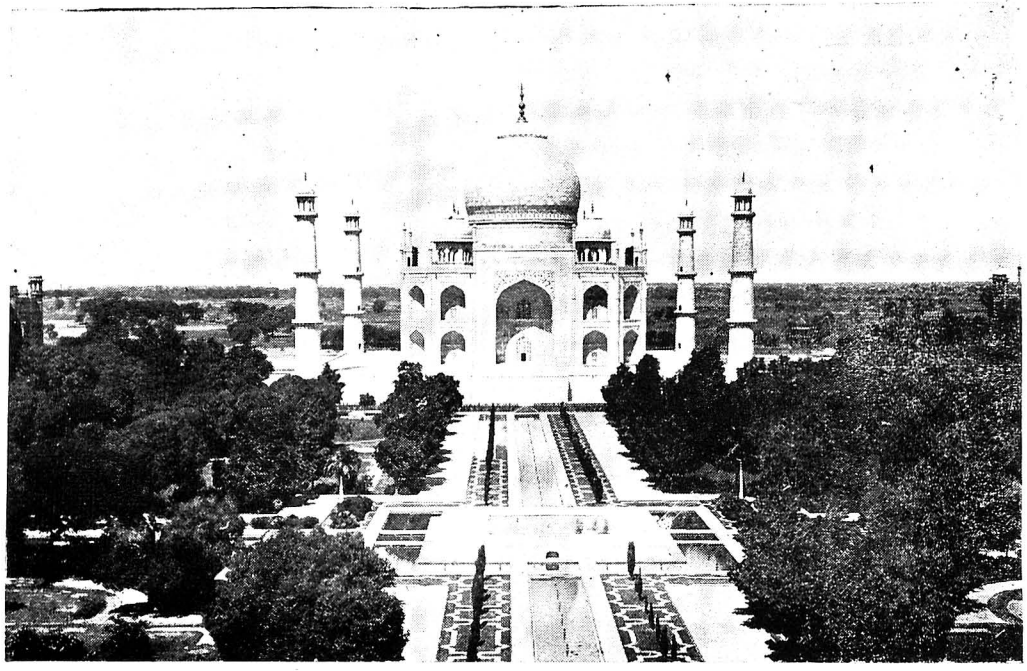
One ship drives East, and another drives West,
With the selfsame winds that blow;
'Tis the set of the sails and not the gales,
Which tells us the way they go.

Like the winds of the sea are the ways of fate,
As we voyage along through life;
'Tis the set of the soul that decides its goal,
And not the calm or the strife.

WILCOX



To face page 76] THE CITADEL, CAIRO



THE TAJ MAHAL [To face page 77

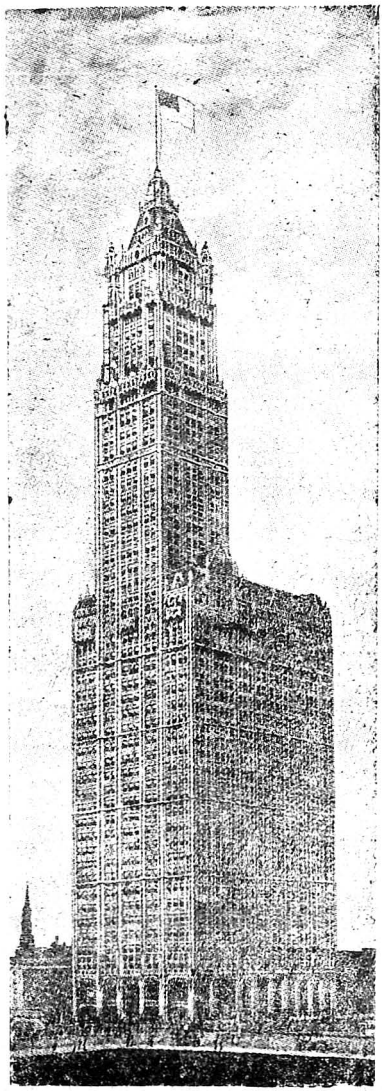
CHAPTER XIV

WHAT MAN CAN DO WITH HIS HANDS

MAN, served by his unique hand, stands pre-eminent among all the creatures of the earth as the user of tools and machines. Even the most primitive man, who lived in caves in the immeasurably distant past, long before the discovery of iron, armed himself with a stick, on the end of which he used to fasten a sharp flint stone so as to form a rude axe, spear or knife; and somewhere far in that archaic past some one made the wonderful discovery that an arrow could be flung to a distance by means of a bow, which must have revolutionised the civilization of those times. Nowadays we find man using many kinds of wonderful tools and machines, which increase his power because they make use of the forces of Nature. Ancient man, however, did not regard the invention of tools merely as a fortunate discovery, as we do to-day, but looked upon them always as a revelation by the divine beings who are superior to man, who generally keep themselves invisible—this revelation being either by the descent or avatāra of a divine man come to teach and guide, or by an inspiration into the mind of one who has prepared

his brain by much thinking about the subject of discovery.

The most imposing monuments of man's manual skill that remain to us from past civilisations are the giant buildings in which men have always gloried. Among the most striking of these are the Pyramids of Egypt, and especially the Great Pyramid at Gizeh, near the river Nile, which is thought by some to be about 5,000 years old, by others some 20,000, and by others again no less than 78,000 years, the last estimate being based upon an astronomical calculation of what are called Siderial Years, or years of the stars as distinguished from years of the sun. This huge structure contains more than two and a quarter millions



WOOLWORTH BUILDING, NEW YORK

of stones, which weigh on the average two and a half tons each, and are neatly squared and fitted together with such marvellous accuracy that it would be impossible to push a knife-blade between them, as there is a space of only one five-hundredth of an inch. Some of the stones are between forty and fifty tons in weight, and the shaping, lifting and placing of these huge masses represents a splendid human achievement, especially when we consider that the whole structure is nearly five hundred feet high. Not far from the Pyramid stands that giant statue, the Sphinx, which has the head of a woman and the body of a lion, and is carved out of living rock.

In contrast with these we have the new giant buildings of America, which are sometimes called 'sky-scrapers' (a very ugly name) on account of their height. One of the biggest of these is the Woolworth Building in New York. This huge steel structure has forty-six floors, one above another, and rises to a height of nearly eight hundred feet—as tall as ten good coconut trees standing one on top of another. Such buildings would be almost useless if it were necessary to climb up many hundreds of steps to reach the upper rooms, but they have inside little rooms called lifts which move in a shaft and rapidly carry us up and down.

The most beautiful building in the world is the Tāj Mahāl at Agra, built nearly three hundred years

ago by the great Muhammadan emperor of India, Shah Jehan. It is built almost entirely in pure white marble, yet its beauty lies not only in its material, but also in the exquisite appearance produced by the arrangement of its parts, particularly the dome in the centre and the towers at the four corners, and in the marvellous lacework of the interior, carved in marble. These beauties mark out its builders, the Hindu architects and craftsmen engaged by the Emperor, as unequalled in judgment, taste and skill in the whole of the world's history, even to the present time. This is only one of the many beautiful buildings that Muhammadan taste, skill and patronage have brought into the world. Among the other wonders of Northern India are the Jamma Masjid at Delhi, the Palace of Akbar at Fatehpur Sikri, and the Audience Hall at Delhi, on which an admirer wrote in Hindustani : "If there is a heaven on earth, it is here, it is here, it is here!" Another magnificent Muhammadan building is the Citadel at Cairo, built entirely of alabaster nearly eight hundred years ago by the famous Saladin, one of the noblest heroes the world has ever seen.

South India has made its own contribution in quite a different style, in the great number of magnificent and impressive Dravidian temples at Madura, Tanjore, Mannargudi, Conjiveram, Chidambaram, Shrirangam, Tiruvallur and many other places. These temples are impressive for their towers or

gopuras, covered with carvings or mouldings of deities, and for their thousands of huge stone pillars, generally exquisitely carved in wonderful detail. In Kumbhakonam there remains a portion of a once long chain of perfect links carved out of stone; into such works in the past men put much spare human labour which in our modern days goes into the making of motor cars and other details of our different civilisation. The tallest gopura, 150 feet high, is in the Madura temple, which has also a magnificent thousand-pillared hall worth at least a million pounds in material and labour value alone, and untold wealth in its æsthetic and religious value to humanity. The gopuras are built with extraordinary skill, for the slightest inaccuracy or crack in the structure would result in a fall. The cut-stone walls of the temples are sometimes between twenty-five and fifty feet high and though only four feet thick and built without mortar, they have stood for centuries. Some of the stones in these walls are from fifty to eighty feet long, and weigh hundreds of tons, while in the interior of some of the temples are pillars of dressed stone rounded with as much accuracy as if they had been made of wood and turned out by machine. Northern India has also its own wonderful Hindu, Buddhist and Jain buildings, among which are the magnificent palaces and forts of Rajputana.

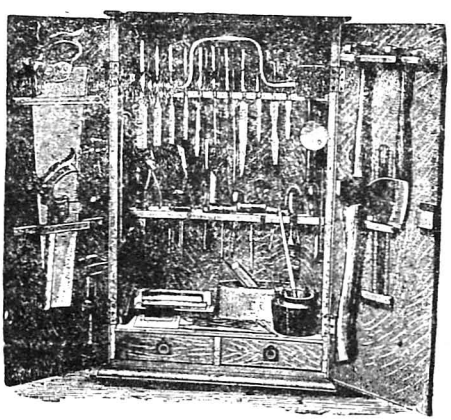
Looking at these splendid erections we see that man has tried by the work of his hands not only to

make what is useful, but also to impress his ideas upon outward form and express his sense of what is beautiful.

CHAPTER XV

THE USE OF TOOLS AND MACHINES

It would have been utterly impossible for men to build those wonderful structures that we have described in the last chapter had it not been for their knowledge and use of tools, machines and engines. It would have been impossible, for example, for the masons of South India to put in place the huge stones of the temple walls without the aid of a crowbar, which is simply an iron rod used as a lever. With such a rod about four feet long stuck about six inches under the stone, a man can lift and move to the extent of a few inches a stone that could be lifted only by seven men without crowbars, so it will be seen that twenty men with these levers could easily move into place a stone weighing much more than seven tons. To



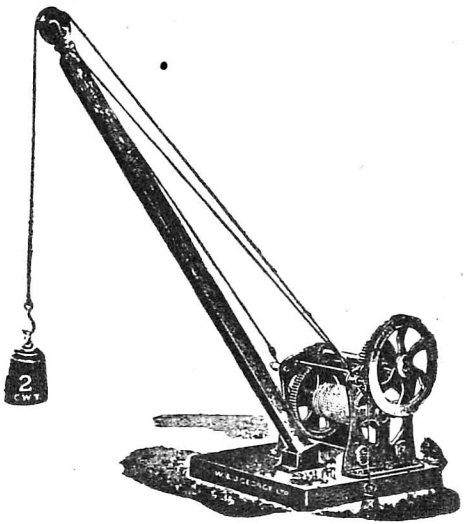
SET OF CARPENTER'S TOOLS

lift the biggest stones to a height of several feet the old workmen must have dragged or levered them up slopes or inclined planes, or up a series of supports or steps.

The lever is an example of a tool for lifting purposes. For cutting purposes we have the knife, saw, axe, and chisel. All the force that you give by pressure upon the handle of a knife reappears at the edge of the blade, and so concentrated along a fine line it exerts great power. With the saw the whole force of your push or pull reappears at the teeth, and the force of your thrust or throw is felt at the edge of the axe, while the chisel driven by the blow of a hammer gives a more delicate form of axe work. A tool for holding, where our fingers are neither hard nor strong enough, is the pliers, working as a double lever and much increasing thereby the force of our grip. Scissors are almost the same as pliers, but they have a fine edge so as to cut through the substance, instead of merely to hold it. The bicycle spanner is also a grasping tool, whose jaws are held by a screw instead of by the hand, combined with the principle of the single lever.

The long-handled thrusting spade is a double tool, which acts as an axe or knife when thrust into the soil, and then as a lever for dislodging the spade-full of earth. The short backhanded spade has only the first of these virtues—it cuts into the soil, and then the load is generally simple lifted, not levered

out. The curved pick is also a double tool, having a sharp point instead of an edge, and a curved head which is rolled over as a lever to dislodge the hard soil or stony matter after the point has been driven in. Allied in principle to the lever we have also the oars of a boat.



A DERRICK CRANE

Pens, pencils, paint-brushes, stylos, and the little tweezers used by printers for putting their type in place, and musical instruments such as the whistle, flute, harp, vina, sitar, violin and trumpet are also tools, not in this case used for the application of force, but for the delicate and peculiar effects required for such operations as writing and drawing and the production of beautiful sounds by touch and breath.

All such instruments held by the hand are called tools; but we have two other kinds of instruments which in modern English we call machines and engines. A machine is generally more complex than a tool, but its special quality is that it has a support of its own and is not held by the hand. A familiar

example is the wheel that is used for drawing a bucket of water up a well. The rope and the wheel together constitute a machine, and the advantage that they give is that you have not to lift your own weight when raising the water. If you had to walk down steps to the water's edge for every potful and then carry it up the steps, you would have to lift your own weight each time as well as that of the water. When builders fix up a wheel and rope on the top of a wall, and draw up buckets and baskets of bricks, stones and mortar, they save very much work which would otherwise be spent in climbing up ladders and steps, and very much time also which would otherwise be occupied in going up and down. It would be a terrible task to carry materials to the upper floors of a structure like the Woolworth Building in New York ; only machines called pulleys, made by an arrangement of several wheels instead of only one, have rendered such a work practical.

Other machines are the potter's wheel and turning table, the hand-loom for weaving cloth, the system of wheels under a cart or carriage, a picotah, a bicycle, a pump, a pair of scales, a screw press, a typewriter, a door on hinges, a clock, a watch, a punkah fixed to the ceiling—and many others. Musical instruments such as the piano, organ and harmonium also belong to this class.

Thirdly we have engines, which are machines supplied with power, such as the expansive power

of steam in the railway engine, the explosion of gases in the motor car, the movement of magnets by electricity in the electric tramcar and the electric fan. About engines operating machines we shall learn something in the next lesson. Here we will notice merely one example, referring again to the power required to lift materials to the upper part of the Woolworth Building. To pull weights up, even by means of ropes and pulleys, would be a very heavy task, so a steam or gas engine is pulled up in parts and put together on a platform at the top of the building, being raised from time to time as the work progresses. It then revolves a wheel which winds and unwinds the rope with a power as great as that which could be exerted by hundreds of horses pulling hard. This engine is called a derrick-crane.

CHAPTER XVI

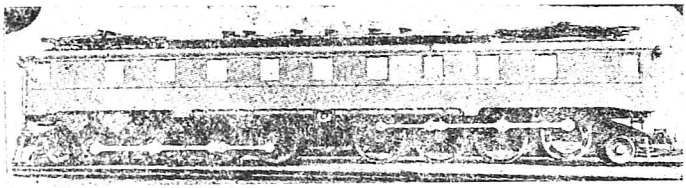
THE USE OF ENGINES

As man has gradually perfected the work of his hands, and carried it out with an ever-increasing knowledge of the world of Nature about him, he has made himself a traveller in all the four regions of life on earth. No bird can fly so high, so swiftly or so far as he, nor remain so long on the wing; even the swiftest horse is left behind in the distance by his rushing trains and cars on rails and roads; no worm can burrow into the earth as deep as he does in search of gold or minerals, or make tunnels through mountains and under rivers; and the fishes of the seas are puny and weak beside his steam-ships that plough the ocean surfaces, and his submarines that explore their depths. Man has made alliance with the powers of earth, water, fire, air and ether (or sky, for ether is the matter of the sky), understanding them with the aid of his brain, working with them with the aid of his hands.

If a visitor were to fall upon earth from a distant planet nothing among the works of man's hands could strike him more forcibly than those travelling

machines which make man master of earth, air and sea. The steam locomotive or railway engine has been with us now for nearly a hundred years, and its long trains of carriages for passengers and goods may be seen in nearly every country in the world. There are railways thousands of miles long; from the west coast of Portugal in Europe to Vladivostock on the sea of Japan; across the United States and Canada and Australia from East to West; and in Africa from the Cape of Good Hope to the Mediterranean seaboard of Egypt (except for a small section not yet built). India has in all about 35,000 miles of railway, more than any other country except the United States, Russia and Germany. In the United States the best mail trains frequently run at 80 miles an hour; in England 60 miles an hour or one mile a minute is the standard for important expresses; but in India the mail trains average only half this speed. A race horse can run for a short distance at 36 miles an hour; a good riding horse or pony can generally do about 30 miles a day; while draught horses pulling heavy loads can do perhaps 10 miles a day on the average. A cyclist can easily beat a horse in a day's run; a motor cyclist can conveniently travel at 20 miles an hour, though his machine, if a good one, is capable of going at 50; while the motor car has a still better record. Thus in all cases the machine proves superior to animal power, both for speed and strength.

For work in tunnels and for climbing mountain ranges with heavy trains, the electric locomotive is

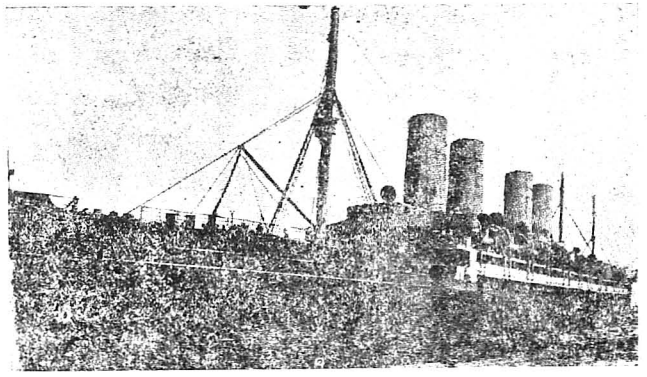


AN ELECTRIC LOCOMOTIVE

becoming the favourite. A new engine of this kind made for hill work in America has 7,000 horse power; it uses up electric power when climbing the mountain, and stores up new power for future ascents as it descends on the other side by the force of gravity. Electric trains flash in and out of the stations on the underground railways in London and some other large cities; you descend by lifts deep into the earth, and find yourself in an underground railway station lighted by electricity; presently a brilliantly lighted train rushes in from the dark mouth of a tunnel, you get on board and are whirled away through a long dark burrow deep in the earth to your destination, perhaps many miles away.

Still more remarkable than the land locomotive is the modern steamship, which can travel day and night over the waves almost with the speed of the railway train. There are vessels which can travel as fast as an English express train; but these are not the large passenger steamers, such as those which ply between

India and England, which usually steam at about the rate of the average Indian mail train. The size of some of these vessels is equal to that of a huge building many stories high and a furlong in length ; such

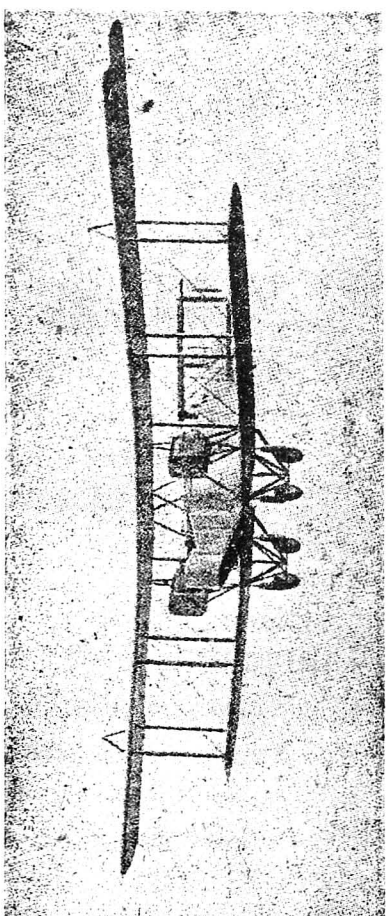


A LARGE STEAMER

monsters are capable of carrying more than a thousand passengers and many thousands of tons of cargo. Almost everything that civilised man requires in his home is to be found on board, and certainly he who invented for these ships the title of 'floating cities' did no more than justice to such marvellous products of human thought and skill.

The boat that can sail, or rather swim, under the sea is another modern marvel. It represents a distinct human achievement, though it is difficult at the present time to see of what use submarine craft will be to mankind, except for purposes of scientific investigation of the ocean depths, and the charting of shallow seas and harbour mouths for the convenience and safety of surface navigation.

But undoubtedly the most astonishing sight for our visitor would be that of man riding joyfully above the clouds, skimming along almost as gracefully as a bird in his winged aeroplane, or sailing steadily and swiftly onward in his dirigible or steerable balloon.

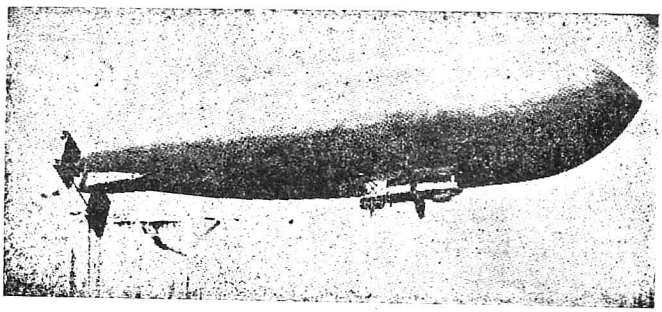


AN AEROPLANE

The first of these machines is noted for its swiftness; the second for its steadiness and carrying capacity. The aeroplane consists essentially of one, two or three pairs of wings (and is called a monoplane, a biplane or a triplane accordingly), moved against the air by a powerful motor engine. These are the swiftest of all things—light aeroplanes built for speed can travel at nearly 150 miles an hour, five times the rate of the average Indian mail train, and they can rise to a height of over 17,000 feet, far above those huge piles of white cloud

that look like castles in the air, but not so high as those fine wisps of icy cloud that are sometimes, though not often, to be seen in the remote heights of the sky.

At the present moment Italy leads the way with successful dirigibles, a machine having been produced which can rise nearly 20,000 feet when not heavily weighted, or can carry about 20 people at a height of 13,000 feet with remarkable steadiness. With such a load it can remain 40 hours in the air, and can travel a steady course in variable weather to a



DIRIGIBLE BALLOON OR AIRSHIP

distance of 2,000 miles within this time. Machines similar to these will shortly be carrying 50, 100 and even 200 passengers, and will probably be a safer and more comfortable mode of transit than the railway train.

You the student, the new citizen of our new civilization, are really this visitor; may you share in the advantage and enjoyment of these modern human triumphs, and do your part in adding to them with your own right hand.

CHAPTER XVII

APPRECIATION OF BEAUTY

THERE is another important feature of human life that we have already briefly noticed—man can appreciate beauty, and by his works of art he can communicate his feelings and emotions about beauty. This sense of beauty is not established by reason, like knowledge of material facts. We should never think, "Gaurishankar is 29,000 feet high, therefore it is beautiful," but we should stand and gaze up at that glorious peak and exclaim, "It is beautiful; it is magnificent". We cannot quite tell why, but we know that its beauty thus contemplated enters into our minds and hearts, purifying, calming and strengthening. Our sense of beauty is a faith, not a knowledge; and we have all found that to submit to that faith and encourage it leads us to what is true and beneficial. It belongs to the dim region of consciousness which is to be lighted up brilliantly in the future, when we have grown more spiritual. Just as reason is a dim light in the animal mind now, but becomes brighter and clearer as the animal approaches nearer to man, so is this reverence and love for

what is beautiful a dim light of our spiritual life, and an inspiration for the development of all our best emotions.

When this reverence for beauty is well grown in a man's heart he begins to desire to communicate the joy of it to others; he wishes that others shall share his happiness in beauty. Then perhaps he begins to work as an artist. We have seen that even those who are working upon objects of utility, such as buildings and machinery, also bring in points of beauty, and arrange the proportions and outlines of their structures so as to please the emotions of the observer. This desire that all things about us should be beautiful was one of the glories of old Indian civilisation. The beautifully-formed wooden pillars of the verandahs and inner courts of the houses, the embellishment of doors and beams with beaded designs and central ornaments, the exquisite contour and finish of the water-pots, the excellent and chaste bordering and pattern-work of hand-made cloths, all enriched the home lives of the people. But it is a fault of our modern days of struggle and hurry that we are too often content with what will merely serve a useful purpose, and the craftsman and artist are not allowed the leisure required for perfect work and for contemplation of their art.. Thus among educated people much of the beauty of Indian home life is passing away, and among the craftsmen that skill which has commanded the admiration of the world is

rapidly declining for want of patronage and nourishment. What will become of the beautiful shawls, muslins, embroidered silks, silver and gold work, wood carving and other crafts, unless it be to supply the needs of rich people in distant lands ? The good citizen will see that in his own surroundings there shall be beauty, for the sweetening of his own character, and for the spiritual benefit and material refinement of all those who enter into his life.

While beauty is apparent to all our senses—in delicate perfumes to the sense of smell ; to the sense of taste in the wholesome flavour of sattwic foods and drinks ; in the soft texture and surface of fine cloths to the sense of touch—it is through the eye and the ear that we receive our greatest enrichment, in the contemplation of beautiful forms and sounds. For the eye we have architecture, drawing, painting, dyeing, sculpture in statuary and relief, moulding and modelling ; work in stone, wood, ivory and metal—all forms of striving towards the light, and for the sharing of light.

When we study the works of pictorial artists, we find that we can divide them into four main types, which merge gradually into each other. These are the literal, the emphatic, the impressionistic and the suggestive, of which the literal and the suggestive are extremes. Examples of the first are Ravi Varma's pictures of the boy Krishna, which have the effect of reminding the beholder of his own thoughts and

emotions, and of associating then more and more with the common things of life; while some splendid examples of the suggestive type are to be seen among the recent work of painters of the Bengal school—in this case the effect is not to remind the beholder of his own thoughts, but to communicate some of the deeper feelings of the artist, whose light in the region of beauty is less dim than that of common men.

The emphatic and the impressionist types lie between these two; the former educates the eye, while the latter aims at the imagination. For example, an emphatic painting of a sunset may at first strike us as unreal—we are tempted to say that such colours do not exist in the evening sky; but when we look again at a sunset we realise that the artist saw true, and that our own vision had been at fault. Many Rajput and Moghal pictures belong to this class, laying wonderful emphasis on detail; and modern pictures of rich ripe fruit and various other such studies also belong to it. The impressionist picture, like those of the famous Turner in England, aims generally at educating the imagination by inviting speculation and discovery, as one might ask a child to discern giants and castles in the ever-changing heaps of clouds.

The effect of modern statuary, following especially the Greek models, is often of the emphatic type. In the great riot of detail that is all around us in the streets we do not notice, for example, the beauty of

form and poise of the woman who passes us carrying a water-pot, but the sculptor setting forth her image isolates the beauty and thus educates us to see it everywhere. For this reason statues are not coloured, as that would distract the beholder from the strong impression of form and grace. Much sculpture is, however, symbolical, such as the image of the dancing Shiva, and it is intended to appeal more to the understanding and to the observer's thoughts and emotions than to the sense of beauty, for to grasp the idea intended by the artist one has to interpret the symbols like a code, or like the words and sentences of a language. Many curves, designs and outlines which are artistic and decorative are also isolated from nature, as they belong to living forms, and to objects such as leaves and shells, which are generally lost to the careless observer in a mass of detail, but when separated appeal to us at once on account of their inherent beauty.

Sculpture and Moulding

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An image of Shri Krishna

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CHAPTER XVIII

MUSIC AND POETRY

Beauty of sound in the form of music has been appreciated, like pictorial beauty, from the earliest beginnings of human civilisation, when our primitive ancestors lived in caves and carved pictures upon bone, and early shepherds and cowherds cut their first flutes with which to make melody of sound. The effect of music (which is a melodious and harmonious succession of sounds) upon our emotions has been recognised in every country, but of all nations the Greeks admitted it to the largest share in their lives. They were always glad to think of the divine incarnation, Orpheus (whom we may almost call the Krishna of Greece), as charming the world with the melodious beauty of his lute. Shakespeare or Fletcher (nobody knows which) has put this ideal of the Greeks in strong English verse :

> Orpheus with his lute made trees
> And the mountain tops that freeze
> Bow themselves when he did sing :
> To his music plants and flowers
> Ever sprung ; as sun and showers
> There had made a lasting spring.

Everything that heard him play,
Even the billows of the sea,
Hung their heads and then lay by.
In sweet music is such art,
Killing care and grief of heart
Fall asleep, or hearing, die.

This verse is in itself a little piece of impressionist music; it does not inform us, but it invites us to speculate and discover the not obvious truth about the full power of music. Surely where sounds are pleasing the sweet-natured devas will abide, and they will shrink as man does from the discordant and harsh; so where sweet music abounds, in the home or in the fields, plants, animals and men alike are uplifted and refreshed.

The sounds of nature are sweet—there is rarely harshness and discord—as in the music of a rippling stream, of the crash and roar of the ocean breakers, of water falling over rock, of the wind in trees, and of most healthy, happy living things. To natural sources of music man has added a great variety of instruments, from the mellow flute to the rich strong tone of the trumpet and the organ; from the lyre and harp and sitar to the violin and piano; but it is in the voice of a person of pure life swayed by high and great emotion and trained in purity of tone and self-control that the highest and most moving beauty of music is to be heard. In singing and poetry, free and unconventional, music reaches its highest power to move

and to uplift, to strengthen in courage and to melt

PLAYING THE WELSH HARP

to softness in pity or love, to refresh the weary and soothe the agitated.

Poetry adds the power of music to enforce a spoken idea too spiritual to be grasped by any mere description in words. It is as though the poet were to say: "You must not only try to understand my words; you must submit yourself entirely to feel with me, for there is not merely truth in these ideas, but beauty also." In its highest form, poetry is thus suggestive, not merely impressionistic.

If asked what are the elements of beauty in a picture, we could distinguish four; form, colour, grace or poise, and proportion or balance of the parts. In music also we have these four, as the melody which is the succession of simple sounds (the form), the tone and expression (the colour given to the form of sound by the nature and material of the instrument, and also by the touch of the player), the time-rhythm (or poise), and the harmony of simultaneous and successive parts. Of these four none is more essential to beauty than rhythm, which is the sāttwic element in music and other forms of art. An endless repetition of the same sound or curve would be tāmasic, inert; a constant change would be rājasic, uncontrolled; but sattwa is rhythm, not stability nor motion, but stabilised motion, licensed motion, grace. With sattwa alone is there true beauty in art.

This then is to be realised: that through all-pervading beauty man's emotions are nourished and his progress is assured. Just as the fertility of the earth is the nourisher of his body, so in the world of beauty his emotions have their home and their nourishment which is inspiration. Because of the former truth, productive work is religion; because of the latter, art, the worship of beauty, is religion. Following these faiths at all times, man has never been misled. And the third religion is reverence for law, science, by which the intelligence is fostered throughout its age-long growth.

CHAPTER XIX

SPEECH AND WRITING

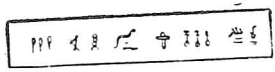
No power that man possesses has been more useful to him than that of speech, by means of which he can communicate his thoughts. As the wielder of this power he ranks far above any of the animals, which appear to be limited to the communication only of their feelings, such as disappointment, hunger and satisfaction, by means of expressive sounds and gestures. There can be no doubt, however, that the man-like apes have a language of definite words, expressive of desires as well as feelings. Dictionaries of these words are in course of compilation, and several scientists have given their time to the work, by studying those animals which are caged in the zoological gardens, or by caging themselves in the middle of African forests so that they may safely listen to the chatter of the monkeys and try to record it.

One of the great advantages of speech, vocal and written, is that knowledge gained by one can be passed on to others and permanently recorded and tabulated. It permits the progress of knowledge with the

aid of works of reference. Just as you would have great difficulty to work out a complicated sum if you could not write it down, but had to remember all the figures, so would a great chemist or engineer have difficulty in his work without books of reference. Speech gives mankind intellectual association for mutual benefit; even in leisure hours we may enjoy the company of the great and good by reading their thoughts, whereas without speech and writing such beneficial association would have been impossible, and man would have been obliged to amuse himself like an animal in his spare time. As Bhartrihari says in the *Nitisataka*: "The man who has no sense of literature and music is like an animal; though he has not horns and a tail, and does not eat grass, he lives a life exactly like that of cattle." Among the greatest benefits of speech is the power of co-operation, by which many may work together at a large undertaking, such as the building of a palace or of a railway engine. The advantages of this power are nowhere better illustrated than in an old Mesopotamian story which tells how men were resolved to build a tower that should reach to heaven, and that their work was progressing well until they were suddenly deprived of their common language, whereupon confusion arose, none understanding what others required, so that the tower could not be built.

We have seen that man can not only communicate his thoughts by speech, but can also communicate and

record them in written form, and it is in this power that he is unquestionably unique. The earliest writing seems to have been in picture form, as in the Egyptian hieroglyphics where, for example, several wavy lines signify waves, water and the sea, the written form thus being not a complete picture, but a part of the object sufficiently characteristic to make the meaning easy to read. This method passed into the phonetic form, in which vocal sounds are imitated by signs, as would be the case if the picture of a serpent, which first represented a serpent, began to signify nothing more than the sound of its first consonant s. Thus alphabets arose, unfortunately not one for the whole world, but a great number in different countries, which has done much to produce confusion among the peoples, like the loss of common speech in the Mesopotamian story. So a written language is now a code, consisting of a number of signs, which can be understood only when the meaning which convention has attached to them is known. As well as alphabets we have two other codes which are widely known—the codes for signalling with flags, or flashes of light, or the clicks of a telegraphic machine, which all work for the eye or ear, and the code by which the blind may write and read, which consists of various arrangements of raised dots on stiff paper, which signify the letters of the alphabet and



HIEROGLYPHICS

can be readily interpreted by the touch of the fingers.

Indeed it is true that even spoken language is a code. There are few words that resemble what they represent, though we have some in English, such as "jingling" (of a horse's bells) and "hiss" (of a snake), though these can obviously only be names of sounds. Spoken language is thus a set of arbitrary symbols, which have to be interpreted by the hearer before he can understand their meaning. In this, speech differs from music and pictorial art, which give direct experience and instruction to the hearer and the observer.

For still further increasing his power of communication, man has invented many wonderful machines. In old times knowledge was sometimes spread abroad by means of monuments, such as the famous inscribed pillars erected in various parts of India by the great and good Buddhist king Asoka, in order to instruct the people in the way of virtue. To replace the old cumbrous stone and clay tablets, and the palm-leaf manuscript of comparatively later times, we have now books, which can be multiplied almost indefinitely by the printing machine, and have the merit of being easy for the eyes (when they are good), and cheap, so that all may enjoy them. Then we have marvellous reproductions of the living voice by those wonderful inventions the phonograph and the gramophone, in which a record is taken upon waxy material of the

impressions made by the sound of the voice, and when this record is put into the machine it brings forth the sounds. We have the telephone, by which men can speak to one another at a distance of miles—only recently a party of gentlemen in America listened at the same time to the roar of the breakers of the two great oceans, the Atlantic and the Pacific by means of telephone wires stretching across the continent of America, a distance of about 2,500 miles. We have the telegraph by which we can communicate with great speed across continents and oceans, and even round the earth ; and we have the heliograph for sending flashes of light by day, and the searchlight for night. In addition we can represent our thoughts pictorially, and thus give most valuable instruction in useful arts as well as in social manners by means of the moving pictures of that most valuable educational machine, the kinematograph.

CHAPTER XX

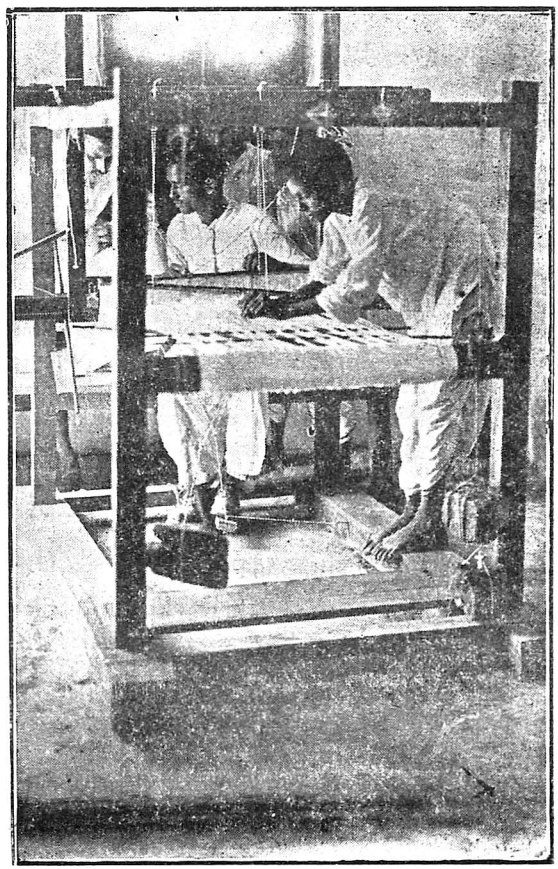
THE DIGNITY OF WORK

It is well known that the primitive man or the savage has no love of work, and that when he has satisfied his hunger and other simple needs he prefers to spend his time lying indolently in the shade of a tree rather than to seek by work to make any improvements in his surroundings or in himself. Very often the same defect is to be seen among civilized men. In this case, however, only the most degraded can become idlers, homeless and workless, wandering and begging not because they are strenuously seeking spiritual life or transmitting to others beneficial magnetism, knowledge or other help, but because they are too lazy to work or to arrange their lives properly and decently, and too tāmasic to desire improvement. But in many other cases it takes the form of an anxiety to get rich quickly, so that time may afterwards be spent in luxury and idleness.

Such a tāmasic man is ignorant of two important facts—first, that the happiness accompanying and resulting from successful work is far far greater and more permanent than the pleasures of idleness and luxury; and secondly, that work makes man more man and less animal. The animal can eat and sleep; it is reserved for man to do creative and artistic work. It has already been pointed out that man alone has been endowed with a developed hand, and man alone

can enjoy the pride and privilege of using it; how foolish then is the person who clings to that false idea that to work with the hand is degrading? In that case to be man would be degrading, and to live as a tree or a vegetable that merely sucks in food from the adjacent air and soil would be a lofty and inspiring state.

Manual work is not degrading, whatever foolish people may think or say; it is elevating, for it brightens the mind by bringing to it direct experience as distinguished from knowledge conveyed by words (a very indirect and imperfect



BOYS LEARNING WEAVING

form of experience) and it educates the will to definite achievement. If you have ever done a good, honest, sound and complete piece of useful work with your hands, even if it is only the very humble one of dusting your room and making it thoroughly clean and tidy, or that of putting your bicycle into good condition, you will know the truth of this. It gives you a sense of being able to accomplish things, which always is a sign of developing will-power. An American poet, Longfellow, has sung of the satisfaction of steady useful work in his *Village Blacksmith* :

Week in, week out, from morn till night,
You can hear his bellows blow :
You can hear him swing his heavy sledge,
With measured beat and slow, . . .
Toiling—rejoicing,—sorowing,
Onward though life he goes ;
Each morning sees some task begin,
Each evening sees it close ;
Something attempted, something done,
Has earned a night's repose.

The work of the village blacksmith has in it something of each of the six divisions or kinds of labour :

Skilled or unskilled,
Creative or mechanical,
Mental or physical.

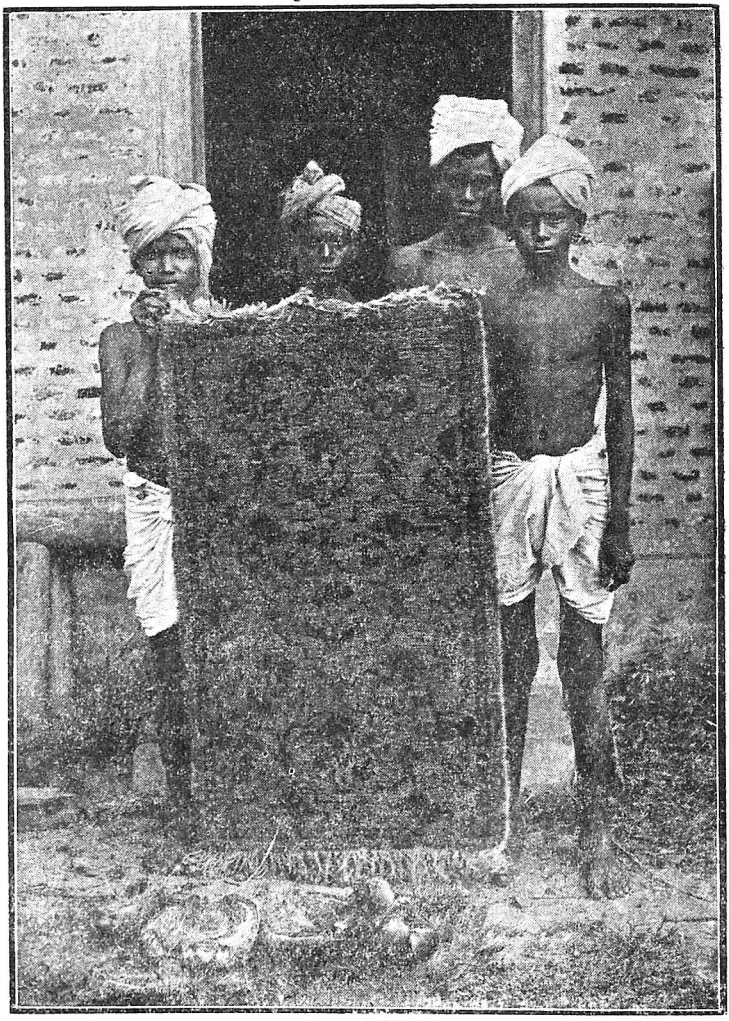
Whenever work is done with an object of utility or beauty, or of both, these classes appear. To drive a motor-car through traffic, to lay bricks evenly and build a wall straight and strong, to put together or

'compose' printing type, to 'assemble' the parts of a bicycle or a clock, are all examples of skilled labour. To drag a hand-cart, to carry bricks up a ladder, to turn the wheel of a hand printing-machine, are all forms of unskilled labour. To sew together hour after hour marked pieces of cloth is mechanical work, but to cut out the cloth to form a garment beautiful and well-fitting is creative work. Work such as writing a book, designing a new garment, discovering the defect in a broken clock, supervising an estate, is largely mental, whereas work requiring but little mental attention is classed as physical.

The benefit of work is lost if it is carried on beyond the point of fatigue, under conditions bad for health, or so long that it becomes monotonous, as is too often the case in factories and mills. Labour which is almost purely mechanical should not be done by man, except off and on in conjunction with other work, when it is valuable as diluting the strain of mental, creative and highly skilled work. Man's work is not that of a beast of burden or of a machine, but is properly characterised by some degree of skill, creative power and mentality.

To seek enjoyment in idleness and sensuous pleasures (tāmasic and rājasic aims) is to find depression, and perhaps even ill-health, for these pleasures do not belong to the human soul. On the other hand, work is the great cure for sorrow and depression of spirits, especially when it is work undertaken to make

other people happy, directly or indirectly, and pursued without haste or hurry—such is the power of



PANCHAMA BOYS AND THEIR WORK

sāttwic work. In the stately, dignified life of old days, the nobleman took a pride in the good

cultivation of his lands, the good condition of his tenantry, good service to his family and country, and the encouragement of craftsmen who could make useful and beautiful things, for he recognised that worthiness and true wealth lay in these works, not in any display of richness, extravagance and wilfulness. Such a man must inevitably acquire the dignity which comes from a consciousness of worth, and must gain a sense of strength and power steadily developed and held in reserve for days of trial that may come.

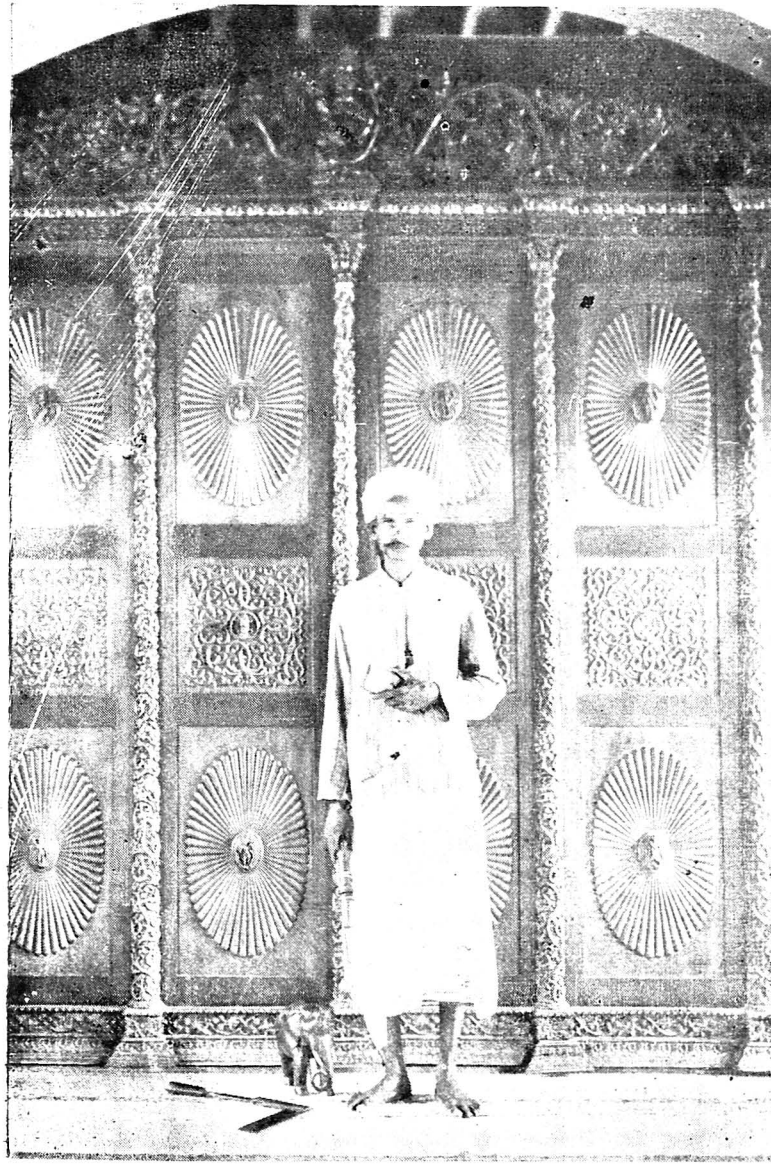
From this let us realise the fact that if riches make us sluggish they are a source of injury, not of benefit; far better indeed that they should be torn from us, and that we should be forced to develop our powers by work under the necessities of comparative poverty.

CHAPTER XXI

DO IT WELL

We have already distinguished between man and the animal and other sub-human kingdoms of nature, and have learned what it is to be a man and to live a human life, exercising human powers. There is finally another point of distinction which is of the utmost importance—that the appetites are different. The animal desires to satisfy its hunger and other physical cravings, but man desires improvement. There is in him what is often called 'divine discontent' which will not let him be satisfied with what has already been attained, but is constantly urging him on to seek further improvement; and though the tāmasic man may have very little of this higher desire, there must be some little of it at least or he would not be worthy of the name man.

Success in life is to be measured by this improvement. No matter where we stand, high or low, with much or little power and ability, our life is a success if we have used our powers well and improved them by use; it is a failure if we have not. If you develop your will-power and become more capable of doing



An Indian Carpenter and his work

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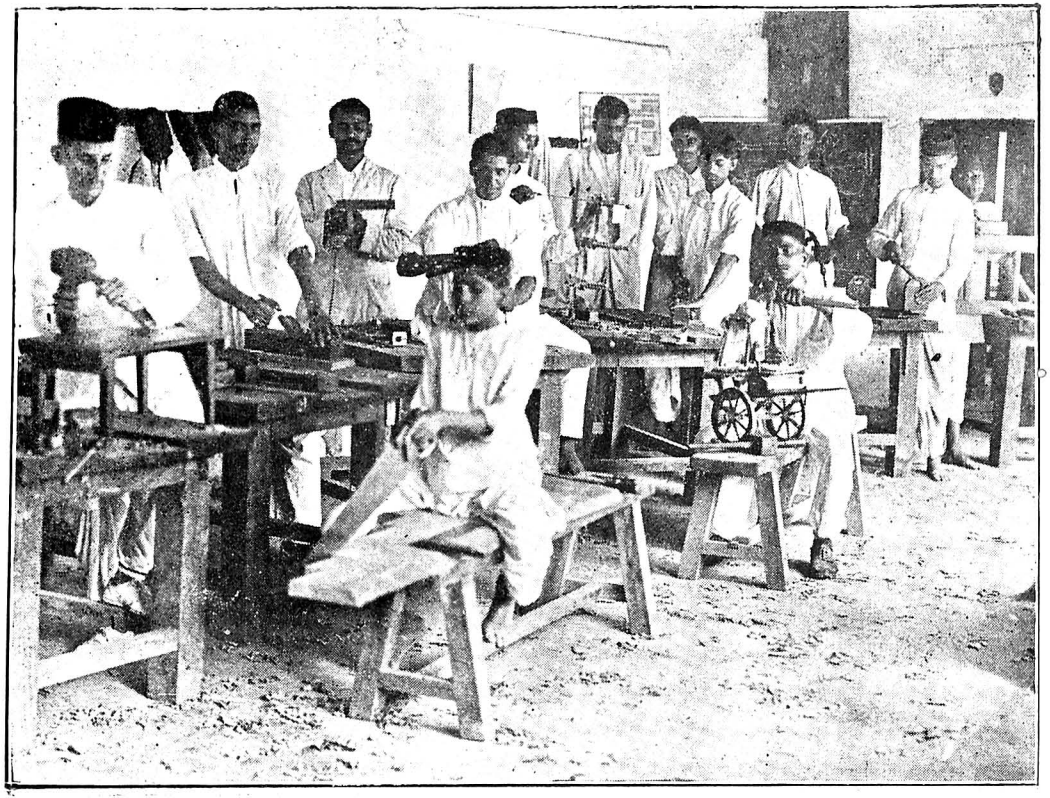


Boys Learning Carpentry

[To face page 115

things, if you develop your mind so as to increase its power of understanding, if you develop your social feelings, such as love, kindness, good comradeship and sympathy—you are making a success of your life. It is only such success that can give real happiness, because it makes man more godlike, and carries him on towards his goal of perfection. The value of the unresting desire that urges him ever onward is pleasantly expressed in George Herbert's poem :

When God at first made Man,
Having a glass of blessings standing by,
Let us (said He) pour on him all we can ;
Let the world's riches, which dispersèd lie,
Contract into a span.

So strength first made a way,
Then beauty flow'd, then wisdom, honour, pleasure :
When almost all was out, God made a stay,
Perceiving that, alone of all His treasure,
Rest in the bottom lay.

For if I should (said He)
Bestow this jewel also on My creature,
He would adore My gifts instead of Me,
And rest in Nature, not the God of Nature :
So both should losers be.

Yet let him keep the rest,
But keep them with repining restlessness ;
Let him be rich and weary, that at least,
If goodness lead him not, yet weariness
May toss him to My breast.

All of us who are loyal to humanity, as soon as we realise what it is to be a man, desire to be as good a

man as possible—capable, intelligent and good-natured. Not only in loyalty to humanity and ourselves,

SCHOOLGIRLS ACTING SAVITRI

but also in loyalty to the country in which we live, must we maintain the same desire; for a country prospers when its citizens are making the most of their individual lives. Every unskilled worker who fits himself to become a skilled one, every one who becomes a creative or mental worker, is not only raising himself but the whole nation in which he lives.

When you have realised that this improvement is the most important thing in life, there are two vital truths to be understood: (1) that it cannot be gained without effort, and (2) that it can be gained amid all the small experiences of daily life. You must pay

for what you want; if it is to develop the muscles of your arm, you must pay the price, which is effort given to arm exercises, and time and thought expended upon them; so also if it is to develop capability,

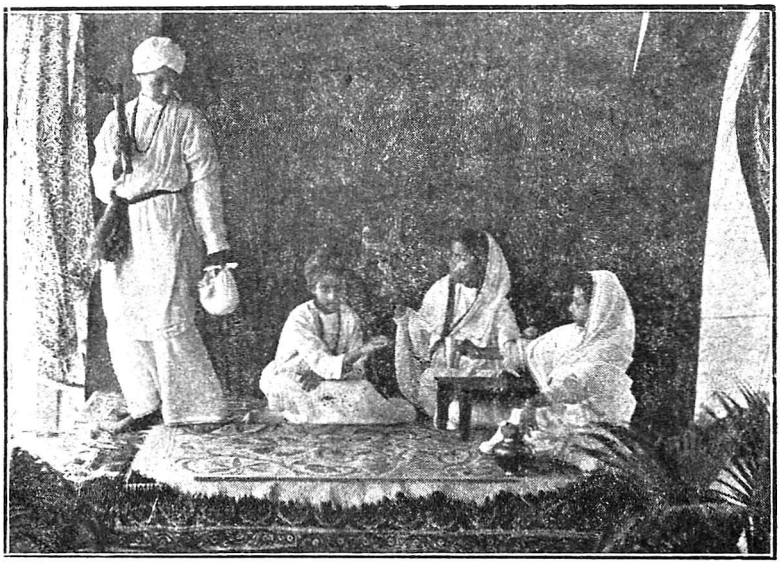
SAVITRI

intelligence and good-nature, you must spend upon them the requisite amount of thought, time and effort.

If it appears that some people are more highly endowed than others with these human riches, do not doubt the law of effort, but remember that they have worked unnoticed, either in the present life or in a previous existence—

> The heights by great men reached and kept
> Were not attained by sudden flight
> But they, while their companions slept,
> Were toiling upwards in the night.

The secret of success in this self-training is summed up in the phrase "do it well". Whatever you have to do, do it well—let quality rather than quantity of work be your aim, and put your thought, feeling and energy into it. Suppose it is so small a



SAVITRI

matter as that of writing a casual letter; let it be as short as is consistent with clear conveyance of your thought, carefully worded, and neatly written, so that it may be read without loss of time, temper and eyesight. Then, you have not only written a letter—you have trained your brain to think clearly, your hand and eye to work accurately, your nerve to act steadily, your artistic sense to open freely, and you have gained self-control, which is will-power. This

rule "do it well" applies to everything you have to do, however small a matter it may be. Looked at in this way, the whole of your daily life is crowded full of opportunities for real success. To aid yourself in this noble effort, you can always have satsanga, association with the great and good, for when you have not actually their presence you can have the company of their thought and wisdom in your favourite books.

Those men are good men who study the good of others without regarding themselves. Those men are ordinary men who, while they benefit others, do not neglect their own interests. Those men are demons who destroy another's good for their own profit. What shall we call those who aimlessly destroy that which is another's ?

BHARTRIHARI

CHAPTER XXII

THE EXPANSE OF HUMAN AFFECTIONS

Among the things that man can do, there is scarcely any equal to his power of deep, strong love, not only for his immediate family but for his nation and for humanity throughout the world. In obedience to this love he is often prepared to sacrifice all his possessions and even life itself. In the ancient literature of India no man is more highly honoured than he who is thus prepared to surrender his own pleasures and possessions when it is necessary for the benefit of mankind. In the Hitopadesa and a number of other Sanskrit works there appears a verse which says that personal advantage should be sacrificed when necessary for the welfare of one's family, family advantage for the sake of the village, village advantage for the benefit of the countryside, the advantage of the countryside for the sake of the nation and that of the nation for the sake of humanity. In other words, it is the unworthy man who loves only himself; the good man loves his family, but better is he who loves his village, and better and better still are they who can love also the countryside, the nation and the whole

of humanity. Such is the extension of the love and affection which first rise in family life, and then expand themselves to village, district, province, country and the whole world. The river of love rises in the family, and flows on, becoming broader and broader until it enters the ocean of mankind.

It must not be thought, however, that a man who loves and serves his country must therefore love his family less. That would be a great mistake. Such a man should have greater power of love than that of one whose affection is not strong enough to extend beyond his family bounds; hence his love of family is also greater. Thus an old poet sang about a man who loved his country so that he must go forth to fight for her, and leave for the time his remonstrant wife:

> Yet this inconstancy is such
> As you too shall adore:
> I could not love thee, dear, so much,
> Loved I not honour more.

Family life is the great nursery of human affections, where father and mother, brothers and sisters, youngers and elders, and even grandfather and grandmother and brothers, wives and children, live in closest intimacy and mutual understanding, affection and help. The honour of the family is a thing that each learns to hold sacred on account of affection, so that if one brother has done wrong, the others will shield him from the criticism of the world and try with all affection

to help him to overcome his fault. Are we not always sorry when we hear anyone speak ill of his own family, or even of his village? Does it not seem an act disloyal to family and contrary to the spirit of brotherhood, like that of birds who peck at one of their number which has been wounded, or like that of the insects which sting some of their companions to death or turn them out of the home when they have done their share of the communal work? Further, in the family the stronger helps the weaker, and he who has knowledge uses it for the benefit of those who have less, not for his own advantage. The master of the house is the *bhartā*, the husband, the upholder, the mother the *bhāryā*, the one to be upheld; the elder brothers and sisters do not override the weaker and more ignorant, do not snatch from them their things, but rather yield up what they themselves have when the younger has need—such are the bonds of family affection in the home.

The affections generated in the home expand to include the village, so that in the heart of a good man love of village arises, and there is a desire to make the village prosperous and happy, to protect the weak within it, to provide for the unfortunate, to see that the ignorant are taught, and that good water and clean and healthy conditions are obtained for all. So there is also a town feeling, such as that of the man of Madras, Bombay, Manchester or London. He does not suppose that his own town is perfect, but he

knows it as the source of many good things, without which his country and humanity would be the poorer. The learning of Oxford, the commerce of Manchester, the engineering of Glasgow, the shipping of Liverpool all contribute to Britain's greatness, and it is no wonder that the men of these towns love the places in which they have been nurtured, and to which they are bound by ties of gratitude and affection.

From the village and the town love expands to include the province. The Tamil people love their great civilisation, full of rich treasures of human culture garnered during many ages; the Bengali also knows the value of his own. The Irishman, Scotchman, Welshman, Englishman—each cherishes his own provincial qualities as a component of vital importance in the life of the British nation; which was compacted of these diverse elements only within the last few hundred years, yet has produced a character and type which is honoured throughout the world. The Indian union is older, for the various provincial types were united in the great Sānskritic national culture thousands of years ago, and indeed every cultured Indian must feel something at least of that ancient brotherhood of all Indians, which is called love of the Motherland or, in general, patriotism. We see the web of love growing wider yet in the British Empire, where bonds of mutual affection and esteem are being firmly woven, and in the idea of

the League of Nations which was intended to acknowledge human brotherhood throughout the world. The Aryan peoples, American, Teutonic, Celtic, Arab, Persian, Indian and others, are also more and more realising the fact that they were all born from one single family in the distant past, though they have migrated and multiplied in many lands. Above all comes that sense of brotherhood for the whole of humanity which makes us feel that every human being is in some degree a brother in a great world family in which the weak shall be protected, the ignorant taught, the oppressed relieved, the enslaved set at liberty, and brotherly love shall rule the earth.

Land of our birth we pledge to thee
Our love and toil in years to be,
When we are grown and take our place
As men and women with our race.

Father in Heaven, who lovest all,
Oh help the children when they call,
That they may build from age to age,
An undefiled heritage.

Teach us to bear the yoke in youth,
With steadfastness and careful truth,
That in our time Thy grace may give
The truth whereby the nations live.

Teach us to rule ourselves alway,
Controlled and cleanly, night and day,
That we may bring, if need arise,
No maimed or worthless sacrifice.

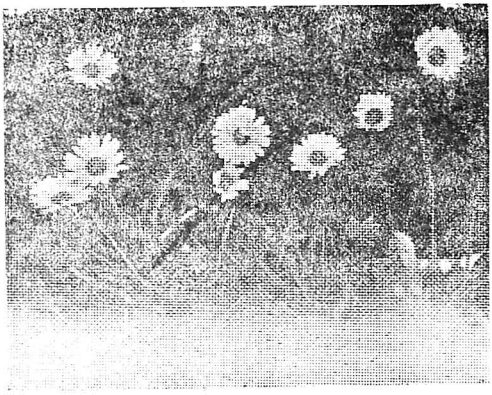
Teach us to look in all our ends
On Thee for judge, and not our friends,
That we, with Thee, may walk uncowed
By fear or favour of the crowd.

Teach us the strength that cannot seek,
By deed or thought, to hurt the weak,
That under Thee, we may possess
Man's strength to comfort man's distress.

Teach us delight in simple things,
And mirth that has no bitter springs,
Forgiveness free of evil done
And love to all men 'neath the sun.

Land of our birth, our faith, our pride,
For whose dear sake our fathers died ;
Oh Motherland, we pledge to thee
Head, heart and hand through years to be.

RUDYARD KIPLING



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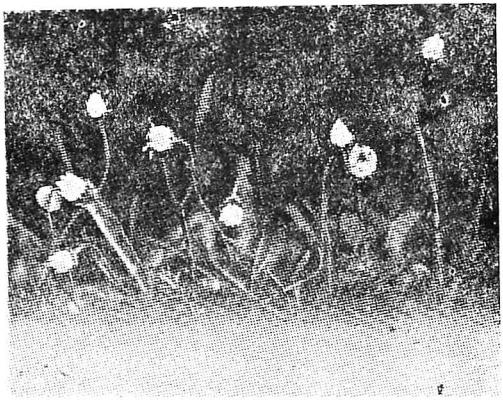

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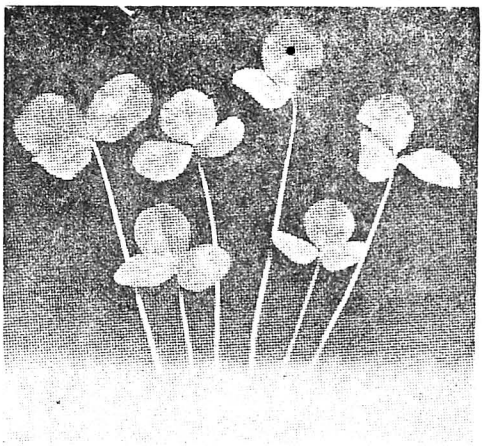

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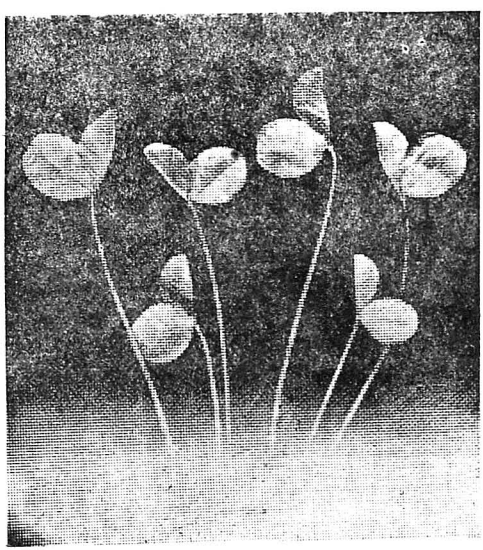

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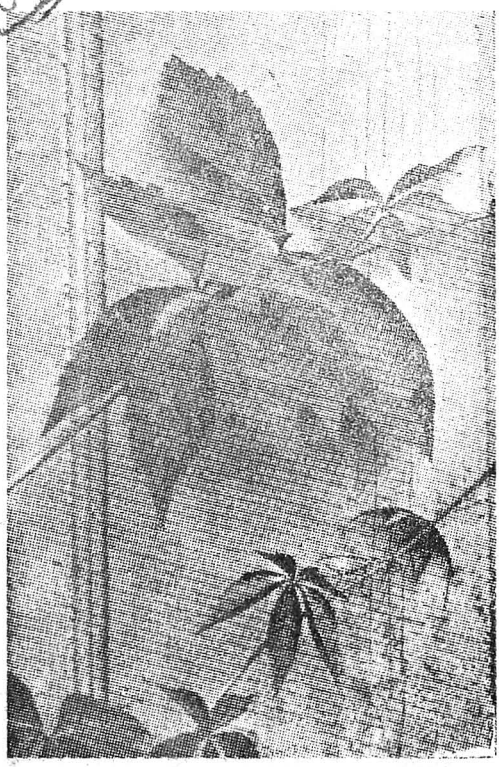

Printed by J. R. Aria at the Vasanta Press, Urur, Adyar, Madras.