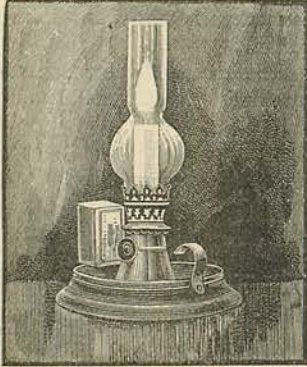


THE GATHERER :

AN ILLUSTRATED RECORD OF INVENTION, DISCOVERY, LITERATURE, AND SCIENCE.

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 Gas Candle.



Heavy petroleum oils are safer than light ones, but it has been found difficult to burn them, as they do not readily rise in the wick. The candle lamp shown is intended to overcome this drawback, and enable heavy oils (specific gravity, .855 to .870) with a flashing point of 100° Centigrade to be burnt.

The "candle" may, however, be used with any kind of petroleum oil. The bottom of the candlestick is a reservoir for the oil, which in burning forms the lower of the two flames indicated in the figure. A wire gauze cylinder is placed over this flame, and the products of imperfect combustion from the lower flame, mixed with air, are burnt above. In the arrangement, the whole of the space immediately below the flame is filled with oil, and the risk of explosion is thereby claimed to be eliminated. According to tests made, the petroleum gas candle gives a light of 1.66 standard candles with a contracted chimney, and 1.25 candles with a "globe" chimney; the consumption of petroleum being about half an ounce per hour.

The Sunflower and Malaria.

It is stated that since the sunflower has been cultivated on certain swamps of the Potomac, malarial fever has decreased. At the mouth of the Scheldt, in Holland, it is stated that similar results have been obtained. The sunflower emits large volumes of water in the form of vapour, and its aromatic odour, as well as the oxygen it exhales, may have to do with the sanitary influence in question.

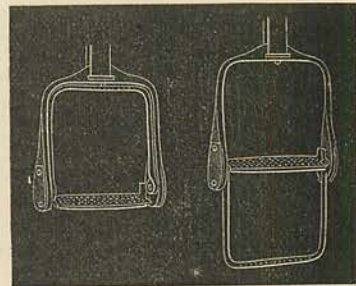
Photographing with Fire-flies.

Dr. John Vausant, of the St. Louis (United States) Marine Hospital, has made some interesting experiments on fire-flies' light as a means of photography. The experiments leading up to the use of fire-flies were made with phosphorescent substances such as the sulphides of calcium and strontium. Even such matter as white paper has, it seems, the power of storing up a little light, and Dr. Vausant shows that a latent image can be produced and developed in a bromide of silver plate by bringing it

into contact for an hour or so in darkness with an engraving or with ordinary print on white paper which has previously been exposed for some minutes to the direct rays of the sun. Dr. Vausant also took about a dozen newly-caught fire-flies (*Lampyrus corusca*) and put them into a phial having its mouth covered with a piece of bobinet, such as is used in ladies' veils. Flashes of greenish light were emitted by the flies every few seconds. Repairing to his dark closet with these flies, he placed the phial on one side while arranging and clamping a very sensitive gelatine bromide of silver dry-plate beneath an ordinary negative picture of a landscape on glass. He then occasionally slid the phial over the negative until fifty flashes had been given. The plate was then developed by alkaline solution of pyrogalol, and a positive image of the negative landscape was obtained. It was fixed in the usual way by sodium hyposulphite, and preserved as a curiosity of animal-light photography.

A Natural Barometer.

Nature provides a very simple barometer in the web of the spider. Before the advent of wind or rain the spider shortens the filaments from which its web is suspended, elongating them again only when there is a prospect of fine, calm weather—the duration of which can be estimated by the length of the threads. The spider alters the form of its web once every twenty-four hours, and it is said that if the change be made in the evening, just before sunset, the night will be clear and fine. Long inactivity of the spider is a sign of continuing rain; but if it is seen to be busy during rain, it is a sign that the wet weather will be of short duration, and that fine weather will follow.



A Mounting Stirrup.

Our engraving shows a new stirrup for mounting tall or restive horses. The special device consists of a lower step which is let down fully four inches below the ordinary tread, as shown on the right of the figure.

After mounting by the lower step the foot is changed into the tread, and the former rises automatically into its place, as shown on the left of the figure, by the mere pressure of the foot.

A New Remedy for Diabetes.

A new drug of apparently great value has recently been introduced into the market. It consists of powdered Jambúl seeds—the seeds of a plant (*Syzygium Jambolanum*, or *Eugenia Jambolana*) found in various parts of India, Ceylon, the Mauritius, and the United States of Columbia. It has been well tested by the medical faculty in England, Germany, and the United States, and is said to be a promising remedy in all cases of diabetes. The action of the drug is to prevent formation of sugar in the system, and so to stay waste; and cases are on record showing that under its influence the special restrictive diet—so obnoxious to diabetic patients—can be dispensed with.

A Simple Sprinkler.

The illustration shows the use of a simple hand-sprinkler for shedding a spray over flowers, carpets, clothes, or plants. By dipping it in water or other liquid, it fills; and the spray is then ejected from a hose by pressing the two handles together as shown. The spray can be sent in any direction desired by simply turning the hand round.

A Water Stopper.

A new device for stopping the inrush of water through the damaged side of a ship's hull has been brought out, and already supplied to several lines of steamers. It is an improved tarpaulin pad, resembling a window-blind, and when unfurled over a hole in the ship's side, and held in place by the shield provided with it, renders the inflow of water impossible. It was recently on view at Lloyd's, the Royal Exchange.

Photographic Opals.

The introduction of these novel "photographic opals" marks a distinct advance in the application of art as applied to Christmas and New Year souvenirs. The photographic opals are delicate reproductions of views and groups by photographic means on tablets of china. The effect is most beautiful, the tints of the pictures being rendered with the greatest possible delicacy on the fine surface of the "opal." Appropriate seasonable greetings are enclosed with the opals in the

form of cards. Messrs. Hildesheimer and Faulkner are the publishers of this most exquisite novelty in Christmas and New Year cards. Among the other cards issued by this firm, the autograph cards take special prominence by reason of their variety of shape and design; crescents of Christmas bells being, perhaps, the most striking and original. Crescents find their place among the other cards, too, along with circles, palettes, and ovals. There are some very beautiful folding cards designed by B. D. Sigmund, C. G. Noakes, and Ernest Wilson. One cleverly executed series of cards called the "Emmanuel Series," includes some very fine angel studies by Alice Havers, and in another little series of Eastern views we have some very rich colour effects from Jane M. Dealy. We must not omit to mention some striking monochrome studies of cattle by Mr. Williamson, which are among the best designs in a varied collection which our space will not allow us to further describe.



A SIMPLE SPRINKLER.

A Search-Waggon.

A search-waggon for use in time of war has recently been invented, and has been very successfully tested in Germany. In the waggon is an electric lamp of special construction, fed from accumulators, protected against the effects of jolting. It is said that with this light the country can be illumined for miles around, every trench, gun, or man being rendered distinctly visible.

Cheap Oxygen.

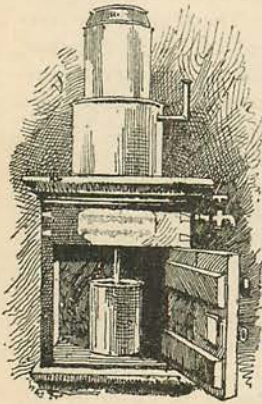
A London company now supply oxygen gas at the rate of three shillings per thousand cubic feet. The gas is used for lime-light and lantern purposes; and also for blow-pipe and other chemical operations, such as reviving the oxide of iron used to purify coal-gas.

Black Rain.

On April 30th of last year a shower of black rain fell at Castlecomer in Ireland, and on the same day a smaller shower fell at Newport in Monmouthshire. It fell at the latter place about 4 p.m., and was accompanied by partial darkness, making it necessary to light the lamps and candles. It left a black deposit where it fell. Newport is a town of 40,000 inhabitants, and contains various manufactories. A dark, heavy cloud lay over the town in the afternoon. It should also be mentioned that coal is worked in the Castlecomer district. The shower there happened a few

hours later than at Newport. Recent researches have shown that electricity condenses smoke in air, and there was thunder at Newport. It is possible therefore that the smoke condensed by electricity was brought down by the rainfall.

A Snow Gauge.



The rain and snow gauge which we illustrate is made of copper, and consists of a funnel or catch-pipe for the snow, which widens inwardly, then drops eighteen inches, allowing the rain or snow to fall into a pan or reservoir beneath. A casing which can be heated with hot water surrounds the gauge, and is used to melt the snow. By this arrangement the snow cannot escape; it melts and runs

into the basin beneath, where it is accurately gauged.

The Aerophore.

An apparatus termed the "aerophore" has been brought out in America for moistening the air of mills and factories, which, as is well known, becomes electrified by the friction of the machinery. In cloth mills the fabric is sometimes inconveniently electrified. Moistening the air prevents this annoyance. The apparatus consists of a piece of pipe about twenty inches in diameter, fitted with a circle of fine jets, which discharge the water against a series of studs, which break it into spray. Air is also drawn in, and, mingling with the spray, disperses it throughout the apartment. The apparatus, it is stated, can also be utilised for cooling or disinfecting large rooms.

A Steam Pile-Driver.

Our engraving shows a section of a steam pile-driver of very ingenious design. It consists of a movable cylinder which acts also as the "monkey" or hammer-head driving the pile; the piston-rod remaining stationary. The steam enters the cylinder by the piston-rod, which is hollow. The device is capable of making thirty strokes a minute, and driving from twenty to thirty-five piles in a day. The cylinder is kept in position by a guide-frame which also steadies the pile. The machine, which is the invention of M. de Wit, has been used successfully at Antwerp and Bremen.



Some Novel Christmas Cards.

The "Jubilee" has made its influence felt even in Christmas cards, and Messrs. Raphael Tuck and Sons send us a beautifully executed portrait group showing the four generations of our Royal Family. The An-

sidei Raphael, a reproduction of which was last year brought out in large panel form, is this season again reproduced, but in a smaller, and perhaps handier, size. Messrs. Tuck have produced a pretty novelty in their porcelain studies, monochrome pictures on porcelain grounds, executed like all their cards with the utmost care and finish. In the "Gem" series, issued by Messrs. Eyre and Spottiswoode, we have some pretty little engraved views very delicately rendered, and which lead us to hope that engraving will be more generally used in this branch of art than it has been heretofore. Punnets filled to overflowing with pretty flowers, shells which, opening, disclose delicate seascapes, palettes and ovals also, with tasteful sprays of flowers, all find their places in the cards issued by this firm, and are all alike beautifully produced. But perhaps their most popular cards will be their playful studies of birds, animals, and children.

Coppered Steel.

Sheet steel is now copper-plated on both sides by electro-deposition, and used as sheet copper. The sheet is decarbonised steel, and one of the copper sides is tinned. The new material is manufactured at Pittsburg, United States.

A Simple Gas-Lighter.

A simple electric gas-lighter has been brought out in America. It consists of an oval plate of vulcanised rubber, which is covered by a thin metallic plate of similar size. The latter can be withdrawn from the vulcanite suddenly by means of a small lever. The separation excites a charge of static electricity which passes in the form of a spark at the end of the handle used to turn the gas-cock, and in such a position as to ignite the gas. The device obviates the necessity for lucifers or tapers.

An Enamelled Wash-stand Screen.

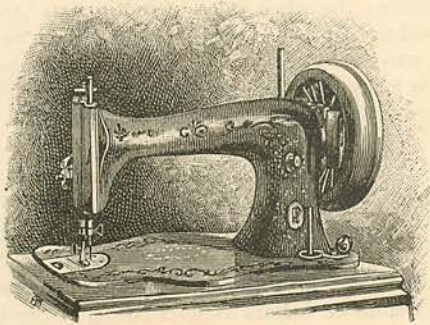
A means of preventing damage to walls or paper over or near sinks and wash-stands is shown in our figure, which represents the device applied to a wash-stand. It consists of an enamelled back, with nail-holes; a hook to hang a sponge on; a raised edge to guard the wall in cleaning; and a turned-up gutter to collect water-drops. The plate is ornamented with a floral or other design. A soap-box is also added to some of the screens.



Cheese in Paint.

It is known that the caustic lime which is not in a state of combination in cement, saponifies the oil

used in painting on the cement. Hence painting on it is practicable only when, under the influence of the air, carbonic acid has united with the caustic lime to form carbonate of lime. In the painting of the Berlin War Museum a composition of casein was used to neutralise the cement. It consisted of three parts of cheese and one of slaked "fat" lime, stirred together, the quantity of colour to be added being regulated by practice. Only earth colours or oxides of iron were used for light red to dark brown shades. For blue tints, ultramarine or cobalt blue were used; for black, animal black; and for white, oxide of zinc or sulphate of baryta. Inorganic colours such as aniline and Prussian blue were not used; nor blue ochre, vermilion, or white lead. The caseous lime should be prepared daily, and the brushes cleaned after the application of each coat of paint. This process enables the walls of a house to be painted as fast as the scaffolding is removed. Moreover, the caseous paint does not readily take fire.



A Motor Sewing-Machine.

A sewing-machine driven by an electric motor, with which it is combined, is illustrated herewith. No belting is used in the apparatus, and the motor is, as will be seen, completely housed inside the fly-wheel and connected directly with the shaft. The armature of the motor is of the Gramme type, and the commutator is fixed at the hub. The wires conveying the electric current to the motor pass up inside the frame; a switch being provided to start and stop the machine at will. The device is a compact and neat arrangement of a sewing-machine driven by the electric current.

Non-slipping Pulleys

Belts conveying power are very apt to slip on pulleys; but a new pulley has been devised to prevent this. The pulley is covered with perforated sheet-iron $\frac{1}{16}$ inch thick, which is riveted to the pulley. The tension on the belt causes it to slightly grip the holes, and thus slipping is avoided, while at the same time the pulley is strengthened.

A Giant Printing Press.

Probably the largest printing press ever built has been furnished for the New York *Telegram* newspaper. The press weighs fifty tons, and can print 75,000 copies of the *Telegram* in an hour, or 144,000 single

sheets in the same time. Three separate plates rest on its revolving cylinder, and either type or stereotype plates can be used. No less than 11,000 separate pieces enter into its construction.

Silencing Telegraph Wires.

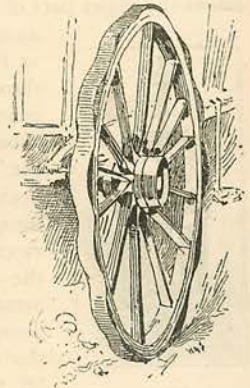
Telegraph and telephone wires on house-tops sometimes cause a disagreeable humming, and it may be useful to know that the noise can be easily and simply stopped by a short length of india-rubber tubing fitted on the wire at its attachment. The plan was suggested by Sergeant-Major Buck, R.E., and introduced on the southern postal telegraph district. According to Mr. John Shakspear, loose yarns may be used in place of the rubber tubing with success.

Tempering Springs by Electricity

It is well known that a current of electricity traversing a fine wire will heat it red-hot; and this fact has been applied by an American industrial company to the tempering of watch-springs. The springs are put in an oil bath, and the current from a dynamo-electric machine sent through them, until the colour of the steel determines the degree of heating reached. The process is rapid, and the springs have no time to oxidise; and at the same time they are uniformly heated.

A Corrugated Wheel.

The figure shows a new corrugated steel tyre for wheels, manufactured by a Yorkshire firm. The object of the invention is to avoid the wrenching of van, cart, or other wheels, when the vehicle crosses tramway-lines in streets. Such wheels do not slip far in crossing tram-lines; and, being made of steel, their durability is in proportion.



The Pyro-Magnetic Dynamo.

Mr. Edison, the well-known electrician, has devised a new dynamo-electric generator and also a new magnetic motor in which the use of an intermediate engine to drive it is dispensed with. In other words, the heat of the furnace directly drives both machines. This important advance is not yet in a perfect form, perhaps, but it is already sufficiently promising to merit some description. It is based on two well-known facts in electro-magnetic science. The first is that iron loses its magnetic property when heated to a dull red. The other is that when a magnetic field changes in intensity the change is accompanied by the generation of an electric current set up in any conductor placed in that field. Mr. Edison therefore applies the heat of the furnace to iron conductors placed in a magnetic field, and he applies it in such a way that the magnetic power of the iron is now destroyed, now restored, thereby changing the magnetism of the field

and setting up currents of electricity. In the motor a bundle of iron tubes mounted on an axle and free to rotate round it are heated by hot air sucked through them. This hot air is, however, cut off and let on alternately by means of a revolving screen. The iron tubes are placed between the poles of a powerful magnet, and when the heat is allowed to destroy the magnetism in one half of the bundle of tubes while leaving the other half magnetic, the bundle begins to rotate, and hence the motion is obtained. Thus by the direct application of heat a revolving motor is the result. In the dynamo coils of wire are used, and the intermittent heat, instead of producing motion in the magnetic field, sets up currents of electricity in the coils, which currents are collected by a commutator as in ordinary dynamos. It is stated that the current produced is about the same as when a separate engine is used between the furnace and dynamo to drive the latter; but, on the other hand, the waste heat can be utilised for other purposes. It is, however, too early to pronounce upon this point, as the subject is open to further investigation. Fig. 1 shows the upper part of the generator, which is placed as it stands on the top of a stove or furnace. The hot air ascends through the iron tubes, T, in the centre, which are covered with asbestos and wound outside with the wires of the armature. The upright bars and horizontal bobbins, M, outside, represent the electro-magnets which produce the magnetic field in which the armature coils are situated. Fig. 2 shows the armature coils C, with the rotating screen S, which cuts off the hot air below, while the commutator and brushes to collect the electricity generated in the coils C are seen above at B, B. Experiments have before now been made in this direction for converting heat direct into motion by means of magnetism; notably by M. Schwedoff and Professors Houston and Thomson, but these did not take a practical form; moreover the generator of Edison appears to be quite novel.

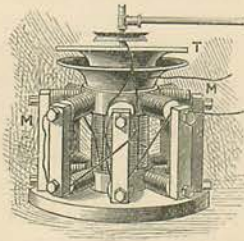


FIG. 1.



FIG. 2.

lect the electricity generated in the coils C are seen above at B, B. Experiments have before now been made in this direction for converting heat direct into motion by means of magnetism; notably by M. Schwedoff and Professors Houston and Thomson, but these did not take a practical form; moreover the generator of Edison appears to be quite novel.

A Sculptured Mountain.

The summit of Mount Roraima, in British Guiana, is a wild scene of natural sculpture. As described by Mr. Thurn, who ascended it for the first time, "The first impression was one of inability mentally to grasp such surroundings; the next, that one was entering on some strange country of nightmare, for which an appropriate and wildly fantastic landscape had been formed some dreadful and stormy day, when in their mid-career the broken and elastic clouds had

been stiffened in a single instant into stone. For all around were rocks and pinnacles of rocks of seemingly impossibly fantastic forms, standing in apparently impossibly fantastic ways; nay, placed one on or next to the other, in positions seeming to defy every law of gravity—rocks in groups, rocks standing singly, rocks in terraces, rocks as columns, rocks as walls, and rocks as pyramids; rocks ridiculous at every point with countless apparent caricatures of the faces and forms of men and animals; apparent caricatures of umbrellas, tortoises, churches, cannons, and of innumerable other most incongruous and unexpected objects. And between the rocks were level spaces, never of great extent, and of pure yellow sand, with streamlets and little water-falls, and pools and shallow lakelets of pure water; and in some places there were little marshes filled with low, scanty, and bristling vegetation. And here and there, alike on level space and jutting from some crevice in the rock, were small shrubs, in form like miniature trees—all apparently of one species. Not a tree was there; no animal life was visible; the whole face of nature was intensely quiet and undisturbed. Look where one would, on every side it was the same; and climb what high rock one liked, in every direction, as far as the eye could see, was this same wildly extraordinary scenery."

The Telephone and Fever.

The speaking telephone has been successfully used in ministering to fever patients without running the risk of infection. A telephone is fixed at the bed of the patient and within reach, so that the patient can talk to friends or visitors in other rooms of the house, or listen to a book read there. The arrangement is found to cheer the tedium of the lonely sick-bed.



A New Saucepan.

Liquids in pots and pans boiling over sometimes crack hot plates and bars of gas stoves. To remedy this, the device illustrated in connection with a saucepan has been introduced. It consists of a channel and spout, which surrounds the pan as shown, and catching the over-boil, pours it into a can attached.

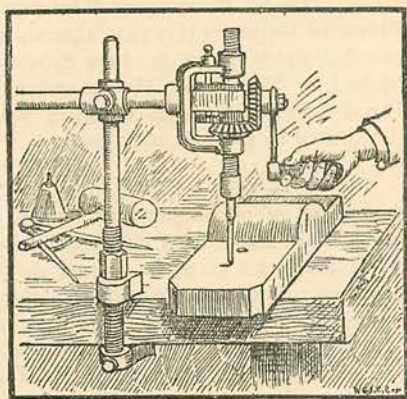
A New Phonograph.

According to advices from America, Mr. Edison has again turned his attention to his neglected invention, the phonograph, and has succeeded in making a useful and commercial article of it. Several sizes will

shortly be in the market. It is intended to enable business men to dictate phonograms or letters which can be enclosed and sent by post, and then put into another instrument and the original sounds reproduced. It is also intended as a musical instrument; phonogram copies of music, as played or sung, being purchasable, and reproduced in the phonograph. It will be interesting to learn how he has perfected the appliance to this extent; but at present no details are to hand.

A Portable Drill.

A new hand-drill, likely to prove very serviceable, has been brought out by a Manchester firm. It is intended to replace the old ratchet brace, and is specially adapted for drilling by hand in places where the work cannot be done by an ordinary drilling machine;



but it also serves for the latter when mounted on a bench as shown. The feed motion is self-acting and the handle can be placed in three different positions for working, a convenience which makes it applicable for drilling in difficult positions. The machine, as will be seen from our figure, is very neat, and it will drill holes at almost any angle.

Some Hints worth Noting.

Savouries and Entrées are important items in a good cook's programme, and we are glad to welcome two handy little books of recipes—"Savouries à la Mode" and "Entrées à la Mode," by Mrs. de Salis—published by Messrs. Longman. We hope their hints will be largely acted upon. The name of Georg Ebers is familiar to all who have studied Egyptian history or archaeology. An historical novel of his, "An Egyptian Princess," is now translated by Emma S. Buchheim (Bell and Sons), and gives an interesting picture of old-world life. Another translation from the same publishers is Mr. Storr's rendering of Heine's "Travel Pictures" and "The Romantic School." It is good to see these works in a reliable English form, and we trust they will be widely read. Miss Adelaide Procter's verses need no recommendation now to secure them a reading, but we are glad to see a cheap edition of her "Legends and Lyrics" (Bell) at a price which brings the work within the reach of all.

Men of Letters.

"Milton," says the late Rector of Lincoln, "must be added to the long roll of our poets who have been natives of the city which now never sees sunlight or blue sky, along with Chaucer, Spenser, Herrick, Cowley, Shirley, Ben Jonson, Pope, Gray, Keats." The work in which Mr. Pattison gives us this information is one of Mr. John Morley's series of "English Men of Letters," that Messrs. Macmillan are reissuing in monthly volumes at popular prices. Eleven of the series are before us, and more readable or interesting books in their way we do not know. The choice of the biographers is sometimes particularly happy, notably in Milton's case, where, as we pointed out above, the late Mark Pattison was the writer; Hume is dealt with by Professor Huxley, while Spenser and Johnson fall most fittingly to Dean Church and Mr. Leslie Stephen respectively.

Under British Protection.

Every newspaper-reader in Australasia knows "the Vagabond," under which name Mr. Julian Thomas has told them of his strange wanderings among the islands of the Western Pacific. Now he comes directly before the public of the mother-country with the story of his adventures among "Cannibals and Convicts," published in London by Messrs. Cassell. His book has a deeper object, too, than mere amusement of its readers. Mr. Thomas is pleading, and that right eloquently, for British protection to his native friends in the far-off isles.

An Unfinished History.

Our regret is unfeigned at seeing that Mr. Rowbotham's third volume of the "History of Music" (Trübner) is to be his last. It carries us down to the days of the Troubadours pleasantly enough, and there leaves us stranded. Mr. Rowbotham has done his work so well, that we trust he will reconsider his determination and give us at least one more volume, to include the Elizabethan galaxy, and perhaps to conclude with the brightest star of all in the following century—Henry Purcell.

Christmas Books.

It was a happy idea that led Messrs. Hildesheimer and Faulkner to issue Goldsmith's "Deserted Village" as one of their Christmas gift-books, with figure illustrations by Charles Gregory, R.W.S., and vignettes of flowers and landscapes by Ernest Wilson and Frederick Hines. This work is a striking example of the progress which colour-printing has made of late years. Equally artistic, but on a smaller scale and correspondingly cheaper in price, is Messrs. Cassell's pretty edition of the same poem. What would the children of the last generation not have given for the children's books prepared for their successors, the little ones of to-day? Among the works issued by Messrs. Hildesheimer are some of the very choicest of such books. "Cape Town Dicky," by Theo. Gift, is illustrated by our old friend Alice Havers, whose drawings are well known to our

readers: "Rhymes and Roses" is a volume of Mr. Frederic E. Weatherly's charming verses illustrated by St. Clair Simmons, and Mr. Weatherly is also the author of "The Star of Bethlehem," another seasonable volume, illustrated most appropriately by M. Ellen Edwards and J. C. Staples. All these works are marvellous specimens of the art of colour-printing, and more beautiful and seasonable souvenirs could not well be imagined. A series of tasteful little booklets is also issued by Messrs. Hildesheimer and Faulkner, and in excellence of production these tiny works are quite equal to their more ambitious companions.

A Few of Nature's Secrets.

We cannot all be botanists, zoologists, or geologists, but there are phases of animal life, and features of the world around us, that we are all of us deeply interested in, and which we would gladly study and understand. And now, in "Short Studies from Nature," recently published by Messrs. Cassell, we have a guide, at once popular, thorough, and accurate. One need only name two or three of the subjects to excite interest in the book. "Flame" is explained by Professor Eaton Lowe, "Birds of Passage" by our old friend and contributor, Dr. Robert Brown, and "Caves" by Mr. James Dallas.

Some New Stories.

"Only a Nursery Story," Mrs. Molesworth calls her "Little Miss Peggy" (Macmillan), but the story is one which will delight many who have left the nursery, and especially those who have nurseries of their own. Miss Peggy is a charming little mortal, whose truly childlike sayings and doings are chronicled most delightfully. Miss Yonge's "A Modern Telemachus" (same publishers) is another of those interesting stories in which the authoress has led us to look for blended history and fiction. The story is laid in the early part of last century, and the adventures of the Comte de Bourke's family among the Algerine pirates, by whom they are captured, are well told. Messrs. Macmillan also send us single-volume editions of Mrs. Oliphant's "A Country Gentleman and his Family," of Mr. Thomas Hardy's "The Woodlanders," and of "The Cæruleans," by H. S. Cunningham.

A Simple Planisphere.

A handy planisphere has been brought out by Messrs. G. Philip and Son, which should be very useful to tyros in astronomy. Simple in construction, its working is very easily learned, and the new instrument is well calculated to teach the position of the principal planets. A similar planisphere for the use of colonial friends in the southern hemisphere is also made. Elementary "Modern Gymnastic Exercises" is the title of a handbook of exercises for the use of members of the National Physical Recreation Society, also published by Messrs. Philip. The exercises are accompanied by music, the playing of which secures regular and rhythmical motion on the part of the young gymnasts.

The "National Library."

Among recent additions to the "National Library" we are glad to welcome Edmund Burke's famous "Essay on the Sublime and Beautiful," a work that is far less read nowadays than it deserves to be, if only for the beauty of its language. Keats's "Endymion," and Dr. Johnson's translation of Father Lobo's sixteenth-century "Voyage to Abyssinia," are also now to be had in this popular form. A new edition of the "Leopold Shakespeare" (Cassell) has recently been issued at a price which makes the possession of a complete illustrated Shakespeare possible to every one. Mr. Furnivall's scholarly "Introduction" to this edition is most comprehensive in its treatment of the bard's life and works.

The Crown Prince.

There has been so much special interest in the Crown Prince of Germany this year, that we are glad to welcome the joint biographies of the Prince and his wife, published by Mr. Fisher Unwin under the title "Two Royal Lives." It is an excellent work, admirably illustrated by photographic portraits.

"Living Lights."

The phenomena of phosphorescent bodies, animal and vegetable, have lately been carefully analysed by Mr. C. F. Holder, who gives, in thoroughly popular language, a most interesting account of these self-luminous animals and plants, in a volume, entitled "Living Lights," published by Messrs. Sampson Low and Co. The same publishers send us Mr. Frank R. Stockton's very clever story, "The Hundredth Man." In "Days and Hours in a Garden" (Elliot Stock) we have a reprint of a book which made a decided success a few years ago. Mr. T. C. Junior's "Lucy Carter," issued by the same publisher, is a striking story, though we cannot approve of all the incidents of the tale. The style is good and bright, and we trust we shall hear more of the author. The Clarendon Press edition of Johnson's "Rasselas," with introduction and notes by Dr. G. Birkbeck Hill, is no doubt intended for the use of students, for whom it seems to us admirably adapted. But the form of this edition is so pleasant and convenient that we commend it to the general reader.

Fifty Years in the Post Office.

'Mid all the stir of Her Majesty's Jubilee, how many of us remembered that in no department of life have we made greater advance during the last half-century than in postal communication? Cheap postage is now so essentially a matter of course to us all, that we can hardly realise that it is only fifty years since Sir Rowland Hill issued his famous pamphlet calling attention to the need for "Post Office Reform." How urgent that need was, we may see from the instructive pamphlet before us on "The Post Office of Fifty Years Ago" (Cassell), which, in addition to many curious and interesting facts as to the correspondence of our grandfathers, reprints Sir Rowland's appeal. All profits from the sale of this most interesting work are to go to the Rowland Hill Benevolent (Post Office) Fund.