

D. D. FRACE.
Egg-Tester.

No. 227,240.

Patented May 4, 1880.

Fig. 1.

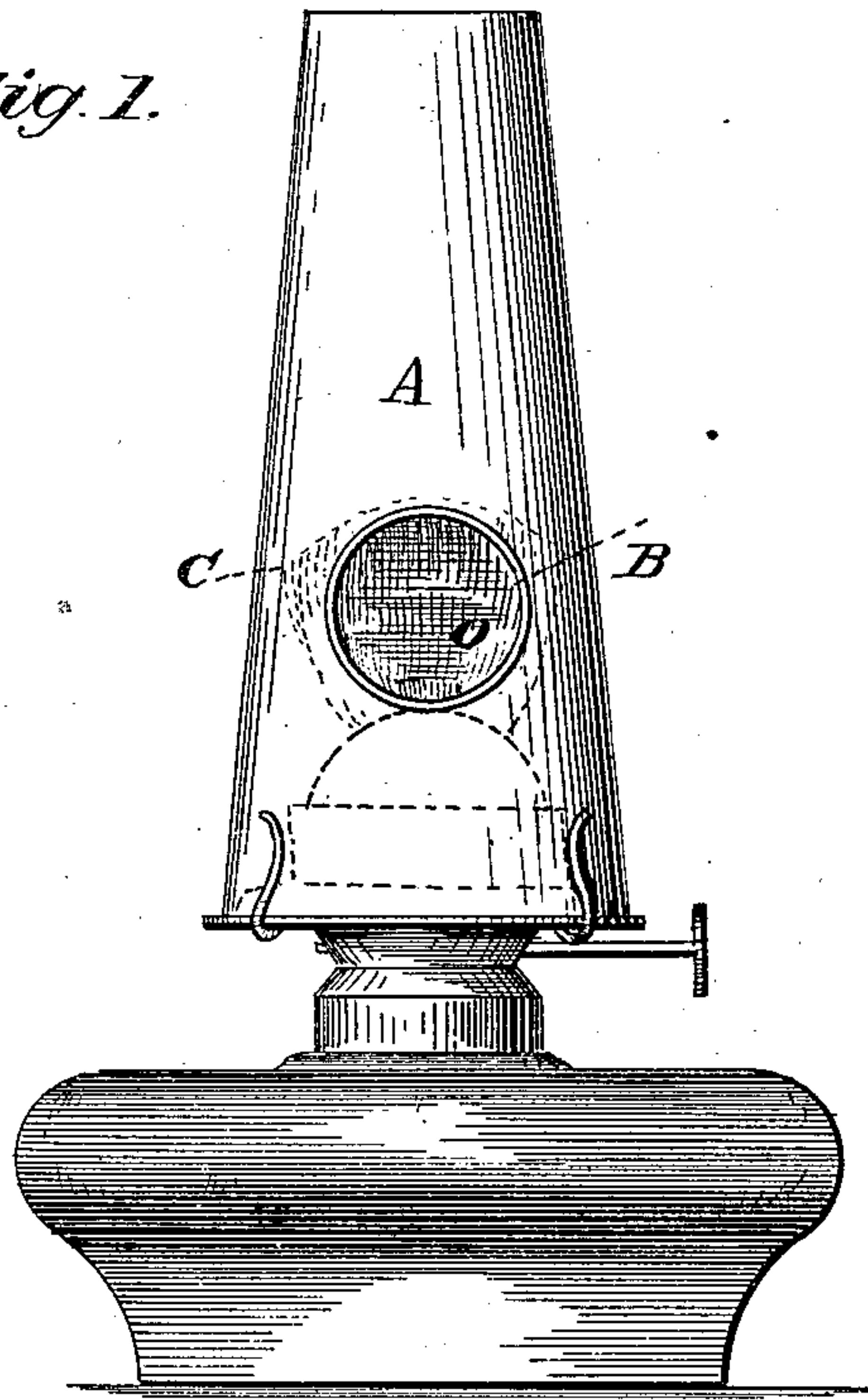
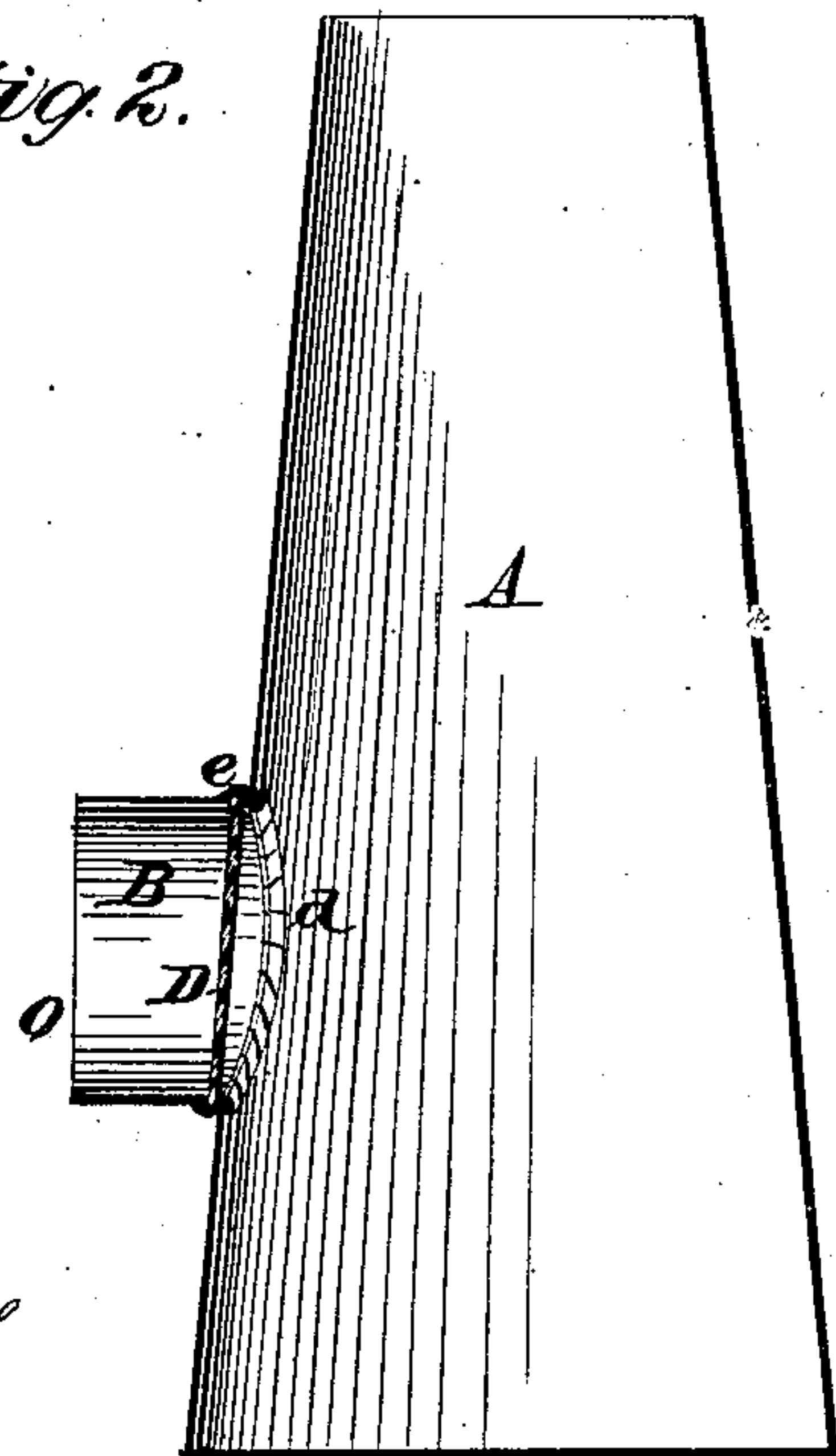


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL D. FRACE, OF HORNELLSVILLE, NEW YORK.

EGG-TESTER.

SPECIFICATION forming part of Letters Patent No. 227,240, dated May 4, 1880.

Application filed January 19, 1880.

To all whom it may concern :

Be it known that I, DANIEL D. FRACE, a citizen of the United States, residing at Hornellsville, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Egg-Testing Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Similar letters of reference indicate the same parts.

My invention relates to an improvement in egg-testing devices; and it consists in providing a metallic chimney in the form of a truncated cone designed to fit over a lamp, candle, gas-jet, or other light, and having at one side a horizontal branch or tube of suitable length opening into the main tube or chimney opposite the light, the opening being covered and protected from the heat and smoke by a shield of glass or mica which permits the rays of light to pass freely, but operates as a shield to prevent the heat and smoke from passing out of the tube.

Its object is to provide a simple, economical, and convenient device for gathering and concentrating the rays of light from a lamp, candle, or other illuminating-jet upon an egg, for the purpose of quickly and readily ascertaining whether it is good or bad.

In the drawings, Figure 1 is a front elevation. Fig. 2 is a vertical section.

A represents the metallic chimney, and B the horizontal branch, which is located near the bottom of the chimney and on a line with the light or flame C, so that the focal center of the direct and reflected rays is opposite the center of the opening. This branch or tube may be made slightly funnel-shaped, its smaller end being firmly united with the chimney without soldering by an annular flange, *d*, formed by turning out a small portion of its inner end and pressing it back firmly against the inside of the chimney around the opening through

which the tube is inserted, an annular rib, *e*, being provided on the outside to hold it firmly in place. It may, however, be secured by rivets or in any suitable manner without solder, which is objectionable, it being liable to melt by the action of the heat.

The chimney and tube may be made of any suitable metal having a polished surface, preferably, however, of tin, a bright interior surface being thereby secured for intensifying and reflecting the rays of light in the direction of the opening O.

The inner end of the tube B is closed by a shield or partition, D, composed of glass or any other suitable transparent substance. I prefer to employ mica for the purpose, it being least liable to injury from heat.

The operation of my invention is as follows: I place my device over a lamp or other light, as shown in Fig. 1, with the opening or tube B opposite the broad side of the jet, so that the focal center of the rays is opposite the opening. The polished interior surfaces of the chimney and tube serve to concentrate a strong volume of light in the direction of the opening O, over which the egg to be tested is held by the operator, who, from its translucent character, is readily and instantly enabled to determine whether it is fresh or spoiled. The transparent shield D interposes no obstacle to the free passage of the light, while it serves to prevent any draft of air through the tube which would affect the light, and excludes the heat and smoke from the egg.

I am aware that an egg-tester consisting of a metallic chimney having a branch or tube extending upward at an acute angle, over which the egg to be tested is placed, has been heretofore used; but such construction is subject to serious objections which render it practically worthless, among which are that the light, being conducted in an indirect oblique course from its source, is partially deadened or dimmed and becomes simply reflected light, while in my device the rays are not only reflected, but also direct from the source. Again, there being no transparent shield over the opening into the tube, a portion of the heat and smoke from the lamp will naturally find

its way out of the tube and be brought in direct contact with the egg. These objections are overcome by my device.

Having thus described my invention, what
5 I claim, and desire to secure by Letters Patent, is—

In an egg-testing device, the reflecting-chimney A, provided with an opening opposite the source of light, a horizontal branch or
10 tube, B, joined to the reflecting-chimney A by

flange *d* and rib *e*, and having a transparent shield or partition, D, interposed between the light and exterior opening of tube B.

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

DANIEL D. FRACE.

Witnesses:

MILES W. HAWLEY,
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