JOURNAL OF THE
BRITISH SOCIETY OF DOWSERS
No. 5 September, 1934

NOTICES

IN accordance with Rule (v) the annual **General Meeting** will be held on **Wednesday, October 10th,** at 3 p.m., at York House, Portugal Street, Kingsway, W.C.2.

Any member desiring to put forward a resolution should send the same to the Honorary Secretary with the name of the proposer and seconder by September 25th.

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By the kindness of Dr. Munro meetings will be held at 12 Park Crescent, W.1, on **Thursday, October 18th,** and **Thursday, December 6th,** from 4 p.m. till 6 p.m. Regents Park is the nearest Tube station.

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We much regret to record the death of Mr. H. H. F. Hyndman, B.Sc., on June 6th. He was one of our first members and was most helpful in reviewing books and journals.

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The annual Congress was held on June 1st and 2nd. On the former day, lectures were given in the hall of the Royal Asiatic Society—in the morning by Mr. Timms on 'Water Divining', by Major Pogson on 'Water Diviners of India', by Mr. Tompkins on 'How I became a Water Diviner'—and in the afternoon by Dr. Dudley d'A. Wright on 'Medical Diagnosis with Rod and Pendulum' and by Captain Trinder on 'Dowsing and Agriculture'. Dr. Munro also spoke on the subject of medical diagnosis and read an account of the experiments carried out last year at Guy's Hospital.

Some of these lectures will appear in the Journal as space admits.

On June 2nd about 100 members and friends came to Backwoods, Lindfield, where various tests had been arranged. The tests were :

To locate pieces of silver and lead buried in a ploughed field.

Out of five bottles of water to pick out that in which salt had been dissolved.

By means of samples to identify the contents of six cardboard boxes containing copper, iron, flour, salt, sugar, boracic powder.

To find the position of a boy who had concealed himself, using bits of his shirt as samples.

To locate the position of an earthenware sewer.

Talks were given during the afternoon by Miss E. M. Penrose, Dr. Wright and Captain Trinder.

The finding of buried objects of silver and lead was not an easy test. Lead being a poor radiator would naturally not be easy to locate. Many of the members who attempted the test and also spectators must have been carrying metal objects on their persons which would have been a source of obstruction.

Many people collected in a comparatively small area were not conducive to the performance of delicate tests such as the identification of objects by means of samples in paper envelopes which become easily saturated. It might have been better if the samples had been in glass bottles.

As regards results : Of 15 trials the nearest locations of lead and silver were 14 ft. 4 in. and 11 ft. 8 in. respectively.

Six people identified the bottle with salt in it.

Three people identified the contents of two cardboard boxes.

No one succeeded in finding the boy.

The sewer was discovered by the few people who attempted to do so.

No one had any difficulty in finding the course of two subterranean streams, one of which had been located some days before by Major Pogson.

Our thanks are due to members who were kind enough to give the lectures and demonstrations on June 1st and 2nd.

Suggestions are invited for next year's Congress.

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Copies of Journals 2, 3 and 4 can be obtained from the Editor by members, at sixpence each.

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Whalebone for divining rods can be obtained from Messrs. Devine & Co., Ltd., St. Stephen's Road, E.3.

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Communications for the Editor and enquiries should be sent to Colonel A. H. Bell, Backwoods, Lindfield, Sussex.

WATER TABLE AND FISSURE STREAM

By ELVAN

THE writer of a recent letter to the *Field* took dowsers to task for speaking of underground streams ; he denied their existence, and wrote quite firmly about water tables. Let us examine this matter.

Topical Press.

DOWSERS AT BACKWOODS, JUNE 2ND.

Examples of natural water storage in its simplest form occur in parts of Essex, where large patches of glacier gravel and sand lie on the London Clay, rather like sponges on a rubber mat. They absorb the rain; wells sunk into them fill to the level of saturation; excess is relieved by springs at the lowest points. Here the appropriate O.E.D. definition of Water Level—' The plane below which the rock or soil is saturated with water '—is perfectly illustrated.

When the *Water Supply of Essex* was written (1916), Colchester was taking half a million gallons a day from springs of this type. The largest, the Lexden Springs, draw water from a gravel area of 13 square miles; on the 30 acres above them special precautions are taken against pollution.

But water also flows along fissures, and water-bearing fissures occur in all rocks. The French hydro-geologist, E. A. Martel, categorically denies the existence of water tables in the limestones, or the silicious sandstones, maintaining that in both water moves only in fissures.

Prestwich pointed out in 1871 that the permeability of chalk was due to its fissuring. Whitaker—whom Martel calls ' that excellent specialist of the English chalk '—writes in the *Water Supply of Surrey*: ' It is chiefly to the planes of jointing (more or less vertical cracks) that the chalk is indebted for the passage of water; to some extent also the planes of bedding help; but comparatively little water can find its way through the rock itself. The way then to get a large supply from the chalk is to cut as many water-bearing fissures as possible '.

The large south coast towns on the chalk use a great deal of water. The Upper Chalk of the South Downs is a particularly fine water-bearing formation. The chalk outcrop in Sussex covers about 330 square miles, there is very little drift or town cover, the average rainfall is 35 ins., and as the strata dip towards the coast the underground water tends to move in that direction. There is no heavy load of overlying beds to consolidate a soft rock below, as in parts of the London district; the large amounts of water which are obtained when suitable methods are employed, show that much of the rock must be very well jointed and fissured; and as it is soft it can be tunnelled comparatively cheaply.

For a big supply, the normal waterworks practice there is to sink shafts of good diameter, from the bottoms of which horizontal headings are driven out—' in a direction calculated to tap the water-bearing fissures '.

Many wells have been sunk to supply these towns, and several miles of headings driven; from the data thus obtained it is

possible to form quite a clear picture of how the water moves underground. . Fissuring varies to some extent, particularly in depth, as the following examples from *Wells and Springs of Sussex* (1928) will show. In the absence of competent dowsing, cutting a big fissure stream is a matter of luck; but provided that a sufficient length of heading is driven, in a suitable direction, and at a proper depth, an adequate supply can be obtained.

1. Eastbourne Waterworks at Friston. Shaft 110 ft. Headings in Upper Chalk—1 mile 5 furlongs. Average 16 million gallons per week.
2. Brighton, Old Waterworks (disused). Upper Chalk. Bottom of headings 93 ft. down, length 2,150 ft. 'It was rare for 30 ft. to be driven without finding a fissure, but the produce of the largest was only 100 to 150 gallons per minute.'
3. Brighton, Goldstone Road. Four shafts in Upper Chalk. Bottom of headings 167½ ft. down; maximum size 18 ft. high, 12 ft. wide; length about 2,600 ft. 'The supply comes chiefly from a few large springs a long way apart yielding from 4,000 to 5,000 gallons per minute, and in connection with joint planes. There are small additions between these.' Six million gallons per day have been pumped. (5,000 galls./minute = 7.2 million galls./day.)
4. Brighton, Patcham. Two shafts 174½ ft., headings 4,968 ft. 'A large fissure was cut which gave 2 million gallons of water daily.' Yield of well in 1926, 2 million gallons per day.
5. Brighton, Mile Oak. About 200 ft. deep. 'Three shafts were sunk and about 1,500 ft. of headings driven in 1901, with the result of cutting only one fissure of importance, which, however, yielded about 4 million gallons per day.' Total length headings 6,212 ft.

Now firstly, a big fissure 150–200 ft. down, with over a million gallons a day flowing along it, seems an important underground stream.

Secondly, there is little resemblance here to the true water table form, an even saturation below a certain level; or to Daubrée's dictum, 'the chalk is like a saturated sponge'.

Back on the open Downs where the rain soaks through the turf into the chalk, the water filters down through a network of cracks and crevices extending more or less generally through the mass of the rock. After a wet season water stands higher in the downland wells, and bournes occasionally break out in the valleys; so to this extent local planes of saturation may be said to exist.

But there is no question of any saturated zone over an impermeable layer ; there is no such layer in the Upper or Middle Chalk, which in Sussex are regarded as one water-bearing unit. The former, being softer and much intersected by bands of flint, is the better water bearer. These headings are all in the Upper Chalk, generally some distance above its base. The Middle Chalk is about 200 ft. thick. The degree of useful saturation must depend on the intensity of the fissuring. This can vary considerably in a short distance, and is no doubt similarly inconstant in depth. Further, as the distance from the surface increases, the weight above tends to limit the fine fissuring in a soft rock. The maximum thickness of the Upper Chalk in Sussex is 800 ft.

These saturated networks act as immense reservoirs from which water steadily drains away. As the larger fissures offer less resistance to flow, the water tends to find its way into them, its passage smoothes and enlarges them by erosion ; the end of this development is the large fissure stream, generally in the jointing, but also to some extent in the planes of bedding.

The headings show this clearly. Though at the wells rain may soak down, and there may be small saturated networks round them, these are a negligible factor. The big streams carrying the water from the catchment areas behind furnish the supply.

The dip of the chalk north of Brighton is 3 to 5 degrees S.S.E. If lines are drawn N.N.W. from the three big wells to the edge of the upper chalk outcrop, their lengths are, roughly : Patcham, 1½ miles ; Mile Oak, 2 miles ; Goldstone Road, 3 miles. The respective fissure flows are given as : two, four, and over six, million gallons per day ; in the latter case they are ' a long way apart ', with just ' small additions between '.

So the further down the dip slope the larger the stream ; the big flows seem to keep pretty closely to the direction of the dip. With No. 2 the headings are shallow ; the big streams would be deeper there, and perhaps the line of folding by Hollingbury Castle has some effect.

Geologically, water-bearing rocks are divided into : (*a*) porous and permeable, which hold water more or less freely throughout their mass ; (*b*) those practically impermeable in mass, which hold water in joints, fissures, caverns, shattered portions, etc.

Under (*a*) are usually grouped : sand, gravel, loose breccia, soft sandstone, sandy limestone, chalk, oolite, marlstone, dolomite or magnesian limestone, and brown ironstone beds.

With the first three, water percolates through the interstices, the rate of flow depending on their size and shape, the pressure, etc.

Clay absorbs a great deal of water, but will not part with it ;

the pore spaces are too small, the diameter of the particles being less than 0.005 mm. But soft sandstones are often saturated with water and part with it freely. Sinking colliery shafts through Triassic sandstones has often been a troublesome matter for this reason, e.g. at Thorne; and the Bunter is second only to the chalk as a source of supply in this country. With soft sandstones yield is a matter of both pore spaces and fissuring, their relative importance depending on the character of the former.

As we have seen, supply from the chalk depends on fissuring alone, where the rock is compact and poorly fissured the yield is very meagre, e.g. at Wimbledon, where there are overlying beds 400 ft. thick (*vide London Wells*); also Lovett found sections of dry unfissured chalk in the headings at Addington.

With the remainder of the permeable rocks, I suggest that fissuring is far more important for supply than seems generally supposed. It is one thing to put a borehole down into them at random, and quite another to bore where a dowser has pegged a good stream. Well-boring companies are realizing this: now many of them habitually employ a dowser.

Hitherto we have considered a simple sequence—the absorption of rain by permeable rock—networks of saturated fissuring acting as reservoirs—the flow off by fissure streams. But these streams also occur in permeable rock in circumstances where no connexion with either rainfall or saturation is apparent. They also occur in impermeable rocks of all types. In either case good dowsing can find them. Perhaps two examples of each from the writer's knowledge would be sufficient illustration.

Dixey, in his recent *Handbook of Water Supply*, writes: 'Amongst all deposits true clay is the most hopeless as a source of water supply'.

Some eighteen months ago a determined effort was made to get a supply for a country house in Bucks., which has over 500 ft. of bedded clay below it—Kimmeridge, Ampthill, and Oxford. Two fine professional dowsers were employed in turn. The first found 'a good supply with great accuracy' at 250 ft., which was bored for and got; unfortunately it proved to be undrinkable owing to an excess of sodium sulphate. The second located a vertical with a good stream off it at *c.* 150 ft.; this was also bored for and got, but proved equally useless for the same reason. Neither dowser undertook to judge quality, but each found a stream of good volume, and gave its line and depth accurately. Perhaps there was no good water.

Just after the war, Branston Hall (3 miles S.E. of Lincoln) was bought by the County Council for a sanatorium. More water

was wanted, so on expert advice a borehole was put down through the Lincolnshire Limestone, but no water was got. A fine local dowser was asked to help ; he found a good fissure stream a few yards away at less than 10 ft., which is still giving a satisfactory supply.

During the drought of 1921, the 250-ft. well at Great Chishill (Upper Chalk) ran dry. A water scheme estimated to cost £5,000 was prepared : the villagers suggested a dowser and were snubbed. Early in 1922 a concert and subscriptions raised the necessary fee, and a fine professional dowser was summoned. His offers of 20,000 galls. per day at 200 ft., and 3,000 galls. per day at 45 ft. were refused on the ground of expense ; but when he announced a strong little spring at 20 ft., the owner of the land said ' Right '.

The well was dug, at 17 ft. the pump had to be started ; it was finished to 20 ft., handed over to the R.D.C., a good hand pump was installed, the total cost was £50, and when I went to see it on the 1st July it was flowing strongly. I was told that the village well was dry again, also that it took over five minutes to wind up a bucketful when it was not.

Here there is no question of saturation ; both wells enter the chalk at exactly the same horizon, one penetrates the rock for certainly 250 ft., the other for perhaps 12 ft. The deep well starts on the bare chalk at *c.* 445 ft. The dowser's well, which is 800 yards N.E. on the Heydon road, starts at *c.* 455 ft., on boulder clay, which is probably some 8 ft. thick there. The outcrop of the horizon of the Chalk Rock runs across the slope below and N.W. of the village at *c.* 330 ft., and is roughly equidistant from both wells.

Local rainfall must also be ruled out. The Chiltern escarpment is steep in Bucks. ; here it is much planed down ; both wells are roughly on its crest. The chalk dips gently S.E. With the exception of the higher ground along the ridge to W.S.W., the rock surface at the dowser's well is higher than at any point for many miles round, and is completely sheeted over by boulder clay.

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A QUESTION OF DEPTH

By M.E.M.

IS it possible that radiation from underground water can penetrate through the floor of a house three or four stories high?

I stumbled upon this experience a short time ago, when visiting friends in their charming old house, which overlooks the valley of the Dee, in Kincardineshire.

Knowing that these friends were interested in dowsing, I had taken with me my whalebone rod and pendulum to show how to operate both these appliances.

As it had begun to rain soon after my arrival, we had to abandon the idea of working out of doors, and content ourselves with remaining in the house.

On this occasion we were sitting in the dining room, a room on the second floor, and my hostess was telling me how their ground officer had discovered that he was a dowser, and during the recent dry summer had found water supplies for several farms on the estate.

She said, 'My husband and I watched him at work, and when he handed me his rod it moved for me; in the case of my husband, it only reacted when the ground officer held one branch of the fork. This is the rod he cut for me', she said, and held out a thick forked branch of hazel, and sat holding it in her hands, and asked me to tell her if she was holding it in the right position.

Presently the rod began to move, and slowly, very slowly, and with difficulty it assumed a perpendicular position. 'Look,' she cried in excitement, 'it is going up, it is moving.' Her husband, who was inclined to be sceptical of her power, said, '*You* are making it move, besides, there can be nothing on that spot to cause a reaction.'

I knew that it was impossible that a strong rod such as she was holding could be made to rise by her frail hands, so I said, 'Will you allow me to check this?', and with both my rod and pendulum I got a strong reaction on the same spot. 'Undoubtedly there is something here, and by the serial number "2" it is water', I said. 'What is under this room on the ground floor?' I asked. 'The garden room', my host told me. 'Is there water in it?' 'Yes, a wash-hand basin, but not under the spot where you got the response with your rod just now.'

'Let me go downstairs', I said. By this time the ground officer had arrived, and we all proceeded downstairs to the garden room, and precisely on the same spot where we had got the reaction in the room above, our rods rose sharply, certainly

there was water here, so I suggested going out of doors, and outside the window of this room we again picked up the reaction, right across the drive, and into the park below the house.

I then proposed that we might go to the back of the house, and here again in the old-fashioned formal garden we traced the water, picking it up in several places.

The house faces north-east, and the ground slopes gradually down to the River Dee, about 500 yds. distant. At the back of the house the ground rises rather steeply.

On returning to the house my hostess asked me if I would go up to the top floor to find if the reaction could be felt in the room above the dining room. Sure enough, on the same spot where we had got the reactions on the two other floors, we again felt the pull of the water. Not satisfied with my first findings, I returned again a short time later, and went carefully over the spots where I had got reactions on the previous occasion, in order to ascertain more accurately the depths at which water would be found. In the garden room I confirmed my first finding at 4½ ft. and on the drive at 4½ to 5 ft. In company with a fellow dowser we proceeded to traverse the park, and it soon became evident that there were two parallel streams, one the continuation of the water which was obviously flowing under the house, and the drive. In the park the depth was approximately 6 ft. The other stream about 34 ft. to the east was considerably deeper, being 12 ft.

Further down the park, our next testing showed that the streams continued at the same depth, 6 ft. and 12 ft. respectively.

At the foot of the park close by a large beech tree the depth of the first stream increased to 7½ ft., while the depth of the other one decreased to 8 ft., the line of the flow continued to be practically the same all the way.

Acting on the suggestion that we might try to gauge the depths from the different floors, we returned to the house.

Having already ascertained the depth in the garden room as 4½ ft. we proceeded upstairs. On the second floor the depth had increased to 16 ft. On the third floor, after very careful gauging, the depth had further increased to 30 ft.

Owing to the difficulty of the ascent to the roof, it was not possible to pursue our investigation further, but it would appear that the data which have emerged from this experiment show that radiations from underground water can penetrate through the floors of buildings, probably with many more stories than the above, and in these circumstances is it not possible that unsuspected underground water may be responsible for outbreaks of dry rot, and also that the rheumatic affections from which the inmates suffer may be attributable to the same cause?

DOWSING IN ARABIA

By COMMANDER C. CRAUFURD

FIRST let me preface this small article by the assurance that I know very little regarding the art of dowsing. During fourteen years of travel in Arabia I have not found anyone sufficiently interested in dowsing to give me assistance in investigations that are very primitive while they own the merit of being pioneer.

Arabia is a country larger than India. The major part of its terrain is regarded as waterless. In my own experience, of many thousands of miles of Arabian travel, I should suggest that many of the apparently waterless districts could develop a sufficient water supply for moderate cultivation and moderate population if the art of dowsing received proper appreciation. Water is wealth in a desert land. Having spent the best years of my life among the Arabs, I can appreciate the blessings that the dowser may soon give to a poverty-stricken peninsular.

Some fourteen years ago I found myself free to work in Arabia. At that time Aden was considered waterless and the European residents were unable to distil sufficient water for the full requirements of drinking and washing. Two years earlier I had seen the tragedy of a British regiment practically wiped out through undertaking a gallant and emergency desert march, falling exhausted and in many individual cases perishing, on a hot afternoon. They thought they were in a waterless desert; frequently they passed within fifty yards of running water!

So soon as I was free to act, I determined to find water for Aden. A skilled civil engineer gave me some very valuable hints which he had gathered from examination of the terrain, his examinations being incomplete since he had undertaken most of his survey while within range of enemy fire.

His information showed me that I should have to live in the desert for a while. The resident of Aden could hardly welcome such a suggestion, since his information suggested that looting bedou were in the proposed neighbourhood of my investigations. However, I knew something about Arabs and soon got over that difficulty. My scouts would give me warnings of intended raids. I would immediately send out courteous invitations to tea and the sheikhs from those disturbed areas would tell their youth that they could not go looting a man who has just asked them to a feast.

My knowledge of dowsing consisted of half an hour of instruction in England and a few hours of practical test, when I

located a spring and sunk a well in my own garden to prove that I had some dowsing sense.

I had got hold of the idea that dowsing is largely a matter of uric acid in the blood increasing sensitiveness to water current. So I reasoned that if I drank enough whisky overnight to feel thirsty in the morning, I might increase my dowsing abilities. I had no great objection to that form of martyrdom. After sacrificing a case or two of whisky to a good cause, after many hours of thought—clear thought in day time, confused thought at night and bemused reasoning at dawn—I gave up that dowsing method. There may be something in the theory, but not much, and not enough to count.

Next I tried fasting. It was a convenient method and saved disappointment when my ' boy ' had forgotten or had failed to get any provisions. My dowsing rod appreciated that game more than my stomach did. I should suggest that the scientific explanation lies in the fact that when you are well famished your nervous system is highly keyed.

In the desert you can do as you will. I decided that I could do my dowsing barefoot, better than when dry-shod. I hope that most dowsers will agree with me that, though individual tastes may seem absurd to others, the tyro who has induced self-confidence is more likely to succeed than he who is dubious of his abilities. So at dawn and sunset I wandered around the desert barefoot and clad in a topee with a loose cotton shirt and pyjama trousers. At other times of the day it was too hot to work in comfort. Cactus bushes were a nuisance, for when I concentrated on my job I took no notice till I fell into a cactus bush. Cactus thorns are sharp and often more than an inch long. I discovered most of those that lay in my path, until my feet soon grew too hard to trouble over such trifles. Scorpions scared me badly, till I learned that a scorpion has no more desire to meet you than you have to make his acquaintance. I did not realize, until later, that there were some risks of sand asps. Of course, everyone thought I was mad, for I did not explain my antics. There is a saying that Allah protects the mad. Certainly I came to no harm.

I finished my dowsing and gave a verbal report to an Aden authority. My report was sufficiently interesting to merit further investigation. A mining engineer was appointed to make a professional survey.

I was in an awkward position. I did not want to butt in or to rob him of his job. But the desert has its hardships and the engineer looked rather frail. I offered him my assistance, but he refused the offer. He was dead within a month.

Other and better methods were employed. It was rather curious that the next professional location was within six feet of my number 2 location; for the water shed seemed to me a large one and I could have given that number 2 location up to two hundred yards further south or three hundred yards eastward.

'To the man who can wait, all doors will ultimately open.' They bored well over a thousand feet and when they seemed ready to make for Australia by underground route, I dropped my hint. The authority deigned to listen to an amateur. 'After the first hundred feet, you knocked a hole in the bottom,' I suggested. I am very much of an amateur and not much of a dowser. The general got his bath all right. That is the main thing.

CORRESPONDENCE

Ivy Lodge,
Thetford,
Norfolk,
15th June, 1934.

Dear Colonel Bell,

You will no doubt be pleased to hear of a very unusual experience and one that will further substantiate my theory of electrical power. I was advising for a new supply at the Kettering Steam Laundry (Mr. P. W. Wilmot) on Monday last, and after searching the whole district, police station, cattle market, churchyard and church, parish hall, the main street, Midland Bank and Messrs. Boots' chemist shop, I found, in all, nine subterranean streams over this wide area, and discovered the head of the spring in the rectory garden close up to the main boundary wall of the laundry. On the other side of the wall, two dynamos were running full speed and I could find no trace of the spring although within two yards of the head the other side of the wall.

I searched the workrooms, which were full of girls, etc., at work, but I could only find a trace of water near the huge boiler. It was a difficult job amongst all this machinery and my twig would not move or respond. So quite innocently Mr. Wilmot said, 'Let me stop the works and give you a chance', and he stopped the two dynamos which were in the room opposite the spring on the other side.

To my surprise and astonishment, my twig twisted and turned over and over much more strongly in this room than in the garden on the other side of the wall; consequently we were

able to tap the spring more fully on their own property. I estimated it to yield 2,000 gallons per hour at a depth of 80 ft.

'There,' I said, 'your dynamos were stronger men than me and stopped my work'. I never had such an experience before in my life, and had these not been stopped I should have said no spring existed on their property and all work would have to be carried out in the rectory garden. If I get another engagement like this, I shall ask that all machinery be stopped at commencement of search. The site being marked △ on the floor the dynamos were started again and I had a very pleasant charge up, like a whiskey and soda, but I did not stay too long.

I checked up my work again next morning, which was very satisfactory, and left for an engagement at Northampton with which I was very disappointed, as after searching five acres for water for sports and pleasure ground and large new swimming bath in the open, water being badly needed for watering tennis courts, I could only find one spring of water in the centre of one of the main streets, useless to us. Fortunately this spring had a strong overflow, so I advised a six-foot well to be sunk on this outlet.

Yours faithfully,

B. TOMPKINS.

In a letter to Mr. Tompkins dated June 25th, Mr. Wilmot says, 'Mr. H. W., an architect of Kettering, who is studying water finding, asked if he could work over our property after you. He was successful in finding the spring in the rectory garden adjoining our wall, but could, at first, get no result over the spot chosen by you. We then stopped the electric motors, when he obtained an immediate result. This shows that he was affected by the running motors in the same way that you were.'—Editor.

ST. PAUL'S VICARAGE,
BURNLEY, LANCS.,
April 10th, 1934.

I give my experience at your request for the benefit of other dowsers: I have read of others who have had similar experiences, but they must be few. In February last, I received a request from a local Vicar who informed me that the Police had advised him to seek my aid to locate a body in a reservoir. I might add that I have been known for some time as a water diviner.

I visited the reservoir known as Jack Kay's Lodge, Darwen, Lancs., which is very deep and rather more than a mile in

circumference. The Police had been grappling for the body for a month without success. I walked on the side of the lake carrying a cap belonging to the missing woman together with a hazel twig, and quite suddenly the stick turned sharply toward the water at right angles. I marked the place on the ground. Then I returned to the police the cap of the missing person, and walked over the same ground, but the stick did not move. I then entered a boat and when fairly near the place marked by me on the bank, I found I could guide the boatman towards it, and when over a certain spot opposite the mark, the stick revolved round violently. Dragging operations were resumed, and a fortnight later I received a communication from the Police thanking me and stating that the body had been found floating twelve to fifteen yards from the spot indicated by me. The body had been in the water six weeks and was discovered where I indicated a fortnight after my visit.

In less than a month the Police again recommended that my aid be sought to locate another body in the same lodge. The Police in this case had been dragging the lodge for two days. I received a pair of gloves belonging to the missing man, and walking along the lake-side with my stick and the gloves, the stick revolved. I parted with the gloves and went over the same ground. The stick revolved again, and I concluded there was an underground inlet of water only, and that it was the water and not a body which was affecting me. I took the gloves again, and after walking on the south side of the lake, suddenly the stick took a sharp turn at right angles. It was a very strong turn, so strong that those watching thought I was being drawn into the water. I was of course close to the edge. I parted again with the gloves, and walked without them, but the stick remained still. I then walked on the west side of the lake, and after about eighteen yards there was another indication from the twig, but not so strong as that on the south bank. I then concluded, and rightly as it proved, that the body was eighteen yards in the water opposite the place marked on the bank on the south side. I waited while a boat was obtained and then I was rowed over the water and the stick revolved violently when I was opposite the mark on the bank. I then helped while the grappling irons were used. The Police were satisfied that they touched the body during these operations, but they could not get the grappling irons to hold. After an hour, work was suspended for the day, but the following day the body was found at the exact place I indicated.

I may add that I purposely went over other parts of the water, and was drawn back to the place near to the mark on the bank—

also that, without any personal articles, the stick was inactive.

In both instances the stick used by me was a hazel twig.

(Rev.) THOMAS WILLIAMS.

107 THORNBURY ROAD,
OSTERLEY, MIDDX.,
June 6th, 1934.

DEAR SIR,

DOWSING WITH ANGLE RODS

During the last 25 years I have frequently accompanied professional and amateur water diviners with a view to locating sites for wells and boreholes, and have been struck by the diversity of the methods employed. Every attempt on my part to emulate the diviner, however, always drew a complete blank.

About 9 months ago, however, I came to hear of a method which, to distinguish it, I call the ' angle rod method '. At the very first attempt I found there was a response and I felt I was holding something in my hand that at any rate appeared to move of its own accord.

It was with much interest therefore that I read Mr. H. O. Busby's letter in the March issue of this year describing his experiences with this method.

At first I used two rods but soon found that only one was really necessary.

Not having studied the subject I cannot attempt to explain why this particular shape of rod should move, more especially when attempts with many other types had utterly failed.

The position of the hands when holding the rods does not appear to be of great moment, but my method is to hold the rod (or rods) with arms bent and hands close to the chest. The rods should be held truly horizontal and parallel, the short portion (which is at right angles to the long portion) being lightly held in the vertical position ; this is most important and some little practice may be required.

The main advantage of this type of rod appears to be that little or no effort is called for beyond a little concentration—so different from the contortions and strainings that frequently accompany other methods.

Any kind of metal rod will serve the purpose, the vertical or gripped part being not less than six inches long, while as for the horizontal part the longer the better within reason. A thin rod also seems to be more responsive than a thick one. The maximum pull is felt over the centre of the stream and the strength

of the stream is roughly gauged by walking at right angles to the line of the stream and marking the spots where the influence first begins to be felt on either side. A really powerful stream can be felt over a distance of several yards when crossing at right angles, the rod being drawn inwards or towards the body. When walking parallel with the line of the stream the outer rod only is affected.

Speaking with all reserve, the method seems to be as reliable as other methods, i.e. good but not infallible. In one case I hopelessly overestimated a supply, but my disappointment was lessened by the fact that a professional water diviner estimated the result at more than double my own findings. Up to the present I have not found a method for estimating depth.

Iron pipes and electric cables, I find, can easily be located provided they are not more than a few feet below the surface, in fact they can quite easily be confused with underground streams.

It would be very helpful if a collection of records where dowsing for water had failed, or apparently failed, could be kept, then by further study and comparisons it might be possible to arrive at the correct solution or trace the cause of the wrong interpretation. Unfortunately my experience has been that dowsers seldom if ever are prepared to admit a failure or incorrect diagnosis, but endeavour to side-step or wriggle out of it in some way.

In conclusion, can anyone inform me as to what bearing and in what proportion, direct or otherwise, the velocity of flow has upon the action of the rod, i.e. would 1,000 gallons per hour travelling at 2 feet per second have exactly the same effect on the rod as 2,000 gallons per hour travelling at 1 foot per second?

Yours truly,

J. P. Le Grand, A.M.I.C.E., F.G.S.

June 9th, 1934.

Dear Sir,

I was greatly interested by the letter from N.S.W. I was in Australia a few years ago and went out to find water on a farm near Sydney, each of us with a galvanised wire as in the illustration. This method seems extremely sensitive and I have found it work for people when the hazel twig does not.

Yours very truly,

Edith M. Harding.

In a further letter Miss Harding says that the measurements of the rod are 4 ins. vertical and 11 ins. horizontal. 'Holding

the short piece with the hand forming a fist, the pointer, i.e. the eleven inches, in a direct line with your nose, slowly walk over the ground. The point will swing round towards the spring. Reverse your steps with the pointer adjusted, the same will happen, to the previous spot indicated, so one can soon find the exact spot to dig.

'I have got two good wells by this method for my own use.

'I do not agree that everyone can become a water diviner.

'I usually wear soles of crepe rubber! But even with these on, it makes not the slightest difference to the actions of twig or wire.'—Editor.

REVIEWS

ZEITSCHRIFT FÜR WÜNSCHELRUTENFORSCHUNG

(*No.* 10/12 *October–December* 1933)

Account of the 19*th Congress of the International Association of Dowsers which was held at Lüneburg from the* 13*th to the* 15*th October*, 1933. The article refers, in a general way, to the course of the proceedings, which are dealt with more fully in subsequent articles.

Besides the usual accounts of phenomena, there appear to have been debates on the possibility of bringing in the official recognition of dowsing as an aid to geology. Two government geologists were present. It is noted with regret that these two gentlemen took no part in the proceedings, as their comments would have been valuable.

The congress concluded with a discussion between two physicians on the theory of disease, as related to irritating influences.

Account of the scientific investigations on dowsing, made during the Lüneburg Congress, by Dr. W. Brauch, Hanover. This article shortly explains why Lüneburg is a singularly favourable spot for investigations in the art of dowsing; and then proceeds to give a short account of the experiments which were carried out. The time allowed for these observations was necessarily very short.

The writer describes eight series of experiments, and gives an account of his conclusions.

Progress of research with the divining rod, by Dr. P. Beyer. This article starts with a brief historical sketch of the growth of

dowsing investigations in various countries. The author pours scorn on a meeting held at Guildford in 1913, at which he seems to think there was more advertisement than work. He says, however, that we must not lose sight of the fact that at that time dowsing in England was treated as a sort of clairvoyance. It was at this congress that the speaker decided that solitary dowsers could not make much headway, and that an organization was necessary.

The article is a long one, and contains much interesting information on the successes of dowsing in Germany, and of the increase in the number of organizations for its study, both in Germany and in other parts of the world (he mentions our own organization).

He ends up by saying that while there was no official recognition of their organization under the old régime, the present authorities recognize the German dowser.

Petroleum, by Dr. Brauch. German production, 0.18 world's yield. The writer points out the great necessity of building up the petrol industry in Germany; and gives a brief account of the work done, and progress achieved by borings in different parts of Germany.

This leads to an account of experiences in the search for petroleum by the diviner's rod. This is of particularly great interest, as the pure geological method 'misses fire' in provinces such as that of N. Germany, where the substrata are covered with débris from the Ice Age. Attempts to use geophysical methods failed in N. Germany, but Dr. Brauch points to many successes on his own part, by dowsing, during the last ten years, in Hanover. His results led to successful borings in Nienhagen, a district which had been previously 'turned down' by the pure geologists. Dr. Brauch summed up by saying that in many cases divining methods are of great value as a help to geologists and geophysicists.

Account of foreign activities, by Dr. Braun-Fernwald.

1. Switzerland. Theory brought forward that diseases are influenced by the earth's electric rays (reference to Larvaron's radio-campimeter and wave emitter).

2. France (Brignoles). Reference again made to Larvaron (neutralization apparatus).

Dr. Regnault pointed out that many most valuable observations and discoveries are made by unlearned people, whose opinions are not hampered by a knowledge of science.

Reference made to *La Chronique des Sourciers* and other work of M. le Vicomte Henri de France.

3. Italy. Cav. Alberto de Vita's electrometer. Prof. Leo Maddalena, head geologist of Italian State Railway, gave direct evidence in favour of diviner's rod.

4. England. Previously the diviner's rod was regarded mainly from the psychological standpoint; but there is now evidence that it is being handled rather from the physiological and physical side (reference to the Society and its President).

5. South America. A very short reference, mainly as regards the influence of various rays on disease.

Is the rod barred? by Dr. Kritzinger. A polemic against opponents of the divining rod. The writer points out that between 1932 and 1933 there has been a marked change in its favour in the opinion both of Press and technicians.

Remarkable observations, by Dr. Braun-Fernwald. Certain remarkable observations on the neutralizing effect of the presence of different oils and other substances. He wishes these observations to be put to the proof, to decide whether he is right, or the victim of self-deception. The matter is of great interest, as oil is used in certain ' de-raying ' apparatus.

Publications of the ' Gesellschaft für Wünschelruten- und Pendelkunde e. V., by Dr. Osswald. Observations with the divining rod.

1. Account of successful locations of water and of testimonials from satisfied users.

2. Observations on depth—gives numerical results—inconclusive in some cases, better in others.

3. Influence on plants. Interesting observations on the occurrence of diseases at specific points fixed by the crossing of lines of force.

4. Lines of force—influence on lower animals—ant heaps lie on the crossing of lines of influence. In S.W. Africa termites and mimosa trees both follow water veins.

Water supply, divining rod and electrometer, by F. D. Schmitz. Refers to an interesting co-ordination in Italy between results obtained by rod and electrometer. The work was done by Cav. Alberto de Vita.

More about earth rays, by Dr. A. Mannlicher. The writer cured many forms of illness with formic acid. He came to the conclusion that possibly these diseases had a common cause, or at least a partially common cause. He thought that diseases of men, animals and plants, all had this common cause. His opinions were pooh-poohed by the light and leading of the scientific world, who classed the idea as chimerical. He refers to a book, *Erdstrahlen, Reizstreifen, und Wünschelrute*, recently published by Dr. Kritzinger.

Dr. Kritzinger also makes a note on this, referring to the agitation against the diviner's rod, and quoting Dr. Blumenthal, a great cancer specialist, who at one time plainly stated ' Up to this very day not a single fact has been established to indicate that earth rays have anything at all to do with the presence of malignant growths '. Dr. Kritzinger says that Dr. Blumenthal has now abandoned this attitude.

C.S.T.

EARTH RAYS AS CAUSES OF DISEASE

By Gustav Freiherr von Pohl, pp. 214; Jos. C. Huber, Munich.

In spite of the great advances in medicine the real cause of cancer has been little investigated by official institutions.

Deaths from cancer are shocking; in 1928 there were 72,529 in Germany, of which urban and rural proportions were as 37.96 to 8.55. Switzerland has the highest percentage, 124.3 per 100,000, England and Wales about middle, Hungary only 45.5.

The connexion with underground waters was first noted by Haviland (London) about fifty years ago.

The author has made an official and exhaustive investigation of the relation between underground water streams and the occurrence of cancer at Vilsbiburg with most satisfactory results. A chart showing both is given. In a village in Swabia most people die of cancer. Illustrated examples are given of cases where severe illness has resulted from sleeping over the confluence of streams. Some people get a special sensation, especially women. The occupation of places for hours in daytime may also have serious effects. In sleep the head should always be towards the north. With animals the same conditions apply, and in a large number of investigated cases sickness caused in this way was cured when the animal was removed to a neutral position. In many cases animals appear to feel these adverse conditions and choose positions free from influence even if less comfortable. Pigeons and fowls are specially susceptible. On the other hand, cats choose positions where rays occur. Bees produce more honey in such places and will swarm there.

It is to be expected that plants might show an effect and this is found to be the case. Only the *sequoia gigantea* appears to be quite immune. The oak is little and the beech much affected by rays. Trees which are so subject are usually crooked and less flourishing. One result of this is that in ancient thick woodland primitive tracks usually follow the course of underground water. Rays affect fruit trees and vegetables considerably but to various extents. As earth currents are stronger at full moon there may

be a connexion between this and the old custom of herbalists of plucking herbs at that season.

Situation with reference to rays is most important in the case of hotels and restaurants and also for wine cellars. Many productions such as beer, cheese, etc., are harmed by rays.

In considering the nature of the rays the author is satisfied they have no connexion with the α, β, or γ rays. Their nature is not yet understood. It has been suggested that they are reflected cosmic rays. In any case they, too, are extremely penetrative and the author finds that thick lead sheeting does not stop them appreciably.

The author has invented and applied for a German patent for a means of counteracting the earth rays. Testimony as to this is given by a number of people, particularly by inhabitants of Dachau, where the tests were made. The method depends on the use of a central electrical station and shows that by the means employed the people in the town are not only cured but kept in good health.

One effect of the rays is that they will induce sterility : another is to stop thunderstorms from crossing flowing water. Storms appeared to avoid the town of Dachau after application of the method. This opens an enormous field for research. Lightning will in general strike where especially strong electronization occurs. Many details and illustrations are given which show connexion between earth rays and the incidence of lightning.

The whole book is full of interest to the dowser and merits the most careful attention and study.

F.H.

EARTH RAYS AND WOODCRAFT

By Dr. J. Kopp.

In dowsing literature earth rays are not infrequently mentioned. Dr. Karl M. Müller in *Der Deutsche Forstbeamte* has published useful data. Earth rays appear as irregular bands, streaks or layers, so the problem is clearly one of small areas and the rays are definitely localized.

All firs are considerably affected and show canker, also knot formation. The oak seems to benefit from the rays and to show canker when these are absent (*cf.* von Pohl). This throws new light on the old problem of mixed oak and beech woods.

Dr. Müller shows that susceptible trees should not be brought into affected positions. The rays are called by some ' geo-pathic '. The nature of the rays is discussed by two physicists,

Drs. P. Dobler and Wimmer, who put the wave length at 0.1 mm. to 20 mm. Dr. Dobler can register them photographically.

The firm of Stehle-Futterknecht has developed an apparatus which will register exactly effects from subterranean water.

F.H.

BULLETIN DE L'ASSOCIATION DES AMIS DE LA RADIESTHÉSIE
(*May* 1934)

An article, *Solar, terrestrial and cosmic radiations*, by Dr. Armand Viré, is a note on a lecture by Dr. Regnault.

Method of instruction in radiesthésie, by Commandant de la Bastide, is the eighth article on the same subject and deals with radiation from living beings. The subject includes diagnosis from photographs and correspondence, and obtaining answers to questions.

Calculation of depth, by C. Brouardis, an explanation of the methods of counting aloud and beating time with the foot and hand.

Study of the radiesthetic fields, by Maurice Alby, explains how the so-called radiant, solar and fundamental planes are really radiesthetic fields.

The *Congrès International de Radiesthésie* is to be held this year at Lausanne from September 16th to 23rd. The programme and arrangements are given. There will be a reduction of fares on railways and at hotels.

A branch of the Association has been started at Marseilles by M. Joseph Rocher.

LES CAPTEURS D'ONDES

A special number (March–April) contains instructions for making the *Balance Pendulaire de Précision*, an apparatus invented by MM. Brard and Gorceix for analyzing substances on the principle originated by the late M. Probst. The use of the apparatus is described in a book published by P. Lechavalier of 12 Rue de Tournon, Paris (vi), price 25 francs.

LA CÔTE D'AZUR MÉDICALE
(*April, May, June, July*)

In the April number there are articles on the 'Geological Structure of the Subsoil' in its relation to the atmospheric electric fields and the human organism, by M. Raimondo Jemma, and on 'Fields of Influence and Telluric Waves', by M. Larvaron; in the May number on the 'Origin of Vital Energy', by the same author;

in the June number on the 'Effect of Ionization on the Human Organism', by A. L. Chijevski of Moscow; in the July number there is a description of a new Radioelectrometer which is sensitive to noises and mechanical vibrations, by Henry Copin, and an article on Radiotellurie, electrical phenomena and emanations, by Lt.-Colonel Comte de Marsay. As a result of a large number of experiments the author has come to the conclusion that two sorts of radiations are given off by substances, one purely electrical which can be appreciated when there is an obstacle between the object and the operator, and the other which can be appreciated when there is no intervening obstacle or when there is contact between the object and the obstacle, but not when there is a space between.

LA PROSPECTION A DISTANCE

(*May, June, July*)

In the May number there is an account of the tracing by M. l'Abbé Mermet of an infant which had been carried off by a bird of prey. In the June number there is a letter from M. Mager on the Bishop's rule for finding depth.

LA CHRONIQUE DES SOURCIERS

(*April, May, June*)

In the April number there is an article on The Mental Ray; in May on Methods of Instruction. June contains a note on M. J. Treyve's method of working.