



BENJAMIN IRVING, OF NEW YORK, N. Y.

Letters Patent No. 83,066, dated October 13, 1868.

IMPROVED FUEL FROM SPENT TAN-BARK

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, BENJAMIN IRVING, of the city, county, and State of New York, have invented a new Manufacture, or Method or Process of Making Compressed Fuel from Refuse or Spent Tan-Bark; and I do hereby declare the following to be a full description of the same.

As a preliminary to the more particular description of my invention, it may not be deemed improper to explain that my invention is based upon certain other improvements, made and patented by me, relating to the treating of bark for obtaining the extract therefrom, in contradistinction to the old plan of chipping up bark, and leaching it in vats, to obtain the extract.

By this old method of treating bark, the refuse becomes waste, and is generally a nuisance about the tannery, as it is impracticable to burn it; or to form it into any shape that it can be made to burn to advantage. My invention, therefore, is to utilize the spent tan-bark by making it into fuel. This is accomplished in the following manner:

The bark is soaked in water, either hot or cold, as deemed best. When thus properly soaked, it is fed into a series of pressure-rollers, and through certain water-baths, until it is thoroughly crushed, for the purpose of obtaining the tannin therefrom, substantially as described in my patent of April 30, 1867, No. 64,323.

When thus treated, the bark is discharged from the machine in the shape of a flocky, fibrous mass of wood.

As soon as it comes from the machine, it is collected into suitable hoppers, and delivered to a press, in which it is formed into blocks, or any other suitable form, for convenient size for transportation, and for making a lively fire in the grate or furnace.

It will be obvious that the slight amount of moisture retained in the fibrous mass after leaving the crushing-rollers, and the fibrous character of it, enable it to be compressed rapidly into any required form, and, at the same time, so solidly and toughly, by the infinite commingling of the fibres of the material, as to make it retain its form when ignited in the grate or furnace, and form thereby a bed of living coals, to sustain a quick and lively fire, whether for cooking-purposes, or for generating steam.

Having now described my invention, I will proceed to set forth what I claim, and desire to secure by Letters Patent of the United States.

I claim the new manufacture of compressed fuel from spent or refuse tan-bark, by the method or process of forming it into blocks, or other suitable shapes, for fuel and transportation, substantially as hereinbefore described.

Witnesses:

FRANKLIN BARRITT,
CHARLES L. BARRITT.

B. IRVING.