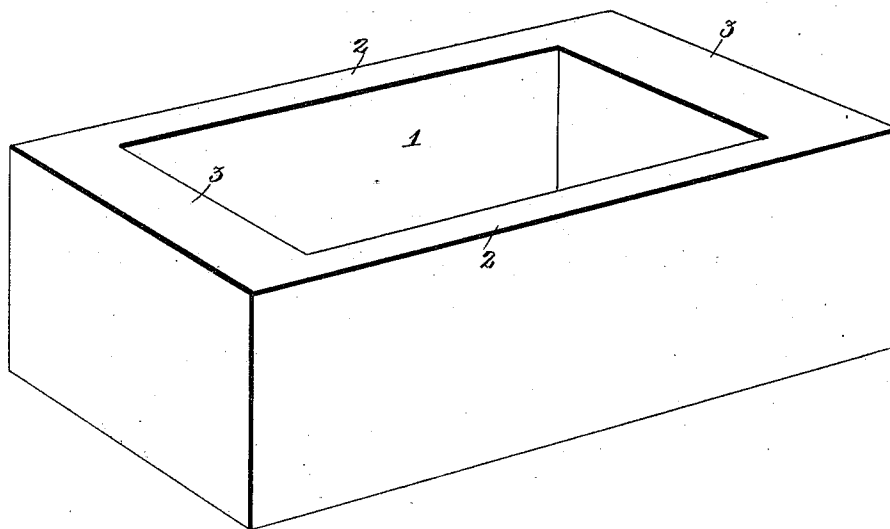


(No Model.)

A. SENDLEIN.
FIRE KINDLER.

No. 566,419.

Patented Aug. 25, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

ANDREAS SENDLEIN, OF ST. LOUIS, MISSOURI.

FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 566,419, dated August 25, 1896.

Application filed October 21, 1895. Serial No. 566,366. (No specimens.)

To all whom it may concern:

Be it known that I, ANDREAS SENDLEIN, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Fire-Kindlers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming a part hereof.

My invention has relation to improvements in composition fire-kindlers; and it consists in the combination of ingredients to be more fully described in the specification and pointed out in the claim.

In the drawing the figure represents the preferred form of the kindler.

The object of my invention is to produce a fire-kindler which shall be readily ignitable, one which will support a maximum weight of fuel placed upon it, and rapidly communicate the flames to said fuel, thus enabling one to build a fire in a minimum amount of time.

A further object is to produce a cheap coherent composition and durable kindler.

The drawing represents a perspective view of the block, being substantially oblong in shape and having a central through enlarged passage 1, bounded by thin lateral walls 2 and terminal thick walls 3.

In the manufacture of my kindler I take for the base the refuse of hops from breweries, that is, the waste hops, after the same have been boiled with wort. These refuse hops are then formed into blocks by hydraulic pressure of approximately six thousand pounds to the square inch, the weight of each block approximating three ounces. I then take about twenty-five (25) pounds of sulfur, fifty (50) pounds of naphtha, one hundred pounds of colophony, and one hundred and twenty-five pounds of crude petroleum, reducing

these several ingredients to the liquid form by boiling in suitable kettles, a separate boiler or kettle being used for each ingredient. While hot the several ingredients are then thoroughly mixed in one vessel, the mixing being effected in any mechanical manner. While the resulting mixture is still liquid and hot the individual blocks of compressed hops are then dipped into the mixture for a period of about three seconds, after which they are withdrawn, when it is found that each block has absorbed about its own weight of the liquor. That is to say, it takes about three hundred pounds of hops (sixteen hundred three-ounce blocks) to absorb the three-hundred-pound mixture above referred to, so that the resulting composition of each block when saturated is as follows: hops, three ounces; sulfur, one-fourth ounce; naphtha, one-half ounce; colophony, one ounce; crude petroleum, one and one-fourth ounces.

It is found that a kindler of the foregoing composition and of the shape herein set forth presents the several advantages above enumerated.

Having described my invention, what I claim is—

A composition for fire-kindlers comprising a mixture of substantially three ounces of compressed refuse of hops, one-fourth ounce of sulfur, one-half ounce of naphtha, one ounce of colophony, and one and one-fourth ounces of crude petroleum, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ANDREAS SENDLEIN.

Witnesses:

ALFRED A. MATHEY,
EMIL STAREK.