D. M. SMALL.

Gas Test Meter.

No. 208,271. Patented Sept. 24, 1878.

Fig. 1.

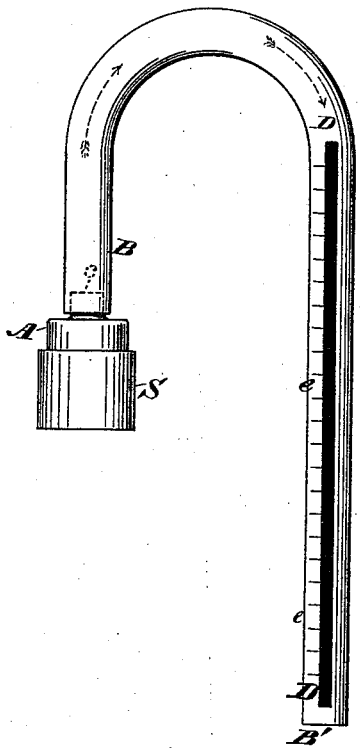
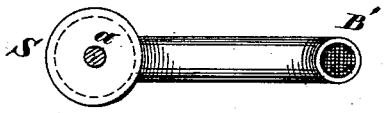


Fig. 2.



ATTEST=

Henry Connett

Henry A. Pierkes

INVENTOR=

Dexter M. Small

UNITED STATES PATENT OFFICE.

DEXTER M. SMALL, OF NEW YORK, N. Y.

IMPROVEMENT IN GAS-TEST METERS.

Specification forming part of Letters Patent No. **208,271**, dated September 24, 1878; application filed April 18, 1877.

To all whom it may concern:

Be it known that I, DEXTER M. SMALL, of New York city, in the county and State of New York, have invented an Improved Process for Testing Gas-Burners, which is fully and clearly set forth in the following specification and accompanying drawings, in which—

Figure 1 gives a front view of a meter, illustrating the process, in an upright position; and Fig. 2, a view from the bottom.

The object of my invention is a more simple and convenient method of ascertaining the capacity of gas-burners, which I do by measuring the flame produced by the gas passing through the burner. This can be done in several ways; but I have adopted the one herein set forth as one of the most simple and convenient.

A represents the base of the instrument, which is hollow, having no bottom, and being sufficiently high and wide to admit within it, at the bottom, the top of the burner to be tested, which is to be pressed up into it about one-half of an inch through the aperture *a* in the rubber socket S, which surrounds the base A, as seen in Fig. 2. The gas passes up through the little shoulder *c*, Fig. 1, which is open at the top to allow the gas to pass up through it, and which fits gas-tight within the curved tube B B′ at the end of the short arm B, as seen in Fig. 1. After passing up through the shoulder *c*, the gas continues in the line of the dotted arrows to the slot D D, out of which it escapes and at which point it is lighted. The length and width of the slot can vary as much as desired, the distance between the graduations on the scale *e e* depending on the width of it, as will be seen hereinafter. I have made it about one-sixteenth of an inch wide and about four inches long, commencing just below the curve on the tube B B′, and extending to within about one-fourth of an inch of the bottom.

The more gas there is passing out of the slot D D the larger the flame will be as it comes out of the slot, since there is nothing to prevent it from expanding downward.

On the side of the slot D D is marked the scale *e e*, by which the exact rate at which the gas is being consumed can be readily seen, as each mark indicates the rate of consumption when the bottom of the flame, as it comes out of the tube, extends down to that mark.

The scale is made by connecting the instrument, after being otherwise all completed, with an ordinary test-meter, in the same manner as it is connected with a burner, as before described. When it is ascertained by the ordinary test-meter that gas is passing through the slot at a foot per hour, for instance, mark on the tube the point down to which the flame extends. So on for each foot and part of a foot, if desired.

The bottom of the flame can best be seen at an angle.

I claim as my invention—

The combination, with an apparatus for measuring a gas-flame, of a graduated scale, made substantially as described, to show by the size of the flame the rate of passage of the gas through the said apparatus.

DEXTER M. SMALL.

Witnesses:

OLE H. HOLBERG,

HENRY CONNETT.