

# United States Patent Office.

IRA BICKNELL, OF CINCINNATI, OHIO.

Letters Patent No. 92,003, dated June 29, 1869.

## IMPROVED FUEL.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, IRA BICKNELL, of the city of Cincinnati, Hamilton county, Ohio, have invented a new and improved Fire-Kindling; and I do hereby declare the following to be a full and exact description thereof.

The nature of my invention consists in saturating wood with petroleum or any inflammable fluids or oils, and sizing or coating the same with rosin, or pitch, beeswax, and paraffine, filling the strata and pores of the wood, so as to preserve from evaporation the absorbed ingredient.

As a matter of economy, I take the waste wood or offal from saw-mills, planing-mills, or any wood-working establishment, and prepare the same by the use of a circular saw, cutting it to any given lengths, and splitting the same as fine as is required for the purpose intended. I then provide two kettles or tanks, of any given capacity for convenience, corresponding to the quantity to be made—No. 1 for saturating, and No. 2 for sizing or coating.

Now, take one barrel, more or less, of refined coal-oil, and put it into kettle or tank No. 1. Now, take the prepared wood, it having been sawed and split, and put it into the kettle or tank of oil, and thoroughly wet, or immerse the same. Then remove it from the kettle, or tank, by means of wire scoops or otherwise, and place it upon a grating to drain, and as soon as the wood becomes dry upon its surface, (requiring only a short time,) it is then ready for sizing or coating.

Now, take kettle, or tank No. 2, set and arranged

for heating. Put into the same, one hundred pounds of rosin or pitch. Melt and dissolve the same over a moderate fire. Then add twenty gallons of refined coal-oil, five pounds of beeswax, and five pounds of paraffine, and mix them well together, and heat the same until boiling. Then take the saturated wood and put it into the boiling liquid, and wet it thoroughly in the same. Then remove the wood from the kettle or tank. Care should be taken to keep the liquid at a uniform boiling-temperature during the process of coating.

The composition above described fills the strata and pores, and so sizes or coats the wood that it will preserve from evaporation the absorbed burning-fluid or oils.

The process of saturating and sizing or coating may be performed at one operation.

I do not confine myself to the exact proportions given, nor to refined coal-oil, as any inflammable fluid or oils may be used in saturating; nor to rosin or pitch, as any resinous substances may be used.

What I claim as my invention, and desire to secure by Letters Patent, is—

A fire-kindling, composed of wood saturated with petroleum, or its equivalents, and sized or coated with rosin or pitch, beeswax, and paraffine, to prevent its evaporation, or any other substantially the same, and will produce the same effect.

IRA BICKNELL.

Witnesses:

V. SCHWAR,  
THOS. MCLEAN.