

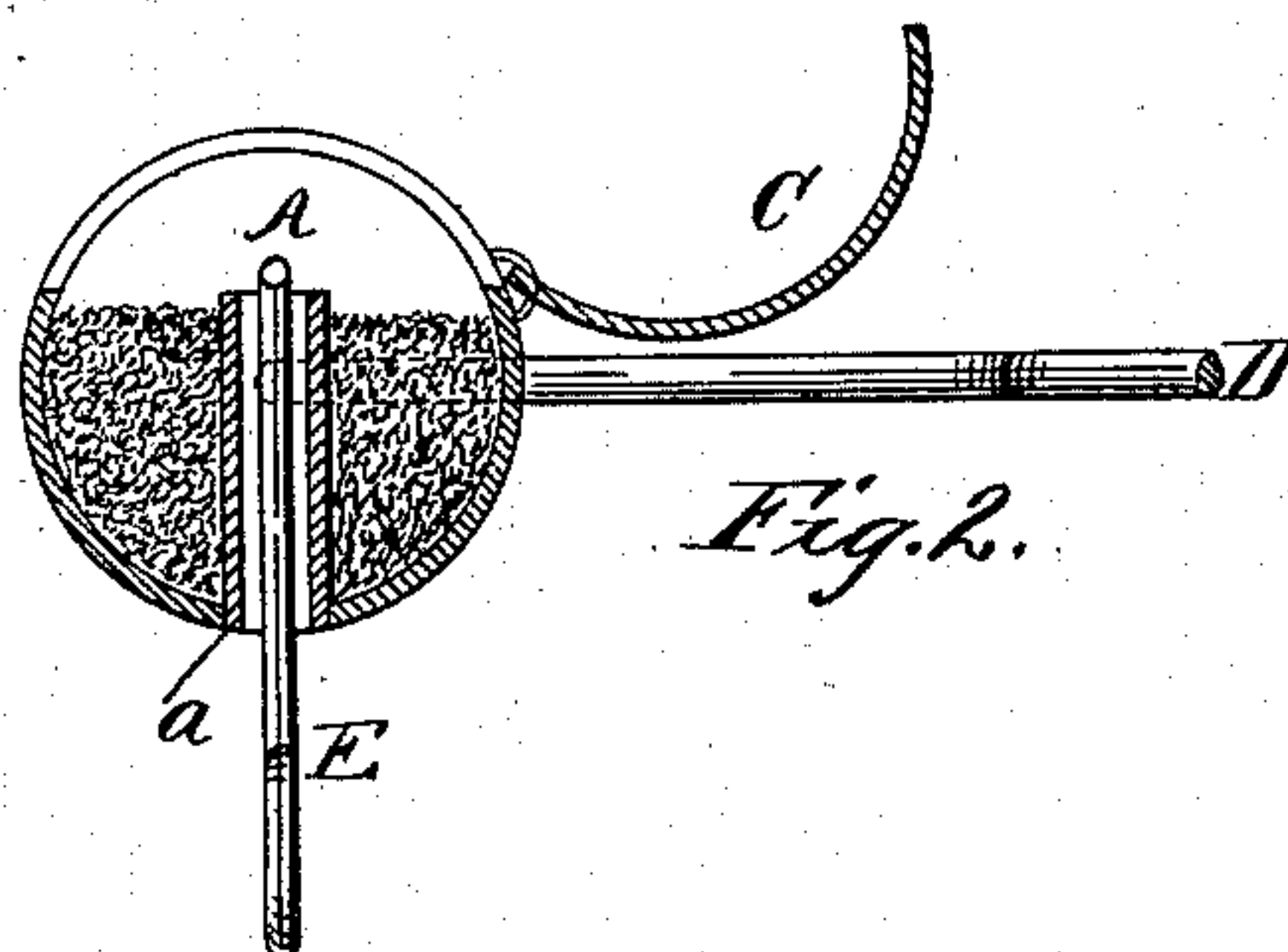
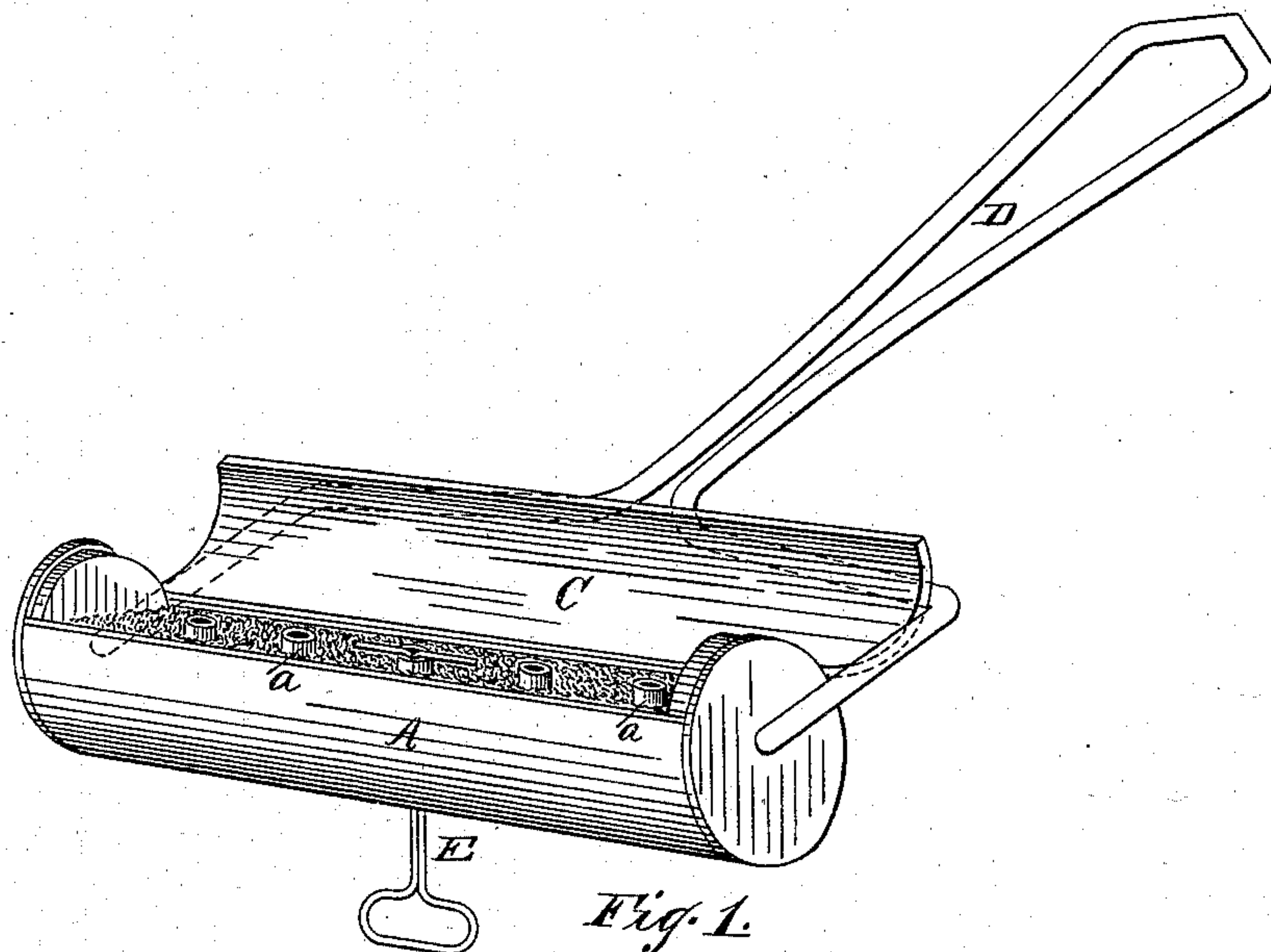
(No Model.)

C. K. BRADFORD.

FIRE KINDLER.

No. 252,014.

Patented Jan. 10, 1882.



Witnesses:
G. B. Maynard.
J. R. Snow.

Inventor:
Charles K. Bradford.
by J. L. Maynard
his atty.

UNITED STATES PATENT OFFICE.

CHARLES K. BRADFORD, OF LYNNFIELD, MASSACHUSETTS.

FIRE-KINDLER.

SPECIFICATION forming part of Letters Patent No. 252,014, dated January 10, 1882.

Application filed November 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES K. BRADFORD, of Lynnfield, in the county of Essex and State of Massachusetts, have invented a new and useful Fire-Kindler, of which the following is a specification.

My invention relates to fire-kindlers in which a non-combustible absorbent material is moistened with an inflammable substance; and it consists in a suitable receptacle provided with a number of tubes for distributing the air to secure perfect combustion, so that one large flame can be maintained without the intervention of wicks, perforated plates, or wire-gauze.

The object of my invention is to provide a cheap, simple, and effective device for kindling fires with safety when kerosene or other highly-inflammable substance is used.

In the accompanying drawings, which illustrate a fire-kindler embodying my invention, Figure 1 is a perspective view of the kindler with the extinguishing-cover open. Fig. 2 is a transverse section through the central air-tube.

A receptacle, A, is provided with a number of tubes, *a*, which extend from its bottom to the level of its sides. A non-combustible absorbent material, B, such as asbestos, a mat-tress of fine wire covered with asbestos, or the like—is packed in the receptacle A to the top of and around the tubes *a*. A cover, C, hinged to the receptacle A, serves as an extinguisher, and also prevents loss by evaporation when the kindler is not in use.

A suitable handle, D, for manipulating the device is attached as shown.

A holder, E, is hung in the central air-tube, and is pushed up and turned to take hold of two adjacent grate-bars to support the kindler when under the fuel, and falls back out of the way of the cover when the kindler is removed.

The number of tubes depends upon the size of the receptacle, and should be about one to each square inch of surface. They should be

regularly spaced, so as to evenly distribute the air passing through them to the gases rising from the liquid with which the absorbent material is impregnated. By this even distribution of air perfect combustion is secured, no smoke is produced, and one large flame is maintained over the entire surface. This distribution of a number of air-tubes through an absorbent material is the main feature of my invention, the handle and holder not being essential, as the kindler may be placed and held under the grate in other ways.

I am aware of Patent No. 36,769 to David Dick October 28, 1862, for petroleum-burners in which mineral oil flows through a porous incombustible material upon the surface of which it is burned. The material is placed in receptacles surrounded by air-flues, and adapted for a constant flow of oil from the bottom up through the material. In my improved kindler no flow of oil is required, the incombustible material serving only as an absorbent for a small quantity of combustible material poured on top of it, and the air-flues are surrounded by this material.

In practice one table-spoonful of kerosene to each cubic inch of absorbent material has been found to be ample to kindle hard coal. This quantity of fluid is entirely absorbed, so that there is no danger from explosion nor any dripping, as in fire-kindlers in which the absorbent material is dipped in the fluid.

I claim as my invention—

The improved fire-kindler above described, consisting of a receptacle provided with a number of air tubes and having an absorbent material packed around these tubes, substantially as described, and for the purposes set forth.

CHAS. K. BRADFORD.

Witnesses:

W. A. COPELAND,
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