

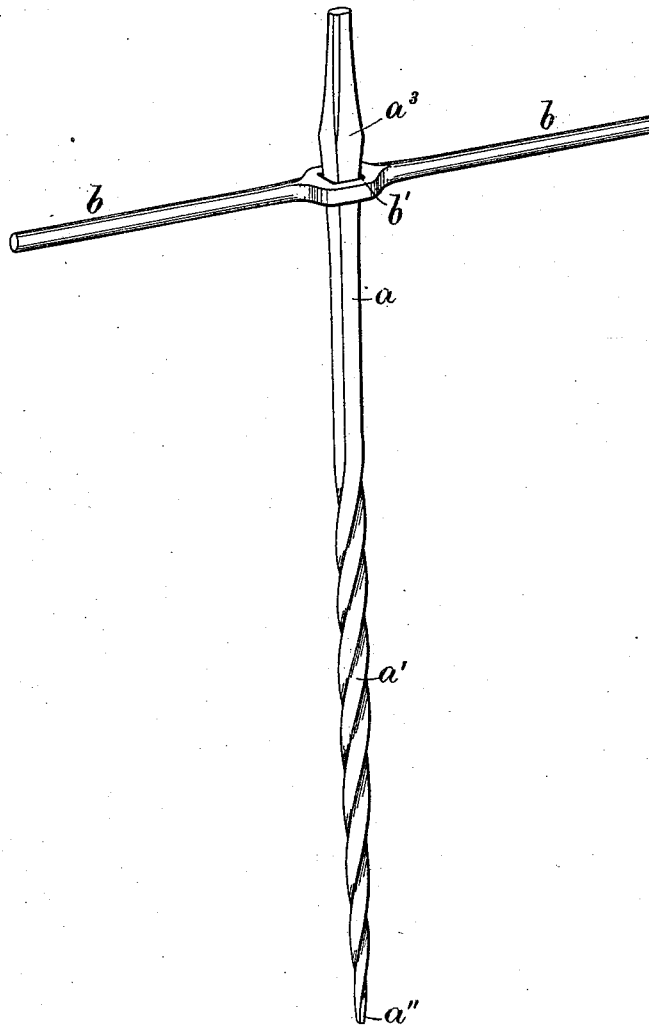
(No Model.)

E. C. JONES.

SOUNDING BAR.

No. 345,698.

Patented July 20, 1886.



Witnesses

Henry Chadburn.
Francis Allen.

Inventor

Edward C. Jones
by *Alban Andrieu*
his atty.

UNITED STATES PATENT OFFICE.

EDWARD C. JONES, OF BOSTON, MASSACHUSETTS.

SOUNDING-BAR.

SPECIFICATION forming part of Letters Patent No. 345,698, dated July 20, 1886.

Application filed January 18, 1886. Serial No. 189,025. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. JONES, a citizen of the United States, residing at South Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sounding-Bars; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawing.

This invention relates to improvements in sounding-bars for the purpose of ascertaining the location of leaks in street gas mains or pipes, and it is carried out as follows, reference being had to the accompanying drawing, representing a perspective view of the invention.

When a gas-leak occurs in the street mains or pipes, a strong gas smell occurs, generally, in the adjoining house or building nearest to the place of the leak, and to ascertain the precise location of the leaky place it is the custom of gas-men to drive a steel or metal bar, termed a "sounding-bar," into the ground or street in a line with the main or pipe where the leak is supposed to be. After such sounding-bar has been driven into the ground to or nearly to the gas main or pipe, it is withdrawn and a lighted match applied to the hole thus made in the ground or street, by which the escaping gas is ignited, and the height of the flame above ground recorded. The operator then makes successive soundings in the same manner to the right and left of the first sounding, in a line with the gas main or pipe, and by igniting the escaping gas after the sounding-bar has been withdrawn and by noting the heights of the respective flames the precise place of the leak is quickly ascertained without digging at random through a large portion of the street or road. After the place of the leak is thus ascertained the street or road is dug up until the main or pipe is reached, and it is then repaired, as usual. Heretofore a square or round metal bar has been used for this purpose; but, particularly when the ground is frozen, it is very difficult to remove such bar after it has been driven a couple of feet (more or less) into the ground.

For the purpose of enabling the sounding-bar to be driven easily into the ground, and to permit it to be as easily removed, I construct my improved sounding-bar as follows:

a represents the bar, made of steel, preferably of a square section, although it may be made of other polygonal form, if so desired. At the lower end, and for some distance upward, the bar is twisted to a screw form, *a'*, as shown, terminating in a point or taper, *a''*. (Shown in the drawing.) In connection with such screw-formed bar I use a handle, *b b*, having a square or corresponding polygonal perforation, *b'*, that is slipped over the sounding-bar from the lower end of the same, such handle being prevented from passing by the upper end of the sounding-bar by the enlargement or collar *a³*, made on it near its upper end, as shown.

In using this my improved sounding-bar I first introduce the lower end of it into the perforation *b'* in the handle *b b* until the latter is in or about the position shown in the drawing. The rod is then held by one operator, who takes hold of the handle *b b* and places the point or tapering end *a''* on the ground where the rod is to be driven, and holds it in a vertical position. Another operator, by means of a suitable hammer, drives the rod into the ground by striking it repeatedly on its upper end, and by so doing the rod is caused most easily to enter the ground, and as it passes downward it turns itself or screws into the ground with very little frictional resistance, owing to the screw-threaded or helical shape of its body *a'*. After the rod has thus been driven into the ground the desired depth the operator twists the rod a turn or so backward by means of the handle *b b*, when it is so loosened that it can most easily and readily be withdrawn by lifting the handle *b b* upward without the need of prying it sidewise or striking it in such directions.

What I wish to secure by Letters Patent, and claim, is—

1. The herein-described gas-leak sounding-rod, having its lower end, *a'*, twisted in the form of a screw-thread, to facilitate its being driven into the ground and removed therefrom, as set forth.

2. A gas-leak sounding-rod having a pointed or tapering lowering end, *a''*, a twisted or screw-threaded lower portion, *a'*, and square or polygonal shank *a*, with collar or enlargement *a³* near its upper end, all combined and ar-

arranged in a manner and for the purpose as set forth.

3. The handle *b b*, having square or polygonal perforation *b'*, combined with the rod *a*, having collar or enlargement *a'* near its upper end, and twisted or screw-threaded lower portion, *a'*, terminating as a point or taper, *a''*, as and for the purpose set forth.

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

EDWARD C. JONES.

Witnesses:

ALBAN ANDRÉN,

HENRY CHADBOURN.