

**G. GOLDSMITH & J. DILKES.**  
**Apparatus for Removing Obstructions from Gas-Pipes.**  
 No. 144,843. Patented Nov. 25, 1873.

FIG. 1.

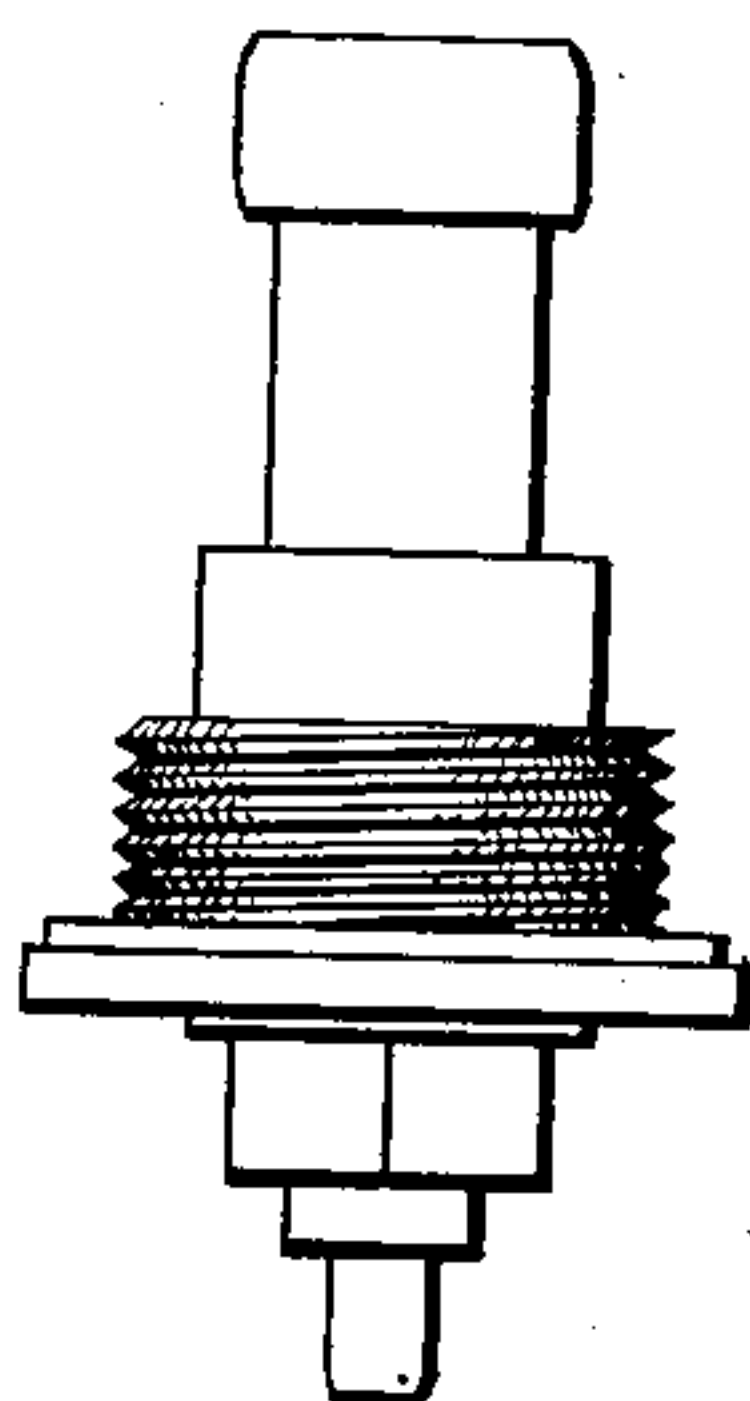
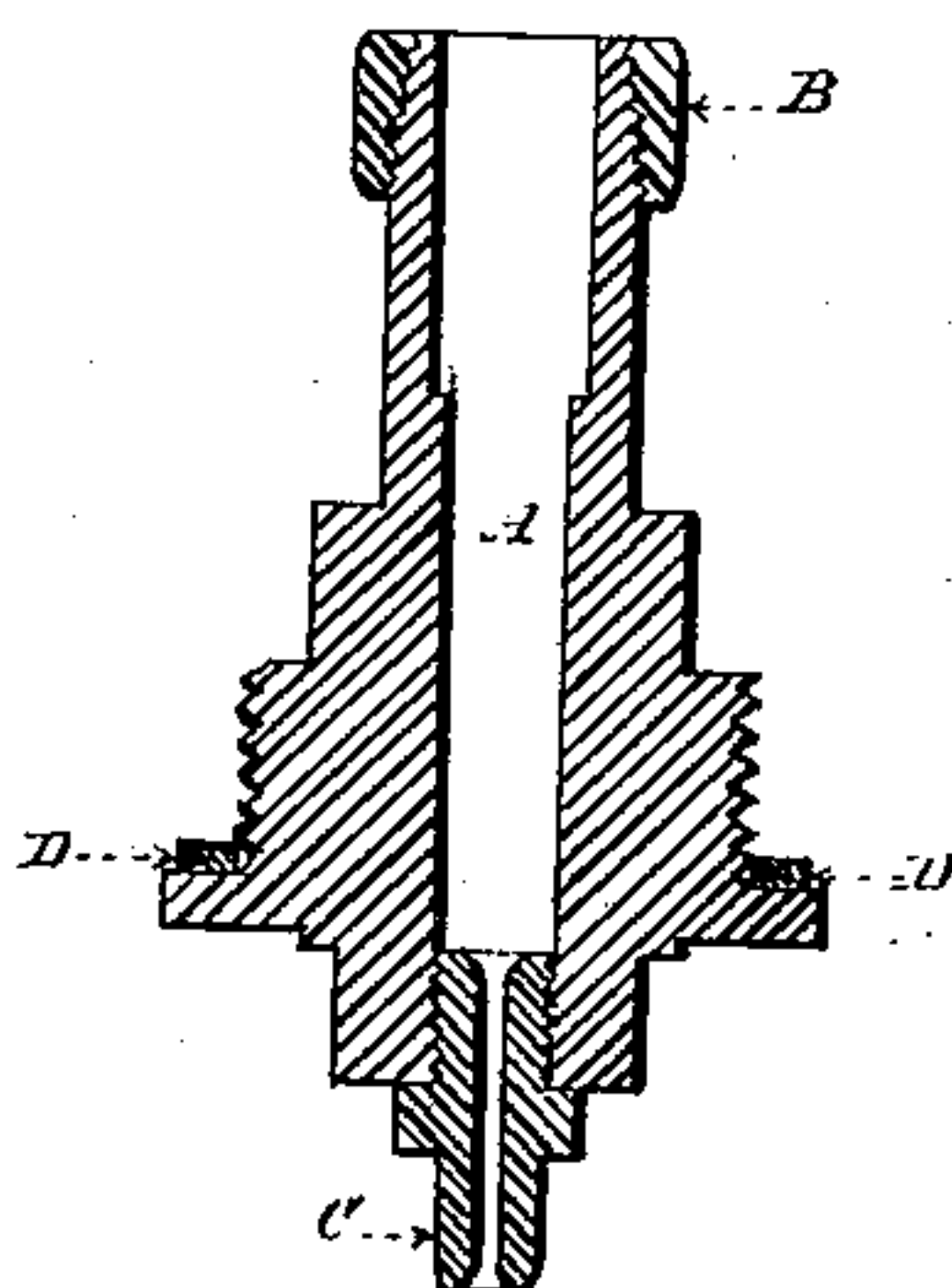


FIG. 2.



Scale, full size.

WITNESSES.

*John Joshua Sawyer*  
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INVENTORS.

*George Goldsmith*  
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# UNITED STATES PATENT OFFICE.

GEORGE GOLDSMITH AND JAMES DILKES, OF LEICESTER, ENGLAND.

IMPROVEMENT IN APPARATUS FOR REMOVING OBSTRUCTIONS FROM GAS-PIPES.

Specification forming part of Letters Patent No. **144,843**, dated November 25, 1873; application filed February 1, 1873.

*To all whom it may concern:*

Be it known that we, GEORGE GOLDSMITH and JAMES DILKES, both of Leicester, in the county of Leicester, England, have invented Improvements in the Means of and Apparatus for Removing Obstructions from Gas-Pipes, of which the following is a specification:

The mains and service-pipes used for the supply of gas are liable to become choked with naphthaline and other deposits, whereby the flow of gas is interrupted or entirely stopped. When this occurs great inconvenience has been experienced for the want of some simple method for effectually clearing the pipe. The object of this invention is to afford ready means for meeting what has hitherto been a difficulty; and consists in constructing a plug in which a barrel or chamber is formed. Into the outer or breech end of the plug a percussion-cap nipple is screwed, the hole in the nipple being in communication with the barrel, which is furnished at the other end with a ring having a taper female thread, so that it can be screwed onto the extremity of the barrel.

In order that the construction of this piece of apparatus may be more easily understood, reference is made to the accompanying drawings, of which the following is a description:

Figure 1 represents the apparatus in elevation, and Fig. 2 a vertical section of the same.

A is the chamber or barrel partially filled with gunpowder; B, the ring with taper thread; C, the nipple upon which the percussion-cap is placed when it is to be discharged, and D a washer.

The mode of applying the apparatus is as follows: The barrel or chamber of the plug is filled with gunpowder or other suitable explosive substance, a piece of tissue or thin paper being put over the end of the barrel, and the ring (which, being formed with a taper thread, will thus admit of the intervention of a piece of paper) is then screwed on, to keep the paper in its place and prevent the powder from escaping. A coupling-piece is attached to the offending pipe, and the plug, charged as described, is screwed into it, the barrel extending a short distance within the pipe. A percussion-cap is then applied to the nipple, and upon the cap being struck by a hammer or otherwise, an explosion of the powder follows, the result being the removal of any obstruction that may exist in the pipe.

This apparatus is specially adapted for the cleaning of services, but with slight modification it may be suitable for operating upon pipes of larger caliber.

We claim—

1. The described process of removing obstructions from pipes, consisting in the employment of explosive materials, as and for the purpose described.

2. The apparatus described, consisting of a tube, A, having nipple C and ring B, the tube being adapted to be screwed into a pipe, as and for the purpose described.

GEORGE GOLDSMITH.  
JAMES DILKES.

Witnesses:

JOHN JOSHUA CARRYER,  
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