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A high-contrast, black and white illustration of a mechanical joint washer. The illustration shows a cross-section of the washer, which is a wedge-shaped component with several circular holes. It is shown being inserted into a joint between two metal parts. The background is dark, and the washer and the parts it connects are light, creating a stark contrast.

BUY BRITISH

LANGITE joint washers, having an extraordinary degree of resilience, plus the outstanding advantage of being unaffected by oils and spirits, solve the problem of retaining oil.

Langite is used for joint washers on marine engines; motor car and lorry engines, gear-boxes, axles and hubs: for petrol tank joints

Railway and Road Matters.

THE L.M.S. is making experiments both in England and Scotland with vehicles equipped to spray weed-killer over the tracks as they go along. The weed-killer train consists of an engine, a brake van and a wagon fitted with a large tank and a spray-pipe controlled by a man riding on the wagon.

THE late Sir Herbert Jekyll succeeded, in 1901, Mr. F. J. S. Hopwood as Assistant Secretary, Railway Department, at the Board of Trade, and when the London Traffic Branch was formed in 1907 he was made its chief and remained there until he retired, on reaching the age limit, at the end of 1911.

SPEAKING of a man who was killed in walking home through some sidings instead of by a quite convenient public road, Mr. J. L. M. Moore said in a recent report: "It is almost incredible that men should take such risks, but this regrettable occurrence brings to light the fact that some have done so in the past in spite of warnings and rules to the contrary."

FOLLOWING our note of August 5th, we can now announce that after negotiations lasting twelve years, four trunk-line railway systems in the eastern part of the United States have been merged into one system valued at \$3,000,000,000 (£1,600,000,000 at par). The railways are: The New York Central, the Pennsylvania, the Baltimore and Ohio, and the Chesapeake and Ohio.

A LETTER in *The Times* of October 6th suggests that railways could find a source of economy in omitting the lettering "Railway" from their carriages, e.g., "Southern," instead of "Southern Railway." We may point out in this connection, that Section 121 of the Railway Clauses Act, 1845, requires the owner's name to be painted in legible characters on some conspicuous part of the outside of every such carriage so as to be always open to view."

A MOBILE fleet of thirty "warehouses on wheels," for providing emergency or temporary warehouse accommodation at outlying stations, where there is no warehouse or where the existing accommodation is fully occupied, has been introduced by the L.M.S. Railway in several important areas, including North Wales, Leicester, Bristol, Northampton, and Stoke-on-Trent. These mobile warehouses are converted parcels brake vans or passenger vehicles, and are placed in wayside goods yards with a railway siding adjacent, so that freight can be unloaded direct from the wagons.

THE census of railway servants as on March 12th last, shows that there were 597,971 employed as compared with 615,592 in March, 1931, a decrease of 17,621. The L.M. and S. had, roughly, 7000 less, the L. and N.E. 6000, the Great Western 4000 and the Southern 300. On all the railways there were 1330 fewer drivers and 1342 less firemen, but as an increase of 1099 is recorded in engine cleaners it would seem that many drivers now rack as firemen and firemen as put back to the cleaners' grade. There are 140 fewer permanent way men and 300 less shunters and assistants.

Notes and Memoranda.

THERE are, it is said, 140 million people in the world who listen in to wireless transmission. The value of wireless sets in commission is put at £200,000,000 and the cost of broadcasting at £30,000,000 a year.

THE steelwork of the new sixty-nine-storey Rockefeller building in New York was finished on September 26th. The first foundation grillages were placed on February 8th. The building covers a plot 535ft. by 200ft., and contains 58,500 tons of steel.

A RECIPE for the removal of greasy or dirty finger marks from drawings is given as follows in the *Engineering News-Record*:—Place sheets of blotting paper over and under the stained portion. Lay powdered magnesia on the stain and under it, then press the blotting paper with a hot iron. When the powder is shaken off the stain will be gone.

To blacken brass for templet work, it should, according to C. R. Whitehouse, of Boston, Mass., first be thoroughly cleaned and then heated slowly over a charcoal fire. Care should be taken not to allow the brass to touch the charcoal or to allow any sparks from the charcoal to come in contact with it, as this will cause red spots. As soon as the brass has a slightly red hue, dip it into nitric acid and reheat it until it is just short of being red. Rub it strongly with a stiff bristle brush and clean with a greasy cloth. This gives a dead black finish, permanent enough for any lay-out work.

It would appear from a note in the *Journal of Commerce* that a considerable advance in the technique of soldering aluminium has been achieved by Mr. E. Jones, of the Department of Mechanical Engineering at the University of Liverpool. He uses a sharp-edged bit made of steel, which is surrounded by a Bunsen flame. The bit is used to scrape off the oxide film which naturally forms on the surface of the aluminium, and plain tin is applied to the surface of the metal within the flame. It is said that the tinning of the aluminium is quite effective and obviously provides a basis for a soldered joint.

WORKING in co-operation with refinery engineers of the U.S. Bureau of Mines, O. H. Schoenwald and G. M. Ford have developed a method of removing hydrogen sulphide from natural gas, based on reaction with lime. Treatment of the gas to remove the hydrogen sulphide was accomplished by scrubbing the gas with a solution of sodium chloride and calcium hydroxide. The salt solution appreciably increases the solubility of lime in water up to a certain percentage, and thus a smaller volume is required to remove a given amount of hydrogen sulphide. The treating plant consisted essentially of a scrubbing device for contacting the gas with the solution and a series of tanks for making up or settling the treating solution.

PAVEMENTS and lawns are no longer torn up in Baltimore when the gas company finds it necessary to change the pipes entering the premises of consumers. Instead of digging up the old service pipes for their entire length, with considerable damage to streets and yards, the new

Miscellanea.

It is proposed to construct a bridge across the Krishna River at Karad, in Madras.

A SHIPBREAKING yard is being organised on the premises of Richardson, Duck and Co., at Thornaby-on-Tees.

SINCE the beginning of 1932 thirty-one new manufacturing firms have started business in Greater Vancouver.

A WHALE oil refinery is to be put up at Churchill, Manitoba, by one of the largest soap makers of the world.

THE new mining and technical college, erected at a cost of £110,000, towards which a grant of £15,000 was made from the Miners' Welfare Fund, was opened at Barnsley on October 10th.

A NEW type of the three-motor Fokker monoplane is being produced to enable the Royal Dutch Air Line to fly in five days from Holland to the Dutch East Indies with mails and passengers.

THE Canadian Government proposes to construct a chain of airway landing fields from coast to coast via Halifax, Montreal, Ottawa, Toronto, Winnipeg, Lethbridge, and Vancouver.

THE new bridge which is being built across the Danube near Belgrade is 4900ft. long and about 40ft. wide. It is to carry two railway tracks and two roadways and includes seven spans of 530ft. each.

It is proposed by the Soviet Government to construct a series of power stations on the rivers Vytegra, Meta, and Lovet, in the Valdai district. The largest would be one at Damysansk, of 250,000 kW.

THE first potash concentration factory in the U.S.S.R. is being started in Solikamsk this month. The factory is equipped with the most modern apparatus. Its capacity is 300,000 tons of potash fertiliser a year.

It is proposed by the British Cadastral and Topographic Air Survey Company, Ltd., of London, to organise in Vancouver a plant for the production of accurate maps. It is said that some 300,000 dollars will be expended on the scheme.

A MEMORANDUM on "The Industrial Diseases of Silicosis and Asbestosis" has been issued by the Home Office (Stationery Office, 3d. net). The memorandum states that "respirators can never be regarded as a substitute for exhaust ventilation."

OWING to the success attending the previous competitions, the Institution of Welding Engineers has decided to offer again the gold medal of the Institution and a prize of £10 10s. for the best paper by a working welder on "Improvements in Welding Practice."

WORK has been started on the further development of the Pykara hydro-electric scheme in Madras in connection with a dam across the river near Mukurti, with the object of increasing the storage capacity. So far the work has consisted principally of surveying and boring, and the results are said to be promising.