

The GATHERER

An Illustrated record of Invention Discovery & Science

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A Skeleton Field Glass.



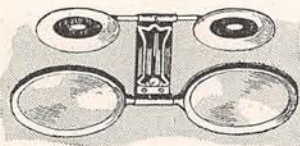
FIG. 1.

Our engraving shows a portable field and opera glass both in use and folded up for the pocket. It will be seen that the apparatus has no tube, and that the lenses are simply turned into a plane at right angles to the plane into which they are turned for carrying in the pocket. The ocular glasses

and the rest of the instrument are so constructed that the ordinary tubes would be superfluous, and the adjustment is easily made.

Magnetism and Eggs.

Dr. Bertram Windle has recently made experiments to see whether or not strong magnetism has any effect on the hatching of eggs. He took a powerful magnet and hatched the eggs between its poles—that is to say, in the “magnetic field,” where the stress of the luminiferous ether is greatest. The eggs of silkworms were apparently unaffected by the magnetism or “lines of magnetic force” penetrating them, but hen’s eggs thus treated were found to produce an unusual number of abnormal chicks. Dr. Windle has also submitted the eggs of trout to



A SKELETON FIELD GLASS.—
FIG. 2.

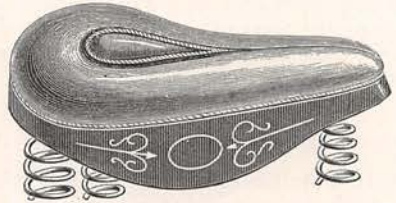
an electrical current traversing the water, and found it to arrest their development.

A Canning Steamer.

An American company have introduced a steamship fitted with all the appliances for canning and preserving tropical productions on board. She is designed to cruise about the West Indian islands and the “keys” of Florida to pick up fruits, turtle, Guava jelly, and other dainties, and preserve them on the spot; then deliver them at the Southern ports for transport by rail throughout the length and breadth of the United States.

The Air Saddle for Cycles.

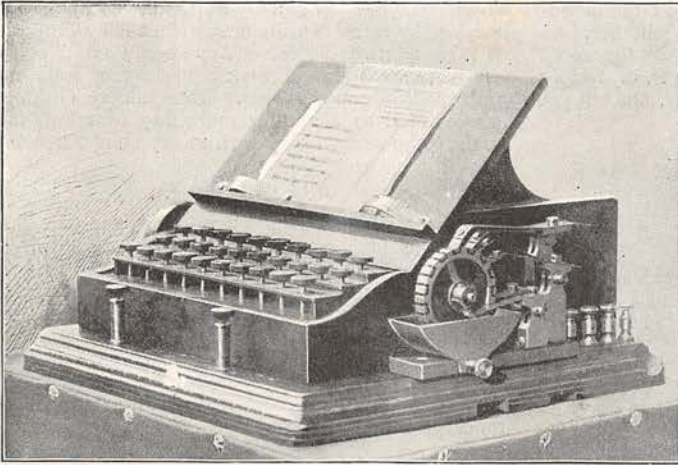
The pneumatic saddle for bicycles is virtually a compressed air cushion, and may be applied to



ordinary saddles, as shown in the figure. It gives a soft and springy seat, which is found an advantage, particularly on long and hilly journeys. The air bag can be inflated by the lungs; but if the rider is weak in the chest, a pump may be found desirable.

Air-tight Covers.

The “Limpet” is the name given to some new covers for domestic use which have recently been patented. Each cover consists of fine india-rubber stretched upon a circular metal frame. In use their action is very simple, for all that is necessary is to moisten the rim of the basin, glass, or cup which it is desirable to protect, and to slightly depress with the hand the rubber of the cover when putting it in position. On the withdrawal of the hand the rubber naturally returns to its original



A TELEGRAPHIC TYPEWRITER. FIG. 1.—THE TRANSMITTER.

position in the frame, and thus a partial vacuum is created, and the vessel hermetically sealed. As the cover may be easily removed by again depressing the rubber, the handy nature of this contrivance is apparent. Not only for general household use, in the preservation of various stores, liquid or solid, but for the sick room and the hospital, in keeping the air from medicines or lotions, the "Limpet" covers should prove a boon.

A Telegraphic Typewriter.

The Havas Agency, of Paris, have adopted the telegraph typewriter of Mr. Wright, an American inventor, for the distribution of news to their clients. Our engravings show this apparatus, which is too complicated to describe in full. We may point out, however, that the message or news is telegraphed in working the typewriter with three rows of keys, shown in Fig. 1, and printed in Roman type at the distant station on the receiver, shown in Fig. 2.

A New Microbe.

M. Physalix, a French bacteriologist, has succeeded in creating, or "breeding," a new variety of microbe by cultivation. It has been derived from the microbe of anthrax by the inoculation of guinea pigs, and the properties of the original bacillus as well as its shape have been altered in the process. "Bacillus anthracis claviformi" is the name given to it, and it has the appearance of a short rod. The experiment is a new departure in bacteriology, which may have important consequences in future. We may add that a cure for cancer by the inoculation of bacteria is reported from Paris, but it will be well to await further information as to its efficacy before descending to particulars. We may also mention here that Dr. Meade, of Bolton, has made some experiments with microbes, which go to prove that copper coins kill them; whereas coins of gold, silver, nickel, or other metals which resist chemical reagents, do not seem to harm them. The observation is valuable in connection with the spread of disease by means of money. Books from circulating

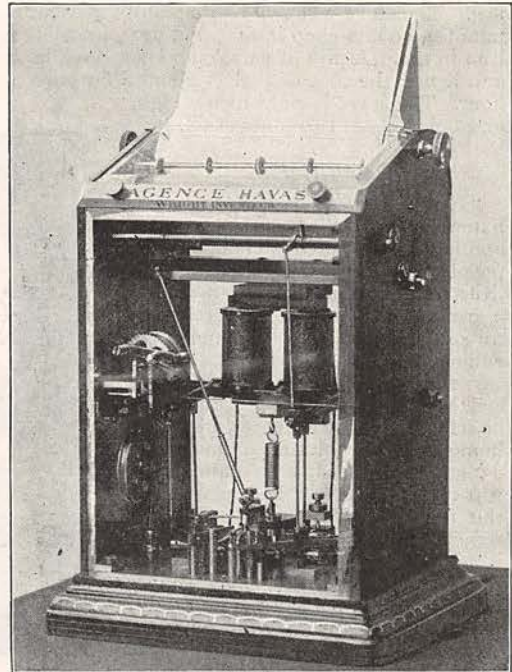
libraries have been so often blamed for this evil that it would be well if they were submitted to disinfection on their return to the library. Barbers of high standing now employ disinfectors for their brushes and razors; but it would appear from experiments lately made in France that soap itself is inimical to bacteria, and that infected linen is properly purified by washing with soap and water.

A Balloon Trip to the Pole.

The Academy of Sciences, Paris, are now considering a project of M. Andrée for attaining to the North Pole by means of a dirigible balloon. It is estimated that the balloon will require to raise and support over 6,000 pounds, including three travellers, provisions, and apparatus, and remain impermeable for some thirty days. The travellers intend to start from Spitzbergen in the summer of 1896, and expect to reach the Pole in a few days with a fair wind. After making their observations and taking photographs they would refill their balloon and return to civilisation.

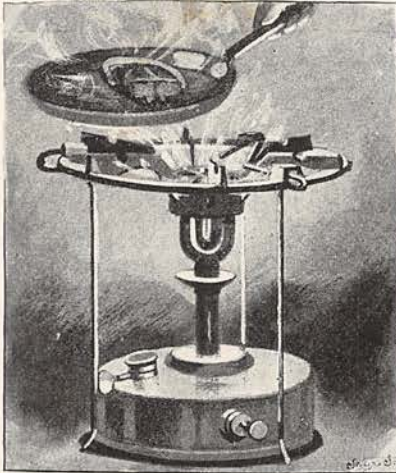
Musky Trout.

In the vicinity of Geneva there is a manufactory of musk by means of chemistry which stands on the banks of the Rhone, and the waste products are discharged into the river. As a consequence,



A TELEGRAPHIC TYPEWRITER. FIG. 2.—THE RECEIVER.

it is found that trout and other fish in the neighbourhood have a musky savour; but whether, like some other fishes, they are attracted by the scent of the musk and eat the waste products, or simply become impregnated with the perfume, has not yet been ascertained.



A WICKLESS OIL STOVE.

A Wickless Oil Stove.

The wickless oil stove which we illustrate is useful for boiling, grilling, and so on. It is claimed for the stove that it has no smell or smoke, and is quite safe, while being of neat appearance. The reservoir for the petroleum seen below is of polished brass, and therefore cleaner than the iron ones in use. The stove will boil two pints of water in four minutes, cook a chop in five, and heat a smoothing iron in ten. A pint of petroleum lasts three hours, and hence the cost of fuel is about a farthing per hour. The stove is eight inches high, and holds about two pints of oil.

House Nerves.

"House nerves" is an American name for a species of nervousness and low spirits which is common with people, more especially women, who live a sedentary indoor life, and brood a great deal. Such women are prone to self-analysis, and become very anxious about their affairs, not to say suspicious. They imagine that evil is likely to befall their husbands or children whilst these are from home; they conjure up imaginary dangers, and become so timid as to fear the ordinary weather outside and the usual incidents of travel. The remedy for this condition of health is, according to an American authority, not doctors or drugs, but simply exercise in the open air, and bright, pleasant company. Those who are suffering from such melancholia should take long walks in the sunshine with a friend or two, they

should banish each gloomy and anxious thought as it arises by force of will, or supplant it by thinking of their nearest duties. They should avoid being left alone, and should seek a variety of innocent and cheerful amusements. Imaginative children are inclined to a similar morbidity of mind, and ought to be sent to play with merry companions.

A Veiled Sheet.

A sheet which has a veil in its upper part just where the face of the sleeper comes will prove serviceable in the nursery or the sick room in cold weather, when it is advisable to cover the head; or in summer, when flies are troublesome. The veil not only admits fresh air, and thus prevents suffocation, but permits the nurse to observe the sleeper, if necessary. In cases of ophthalmia the veil can be made of green gauze, and if desirable it might be rendered antiseptic.

Novelties for the Home.

A new joint for cornice poles has lately been brought out, which will earn the gratitude of all householders. It has several advantages, not the least being that by its simplicity it reduces the cost of cornice poles for bay windows, and makes alterations possible to fit the poles for use in another house in the event of removal. When to these advantages is added the fact that the joint (of which the construction will be readily apparent from the illustration on p. 639) allows very free passage to the curtain rings, a strong case has been made out for calling general attention to a useful novelty.—The "People's" washing machine is the next home-invention which claims notice. The machine is intended for use with an ordinary washing-board, and consists of a pair of corrugated rollers of brass, which are mounted in a frame. The inventor claims that by the use of this machine, which has simply to be run up and down the board over the articles to be washed, thorough



A VEILED SHEET.

cleansing is speedily secured without damage to the clothes.—A disinfecting sanitary dustbin is a novelty of which many householders will be glad to hear. The cover of the bin is so contrived that



CORNICHE POLE JOINT.

it may be removed bodily by the dustman when taking away the refuse, but for general household purposes a small hinged lid in the centre of the cover is employed. Beneath this lid is a perforated box which contains a disinfectant, a small quantity of which is automatically scattered over the contents of the bin each time the lid is dropped.—Another new candle-holder has just been patented, and deserves a word of commendation. To the brass plate upon which the bottom of the candle stands is firmly attached a brass upright that carries a flexible spring grip. Without danger, then, the candle may be burned to the last particle, and waste and grease are alike avoided.—Still another invention appealing to housewives for acceptance is a newly patented screw fastener for broom-heads. It consists of a double screw—that is to say, of a head with a screw on each side of it. One screw is to be first fixed in the end of the broom-handle, and then the other may be driven home in the bottom of the socket in the broom-head, with the result that a secure and lasting joint may be made. Not the least advantage of this novelty is that it renders a change of handle to a new head the matter of a minute's work only.

“Century Science.”

A good many people who could not be induced to read a history of the progress made in any given science will be tempted by Messrs. Cassell's “Century Science Series,” the principle of which is to tell the life-story of some epoch-making discoverer, and show from that how the science which he advanced and widened has grown. The editor of the series is Sir Henry Roscoe, who himself writes upon “John Dalton, and the Rise of Modern Chemistry” for the first volume. The discovery of the Atomic Theory revolutionised chemical study, and made chemistry an exact science. Every tyro now knows and realises the importance and value of the system we owe to Dalton, but few have hitherto known the details of his interesting story. The name of Major James Rennell, which is associated with “The Rise of Modern English Geography” in the second volume of the series, from the pen of the President of the Royal Geographical Society, is not so widely known and honoured as it should be. He was a pioneer in a field where good work has since been done, but his labours richly deserve the meed of recognition which they here receive.

New Stories.

Those of our readers who remember Mrs. Neal's pleasant story, “Worthy to be Loved,” will be glad to hear that it has been published by Messrs. Hurst & Blackett in two volumes, under the title “Coming of Age.” It is a pity that the identity of the story should be thus hidden; but the tale is a good one, which many readers will be pleased to meet again in this separate form.—Miss E. H. Fowler is the author of a clever little story for children, which is published by Messrs. Longmans under the title of “The Young Pretenders,” with illustrations by Mr. P. Burnes Jones. The book ought to be a great favourite in nursery and play-room.

“Royal Academy Pictures.”

Anyone who is in want of a permanent record of the pictures in this year's exhibition of the Royal Academy must certainly see and get the supplement to the “Magazine of Art,” published by Messrs. Cassell. It does not profess to be a catalogue. Its aim is to give the best reproductions possible of the most striking and representative works shown at Burlington House. The result is a volume of more than present interest, which appeals to every lover of pictures.

“English Writers.”

A pathetic interest attaches to the eleventh volume of “English Writers” (Cassell), for it is the first in which another name is linked with the late Professor Morley's upon the title-page. Professor W. Hall Griffin has, indeed, had to take up the work at the point where his former teacher's pleasant task was cut short by death. The tenth volume of the work carried the story of English literature to Shakespeare's day, and in this present volume Professor Griffin has had to complete the study of Shakespeare and his contemporaries under James I. The bibliography which he has introduced is one which no student can fail to appreciate. And in the conclusion of the volume (two-thirds of which Professor Morley left finished) there is no apparent break in the thread of the story. Concisely, the later chapters are what—so far as can be judged—Henry Morley would have wished; and higher praise than that it is not possible to give them.

GARDENING IN JULY.

FLOWERS should be everywhere now—roses, carnations, pinks, and a host of lovely sweet-smelling things spreading their fragrance around and feasting the eye with varied colour. At this summer-time those who have neglected their gardens will see their folly, when at every step one takes the beds and borders in a good garden are covered with blossom.

As regards greenhouse plants, look over them twice a day at least to ascertain whether they are dry or no, as, in the smaller greenhouses especially, the soil soon gets quite powdery. Some things, once they have flagged to any extent, never recover, ferns in some cases refusing to be coaxed back into normal vigour. The greenhouse, if fully