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MEDFORD MAIL TRIBUNE, MEDFORD, OREGON, MONDAY, FEBRUARY 13, 1911.

To Make Last Tour.

Lime-Sulphur---Its Use as a Fungicide and an Insecticide

-By-Prof. P. J. O'Gara, Pathologist. Written especially for the Medford Mail Tribune. (Copyright, 1911, by Medford Printing Company.)

INSTALLMENT I. Introduction.

and-sulphur dip, first proposed by Mr. Rowe and adopted by the Austra-

This bulletin is written to meet the lian sanitary authorities as official; demands of two classes of fruit grow- this contained 20 5-6 pounds flowers ers; first, those who are more or of sulphur, 10 5-12 pounds fresh less acquainted with the use of lime- slaked lime, and 100 gallons of wasulphur; second, those who have had ter; the South African official limeno orchard practice and may be class- and-sulphur dip which contained 15 ed as beginners. Among those be- pounds of flowers of sulphur, 15 longing to the first class I may say pounds unslaked lime, and 100 gallons of water. much will be found in the bul-

Following these two formulae came letin which will seem to them as a large number of others which were elementary, but, on the whole, enough of the history, chemistry and used throughout Australia, Africa the new uses of lime-sulphur will be and the United States. The states of given to make the matter not only California and Oregon were probainteresting, but instructive. Enough bly among the first to make use of the lime-sulphur as a sheep dip, folof technical matter will be introduced so as to give those who have had lowing the example of the Austracollege work opportunity to easily lian sheep raisers.

Lime-sulphur as an insecticide was find food for thought as well as study. For the growers who have first used for treating sheep scab had no technical training, I may say and no thought was given as to its possible use for keeping insects inthat the bulletin will contain enough of the elements and will lead up juring plants under control. Its use in the orchards of this country came gradually to the technical so that about as an accidental discovery. It they may be able to comprehend the may be stated that some of the first text without any great difficulty. It formulae of lime-sulphur also conwill be so arranged that such matter tained salt, and we find that it was as they may not desire to use for this type of mixture that was used practical purposes may be left out first in Californía as early as 1886. so far as they are concerned. The discovery was made by F. Du-The writer has realized for a long

sey of Fresno, Cal. He tested the time that the fruit growers of the valley have no up-to-date bulleting sheep dip obtained from a neighbor giving instruction as to the use of who had been treating a herd of lime-sulphur, or, for that matter, sheep for scab, thinking that if i fungicides in general. In the numerkilled the lice or scab on sheep. ought to kill insects affecting trees ous lectures which have been given This happy discovery soon became in the past, the writer has also realized that on the whole the growers known quite generally, but the use of of the Rogue River valley are capa- lime-sulphur did not become general for several years afterwards, perble of comprehending technical mathaps for at least ten years or more. ter, either from the lecture platform The first attempts at using lime-sulor from texts and bulletins. In no phur in the eastern states were far other district with which the writer rom successful, largely because litis acquainted does such a condition tle was known as to the best strength obtain. Of course, the reason is selfo use and the best time to apply evident, since a large percentage of the growers are men who have had t. In fact, some of the first tests made by prominent entomologists technical training and have left other were reported as failures and the walks of life where education seemed ecommendations were made that far more necessary to them than is miscible oils, kerosene emulsions and usual with the man who tills the soil. The growers of the Rogue River other sprays were more effective as

scalicide. valley as a whole are therefore fully equipped to carry on their new occuwas put in the orchards of this counpation of fruit growing with much ry was that of destroying scale ingreater intelligence than those who sects, principally of the San Jose have not had the training necessary to the understanding of the technical scale. It has only been within commethods now employed on all suc- paratively recent years that its value cessful farms. The novice in fruit is a fungicide has become such as to

Muse, Nellie Melba, once the peer of all songsters, after an absence off the

Melba, the Queen of Song,

oncert stage of two years is going to make her farewell tour of the United States. Mme. Melba has enough money to retire now, but answering the request of her many friends has promised one more tour. There have been many reports that age has marred the wonderful Melba voice. Patti's farewell tour, it will be recalled, was one of sorrow, for her musical powers had bowed before age.

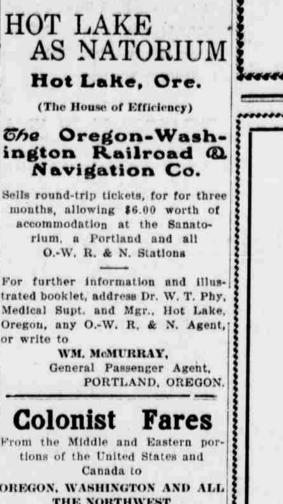
SMITH MERGER GETS \$1,000,000 RAILWAY

SAN FRANCISCO, Feb. 13 .- The East Shore and Suburoan Railway ompany, an electric line that cost \$1,000,000 and furnishes the local passenger connection between Richaond in Contra Costa county and Oakland and other cities in Alameda county, was acquired yesterday by he United Properties company, recently formed, with F. M. Smith as

one of the leading factors. The transfer of the property

over the rom low. POPE REPRESENTED You Can PREPAY Fares AT RYAN OBSEQUIES PHILADELPHIA, Pa., Feb. 13.-With Monsignor Falconio, papal delgate to the United States, present a special representative of the pope. the funeral of the late Archbishop Patrick John Ryan, will be held here on Thursday, Cardinal Gibbons Arhebishops Glennon and Farley and

a dozen bishops will altend. The pontificial high mass will be celebrated by Bishp Prendergast of



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growing in the Rogue River valley usually becomes a well trained horticulturist within a very short time. History of the Use of Sulphur as an Insecticide,

The chemical element sulphur has been known for a great many years, even from very ancient times, having been used as a medicine by the While the present lime-sulphur wash Greeks and Romans. The alchemists considered it an essential portion of all combustible substances and during this period, while credit was given to the phlogiston theory, it was looked upon as a compound of sulphuric acid with phlogiston. Sulphur, of course, is found uncombined and therefore any method for preparing the element from its compounds is of no essentional value in the laboratory. Sulphur, while occurring in the free state in nature, is also found in many of the rocks, and pyrites of iron is often used to secure sulphur. This is done by heating the rock. Rocks containing sulphur, as well as free sulphur, exist in the neighborhood of volcanos and some of the greatest deposits are found in southern Italy and Cicity. Free sulphur Is also found in Louisiana, California and other parts of the United States.

The sulphur which we find upon the market is found in three forms. namely; the flowers of sulphur, flour of sulphur and the stick sulphur or brimstone. The flowers of sulphur consists of sulphur which has been sublimed and is made directly from the crude sulphur or brimstone by heating, causing the sulphur to pass as yet have not been fully developed into a cooling chamber where it do- we may expect in the future many posits upon the walls in a very finely things of great importance to the divided state. It is this grade of sulphur that is commonly used to control grape mildew. The flour of sulphur is nothing more or less than the ground or powdered brimstone. Either the flowers of sulphur or flour of sulphur may be used in the preparation of lime-sulphur,

The use of sulphur as an insecticide dates from the year 1854 and

appears to have been first proposed BERLIN, Feb. 13.-The graves by John Rutherford in New South public alarm for the health and per Wales, Australia. The sulphur was haps the life of Emperor William in combined with tobacco and was felt here today. The uncasiness of known as the tobacco-and-sulphur the people has been increased by a dip, the formula consisting of one pound of tobacco leaves, one pound mass of contradictory statements as of flowers of sulphur, and five impe- to the kalser's illness, and inday no rial gallons of water. This formula one outside court circles really knows was used as a dip for the control of how serious his indisposition is. The sheep scab, which for a long time had ruler's immediate engagements were been one of the great menaces to sheep raising throughout the world, cancelled today and this has accon-Later lime and sulphur were combin- tunted the fear of the populace that ed in various ways and they were a fatal termination of his illness h termed the lime and sulphur dips, not an impossibility, 1.1657 The various lime and sulphur dips

were known as the Victorian lime-

Haskins for Health.

ompare favorably with what tot actually been made, but an agreeways been thought to be the most imnent was reached whereby the Unitportant fungicide, namely, the Borad Properties company can take over feaux mixture. As a matter of fact, he Richmond line at any time, vithin certain limits it may be said

This, it is expected, will be within that lime-sulphur has largely taken few days. the place of Bordeaux, both as a dor-The change in ownership of the mant spray and a summer spray. ast Shore and Suburban means the xtension of the Key Route into Richa recognized as one of the most imand at an early date. portant spray materials, both as a

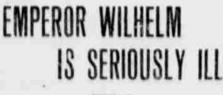
It was reported when the \$200,ontact insecticide and fungicide, it 000,000 merger was announced that s also recognized as one of the most the Key Route would be extended to and of the city to the bay shore, inconvenient and disagreeable. In hat city

act, its disagreeable nature is the only thing that the orchardists of the cresent day have against it. Someone has said that it is the divises. messiest and nastiest spray mixture over invented and perhaps for that reason it is one of the most effec-

tive. The commercial lime-sulphur ompounds have now so largely tak in the place of the home made lime ulphur that the trouble and incon enience of making it has been re noved, but the inconvenience of apdving it still romains. It is possible that in the future we will find mixture or compound which will be just as effective as a fungicide and insecticide, and not have the disagree

The first use to which lime-sulphur

ble nature of lime-sulphur, but, unti such a spray is found, we shall have what you can "get, along to content ourselves with what we al with," use an ordinary paper ready have, namely, one of the best for your business stationery. if not the best all round fungicide and insecticide yet discovered. With the various combinations of lime ing to turn expense into insulphur and other compounds, which vestment, use rull grower and farmer in general



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Philadelphia. Cardinal Gibbons will conduct the services for the dead. Archbishop Glennon will preach. uch matter sent.

FRISCO HOLIDAYS IN HONOR OF EMANCIPATOR

SAN FRANCISCO, Cal., Feb. 13. The postoffice and all banks were closed here today in honor of Lincolu's birthday and appropriate exereises were held in the public schools

There is an extension to the Blake The East Shore and Suburban be- quarry, farther on toward San Pablo, ins at the county line, where it meets as well as a branch line to San Pablo the Oakland Traction road on San and another from Stege to Richmond. Pablo avenue. Running through. In all there are 22 miles of the sysstege, it follows McDonald avenue tem. Its service is already utgrown. in Richmond and on through the Standard Oil refinery at the upper

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