

MEDFORD MAIL TRIBUNE

AN INDEPENDENT NEWSPAPER PUBLISHED EVERY AFTERNOON EXCEPT SUNDAY BY THE MEDFORD PRINTING CO.

The Democratic Times, The Medford Mail, The Medford Tribune, The Southern Oregonian, The Ashland Tribune.

Office Mail Tribune Building, 25-27-29 North Fir street; phone, Main 3921; Home 75.

GEORGE PUTNAM, Editor and Manager

Entered as second-class matter at Medford, Oregon, under the act of March 3, 1879.

Official Paper of the City of Medford. Official Paper of Jackson County.

SUBSCRIPTION RATES.

One year, by mail \$5.00. One month, by mail \$1.00. Per month, delivered by carrier in Medford, Jacksonville and Central Point \$1.00.

SATURDAY ONLY, by mail, per year, \$2.00. Weekly, per year \$1.50.

SWORN CIRCULATION.

Daily average for eleven months ending November 30, 1911, 2751.

Full Leased Wire United Press Dispatches.

The Mail Tribune is on sale at the Ferry News Stand, San Francisco, Portland Hotel News Stand, Portland, Bowman News Co., Portland, Ore., W. O. Whitney, Seattle, Wash.

MEDFORD, OREGON.

Metropolis of Southern Oregon and Northern California, and the Eastern growing city of Oregon.

Population—U. S. census 1910—5540; 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 November 30, 1911, show increase of 19 per cent.

Banner fruit city in Oregon—Rogue River Spitzenberg apples won sweepstakes prize and title of "Apple King of the World" at the National Apple Show, Spokane, 1909, and a car of Newtowns won First Prize in 1910.

at Canadian International Apple Show, Vancouver, B. C.

First Prize in 1911 at Spokane National Apple Show won by Rogue River apples.

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

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

JOLTS AND JINGLES By Ad Brown

Old man Umph says, "Al Wanters boy bought a razor Saturday and yesterday dislocated his jaw tryin ter shave."

A strike of laundry workers will take the starch out of things.

Edison says the most important achievement of the year was the discovery by Ehrlich of salvarsin. We think so too, but what is it?

The man who stole my wood has a warm time coming.

The wrestling match between a bulldog and a horse the other day drew an audience that made Frankie Edwards turn green with envy.

The campaign for the nominations is on and still there is no word to rhyme with La Pollette!

A retired circus clown is to make his home near Baker. When he meets with the village cut-ups he will realize that his work has always been amateurish.

Beautiful Ice.

All the newspaper poets, from Gold Hill to Chico, have tackled the beautiful snow theme for all there is in it. It is very easy to write a masterpiece about snow; every time the flakes fall the pen or typewriter itches to get busy—but where is the one who has dared to do this? Ice, ice, beautiful ice, covers the streets and the walks in a trice, Slippery, treacherous, lying in wait For the fellow who, staggering, wanders home late, Tripping Slipping Ripping

Out oaths at the glistening fair Costing of ice that is spread everywhere, You slip and you struggle and shout out in fear To land in a heap with your feet on your ear. Ah, ice is O. K. at so much the chunk But as varnish on sidewalks it's—punk.

Robbing 16 a Habit.

Four bandits sat them down to sup. One said, with yawns between, "Before we go to bed tonight 'Let's rob that train sixteen."

Then spake the youngest of the gang, "I hate to spoil your fun, 'I met it as I came from town, 'The job's already done."

"Oh, never mind," a third one said, "There is no cause for sorrow, 'If you have robbed 16 tonight 'We'll all rob it tomorrow."

Nothing is surer in this world than that a good servant can find a good place through want advertising.

With fair business insight you may make every hour you devote to reading and answering ads PAY YOU.

Haskins for health.

PRINTING WITHOUT INK.

IN NO branch of manufacturing is the progress of the world shown clearer than in printing. In none is there such a bewildering evolution from crudity to perfection, from the rude artisan to the finished artist.

The ancient Greeks, with all their perfection of sculpture, architecture and literature, lacked mechanical genius and failed to give the world its greatest invention. The Romans conquered the earth but could not make water run uphill or print a dodger.

It was left to the plodding and patient Chinese to first invent type—that is printing, just as it was to first produce gun powder. The Chinese have been leaders in original invention and hence must eventually be the dominant nation of the orient—for the Japanese are simply imitators and adapters of the ideas of others.

About the time that Julius Caesar was dividing Gaul into three parts, some fifty years or so before the birth of Jesus, the Chinese were using engraved blocks to stamp their manuscripts. Eastern civilization has since marked time. For fifteen hundred years the Roman empire declined and fell. Europe passed into the hands of the barbarians and the dark ages were not favorable to either progress or invention. Literature was confined to the monasteries, where in meditation and seclusion the monks painfully wrote their parchments and manuscripts, and kept literature alive.

One of these monks, in the thirteenth century, to whom evidently fell the job of designing and coloring the initial letters, must have wearied of the endless repetition of the same characters, for this forgotten genius invented anew the process of engraving blocks for stamping the letters upon the parchments. From this crude beginning, moveable types were evolved to be first made use of by Johannes Gutenberg at Mainz, who in 1448 invented the first printing press.

Gutenberg's ingenious device had many imitators and was gradually improved, although for two centuries and a half the printing press consisted of two plates brought together by a simple hand screw, or a lever took the place of the screw. In the early years of the nineteenth century the cylinder press was invented, and from that day the progress has been exceedingly rapid. Newspaper presses now print tens of thousands an hour and are an expensive and costly affair.

A couple of decades ago Mergenthaler invented the linotype, which mechanically sets and distributes type, enabling one man to do the work of seven. Other type casters followed and today every completely equipped print shop makes its own type in any style or form, and sets it up while you wait.

Every day sees remarkable improvement in all printing machinery. One new press automatically feeds, makes ready and prints, tended only by one pressman, 5000 dodgers an hour. Another does automatic color work in several hues at the rate of 4000 impressions an hour. In fact in color work the artisan has been replaced by the artist—so perfect is the output.

Latest of the many new processes to improve printing is one doing away with ink altogether. This has been successfully accomplished by Cecil Bembridge of London, England, after twenty years of experimental work. It promises to still further revolutionize the industry. His efforts are described as follows in the Pacific Printer:

Bembridge is credited with having first hit upon the idea of printing without ink from observing that the impression of a gold coin was reproduced while he was making an electrical experiment. From the accidental impression of the gold coin Bembridge pursued the same test with silver and copper coins, in every case getting the same results. The imprint was the same brownish black and always perfect, provided one battery wire rested on the coin and the other on the tin plate. If coins could make such an imprint, why not type?

Following his own questionings he produced a few linotype lines of print, assembled them and placed the type face down on a like sheet of moist paper resting upon a like sheet of tin. When the battery wires were connected with the type metal and the tin sheet and current applied every letter showed from the type lines without blur or blemish and in the same shade which had resulted in the experiments with the various coins.

Taking a sheet of zinc in lieu of the tin, again the electrical influences brought the same general effect, though the crudest of hand methods were used in applying the type to the paper. Dry paper was not affected; moisture was required for the proper conductivity.

After proving to his satisfaction that, regardless of the pressure upon the paper in contact, the clearness of the lettering was satisfactory, Bembridge sought to discover a chemical moistener for the papers which would give the jet black effect of ordinary printer's ink and at the same time preserve the whiteness of the paper.

The great trouble was to secure permanency in the electrical imprint. Where permanency appeared possible the cost of the process was abnormally above that of printer's ink. Time and again, under the influence of air and light, either the type disappeared by fading or the whole sheet of paper blackened.

For ten years Bembridge wrestled with the solution of his problem. Today he announces that everything is accomplished and proved, not only in the matter of a jet black print without ink, but asserts that he is able to print a newspaper in all hues of a rainbow with one contact.

As to the presses for turning out the newspaper, they are greatly simplified, the ink troughs and rollers disappearing altogether. The stereotype plate is used and its position on the press is thoroughly insulated below, while the roller surface which guides the moist paper is also insulated. The paper rollers are connected with the positive magnetic pole, while the stereotype plate is linked with the negative and from the electric-chemical action is set up, making the imprint as desired upon the paper.

A Test of Fuel Oils

By P. J. O'GARA.

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

Bolton One-Gallon Orchard Heater (new) Without Soot Arrester. Weight of heater, 14 ounces. Weight of heater plus one gallon stove distillate, 8 pounds, 4 ounces. Index of balance stood at 8 pounds, 4 ounces. Burning time, 4 hours and 13 minutes. Oil burned 118 ounces. Little soot left.

TABLE 14

Table with 4 columns: Time, Weight of pot and oil, Weight of oil burned each ten minutes, Theoretical number of heat units liberated per minute. Data points range from 11:10 a.m. to 3:25 p.m.

Burning time, 4 hours and 13 minutes. Oil burned, 118 ounces. Little soot left.

The stove distillate is chosen for this illustration, and on account of the fact that it was burned where wind currents did not affect the flame, it burned somewhat longer than if it had been in the open. Several other experiments with the other oils used in this test were made and, although the curves are not quite so regular, in the main, the one important fact is shown, and that is the gradual decrease in quantity of oil burned in a unit of time. It is interesting to note that the quantity of oil burned per unit of time increased slightly in the beginning. This is due to the fact that the body of oil beneath the flame was not sufficiently warm to evaporate so rapidly as it did later. After making tests of the different fuel oils with the heaters without soot arresters, another series of tests were made with the soot arresters in place. In the main the same characteristic was noted, with the exception, of course, that the curve is much flatter. This, of course, is due to the increase in burning time. With the two-gallon lard pail type without arrester the burning rate is more uniform. In all the tests that were made, whether during very calm weather or when the wind blew from two to three miles per hour, it was noted that there was a great falling off in the quantity of oil burned per unit of time as the surface of the oil lowered in the pots. Naturally, this falling off was greater in deep pots of rather small diameter. Since the burning characteristic is much the same for pots such as the Bolton, lard pail and Troutman, only one curve is given as an illustration.

Difference in Temperature Between Heated Area and Outside Air—Burning Rate of Oil Compared With Decrease in Temperature Difference.

Mention has been made of the fact that, in the practice of orchard heating under actual conditions, the difference in temperature between the air outside the orchard and that within the heated area does not remain constant, although it may be perfectly calm and with the outside atmospheric temperature running more or less uniform. In going back over the records for the past three years the writer finds that on several occasions the records show that the rate of decrease in the difference between the outside and inside temperatures corresponds very closely with the rate curve of the burning oil as mentioned above. In other words, the decrease in difference in temperature within and without the orchard is due primarily to the decrease in burning rate as the fuel lowers in the pots. Also on nights when the temperature lowered very markedly over a certain length of time the rate of decrease in the differences between outside and inside temperatures as the pots burned could not be accounted for in any other way than because of the uneven rate of fuel consumption. Naturally, as the outside temperature of the incoming air lowered, we would expect, with the same quantity of fuel burning, that a proportionate decrease in temperature within the heated area would take place. However, where this decrease is much more it can only be accounted for by what we have already mentioned, namely, the decrease in burning rate of the fuel oil. Even where there may be a very slight air movement, so long as it is uniform and other factors remain equal, it will not affect conditions in such a way as to cause a non-uniform difference in inside and outside temperatures. It is no easy thing to get data of extreme accuracy under actual conditions of orchard heating. We do not expect it. However, all the data we have, together with much that has been published, point to the conclusion that the falling off in temperature differences toward the late morning, after a night's heating, is due to a decreased rate in fuel consumption which is due directly to the form or makeup of the heater. With those that may be regulated, or have the burning surface always the same, the results are entirely the opposite; namely, no decrease in temperature differences, but rather an increase.

The following data taken from the records in this office will serve as an illustration.

TABLE 15

Table with 5 columns: Time, Temperature out-side of orchard, Temperature in-side of orchard, Difference, Wind Velocity. Data points range from 3:00 a.m. to 6:30 p.m.

Fifty-Five One-Gallon Bolton Heaters Per Acre Burning 14-Gravity Crude Oil, April 14, 1910.

By plotting the time and the differences in temperature we get a curve which is in all respects like that of the one obtained for the burning rate of fuel oil, and which is illustrated herewith. From the data at hand it would be possible to give a good many illustrations like the above, but we feel that what has been given will at least be of sufficient interest to those who may wish to study the subject further, and who may have the opportunity of making future tests.

Cost of Fuel Oils and Burning Qualities Compared.

In the past it has been difficult to secure oils at a reasonable price; the high cost being largely freight charges. More than this, the quality of the oils, with the exception of the high-grade distillates, was such that they could not be depended upon. The so-called crude oil contains too high a percentage of asphaltum, and, besides, may have more or less water mixed with it. The smallest amount of water in a fuel oil will tend to extinguish the flame, or at least cause the pots to boil over. In the tests which were made recently the only oils to boil over were the crude oil and the slop distillate. The Richmond smudge oil and the stove distillate burned uniformly well, and left only a small percentage of residue. In fact, the stove distillate burned quite as clean as kerosene. We are not able at this time to give the exact f. o. b. prices per gallon for these oils, but the following is not far from what they will cost delivered at Medford:

- 1. Stove distillate 6 cents per gallon
2. Richmond smudge oil 4.1 " "
3. Slop distillate 4.3 " "
4. Crude oil 4.5 " "

Comparing the burning time, heat units per gallon, and cost per gallon of each oil, it will be seen that the stove distillate as compared with the Richmond oil and the slop distillate is too expensive. These last-named oils are just as easily handled, and low temperatures do not affect them. The Richmond oil and the slop distillate are very much alike. It is possible that the Richmond oil has a slightly shorter burning time, but on the other hand, there is absolutely no water in it. At this time the difference in cost is an item, but it is possible that a reduction may be had. The crude oil as compared with the other three is wholly out of the question. If the cost of the oil were lower than any of the others, it would still be more expensive to use from the standpoint of efficiency. In all the tests that were made, the loss due to asphaltum residue ran very high.

(To Be Continued.)

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TRADE: 21 acres, 12 acres in alfalfa... \$8,000. 10 acres 4 miles out... 3,000. 160 acres in Sams valley.

MISCELLANEOUS: Team, harness and wagon for sale, \$275. Wanted, to buy a light work team. Some furniture for sale cheap. Furnished houses for rent. Vacant houses in all parts of the city for rent. List your property with us.

EMPLOYMENT: Woman to cook on a ranch. Girls for general housework.

E. F. A. BITTNER ROOM 7, PALM BLOCK Opposite Nash Hotel Phone 4141; Home, 14.

WHERE TO GO TONIGHT

UGO THEATER See large "ad" on other page for Tonight's Attraction. 15c and 5c

STAR THEATRE

ALWAYS IN THE LEAD 4000 Feet of Feature Films

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A NICOTINE CONSPIRACY Clepsy Comedy

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THE LUCK OF RECKLESS REDDY A Rattling Good Western Comedy

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TONIGHT THE CARSON SINGING TRIO Singing everything from ragtime to classics. Splendid harmony.

THREE REELS OF THE LATEST MOTION PICTURES Always one good comedy.

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EAGLE POINT LIVERY STABLE

The undersigned having just completed a large new livery stable in Eagle Point, we invite the traveling public to call and examine our rigs, teams, etc., all being in first-class condition. Our motto is to Live and Let Live. Phone at stable and residence. Call central. S. H. HARNISH & SON, Props.

Seattle Appraisals

Several Medford people have employed us to appraise Seattle real estate. Such appraisal is usually worth more than it costs. Ira J. Dodge of Medford was formerly connected with this office. Other Seattle and Medford references on request. R. C. ERSKINE & COMPANY 206 New York Bldg., Seattle (Charter Member Seattle Real Estate Assn.)

People who make want advertising SERVE THE, on all occasions, do not retain INEFFICIENT workers on their payrolls for very long.

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backed by capital and complete equipment—that's the kind of abstracting we do. A flaw in your title (which might not be shown in a poor abstract) might mean the loss of a profitable sale—it might even mean the loss of your property.

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