

MOTORING NOTES.

CAUSE OF SQUEAKING BRAKES.

Worn brake linings may cause the heads of the rivets holding the linings to the bands to strike the drum. This brings the squeak when you apply the brakes. To correct this, remove the bands and sink the rivet heads below the linings, or, if the linings are too thin, renew them.

SQUEAKING WHEELS

The creak and squeak of a wheel going around a corner, or when a car comes to a sudden stop presages danger. Few drivers realise the seriousness of loose spokes. When spokes work loose at the hub, and sudden strain on the wheel, such as turning a corner rapidly, or hitting an obstruction in the road, may cause the total collapse of the wheel, placing the occupants of the car in a very precarious position. To drive a car with creaking wheels is to court disaster. If the trouble is remedied as soon as the squeak develops, the job is usually of no serious nature, and of little expense.

WORKING INTO A SMALL SPACE.

Not one driver in a hundred knows how to work a car into a small space to get near a wall or curb when it is necessary to wedge in between two cars not more than sixteen or twenty feet apart. As a general practice the driver attempts to go into the space head first. It is impossible to work into a place by this method, particularly if the space is limited. The direction of the movement of the car should be a swing to the left and alongside the forward car. This will set your car in a position heading slightly out, making it possible to begin backing into the space between the two stationary cars. The final operation comes in pulling the front end of the car around and getting the front wheels as close to the curb as possible, yet permitting room for swinging out, and then turned out slightly, followed by a straightening movement. Otherwise the body of the car will not come parallel with the curbing.

A NEW USE FOR MOTOR-TRUCKS.

The motor-truck has won new laurels. This time it has scored in the field of motive power for shops and factories which would otherwise be rendered inoperative by the shortage of coal. Two standard 1½-ton truck power plants operated an air compressor in a motor truck factory. The two engines driving the air compressor were taken out of stock and were not limbered up or adjusted in any way. They were rigged up on test stands and belted to the air compressor. They ran at a speed of about 1200 revolutions per minute. The same motor-truck plant made use of its standard five-ton trucks for driving other machinery during the coal famine. These trucks were installed in various parts of the plant, with their front wheels blocked, rear wheels and axles jacked up, and belts attached to the rear wheels. These trucks furnished power to big lathes and heavy milling machines; in fact, it was found that the trucks delivered more power than the regular motive power equipment.

A TANDEM MOTOR-CYCLE.

Details of a striking new design are given in a recent issue of the "Motor Cycle," the salient features of which mark a further step in motor cycle construction which will help to make the two-wheeled vehicle a comfortable and clean mode of transport for two persons. The object of the designer has been to provide a machine equipped with an engine of adequate horse-power to carry two persons and luggage in comfort without reducing the handiness of the machine for use as a solo mount. As the provision of an additional seat forms one of the principal features, stability has received considerable attention. The improvised pillion seat placed on the carrier of a solo machine often necessitates very cautious control, because the passenger's weight is largely in the rear of the back axle. This disadvantage has been rectified in this machine, and, moreover, the lateral stiffness of the rear suspension system forms one of the most striking features. The enclosing of the power unit and transmission has been effected quite satisfactorily by means of metal shields. During the trial run on this machine the absence of rattle was noticeable.

SCIENCE NOTES.

FIREPROOF PAINT.

There has recently been placed on the market a form of paint, two coats of which applied to woodwork, render it, for all practical purposes, non-inflammable. It can be had ready for use in a variety of colours, and admits of the application of varnish or enamel as a final coat without lessening in any way its fire-resisting qualities. The favourable impression made by experiments is confirmed by the offer of at least one English insurance company to make a substantial reduction in its fire insurance premiums where wooden buildings are protected by this paint.

A PHOTOGRAPHIC INVENTION.

A new invention, greatly accelerating speed at which cinematograph films may be taken, has been demonstrated. By means of special electrical apparatus producing 50,000 sparks per second, it is possible to obtain 50,000 different positions of a projectile in the course of its passage through the air. Experts stated hitherto, 2000 photographs per second had been the record. The new discovery means a revolution in experimental science and in medicine, especially in radiography. It will be possible to study circulation of blood, the play of muscles, and everything moving in the body with much greater exactitude.

THE WIRELESS UMBRELLA.

Another stepping-stone along the steady march of wireless progress was disclosed at a meeting of the Wireless Society of London, when Captain Donisthorpe exhibited a new pocket-book wireless receiver. By using this new receiver, it will soon be practicable to walk about in the street, and pick up wireless messages as we go along. To all appearances this pocket-book resembles an ordinary note-book, except that it is rather larger and heavier. If we clip a wire from a small aerial on to one metal corner, and another from a convenient waterpipe on to the other, and push the plug of a pair of telephones into the hinge of the book, we have a wireless receiver complete, which will give us a message from friends across the ocean. The windings of the receiver are concealed in the covers of the book. To use our umbrella as the aerial and our boots as the earth connection is but one more step forward, so that if we carry one of these books with us we need not fear if our watch stops; we shall put up our umbrella, open the book, and pick up the time from the Eiffel Tower.

THE NOISELESS TYPEWRITER.

Few sounds are more nerve-racking than the clatter of typewriters, and it is not surprising, therefore, that many efforts have been made to eliminate this drawback. As a result, a machine has been evolved known as the "Noiseless Typewriter." This appliance is almost silent, only a faint clicking noise being audible. What makes the ordinary typewriter so noisy is the constant succession of hammer-blows given by the type upon the platen roller. When a key is pressed down the type and the sliding frame carrying it shoot out with constantly increasing speed until pulled up with a snap on the paper. In the noiseless typewriter this rate of motion is reversed, the sliding frame travelling fast to begin with, and more and more slowly during the remainder of the stroke, until it has almost stopped by the time the surface of the paper is reached. Just at this point, a tiny weight, which, brought into action automatically, has been gathering momentum during the stroke, comes into play, and presses the type forward. The effect of its working is to produce a strong pressure and to ensure perfect registration on either one or more copies.

OFFICERS N.Z.E.F.

An instruction issued by General Headquarters states that it is noticed that a number of officers on being struck off the strength of the N.Z.E.F. have failed to carry out the instructions laid down, and have omitted to notify the officer commanding the district in which they reside whether they wish to continue their service in the Territorial Force, or be placed on the reserve, etc. Unless the instructions on the point are complied with by September 30, 1920, the officers will be deemed to have resigned their commissions, and will be struck off the strength accordingly.

Nutmegs are kernels of the fruit of a tree cultivated in Sumatra, Java, and the West Indies.

T.B. FACTS.

A short time ago we ("The Digger") had a leading article on T.B. men. What does T.B. mean? T.B. is simply an abbreviation for the words "Tubercular Bacilli," and when used in connection with returned soldiers simply means "men suffering from consumption."

Dr G. J. Blackmore, medical superintendent of the North Canterbury Sanatorium, has evinced a great interest in "T.B." cases among returned soldiers, and, being a specialist in tubercular troubles, a pamphlet he has prepared on "Consumption—How to Prevent It," is of especial value.

Pointing out that the cause of consumption is a germ, Dr. Blackmore states that the disease is not inherited, and the germ may attack any part of the body, but is found most commonly in the lungs. This germ is the sole cause of consumption, and can gain entrance to the body by being inhaled in the form of dust from contaminated hands, or articles placed on the mouth, by kissing a consumptive person on the mouth, and by drinking milk from tuberculous cows.

— How the Germs are Scattered. —

The germs are scattered by boots and shoes (through sputum adhering to them), by skirts, by dusty air (especially indoors), by coughing with uncovered mouth, by soiled handkerchiefs, by public drinking cups, by flies. "The germ of consumption cannot live in the perfectly healthy body," says Dr. Blackmore, "and some of the things which weaken the body and enable the germ to gain a foothold are:—(1) Living and working in badly ventilated places; (2) inhaling irritating particles or fumes; (3) over-fatigue; (4) over-indulgence in alcohol; (5) unwholesome or insufficient food; (6) decayed teeth; (7) weakening diseases. Sunlight and fresh air kill the germs of consumption in a very short time, but they can live for months in dark, damp badly ventilated places. Consumption is not a highly infectious disease. It is not contracted by casual contact with a consumptive person, nor is it carried through the air from person to person. To treat a consumptive person like a leper—if that person is taking precautions—is unjustifiable cruelty. If all the sputum of consumptive persons were destroyed before it became dry the chief source of consumption would be abolished. To avoid contracting the disease: (1) Live, work, and sleep in pure fresh air; (2) keep the windows open night and day; (3) take good food and reasonable exercise; (4) have decayed teeth attended to; (5) be temperate; (6) wash the hands before meals; (7) breathe through the nose. The nose is capable of destroying germs of all kinds; (8) see that flies do not gain access to food and drink; (9) do not sleep in the same room with a consumptive person; (10) do not live in a house which has been occupied by a consumptive until the house has been thoroughly disinfected.

— Simple Precautions. —

"No consumptive need be a danger to other persons if these simple precautions are observed: A consumptive person (1) should not spit anywhere excepting into a spitting cup or flask; (2) should not cough in the direction of another person or over food; (3) should not kiss anyone—especially a child, on the mouth; (4) should sleep alone and, if possible, in a separate room or out of doors; (5) should never sleep in the same room with a child; (6) should use separate table utensils; (7) should not allow rooms he occupies to be dry swept or dusted; (8) should have his bedding put out in the sun frequently; (9) should keep his rooms thoroughly ventilated by night and day, so that they may not become infected and a danger to others. . . . The dust in public houses, schools, public buildings, the churches, theatre, etc., and railway waiting-rooms, has frequently been found to contain the living germs of consumption. Such places should never be cleaned by dry sweeping and dry dusting. In sweeping the floors a damp broom may be used as stated above, or sawdust dampened with a disinfectant should be spread on the floor before sweeping.

— "Delay is Dangerous." —

"Consumption is curable in most cases if treated early. It may be arrested in the more advanced condition, but every day's delay in beginning treatment lessens the chance of recovery. The early symptoms are often very indefinite. The following symptoms may point to the commencement of consumption:— Cough, however slight, if persistent, and especially morning cough; spitting of blood,

whatever the amount or supposed source; loss of flesh; shortness of breath on slight exertion; pain in the chest or side, if persistent; loss of energy, becoming easily tired, feeling "run down"; loss of appetite, especially in the morning; anaemia, bloodlessness, huskiness, if persistent. Any person with one or more of these symptoms should have the chest examined by a doctor, especially if there is consumption in the family or among fellow workers. If you have even the earliest signs of consumption it is better to know it at once. Delay is dangerous.

LAND FOR SETTLEMENT.

AREAS FOR IMMIGRANTS.

CLAIMS OF RETURNED MEN.

FARMERS' UNION OPINION.

The action of the Government in holding all land for returned soldiers was criticised by members of the executive of the Auckland Farmers' Union recently.

In reference to the suggestion that provision should be made for settling some of the immigrants on the land on the block system, together with discharged soldiers, the Under-Secretary for Lands Mr T. N. Brodick, stated in a letter in reply to a communication from the union, that this system had already been tried but had proved very unpopular with returned men. Two large suitable blocks in North Auckland, aggregating about 10,000 acres, were offered for settlement on the block system, but after lying available for about two years without finding any soldiers who were willing to work on them as proposed the scheme had to be abandoned. The selections were allotted to the soldiers in the usual manner, and were immediately selected. The Department had a similar experience in Canterbury. All suitable Crown and settlement lands were set apart for selection by discharged New Zealand soldiers only, and until the wants of these were satisfied it was not likely that any lands would be made available for parties of immigrants.

Mr J. E. Makgill said the reply was most unsatisfactory. Many of the immigrants had to keep themselves until they found employment. If they were given the work of roading these blocks they would be enabled to maintain themselves, and also assist in opening up the land. The Under-Secretary for Lands had mentioned that the land was tied up for New Zealand soldiers. He was satisfied that was an exceedingly bad policy, for the Government was hampering settlement. It was only right for them to look after their soldiers, but to tie up the whole of the land for soldiers was a mistake, for there was a great deal of land that would not be taken up by them. Speaking from memory, he said the Commissioner of Crown Lands for Auckland, in a report, had stated that this policy was hampering settlement, for the board had had to pass over suitable civilian applicants. Why should the Government reject suitable immigrants who required land when the whole country was crying out for settlers and the need for increased production was self-evident? The union should take a strong stand in the matter. He thought that immigrants would be quite prepared to do pioneering work, and the union should urge the Government to put these people on the land. There was far more land than the New Zealand soldiers would take up. The Government was hampering New Zealand getting its fair proportion of immigration from Britain. He moved that the executive affirm the principle that the Government should provide employment for immigrants in opening up the land.

Mr S. C. Lounneaux seconded the motion. He said they all advocated that New Zealand soldiers should have first say, but in many cases they would not take up certain classes of land, which was still being retained for them. That should not be the case. Canada and other countries offered land free to immigrants, and New Zealand, if soldiers did not want the land, should throw it open to other people.

Colonel R. C. Allen said that as a matter of practical politics it would be hard to throw land open to immigrants, for they would never convince the public that the soldiers would not take it up. There would be too much of an outcry.

The chairman, Mr Ross, said that when the idea of settling soldiers on the land was started the union went to a great deal of trouble to ascertain what it would cost. They started with modest views, and now the Government had run into millions. To a very great extent it was of no benefit to the country at all. The Government had bought out the small settler and given him a great price. If it had spent a quarter of the money it would have got the land much cheaper.

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