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GEORGE PUTNAM, Editor and Manager



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MEDPORD, OREGON. Metropolis of Southern Oregon and orthern California, and the fastest-Northern California, and the fastest-growing city in Oregon.

Population—U. S. census 1910—8840; estimated, 1911—10,000.

Five hundred thousand dollar Gravity Water System completed, giving finest supply pure mountain water, and 17.3 miles of streets paved.

Postoffice receipts for year ending Miles of streets paved.

Postoffice receipts for year ending November 30, 1911, show increase of 19 per cent.

Banner fruit city in Oregon—Regue River Spitzenberg apples won sweep-stakes prize and title of "Apple King of the World" at the National Apple Show, Spokane, 1909, and a car of Newlowns won

at Canadian International Apple Show, Pirat Prize in 1911 at Spokane National Apple Show won by carlead of Newtowns.

Rogue River pears brought highest prices in all markets of the world during the past six years.

Write Commercial Club, inclosing 6 cents for postage for the finest community pamphlet ever published.

therefore it opposes the just as it would oppose democrats as partisans.

The socialist candidate any other political party

JOLTS AND JINGLES By Ad Brown

When the baby goes to sleep There is quiet about the place 'Sif the mouth of fate were 'sssh-ing At the entire human race.

Father doesn't dare to rumple Up the paper; there he stands. Brother, awful red, succeeds in Choking sneezes in his hands.

Bime-by mother's sure to whisper While her eyes look into mine: "Did you notice, dear, that baby Went to sleep tonight, just fine."

Verify This, Doubters.

A. G. B. Bouquet is professor of horticulture at Corvallis.

Again, note that a man who another arrested for swatting him is hamed Swatzel. _

of privacy. Can't be the same old

A Turbulent Life,

To train his life to melody Decided Mr. Long: But later he discovered he Had snagged a rag time song.

Epitaphs.

The only reason I am here A hunter took Me for a deer. -Detroit Free Press.

The only reason I am dead. I ate "hot dogs," Then went to bed. Birmingham Age-Herald.

The reason why My grave is green, I lit the fire With kerosene.

-Louisville Post. The reason I Am in my tomb A toadstool looked Like a mushroom.

-Houston Post. The reason I Am now no more Is 'cose they wouldn't Shut the door.

-Chico Charley,

The reason I Am going fast; I read these poems Clear to the last.

COMMUNICATIONS.

duties and work. A TAXPAYER.

THE CITY ELECTION.

TOMORROW'S city election is important and every should be on deck to vote for the best man Who this "best man" may be, is not difficult, in most cases, to

The most important office to be filled is that of re-Telfer is not only the best man available, but the best have found that to depend upon smudge alone will not do. city recorder Medford ever had. The city's books are in better shape and affairs are better conducted than ever before. Mr. Telfer's reelection is essential for the continuance of a business administration.

The same observations can be made with reference to the city treasureship. Gus H. Samuels, the present same type is not directly preportional to the diameters of the tops of the Daily average for eleven months end-ing Nevember 30, 1911, 2751.

In the second ward E. C. Ireland, P. E. Wynkoop and Isaae M. Thomas are candidates. The latter is the social- in a more concise way: For fuel pots of the general form of a frustrom ist nominee. Both Messrs, Ireland and Wynkoop have a of a cone, but of varying dimensions and capacities, such as the one and loyal following. Mr. Ireland has been identified with all two gallen Bolton and lard pail types, the square of the product of the undoubtedly make an excellent councilman.

Summerville ought to be elected,

just as it would oppose the election of republicans and burning time.

The socialist candidate is under a worse handicap than any other political party in America ever imposed. He must write out his resignation in advance and give it to lon not. his "local" to present any time his course fails to meet approval of the ruling clique. His individual judgment and initiative is paralyzed from the start—he is reduced to the position of a mere automaton to carry out the will of the "local"-not of the people as expressed at the squared or t(dh) squared equals T(DH) squared, equals K (a constant). polls. It is virtually a restoration of the outgrown tyrannical government by guilds that flourished during the middle ages.

There are many excellent things about socialism, many ideas bound to spread, but this political organization, similar in principal to that which governed during the reign of terror during the French revolution, is not one of them.

As well elect phonographs to office as socialists—for all the individuality or latitude allowed the candidate.

A Test of Fuel Oils

By P. J. O'GARA.

Pathologist and Special Meteorological Observer U. S. Weather Bureau. (Continued from last Saturday.)

This loss was all the way from 8 per cent to nearly 50 per cent. The average loss in the one-gallon Bolton and lard pail type of heater was somewhat more than 12 per cent. In the two-gallon type it was between Roosevelt is demanding the right 8 and 9 per cent. If the crude oil could be laid down for 4 cents per gallon, the high percentage of loss in burning would make the actual cost greater than that of the better grades of fuel oil. The difficulty in handling crude oil should not be overlooked. It is variously estimated by those who have worked with both crude oil and the distillates that the cost of handling the crude oil is fully one-third more than that of the lighter oils. The worst difficulty, and the most serious, is its poor burning qualities which tend to leave so much residue in the fuel pots that their capacity for future fillings is reduced. At best, a pot holding only a gallon is none too large, and under average conditions with the oils used in this test will burn from three and a half to four hours. After the three-hour period is passed the efficiency is not high. Where there may be two or three nights of low temperature following each other, the orehardist has no time to stop to clean his heaters. It is usually a task to refill the pots without having to stop to clean them.

What It Will Cost to Heat an Acre of Orebard.

two pounds of fuel oil per hour per heater, or 100 pounds total per hour the other fuels agreed very closely with the law. per acre. If the fuel is Richmond smudge oil, which weighs 7.84 pounds per gallon, the quantity of oil consumed per hour per acre will not be far from 12 1/2 gallons, which, with an orchard of old trees covering most of the ground, will be sufficient to keep the temperature about five degrees higher than that of the incoming cold air. In a young orchard this quantity of fuel will not raise the temperature much more than a couple of degrees, and if there be an air movement of two to three miles per hour, very little temperature rise will be experienced. The quantity of fuel oil which may be burned in any unit of time will depend upon the size of the orchard heater. This has been shown in another part of the bulletin. In considering the quantity of fuel oil burned in the above example, it is understood that the fuel pot used has a top diameter such that the area is about 44 square faches. It has been found that fuel oil if not too light gravity will burn from such a surface at an average rate of about two pounds per hour. In considering the use of such heaters as have larger areas, it will be understood that they will consume oil at a much greater rate. In the adjustable types the rate may be made anything from practically zero to the maximum, which in the case of the Hamilton, with the cover drawn, will be as high as 8 to 10 pounds or more per hour. It is the unit surface, therefore, that we are considering; a surface of 44 square inches, which is about what we find in the 10-pound lard pail and the one-gation Bolton types.

Disregarding the cost of distributing the oil, which will depend very much on the facilities for handling it, as well as distance necessary to hand it from the tank car, we may say that, with fuel oil coating 4 cents per gallon f. o. b. Medford, each one gallon fuel pot will burn one cent's worth Opinion of a Taxpayer in First Ward. of oil per hour. Now, since it will cost one cent per hour to run a one-I have known L. G. Porter for five gailon heater, it is easy to calculate how much it will cost per hour per Years and will say I can recommend acre for any number of heaters. The total cost per acre for any night's him for councilman in First ward, for heating will, therefore, depend upon the temperature to be maintained, what is his interest is ours, as he as well as the number of hours necessary to continue the heating. Under is a heavy faxpayer and property our conditions, four hours is about the maximum length of time, and the owner, having paid more street pay- number of pots per acre will run all the way from 50 to 125 per acre, ing and sewer and water assessment depending not only upon the age of the trees but the location of the than any other man in Medford. Fur- orchard. We know that temperatures invariably reach a lower point in thermore, Mr. Porter has plenty of some orchards than they do in others because of elevation and air draintime to devote to the duties of this age. Although it is to be understood that a sufficient number of orchard office. Why vote for a man who has heaters should be on hand to meet any emergency, only the number no time to spare away from his own actualty needed to maintain the temperature above the danger point should be lighted. The practice in the past is to begin by lighting, say, Haskins for health. . will * levery other heater or even every third heater, leaving the rest in re-

serve. This plan permits of increasing the quantity of heat given out to the maximum when it is needed.

The Value of a Heavy Smudge to Hold the Heat,

The discussion so far has considered mainly the value of fuel oil citizen who has the welfare of Medford at heart from the standpoint of heating. It may be said, however, that there is some value in the smoke, but much less than there is in the heat. When it is calm, there is little difficulty in maintaining a heavy smudge when only 50 one-gallon pots are burning per acre, but a very light breeze will quickly drive it away. In our experience, the smudge has been valuable where the temperature dropped somewhat below the danger point the time the sun rose. In a case of this kind, the smoke acted as a corder, and there is no doubt in the world that R. W. screen and prevented the too sudden warming up of the trozen fruit. We

Law of Burning for Lard Pail and Bolton Types of Orchard Heaters.

During the course of the experiments a very interesting law of burning r rather fuel consumption, in the common lard pall and Belton types of orchard heaters was worked out. As a matter of fact, the law applies to all pots which have the general form of a frustrum of a cone. In this class we find the lard pail, Bolton, and Hamilton Competition of the various capacities. It is shown that the rate of fuel consumption in pols of the deputy treasurer, who has proved his capacity and effi- pots, or areas of the surface of the oil exposed to the air. The form of the pot, that is to say, its several dimensions, must be considered. With clean pots, burning the same oil under the same conditions, it is found For councilman in the first ward are J. W. Mitchell, that the time required to consume one gallon of fuel oil in the one-gallon L. G. Porter and Frank B. Sankey. The latter is the pot is to the time required to consume one gallon in the two-gallon pot as the square of the product of the mean of the top and bottom diamsocialist nominee. Both Mr. Mitchell and Mr. Porter are eters times the depth of the two-gallon pot is to the square of the product well known citizens and either would make a good coun- of the mean of the top and bottom diameters times the depth of the onegallon pot. In other words, the time of burning a unit quantity of fuel oil in the one and two gallon pots as used in the experiments is inversely proportional to the squares of their dimensions. This law may be stated progressive movements since his residence here and will mean of the top and bottom diameters times the depth multiplied by the time of burning a unit quantity of fuel oil (one gallon) is a constant. It must not be understood that this law will give the exact In the third ward the choice lies between J. T. burning time of the type of pot which is too much out of pro-Summerville and his socialist opponent, D. C. White. Mr. portion as to diameter of pot and depth; but for the Bolton and lard pall types it seems to be fairly accurate, providing the same fuel is burned under exactly similar conditions. In practice it is not so easy to determine The Mail Tribune is opposed to the introduction of the total effective burning time of a pot; this can only be found by having political parties and factional strife in municipal affairs- the burning pot on a scales, thereby noting the decrease in weight. A therefore it opposes the election of socialists as Socialists mere flicker in the bottom of a pot should not be considered in calculating

> The law of burning as stated above may be given in formula as follows: Let "t" be the burning time of one gallon in a one-gallon pot.

Let "T" be the burning time of one gallon in a two-gallon pot.

Let "d" be the mean of the top and bottom diameters of the one-gal

be the mean of the top and bottom diameters of the two

Let "h" be the depth of the one-gallon pot.

Let "H" be the depth of the two-gallon pot Then, according to the law as stated, t:T::(DH) squared : (dh) For those who may wish to see how closely the law coincides with from our experiments. The dimensions of the one-gallon and two-gallon

Diameter of top of one-gallon heater, 714 inches. Diameter of bottom of one-gallon heater, 6 inches, Mean diameter of one-gallon heater, 6 3-4 inches, Depth of one-gallon heater, 8 inches,

lard pail and Bolton heaters as used in the experiments are:

Diameter of top of two-gallon heater, 9 3-4 inches. Diameter of hollom of two-gallon heater, 8 % Inches, Mean diameter of two-gallon heater, 9 inches, Depth of tells-gallon heater, 9 inches.

Observed Burning Time Compared with Burning Time Calculated from Formula. Lard Pail One and Two Gallon Heaters.

TABLE 20							
Fuels-		one gal. in	flime in 2	burning Bo egal, lard ga ie gal, of pa ed	il. iti 2-	gal, lard calculat-	
Slove Distillate Slop Distillate Richmond oil Crude oil	# "	30 minutes 47 50 "	1 hour, 3	0 minutes 1	hour, 31	minutes	

Bolton	One	and	Two	Gallon	Heaters,

TABLE 21.							
Fuels—	time of one	m heat-	time in	burn u g li 2-gal Bof-g ter of one in f fuel oil fo	nl in two	egat. Hot- calculated	
Stove Distillate Slop Destillate Richmond oil	1 2 8	minutes	hour,	30 minutes 1 4256 " 1 4256 " 1	horar, 2	a minutes	

It must be understood that the law considers the fuel pots burning without any device for cutting down the burning surface. The soot arreater causes the burning time to vary very widely. With fuel pots of the lard pail group, the time of burning a unit quantity of oil in any pot larger than the standard, or one-gallon size, which is here taken as the unit, may be calculated very closely by the formula. As a rule the results will be within ten minutes of the actual time required to burn the unit The answer to the question as to what it will cost to heat an acre of quantity, namely, one gallon. It is very difficult to keep conditions always orchard is quite as easy to answer as to tell how far a bird will fly. The the same in a field test; slight wind currents will have a great deal to do only thing that we can give in the way of an answer is the cost per unit with the burning time of any fuel. The only fuel which did not give reof time. With an orchard having, say 50 pots of one-gallon capacity suits fairly in accord with the burning law is the crude oil burned in burning at one time, we know that the fuel consumption is not far from the Bolton heater; this is on account of its poor burning qualities. All

1. The (mal oil most practical for orchard heating is one which is neither of too heavy nor too light gravity. The light gravity oil is usually high in price, and, together with its light weight and rapid burning, is too expensive. The heavy gravity oil does not burn clean, the amount of residuum left as waste often running from 12 to 40 per cent. It is difficult to handle at low temperatures, costing fully one-third more for labor as compared with the lighter oils. The residuem left reduces the capacity of the heater for future filling. This shortens the burning time The oil which has given the best results is one of about 19 to 20 Beaume namely, the Richmond Smudge Oil. The slop distillate has given practically the same results with the exception that in the past some little water has been found in it. The price of these oils is such that it will cost about one cent per hour for burning in the one-gallon or any other heater having a top area of 44 square inches and not provided with any soot arresting device.

(To Be Continued.)

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