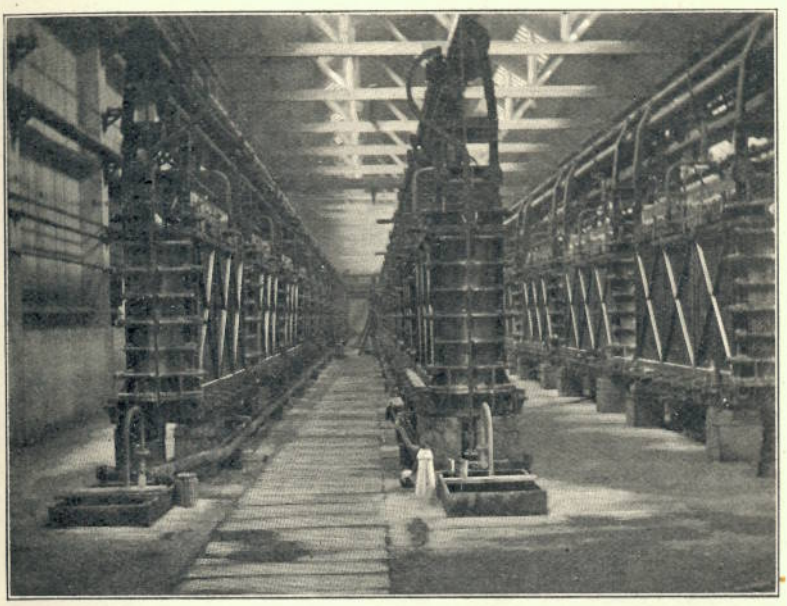
A VISIT TO A CHEMICAL WORKS.

By EDWARD RICHMOND SWALES.

(Illustrated from Photographs specially taken by the Author).



THE CELL ROOM.

LONG ere I set foot in Cheshire, I was aware—as all good students of Geography should be—that it was famed for cats, cheese, and salt. But to tell you the truth, the Cheshire of my experience, though it abounds in cheese—mostly imported American—and in salt, has no cats peculiar to itself!

But I fear I am trifling. The other day I visited a chemical works, and, as it proved a more than usually interesting visit, I have ventured to think that I might interest you also by recounting what I then saw; especially as I took some photographs, which, having turned out well, will serve as aids to your comprehension of my description.

But, when I say chemical works, I use a rather broad term; there are many types of chemical works which, from various raw materials, produce many and varied commercial commodities. So it seems necessary to state that the Electrolytic-Alkali Company are manufacturers of the numerous chemicals obtainable from salt, and which are usually comprised in the somewhat general term "alkali."

Now, the especial interest of my visit lay in the fact that the process by which these products are obtained is a new, and but very lately-invented one. I need not tell you particularly in what this process differs from those which it is expected to supersede; only that that delicate and beautiful force, electricity, is the presiding genius.

The Manager of the works was exceedingly kind, and did me the honour of personally conducting me over the works. At my request he allowed himself to occupy the foreground of the general view of the works which I took, and there you may see him.

200 feet or so below the surface upon which the works are built, lies a stratum of rock-salt, some 180 feet thick. Through this underground rivers are boring their way, taking up the salt into solution as they go. From this depth the water (when a fully saturated solution as it is called—that is to say when it has in suspension or solution as much salt as it is capable of bearing) is pumped, by the use of compressed air, to the

surface. Arrived there, it is stored in a tank to await its fate. This water, or brine, as it is more properly termed, is the raw material, the due treatment of which will yield several valuable chemical products.

Now, the ideal process in the manufacture of anything whatsoever, is that which, from a given raw material, shall most cheaply obtain the most valuable product with the least possible amount of waste, or useless product. It is claimed for the Electrolytic production of alkali that nothing is obtained but valuable chemicals while waste products are *absolutely nil.*

Let us, then, follow the brine in its conversion into a valuable commercial commodity.

Those of you who possess some chemical knowledge, will probably be familiar with the details of electrolysis. It is this process to which the brine is subjected.

In most other processes, only salt can be dealt with in the manufacture of alkalies; in this, the brine goes straight away for treatment.

The first photograph shows you what is known as the "cell-room." In these cells the brine, after an uneventful journey hither from the storage-tank, undergoes electrolysis, or a splitting up into the two elements (chlorine and sodium) of which it is composed.

two diaphragms formed of asbestos-composition, covered with gauze of copper-wire, and the diaphragms are kept in place by a couple of hollow boxes. Dipping in the salt solution or brine, with which the cell is charged, are numerous pieces of gas-carbon.

Now let us watch the hard treatment to which our friend the brine will be subjected. The brine being in the cells, an electric current is made to pass between the wire-gauze and the carbon-points, which has the effect of rendering the diaphragms porous enough for the atoms of sodium to pass through to become sodium hydrate, or soda solution as they are washed away by a stream of steam, and carried in the little trough (which is plainly visible in the photograph, at the bottom of the cells) into the well-like holes at the end of the row, whence it passes to the next process.

But while the soda is thus liberated, chlorine in the form of gas is passing from the gas-carbon to the pipe, which conveys it in turn to its further doom.

Here you see the small amount of plant or machinery necessary for the decomposition of the brine into soda and chlorine gas.

I was amazed at the quietness with which two such valuable products were obtained;—no changing of material from one place to

SODA CRYSTAL SHED.

That you may fully comprehend how this takes place, I must give you a few more details as they were given to me.

Each of the cells which you see in the first photograph is made in this way:—

It is divided by a partition consisting of

another;—no difficult and slow manual labour; but everything accomplished, without attention almost, by the orderly yet powerful electric current, which was so simply forced to do the will of man

The soda liquor requires a slight further

concentration; that is to say, it is necessary to extract some little superfluity of water from it, before it can be crystallized. The concentration, to which it proceeds from the wells in which we last saw it disappear, being completed, the soda solution is run into vats, where crystallization proceeds. My second photograph shows you the building in which

It is necessary that the soda-crystal shed, as it is called, should be kept as cool as possible, and I noticed at once the change of temperature as we entered. This is because, as even the slightest chemical student is aware crystallization can take place much better in such temperature.

But, having followed the soda solution

BLEACH CHAMBERS

this takes place. You will perceive that the extension is not yet complete, and that the vats are not all in position. Those in use are to the left of the picture, and the last of these is to be plainly seen.

The crystallizing vats have the appearance of huge iron tanks: into these the soda solution is run, and, upon cooling, the beautiful crystals of soda gradually make their appearance, until finally the whole tank is filled with a solid mass of soda. There is still present a trifle more water than is convenient, and so the soda crystals, as they are now termed, are dug out of the vats and placed in revolving drums, which cause the product to part with its excess of water. One more small manipulation—the breaking up of the crystals into small pieces, and they are ready to be packed in bags and despatched to the consumer. This, then, is the soda crystal of commerce—the common soda of the household; one product of the electrolysis of brine, which takes its primal origin from the beds of rock-salt deep down in the earth; which latter, as Geology informs us, are the remains of long dead salt lakes, or seas of ages past.

through its process, we must turn again to the chlorine gas, which we left travelling to undergo its subsequent treatment.

It is led through overhead pipes to the bleach-chambers, where another valuable commodity is obtained.

These chambers are to be seen in my third photograph.

On the right hand side are to be seen the pipes above mentioned, elevated upon a trestle-like structure of beams.

The bleach-chambers are reached by the steps which form a somewhat prominent feature of the picture. Looking through a small pane of glass, which I fear is not visible in the photograph, one perceives a queer yellow light which indicates, to the initiated, the state of the product.

But, to somewhat retrace our steps, in another part of the works are lime-kilns, where lime is burnt, slaked, etc., in preparation for the part it is destined to play in the production of bleaching-powder.

This lime hies originally from the Buxton lime firms, and it once formed a part of those beautiful hills which render the resort so picturesque and delightful,

The prepared lime is then placed in the bleach-chambers, and, the chlorine gas passing in, the two are left to themselves to accomplish the process.

When, as I above mentioned, this process is complete, the product is run out, and packed in the space between the pillars upon which the chambers rest.

The barrels into which the completed commercial material is put, are conspicuous in the photograph. You will notice men engaged in this work of preparing the bleach for dispatch to the user, on the right of the steps, and about half-way between these and the end of the chambers. Bleaching-powder is a valuable material, and is much used in the preparation of paper, and of cloth, etc.

source of this is to be found in the power-house, where already two huge engines are engaged in rotating equally large dynamos. The fly-wheels of these engines are 16 feet in diameter, and weigh 16 tons—a nice little morsel to land on one's toe! They are grooved upon the outside so that they take ropes instead of bands, to convey the power; that is to say, to rotate the dynamos. Other similar engines are in process of erection in the power-house, and I believe five will be the holding capacity of that house at least.

I have already told you that the figure in foreground of the fourth picture is that of the manager of the works, to whom also I am beholden for the information concerning the process, which I have endeavoured to

GENERAL VIEW OF THE WORKS OF THE ELECTROLYTIC ALKALI CO., LTD., MIDDLEWICH, CHESHIRE.

We have followed the brine from its sources in the interior of the earth, through its electro-decomposition, to its completion as two very useful, important, and valuable chemicals — soda-crystals and bleaching-powder. I was astonished when I learned of the cheapness of the process. About 45s. per ton covers the average cost of the making of the various products; these when obtained being saleable at something like £4 or £5 per ton.

This seems surely like ideal manufacture, when a process, being so cheap in working, is simple, and has no waste to be cleared away.

I have not told you whence the electric current proceeded, which plays so important a part in the electrolysis of the brine. The render as interesting to you as it was made to myself.

Indeed, I venture to consider it of very great and absorbing interest to behold, thus, one of the latest and most up-to-date inventions of the manufacturing world, actually in operation.

I thanked the manager very heartily, feeling grateful for so interesting a visit and inspection; and, girding my camera upon me, I mounted my bicycle and rode away, brimming over with bewilderment and great thoughts of the wonders I had witnessed.

Just then my bicycle wheel bumped heavily against an agressive brickbat, and taking ing the hint, I desisted from airy generalization and—pedalled home!

A Light-house Adventure.

By ERASMUS.

"IT'S more'n I'd do for anybody," said old Jerry, removing his clay, and staring again at the distant light-house. "'Sides, as I've told you, no stranger is admitted without a special permit from Trinity 'Ouse."

"Have you never taken anyone there then?" asked Kirkman as we sat on the parapet beside the old man.

"Only twice since I've bin in Birchampton, and that's more years that any o' you can remember."

"Well, there's nothing to prevent your taking us now, Jerry," I urged for the twentieth time. "It's not yet ten o'clock; the sea is calm as a mill-pond, and we could easily get back by the afternoon."

"Do, Jerry," repeated Provis. "The light-house keeper knows you, and would I am sure show us all over without a permit. Remember, none of us have ever seen the inside of one of these beacons——"

"And we'll each give you a whole week's pocket money——"

"If that won't suit you we might manage a fortnight's," I began, looking doubtfully at the others, who nudged me in the ribs to shut up.

"It ain't a matter o' money," said Jerry, puffing slowly at his pipe. "I don't want to take anything belonging to you young school gents. 'Tis the weather I'm thinking of."

"The weather?" we cried simultaneously. "Why what's wrong with it? You couldn't have a finer morning than this."

"I know, I *know*," retorted the old boatman somewhat fiercely. "It's fine enough *now*. But suppose it should come on to blow sudden? This is a squally coast, and you don't know what high seas run out there." and he jerked the stem of his clay towards the light-house.

As Jerry's objections failed to have any effect, he suddenly knocked out the ashes of his pipe and said,

"Look 'ere young masters, let me beg o' you once for all to put the notion o' visiting the light-house out o' your minds. If the weather should suddenly change, you might be kept there all night and longer. Think o' that! What would Dr. Ewing say then? Why, 'twould be my ruin, for the little patronage I have comes from the school. I'll take you for a nice row or sail now for a couple o' hours, and free, as it's 'oliday time. What do you say to a nice pic-nic like on the shores o' Sandy Cove?"

But we wanted no pic-nic on the shores of Sandy Cove, or anywhere else. We had thoroughly made up our minds to visit the light-house that day, and thither we intended going. All Jerry's remonstrances were at length over-ruled, and muttering that he never saw such boys, and that something unpleasant was bound to come of it, he sullenly ran the boat down to the water. Having taken our places, the sail was hoisted, and away we skimmed over the dancing, sunny sea, towards the light-house six miles off.

Is there any summer pastime to beat sailing in a well found boat, and under favourable conditions? I think not, and I am sure my school-fellows were of the same opinion. The parents of each lived in India, and as we had to undergo the unpleasant ordeal of watching our more fortunate companions departing for their holidays, we, who had to remain at the school, were accorded a few extra privileges during vacation time. We had long been wishing to inspect the light-house, that being the only place of interest in the neighbourhood as yet unvisited.

In the best of spirits, we sang songs and laughed and joked, whilst the boat sped on to the humming of the brisk breeze, under Jerry's skilful management. In time he too shook off his fit of gloom, and becoming infected with our high spirits, trolled forth some ditty of the sea which he had learned years ago when a sailor on a merchantman. The coast-guards on the cliffs recognising us through their glasses, waved greetings which were heartily acknowledged.

So the time passed pleasantly enough. It took us a little over an hour to reach the light-house. The water being calm as a lake, we easily floated over the submerged rocks, thickly encrusted with barnacles and shell-

fish of many kinds. The lug-sail being stowed, the boat retained enough way to come within biscuit toss of the landing stage. Jerry sent up a shout, that proved by its lustiness that his lungs were good enough for some years to come yet. Soon a door about twenty feet above the stage opened, and a shock-headed man in a rough, reefer suit appeared.

"Hullo Jack!" shouted Jerry.

"Hullo Jerry, I couldn't make out who was 'ailing us," returned the other.

Another man in shirt sleeves now stood beside his companion.

"These young gents from the school over yonder," said Jerry with a jerk of the thumb in the direction of Birchampton, "ha' been persuadin' me to bring 'em to pay you a visit o' inspection."

"You ought to 'ave a permit from Trinity 'Ouse," said the man in the reefer suit.

"Ay, the authorities are very strict about light-houses," remarked his companion. "They don't allow strangers, except with special permission."

"Well, young Sirs, what are we to do now?" cried Jerry with an air of triumph. "I told ye what was the regulashions, and now ye've larnt what the keepers ha' to say about it."

"I glanced at Kirkman and Provis. The disappointment I felt seemed to be reflected in their faces.

The two men above now appeared to be conferring together.

"It's more'n our places are worth," I heard the man in shirt sleeves growl.

"The weather remains fine, Tom," retorted the other. Then the words "for half an hour or so," reached our ears.

The man in serge who was evidently one of the assistant keepers, shrugged his shoulders and stepped aside for his companion to descend the iron ladder to the landing-stage. Then he sang out: "If the young gentlemen like to come for half an hour or so, we'll risk the consequences."

On hearing this, we lustily expressed our thanks.

As the weather was so calm, the winch—by which the men ascend in rough weather—was dispensed with, and we were soon serambling up the slippery steps to the stage. Old Jerry, who had cast anchor near, sat in the stern smoking, to await our return.

The light-house keeper led the way up the iron ladder. We being novices at the feat, followed with extreme difficulty.

"Under here are the water tanks," said the keeper, when he had dragged us all to a place of safety inside the entrance. "The walls are made of gun-metal, and of tremendous thickness and weight, to stand the force of the heavy seas——"

"You've something like storms here, I expect?" said Kirkman.

"Aye, I should rather guess we have. If you've only seen the force of a gale near the shore, you've no idea what fearful seas burst over these rocks."

Good natured fellows were these two men. They described their lives, their anxieties, their daily duties, with an occasional anecdote thrown in. We might almost have been grown men, for the consideration and attention we met with.

After climbing three more iron ladders, and passing through the oil, winch, and store rooms, we came to the living room of the of the light-house. 'Twas a tolerably cosy interior, with a couple of easy chairs, book-shelves containing books supplied by the authorities, and a few other creature comforts which such men, unaccustomed to luxuries, would require. But the Lantern Room excited our interest more than any other. Here we found two men busily employed cleaning the lamps. We were shown the operation of lighting them; how the revolving gear was wound up, and many details in connection with these powerful beacons. We learned that each man was on duty for four hours in fine weather, and eight hours off. During bad weather, however, two men were constantly on watch.

"And what about your leave?" I asked. "I expect you're glad to get ashore when the time comes?"

The men all laughed.

"We are that," said the man in the reefer suit. "It's real isolated we are here, where we 'as to have a spell o' three months. Then a boat comes and takes us off for a month ashore."

Kirkman and I were examining the delicate machinery underneath the lanterns that could burn a flame equal to the intensity of nearly a quarter of a million candles, when a sudden exclamation escaped one of the men as he stepped out of the open door onto the gallery. As we quickly followed, a faint shout reached us from far below. To our unbounded alarm, the sea had got up, and a heavy bank of clouds was rising in the south west. Old Jerry was frantically shouting to us to be quick and leave the light-house. I glanced at my watch. 'Twas nearly one o'clock. We had been over an hour and a half on the light-house.

"Come along young gentlemen if you please?" cried the keeper in shirt sleeves excitedly. "I'd no idea how the time was flying. We're going to have dirty weather from those clouds." And he hurried towards the ladder leading to the rooms below.

"Aye, the glass has suddenly fallen a lot,"

cried one of the men who had come over to examine it.

"Come along, come along," repeated the keeper Tom, as we followed him down the ladder as fast as our inexperience would let us.

"Dear me, Joe, how I wish I'd never let 'em come on," I heard him say to one of the men. "If the sea gets up much more, they can't get off, and pretty ructions there'll be all round."

I thought so too, and wondered what Dr. and Mrs. Ewing at the school would think, if we failed to put in an appearance at night prayers. I remembered when standing on the gallery, that there was an ominous look about the sea as it frothed on the rocks, which I didn't like.

We were slow in descending those awkward ladders, and the keeper's impatience and eagerness for our departure made us so nervous that our progress was more tardy than ever. At length, to my unbounded relief, we once more stood on the landing-stage.

The waves were already breaking with such force over the rocks, that the boat—now some distance out—was rising and falling like a cork on the foamy billows. Jerry rowed vigorously, to keep as near the light-house as he dare venture. The spray flew all around us, whilst the monotonous shriek of the gulls was well-nigh deafening.

Suddenly Jerry shouted out something, and his voice reached us in a thin, discordant note. But no one seemed to hear what he said.

Words cannot describe the men's state of mind.

"It'll have to be the winch," I heard the man Tom cry in the rapidly rising wind, "and if we don't look sharp Joe, it'll be too late even for that."

"But how are them boys going to 'ang on to the rope?" expostulated Joe.

But the other quickly cut him short.

"Hurry up there!" he sang out to the men up above.

Slowly the rope came down from the crane overhead, and one of the men near us siezed the end. Jerry with the utmost difficulty succeeded in catching it after some vain attempts and securing it to the boat.

"Now then, Sir, quick as you please," cried Joe; and bidding me hold like grim death to the rope, he put my foot in a noose. At a given signal, the men at the winch lowered away, and I was soon hanging over the boiling surf that bubbled and hissed as though trying to reach me. I seemed to be racing at a tremendous pace towards the boat, and the novel experience made me feel quite dizzy. Every now and then I thought I should have fallen, owing to the sickening sight of the waters hissing about me. At length, to my great relief, Jerry seized and dragged me into the boat.

The others soon followed. What their true sensations were at the time I've never been able to hear; but if they were anything like mine, no doubt they've remembered the experience for many a day.

When we were all safely in the boat, the men on the light-house gave us a rousing cheer. Then giving Jerry some parting admonitions, some of which we couldn't hear, about getting clear of some dangerous rocks, they quickly sprang up the ladder, and disappeared inside the structure.

"I'm not goin' to risk the sail 'ome," said Jerry surlily, as we plied him with questions. "I shall run the boat well up on the beach in Archer's Cove, and call for her when the weather moderates."

And the old man was as good as his word—he ran the wherry on the shingle a trifle to the westward of the light-house. Having made her all secure, he led the way up the rough, winding stairs to the cliff above.

"It won't do ye any harm to walk 'ome," he remarked in the same growling tone.

We said nothing to this, but started off a silent party towards Birchampton. Every now and then one of us would turn to watch the seas bursting with greater fury than ever over the rocks, the foam rising to half the height of the light-house. If we had delayed only a little longer in getting away, our captivity—as it proved—would have lasted over sixty hours; for fully that time elapsed ere the gale moderated and the sea went down.

When we had reached that part of the village where our roads divided, Jerry who had maintained an obstinate silence the whole way back, said, as we expressed thanks, and promised to bring our pocket money: "Ye may all thank your lucky stars ye got off from the light-house so easy. And I tell ye what it is," putting the right fore-finger in the left palm to emphasize his remark, "next time old Jerry gives his opinion about the weather as he did to-day, look out for squalls. That's all I've got to say."

With this parting shot, he grunted, and strolled off towards his cottage on the fore shore, whilst we all stared after the quaint, bow-legged figure until it was out of sight.

SKY TRAVELLERS.

By SIR EDWIN ARNOLD.

NO one can fail to remark how there will be suddenly seen flocks and clusters of swallows, swifts, wheat-ears, plovers, curlews, and the rest all at once in places quite destitute of them a week before. The most familiar examples are, perhaps, the swallow, the redbreast, the cuckoo, waterwagtail, and nightingale, but the list would be very long of regular migrants. Some among them are remarkable for their punctuality of arrival. Of the sea-fowl, the puffin, for instance, is one whose advent upon its accustomed rock is looked for by shore residents as a matter of absolute certainty on a fixed day. There are many spots where a woodcock, not seen before for many months, may be "flushed" without fail behind rocks or thickets near the sea-beach at the regular time. There are islands, promontories, and even populous towns above which will be heard, passing at the ordained seasons, interminable lines and vast commingled bands of feathered voyagers who break the silence of a spring or autumn night with a noise like that of distant sea-waves produced by their wings or wailing cries. They have their well-marked roads through the trackless air steadfastly adhered to, except by some stragglers, so that their arrivals and departures are notable events in rural history, and serve as points in the calendar for foreign sportsmen to whose "bag" nothing comes amiss. The principal routes followed by them are registered in books of natural history and show a wonderful geographical instinct, taking as they do for the most part the sea and oceans at their narrowest and the river-valleys at their longest. For many nights to come he who should watch in the balcony of a light-house, placed near one of their habitual tracks, would see hundreds of poor little strayed wayfarers striking in their tired flight against the glass of the beacon-light, and falling dead after, possibly, a thousand miles of brave travel. An immense number perish in the salt waves which, perhaps, adverse winds have made too difficult to traverse. Some few perch, beaten and bewildered, on yards and riggings of ships, and many only touch the firm earth to succumb to fatigue or be the prey of predatory animals. But a considerable majority do accomplish the long trip which seems forced upon them by hereditary instinct or the necessities of their food-supply.

Naturalists have never ceased to marvel at the phenomena of this stupendous migration. What supplies the place of A.B.C. guides and time tables with the little trippers? How do they know amid changeable weather that the days have arrived when they must break away from their sunny sojourning places to find the old nesting-grounds and feeding-haunts? It cannot always be by judgments drawn from the temperature of their southern and northern abodes, since they often start when no meteorological office would predict suitable conditions for the expedition. How do the small hearts beating in those feathered bosoms hear that pervading whisper of Nature which says imperatively, "Go northwards" or "Go southwards" to mate and make your nests? Obviously they hear a voice, inaudible to us, and act by information denied to the cleverest of our weather prophets. The general theory is that problems of daily food are forced upon them, and especially as regards the bringing up of their young. But there is surely food everywhere for such tiny digestions, nor does it ever fail so abruptly that they should keep such exact dates. Nor is it only change of diet which can occupy them, because a great many come back from the south to the exact northern localities where they passed last spring. Over and over again the same birds are seen to return to the same spot, even though it be changed in appearance. The swallows return to the well-known eaves; the ravens build in the same crag, the cuckoo lays her intrusive eggs in the nest which she knows will be found where the finches or wagtails of last spring also prepared for her. All this looks rather as if the small travellers had a keen feeling of home, and were drawn by it between their southern and their northern habitats by an irrestible nostalgia. Even fish like the salmon manifest a similar passion to haunt alternately well-known localities first in the open ocean and next in the foaming river. Again, a point of much interest is that the birds by no means migrate in family parties. On the contrary, the rule with many species is that the male birds start away first, or, at any rate, are found arriving in advance, at their several stations, as if, whether by arrangement or because of

their greater muscular power, it was desirable that the feathered gentlemen should get things ready for their little consorts.

Yet, whether it be with the instinct to revisit alternate homes, or from domestic prudence and fore-thought in regard to their expected young, how mysterious remains the impulse which despatches these tourists of the sky on journeys so tremendous! Some among them, like the bluethroat, are known to perform the whole route by one stupendous effort; and there are those who think that by flying at a great height many of them obtain the assistance of rapid currents in the upper air which carry them along like an aerial torrent. It would be a good thing for M. Santos-Dumont if he could take council with certain of these experienced navigators of the ether. And if we allow something for such knowledge of tides in the sky, and get over the difficulties which must attend the question of refreshments upon the journey, it still remains a prodigious marvel. How do the migrating birds deal with the questions of whether it be wise to fill their little crops with food and water before starting, or to have the advantage of flying light by setting forth with empty stomachs? Imagine all these small creatures gathering for the great trip along the Nile, beyond the Sahara Desert, down the West Coast of Africa and the islands of the sea, and successfully arranging all the preliminaries and preparations essential to launch themselves on such unchartered roads with so much confidence. Yet they do this year after year. As our spring opens they pass all down the course of great rivers like the Nile; over deserts and ranges of mountains in Asia and Africa; up the green avenues of the Rhine and the Rhone and the Danube; across the Irish Sea, the German Ocean, and the Baltic with no compass but their tiny hearts; no lights to guide except the sun and the stars, and no landmarks which would be intelligible to the proud lords of the creation. How do they transmit such skill in travel, such confidence in their delicate conformation, such splendid trust in the endurance of their wings from parents to children? For one of the miracles connected with the subject is that in autumn, when their nestlings have been reared and trained, those feathered mites will commit themselves to the return trip with all the boldness of an old cock corn-crake who has thus crossed the globe ten or a dozen times. Reflect, too, upon the physiological fact that the bird is a descendant and a development of the lizard, as may be seen by anyone who studies the fossil forms of the pterodactyl and the archæopteryx. If any of my readers want something to think of, when they see in their country walks the first swallow skim the ripples of the stream, and the first willow wren flutter in the thorn-bush, let them ask what miracle is impossible to the progress and uprise of life when these fearless sailors of the sky have arisen from the limpish reptile in the limestone or the marl.—*From the Daily Telegraph.*

ANECDOTES.

Fast Travelling.

A passenger on a motor-car remarked to the driver at the end of an exceedingly fast run:

"That was a very long graveyard we passed through."

"Graveyard?" said the other in surprise. "We haven't come through any graveyard."

"Oh, yes, we have," replied the passenger, "where all those tombstones were in a row."

"Oh, those weren't tombstones," rejoined the motorist, "they were milestones."

* * *

All the Difference.

Ticket Collector (to passenger in first-class carriage with second class ticket): "Your ticket is second class, sir. You must pay the difference."

Passenger: "The second-class carriages were full."

Collector: "Yes, but there is plenty of room third-class."

Passenger: "Quite so. Pay me the difference, and I'll change."

* * *

Not the Scotch Express.

Tourist (after unusually long stoppage at small Border station): "I say, guard, why aren't we going on? Anything wrong?"

Guard (complacently engaged upon an *alfresco* lunch): "There's naething wrong, sir; but I canna whistle the noo; ma mouth's fou' o' biscuit!"

* * *

Improving the Scenery.

Commercial Traveller: "Theatrical manager, I presume."

Fellow Passenger: "No, landscape photographer. I am getting up a new book entitled 'Beautiful England.'"

Commercial Traveller: "Photographer! Then what are you doing with that vanload of theatrical scenery?"

Fellow Passenger: "The canvases are painted with rustic scenes. I use them to cover up the pill and soap advertisements."

* * *

Not worth while.

Curate: "Why don't you come to church, John? Come next Sunday, will you?"

John: "'Ow long do it last, zur?"

Curate: "Oh, not very long! About an hour or so."

John: "Lor' bless yer, zur, it bain't worth while changing yer shirt for 't!"

Up or Down

Anxious Passenger (waiting for his boat): "I say, my man, is that boat going up or down?"

Riverside Loafer: "Well, guv'nor, I really can't say. She's a leaky old tub, so she may be goin' down. But, then, her bi'lers ain't none too good, so I shouldn't be surprised if she suddenly went up."

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In the Interest of Humanity.

"What are you doing here?" said the woman to the tramp, who had got over the wall just in time to escape the bulldog.

"Madam," he said, with dignity, "I did intend to request somethin' to eat; but all I ask now is that, in the interest of humanity, you'll feed that dog."

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From Punch.

Old Gent.: "Why are you hiting the boy? What has he been doing?"

Big Boy: "Nothink; but 'e won't be long of doin' somethink."

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Mother (exhibiting first-born): "Don't you see a resemblance? Look at our faces side by side."

Visitor: "Nothing could be plainer."

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Comforting!

"How did you like my predecessor?" asked the new British consul of the savage king.

Umbi-ji-ji: "Really, I'm hardly in a position to say. You see, I barely got a taste."

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Hustled before the Judge.

The coloured prisoner was hustled before the bar of justice. "What is the charge?" demanded the judge. "Inciting riot, your Honour," said the officer. "What did he do?" "It was this way, your Honour; Colonel Julepson's silver-mounted corkscrew mysteriously disappeared from its accustomed place on his sideboard. This nigger had been seen hanging around the place, and suspicion naturally fell upon him. A crowd of indignant citizens got a rope and started to hunt for him, but before they found the nigger, Colonel Julepson discovered that the corkscrew was in his hip pocket." "One hundred days at hard labour. This tendency to mob violence must be checked. Call the next case."