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FARMS.

WYNDHAM DISTRICT.—270 Acres Freehold in this famous locality for £15 per acre. Good grass, well fenced, watered and subdivided. Five-roomed house, 5-stall stable, with loft, large woolshed, 6-stall cowbyre, sheep yards, etc. This is the cheapest farm offering in Southland to-day. Terms may be arranged.

LOOK AT THIS—395 acres near Woodlands; 45 acres turnips, 100 acres young grass, balance older pasture. This land has been limed and is in great heart. Well watered, fenced, and subdivided. Six-roomed house, stable, cowbyre with milking plant, etc. Price £20. Terms could be arranged.

Here is something good—Five-roomed house; bathroom, washhouse, gas. In good order; situated alongside first section of tram. A cheap home at £550. Terms could be arranged.

If you wish to buy or sell a house or a farm consult me.

F. H. TUCKER,

LAND AGENT.

THE PAPER FAMINE is world wide. Supplies are running low. Take my advice and replenish your stocks while prices are reasonable.

MY PRICES—

LETTER TABLETS, 9d, 1/-, 1/3, 1/6, and 1/9 each.

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FOR COUGHS, COLDS, INFLUENZA
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LADIES . . .

KEEP DOWN YOUR

MILLINERY BILL.

BY USING OUR STRAWINE—

MAKES OLD HATS NEW.

WE HAVE IT IN ALL SHADES.

NOBLE'S

Dee street, Invercargill.

DISGRACEFUL AFFAIR AT CASHMERE SANATORIUM.

ALLEGATIONS NOT DENIED BY THE MINISTER.

Mr McCoombes (Lyttelton), desired to ask a question of the Minister of Defence, without notice, in regard to a complaint he had received from the Christchurch Returned Soldiers' Association as to the disposition of the bodies of patients who died at the Cashmere Military Sanatorium. He had received the following letter from the secretary to the Association on the subject:—

"I was requested to advise you of the fact that the bodies of patients who die in the Cashmere Military Sanatorium are placed in a large shed, which is used as a garage and store for fodder, etc., and no alteration is made therein during the time a corpse is lying there. My Association has protested to the A.D.M.S., Christchurch, who stated that although there was a morgue at the sanatorium, this building was being occupied as sleeping quarters for two medical orderlies. My Association again protested and urged that the morgue be used for the purpose for which it was erected, and the officer-in-charge of the institution has replied that this building 'although built for the purpose of a morgue, has never been used as such, and has never been fitted up for that purpose. Further, there is not sufficient accommodation for these orderlies elsewhere, and their services cannot be dispensed with at present.'

"The patients of this institution feel that the bodies of their comrades who succumbed to this disease should at the very least be treated with respect."

Appeal was now being made to the Minister, and he asked the honourable gentleman if he would do something to remedy the state of affairs revealed in this letter.

HON. SIR HEATON RHODES REPLIES.

The Hon. Sir R. H. Rhodes (Minister of Defence) entirely agreed with the writer of the letter that the body of a soldier who died should be treated with every respect, and as far as he was concerned he would see that the bodies were treated with the respect that should be paid to them. He understood that the shed in which they were placed was suitable as a morgue, but he did not agree that the bodies should be mixed up, as stated, with motor cars, fodder, and other stores. If it were used purely as a morgue it was suitable for the purpose, and he thought it was the only building available. He knew the building that was being erected for the purpose of a morgue, but he was under the impression that it was completed. However, he would take steps to see that due respect was paid to the bodies of those men.

SOLDIERS!

The Invercargill Municipal library are anxious to have a complete file of all publications on transports, or others published by the soldiers. It is fitting and in the interest of all concerned that this file should be obtained, and copies from soldiers will be greatly appreciated. All copies should be accompanied by the sender's full name and address, and will be acknowledged through the columns of "The Digger." We have undertaken to help the librarian in this matter and would appreciate the action of returned men in helping to bring it to a successful issue. Copies can be forwarded to "The Digger," Box 310, Invercargill, or to the Public Library direct.

SHATTERED HOPES.

One day I took a lady friend
To see a Football match.
And oh, the questions that she asked—
They formed a motley batch.

Of course, I did my very best
To make her understand,
The "off-side" rule and all the rest,
"Ah, yes," she said, "it's grand!"

The game waxed fast and furious,
Hazel seemed delighted,
Thought I, "I've made it clear to her,"
Alas! my hopes were blighted.

For just before the whistle blew
One side contrived to score,
And Hazel murmured, "Harry, dear,
What are they cheering for?"

"Because the 'Reds' have got a goal."
"A goal!" quoth my fair friend,
"I thought you said they'd both got one—
Those white posts at each end?"

MOTORING NOTES.

An Invercargill business man informs me of a mixture which he has used successfully on the shield. About equal quantities of glycerine and methylated spirits. Rub on the shield and it is stated to be very satisfactory.

EASY STEERING.

Easy steering of a car is made possible by means of gear reduction between the steering arm and wheel. These gears are generally at the lower end of the steering post, and are arranged so that the hand wheel turns farther than the arm, thus giving more twisting leverage.

A CRACKED WATERJACKET.

A mechanically inclined motorist can do his own mending on a cracked water-jacket by this method. Drill a small hole at each end of the crack and tap it for a small copper plug. Scrape the surfaces near the crack until the metal is bright. Cover the crack with soft copper filings and melt them in with a blow torch. Use a flux of resin dissolved in alcohol.

A WATERPROOF BONNET.

Rain can get through the hinged joint at the top of most "two flap" engine bonnets, and under certain weather conditions such leakages are a cause of trouble. One remedy is to rivet a wide flap of leather or fibre along one side of the hinged joint so that it will overlap the joint when the bonnet is shut. The other is to fix a long narrow sheet of fibre to the bracket which supports the high-tension cables, thus forming a protecting roof over all the plugs. In the absence of such protection it is wise to keep the engine running during any car stoppages in the open while damp conditions prevail. The temperature of the plugs will then evaporate any moisture that falls upon them.

CLEARING OUT BEARINGS.

After long usage, all bearings accumulate dirt which has worked into them from outside, fine metal particles worn from the rubbing surfaces and lubricant which has decomposed either from heat or chemical action into gummy or acid substances. This is true not only of the numerous bearings in housings, but of the ball and roller bearings in wheel hubs, the pins used at spring ends and in the steering gear and the like. Unless this grit and deteriorated oil are frequently removed, they act like abrasive compounds wearing the bearing surfaces rapidly, and it is of little use to supply fresh lubricant until they have been cleaned out, as they remain in new oil or grease and continue their action. For wheel bearings, the best method of cleaning is to remove them and soak them in kerosene, as the same time cleaning out the hubs thoroughly, before putting the bearings back and packing anew.

TO PREVENT TYRE-PUNCTURE.

"It is safe to say that during the last 25 years hundreds of patents have been taken out for the prevention of punctures in pneumatic tyres. In most of them the central idea was to make the tyre impervious to nails and other injurious articles, says 'Chamber's Journal.' A recent inventor approached the problem from a new angle by studying the process by which the nail gets into the tyre. He found that (1) nearly all nails lie flat on the road; (2) in motor cycles and cars 90 per cent. of nail punctures are in the rear tyres; (3) punctures occur most readily at high speeds and on dry roads; (4) the front tyres are pierced by short nails, the rear tyres by long nails.

"From these observed facts he concluded that rear-tyre punctures are caused by the front tyre turning objects on end, with the result that if the rear tyre reaches them before they fall again, it is pierced. Experiments conducted over a track strewn with nails verified this theory; not only were the nails seen to act thus, but they were caught 'red-handed,' as it were, by a high speed camera. The puncture-preventer designed as the outcome of these observations and experiments turns down nails as fast as the front tyre turns them up, and so the rear tyre is saved. The form of it suitable for motor cycles consists of a specially constructed rubber-canvas flap, 3in wide, usually mounted on a scroll spring attached to a curved steel bracket fixed by one bolt through the fore-end of the rear mudguard, but occasionally attached to the silencer or to a special adapter. The flap 'covers' the rear tyre, and clears the road by half an inch. It lasts for about 25,000 miles, and then can be renewed cheaply.

"The puncture-preventer has kept the inventor free from punctures for 25,000 miles: previously he had 47 in 11,000 miles. On one occasion he rode for eleven hours over a track strewn with thousands of nails. So long as the apparatus was in position, no damage was done; when it

was removed rear punctures came thick and fast. Forms of the preventer suitable for motor-cycles are already on the market; models suitable for cars and cycles will be ready shortly."

CLIFTON SETTLEMENT.

CONFERENCE PROMISES GOOD RESULTS.

A conference between the members of the Otago Land Board, the local Farmers' Union, the R.S.A., and the settlers was held at the Clifton estate recently. Those present were:—Messrs Sadd (Commissioner of Crown Lands), G. Livingstone, Inder, Munro (members of Land Board), P. A. Watt, Maze, D. Morgan, J. Barclay, J. Cockburn (Farmers' Union), Simpson (Government Supervisor), and A. C. Laing (secretary of the R.S.A.) A tour was made of the whole settlement, and the amount of work done by the settlers inspected, also investigation was made as to the quality of the land. At the conclusion of the tour the settlers formulated their ideas as to what should be done to make the settlement a success. Mr Watt and the members of the Farmers' Union present also spoke in support of the settlers' request. Briefly the men asked that their holdings be increased, and that in view of the unproductive nature of the land in its primary state some assistance be given them in the matter of remission of rent.

The members of the Land Board expressed themselves as being agreeably surprised at the amount of work that had been accomplished on the settlement, and seemed in accord with the men's contention that the areas were too small. They agreed that even though the rents might be quite reasonable the amount of capital necessary to stock the holdings and purchase implements at present prices placed altogether too heavy a burden upon anyone not possessing much capital.

The visitors left by motor for Balclutha, and caught the five o'clock express.

It was noticeable that the members of the Land Board, together with Mr Sadd, seemed to have been under a complete misapprehension as to the actual conditions existing on the Clifton settlement, and it is anticipated that with the first-hand knowledge they now possess a new era may be expected to begin at Clifton before long.

THE LAND OF CALCIUM.

Hear it now, oh gentle readers,
Hear the tale that I shall tell you,
How the doughty Waiwanawians
Journeyed to the Land of Calcium,
Where they fought a mighty battle,
Yea! a mighty game of football.

There was Whiskers, who was pilot
Of a great and grand canoe;
There was Kraggybrown and Tiny
Who were great and sturdy leaders;
Oh! was over such a leader,
Great, and grand, and strong as Tiny?

Many other warriors were there—
Dan and Jimmy, Tab and Eric,
Many who could play at football,—
In that great and grand canoe.
On we sailed past many lands,
Past the land of Tooti Hooti,
Where are only grassy ridges,
Where dwells the famous correspondent,
Till at last we came to Calcium,
Calcium up upon the hill.

"Here!" said Whiskers, "Here we are!"
As his canoe touched the shore,
So out they stepped, those doughty
warriors.

And dressed themselves in many colours,
Then came forth the tribe of Calcium,
Clad in colours of the rainbow,
Black, and red, and white and blue.

Fierce and willing waged the conflict,
Till at last the sun went down;
When, around about the meadow,
Lay the conquered men of Calcium.
Then uprose Mac the swarthy chieftain,
Saying unto all the warriors,
"Let us hie us to a feast
Over in the meeting place,
Where our women-folk have ready,
Tea and cakes, and scones and dainties."

After all the feast had finished,
After listening to the speeches,
Amid shouts, and cries, and cheering,
We sought out the pilot, Whiskers,
And embarked in his canoe.

Away we sailed from the land of Calcium
Singing songs of joy and gladness;
Past the fields of Tooti Hooti,
To the land of Waiwanawians,
Where the silvery moon was shining.

This, oh readers, is the story,
Told about the doughty warriors,
Whiskers, Kraggy, Tab and Tiny;
And of all the other fellows,
Who at one time or another,
Journeyed in the Grand Canoe.

SCIENCE NOTES.

RADIUM.

Although radium is a very recent discovery, it has arrested public attention to a greater degree than is usually bestowed upon a scientific subject.

Everyone is now familiar with the word at least, which has obtained such widespread recognition, that, besides seeing radium dances, we are buying radium collars, radium stoves, and radium polish.

The remarkable activities of radium are shown on so small a scale in the minute specimens of it which alone exist, that one would hardly expect them to rouse the interest of many who can be easily impressed by the mighty power of the turbines for Southland's hydro-electric scheme or the thousands of miles traversed by wireless messages from New Zealand to Australia.

The fact that the general public have been so widely interested in radium, and so deeply impressed by it, is a remarkable testimony to the high position held at the present time by science, since the public have had to rely for the most part, on their faith in the teachings of scientific men, both for their knowledge of the things radium can do, and for their belief that its doings are surprising and deserving of the most careful attention.

Radium in the early days of our acquaintance with it, appeared to afford a contradiction of two of the most firmly established laws of nature—the conservation of energy to bodies, nor receives it from them.

The law of the conservation of energy means that the total amount of energy in a material system cannot be varied, provided the system neither parts with energy to bodies, or receives it from them.

The persistence of matter is the experimentally obtained fact that no process at the command of man can either destroy or create even a single particle of matter.

Energy, however, it may be changed from one form into another, is never, in our experience destroyed, on the one hand or originated on the other.

Whenever we see energy displayed we can always trace it, if we have sufficient knowledge of the facts, to some previously existing form or forms of energy.

The movement of a railway engine is a transformation of the heat energy of the steam, that is, the movement of the steam molecules striking one another and driving one another farther apart.

This is the transformation of the heat energy of the gases of combustion. The intra-atomic energies which were transformed into a combustion-rush, were themselves transformations of the actinic vibrations of the ether which acted on the leaves of the growing plants out of which the coal was formed.

These actinic vibrations were set up at a distance of many millions of miles by the vibrating particles of the sun.

Radium is now one of the alleged sources of the enormous heat energy of the sun.

Although we are in doubt as to whence and how the sun maintains his enormous heat energy, we are at any rate quite convinced that when a theory on this subject is generally accepted, it will prove to be one more instance of the great law, that, wherever energy appears, it has been transformed from some previous manifestations of energy.

Supposing we take it the other way round, beginning with the sun, and ending with the railway engine referred to, we readily perceive the converse truth that, wherever energy disappears it is not really destroyed but only transformed into some other kind of movement in some other substance.

And here I feel tempted to say something about the "existence of human personality and its survival of bodily death," but fearing that "A," "Jacques," and "John," may cause the Tower of Babel to fall in ruins about my feet, I make haste to return to my theme.

If we examine the matter quantitatively, weighing and measuring energies involved in each successive pair of manifestations we find that the force developed is always exactly equal to that out of which it was transformed.

If the travelling energy of a moving train be added to the friction-heat energy of the wheels, axles, rails and disturbed air, to the heat energy passing through the sides of the boiler into the atmosphere, and to the heat energy imparted to the steam, the gases of combustion and the ashes, it is found that the sum total is exactly equal to the heat developed by the burning fuel.

These notes will be continued next week. What we have said about the indestructibility of matter and the conservation of energy is merely put in plain form and intended as a scientific definition. Those of my readers who know all about radium and radio-activity, will, I trust, exercise their christian charity and bear the infirmities of their weaker brethren.