

INDIA'S CHANGING COUNTRY LIFE

by SAINT Nihal Singh



A REAPING OUTFIT IN THE PUNJAB



TOBACCO CULTIVATION IN BENGAL



AN OLD-FASHIONED INDIAN OIL MILL

HERE and there the country life in India is changing. The old agricultural implements which have preserved through the centuries the simplicity and inefficiency with which the primitive people of the peninsula endowed them are being discarded, and their place is being taken by chilled steel plows and modern harrows, cultivators, mowers, reapers and threshing machines, imported from the United States. At the same time, large irrigation canals, built by the government, are liberating cultivators from eternal worry over the prospects of rain. These changes are taking place with startling rapidity. The process is proceeding at a snail's pace, so slowly that it is hard for foreigners to realize that the transition is going on. However, each year more and more of the illiterate farmers are sending their sons and daughters to school, and each year they show more interest in the demonstrations held on the experiment farms, and display less opposition to innovations. In a few districts the advancement is already quite marked. This is especially true of certain parts of the Punjab—the province of the Five Rivers, situated in northwestern India—which are known as the Canal colonies. There several million acres of land that twenty years ago was barren waste, today have been converted, thanks to a marvelous irrigation scheme, into an important grain-producing region, spreading the fame of India wheat far and wide in the world.

The very first farm that I visited in the colonies during a recent tour vividly revealed the transformation of Indian rural conditions. In the courtyard, shaded by a spreading jujube tree, stood a reaping machine. In a mud shed, erected especially for the purpose of protecting the farm machinery, I found four chilled-steel plows, two of them made in the United States. On the floor of the low-roofed verandah the farmer's son, a lad of about twelve, at the highest reckoning, clad as Dame Nature had dressed him at birth, but for a scanty breech-cloth, stood turning the wheel of a modern fodder-chopper, which cut green chaff (millet) in small shreds that fell about him in a succulent shower.

After further travel and investigation among the cultivators living round about Lyallpur, the largest city in the erstwhile waterless wilderness, which now, in the wake of the water carried by the Chenab canal, has become a paradise for farmers, I found that the cultivator whose home I had first visited was not a whit more enterprising than scores of others in the district who today are employing time and labor-saving machinery to do all the work on their land. Wherever I went I found agriculturists galore who owned their own steel plows, harrows, cultivators and improved fodder-choppers. Occasionally I would come across a reaper which was the property of a progressive individual who profited by renting it to his neighbors at harvest time. At one place I even found a steam threshing machine.

Many causes have combined to make the farmers in the Punjab colonies progressive. In the first place they more or less entirely have been cut off from their old moorings, and have begun life all over again in a strange locality. They have left some of their ultra-conservatism behind them in the congested Punjab from which they hailed, and the pioneer conditions that they found confronting them in the new region dived them of some more of their inborn reaction. The Lyallpur agricultural experiment farm, located in the very heart of the settlement, has demonstrated to them the good results of deep plowing with chilled-steel plows, and the advantage of using improved implements instead of farming in the cumbersome, bungling, old-time way. A still more potent factor that is encouraging these farmers to use modern machinery

of India, which is very small indeed. Added to this is the fact that fell work has been done by the bubonic plague, and the population has been ruthlessly thinned out. As a result there constantly is a dearth of laborers, especially at harvest time. Then, too, during the cotton season it is necessary for the many ginning factories which have been established to coax to them men, women and children who otherwise would be available for field work. This further shortens the labor supply on the farms. Indeed, the shortage is so great that the government irrigation department, which is constructing supplementary canals to bring more water to the Punjab colonies, finds it necessary to employ mechanical excavators, since coolies are not to be had for love or money. In such a circumstance it is only natural that wages should rise, so that the landowners find it more profitable to employ labor-saving machinery than hands.

The same causes which have induced the Punjab colonies farmer to use modern implements are persuading their brothers in other parts of the country to take them up. Whenever one thinks of India he has in mind its teeming millions and cheap scale of wages; but he rarely remembers that the price of labor has risen a great deal during the past few years, and still is rising, compelling the wise native to employ mechanical instead of manual help. Moreover, the agricultural department, which maintains well-equipped experiment farms at the principal centers of India, and schools and colleges, dotted all over the land where scientific agronomy is taught to the sons

of farmers and young men whose forefathers have always looked down upon manual work, and issues popularly written literature for the enlightenment of the agricultural classes, also are exerting their influence to persuade the cultivators all over British India to make use of modern implements. Many of the native states, too, are following the example of the British administration and are carrying on a similar propaganda for the enlightenment of the agriculturists. This is especially true of Baroda and Mysore, two of the largest territories under native rule. It is quite natural therefore that the demand for farm machinery should be growing.

Since most Indian farmers are exceedingly poor and cannot afford expensive implements, they have taken to clubbing together, sometimes as many as ten of them combining their resources to buy a reaper; and in many instances they are not satisfied with this machine alone, but indulge in improved machinery of other descriptions. In the central provinces agricultural associations have been formed to interest the tenantry in the use of up-to-date methods. This means India's salvation; for the implements now in use on the land are of the crudest character imaginable. The plow is nothing more than a crooked stick with a blunt piece of iron fastened to the point. The handle stands up at right angles, and by this the primitive share is laboriously guided as it is dragged through the hard-baked earth by the patient bullocks. The cultivating is done with a short-handled hoe, which can be used only when the worker is squatting on his heels, and he wades along at his task without rising. The corn is cut by a hand sickle and threshed out by the old-fashioned method of driving oxen over and over it. The winnowing is done by pouring the grain out of small baskets held high above the head by a man, either standing on the ground or on a sort of step-ladder, the wind blowing away the light chaff, while the corn falls in a heap below. Fodder is cut into shreds with a small hand-knife. Water is drawn from shallow wells or rivers or ponds, sometimes by a "Persian wheel" operated by one or two oxen, sometimes by hand, sometimes by baskets let down and quickly drawn up and emptied into a shallow, narrow channel which conducts it to the field. In view of all this, the adoption of modern implements is a move in the right direction.

SAFETY DURING STORM

The question of personal safety during a thunder storm is perhaps the most interesting to the majority of people. If in a building which is isolated in the open country or is higher than surrounding buildings in a group, avoid chimney or other flues, open windows or drafts, especially warm currents of air directly below a high tower or flag pole, peak or angle of the structure, is the warning given by the writer in the New York Sun. Keep away from overhead wires entering a building—although these are generally protected by lightning arresters, the current is not always "arrested."

If in the open avoid trees, wire fences or poles, and if you happen to be the most prominent object in the landscape, as in an open field or on a beach, do not raise a steel rod umbrella, or, in fact, any umbrella, as you may become a living lightning rod without an approved ground connection. If you should happen to be caught in such open space, with lightning discharges coming close, as may be determined by the lessening intervals between flash and report, it is better to lie flat on the ground and risk a soaking than to offer a possible path for a discharge. The reason for this is that the body, being warm, offers a better conductor than the surrounding air, and only a few feet rise is necessary to attract lightning on flat ground.

Questions as to the action of lightning striking a building are frequently asked, and are somewhat difficult to answer without going into a lengthy discussion of the various kinds of discharges and other matters of a more or less technical nature. Let us, however, take the most frequent case, that of the ordinary "forked lightning," as seen at a distance, which at close range becomes the blinding flash, with the accompanying instantaneous crash, often causing disastrous results to life and property. This discharge is caused by a difference of potential between earth and cloud. The one is heavily charged with positive electricity, the other with negative, with the

air between acting as an insulator. If the air is sufficient to keep apart the two currents no discharge will take place except from one cloud to another. Now, as the storm moves on it comes closer to the earth or meets some object in its path which offers less resistance than the air—maybe a tree, pole, building, etc. The electrical pressure is so great that the slight decrease in resistance offered by such object is sufficient to cause the current to jump the intervening space and we have the destructive discharge. This explanation will be clearer to those who have seen the spark gap from coils used on automobiles.

Now let us assume that instead of the object before mentioned, such as a tree, pole, building, etc., we have a perfect conductor of electricity, as a steel building, steel tower or pole in electrical contact with the earth; the current passes through this into the earth silently, the pressure is relieved and in the great majority of cases there is no violent or explosive discharge.

Here is where the function of the lightning rod appears, similar to pipes tapping the tank and drawing off the water before dangerous pressure is brought to bear on the tank. A properly constructed lightning rod will, in the vast majority of cases, act in this manner by silently discharging the current from cloud to earth, thus preventing the violent discharge which we call the thunderbolt.

ON THE QUIET.

"George is leading rather a gay life, don't you think?"
"Oh, not to speak about."
"All right, I won't mention it."—Yale Record.

SOLICITUDE.

"Why do you suppose the cow jumped over the moon in the old nursery rhyme?"
"I suppose it was looking for its moon calf."

INTERNATIONAL SUNDAY SCHOOL LESSON

(By E. O. SELLERS, Director of Evening Department The Moody Bible Institute of Chicago.)

LESSON FOR AUGUST 31

ISRAEL AT SINAI.

LESSON TEXT—Ex. 19:1-4, 16-21.
GOLDEN TEXT—"Let us have grace whereby we may offer service well-pleasing to God with reverence and awe."—Heb. 12:28 R. V.

The securing of water at Mount Horeb, the battle with the Amalekites and the visit of Jethro, Moses' father-in-law, are the intervening events between this and last week's lesson. A suggestion as to the historicity of the Exodus story is indicated in verse 1 of the lesson. "In the third month," these are not the words of an impostor but of the careful historian. The place, Mount Sinai, was a familiar one to Moses. It was at the base of this range of mountains, "at the back of the desert," that he had met and received his commission from God. (Ex. 3:1-12; Acts 7:30, 38.) Let us consider the entire chapter.

The Highest Source.
I. "A peculiar treasure," vv. 1-8. Thus far there has been no law to guide the Israelites except the word of God by the mouth of the prophet. As a nation they must have laws and the proper time has now arrived to promulgate those laws. But it is necessary to impress the nation with the source, the sacredness and the strength of law. Its source is the highest—God; its sacredness is in the nature of its source—God; its strength is in the matter of their obedience.

"Moses went up" and "the Lord called." When we seek the place of separation from man and the place of seclusion with God we may expect to hear him calling us. (Jas. 4:8.) Once before God had called to Moses in this place (3:4) and Moses was taken by surprise. Now it is the man of experience who joyfully seeks the Lord that he may receive a message for his waiting people. God begins by reminding him of his acts in Egypt and at the Red Sea (v. 4) and by his figure, "eagle's wings," he emphasizes the fact that none else but Jehovah wrought this deliverance. Even as the eagle bears its young upon its wings so has he borne out of Egypt this nation which is as yet but a babe.

It is yet to be, however, his peculiar treasure and upon one condition only—obedience. They are to be a kingdom of priests, persons with a right access to God, spiritual sovereigns and a holy nation set apart to preserve the knowledge and worship of God if they obey his voice.

"A peculiar treasure," on the condition of obedience Israel was his peculiar people, how sad that they ever departed from that lofty privilege. In this present age it is the church which is called out to be a chosen generation, a royal priesthood, an holy nation and the people for God's own possession. (I Peter 2:9, 10 R. V.; Tit. 2:14; Eph. 1:11 R. V.; Rev. 1:6; 5:10; 20:6 R. V.)

II. A sanctified people, vv. 7-15. That the Israelites might believe Moses forever, God was to come and converse with him from a thick cloud. Before this took place, however, they must cleanse themselves, set guards about the mountain lest any draw too near and be put to death (v. 12). God's revelations to men are never made to those who with lust in their hearts cling to their sins.

Trumpet Not Material.

III. A wonderful revelation, vv. 16-25. God's descent was signalized by every object of grandeur and awe that imagination can conceive. The burning mountain suggests the consuming fire to the transgressors of the law about to be revealed. The booming thunder and flashing lightning amid the stillness of the wilderness would arouse universal attention, and has not the law thus attracted the attention of ages? The enveloping cloud reminds us of another mountain experience, see Matt. 17:5. The trumpet emphasizes the supernatural, that it was other than a material trumpet blown by human breath. Read in connection with this lesson Isa. 6. Our God is not alone a God of love but he is a being of infinite majesty and holiness, "a consuming fire." Heb. 12:29. Too often we have presented an emasculated God; we need to emphasize, in this day, both sides of his character. At least two locations are pointed out, each of sufficient area to accommodate those gathered under Moses' leadership (v. 17). Though he trembled (Heb. 12:21) yet he approached with confidence, I John 3:21, this interview with God. No sooner had he gone a little way up the mountain than he is ordered to return in order to keep the people from breaking through the bounds to gaze, vv. 21, 22.

Summary. The murmurings at Rephidim (ch. 17) seem incredible so soon after the song of Moses (ch. 15) and the supply of manna (ch. 16), yet how soon darkness makes us forget the brightness of bygone light, imminent danger to forget previous deliverance. Man alone cannot cope with these emergencies; God alone can provide. God's revelation and declaration have in this dispensation been repeated in almost identical language to the heavenly people, the church of Christ. (I Pet. 2:9.) His methods, though seemingly stern, are those of grace and mercy.

HE CARRIED AN UMBRELLA.

A dear old lady who was very "set" in her prejudices was asked just why she didn't like a certain man. She had no particular reason that she could think of at the instant, but she had been so emphatic in her expression of dislike that she knew she would have to find some excuse—at once. Just at that moment she happened to glance out of the window and saw him passing by. He carried a neatly rolled umbrella though it hardly threatened rain.

Quick as a flash she answered her questioner. "He carries an umbrella whether it's raining or not—he is a 'softie.'"

"But," said her friend, also looking out of the window, "here comes your son William, and he is carrying an umbrella."

"That did not stump the old lady. 'But that's another matter—I don't like him anyhow—and besides, it all depends on who carries the umbrella,' she replied triumphantly.

That is the position some people have taken regarding that wholesome and refreshing beverage Coca-Cola. They have said a good many unkind things about it and in each instance have had it proved to them that their tales were not true.

Finally they seized upon the fact that Coca-Cola gets much of its refreshing deliciousness from the small bit of caffeine that it contains. They looked upon that as a splendid argument against it. Then, like the old lady who was reminded of son William, they were reminded that it is the caffeine in their favorite beverages, tea and coffee, (even more than in Coca-Cola) that gives them their refreshing and sustaining qualities.

But does that stop their criticism of Coca-Cola for containing caffeine? No—their answer is similar to the old lady's—they say "But that's another matter"—what they mean is "Being prejudiced against Coca-Cola and liking tea or coffee, it all depends on what carries the caffeine."

We think the joke is on them—for caffeine is caffeine, and if it is not harmful in one it can't be harmful in another. We all know that it is not harmful in tea or coffee—that it is really helpful in whatever it is—this is bound to include Coca-Cola.

Of course, the truth is, that having started an attack on false premises and having had what they thought were good reasons for criticism proved to be no reasons at all, they are grasping at an excuse which does not exist, to explain a prejudice. So you see, after all, it all depends on who carries the umbrella to people who are determined to be unfair. Let us be fair.—Adv.

Gets Clogged.

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