

# UNITED STATES PATENT OFFICE.

WILLIAM S. TISDALE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS  
RIGHT TO WILLIAM HELLINS, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN KINDLING MATERIALS.

Specification forming part of Letters Patent No. **159,001**, dated January 19, 1875; application filed  
June 9, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM S. TISDALE, of the city of New York and State of New York, have invented an Improved Kindling and Self-Igniting Fuel; and I hereby declare that the following is a full, clear, and exact description thereof.

The object of this invention is to provide an improved article of fuel for domestic and other purposes, which will readily and easily ignite, and which, when ignited, will burn for a considerable length of time, and produce a large degree of heat, so that it may be used either alone as a fuel, or, in connection with anthracite and bituminous coal, as a kindling, and which may be produced and sold at a small cost.

My said improved kindling and self-igniting fuel consists of dried condensed peat as a basis, which I cover with a thin coating of common rosin, with which a small percentage of common bees-wax has been mixed. The proportions of bees-wax and rosin which produce the best results are about fifty or sixty parts of rosin to one part of bees-wax. This admixture of bees-wax with the rosin removes the brittleness of the latter, and imparts a certain degree of toughness, which prevents its wearing off by abrasion, thus forming a hard smooth surface, which resists moisture and will not soil the fingers.

The peat is first thoroughly cut, bruised, and condensed by means of any suitable machinery, so that, when dried, it will form a hard compact substance, and, after being thoroughly dried in blocks or pieces of convenient size, is dipped into or otherwise covered with the mixture of rosin and bees-wax while the latter is heated to a fluid state, and the said mixture adheres to the peat, and dries thereon, forming a hard coating.

In the preparation of my improved kindling-fuel, I use about one part of bees-wax to fifty or sixty parts of rosin, which I mix together while heated, and apply to the surface of the peat.

This fuel possesses the following several advantages: It may be manufactured and sold at a very cheap rate, the price per ton not exceeding that of anthracite coal. It may be used as an ordinary kindling, in connection

with coal, for which purpose a very small quantity is required to start a fire; or, it may be used with advantage as a substitute for coal, especially in hot weather, when it is desirable that the fire should go out when not required for cooking, as with this fuel a fire may be got up in a few minutes with very little trouble, and a given quantity of it will burn longer and make a hotter fire than the same quantity of anthracite coal; and it possesses the further advantage of producing but a very small quantity of ashes and no disagreeable and injurious gases and smoke; and I may also mention that peat will not form or deposit clinkers upon the sides or brick-work of the fire-chambers in stoves, and, being nearly or quite free from sulphur, will not destroy the grate-bars or other iron exposed to its action.

I am aware that various substances have heretofore been used in connection with peat for making kindling-fuel, some of such substances having sometimes been incorporated with the peat, and at other times applied as a coating. Most of these substances being of an oily nature, penetrate into the peat, and render it soft and friable, and inconvenient to handle. I am also aware that rosin alone has been used as a coating, but this, being very brittle, is easily chipped off or removed by abrasion. But I am not aware that an admixture of rosin and bees-wax has ever before been used in connection with condensed peat, as an outer coating for the same; and this admixture produces a hard, tough, inflammable surface, which is impervious to water, and is not readily chipped off, and the fuel thus produced needs no greater care, either in storage or in handling, than does common coal.

What I claim as my invention is—

The improved kindling and self-igniting fuel herein described, consisting of dried condensed peat, covered with an outer coating of rosin and bees-wax in about the proportions herein specified.

WILLIAM S. TISDALE.

Witnesses:

JOHN S. THORNTON,  
ROBERT GRANT.