

# UNITED STATES PATENT OFFICE.

A. VAN CAMP, OF WASHINGTON CITY, DISTRICT OF COLUMBIA.

## IMPROVED COMPOSITION FOR FIRE-KINDLING.

Specification forming part of Letters Patent No. 87,734, dated March 9, 1869.

*To all whom it may concern:*

Be it known that I, A. VAN CAMP, of Washington city, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in Fire-Kindling, which I call "The Vesuvius Kindler;" and I do hereby declare that the following is a full, clear, and exact description of the same.

I am aware that many attempts have been essayed to produce an artificial fuel than can be advantageously used as a fire-kindler; but notwithstanding the numerous combinations before the public, all aiming to accomplish the desired result, viz., a rapid and durable kindler, many of which are protected by Letters Patent, still you scarcely ever find a kindler in domestic use, or, indeed, offered for sale in the market. Many reasons might be assigned for the want of popularity that has attended all former attempts, among the most prominent of which may be mentioned the following: They are either too expensive or do not burn with that degree of intensity that will insure the proper igniting of the fuel.

My Vesuvius kindler is highly inflammable, burns with great intensity, and a small block will last sufficiently long to insure the proper igniting of any fire, no matter whether the fuel used be the greenest wood or the hardest coal; and the ingredients used, and which form the basis of my invention, are known to be of such a character that they can readily be obtained in any desired quantity, and at a most trifling expense.

The ingredients used by me in forming my improved artificial fuel or Vesuvius kindler are pulverized corn-cob, bituminous-coal siftings, (commonly known as coal-dust,) pitch, (pine,) coal-tar, tan-bark, (fiber,) peat, and turpentine. In grain-growing sections the cobs can almost be had for the mere expense of hauling. Now, it is an admitted fact that the cob possesses more caloric than any other known fuel, while at the mines and at coal-yards large masses of fine coal, known as coal-dust, accumulate and are almost, if not entirely, useless. This dust is composed of fine particles of coal, and is entirely free from slate and all other injurious foreign matter, and burns with the greatest intensity. The tan-bark at the tannery is comparatively valueless, and, owing to its fibrous formation, when united with the other ingre-

dients, burns freely, but at the same time adds greatly to the durability or lasting qualities of the kindling-block.

Now, it will be seen by the formula hereinafter introduced that these ingredients, viz., corn-cobs, coal-dust, and tan-bark, compose nearly one-half the block; therefore, it will readily be seen at what a small expense the block can be furnished to the market, especially when the fact is borne in mind that the other or inflammable ingredients used are such as can be the most readily obtained, and at the smallest possible cost.

To enable others skilled in the art to make and use my improved artificial fuel or fire-kindler, I will now proceed to describe its combination, construction, and operation.

In combining the ingredients I have found the following formula to admirably answer the desired purpose: Pulverized corn-cob, three parts; bituminous coal-siftings, (commonly known as coal-dust,) three parts; tan-bark, (fiber,) three parts; pitch, (pine,) three parts; coal-tar, four parts; peat, two parts; turpentine, two parts.

Of course this formula can be varied, and the proportion of either of the above increased or lessened without affecting the invention.

The cob is crushed or pulverized by any known means. Many crushing-machines are now in use that can be advantageously used. The object is not exactly to reduce the cob to a powder or flour, but to leave the same in small lumps about the size of an ordinary white bean or pea. The coal-dust and tan-bark are then added. In a suitable vessel the other ingredients are then placed, and when the same are reduced to a proper consistency, the compound of corn-cob, coal, and tan-bark is added, and all thoroughly agitated and mixed. They are then allowed to remain sufficiently long to allow the compound to absorb the liquid or mucilaginous substance to such an extent as to prevent its running or leaching when removed for the purpose of caking or molding. If allowed to remain a few hours in the mixing vessel or tub this operation is greatly facilitated. It is then caked or molded. So soon as the mixed composition is conveyed to the molds a slight degree of pressure can be most advantageously applied.

I apply my kindler differently from others



now in use. Instead of placing the kindler under the fuel, I introduce it into the body of the same, and then ignite. The result is that small particles or sparks fly off in different directions, thus soon carrying the flame throughout the entire mass.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent of the United States, is—

1. An artificial fuel or kindler, when pulverized corn-cob, coal-dust, and tan-bark are used as a basis, and are united with suitable inflammable ingredients, substantially as described, as and for the purpose specified.

2. An artificial fuel or kindler, when the same is composed of the ingredients herein stated, and the whole is so combined and arranged as to operate substantially as described, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

A. VAN CAMP.

Witnesses:

EDWIN JAMES,

EDM. F. BROWN.