

(No Model.)

J. FLANNERY.
FILLING FOR MAN HOLES.

No. 420,192.

Patented Jan. 28, 1890.

Fig 1.

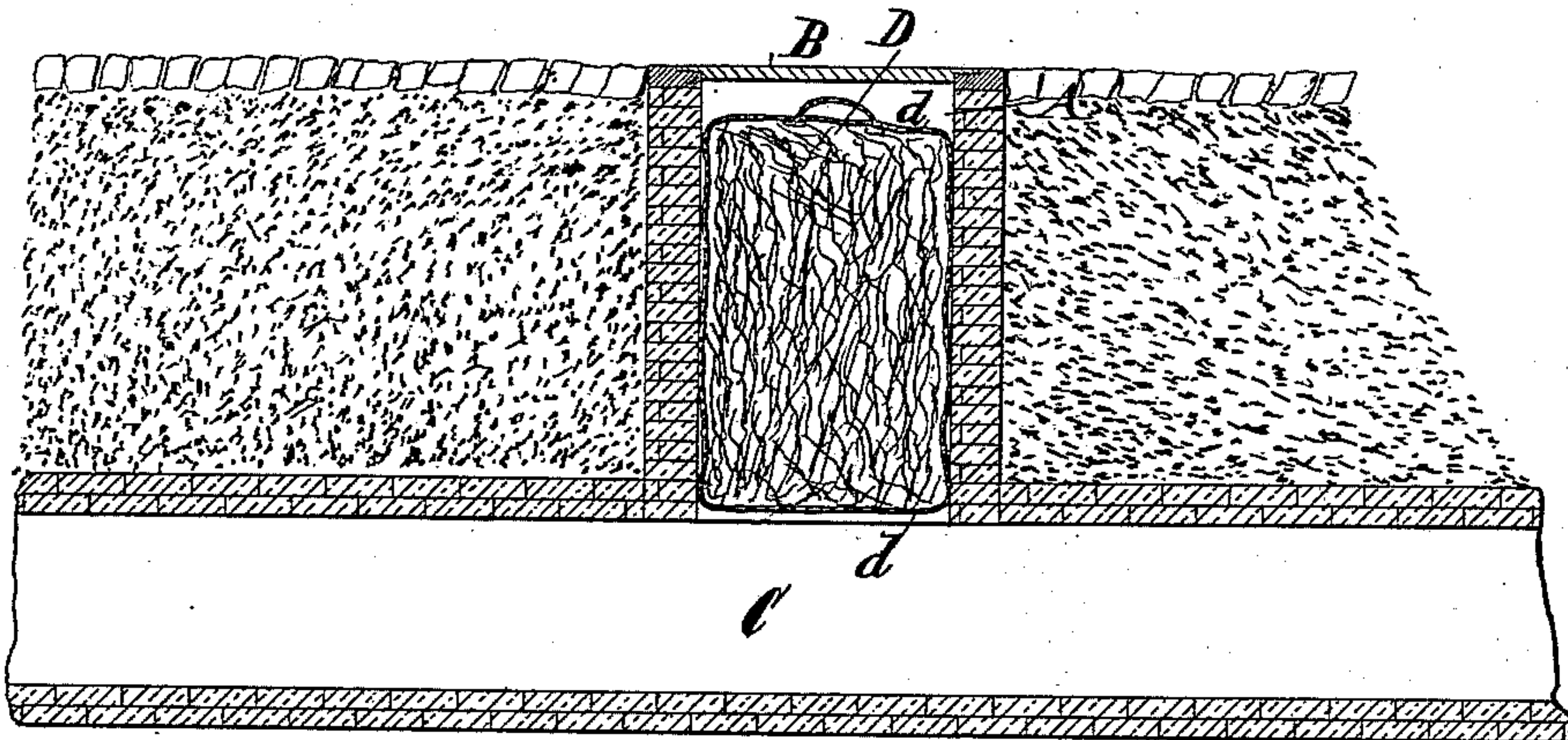


Fig 4



Fig 2.

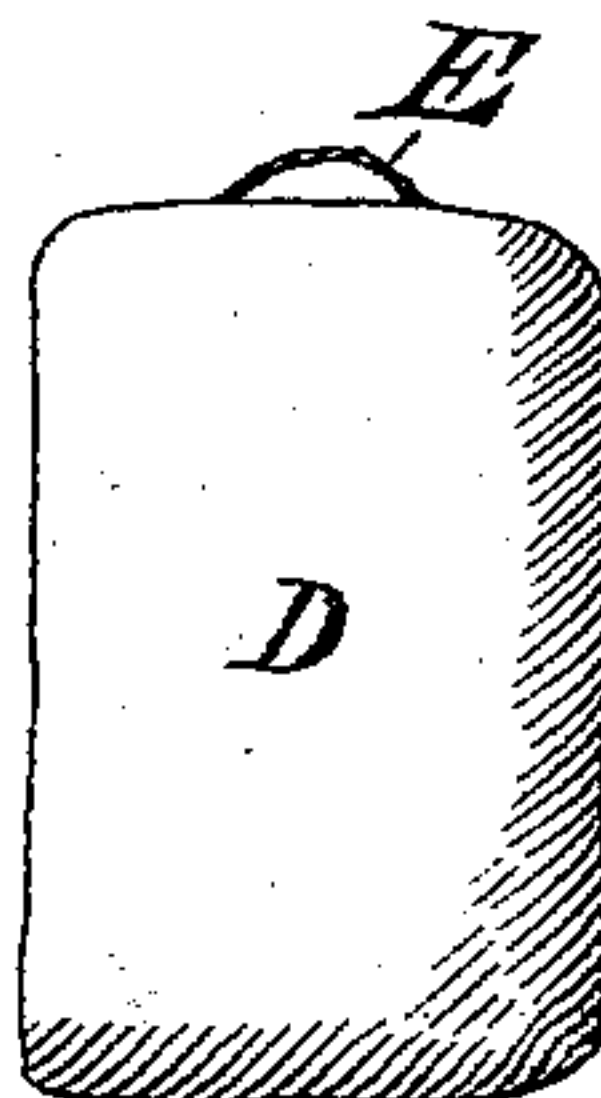
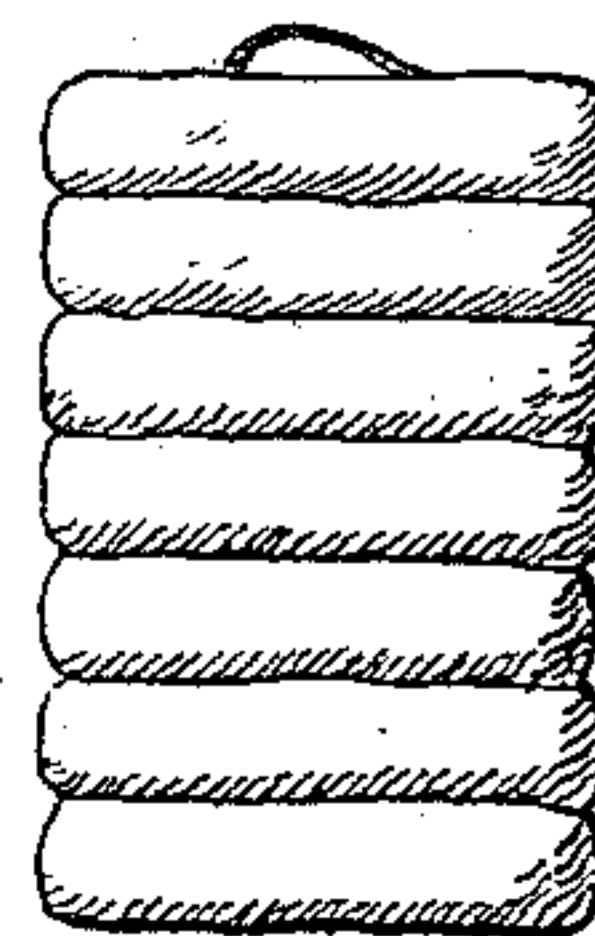


Fig 3.



Witnesses;
John Bicket
O. Sundgren

Inventor;
Joseph Flannery
by his Attorneys
Brown & Grunwald

UNITED STATES PATENT OFFICE.

JOSEPH FLANNERY, OF NEW YORK, N. Y.

FILLING FOR MAN-HOLES.

SPECIFICATION forming part of Letters Patent No. 420,192, dated January 20, 1890.

Application filed May 9, 1889. Serial No. 310,085. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH FLANNERY, of New York, in the county and State of New York, have invented a certain new and useful
5 Improvement in Fillings for Man-Holes for Underground Subways and Similar Structures, of which the following is a specification.

Heretofore the construction of underground
10 subways or similar structures has resulted in the accumulation of dangerous and explosive gases therein, from which violent explosions have resulted, endangering life and causing loss of property.

15 It is the object of my improvement to prevent the accumulation of gas in such man-holes.

In the accompanying drawings, Figure 1 is a sectional elevation of a man-hole for an underground subway or similar structure, together
20 with a filling or plug embodying my improvement and a portion of a subway. Fig. 2 is a view of a certain kind of plug which I employ in connection therewith. Fig. 3 is a view of a plug of modified form. Fig. 4 is a detail
25 view of one of the sections of the latter.

Similar letters of reference designate corresponding parts in all the figures.

In the example of my improvement shown
30 in Figs. 1 and 2, A designates a man-hole covered with a man-hole plate B at its outer end in any well-known manner.

C designates an underground subway or similar structure.

35 D designates a plug, which when the subway is not to be reached through the man-hole is inserted in the man-hole and operates to substantially prevent the introduction of gas from the subway or similar structure into the
40 man-hole.

In this example of my improvement the plug comprises an elongated and, as here shown, a cylindrical bag or casing *d*, which
45 may be made of canvas, netting, or any suitable material which is yielding. The bag or casing *d* is filled with any light, loose, and yield-

ing material—such, for instance, as mineral wool, hay, or a granulated or comminuted material. The diameter of the plug D is such that when inserted in the man-hole it
50 will fit substantially snug within the same. When the plug is introduced into the man-hole, it occupies preferably the whole of the space within the man-hole, and when arranged therein will prevent the accumulation of a
55 quantity of gas in the man-hole, which might result in an explosion. The plug being filled with loose light material is easily withdrawn and inserted, and for the purpose of facilitating its withdrawal I have shown at its upper
60 end a handle E, which when the man-hole cover has been removed may be grasped to withdraw the plug.

In Figs. 3 and 4 I have shown a modification of the plug, consisting in forming the
65 same in sections J, which may be separately inserted in the man-hole and removed therefrom. When inserted, the sections will be superposed one upon another. Each of the
70 sections may be provided with a separate handle E, by which it may be removed from the man-hole.

With certain kinds of light loose material the bag or casing *d* may be omitted and the material may be inserted and removed in a
75 loose and unconfined state.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A plug or filling for a man-hole for a subway or similar structure, consisting of light
80 loose material adapted to be inserted into and removed from the man-hole, substantially as and for the purpose specified.

2. A plug or filling for a man-hole for a subway or similar structure, consisting of a bag
85 or casing filled with a light loose material and adapted to fit snugly within the man-hole, substantially as and for the purpose specified.

JOSEPH FLANNERY.

Witnesses:

W. P. ELLIOTT,

JOS. D. HUNTINGTON.