Correspondents are requested, when applying to the Editor for the names and addresses of the persons from whom further particulars respecting the articles in THE GATHERER may be obtained, to forward a stamped and addressed envelope for reply, and in the case of inventors submitting specimens for notice, to prepay the carriage. The Editor cannot in any case guarantee absolute certainty of information, nor can he pledge himself to notice every article or work submitted.

A New Air Brick.

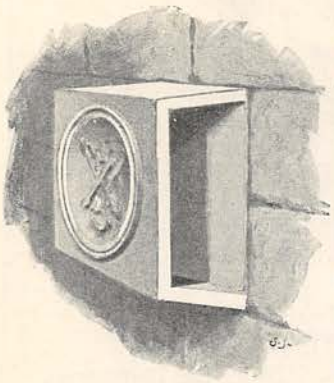


FIG. 1.

An air brick which acts as a ventilator without causing a draught from outside has been introduced by a Leeds manufacturer. The brick, which is built into the wall, is made hollow, and its air passages are so contrived that warm air is drawn out of the room when the wind blows on the outside of the brick. When there is no wind the air-current through the chimney of the room will draw in fresh air through the brick without causing a draught.

Thought-Reading by Telephone.

In a former volume of our MAGAZINE there appeared a short story entitled "The Sphinx: a Mystery," which was based on the possibility of applying the telephone to necromancy. This idea has recently been utilised by M. Trouvé, the well-known Parisian electrician, in conjunction with M. Roskoff, the popular prestidigitateur and clairvoyant. M. Trouvé constructed a telephone the size of a franc piece or shilling, which is applied to the ears of the clairvoyant so as to be concealed by the hair of his wig. Invisible wires run from these telephones to other telephones behind a screen, where a confederate is stationed, who can see all that passes, and thus prompt the blindfolded clairvoyant or "thought reader." It is a question whether the device would not be useful in "prompting" actors or speakers of defective memory.

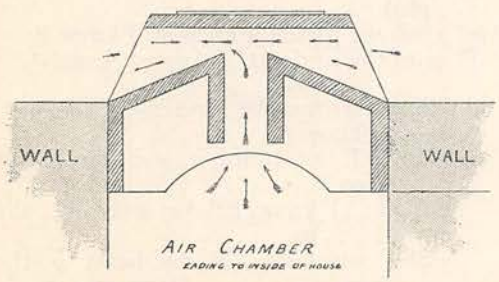


FIG. 2.—HORIZONTAL SECTION OF AIR BRICK.

A Rocking Cinder-bin.

The cinder-sifting bin which is shown in the wood-cut is fitted with rockers on the base, and contains a riddle inside, as shown. The ashes to be sifted are placed in the riddle, the conical cover is put on, and the bin is rocked to and fro by means of the handles. The cinders can thus be easily sifted without any disagreeable dust.

Wasps and Suicide.

Benzine is peculiarly noxious to some insects—for instance, wasps and mosquitoes. Indeed, it has been applied with remarkable success as a means of driving away mosquitoes in America. The benzine is rubbed on the face, hands, and other parts of the body exposed to the insects, and in certain cases it is spread in a film over the water of reservoirs, which attract the insects in large numbers. A short time ago M. Henry, a Frenchman, being curious to see the effect of benzine on a wasp, put some of it under a glass in which a wasp was imprisoned. The wasp immediately showed signs of great annoyance and anger, darting at a piece of paper which had introduced the benzine into his cell. By-and-by he seems to have

given up the unequal contest in despair, for he lay down on his back, and bending up his abdomen, planted his sting thrice into his body, and then died. M. Henry allowed his scientific interest to overcome his humanity so far as to repeat the experiment with three wasps, only to find that the other two did likewise. He is, therefore, of opinion that wasps, under desperate circumstances, commit suicide. It is also said that snakes and scorpions will take their own lives; but the report does not seem to harmonise with the fact that snakes are proof against snake poison, unless we are to suppose that they are not proof against their own poison—at least, when they have a mind to kill themselves.

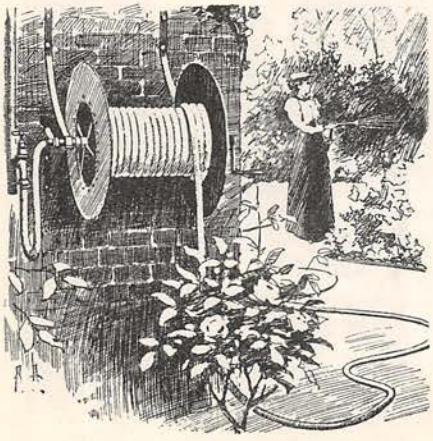
A PNEUMATIC BOAT.

An Artistic Radiator.

The hot-water pipes, coils, and other heaters for buildings are usually so unsightly that a new and elegant radiator which has been introduced will commend itself to householders. These radiators consist of blade-like tubes of decorated exterior, and seem rather an ornament to a house than anything else.

A Garden Hose-reel.

The hose-reel which we illustrate will be useful in watering gardens. It is fixed against the garden wall, and the hose gives a supply of water all the time it is being run off the reel. The hose is joined to the waterpipe by a valve within reach. Obviously, such a reel would also render good service in case of a fire on the premises.



A GARDEN HOSE-REEL.

A Pneumatic Boat.

Our illustration shows a new portable boat on the pneumatic principle, which will be useful to travellers and people in the country. It is an American device, and consists, as shown, of an indiarubber shell like a horse-collar, with waterproof leggings and boots attached, forming part of the bottom of the boat. The person inserts his legs into these leggings and draws the boat up to his waist, then walks into the water, inflating the pneumatic collar until it buoys him up. The boat can be propelled by the feet and hands, or by hoisting a small sail.

A New Diamond Tester.

It is well known to jewellers that aluminium will mark a glass or "paste" diamond, but not the true gem, provided the surface is wet. This fact has now been applied in the production of a mechanical tester, which consists of a small disc of aluminium rapidly revolved by an electric motor. The stone to be tested is wetted, and held against the edge of the disc by means of a spring clamp. When metallic marks are found on the stone after this treatment, it is rejected as false.

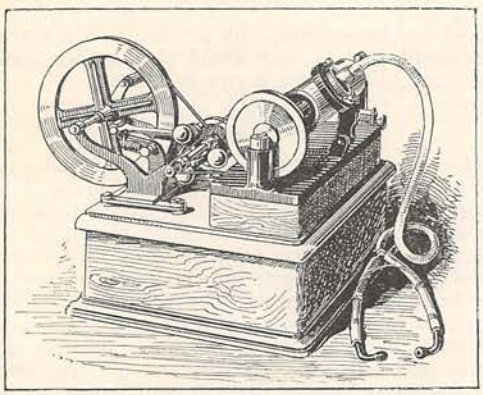
The Rings of Saturn.

In 1859 Professor Clerk Maxwell, the celebrated electrician, proved mathematically that the wonderful rings of the planet Saturn, which form such a splendid spectacle in a powerful telescope, are composed of myriads of small bodies or minute satellites in rapid rotation round their primary.

Experimental proof by actual observation has recently confirmed the reasoning of Maxwell. Professor Keeler, Director of the Alleghany Observatory of the United States, has applied a spectroscopic test, which shows that the small satellites composing the stupendous rings are moving with different velocities. His method of observation is based on the principle of Doppler, according to which we can tell whether a heavenly body is moving to or from us by examining the light coming from it in the spectroscope. The lines of the spectrum are displaced if it is moving with sufficient rapidity, and some estimate of its velocity can even be made by measuring the displacement. The discovery is another confirmation of the penetrating genius of Maxwell, which likewise anticipated the experiments of Dr. Heinrich Herz in demonstrating the wave theory of electromagnetism.

A Portable Phonograph.

The ordinary phonograph of Edison is comparatively large and costly, hence it will gratify the admirers of this ingenious apparatus to find that a small portable one has been brought out by a well-known Parisian instrument maker, at the price of 400 francs, about £16. Our illustration shows this

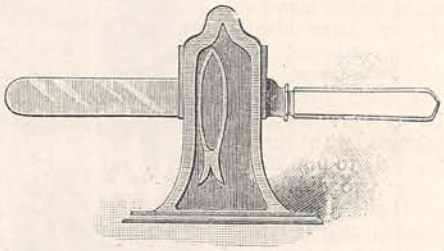


A PORTABLE PHONOGRAPH.

simplified phonograph, which is worked entirely by hand, whereas in the larger instrument an electric motor is required to revolve the wax cylinder on which the voice impresses itself. We need not enter into the details of the mechanism further than to say that there is no change in the manner of recording the sounds by means of a vibrating drum, a pointed stylus, and a surface of wax. In working it, a great matter is not to turn the handle too fast or too slow. After two or three days of practice the proper speed can generally be kept up, and according to M. Gaston Tissandier, a well-known French man of science, the articulation of the new instrument is superior to that of the larger and more expensive one.

A Quick Knife-Cleaner.

The little knife-cleaner shown in our figure is very rapid in its action. It consists of two cleaning surfaces of emery pressing together, and it is sufficient to pass the blade of the knife once or twice between them, with its back down and its edge up, in order to clean and polish it.



A QUICK KNIFE-CLEANER.

An Electric Incubator.

Herr Otto Schulze, of Strasburg, has been at work for three years on an electric incubator, in which the heat required to hatch the chickens is supplied by the electric current in a way that is now well known. The difficulty in such an application of electric heating lies in regulating the current, and consequently the temperature; but it is stated that Herr Schulze has devised one which maintains the temperature within one-tenth of a degree.

A Home-trainer for Bicycles.

Our woodcuts represent two "home-trainers" for bicyclists, and require very little explanation. In the first and larger apparatus (Fig. 1) the wheels of the bicycle rest on rollers, which go round as the bicycle is worked. It follows that the bicycle never moves from its place however fast it is driven, and thus the rider can practise in his own home. In Fig. 2 a small appliance is seen attached to the hinder wheel, which has the effect of retarding the pace of the bicycle so much that it only moves about fifteen feet instead of a mile.

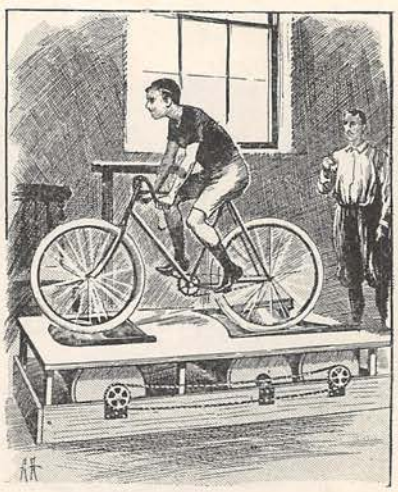


FIG. 1.

Haircutting by Electricity.

At a recent meeting of the Brooklyn Electrical Society, New York, an electrical comb which acts as a pair of shears and cuts the hair was exhibited in use. Across the teeth of the comb is stretched a fine platinum wire, which can instantly be made white hot by sending an electric current through it. A switch for this purpose is attached to the comb, and worked by the finger of the barber. On

A HOME-TRAINER FOR BICYCLES.—FIG. 2.

passing the comb through the hair the barber presses the switch and heats the wire, which immediately singes through the hair. The process is said to be less injurious to the hair than cutting with ordinary shears, as the natural oil is preserved in it by the singeing of the ends. In a former GATHERER, if we mistake not, we have described a somewhat similar comb for shearing sheep; but it is interesting to find the idea adapted to the human toilet.

New Stories.

Mr. Frank Stockton's "The Adventures of Captain Horn" (Cassell) comes as a pleasant surprise upon the reader. For it is quite a departure from his old manner of depending chiefly upon characters; and he gives us in this story a stirring chain of thrilling adventures. Incident follows incident, and the reader's interest is never allowed to flag for a minute as he follows Captain Horn and his friends in the discovery of the long-buried treasure, and the steps by which they got it away from the inhospitable South American shore. To hint further at the plot would be to spoil the reading of a good tale, and take away from the pleasure of an introduction at first hand to some excellently drawn characters.—Just as Mr. Stockton shows us a fresh revelation of his many-sidedness in "Captain Horn," Mr. Max Pemberton also strikes a new vein, for him, in his contribution to "Cassell's Pocket Library," under the title of "The Little Huguenot." The story is a powerful picture of life in France under Louis the Well-Beloved, and Mr. Pemberton has never written a stronger scene than that in which he describes the interview between the King and the Jesuit at the close of the story.

Some More Fresh Reading.

Mr. P. Anderson Graham and his publishers, Messrs. Longmans, are to be congratulated on the appearance of "Country Pastimes for Boys," for it is just the book to arrest and rivet the attention of all healthy British lads. It deals of pets and games, of sports and studies; gives hints on the collecting of eggs, and advises beginners in fishing and rambling (with a purpose), and includes a chapter on autumn berries and poisonous plants. It is an all-round book, which is sure of a hearty welcome, and made all the more useful by reason of its excellent and abundant illustrations.—From the same publishers we have received a couple of little handbooks from the pen of the indefatigable Mrs. de Salis on "Gardening à la Mode." One is devoted to "Fruits," and the other to "Vegetables." They are useful collections of practical hints, not only on the growing and production of garden stuffs, but also on their proper and appetising preparation for table.—The second volume of "Cassell's Gazetteer of Great Britain and Ireland" carries its alphabetical and illustrated notes from Cheddington to Frome, and will be found a useful companion to the newspaper and in the library. —Messrs. Longmans send us a most readable volume of essays by "Jack Easel," under the title of "Our Square and Circle: the Annals of a Little London House," in which, with a light touch and in a laughing, pleasant way, our author contrives to point not a few useful morals for the benefit of dwellers in other (and, may be, even smaller) London houses.

GARDENING IN SEPTEMBER.

THOSE fortunate enough to possess fruit trees burdened with a luscious crop should gather as soon as it comes to maturity. September is a lovely month—a month of ripening fruit and brilliant foliage. One need never spoil the picture by gathering the harvest too soon. Fruit picked before it is ripe shrivels, and, when gathering, remember that careless handling means bruises, which develop into decay. Store the crop in a cool, dry place, and go over the fruits frequently, first using those that show signs of rottenness. When the fruit parts readily from the tree is a sign that it is fit to gather.

Towards the end of the month frosts may be expected, and when they occur, lift tuberous begonias, dahlias, and cannas—everything, in fact, that one wants to keep and which will not stand frost. Store dahlias and cannas in a cool, dry cellar, and pot up what geraniums are required for the greenhouse. Take off as many cuttings as are wanted, and put them round the sides of 5-inch pots, placing them in the greenhouse. They will soon root, and can then be potted off separately.

The outdoor chrysanthemums are lovely now, and one wishes that such beautiful autumn flowers, so hardy and varied in colour, were grown in every garden. Mme. Desgranges and its sports are the