

WEEKLY INDUSTRIAL RECORD.

PUBLISHED EVERY MONDAY, DEVOTED TO NAVAL STORES, LUMBER AND MANUFACTURING INTERESTS.

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GOVERNMENT EXPERTS ESTIMATE EASTERN ARIZONA TIMBER.

Albuquerque, Sept. 4.—A party of five timber experts is just completing a comprehensive and detailed estimate of a portion of the timber resources of the Sitgreaves National Forest in east central Arizona. The immediate object of the estimate is to determine accurately just how much timber would be available if a railroad were built from Holbrook to make the timber accessible and to enable forest officers to handle promptly applications to purchase.

According to the plan under which this work is being carried on, a careful estimate of the total standing timber on each 40-acre tract is obtained, and a detailed report will be prepared showing the amount of merchantable timber available for sale. An accurate topographic map of the area furnishes just the information a lumberman would require in determining the practicability of logging the tract from a lumberman's standpoint.

This work has been carried on with good economy by D. W. Adams, the expert lumberman who has charge of the party. During the month of August, the estimating cost approximately .8 of a cent per acre, and since the work commenced there has been cruised more than one billion, ninety-one million feet board measure, at an average expense of .7 of a cent per acre, or only 13-100 of a cent per M.

In addition to the timber estimators who carry on the work, the field party includes a cook and teamster, and the entire camp outfit is moved every three or four days as the work progresses, in order that no time may be lost in going to and from work.

The estimate data and other information which will be obtained as a result of the work of this party will be of the greatest importance to the Forest Service in handling the timber resources of this locality.

All the necessary information for the regulation of timber cutting will be in such shape as to enable the Forest officers to handle promptly applications to purchase timber and to regulate the location and amount of sales made with a view to avoiding any possible danger of overcutting the forest. The timber is of good quality and offers an attractive opportunity for an enterprising lumberman.

BIG PACKING HOUSE AT FT. MYERS.

The Lee County Packing Company, composed of several prominent orange growers, will erect a large modern packing house at Fort Myers to handle next season's crop. It will be 131x250 feet in area, two stories in height, and will cost about \$25,000. It will be furnished with the most approved machinery, and will be conveniently located on the Caloosahatchee river so as to be reached by growers all up and down the river. The Atlantic Coast Line will run a spur to the house

THE UTILIZATION OF WOOD WASTE BY STEAM DISTILLATION.

(Copy from V. T. M. Co.)

It is not generally known, but it is a fact, that any manufacturing plant using the Southern pine wood for fuel, can, at a normal cost, extract the turpentine from the wood in sufficient quantities to more than pay for the cost of the wood. After the turpentine has been extracted the wood is a better fuel and will give more heat units per cord than before, because all wood contains more or less moisture, and in extracting the turpentine this moisture is removed also. Another reason it gives out more heat is that chipped wood burns better and hotter than large wood. To extract the turpentine the wood is first put through a chipping machine.

The quantity of turpentine obtained is governed by the quality of the wood. Fat lightwood yields from 10 to 15 gallons per cord.

A turpentine extracting outfit located at a steam plant using 10 cords of wood per day would under usual conditions, cost about \$5,000, more or less, according to existing conditions. Such a plant could be operated at an expense of \$5.00 per day.

Turpentine extracting plants are being used profitably in the clearing of lands. The young pine trees, together with the tops and stumps left from the salable timber and the lightwood on the ground, are all utilized by the extracting plant and the turpentine recovered largely pays for the cost of clearing the property.

One company in Florida is now clearing a considerable acreage in this way. Pine stumps are very resinous and will yield 15 to 20 gallons per cord.

With a tract of land, owned or leased, of a few thousand acres, on which there is a supply of dead pine wood or standing timber, a profitable business can be conducted in extracting the turpentine from this wood. The chipped wood can always be sold for fuel to some nearby steam plant. As this chipped wood is a better fuel, it will sell for as much or more per cord than regular cordwood. Thus the turpentine will represent a clear profit. If there is a market for Gas or Electricity near the plant, the chipped wood can be turned into this very profitably.

One of the largest and unlimited fields for the utilization of the wood after the turpentine has been extracted, is in the making of paper, pulp board, or paper pulp. The Southern pine or any other resinous wood, when properly treated, can be manufactured into the best grades of wood fibre board or wrapping paper, and it is worth from \$40.00 to \$75.00 per ton.

Turpentine operators having finished their crops can extract the turpentine from the lightwood stumps and young pine upon the property and realize more profit than was obtained from the boxing opera-

tions, even if no disposition was made of the chipped wood.

The Victoria Turpentine Machine Company, Jacksonville, Florida, manufacture all kinds of turpentine extracting machinery, and for all purposes, including retorts, condensers, tanks, stills and worms, refiners, hogs or grinders, conveyors, engines, boilers, and in fact everything needed for a complete turpentine plant.

They will furnish estimates on a complete outfit or any part of it. They make a specialty of contracting, at a fixed price, for the furnishing, erecting and starting in operation of complete extracting plants. Correspondence solicited.

PROTECTING GROVES BY MEANS OF HEATING APPARATUS.

The production of oranges in Florida is reaching the output as it was before the big freeze, and as the production increases, and the time lengthens since that disastrous year, apprehension of another killing freeze in this state arises. Indeed there are many growers who always have this possibility before them, and this is the great excuse for rushing off the crop early in the season, and the consequent shipping of much that is unripe and unfit for marketing.

Florida growers, however, are not the only ones who suffer from the menace of unseasonable cold weather. In all parts of the country—even in Southern California, the nipping winds are apt to blow and cut short the expected crop.

This condition has encouraged the invention of numerous appliances to ward off the cold. Some of these have been used with great success, as in Colorado, last year, the Troutman orchard heater, an oil burning fire pot, was used very extensively in many localities. These pots are set among the trees at the rate of from 60 to 100 to the acre. Each holds 5 quarts of oil, and will maintain a hot smudge for seven hours, raising the temperature from 6 to 10 degrees above the normal. In orange groves the Troutman heater is most effective, as the foliage of the trees largely prevents the dissipation of the heat. These heaters are also very useful in protecting growing vegetable crops from freezing and every grower in the state above the frost line should keep a supply of them always ready for use.

HEAVY DRAINS ON NATION'S FORESTS.

"The total yearly drain upon our forests, not counting losses from fires, storms, and insects, is some twenty billion cubic feet," says R. S. Kellogg, assistant forester in charge of the office of forest statistics, in a publication just issued by the Forest Service on "The Timber Supply of the United States."

"Our present forest area of 550 million acres may be roughly estimated to consist of 200 million acres of mature forests, in which the annual growth is balanced by death and decay, of 250 million acres partially cut or burned over, on which, with reasonable care, there is sufficient young growth to produce in the course of time a merchantable, but not a full crop of timber, and 100 million acres of more severely cut and burned over forests, on which there is not sufficient young growth to produce another crop of much value.

"Taken as a whole, the annual growth of our forests under these conditions does not exceed twelve cubic feet per acre, a total of less than seven billion cubic feet. That is, we are cutting our forests three times as fast as they are growing. There is menace in the continuance of such conditions. While we might never reach absolute timber exhaustion, the unrestricted exploitation of our forests in the past has already had serious effects, and it will have much worse if it is allowed to continue unchecked.

"White pine, for instance, which was once considered inexhaustible, has fallen off seventy per cent in cut since 1890, and more than forty-five per cent in cut since 1900. The cut of oak, our most valuable hardwood lumber, has decreased sixteen per cent since 1900, and that of yellow poplar twenty-two per cent. The same story will be told of other woods if they are not conserved.

"The fact that timber has been cheap and abundant has made us careless of its production and reckless in its use. We take 250 cubic feet of wood per capita annually from our forests, while Germany uses only thirty-seven cubic feet, and France but twenty-five. On the other hand, Germany, who has learned her lesson, makes her state forests produce an average of forty-eight cubic feet of wood per acre. We have as fast growing species as Germany, or faster, and as good or better forest soil if we protect it.

"The necessity for more farm land may eventually reduce our total forest area to 100 million acres less than it is at present. It is entirely possible, however, to produce on 450 million acres as much wood as a population much greater than we have will really need if all the forest land is brought to its highest producing capacity and if the product is economically and completely utilized. But to reach the necessary condition of equilibrium between timber production and consumption will take many years of vigorous effort by individual forest owners, by the states, and by the national government. None of them can solve the problem alone; all must work together."