

## Science Siftings

BY 'VOLT'

### Defective and Misplaced Teeth.

Dentists make the startling disclosure that they can alter and enlarge the jaws of any child by simple means, and that they have found that the teeth themselves and their arrangement are the pattern from which the jaw takes its shape. Three people out of four seem to lack in the proper development of the lower portion of the face by reason of defective and misplaced teeth and weak and ill-developed jaws.

### Utilising Old Rubber.

The great increase in the price of rubber gives additional interest to the process of regeneration of waste rubber. The regeneration of vulcanized India rubber consists in removing the sulphur, which was added in the process of vulcanization. The scrap rubber is assorted according to quality, and is treated either with sulphuric acid or with potash, for the purpose of destroying fibres of cloth, etc., and of removing the greater part of the sulphur. The material is then ground and washed. This regenerated India rubber is used only as an addition, in small proportions, to new rubber.

### The Age of a Fish.

The age of a fish can be determined by examining the bony parts of its bearing apparatus. These increase in size during the entire life of the fish, each year adding two layers, a light colored one formed in summer, and a dark one formed in autumn and winter. The alternate layers are sharply contrasted and very distinct, so that there is no difficulty in counting them. The number of pairs of layers is equal to the number of years the fish has lived. By this means it will be comparatively easy to determine the rapidity of the growth of fishes, and the effect of fisheries on the population of the sea.

### The Panama Canal.

The mere mass of the concrete floors and side walls of the locks at Gatun, in the Panama Canal Zone, ought to be sufficient to give them great stability, but with a view to adding a further safeguard against rupture in the event, say, of earthquake shock, the Government engineers intend to reinforce the concrete by imbedding in it seven thousand tons of old rails. These consist partly of a light rail used during the era of French construction, and partly of more modern American rails, which have been so badly bent that they can no longer be used for trackage purposes.

### A Pennyworth of Gas.

The price of gas differs in different localities, but taking the Manchester price of 2s 3d per 1000 as an average this will serve the purpose of our calculation. At that price 37 cubic feet, valued at about one penny, and weighing about 1½lb, is a powerful factor. Its burning will generate about 1½lb of water and about 19 cubic feet of carbonic acid. This pennyworth of gas will heat 30 gallons of water from 50 degrees to 110 degrees for a bath, or it will in good kettles boil eight gallons of water and make tea for 64 persons. It will work a one-horse power gas engine for an hour, or lift a weight of 88 tons 10ft high, doing the work of six men for one hour. It will melt 10lb of iron, and make a casting in twenty minutes, which would ordinarily require two hours and 30lb of coke. It will braze a metal joint in two minutes which would require twenty minutes in a forge. If burned in a six-inch flue for ventilation purposes it will induce 80,000 cubic feet of pure air. It will give you a brilliant light of 50-candle power for nine hours, and in a good radiating stove will comfortably warm a room 16ft square for an hour. It can easily cook a dinner for eight persons.

### Novel Bridge.

The city of Toulouse, which already contains so many interesting monuments, has recently been enriched with a new and very remarkable bridge, called the Bridge of the Amidonniers (starchmakers), which spans the Garonne River, a little below the St. Pierre Bridge. The new bridge is the first large work of its peculiar type, which has been constructed in France by Sejourne after the model devised by him for the bridge at Luxemburg. This type of bridge is characterised by the association of two parallel masonry arches connected by a floor of reinforced concrete. The Toulouse Bridge, the entire length of which is 730 feet, contains five such pairs of elliptical arches. The largest pair, in the middle of the bridge, has a span of 150 feet. Each arch of the pair is about 19 feet wide, and the two arches are separated by an interval of 33 feet. (The corresponding interval in the Luxemburg Bridge is only 20 feet.) By allowing the transverse girders of the concrete floor to project beyond the arches, the builder has obtained room for two overhanging walks and parapets, each about 10 feet in width. Thus, although the combined width of the two masonry arches is only about 20 feet, the total available width of the bridge is about 70 feet! This method of construction results in great lightness of appearance and an economy of material and money which cannot be obtained by any other system now in use.

## Domestic

By MAUREEN

### To Remove Water Stains from Black Crape.

When water falls on a black crape veil or collar, it leaves a conspicuous white mark. To obliterate this, spread the crape on a table (putting a large book or paper underneath it to keep it steady), and then place beneath the stain a piece of old black silk. With a camel's hair brush, dipped in common ink, go over the stain; then wipe off the ink with a small piece of old black silk. It will dry immediately, and the white mark will be seen no more.

### To Renew Oilcloth.

When oilcloth has been down for a few months and is losing the shiny surface it can be renewed easily and made to last twice as long if treated in the following way: Melt a little ordinary glue in a pint of water, letting it stand on the top of the oven till dissolved. Wash the oilcloth thoroughly and let it dry. Then at night, when the traffic of the day is over, go over the whole carefully with a flannel dipped in the glue water. Choose a fine day for it, and by morning the glue will be hard and will have put a fine gloss as good as new on your floor.

### Worth Knowing.

If stamps have become glued together, do not soak them in water. Instead, lay a thin paper over them, and run a hot iron over it. They will come apart easily, and the mucilage will be all right there instead of being soaked off.

To clean white knife handles, dissolve a little salt in lemon juice and rub with a piece of soft rag. Rinse in clean warm water, dry thoroughly, and polish with a soft leather.

To prevent the wick from an oil stove creeping up and smoking, tie a string on the screw that regulates the wick and hang a weight from it. You will then be able to have the stove without danger.

### Salt as a Disinfectant.

As a kitchen disinfectant salt is invaluable. A lump of salt should be kept in the kitchen sink, where it will dissolve slowly and keep the drain pipe pure and wholesome. A strong solution of boiling hot salt water is a good thing to flush drains with. When frying, the stove is often splashed all over with grease; to prevent this sprinkle a little salt in the frying pan before putting in the fat. If anything boils over on the stove and begins to smoke throw a handful of salt on it; this removes any objectionable smell. A simple way to remove ink from a kitchen table is to damp the place with cold water and rub in salt. To remove stains and mustiness from decanters take equal parts of salt and vinegar; after allowing to stand some time shake vigorously and rinse well under the water tap.

### How to Put Baby to Bed

It is not desirable to lay a baby on its back when sleep is wished for. Either one side or other is best; and, if possible, it is well to accustom it first to one side and then to the other, as this obviates falling into the habit of being able to sleep only on one side. But a child who is wide awake and of a happy disposition, so that it lies cooing to itself and watching the mysteries of its own ten fingers, is all the better for being laid on its back, as the spine is thereby kept straight and unstrained, and growth goes on apace, just as it does when a growing boy or girl is compelled, from accident, to spend a few weeks in a recumbent position, and finds, when allowed to get up, that none of his or her clothes are long enough.

### Household Hints.

One of the commonest causes of broken incandescent gas mantles is that of being too precipitate in applying a match to the gas. The match should never be struck before turning on the gas, so that the latter may have time to envelop the mantle before it is lighted.

Unless candles of a very good quality are invested in they are apt to 'gut', the melting wax not only being wasted, but giving an unsightly appearance to the candle. To obviate this the plan is recommended of covering the wax from the rim to where it is pushed into the socket of the candlestick with a thick application of soapsuds. This should be left on for a few moments, and any superfluous bubbles of soap removed by smoothing the candle with the finger-tips, when it should be stood on one side to dry until it is required.

*Maureen*

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