

W. C. Philbrick.

Imp^d Composition for Kindling Fires.

N^o 73922

Patented Jan. 28, 1868.

Fig. 1.

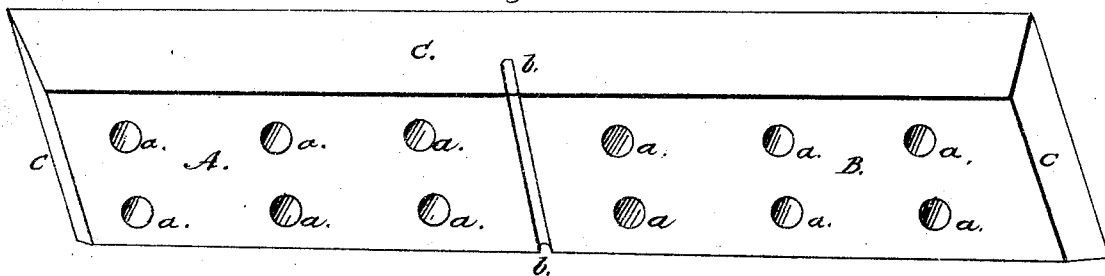
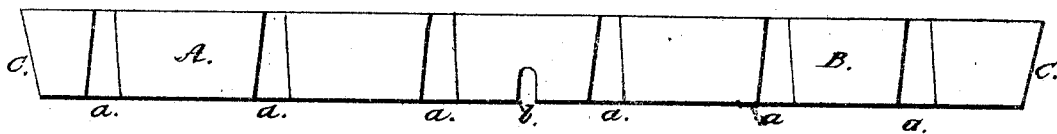


Fig. 2.



Witnesses;
Cyrus M. Tracy
Elijah Holmes

Warren C. Philbrick

United States Patent Office.

WARREN C. PHILBRICK, OF LYNN, MASSACHUSETTS.

Letters Patent No. 73,922, dated January 28, 1868.

IMPROVED COMPOSITION FOR KINDLING FIRES.

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, WARREN C. PHILBRICK, of Lynn, in the county of Essex, and Commonwealth of Massachusetts, have invented a new and useful Material or Composition for Kindling Fires, particularly those of hard or anthracite coal, without the use of wood; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is the production of a material sufficiently cheap, portable, and cleanly, ignited readily by a common match, giving abundant flame and heat, and of so substantial a character as to continue its combustion long enough for the kindling of ordinary anthracite coal. For this purpose I make use of the following ingredients:

- I. Charcoal-dust, or charcoal in moderately fine powder.
- II. Anthracite or bituminous coal, also moderately fine.
- III. Rosin.
- IV. Coal-tar, (or "gas-tar.")
- V. Wood saw-dust, from hard or soft wood.

In the process of compounding these substances, I first melt the rosin and coal-tar together, and while the mixture is hot, I add thereto the other ingredients, using of the charcoal-dust at least as much as of the anthracite and saw-dust together. The whole is to be well incorporated, while hot, to a uniform mass; and the proportions of the different substances are to be so adjusted that when thoroughly mixed the material shall be of fit consistence to press, and solidify readily in a wetted iron mould.

When thus prepared, I transfer the material to moulds of iron thoroughly wetted, and worked by a screw or other pressure, by which it is at once brought to a firm, compact, and solid state, and may then be turned out of the mould and cooled. The moulds are made to give the form shown in the drawings. The dimensions given to the cakes or blocks thus made may be varied so as to suit the grates or fireplaces in which they are to be used, but the edge of the cake is to be strongly bevelled, more so, even, than is necessary to slip it from the mould. In the accompanying drawings—

Figure 1 shows one of these cakes or blocks in perspective, the under side being exposed.

The letters A B indicate the cake of material, and C C denote the bevelled edges of the same. Besides this, I so construct my mould that through the thickness of the cake are formed a number of holes or openings, shown at *a a a a*. These are also tapered or bevelled, like the outer edge, and should be rather less than an inch in diameter on the under side of the cake, where they are largest. In general, these openings should be less than three inches apart, and their number should vary accordingly as the cakes made are smaller or larger.

In Figure 2, I show a section lengthwise through the cake, exhibiting the interior form of these openings. In the case of cakes of large size, I form my moulds so as to produce a groove or indentation across the under side, whose depth is about one-half that of the cake itself. This is done to facilitate the breaking of the cake into smaller portions. Such a groove or indentation is shown at *b b*.

These cakes or blocks are to be used as follows: The grate being cleared, the cake is to be laid thereon, the under or narrower side being beneath. A moderate quantity of coal is then put directly upon it, no wood or other kindling being used. A lighted match applied below inflames the cake, and the fire, reaching the openings *a a*, rises through them by the aid of the draught created in them, giving a powerful and efficient flame for a long time, kindling the coal above in the most perfect manner. A similar effect appears along the edges, the strong bevel of which holds up the fuel and prevents the burning surface from being clogged.

I do not claim, nor wish to be understood as claiming, the use of any or either of the ingredients mentioned to be used merely as combustible substances, or in any other combination, mixture, or form than stated above, but only the combination of the ingredients in the manner, in the form, and for the purpose substantially as above set forth.

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

The use of the several ingredients hereinbefore mentioned, in combination, for the purpose of kindling hard-coal fires, substantially as above set forth.

I also claim, in a particular manner, the pressing of the material, while hot, into blocks or cakes, as stated, having the bevelled edges C C, and especially the openings or draught-holes *a a a*, for producing strong and ready combustion.

WARREN C. PHILBRICK.

Witnesses:

CYRUS M. TRACY,
ELIJAH HOLMES.