

you how glad one of your humbler readers is that all your strength is found on the side that fights for right and truth in a world of wrong. And if I have dared here and there to set coils about you—why, doubtless, Samson has the strength to break these green bands of mine.

I am, sir, yours sincerely,
OTTWELL BINNS.

Alexandra Park, Scarborough.

The next Competition

LAST month we announced that we would give three similar prizes (of £5, £3 and £2) for the three best letters, not exceeding 1500 words in length, addressed to Mr. Rudyard Kipling. The winning letters will be published in our April number. We now announce three similar prizes, under the same conditions, for the three best letters addressed to

MR. J. M. BARRIE.

They must not exceed 1500 words in length; must be received at the office of GOOD WORDS not later than March 25, and will be published in our May number.

The Soldier's Pocket Filter

KNOWING that men on active service will, regardless of consequences, throw themselves down by the first water pool they come to, the War Office has been at pains to procure a filter capable of being carried in the pocket, and used with absolute safety, without necessitating the boiling of the water before use. The ordinary big filter was not enough to protect our soldiers from the consequences of their own impatient thirst, and it was no use trying to compel soldiers to go to big filters whenever they wanted a drink.

Our snapshot shows the new "Atkins" filter in use, and this excellent invention enables the thirsty owner to drink when and where he pleases, no matter how dangerously unclean the brook, water-hole, river, or pond may be, nor need he fear the least ill effect after he has drunk provided he uses this valuable little filter.

The filter was used in the Egyptian and Transvaal wars, the various Soudan and

South African expeditions, the Abyssinian Ashanti, and Benin campaigns, &c.

That the Government looks after the health of our soldiers will be seen from the fact that they recently ordered 10,000 of



The soldier's pocket-filter

these useful little filters, which, by the way, only weigh about eight ounces, and are of the highest value in dealing with what Mr. Bennet Burleigh calls "khaki water."

The soldier's pocket filter consists of a solid porous block of pure charcoal, three inches in diameter by about one and a half inches thick. Into this block a white metal nipple is fitted, and on this nipple a canvas-lined india-rubber tube, provided with a white metal mouthpiece, is made fast. The tubes are made according to the War Office specification, and their canvas lining enables them to stand hot climates far better than ordinary rubber.

W. G. F.

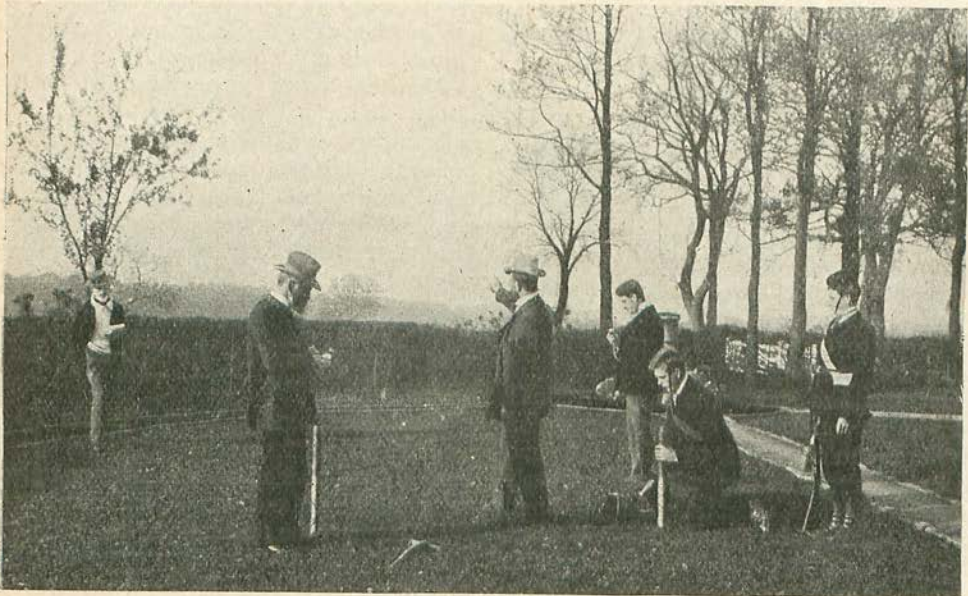
The Newest Thing in Wireless Telephony

MR. MARCONI, although he has done wonders in wireless telegraphy, has never been able to transmit speech from one place to another without employing connecting wires between the transmitting and receiving stations. Mr. Axil Orling, a young Swedish electrician and Mr. T. T. Armstrong of London, have, however, succeeded in telephoning across space without wires.



Wireless Telephony at Hughenden. The Inventors and their assistants

A patent for this method which is known as the "Armorl system" was taken out before that of Marconi, but the inventors refrained from making it public until they could develop up to a point when it would be available for practical use. The inventors now claim that this point has been reached. They have been giving a series of exhibitions of their system of wireless telephony, wireless telegraphy and wireless torpedoes before representatives of various governments, scientific men and experts, who have expressed their astonishment at the results achieved, and have prophesied for the Armorl invention a useful and profitable future. Messrs. Orling and Armstrong use earth or water as the "conductor" for their system and transmit messages and signals through land or through sea. The whole apparatus is contained in a very small compass, and all that is necessary is to connect it up to two side stakes which are



Sending a wireless message through the earth to a distant station

driven into the ground a few feet apart. A similar arrangement having been fitted up at the other end signals can be sent backwards and forwards from one station to the other, and audible speech can be exchanged

£2. The key to the new invention lies in the receiver, which has been devised by Messrs. Orling and Armstrong, the details of which are of too technical a nature for description here. The new system of wire-



Receiving a wireless message sent through the earth from a distance by means of a telephone

over a distance as great as twenty miles. The inventors claim that their apparatus is simple and portable, infallible under the most adverse conditions, cheap and easy to manipulate. The currents employed are of very low potential, a current of eight volts being more than sufficient to transmit a message a distance of twenty miles, while the feat has actually been accomplished by a current of four volts only.

The Marconi apparatus is costly, bulky, unwieldy, and a high mast has to be used for long distance work or the signals can be read and intercepted by those for whom they are not intended. The *Armorl* system is simple in the extreme. There are no induction coils, coherers or high masts and the whole apparatus can be compressed within the compass of a box 7 inches by 4 inches by 8 inches, weighs 5 or 6 pounds, the cost of which is under

less telephony promises to be of great value for communication between ship and ship, and between ship and shore for military and naval signalling, and for sending messages in districts remote from civilisation.

H. H.

Perfumes, Fragrant Herbs and Spices in the Early Modern Period

It may well be doubted if we use scent now more than they did at the end of the mediæval period, for the successive plagues in the last quarter of the fifteenth century, and especially during the sixteenth century when the "Sweating Sickness" added a new terror to life, led to their general use. We certainly do not carry them about our persons to the same extent. The first Tudor entered a plague-stricken London after Bosworth Field (it was the first appearance of the "Sweat"); and several times in Henry

that follows, portions of "M'Andrews' Hymn" and "The Mary Gloster" being especially offensive. "Mary, Pity Women" furnishes a disgusting glimpse of Realism stripped of the glamour and refinement peculiar to the Orient. Had you consulted Tennyson, who is always careful to walk inside the fence whenever he ventures near a precipice, had you consulted him previously to penning it, you might have copied his exquisite treatment of a similar situation to be found in the little poem entitled "Forlorn," and so have escaped an ugly fall. The marriage of East and West is an event most notable in the history of this planet, and well worthy of being celebrated with pomp and circumstance; but if the offspring are going to reproduce the failings of both their parents, instead of displaying the more excellent qualities of each, of what avail will be the splendid ritual and the solemn feast? You remember what a flutter of foreboding ran up and down this island recently when a case or two of suspected plague was reported at a northern seaport town. Yet a visitation of cholera, or even the Black Death, would be a small matter by the side of a possible contamination of ideal resulting from touch and intercourse with communities not so high in the scale of ethical development.

Heavy, therefore, is the responsibility resting upon you and your fellow workers in the field of literature. At a time when the whole earth seems likely to be consecrated to the service of the God of Things as they are, it is imperative that the claims of the Invisible should be lucidly and powerfully stated. To decide in final fashion whether you are a poet or a rhymester, a seer or a picker-up of odd scraps, does not come within the province of a contemporary. But according as the thoughts you utter are addressed to the higher or to the lower nature in man will be the ultimate verdict of posterity. Is it too fantastic a hope that the writer of the "Recessional" may one day be conspicuous as a worshipper in the temple dedicated to the God of Things as they Ought to Be?

I have the honour to be, Sir,

Yours obediently,

India Audit Office, Whitehall. E. S. EVANS.

Costly Cameras

A FEW weeks ago it was stated that the Indian Government Survey Office at Calcutta had received a camera that has been on order some time, that with its stand measures 10 feet by 5 feet by 6 feet, and weighs over a ton. To lift the dark slide into position, we further learn, is the work of two men, from which it can be gathered that it would be hardly appropriate to call this monster snapshot-taker a hand-camera. Judging from its weight the Indian camera should be the largest in the world, for it eclipses by 840 lbs. avoirdupois the gross weight of the previous largest photographic machine, together with its giant plate—that alone weighed 500 lbs.—that was built to the order of the Chicago and Alton Railway, in order that a faultless photograph at least eight feet long should be taken of a certain train, the most beautiful in the world if report speaks true, running on their system.

When fully extended the camera, which takes a plate measuring 8 feet by $4\frac{1}{2}$ feet, which cost £5 16s. 8d. alone, measures 20 feet in length, and weighs 900 lbs., and its proportions are such, that with a ruby glass cap placed over the lens the photographer can get inside, have the plate-holder and its contents put into position, and the shutter being drawn, dust the exposed plate to his heart's content.

Plates at £70 a dozen recall the fact that so long ago as 1898 there was constructed for use in a cinematograph apparatus a photographic film $9\frac{1}{2}$ miles long, that cost about £200 a mile, a price that the layman in matters photographic would naturally associate with the plates of cameras such as the one built last summer for the Sultan of Morocco, rather than for a prosaic machine designed for business purposes. These cameras built for the exalted snapshot cost £2100 and £900 respectively, from which fact it will be readily gauged that they were somewhat out of the ordinary. As a matter of fact, in the first-mentioned instrument gold, and in the latter silver, was used wherever it was possible, and every piece of metal, down to each of the 200 tiny screws, was duly hall-marked. When

such small items of the ordinary man's apparatus as the plate-holders are made of gold or silver, and the shutter is either of chased drilled gold or of the white metal, photography, instead of being the hobby of the million becomes the sport of the millionaire, who alone can afford to indulge in a quarter-plate camera weighing almost a stone, that contains not less than 150 ounces of the purest gold. If the contemplation of a 2000-guinea camera, having a dozen gold plate sheaths, valued at £120, and a lens mounted in eighteen carat gold that cost £100 alone, instead of inducing the reader to "look pleasant," is found by the owner of a five-shilling pocket apparatus to be conducive to feelings of envy, it will be a matter of some satisfaction for him to know that the commercial camera upon which the Sultan's was based, possesses all the essential movements contained in the costly freak of the African potentate, which freak has entailed an outlay that could easily have been invested so as to bring in a safe £80 a year, or a film of £5 Bank of England notes that could not be covered by forty-seven quarter-plates.

The Plymouth Aquarium

CLOSE to the citadel, and a hundred feet or so above the blue waters of Plymouth Sound, is a conspicuous white building, which local connoisseurs vaguely indicate to those of an inquiring turn as the Aquarium, and, indeed, for the average visitor it holds little of interest beyond the well-stocked, dimly lighted tanks, which, arranged on somewhat more scientific lines than those at Brighton, most nearly recall the institution at Naples, of which I some time ago gave an illustrated account in *GOOD WORDS*.* Here, on the hottest August days, when not a breeze stirs even the dust on the Hoe, is cool and shady retreat among great congers sulking in their drain-pipes, silvery bass frisking amid the rockwork, and stirring the angler to thoughts of great deeds from the pier beneath, mullet red and grey, pipe-fish, hermit-crabs, swimming-crabs, and crabs reduced to the semblance of skeletons by some gruesome octopus that sucks from their shell the last

fragment of nourishment. Five minutes earlier the luckless crab had alighted close to the gleaming eye; there was a whirl of arms, a confusion, and a quick movement and the crab's shell was without a tenant.

In another tank are the red and grey mullet, and their sharing of one dwelling in this fashion pleasantly emphasises the popular savour of this annexe of the more sternly serious rooms upstairs. For two fish of more different habits and affinities could scarcely have been chosen to bear each other company, and I have often wondered at the similarity between their popular names. In yet another watery compartment are some promising little turbot, almost arrived at table size, and all reared by Mr. Allen, the director, from tiny creatures scarce distinguishable in the sunlight from five shilling pieces. Mr. Allen, with whom I had a most interesting chat on the possibilities of fish-hatching as a means, not so much of re-stocking our seas as of maintaining a supply for the markets, is somewhat of an enthusiast on the subject, and he certainly, in showing me over the upstairs laboratories, gave more than one justification for the expected aid that science may yet give an industry with none too bright a future.

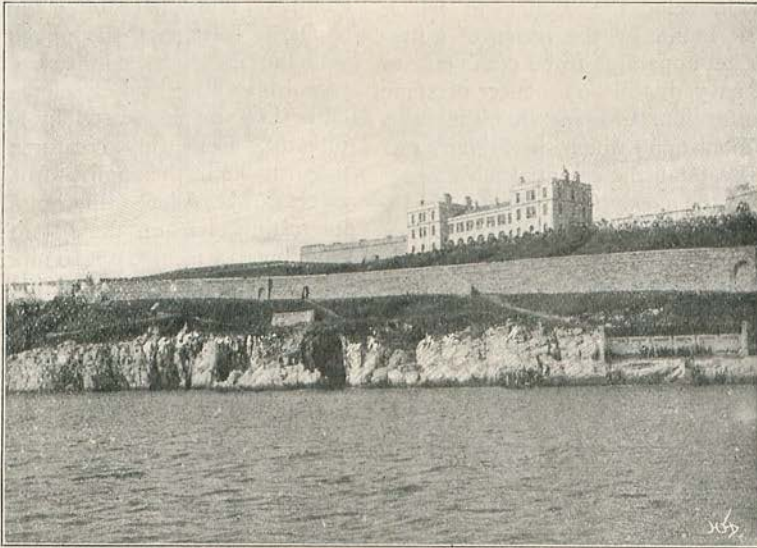
Shallower tanks in the aquarium itself contain young fish in various stages, all kept vigorous by the constant trickle of pure water, such pure water that the Sound, blue enough and clear enough to the unsophisticated eye, cannot supply it, but it must needs be brought in specially constructed vessels from the deeper grounds beyond the breakwater. This possibility of recuperating by artificial means the enormous drains on the harvest of the sea, carrying, in fact, the practices of agriculture to the deep waters, has exercised many minds at home, on the Continent, and in America. Perhaps it is in respect of economic marine animals that are not fishes, such as the oyster and lobster, that the most encouraging successes have hitherto been achieved; but the St. Andrews Laboratory and the Fishery Board for Scotland have also carried out valuable experiments, and a less known marine laboratory, at Peel, has contrived to turn down in the

* November 1898.

shallow waters of Morecambe Bay in a single season no fewer than fourteen millions of fry of plaice, cod, haddock and flounder. It remains, of course, to determine satisfactorily what approximate proportion of this really enormous output ever reaches the stage of being able to struggle against the thousand odds of life in the great waters, and thus materially improve the conditions of the fishing-grounds.

But the officers of the Marine Biological Association are meanwhile plodding away at

most deceptive, science hopes to substitute fixed principles; and to this end not only the migratory fish themselves, the mackerel and pilchard and whiting, are carefully studied, but also the minute creatures, copepods largely, and even vegetable weed spores, on which they subsist, and which greatly influence their movements. Moreover, the surface-drift in the Channel is not without its bearing on the movements of both fish and fish food, and this also has lately been the subject of close and careful



(Photo by E. H. Micklewood)

The Marine Biological Association Laboratory, Plymouth

the beginnings of knowledge that bears on problems which many will think less chimerical in their issue than that of re-stocking. There, in the working rooms, and also aboard the Association's vessel, they study many of the difficulties in the way of a better understanding of those mysterious fish migrations that have so long—for centuries, in fact—puzzled the fishermen and rendered nugatory their best efforts. For empirical guesswork, for rule of thumb that depends for its knowledge of the whereabouts of shoals, on the movements of gulls, gannets and cormorants, often (as those can realise who have followed such signs in the pursuit of fish for sport)

investigation. It is not, of course, possible that all the matters under notice should have so directly practical a bearing, particularly as private students, paying for the privilege, occupy more than one of the laboratory tables; thus, while one man is hard at work on data touching the spring migrations of mackerel, and another is busy with the artificial rearing of larval fishes, a third may have his eye glued to the microscope in a minute examination of the sexual characters in some marine animal of which the man in the street has never even heard the name.

The relaxation of such indoor work comes



(Photo by E. H. Micklewood)

The Dredge aboard

aboard the little steamer, when the otter-trawl is sent to the bottom for such treasures, mainly flat fish and crustaceans, as it may perchance bring to the surface for the eye of science, or, more important still, the tow-net scours various depths, mostly near the surface, for specimens of the floating food, the "plankton," on the careful analysis of which depends the solution of so many of the problems that continue, though in diminishing force, to confront the marine biologist.

In both its structure and manipulation this plankton-net is a delicate piece of work, and the pattern in use at Plymouth gives, I understand, results as satisfactory as any employed elsewhere. I noticed a very elaborate plankton-net in the Prince of Monaco's elegant little pavilion at the Paris Exhibition, but it is said—though I cannot vouch for the truth of this—that that enthusiastic inquisitor of the ocean's secrets is by no means satisfied with its working.

It is impossible, in a short paper like the present, to give any adequate idea of the scope of work undertaken by the Association since its inception seven years ago. That might be better acquired from a glance at its published literature, which embraces both

economic and biological works, the former ranging over the food, development and migrations of the chief food fishes; while under the second head may be found morphological contributions, for the most part on the lowest invertebrate forms. A useful summary of these books and papers was published in a recent number of the Association's Journal.

F. G. AFLALO.

The Biddenham Cake

WHEN service is over on the afternoon of Easter Sunday a pleasant custom is annually observed in the little village of Biddenham in Kent when a distribution of bread, cheese, and biscuits, termed the Biddenham cake, is made at a place locally known as the "Old Workhouse." The origin of the distribution dates back to the middle of the twelfth century, and is some-



(Photo by E. H. Micklewood)

Surface Spoils

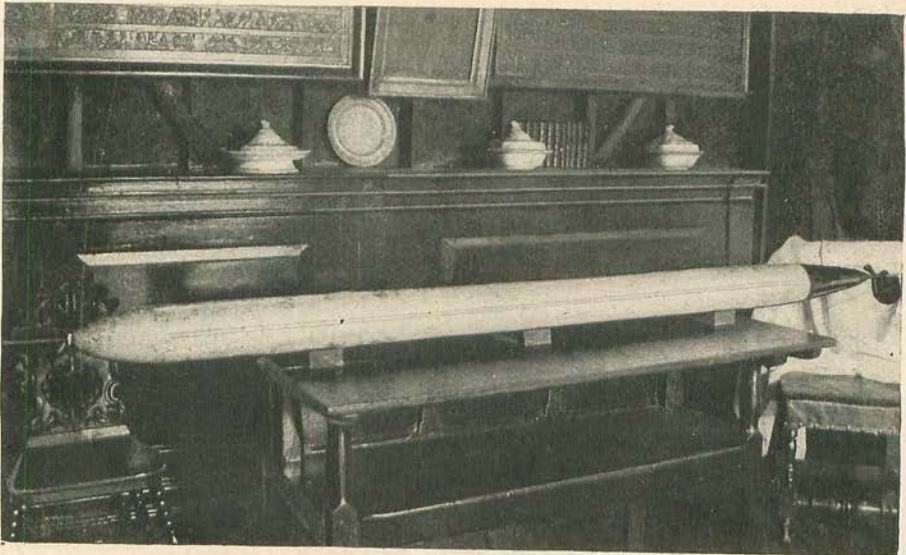
Steering Torpedoes by Wireless Telegraphy

ONE of the first things that Lord Charles Beresford did after his return a few weeks back from the Mediterranean was to journey down to Hughenden and witness some trials of a new torpedo, whose movements can be controlled from the shore or from a ship by means of wireless telegraphy. Our photographs show the torpedo, inside of which is the "receiver" and the steering mechanism, and also the shed containing the instruments for controlling the movements of the torpedo in a lateral direction. The ordinary Whitehead Torpedo when once it has been discharged out of its tube is beyond the control of the operator. With the new Orling-Armstrong Wireless Torpedo the weapon can be directed by means of wireless impulses so that it can be steered up to the vessel which it is desired to hit. The Admiralty are taking great interest in the invention, and official trials will, we believe, shortly take place. The mechanism of the torpedo is at

that the British Museum Authors' Catalogue had, after twenty years indefatigable exertion, and the expenditure of over £40,000, been finished, but notwithstanding its magnitude, it is doubtful, however, whether the whole six hundred quarto volumes comprising the catalogue between them contain as much humour as a little twopenny pamphlet published by a small lending-library at North Woolwich recently.

One of the items that occasioned the greatest mirth, and the member for Battersea did not appreciate the joke the least, read "The Poetical Works of John Burns," which were doubtless commented on in "Lockhart's Life of John Burns," a volume the same library stated was in its possession.

With regard to some other items in this catalogue a prize competition might easily be arranged for their elucidation: thus the following works by Thackeray were stated to be on the library shelves, "Fanity Fair," "The Rose and the King," and "The



The Orling-Armstrong Wireless Torpedo. The steering mechanism is inside the torpedo

present a secret, and we cannot therefore disclose it.

H. H.

Catalogue Humours

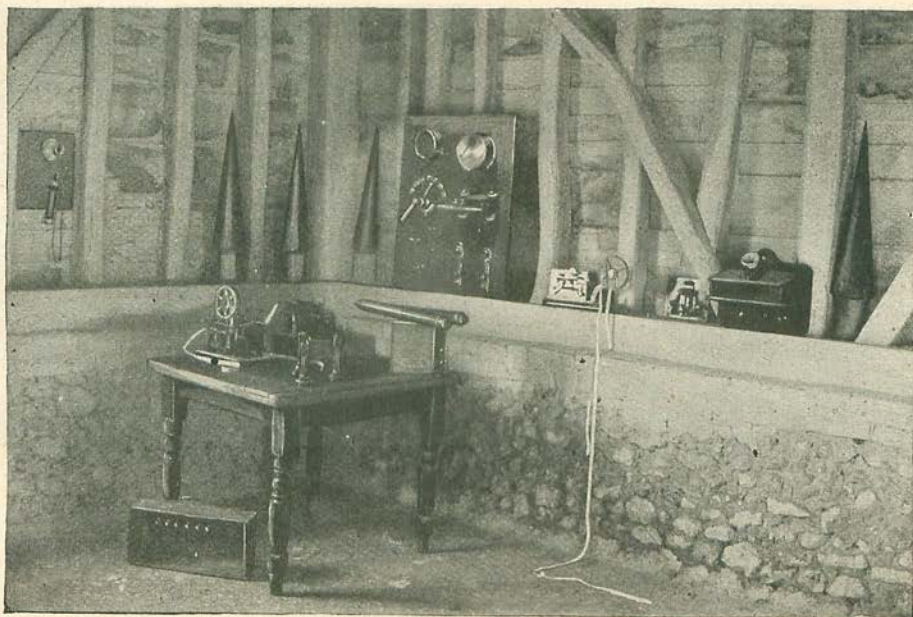
A FEW months ago it was announced

Fatal Books," whilst Lord Lytton was represented by "Paul Clipper," and Mrs. Henry Wood by "The Story of Bessie Costrell."

There is a librarian in the Australian village of Dromana who has classified under

the heading of "Fiction" Cardinal Newman's famous work, "Apologia pro vitâ suâ," and added injury to insult by running the last three into one word thus: "Provitassua."

A picture of King Lear on his death-bed for instance was unfortunately labelled, "There is life in the old dog yet"; many visitors, however, were perfectly content with the



The shed from which the movements of the Orling-Armstrong Torpedo are controlled

So far as classification is concerned the error was no worse than that of the Curator of the National Library at Berlin, who, having received a French work dealing with prison life entitled, "Impressions Cellulaires," decided that it should be placed under the heading of "Vegetable Physiology," a mistake that recalls that of another Teutonic colleague who indexed Murgers' "Vie de Boheme" under Topography. After all, however, these mistakes are not much if any worse than the following musical item on a British programme, "Dance of the blessed parts in the Englishmen's Fields," by Gluck—the "Dance of the Blessed Spirits in the Elysian Fields," taken from Gluck's "Orfeo," being the actual composition for which the above stood proxy.

The great musician Hallé was wont to refer with considerable gusto to divers errors that appeared in the catalogue of the Manchester Art Treasures Exhibition of 1856.

description and the remark, "How true!" was passed many times daily opposite the work of art. Another picture representing a madman sitting unclothed on the bare ground with his arms clenched round his knees was called, "Portrait of Lord John Russell." Hallé used to relate that after contemplating the so-called portrait of the great statesman for some considerable time an old man was heard to remark with becoming gravity, "Probably when he was out of office."

H. M.

A Reminiscence of Mr. Rhodes

To Rhodesians the death of Mr. Rhodes has caused a void that will never be adequately filled. To Englishmen generally he was an idea—the Imperial Idea, vague and visionary; to us he was an ever present personality. To the ordinary Londoner he was about as accessible as the Llama of Thibet; to the meanest Bulawayan he was a

with white and covered with texts from Tyndale's versions, from under which some of the illuminated saints show here a hand and there a head—every detail is eloquent of the history of England, scarred deep in religion and wreckage, in enduring beauty and ruthless demolition. But worst of all is the age of apathy on which we seem to have entered; when such a building, through its aged vicar, appeals in vain for the small sum—scarce twice as much as has been given for a first-prize collie dog at a dog show—required to make the building worthy of the purpose, which it has served for seven centuries, as a Parish Church, and somewhat worthy of its old traditions. One need not be an architectural enthusiast or antiquarian fanatic to feel the disgrace which attaches to us as a nation when such memorials as Binham Abbey are permitted to totter to decay.

For Binham Abbey is one of those things which the citizens of the United States of America would give millions of dollars to possess; but which, although its authentic history stretches in an unbroken line from the Domesday survey, may apparently go begging in vain until another Domesday without obtaining from the British nation the £2000 required to rescue from its present state of ruinous decay what is left of the famous Priory founded by Peter de Valoines, nephew of William the Conqueror, and his wife, Albreda, as a "cell" to the Abbey of St. Albans, subordinate only to the Monastery of S. Peter de Clugny in France. But if we go into these details we shall be lost in the mists of mediævalism, when the Priory used to pay one mark or silver annually to the Abbot of St. Albans and put up—as we should now say—the Abbot for eight days in the year, "he to have only thirteen horses in his train." Equally useless would it be to plunge into architectural details, of bays and clerestory and triforium, transepts and sedilia and nebule corbel-tables. Let it suffice that there now remains the nave of what was once a magnificent pile of buildings and fragmentary portions of other parts representing Norman, Early English, Decorated and Perpendicular architecture.

But one needs no knowledge of these to realise the beauty of the west front of the Abbey—as custom calls the Priory—in spite of the fact that the splendid window is almost entirely blocked up. Inside the building there is, too, one type of moulding believed to be unique in the ancient architecture of the world. Yet now the whole aspect of the interior is spoiled by the dwarfed arches that give a hint of squatness to the whole; but this is one of the defects which the £2000, above referred to, would remove. For when the old Priory buildings were destroyed, the drainage was neglected, and a succeeding age of dull utilitarianism conceived the crude device to dry the floor for divine service by raising it three feet, so that it now runs level with the ancient sedilia and hides a great part of the doorway through which the monks came to serve the altar.

To lower the floor again to its ancient level and give back to the building its pristine grace and majesty, to mend the roof so that the rain may not drip within, and to restore the loveliness of the west window are the three objects of a struggling fund, whose raising so far reads like a story of village rummage sales and sixpenny subscriptions. And this to secure to England a memorial which was reared before she was called England; a beautiful record of her successive styles of ancient architecture; and a building which as Parish Church has its unbroken list of vicars from Alan Alam, appointed in 1310, to the Rev. Robert Corry Cavell, the present vicar, who will be mightily pleased if some are moved to help him in the task of saving the grand old Priory.

A NORFOLK NATURALIST.

The Newest Things in Violins

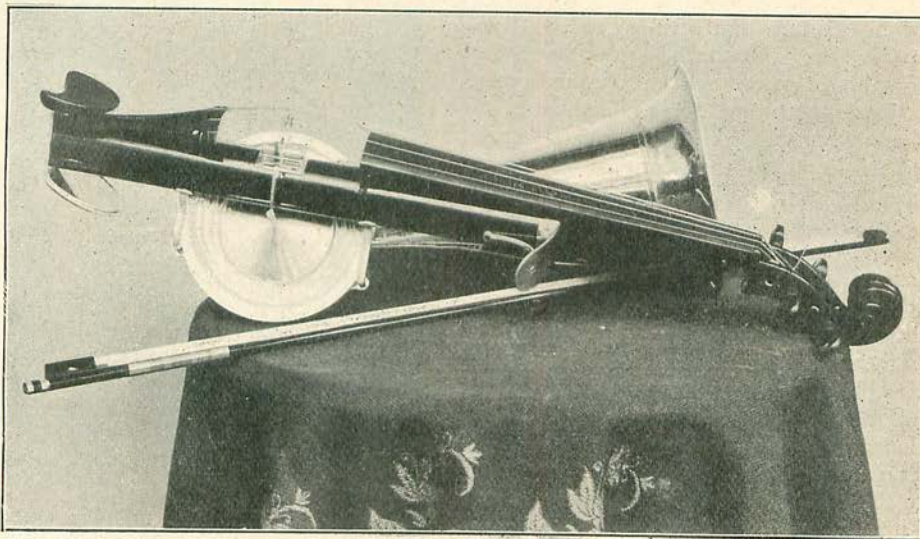
It has often been remarked that whereas the pianoforte has in the course of its existence undergone many changes which have tended to improve it and render it an instrument of greater beauty and quality than it was before, the violin has changed but little from the day of its birth. Since the middle of the seventeenth century the violin has been considered a perfect instrument. To-day the fiddle-player hankers after a Stradi-

varius or an Amati and, generally speaking, he regards all attempts to modify its shape and structure as acts of vandalism.

Quite recently, however, there has appeared an entirely novel kind of violin which has been invented by Mr. A. Stroh, a

which he made his sounding-box. The body required special wood, special varnish, &c., and in the construction of violins the great Cremona makers have for long held first place.

The violinist had to pay a high price for



The Stroh Violin, showing disc or diaphragm

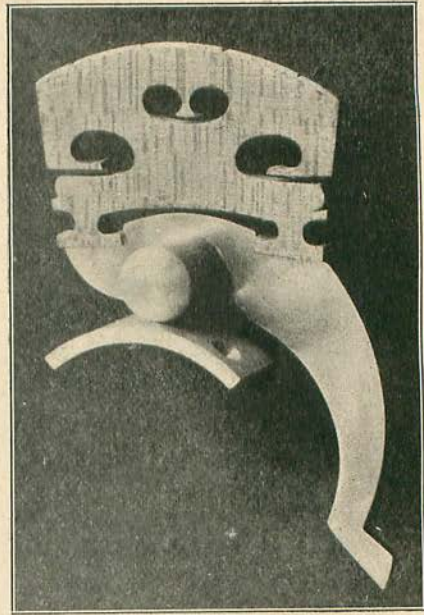
well-known London man of science. It is attracting a great deal of notice, and has aroused the interest of all classes of musicians. Naturally the more conservative fiddlers are still viewing the new instrument with distrust, if not with aversion, but Mr. Stroh is confident that in time his violin will win their confidence and esteem, and will take its place as a musical instrument of great beauty and value.

Mr. A. Stroh, we have said also, is a scientist, and the lover of science is never happy unless he is endeavouring to improve upon some existing type of instrument or piece of apparatus. The ordinary common form of violin consists, as everybody knows, of the strings, the bridge, and the sounding-box or body. It was thought that all string instruments must have a sounding-box, which would be set in sympathetic vibrations with the strings in resonance if any considerable effect was to be attained, and the maker of violins showed his skill by the manner in

one of these instruments, but he knew that it could not be equaled by any other by a modern maker. Mr. Stroh having given much attention to musical instruments decided to abolish the "body" or sounding-box of the violin and to substitute for it a trumpet or resonator made of aluminium. The following description together with the photograph here reproduced will give a good idea of the construction of the Stroh violin. The vibrations of the strings are conducted by means of an ordinary violin bridge, which rests upon a rocking lever to the diaphragm and resonator. The lever supporting the bridge oscillates laterally upon the body of the instrument, the end being attached to a diaphragm of aluminium by a small connecting link. The diaphragm is held in position between the india-rubber cushion by means of a specially designed holder fixed upon the body of the violin by two brackets. Attached to this holder is the trumpet or resonator. The body or

main support of the instrument is in no way employed for sound purposes, it simply holds the various parts of the violin together and sustains the enormous pressure of the strings when tuned. The disc or diaphragm which represents the bell of an ordinary violin is perfectly free to vibrate, the result being that when the strings are set in motion by the bow, the bridge and rocking lever vibrate accordingly, and thus every vibration is transmitted to the diaphragm.

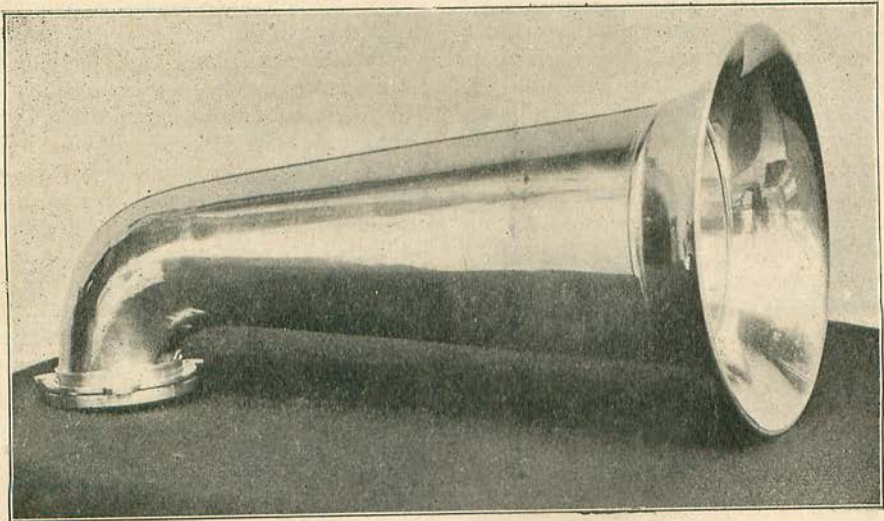
The diaphragm sets in motion the air contained in the resonator, the resonator augmenting and distributing the sound to the surrounding atmosphere. A remarkable point and one worthy of note is that every instrument made on the "Stroh" principle can be guaranteed perfect and almost any quality of tone can be obtained from one instrument by a simple change of diaphragm. The mechanism of the "Stroh" violin is very simple and cannot easily get out of order, each part can be seen at a glance. There are no devices to wear out, and putting aside the results of accident or carelessness the instrument is practically indestructible. In the manufacture of these violins, standard gauge will be strictly adhered to, so that in the event of accident the damaged part will be easily replaced. It need not be feared that any future developments will render obsolete the present pattern. Although the diaphragm



The bridge of the Stroh Violin

is made of aluminium, no metallic sound is audible, and if the hearer shuts his eyes he is unable to tell whether he is hearing a "Stroh" or a wooden violin, save that unless the latter is of superlative excellence, the former will probably have the finer quality of tone of the two.

H. C. F.



The aluminium trumpet, or resonator, of the Stroh Violin

How is it, sir, that possessing lyrical powers beyond ordinary, you have hitherto failed so miserably in your every attempt to write words worthy of a musical setting? Had you written this one song alone I should have dismissed it with the comment that it was probably the product of some uninspired moments, but to say nothing of the so-called "Lyrics" in your earliest volume, your latest endeavours in "Ulysses" have been little, if any, more successful.

Phmiues' song starts well enough,

O set the sails for Troy, for Troy is fallen,
And Helen cometh home;

but how banal its continuance!

The songs of the sea-nymphs are even poorer, the beginning of one of them—

See, see Ulysses, weary and wise—

being about as bad a line as one would wish to find in any lyric.

I am sorry that the space at my disposal will not allow more than a further passing reference to your two last plays. From "Paolo" to "Herod" is a far cry. The play, as a play, is good enough, though I must confess my inability to understand the character of your hero. You bade me look for an astute king whom Cæsar sought as friend, and behold! you have depicted a weak-minded monster who slays other people's victims and then whines over their dead bodies. Surely this is not he who was called Herod the Great! Speaking generally, "Herod" is tolerable drama but patchy poetry; on the other hand, "Ulysses" is better from the poetic than the dramatic standpoint. Seeing that it contains at least one scene—the parting between Ulysses and Calypso—which is as dramatically strong as it is poetically beautiful, I should be inclined to rate it much higher were it not for that ill-written, inartistic Prologue. Homer occasionally laughs at his gods, but you, sir, have made them absurd, and in your portrayal of Zeus chuckling over the remembrance of his earthly amours come not far short of being vulgar.

As in "Herod" so in "Ulysses" there is a certain lack of dramatic continuity and sustained power of poetic presentment which is all the more regrettable because it is due,

I am convinced, not to any premature decay of inspiration but to another reason which, while it reveals your present popularity, may seriously jeopardise your permanent reputation. Alas, sir, you have too easily, I fear, found your Mæcenas! That author's note to Herod reveals much. In your haste to satisfy the demands of a too eager public you have of late been content to give them something less than your best. Such backsliding may be forgiven the author of "vers de société" which have confessedly no other object than to while away an idle hour, but you, sir, are not a jingling rhymster, but a poet possessed of powers that, as Milton says, are "rarely bestowed."

That you may ever use those powers rightly and be increasingly worthy of your high vocation is the earnest prayer of

Your sincere well-wisher,

PHILIP OWEN.

24 Strutton Ground,
Westminster, S.W.

Finding the Enemy

IT is a curious and a startling fact that although a service rangefinder, known as the "Mekometer," is supplied to British troops in the field, neither this nor any other rangefinder is employed with infantry or cavalry in the field.

When the British soldier is using a rifle, no instrument is ever used in actual warfare to tell him the distance. Even if the mekometer be used with artillery, our officers seldom rely upon it, and this is not surprising if we consider the defects of the service rangefinder.

The time taken to find the range is excessive; the two men who have to make the necessary observations not only expose themselves but also draw the fire of the enemy on their comrades. The errors introduced by two men dependent on each other are invariably fatal, and the ground often does not admit of a mekometer being used.

Having invented a one-man folding rangefinder, Professor Gedge Forbes, F.R.S., a few weeks ago went at his own initiative and at his own expense, to South Africa, to test his instrument in actual warfare. After a series of practical trials with his rangefinder at

the front, the reports were sent to Lord Kitchener, who had taken a great interest in the invention. The Commander-in-Chief's reply was as follows:

"Reports sent in of your rangefinder seem most exhaustive, and I do not think anything further is necessary. I will submit

for the men to select for observation. After direction of vision and subjects suitable for the mekometer were found, where the base could be extended, the distances were determined with both instruments. There were, Professor Forbes informs us, grave discrepancies—the mekometer gave 5000



Professor Forbes using the new infantry range finder

them to the War Office in due course. Regret that I cannot make a personal inspection of the instrument."

The first series of tests were made with the Forbes rangefinder against the mekometer. In each case Professor Forbes gave the distances of points varying from 990 to 3000 yards before the men using the mekometer had finished their most necessary preliminary consultation as to the exact point to be observed. Sometimes the ground was such that they could not stretch their fifty-yard string at right angles to the line of sight. Sometimes the target could not be seen from both ends of the base. Sometimes the kopje whose distance was required had no sufficiently definite object

yards as the distance of a hill that the Professor marked as 3000 yards; he suggested to the colonel that his instrument was out of order. Then a new man was found for the right angle and then their distance was 3000 yards. Such a great error as this—2000 yards—was due to one of the observers, and it would not have been known but for Professor Forbes.

After the trials of his rangefinder against the service mekometer, Professor Forbes was allowed to go with Colonel Crabbe's column as range-taker, and was instructed to wear khaki. During the time he was with the column, Professor Forbes had many opportunities of proving the value of the rangefinder to Colonel Crabbe. Every evening

the colonel had the distances of all the kopjes around taken in order to know where outposts were necessary. The usual practice was to take the opinions of many officers as to distance and then to test them with the Forbes rangefinder.

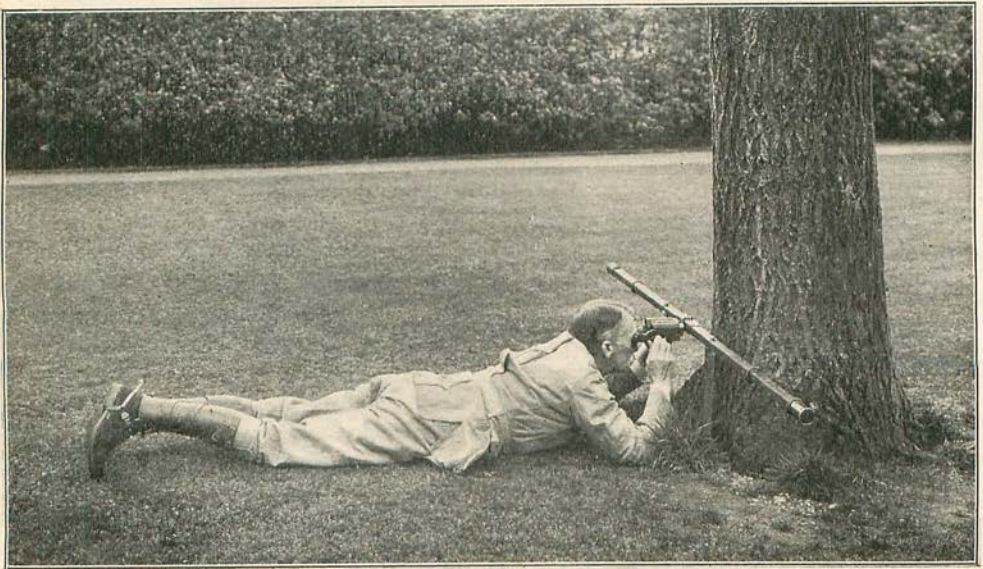
In the clear air of the veldt there is no guide as to distance. Distance judging is absolutely impossible unless there are objects near the target whose size is known.

Professor Forbes proved that men who had been out during the whole war, and who were accepted as authorities, were found to be absolutely at fault. "I have found," he says, "such a man say a kopje was 2800 yards off, when the rangefinder showed it to be only 670 yards; or, again, to usually say it was 500 yards when it was really 1200 yards. A few hours later, in a different light, he could see that he had been quite wrong. At evening, towards the west, the tendency was to give the distance far too great. With the sun behind you the estimated distance was often, but not invariably, too low."

Professor Forbes was able to show that his handy little rangefinder decidedly improved the shooting both with the rifle and with the gun. Every officer who has seen it in use or in

action has told the inventor that it is the very thing the army needs, and some have gone so far as to declare that by its use the war would have reached its present stage at least a year ago, and would have saved the country £75,000,000.

Professor Forbes trekked with the column three hundred miles in eleven days, the rangefinder being always slung on his saddle. Each day he was at different times called on for distances. It always took less than a minute to dismount, set up the rangefinder, and give the first range; subsequent ranges being found in a few seconds. He was in action two days and gave the ranges quickly and accurately, and undoubtedly improved the shooting. No amount of jolting in long gallops ever put the rangefinder out of order. It never needed adjustment of the prisms; no more care was taken of it than of a rifle, and once the Professor's horse rolled on it. Officers have described to Professor Forbes their experiences in scores of battles that disaster would have been converted into victory, or a partial success into complete surrender, if the new rangefinder had been freely used. As to the use of his instrument, Professor Forbes says: "A day or two would suffice to make an accomplished



Professor Forbes spying out the enemy without being seen

range-taker of almost any man in our army."

There is no doubt that the Forbes one-man folding rangefinder would be a most valuable acquisition to the material of the army.

It consists of two parts—the base and the binocular, but space prevents our entering upon any detailed description of its working in the present article. It may be stated that the length of the base is 6 feet, and when folded 3 feet 6 inches, that the weight of base is $2\frac{1}{2}$ lb., and the weight of binocular 1 lb.

H. C. F.

Saints' Flowers

It is a very natural and instinctive feeling that the flower which comes into bloom about the festival of a saint should be associated with his or her name. Moreover, in this changeable climate we sometimes forget the passing of the seasons, but the flowers never do, and they follow the almanac more closely than we are perhaps aware of. The snowdrop, or fair maid of February, is known as the purification flower, a suitable and appropriately named flower to begin the list with. It is our first favourite, we see it when the ground is still patched with snow, and nowhere does it seem sweeter than on the graves of those we have loved, whence it springs, a true emblem of purification, and not the least among the flowers of remembrance. The saffron crocus used to be placed on the altar on the eve of St. Valentine's Day; saffron in the olden days being much used in Lent on account of its enlivening qualities. It was even used to strew floors with. The pansy is also associated with St. Valentine. It is the French forget-me-not, and is certainly a flower of remembrance though one would not call it a seasonal flower. So little notice is now taken of St. Valentine's Day, and so few valentines are sent that the significance of the pansy as St. Valentine's flower no longer appeals to us. That beautiful fritillary, the crown imperial, is dedicated, I believe, to St. Edward, the King of the West Saxons, whose anniversary is March 18. The cuckoo-flower, the milkmaid, the cardamine of the herbalists, is the

lady's-smock, as it blooms about the time of the feast of the Annunciation of the Blessed Virgin Mary, for hundreds of years about the most important religious festival in England. (Our lady's petticoats, by the way, was the name given by the devout to the anemone which grew on Calvary, and was said to be stained by the drops of sacred blood.) This flower is naturally associated more with the bird, for it is at its best when the voice of the cuckoo is heard in the land. The veronics, to which the speedwell belongs, are associated by a curious but not unbeautiful legend with St. Veronica. The holy woman is said to have tendered a napkin to our Lord as he stopped, hot and wearied, in front of her door on His way to Calvary. The flower is said to bear some resemblance to the miraculous image of His face left on the napkin. Then we have herb Christopher and herb Robert, the rather pungent geranium of the hedgerows, the most continuous and, perhaps, the prettiest of summer flowers. The St. John's wort was hung over doorways and windows on the eve of St. John the Baptist to exorcise evil spirits. It seems to have kept its dedication name better than any other flower. The Canterbury bell is St. Augustine's flower, a graceful tribute to the great Kentish missionary, and Kent, it would seem, is the county *par excellence* for this flower. May 26 is perhaps just a little too early for the flower, and one would have thought June 14 also somewhat early for St. Barnaby's thistle; still one may put it all down to the alteration in the calendar. There is a carline thistle associated with Charlemagne; an angel is said to have recommended it to him in a dream, as a means of staying the plague which was destroying his army. But we do not recognise Charles the Hammer as a saint. The marguerite, "La Belle Marguerite," and the Michaelmas daisy are two strictly seasonal flowers. Roses are said to fade about St. Margaret's Day. Not all saints' flowers then are so seasonable. The clover leaf is not out by St. Patrick's Day, so that no one need agitate themselves very much as to what plant really does duty for the shamrock.

M. CHURCH,

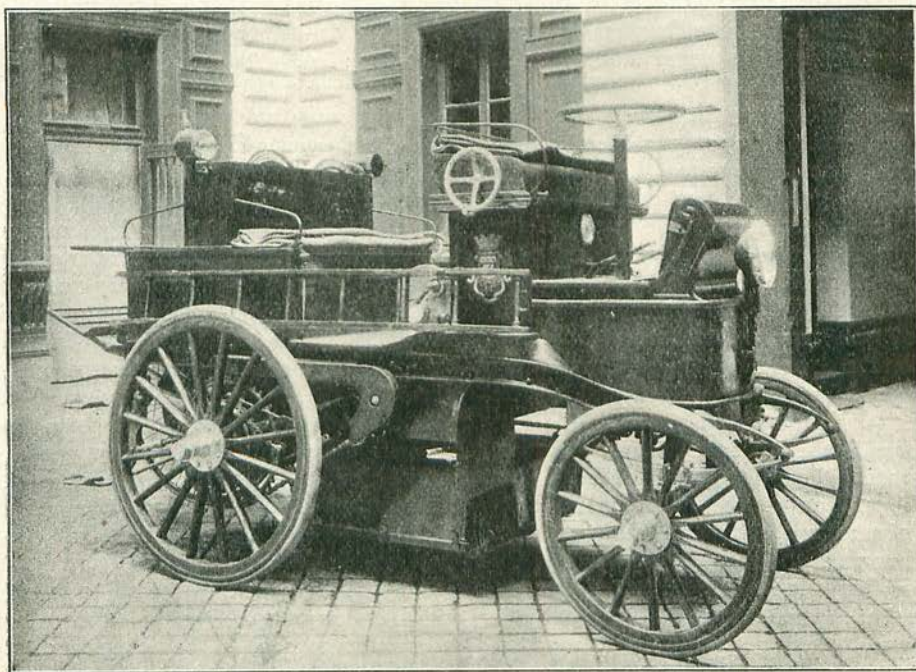
among the reeds by the water's edge and poke about in the holes in the banks and search the water for it, while all the time the moor-hen has slipped off to a perch it knows of, and is perhaps watching its persecutors from the top of a tall fir-tree. The moor-hen I am speaking of always gets up into a yew, and walks along one of the boughs and stands at the end quite hidden from the view of those who do not know its trick, and watches what is going on when the food for the birds is being scattered about. As soon as the house-door is shut, it walks along the bough again, hops down from one bough to the other to the ground and comes out on to the lawn to feed.

Of course I know its trick, and on purpose I walk under the bough it is hiding on, but though my head cannot be more than two feet from the moor-hen as I pass, it does not fly. When it is in the water it escapes, or finds safety, in being perfectly motionless, keeping perfectly quiet. In a tree it does just the same, and it knows it. But this, of course, requires a good deal of courage—or

stupidity—on the part of the moor-hen. Which it is I have never been able to decide. Nothing would be easier to kill than a moor-hen, when you have once seen it, either in the water or in a tree. For it will not move. Is this bravery or is it want of sense? They are timid birds, we know, for when they are walking they are nearly always flicking their tails. This means that they are nervous. A tame moor-hen, like the one I am writing of, never flicks its tail so long as it is sure that there is no danger. But if it hears any strange sound its tail begins to "flick" at once. It will go about picking up crumbs on the lawn as if it knew that we were all friends, but a tap at the window will make its tail flick up at once. So, knowing this, I am inclined to think that the moor-hen is not a sensible bird—but the way that it will snatch a crust out of a cock-pheasant's beak ought to get it the Victoria Cross.

The Only Motor Fire-Engine

THE London County Council Fire Brigade possesses no motor fire-engine, although



Automobile fire-engine used by the Paris Fire Brigade

we believe it is considering the advisability of purchasing one. The Paris Fire Brigade has a motor fire-engine which is used on the regular service, and has given good results. Motors, however, are apt to break down, and for the present at all events, we imagine the horse-drawn fire-engine will serve better than the mechanically propelled one.

H. F. C.

Such a Harvest!

AT half-past three on a sunny September afternoon I turned my steps towards the field of the village baker to see how "our harvest" was proceeding. For there are harvests and harvests; and few picturesque aspects are left in farming upon an up-to-date, commercial scale, whereas our baker's harvest smacks of the sweet simplicity of olden times.

But, as I approached the field, I perceived the baker in his shirt-sleeves, carrying his coat over one arm and the gleaning-fork over the other shoulder, half-way down the winding road to the village, and I concluded that work had ceased for a while. So it had; for when I came to the gate I saw only the solitary pitch-fork sticking upright in the ground, the one hand-rake lying teeth upwards in the clovered stubble, while a full row and a half of the ungathered barley lay neglected in the sunlight. Thus was "our harvest" interrupted because the baker had gone home to tea.

Leaning upon the gate of this upland field I could see many wide waves of the landscape, rising one behind the other like the folds of a double chin, all creased and dimpled with the fatness of harvest, and pimpled with rising corn-stacks. In every direction the clatter of agricultural machinery—elevators, grain waggons, and horse gleaners—with the varied shouts of harvest work, made the distance seem to shimmer with sound. For, wherever I looked, I saw only the land of the Earl, whose many thousands of acres are let as large farms to men of substance, and are cultivated on the most modern lines. And beyond the end of the Earl's estate, fringed with windmills and church-towers, peeping through rounded hills crowned with game coverts, I could see the beginning of the estate of his neigh-

bour, a marquis, similarly leased and similarly cultivated. Only just before me lay the single, narrow field, with one pitch-fork and one hand-rake and a row and a half of barley still waiting to be gathered, because the baker in his shirt-sleeves had gone home to tea.

For the fact is that "spatch-cocked" (as General Buller would observe) between two large farms on the Earl's estate, there is this field of the baker's. It is not a large field as Norfolk fields go; nor a very enviable field, since it is exposed to every wind that blows on our bleak East coast. Still, it is a field, and we can only presume that the Earl's father, who bought all the country round, did not buy this field because the baker's father would not sell it. So there it is to-day, one of the most interesting harvest-fields in the county.

The baker and the postmaster, who is also the proprietor of the general stores of the village, cultivate it between them, with the aid of their families; and it was pleasant in the earlier year to look over the fence and watch the postmaster sturdily hoeing the barley. He owns a pony-cart, too, while a neighbour lends her barn for the storage of the crop; so, a day or two ago, it was equally pleasant to see the postmaster in his pony-cart grasping with his white-shirted arms the sheaves which the baker hoisted up to him on the fork. It was a great occasion.

But the reason why I went to the harvest-field this afternoon was that this morning it had been the scene of even greater achievement. The baker was probably busy with his dough, and the postmaster engrossed with his official duties; so the harvest-field was occupied by their assistants, five persons, of whom the eldest was probably aged eleven, and the others seemed to range in years between eight and five. They were the children of the baker and the postmaster; but they had a shrewd idea of the meaning of harvest-work. The veteran of eleven went ahead with the pitch-fork, turning one line of the scythe-cut barley on to the next, with the view of enabling the baker to hoist full armfuls at once to the postmaster, when they should arrive with the pony-cart. Behind the chief harvester followed the four toddlers,

dragging the large hand-rake with their united strength to glean the straws which the fork had missed.

Everything would have gone smoothly but for the conduct of a volunteer member of the harvest-party, a black-spotted, white dog, which might have passed for a very large terrier but for his wavy tail. He was an amazingly happy dog, and entered thoroughly into the spirit of the proceedings. I had seen him on the previous evening having an immense game of romps with some two-score of Farmer Somebody's bullocks, which chased him with great earnestness all over a forty-acre pasture; but now he was so full of guileless enthusiasm for the harvest, that he could not help sitting down to scratch himself, from sheer overflowing energy, in front of the serried line of infants who were dragging the hand-rake. When he did this, harvest operations came to a standstill. The infants did not see their way to raking the dog with the barley; so the man of eleven who was labouring ahead had to put down his fork and carry the dog, who vehemently licked his face the while, to the heaped barley alongside. Here the happy animal would consent to lie for a few minutes, before his enthusiasm compelled him to interrupt work again.

It was in the hope of witnessing a renewal of such agricultural activity that I visited the field this afternoon, but arrived, as I have said, only in time to observe the back-view of the baker as he went home to tea; and before I could go thither again that last row and a half of barley had been harvested.

E. K.

The Simms Motor War-car

THE newest thing in military science is the motor war-car that has been invented by Mr. Frederick R. Simms, and built by him to the order of Messrs. Vickers, Sons and Maxim, Limited. The principal object of the war-car is to act on the defensive on the splendid coast roads that England possesses, but, with certain modifications, the type of car may likewise be effectively employed over smooth or rough roads or even rough country; further for keeping open lines of communication, haul-

ing guns into position or for carrying and hauling stores and men. It may also be effectively employed, being impervious to bullets of small calibre, to damper street riots, and for search-light operations, &c. The main object of the car is that of coast defence and its great mobility and great range of action will make it valuable for the purpose. The armour is so designed and constructed as to completely encircle or clothe the entire car frame; the armour is 76 mm. Vickers steel and impervious to small arms, it is attached to the car frame by means of semi-elliptical springs on to which it is hung by means of stout brackets. The armament consists of two pom-poms and two automatic quick-firing Maxim guns.

H. F. C.

Forgotten Trains

IT sometimes happens that the public, under stress of intense excitement, forgets to travel by usually popular trains. For instance, on the night (May 4, 1897) of the terrible disaster in the Rue Jean Goujon in Paris, when over a hundred of the greatest ladies and gentlemen in the French metropolis were burned to death on the occasion of a grand charity bazaar, the express from Paris to Lyons did not carry a single passenger; but it does not often happen that the public is forgotten by the trains. A case in point, however, occurred just about eighteen months ago at Victoria, that occasioned, when the first feeling of surprise and annoyance had been overcome, no little hilarity amongst the forgotten passengers. The train in question purported to be the 4.35 P.M. to Brixton, and was highly respected on account of its sedate gait by those travellers who frequented it of a Sunday afternoon, and who, from the other side of the barrier, where they were waiting to be admitted to the platform, were deeply shocked to see it depart in a fit of—let us hope—mental aberration, without a single passenger on board.

On the day of the Diamond Jubilee celebration in 1897 it was said that not a single passenger was booked from Manchester to London by the London and North Western system, a circumstance that has never occurred since the line was open. Such

apathy on the part of the public can with difficulty be paralleled by a like indifference on the part of the train, though an incident on the branch line between Watlington,

his steed of metal with a full head of steam, he was altogether disappointed, for the fire had only just been lit, and the water in the boiler exhibited not the slightest sign of ebullition.



The Simms Motor War-car, showing the armoured rams and poms-poms and maxims

Oxon, and Princes Risborough, may perhaps be worthy of mention in the same paragraph. About two years ago the Great Western officials at the latter town, who were expecting the arrival of the train from Watlington, which train had to connect with the early morning express from Aylesbury, were pained beyond measure to learn on inquiry that there was no prospect of the said train keeping its engagement. It was doubtless with the deepest regret that the officials who had charge of the recreant train forwarded their explanation of the occurrence, for they could urge neither a breakdown nor a landslip in extenuation. As a matter of fact, the elucidation of the mystery was simple, a stoker had overslept himself, with the result that when the driver of the locomotive came on duty, expecting to find

Trains do not often lose their way, but it occasionally happens that they have some lapse of memory which ends in their finding themselves, figuratively speaking, at sea. A case in point happened rather more than four years ago near Dorchester, when a London and South Western up mail, perhaps under the impression that it was making a short cut, crossed the junction points near the town mentioned and ran on to the Great Western main line. Its trespass, however, was of the shortest, for it was pulled up in its wild career in the Great Western station, and after some delay the officials got it back to its own lines again.

This incident recalls that of an essentially misguided Great Eastern train from Lowestoft to Yarmouth, that one Sunday evening, about two years ago, was switched on to

the line for Carlton Colville, instead of that for Oulton, owing to some idiosyncrasy on the part of the points. As these two lines run parallel for some distance, it was not until Carlton hove in sight that the driver recognised that he was making for the wrong port.

Two years ago last June another amusing incident occurred on one of the branch lines of the Great Eastern Railway, when, on the departure bell being rung and the signal for starting being given, the engine with a shrill whistle set off on its journey, leaving the train with the dumbfounded passengers behind. It is related that the engine had almost reached its journey's end before the driver discovered that the locomotive had never been coupled up with the carriages, and that he had left his charge behind.

One of the most remarkable instances of a forgotten train occurred in the case of the 8.15 A.M. Sunday train from Charing Cross some time ago, which was mysteriously stopped for nearly half an hour near Eden Bridge. Having regarded the signal which was at "stop" for some time, the engine driver at length came to the conclusion that the study was lacking in interest, descended from his cab, forced his way into the signal-box, which he found tenanted, and telephoned to Eden Bridge, for permission to proceed. The explanation of this strange occurrence is simple in the extreme, the train, contrary to custom, had been dispatched by the Oxted branch line, and as trains are not due as a rule until 10 A.M. on that portion of the system, and as the signalman had not been apprised of any change in the arrangements, he had not gone on duty.

H. M.

The Author in Blunderland

No more positive proof of the fallibility of mankind can be produced than that which the assiduous explorer of literary curiosities is able to find on the shelves of a library. The republic of letters, in its endeavours to create material for our amusement or edification, often overruns the bounds of accuracy, and passes into the land of unconscious mistakes and blunders. Novelists frequently credit their characters with the performance

of deeds which it would be physically impossible for an ordinary individual to accomplish.

Robinson Crusoe's adventures have been wisely entitled "strange surprising," but the credulity of the reader must be of gigantic size to enable him to swallow the following incident. It will be remembered how the shipwrecked mariner carefully divested himself of his clothes before swimming out to the deserted vessel. Climbing on board, Defoe tells us, the famished hero immediately went to the bread-room and proceeded to fill his pockets with biscuits. Certainly a remarkable accomplishment! And we can only suggest that a far-seeing Nature had provided the gentleman's body with pouched appendages, after the manner of a marsupial.

Even in these days of professional *siffleurs* we doubt if any one of them could be found so accomplished as Andy Scot, a character of Anthony Trollope's creation. The novelist introduces him as "coming whistling up the street with a cigar in his mouth." A performance which must certainly have caused considerable astonishment to those who saw him, and one which, if attempted in these days of unregenerate small boys, would be sure to attract them in crowds.

An amusing slip occurs in Miss Rhoda Broughton's novel, "Not Wisely but Too Well." On one occasion the heroine says desperately:

"I don't care if I'm burnt as black as coal."

"What a dear little negro you would make!" retorts her lover. Yet we fear, however black her skin became, other considerations would arise to prevent her metamorphosis into a negro.

But perhaps the most marvellous achievement chronicled by a modern novelist is that of M. Zola in "Lourdes." After detailing the sights and sounds at this great healing place, we come suddenly upon these words, "Ce furent d'abord les sourds et les muets qui entendaient et qui voyaient."

Ships and their management have proved a stumbling-block to many authors of note. A vessel created by Madox Browne in the "Black Swan" carried, so far as can be discovered, neither cargo nor ballast in her.