THE GATHERER.

From a Sparkling Fountain.

This is a thirsty world, and suspicion now-a-days keeps pace with thirst. We hold up every glassful of refreshing beverage between us and the light, and question what it is made of and how many poisonous ingredients it contains. And we have need of caution. For some time past, to give an example, the quality of the aërated waters in India has been much questioned, and recently a quantity was sent home to be analysed. As the result of the analysis it was found that out of ten samples only two were "fairly pure," and as many as five were calculated to induce diarrhœa in those who were in the habit of drinking them constantly.

In such circumstances we cannot be too thankful that Nature, like a thoughtful mother, has provided her children with springs of aërated water, the ingredients of which are above suspicion. Some of these springs furnish supplies abundant enough to quench the moderate thirst of half a nation. One of them is that of Taunus, a spring in the Grand Duchy of Hesse. It is the richest of the kind in Germany, producing daily 51,684 litres of water. It lies on the slope of a valley known as the Golden Ground, on account of its great fertility and the richness of its mineral fountain. Enterprise has converted this, like several other natural waters, into a commercial product; it is bottled at the spring and sent in large quantities to all parts.

We must take care not to class this water with those which are purely medicinal in their properties. It is a pleasant, wholesome beverage only, consisting of pure water in which are included much gaseous and fixed carbonic acid and certain mineral constituents, taken up by the water on its passage through the depths of the earth. One can drink it alone or mix it with wine or fruit syrups. It has the peculiar soft taste observed in many of the most celebrated mineral waters of Germany. The pleasure of drinking, too, is heightened by the knowledge that it is free from all injurious properties. There is something admirable in the wise chemistry and kind forethought of Nature, and one cannot speak enough in praise of such refreshing streams.

The Philosophy of Boiling Potatoes.

This has been too little studied. Consider how excellent a thing it is to be learned and clever in cooking, and how the potato is of all vegetables the most wholesome, most easily procured, most easily prepared, and least expensive. It is a shame that it so often comes to the table bearing silent testimony to the cook's ignorance. Mr. Buckmaster has been discoursing lately on this subject, and has demonstrated that man does not get out of the potato one-half of what Nature put into it. We ought, it appears, to set about boiling the tubers by picking them out all of a size, else the small ones will be done to pieces before their larger brethren are ready. Each individual potato should be washed with tender care, and all the impurities should be removed from the delicate cuticles by means of a soft-haired scrubbing-brush. In this operation care must be taken not to tear the potatoes' jackets, else the subtle flavour will escape through the rents.

Well-selected potatoes thus prepared, and carefully boiled in spring-water, qualified with the necessary salt, are, according to Mr. Buckmaster, the typical form of carbonaceous food. If taken with a due admixture of nitrogenous elements such as are yielded by cheese, butter-milk, sound bacon, and, best of all, a small allowance of good lean meat, they form a wholesome and palatable dietary. But no matter with what we eat them, they should be done as well as possible. If we are given to hospitality, let us reflect that hospitality is a failure unless the potatoes are good, and well boiled.

Painters' Brushes in City Halls.

Most of the city and town halls dotted over our country are, from the outside, nothing to boast of, and inside look as gaunt and grim as whitewash and grey paint can make them. It has been pointed out recently how much better it would be if these bare walls were adorned with paintings on a grand scale, illustrative of the lives of famous citizens and the noteworthy incidents of local history. The capture of a fort; the invention of a steam-engine; the discovery of an unknown sea; the lonely watch of the astronomer; the writing of some famous book; these and kindred subjects might well be represented with all the poetry of art. The influence of such paintings on the community would be immense. Every attendance at a public meeting would be a lesson in æsthetics, and a silent stimulus to every citizen to distinguish himself by deeds of usefulness and heroism. Money spent thus in decoration would never show a return in pounds, shillings, and pence, but it might yield a rich harvest of noble deeds; and many a quiet, sleepy little town can boast of incidents to which the highest art will find it difficult to do justice.

Addition made Easy.

Adding up long columns of figures is one of the most tedious of operations, especially when they relate to money spent and gone. When the columns represent profits and the windfalls of fortune we find it less irksome, perhaps, our spirits being then somewhat lighter. To assist us in this wearisome labour an adding pencil has been invented, shown in our engraving. This miniature calculating machine—for it is nothing else—does its work with unfailing accuracy, and without the least mental exertion on the part of the operator. All he has to do is to turn a disk, so as to make a coincidence between a figure and a letter.

The apparatus resembles a pencil in shape, and consists of a hollow cylindrical case, closed above, and with a circular flange attached to the lower end, the upper side of this circular flange being numbered.

Fig. 1.

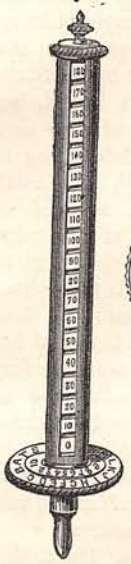


Fig. 2.

Inside the hollow cylinder or case is a solid spirally grooved cylinder, which carries a milled disk at its lower end; the milled disk extends outside the flange, and is marked with a series of letters. The disposition of flange and disk may be clearly seen in Fig. 2. The solid cylinder fitted into the case of the pencil is numbered, and in the groove wound spirally round it is an index or traveller which projects through the longitudinal slot of the case, and may be made to travel up and down the slot by rotating the inner cylinder. The lower extremity of the pencil is merely used for pointing.

The method of using the apparatus is very simple. Suppose the various parts to be disposed as in Fig. 1. The index stands at 30. Now, if we have to add 5, that number is first sought on the flange, and coinciding with it on the disk appears the letter F. The disk is next turned by the finger and thumb until the said letter F is brought to coincide with the zero mark. This, of course, at the same time rotates the solid inner cylinder so that a distance measured on the groove between the parts marked 30 and 35 travels beneath the index. The latter, therefore, ascends in the slot and, when the movement is finished, remains pointing at the figure 35.

To add another number, the letter which happens to correspond thereto is, as before, carried round to zero, and this process is continued till all the figures are added up, when the total sum is shown by the index.

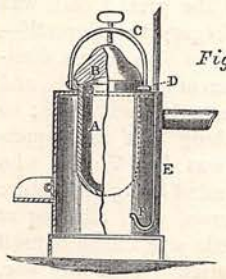
The adding pencil can be used about as fast as a good accountant can add up a column of figures mentally, and it possesses this advantage, that one does not require to check the calculation by doing it a second time. Interruption during the computation is no annoyance; indeed, one might stop in the middle of a column, go away for a week's holiday, and finish the addition on his return.

Every Man his own Gas Company.

It is a luxury not to be despised, to be able to make one's own gas to light a comfortable home. Here is a contrivance by which one can manufacture gas for private consumption, with little more trouble than is required to roast a shoulder of mutton or boil a potful of potatoes.

A, Fig. 3, is a hollow cylindrical retort constructed of iron, with an iron cap B, ground to fit the top. A strong iron ball, C, passes over this cap, and through the ball a perpendicular screw runs, pressing on the top of the cap and keeping it firmly in its place. In the retort fine or small broken bituminous coal is placed. The apparatus is contrived to fit the hole of a stove, or it may be used in a furnace made expressly for the purpose.

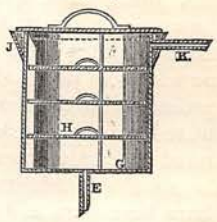
Fig. 3.



From the retort, and near the cap, a pipe, D, extends for a short distance, and is connected with a perpendicular pipe E. At the intersection of these two pipes the gas and tar separate; the gas ascends, the tar falls below into the tube which descends to the bottom of the retort, and then crooks upwards at F, and goes into the stove, fire, or furnace, or it may be conducted elsewhere if desired.

The upper portion of the pipe E, from the place where it is joined by the short pipe D, conveys the gas to a tin purifier G, Fig. 4, which is packed alternately —between sheets of perforated tin H, made fast by catches to pieces fastened within—with lime and sawdust or any other material that will purify the gas. At the end of the purifier from which the gas escapes there is a band, J, flaring from the body of the apparatus, thus making a channel in which water is to be kept. A lid covers the main part of the purifier, extending down into the water, and thus preventing the escape of gas. From the purifier a pipe, K, runs into a small gas reservoir, and thence the gas can be conducted to any part of the house.

Fig. 4.



For country districts this apparatus is specially suitable, and it will also be convenient in towns where one has a grievance against the public gas company. With it, people can light their dwellings with very little trouble and expense, and with ordinary care there is not much chance of the monotony of life being varied by an occasional explosion.

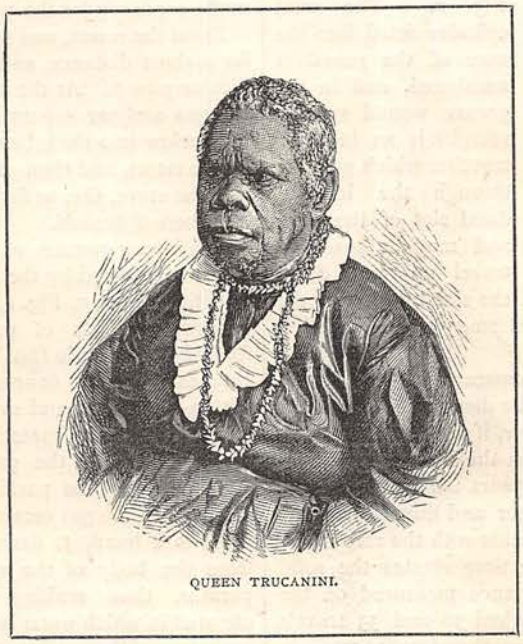
Smallness of Stature.

Not long before his death, Canon Kingsley drew attention to the surprising number of small young men to be seen in a London crowd. According to him, it was a sign of the deterioration of the race. But there are two ways of looking at everything, and, for the comfort and satisfaction of small people, we would point out that it might almost be taken as an indication of intellectual progress. Many—we might almost say most—of the great men of history have been of short stature, from the days of that ancient philosopher

who, as the story goes, was so diminutive that he had to carry lead in his pockets to prevent his being blown away. Canute the Great, for example, was a singularly small man; Napoleon, too, was little; Nelson had no height to boast of; and the great Condé was short enough. Hildebrand—Gregory the Seventh—the mightiest of all the Popes, was also quite a diminutive person. Then amongst men of letters, poets, and philosophers, Montaigne, the essayist, was little; so was Pope—"a little crooked thing that asks questions;" so was Dryden; so was Dr. Watts, who insisted, as we all know, on the mind being the stature of the man; and so was Scarron, who, alluding at once to his ill-health and his little size, called himself an "abridgment of human miseries." Will any one, after such names as these—and the list might be indefinitely extended—look down on little men with disdain?

Trucanini, the Last of the Aborigines of Tasmania.

Notices of the death of this last scion of a once numerous race have appeared in the *Hobart Town Mercury*, May 9th, and the *Tasmanian Tribune*, May 12th, 1876, which, though not quite so interesting to us at this distance as they were to those who were personally acquainted with the short, stout, red-turbaned, dusky-featured old native queen—for so she is admitted to have been—are still of no common interest to the world at large.



QUEEN TRUCANINI.

The death or disappearance of a single member of a numerous society calls up, perchance, a thought or two on the part of some of his relatives or friends; but the void in the community is soon filled by some one or another assuming the rights and duties of the deceased, discharging them better or worse, as the case may be. The disappearance of a race, however, evokes a wider consideration. The Tasmanian news-writer, commenting on it, employs the threadbare sentiment, "that it is the inevitable result of the onward march of the white man's civilisation." The humanitarian wonders why it should be so, and finds no explanation but in a doubt of the ineffable wisdom of a white man's government. It is but a century ago that a numerous race owned the whole island of Tasmania; and to-day another Corporal Trim might feelingly ask, "Where are they now?" Our object, however, is not to moralise on events—we leave that to our readers—but to recall a trait or two of Trucanini's life as given us in the papers, leaving out the details of her malady, death, and burial. It appears that she belonged to the Bruny Island tribe, of which she was queen, and had had five husbands, all kings, the last of whom was the celebrated King Billy, the sole male representative of the race, who died in March, 1869. While young, she was instrumental in aiding Mr. Robinson (Black Robinson, colonially) to collect the natives after the "Black War," accompanying him on a visit to the various tribes, distributing presents, and inducing them to consent to be cared for by the State. Eventually, they were sent to Flinder's Island, but the climate did not agree with them, and they died off rapidly. Some time before this, while living in Port Philip (now Victoria), Trucanini, or Lallah Rookh as she was also called, was accused of murder while in company with others of her tribe, and all were sentenced to be hanged. It transpired, however, that she had once saved a lady and her two children from the fury of some blacks, and as she persistently denied any connection with the murder, great interest was shown in her favour, and her life was spared.

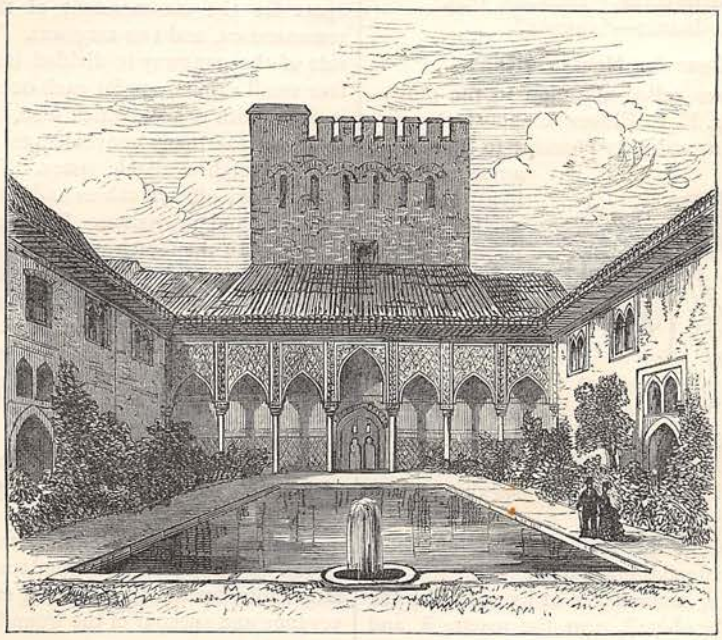
When Mr. Dundridge succeeded Dr. Milligan in the charge of the Oyster Cove aboriginal station, Trucanini and fifteen others were the sole survivors of the Flinder's Island deportation; and Government at that time allowed Trucanini £60 a year for her maintenance, which sum was afterwards increased to £80. After the death of King Billy, Mr. Dundridge took pity on the poor queen, and she became a member of his household, removing with him, in 1873, to Hobart Town, whose inhabitants soon became familiar with her. She was immoderately fond of smoking, but was never intemperate. Her sight was keen to the last, and her beautiful eyes were the theme of admiration to all who saw them. She was very chatty, and always ready to give whatever information she possessed. The deportation to Flinder's Island was a constant sore, however; and she often repeated the upbraidings she received from the poor natives for persuading them to give themselves up, and further stated that they had told her that she would be the last of them as a punishment for that action. Since the death of her husband she would add to the story in a piteous tone, "See, it has come true."

Although endowed with general good health, old age at last began to tell on her. She had reached her seventy-third year, and within the last ten days of her life had had a presentiment that she was going to die,

but it did not seem to give her great concern. She required constant attention, and was a source of great anxiety to those in charge of her. On the evening of her death, she called Mrs. Dundridge, and told her that the devil was on her hand, and asked her to catch him; then she fell into a fit, from which she never recovered. Three days after, she passed away peacefully, and was interred with colonial honour and solemnity; and a movement is already on foot to erect a monument over her grave.

On Pilgrimage to the Alhambra.

If there is a romance in stone anywhere, it is in the palace of the Alhambra, the appearance of which is so well known to visitors to the Crystal Palace. Every one connects its name with all that is beautiful and interesting in Spain, and it is a point of attraction towards which travellers wend their way from every quarter. Here the Moor did his best, by force of intellect and of wealth, to make a natural and artificial paradise; and he succeeded. "Spoilt as it has been," says one writer, "by the spoilers of successive generations—by the Church party under Ferdinand and Isabella—by the French in 1812—by earthquake in 1821—still the Alhambra continues the pride and glory of Moorish Spain; and the magnificent view from its towers, whence you look out on the wild range of the snow-capped Alpjarras, on lovely irrigated plains of verdure, on stateliest trees, sparkling waters, and wooded valleys almost tropical in their luxuriance, presenting all that is highest in art and most lovely in nature, unites a vision unequalled in the whole world." The portions still standing of the palace consist of porticos, pillared halls, cool chambers, small gardens, fountains, and mosaic pavements; the smallness and elegance of the columns and arches, and the richness of the ornamentation, surpassing belief. The colouring has been but little altered by time, the dry air of the Peninsula dealing kindly with this feature of the building.



THE PALACE OF THE ALHAMBRA, SPAIN.

Previous to 1869 the Alhambra was partly closed, or seen with difficulty. In that year, however—it was a year pregnant with reforms of every sort throughout Spain—the palace was, by a legally constituted assembly, taken away from the Crown and made national property. The public were freely admitted to it then, and a handsome annual sum was granted to pay a staff of attendants and keep it in proper repair. Now it has again returned to the possession of the Crown, and "whether," remarks a correspondent, "it may be made a palace, or a barrack, or a hunting box, it is impossible to say." "The Government," he adds, "cannot afford to keep it up; the Crown is already amply endowed with residences; no guarantee is promised that this work of art will be respected, or that entrance to it will be allowed to strangers." We sincerely trust that these fears will not be realised. The Alhambra, in a sense, does not belong to Spain alone; it is the property of the world, and to close it against the public, or to still further deface its beauty, would be a wrong done to humanity.

A Gardener's Use for Empty Tins.

Every dog that has ever run through a village with an old kettle or saucepan tied to its tail may well have been in good spirits of late. We showed a month or two ago that these discarded utensils might be turned to more profitable account, and employed in the garden for cuttings. Since then, a correspondent has kindly pointed out that cuttings are by a long way more plentiful than old kettles and saucepans, well-ordered households only having these in a hopelessly disabled state at long intervals. She states from practical experience that nothing could be better for cuttings than preserved milk and meat tins. These, most people are in the habit of consigning when emptied to the rubbish-heap: in future, we must save them for the garden. A few holes must be made in the bottom of the tins, but that can easily enough be done with an awl, or even with a hammer and a big nail. The tins look tidy and unobtrusive, most of them being painted of an exceedingly decorous hue. It should not be forgotten, however, that pots are best when we can get them. Their porous nature is a great point in their favour, and cuttings in an Australian mutton tin may feel, in some circumstances, slightly uncomfortable.

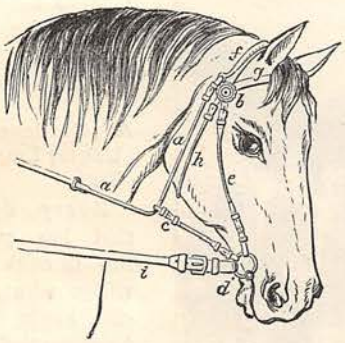
Key to Double Acrostic on page 637.

R a M
E ch O
P a N
U topi A
B oa R
L yri C
I nc H
C it Y.

Ram—Animal, battering-ram.
Echo—Nymph, newspaper, an echo.
Pan—The god Pan, warming-pan.
Utopia—By Sir J. More.
Boar—Bore, boa, bore of a gun, bore for a tunnel.
Lyric.
Inch—Three barleycorns, "Inchcape Bell."
City—Certain ordnance—"canons."

Steering-Gear for Horses' Heads.

Some time ago we called attention to the praiseworthy efforts of Mr. E. F. Flower to abolish the gag-bit and bearing-rein, and it is pleasant to know that amongst the kind-hearted portion of the public—which we take to be by far the larger portion—these cruel contrivances are going out of date. We have now to speak of an improved check-rein invented in the United States, and possessed of some commendable features.



This check-rein, *a*, is connected at its ends with the upper part of the head-stall, near the rosette *b*, and passes through bit-loops *c*, these loops being made of adjustable straps fastened to the rings of the bit *d*. The bit, the side-straps *e*, the head-strap *f*, the front-strap *g*, and the throat-latch *h*, are all of the usual character. The reins, *i*, are attached to the rings at the end of the bit. The check-rein, *a*, is made adjustable in length in the ordinary way. The loops, *c*, being made, as we have said, of straps the length of which can be altered, the place of intersection of the loops may be made more or less forward or backward. No matter what the adjustment may be, the horse's head is free to swing up and down, but the animal is prevented from pushing its nose too far forward, and thus its neck is kept gracefully arched. The contrivance also secures the horse against having the bit drawn forcibly against the upper portion of its mouth.

Horses, no doubt, would be for abolishing such apparatus altogether; but that arises from a natural repugnance to labour and servitude, which should not be encouraged. We as their masters, however, should keep them in as easy harness as we can, remembering that no bits and bridles can be very comfortable.

Trains for Wounded Warriors.

Amongst the most interesting objects shown in the Exhibition recently held at Brussels, were the appliances for aiding the sick and wounded in times of war. Of these, the most conspicuous was an ambulance train belonging to the *Ordre Souverain des Chevaliers de Malte*, a society which has for its object "the encouragement and promotion of all works of humanity and charity in the relief of sickness, distress, suffering, and danger."

The train consists of seven carriages. Down the middle of each carriage runs a gangway, and as there is a platform connecting each carriage with that before and behind it, it is possible to go without interruption from end to end of the train. The first carriage is set apart for the commandant of the train, the sous-commandant, and two surgeons. The space on either side of the gangway is divided into two, thus making four small cabins, one for each occupant. Each cabin is fitted with a seat, which also forms a bed, a flap-table, and as many conveniences as can be crowded into the small available space. The second carriage contains two officers' cabins and a number of cupboards for stores and provisions. The third is fitted up as a kitchen. In the fourth we have a refectory, or dining-room, with benches and tables along the sides.

The three remaining carriages are specially fitted up for the reception of wounded men. There is room for ten men in each. Six can be accommodated on one side and four on the other, the litters being placed in two horizontal lines, one above the other, like the berths of a ship. The litters in which the men are brought to the train are lifted up and placed in a sort of rack, so that the litter, when placed on the rack, forms the bed.

The train is thus a complete moving hospital, with stores, kitchen, and accommodation for surgeons and attendants, besides appliances of every sort for the conveyance and succour of the wounded.

Burns and Scalds.

Burns and scalds are amongst the most common of accidents, and perhaps there are none for which more remedies have been suggested and employed. With some of these remedies it is the duty of all of us to become familiar, that we may know what to do in an emergency. It is a thousand pities to have the chance, even once in a lifetime, of playing the part of the good Samaritan, and lack the skill. The first thing to be noticed is, that in moving injured people great care should be taken not to add to the effect of the shock which the system has already experienced. In removing the clothes there must be no tearing off of the burnt or blistered skin, which affords a useful protection for the injured surface. The next thing is to cover the burnt or scalded parts with a material that will exclude the air. Flour answers well, and should be freely applied. Or common whiting, reduced by cold water to the consistence of thick cream, may be spread on light linen rag, and applied to cover the injured surface. The

ease it affords is instantaneous, and it only requires to be kept moist by occasional sprinkling of cold water. Cotton wool, if at hand, may be wrapped round the injuries, or lint, or linen rags steeped in water, may be used. These may be covered with oiled silk. A mixture of linseed oil and lime-water, in equal proportions, may be applied with rags laid over the burns. The more extensive the surface involved in the accident, the greater care should be taken not to expose it to atmospheric influence, which increases the pain, and also adds constitutional depression. Should the sufferer be greatly exhausted, give brandy or other stimulant; if the pain be excessive and irritating to the nervous system, ten drops of laudanum should be given until professional aid can be obtained.

May we Live a Hundred Years?

We do not live anything like so long as we should. No doubt many of us inherit feeble constitutions; but how often our lives are cut short by causes which, humanly speaking, we have under our own control! We might live longer than we do—perhaps till real old age laid his gentle hand upon us—if we only followed the dictates of prudence and common-sense; and it is worth while trying to do so, for life is sweet.

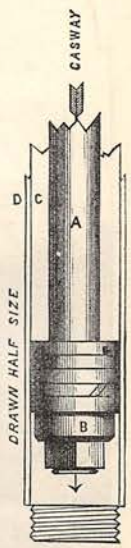
In the supplement to the Thirty-fifth Annual Report of the Registrar-General of Births, Deaths, and Marriages, Dr. Farr, giving the results of ten years of registration, sets down a hundred years as the natural lifetime of man: that is to say, if all children were born in perfect health, and were to live afterwards under the most favourable sanitary conditions, a hundred years would be the age to which every one of them would attain. As a matter of fact, however, this extreme limit is reached by scarcely one English child in a hundred thousand. What, then, is the average duration of life in England? Only forty-one years. Even in the most healthy districts of the country it scarcely amounts to fifty years.

If we would live long and healthily, there are but a few points to be attended to. Of these the chief are pure air, pure water, good food not taken in excess, regular exercise which as far as possible exerts all the muscles without overstraining any of them, sufficient sleep, and a quiet and cheerful mind.

In the observance of sanitary laws we are in advance of our fathers, to judge by the decreasing toll paid nowadays to Death. Two hundred years ago the yearly mortality of London was not less than 8 per cent. A hundred years ago it had been reduced to 5 per cent. It is now 2·4. If we go on at this rate, the metropolis in a century or two more may — Dr. Farr notwithstanding — be in the happy condition of a small but highly-favoured region we know, where the churchyard is empty, and where, if any one wearies of life, he must remove to the next parish.

An Improvement in Chandeliers.

Water-sliding chandeliers are attended with two considerable disadvantages. First, the slide has to be periodically supplied with water—should this be forgotten there is an escape of gas, and the escape may end in an explosion; and secondly, the filling of the slide may be carelessly set about, the result being an overflow of dirty water on fine table-covers and Brussels carpets. A sliding chandelier has lately been introduced to public notice, which dispenses with the use of water altogether, and must be acknowledged a genuine improvement in this department of house fittings. The invention is extremely simple, being merely the ingenious application of expansive split rings at the terminal point of the interior tube of the chandelier. A, in the annexed diagram, represents the gas-way or interior tube, at the bottom of which is the piston B, consisting, as we have said, of expansive split rings. This piston slides up and down in the mandrill-drawn inner tube C. The sliding is accomplished quite as easily as with the water-slide, and with less noise; and chandeliers constructed on this new plan require no attention whatever, and are perfectly free from any chance of escape. They are equally suited for both hot and cold climates, there being no water to freeze in the latter or evaporate in the former. Should a balance-chain ever happen to break, the chandelier cannot fall, like the ordinary chandelier: it is caught by a metal cap at the top of the tube C. The tube C is protected, we may add, by an outer case D, so that should the chandelier receive a blow, its efficient working is not interfered with in any way.



Old Corks Again.

In the autumn of last year we called attention to a novel use to which old corks might be put. We pointed out that they might be employed in the construction of cork jackets, and that so those little stoppers of our bottles—at present thrown away—might be made to baffle the fury of the tempest, and save many a drowning mariner. Our hint has been turned to practical account. A correspondent informs us that, some time since, she had a sleeveless canvas jacket made. Old corks were collected—this was the willing work of children's hands—and they were quilted on to the jacket; it was then put to the test, and found to answer admirably. It supported a man in the water with ease, without his making any exertion, and to a moderately good swimmer it would afford absolute safety for many hours. "Now," says our correspondent, "if only one out of every ten families in England were to turn out one of these jackets each year, and supply them gratuitously to our mercantile marine, how many useful lives might be saved!" It is worth while considering whether something might not be done in this way.

The manufacture of such safeguards for seamen would form a very pleasant occupation for winter evenings: an occupation which might be rendered still more interesting by many a tale of shipwrecks and adventurous voyages.