

the start. We have found it advantageous to so lay in a few pieces of bark or other material that there will be openings left around near the ground-line to admit the air.

The fuel-oils may be had very cheaply wherever they are used for fuel in factories, steamboats, or railroad engines, costing about \$3 when bought by the barrel, but as little as 90 cents per barrel in quantities. One barrel of oil used as we have suggested is sufficient for from twenty to thirty average stumps, and where one can use his time to advantage, this is about as cheap a fuel as one could get by any method of preparing fuel. There is a further advantage in the fact that oil is a concentrated fuel and permits the maximum heat-production in the minimum space.

It has been our observation that light-coloured clay soils are stronger reflectors of heat and the fire seems to burn better and faster than with the darker-coloured soil.

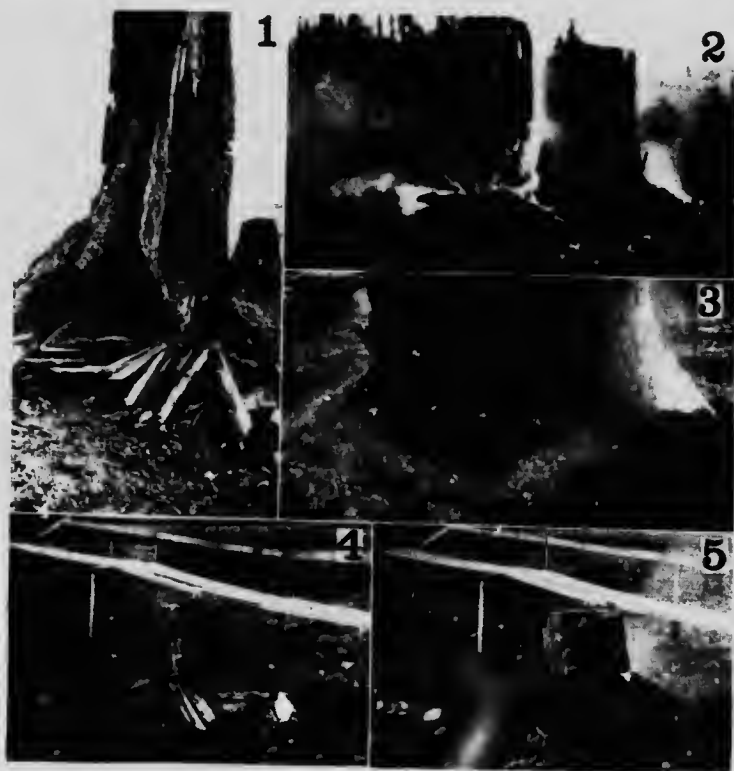


PLATE 1.—Methods of preparing stumps for char-pitting.

- Fig. 1. Kindling in place, ready for covering. Note arch at opening to be left uncovered until fire is going well.
- Fig. 2. Kindling covered and fired. These stumps were fired only on one side. As the fire works around the stump it must be kept covered to prevent loss of heat.
- Fig. 3. Stump ten hours after firing, showing how the fire cuts into the stump. This must be followed closely by earth covering.
- Fig. 4. Stump growing in sandy soil, with kindling arranged ready for artificial covering.
- Fig. 5. The same stump as shown in Fig. 1, covered with coarse coal clinders, ready for firing. After fuel is well kindled, opening must also be covered.