

INDEPENDENT LIBERIA

Would Have Been Gobbled up Long Ago But for U. S.

AN AFRICAN REPUBLIC.

A Territory Rich in Timber and Rubber Trees—Lack of Transporting Facilities—Notwithstanding the Liberians Are Sober, the Country Has Not Prospered.

Among the independent States of Africa none occupies a more peculiar position than does Liberia, which owes its birth to the efforts of American philanthropists, and its continued existence to the mutual jealousies of certain of the Great Powers. As an experiment in the art of government of negroes by negroes on European (or rather American) lines, it has not been hitherto the success which the American Colonization Society fondly hoped it would be when it sent over its first batch of freed slaves in 1822. It has had, since the days of Abraham Lincoln, the powerful protection of the United States, but the progress it has made is lamentably little. Happily, the bloodshed that in Haiti and elsewhere has disgraced black parodies of white men's government has been absent from Liberia; the Liberian is a sober kind of man, has imbibed something of the spirit of his Protestant creed, and has had the Moslem Mandingo and the Pagan Krumen to keep him in check. Nevertheless, Liberia has not prospered; indeed, the number of American-Liberians, (including in that term negroes from the British West Indies) is not more than 20,000. This small body of people, settled along some 850 miles of the Guinea coast, essays to control a territory of 40,000 or more square miles and a native and warlike population of nearly 2,000,000. Speaking English with an American accent, using English money and keeping accounts in dollars and cents, having all the apparatus of the most complicated government machinery, the State has struggled on with a public debt which it could not meet and a trade which was allowed to stagnate.

But for fear of complications Germany would gladly have seized Liberia when the "scramble for Africa" began in 1884, while its neighbors, France and Great Britain, would, in favorable circumstances, have been ready to absorb or share it. Not that either England or France desired to quench the "smoking flag" of a nascent civilization; it seemed then not improbable that a condition of anarchy might arise in Liberia, whose government did not show itself conciliatory to its powerful neighbors. Lying between the British colony of Sierra Leone and the French colony of the Ivory Coast, Liberia, from the commercial standpoint, at least, has been an eyesore, for in its virgin forests—covering fully 25,000 square miles—there is an almost inexhaustible supply of rubber and timber trees. Its strategic position on the route between Western Europe and South Africa would, too, give it great importance if in the hands of a strong naval power. These circumstances explain the interest shown in this petty State by the nations of Europe. France as the predominant power in that part of West Africa, sought by frontier rectifications to limit the area of Liberia, only to find herself involved in a dispute with the United States. That was in 1897, when, on the report of "French aggression" reaching Washington, the American government informed France that the United States, as a result of their "quasi-paternal relationship," were the "natural protectors" of the independence of Liberia. It would have been better, perhaps, had America annexed Liberia, but 1897 was before the days of American imperialism.

The chief hindrance to commerce is the lack of means of transport, coupled with the present inability of the Liberian government to maintain its authority among the savage forest tribes, some of whom are cannibals. But the African, if justly treated, is usually placable, and it should not be a matter of great difficulty to establish friendly relations with the tribes. The Mohammedan Mandingo are already eager traders. As to transport, there does not seem any reason why the Sierra Leone railway should stop short as it does, at the Liberian frontier. If the line were carried on some 100 miles in Liberian territory in a south-westerly direction, it would reach the St. Paul river, a task of no engineering difficulty—it would tap a rich rubber forest, which has the doubtful advantage of being almost uninhabited. It would then also be possible, by means of canoes on the St. Paul river, to reach a very wide forest area in the north. Eventually the railway should be brought down to Monrovia, the capital and chief port. It would furnish to the advantage of Liberia a financial control could be established, such as that exercised by the powers over the finances of Greece. If a German representative were on the commission so much the better. In all these matters nothing need or should be done to hinder the highly interesting experiment of self-government on modern lines by an African people.—*Pitt-Rivers*

A hurried state telegram, marked "urgent," and addressed to the king, was received at the time when the king was going to bed. The telegram was most reluctantly opened by the chamberlain in the king's presence. It came from the king of the Congo, who had been celebrating the anniversary of the day when his

Kite Flying as a Science.

When a kite was flown without tails a new era was opened for it and the kite ceased to be a mere toy. The behavior of a kite in the air proves for one thing that many of our preconceived ideas of wind are wrong. There are vertical as well as horizontal strata of air, and a strong breeze is made up of little breezes, moving at different speeds and in different directions. These facts, which a kite's movements in the air disclose, account largely for the soaring and flying powers of birds, who make instinctive use of every wind, soaring upward and upward air currents and flying against the main currents of the wind on a breeze blowing against the general drift.

It has been found that a kite containing seventy feet of supporting surface will exert a pull of from sixty to one hundred pounds. A big kite of this kind cannot be managed by hand, but the wire must be carried up from a substantial hand or steam winch and a reeling apparatus. The steel wire employed in the experiment is the lightest and relatively the strongest material known, with a tensile strength at the point of breaking of quite three hundred pounds. In this experiment the kite is made fast with a long wire to the ring at the end of the main wire, the meteorograph is attached and another kite is fastened to the ring by a shorter cord. As the kite rises the wire is unwound from the reel, and when the angle with the horizon becomes small another kite is attached to give greater lifting power, and so on until the required elevation is reached. A pause is made at the highest altitude to allow the recording instruments to acquire the conditions of the surrounding air, the height of the meteorograph is calculated and then the steam engine is set to work to wind in the kite. In this way several hundred records have been taken. The kites have frequently ascended to a height of more than twelve thousand feet, and at one time they reached the elevation of fifteen thousand feet, or more than three miles above the sea.

The amateur does not need such expensive outfit to do some very interesting work. He may become his own weather prophet by sending up thermometers to the clouds; he may tell the approach of thunder storms by attaching Leyden jars to his kite strings; he may draw lightning from the clouds, photograph in midair, signal with flags, or send off fireworks from an elevation where the effect produced is worth the labor involved. A state of perfection has already been reached in kite photography so that it is possible to send up a camera and take a picture of any particular building or object with but a small chance of failure. One enthusiast has arranged a contrivance for taking complete views of the horizon. Eight or more cameras are arranged back to back on a circular platform, sent high into the air with kites, and all the shutters snapped simultaneously by pulling a string below. Many successful panoramic views of large cities have been taken with kites flown from the tops of high buildings. In photographs taken in midair buildings and scenes appear much nearer than they really are, and there is often a curious mirage effect which is invisible from the ground which makes the landscape look as though rising up into the sky.

Kites have been put to many ingenious uses in connection with sports. To keep partridges from rising and flying from cover where it is wished to keep them for shooting it has been found that the birds will not rise with kites hovering over their heads, doubtless because they fear attack.

Another interesting use of the kite is air line fishing. The advantage of fishing from a kite is that the fisherman may stand on shore while his bait is dropped far out at sea, also that timid fish are easily scared by seeing the lines or boats near when the old method is used. For this sport strong kites are flown, the string carrying a strong pulley, through which the fish line runs. One end of the fish line is held by the fisherman on shore; the other, which is weighted, drops from the pulley as the ascent is made and dips into the sea. At the moment when the fish snaps at the bait and is hooked the fisherman feels the pull on his line, and the kite is quickly hauled in and the fish is dragged in at the same time. As there is practically no limit to the sizes of kites which will fly well the future surely holds some interesting experiments in many lines where the kite may be utilized.

Expulsion in Chains.

In order to appease their gods and to do penance for real or imaginary sins, the East Indians frequently resort to great mortification of the flesh, which leaves its mark on their bodies for life.

Among these are Shaha-dut Ali Shah a Mohammedan devotee, who for the last 30 years has been going about India, loaded with chains in expiation, as he says of sins committed in his youth. He is an educated native of Jullundur in the Punjab, is about 60 years of age, and stands 6 feet high. He carries no fewer than 640 pounds of iron chains on his person day and night.

Some years ago he arrived by train in Bombay, where he created a considerable sensation among the natives, being taken by them for a state prisoner, and an awful example of the vengeance of the British government. This was due to his having been brought down to Bombay under police escort. In the train he traveled in a goods truck, and water had to be poured over him constantly to keep him cool and lessen the sufferings which his self-inflicted burden brought upon him. The chains are mostly suspended from a heavy iron collar which is fastened round the taker's neck.—*Royal Magazine*

TOBACCO AND DISEASE

Impurities in Cheap Grade Probable Cause of Disease.

SOURCE OF THIS QUALITY.

Conditions as Found by Inspectors in New York City Factories—With Increasing Consumption is Shown an Increase in Mouth and Throat Disease.

The cheapest tobacco sold is scrap tobacco. It can be found only in the cheapest kind of tobacco shops. Scrap tobacco is composed of the cuttings and fragments of leaves that fall from the cigarmakers' tables, says the New York Mail. They are, of course, of the same quality as the cigars and if they were kept clean would be just as desirable for smoking purposes.

Unfortunately, however, the tobacco is not kept clean. It falls on the floor where the workmen wipe their feet on it all day. In Cuba and in Tampa the cigarmakers often work in bare feet. The condition of the tobacco at the end of the day can be better imagined than described.

Moreover cigar and cigarette stumps, fragments of food, and scraps of various kinds drop upon it. At night time it is swept up and placed in bales or barrels and shipped to the factories, where it is worked up into chewing tobacco and snuff.

No attempt is made to clean the scrap tobacco before it is run through the machines, aside from picking out the bulkier articles. A man, therefore, never knows what he is chewing when he takes a bunch of this stuff into his mouth. It is very apt to have a nutty flavor entirely foreign to the tobacco itself.

The demand for cheap tobacco has become so great in the United States that the cigarmakers who were formerly glad enough to give it away, or sell it for three or four cents a pound are now getting twelve cents a pound for it. One factory out in Ohio has been unable to get enough of the scrap tobacco and so is manufacturing scraps out of all sorts of materials having a tobacco flavor.

Physicians have recently reported that there has been a marked increase in mouth and throat diseases among those who chew tobacco and smoke some of the most cheap grades of cigars. They assert that it is possible for disease to be transmitted by tobacco to those who use them.

They call attention to the fact that in Cuba and Key West the workmen employed are far from cleanly in their habits and are often afflicted with communicable diseases. As many of them, in spite of the watchful eyes of the foremen, expirate upon the floor where the scrap tobacco is lying, it is easy to see that the condition of the tobacco at the end of the day must be something frightful.

In many of the cigar factories on the east side of New York city the cheapest class of emigrant workmen are employed. They are dirty in their personal habits and do not use handkerchiefs.

An inspector of the New York State Department of Labor who frequently visits these factories states that he believes that the use of scrap should be made a criminal offense because of its filthy condition. He declares that if people only knew what they were taking into their mouths when they use it they would be so disgusted that they would never dare to chew any more.

The Power of Water.

Imagine a perpendicular column of water more than one-third of a mile high, 26 inches in diameter at the top and 24 inches in diameter at the bottom. These remarkable conditions are complied with, as far as power goes, in the Mill Creek plant, which operates under a head of 1,960 feet.

This little column of water, which, if liberated, would be just about enough to make a small trout stream, gives a capacity of 5,200 horsepower, or enough power to run a good sized ocean going vessel. As the water strikes the buckets of the water wheel it has a pressure of 860 pounds to the square inch. What this pressure implies is evidenced by the fact that the average locomotive carries steam at a pressure of 100 or 200 pounds to the square inch. Were this steam, as it issues from the nozzle, turned upon a hillside, the earth would slide away before it like snow before a jet of steam.

Huge bowlders, big as city offices, would tumble into ravines with as little effort as a clover burr is carried before the hydrant stream on a front lawn. Brick walls would crumble like paper, and the hugest sky scrapers crumble before a stream like that of the Mill Creek plant. It takes a powerful waterwheel to withstand the tremendous pressure. At Butte Creek, Cal., a single jet of water, six inches in diameter, issues from the nozzle at the tremendous velocity of 20,000 feet a minute. It impinges on the buckets of what is said to be the most powerful single waterwheel ever built, causing the latter to travel at the rate of 94 miles an hour, making 400 revolutions a minute. This six-inch stream has a capacity of 12,000 horsepower. The water for operating the plant is conveyed from Butte Creek through a ditch and discharged into a regulating reservoir which is 1,500 feet above the power house. Two steel pressure pipe lines, 30 inches in diameter, conduct the water to the power house.—*The World Today*

Colonel John Singleton Mosby, the ex-Confederate scout, is still living and is practicing law in San Francisco. He was born in 1833, and was educated at the University of Virginia.

WEALTHY MEN'S DIVERSIONS.

One Lay in Bed Listening to Stories—Another's Delight in Eating.

One or two of our great noblemen still keep their private orchestras, and Mr. Carnegie and the Marquis of Bute have their private pipers, but it is a curious fact that of late years no wealthy man has thought of maintaining his own choir of singers, says Pearson's Weekly.

Of all the negro singers who have come to this country from the United States, in their rendering of the plantation songs and the old slave hymns once the vogue among the colored people of the Southern States, it is probable that Hyam Posdyke's Jubilee band of seventy men, women and children was the greatest, though the public had little opportunity of judging of its merits as the man for whose private delectation the band was brought into being was chary of allowing others to listen to the singing of which he himself was so fond.

Curtis Donnythorpe, while he lived, was an ardent lover of dancing in every form. He was an invalid and therefore unable to dance himself, but at the time he took the Kelby troupe of international dancers off the "boards" of the variety houses and induced them to enter his private employ the troupe was reputed to be the finest of its kind in existence.

Mr. Donnythorpe had a dancing platform erected at Wellington House, and there was not in all Kensington a happier man than he as he lay back in his chair and watched the antics of his famous troupe. The Kelbys were strong on jigs and reels and the old English dance, and it was while shrieking with delight at the capers cut in one of these latter that Mr. Donnythorpe was seized with the heart attack from which he died.

But even this man does not give quite the devotion to his flying pictures as was given by Theodore Botley to the science and joy of eating.

It was said that when not lingering over the delicacies in his table, for which his agents had ransacked the world, Mr. Botley was sleeping or deliberately working to excite a fresh appetite.

Stimulating drugs he took under the direction of a physician, whose sole duty it was to administer them, and a favorite plan of his was to read and talk about the pleasures of the table.

Every book on "diners and dining," every historical work, every novel containing passages descriptive of the banquet, was laid under contribution by Mr. Botley. He invited fellow epicures to his house, when his and their sole occupation consisted of feeding and talking about the pleasure of it.

Mr. Botley died of starvation, because, the doctors said, he had lost the power of assimilation of nourishment. In this respect his case bore some resemblance to that of Charles P. Cashel, of whom it was said that, besides being one of the richest stock brokers of his day, he was gifted with powers of smell approximating those of many dogs.

To this abnormal sense of smell the doctors attributed his end, for he ransacked the markets of the world for perfumes, the names of which would be unintelligible to the ordinary society dame. He ruined his extraordinary faculty at last by his fondness for a distillation of Brazilian flowers.

These destroyed his sense of smell and left him unable to detect a leak of gas one night before he retired to rest. He was taken from his bed next morning in a state of insensibility, from which he never recovered.

M. Pierre Lorraine, a French millionaire, lay in bed all night and day, and like the Eastern monarchs in the "Arabian Nights," listened to trained story tellers, with whom he surrounded himself during his waking hours.

Even he, however, was scarcely as lazy as the Russian Count Ivanovitch, who made the rafters ring with his jokes when, by way of a practical joke, some of his noble friends indicated their intention of making him get up and dress himself.

The count was worth eighteen millions of rubles, and was reputed to be the laziest man of his time. From the day of his attaining his majority to that of his death he never stirred out of bed, never read, never spoke, never opened his eyes if he could help it.

Liquid nourishment was ladled to him by retainers, and he died at last of fright because the Emperor Nicholas announced that he was coming to pay Ivanovitch a visit and would chain him to a wheelbarrow and make him work in the Polish salt mines if he did not get out of bed to receive him.

The Cause of Accidents. Our national carelessness is the explanation given by the "Literary Digest" for our dreadful record of accidents. It is shown that we stand first in the world in the accident record, and that the rule seems to apply to all trades and professions.

The proportions of miners killed, for instance, is nearly treble that in France, and about double that in other European countries. For every five men killed by accident in the United States there are only three in all nations of Europe combined.

Our railroads alone kill 21 people every day. The remarkable fact is brought out that we lead the world in the invention of accident preventing devices and adopt fewer of them than any other country. Indeed, many of the inventions travel to Europe for recognition and adoption.

It is claimed that our workmen will not use the safety devices, as something childish, but prefer to run the risk like men. This is true, but it is also true of European workmen. Indeed, the old story of the safety lamps in mines shows that accustomed dangers are forgotten or minimized.

GUARDING OUR COASTS

Large Sums Expended Annually by the Government.

POWER OF MODERN LIGHTS

Antiquated Stone Towers Replaced by Tubular Structures—Hundreds of Lives Lost Yearly in the Undertaking—Advantage of the Revolving Lighting Apparatus.

Of the amount expended nearly \$500,000 is required to purchase the supplies for lighthouses, \$600,000 for repairs and \$400,000 for the maintenance of lighthouse vessels. The United States has now about fourteen hundred lighthouses and fog signal keepers, and as each man's pay is fixed by law at not less than \$600 per year a little multiplication will show us that a sum of about \$825,000 is required yearly for this service alone. Congress has been fairly liberal in the matter of appropriation. Another heavy expense has been the installation of modern lights to take the place of the antiquated illuminating apparatus.

The lighthouse board has under its care more than nine thousand "aids to navigation," of one kind or another, including lights, beacons or signals which are operated by steam or hot air. More than a third of the number are designed to give warning at night. It requires an army of four thousand men and a fleet of fifty vessels to maintain this giant illuminating system, but the lights flash out along the shores in the dusk at evening with as much regularity as though they were operated by clockwork.

The old fashioned towers of brick and stone are being changed to the steel tubular structures of great strength, securely bolted to the rocks. Many of the lighthouses situated in dangerous localities have finally been reared on their hazardous sites after years of dogged fighting on the part of the sea builders with wind and wave and tide and ice pack. The reports of the workmen who have reared these light towers upon submerged foundations where the waves swept them at intervals or on submerged rocks in midocean read like romances. Hundreds of men lose their lives in this most hazardous undertaking; at times they have seen the work of years swept away in a single night or have been compelled to live on some bleak rock, cut off from all communication with the world, for months at a time.

It is by no means exceptional for the government to pay more than \$125,000 for a lighthouse, and some of the triumphs of engineering skill have cost not less than \$400,000. The electrical apparatus often costs a fifth of the sum. Side by side with the endeavor to build beacons where it has been supposed impossible to find a resting place for them is the ambition to furnish these towers with lights of sufficient power to send the rays over greater wastes of water than ever before.

There are now in existence on the coast of the United States a number of lighthouses of more than one hundred thousand candle power, or the equal of eight ordinary incandescent lights, and a new form recently developed more than thirty million candle power. The introduction of a greatly improved lens which concentrates the rays has been important in bringing the lighthouse to their present state of perfection. Another innovation is the revolving of the lighting apparatus. By this plan the mariner wherever he may be, will see flashes of light separated by intervals of darkness, but by this means a more powerful light is obtained than would otherwise be the case.

The important work of indicating his whereabouts to the mariner has been undertaken by the lighthouse officials. Hundreds of beacons which flash white, then red, indicate to the perplexed mariner by means of the order of succession or their duration his exact whereabouts. With glasses of only two hues an endless number of combinations may be devised. But Uncle Sam's officials have a better scheme than this, and it is nothing less than a plan to have each sign of flame dot out its message to the mariners by means of beams of light, just as a telegraph instrument clicks out the words. Every seaman, even though he be color blind, is able to count up to ten, and with our great seaboard lamps operated on this new system all that he will have to do is to count the number of flashes thrown toward him, note the duration of the total eclipse which follows and consult the key or code which he carries and he may be as sure of his position as though the fact were chalked on a signboard before his eyes.

The First Automobile.

The automobile seems to have been born in the form of an idea, in the year 1769, when a Glasgow student threw out the suggestion that the steam engine—then a very crude low-pressure affair—might be applied to the moving of wheeled vehicles. This student afterward achieved fame as Dr. Robinson, professor of natural philosophy in the University of Edinburgh. Ten years later Nicholas Joseph Cugnot, a French engineer, built the first automobile. The machine was a three wheeled affair and its course was quickly run, for on its second or third trip it turned a corner too fast and toppled over with a crash. The city officials of Paris refused to permit Cugnot to repair his machine. To keep it from harming any one they locked it up in a church, and there it stayed for some years.—*Technical World Magazine*

SMOKING HABIT OF POTENTATES.

King Edward and the Austrian Emperor Prefer Cigars.

Emperor William, who possesses the most striking individuality and interesting character of any of the rulers in the Old World smokes cigarettes in large numbers. They are of exceptionally big size, and are made especially for him in the suburbs of Berlin. And when one reviews the absolutely phenomenal progress which Germany has made, not merely in a military and naval sense, but more especially in every branch of trade and industry, under his direction and through his initiative it can hardly be said that the cigarette has in any way interfered with his activity and usefulness.

King Edward has passed his sixty-fifth milestone, and has been an inveterate smoker ever since he attained manhood, more than two score years ago. Judging by the results which he has achieved as ruler in the five brief years which have elapsed since he succeeded to the throne, it cannot be said that the cigarettes which he smoked as Prince of Wales and the cigars which he has consumed as King have in any way unfitted him for the duties of ruler over one-fifth of the entire known universe.

Even the Pope smokes, and is the first Pontiff of the Roman Catholic church to indulge in cigars, his predecessors, notably Pius IX and Leo XIII having contented themselves with snuff.

The Sultan of Turkey is so frequently portrayed in the comic papers of this country as in the act of smoking a hookah or a chibouk that many people will have difficulty in believing that he never touches tobacco. This abstinence in his part is not due to any distaste for the weed, but to his affiliation with the all-powerful and mysterious Order of the Senoussi, which, surpassing in numbers, range of power and wealth the Society of Jesus, even in the palmiest days of that fraternity, embraces about thirty million Mahometans, that is to say, over a third of the total number of the Faithful. The order was founded about 70 years ago by an Algerian of the tribe of Medjaher, named Mohammed Ben Ali el Senoussi, and its doctrines, which are of the most fanatical order, strictly prohibit the use of tobacco. The grand master of the order, who, like Moses of old when he came down from the Mount, never shows himself to his followers save with his face veiled, makes his headquarters at Jerboub, on the Tripoli-Egyptian border, and has his representatives at every Moslem court and in every tribe professing Islam, from the Atlantic shores of Morocco to the Pacific. Abdul Hammed, the present Sultan of Turkey, has long been connected with the order and even those Moslem rulers who do not belong thereto are nevertheless sufficiently in dread of its decrees to sacrifice their personal tastes to its behests.—*New York Tribune*

The Purification of Water.

Remarkable results are announced from the application of a new method of destroying micro-organisms in water, which was discovered by Drs. Moore and Kellerman, of the Bureau of Plant Industry, at Washington. It consists simply in dissolving a certain quantity of copper sulphate in the water to be purified. Fortunately the dilution can be made so large that no deleterious effects are produced upon water intended for drinking purposes. One part of copper sulphate to eight million parts of water is the proportion generally used, and it is pointed out that, in order to obtain a medicinal dose of copper from such a mixture, a man would have to drink forty gallons of the water.

During the latter part of 1904 more than fifty sources of water supply in the United States were treated by this method with gratifying success. Not only are dangerous bacteria thus destroyed, but the green growths that frequently choke up small ponds are also eliminated. Most important of all is the promise that by this treatment the germs of typhoid fever may be entirely removed from any source of water supply.

In case of a lake or pond, the chemical is applied by suspending bags filled with copper sulphate over the side of a boat and allowing the crystals to dissolve while the boat is rowed about. In two or three days the copper is entirely precipitated from the water, but the beneficial effects of the treatment last for weeks or months.

It has been suggested that this discovery may raise the question whether after all, our mothers were not right—although they did not understand the scientific aspects of the matter—in preferring copper kettles for preparing many kinds of food.—*Success*

Wounds Dressed With Glass.

The substitution of glass for lint in dressing certain kinds of wounds is the curious suggestion made by Dr. J. L. Aymard, M. R. C. S. in London Lancet.

Dr. Aymard describes an experiment with the new dressing which he himself undertook at Johannesburg hospital. After obtaining a piece of thick window glass, the edges of which were ground on an ordinary grindstone, he smeared it with carbolic oil, and used it on a patient instead of lint. The wound, he says, subsequently healed up entirely, and will leave no trace of a scar.

Two other cases Dr. Aymard has treated with watch glasses, the results being equally satisfactory.

In summing up the advantages of a glass dressing, Dr. Aymard dwells upon its extreme cheapness, and states that its adoption on a large scale would mean considerable economy in hospital practice.

Game Laws—Football rules.