(No Model.)

E. BROOKS.

CONNECTION WELL FOR STEAM STREET MAINS.

No. 275,129. Patented Apr. 3, 1883.

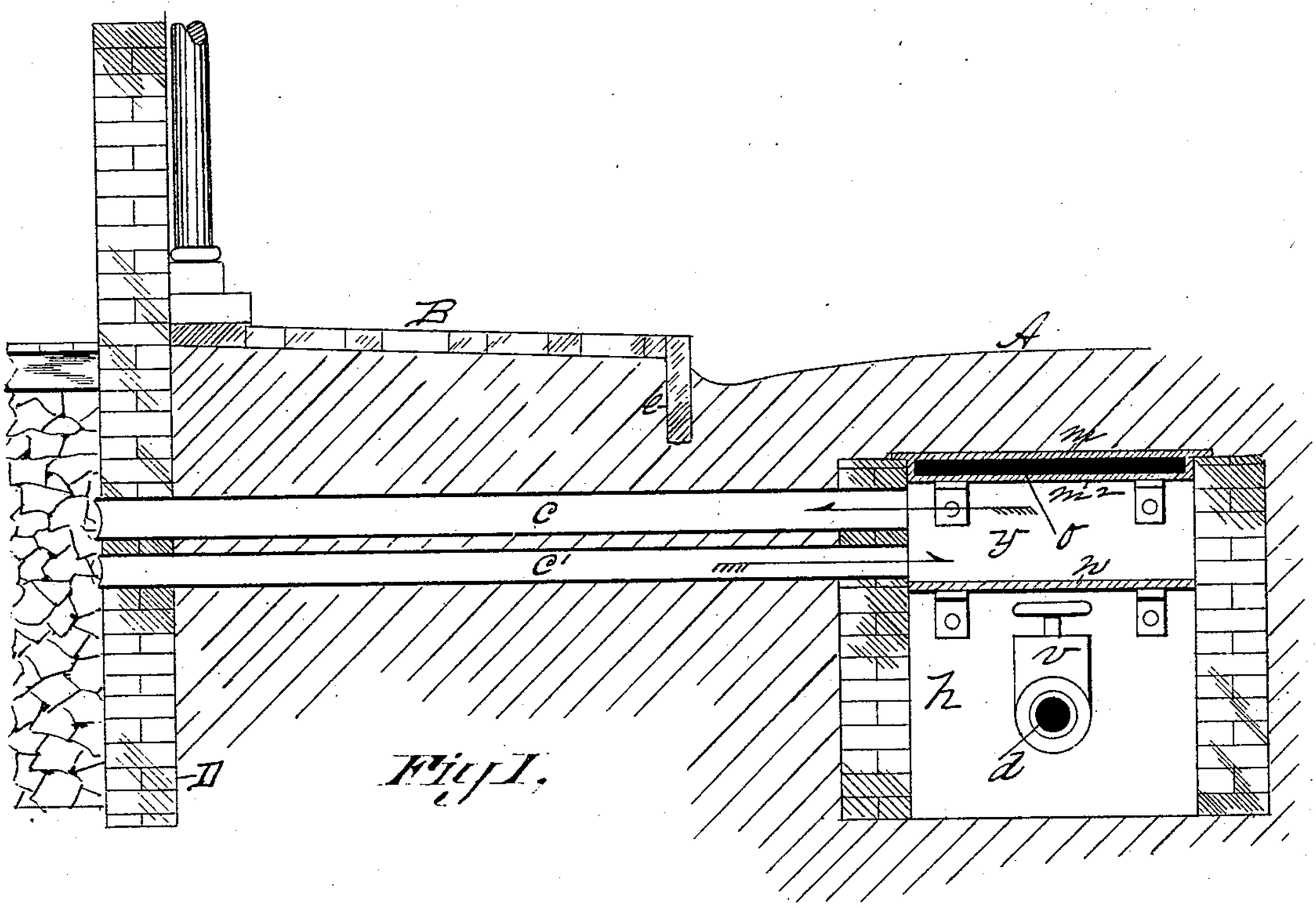

Fig. I.

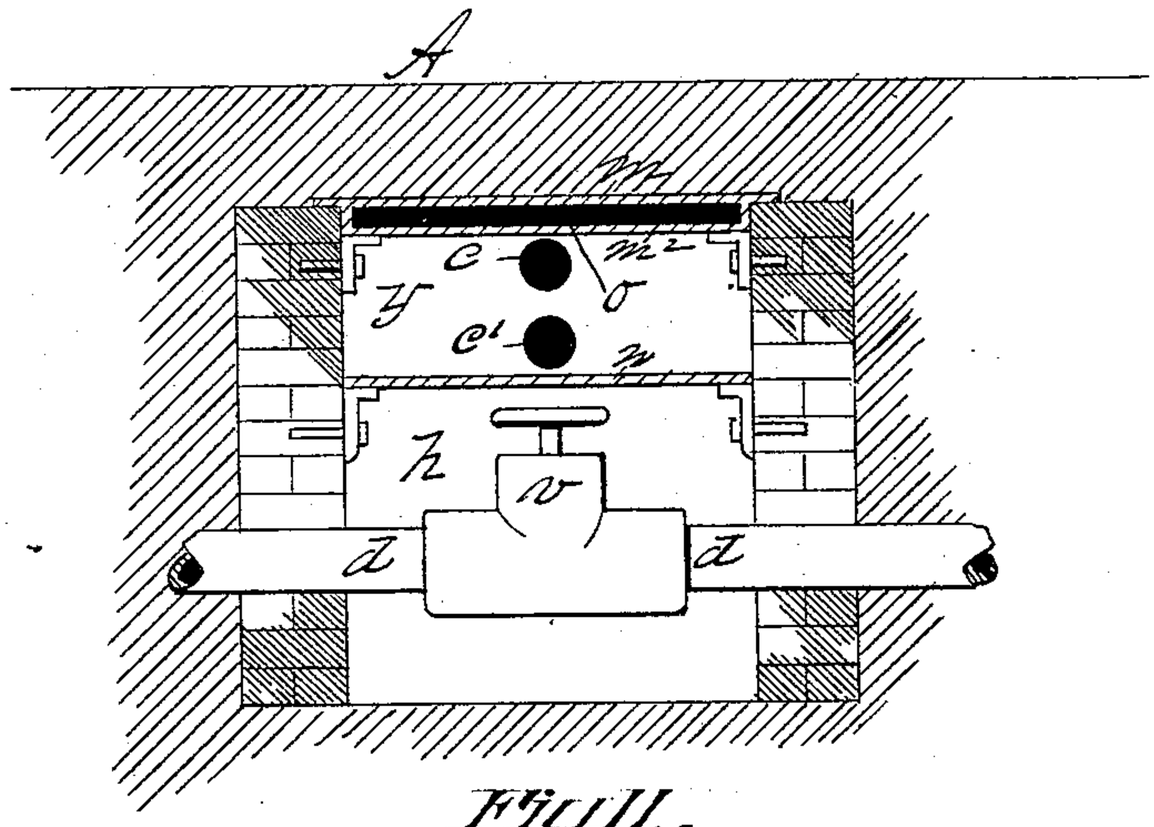

Fig. II.

Witnesses:
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ETHAN BROOKS, OF WEST SPRINGFIELD, MASSACHUSETTS.

CONNECTION-WELL FOR STEAM STREET-MAINS.

SPECIFICATION forming part of Letters Patent No. 275,129, dated April 3, 1883.

Application filed February 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, ETHAN BROOKS, a citizen of the United States, residing at West Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Connection-Wells for Steam Street-Mains, of which the following is a specification.

This invention relates to improvements in junction valve-wells for steam-heating street-mains, the object being to prevent the heat from the interior of such wells from reaching to the surface of the roadway over them, whereby the snow is melted and much inconvenience caused to travelers, and to utilize a portion of the heat which is given off by the steam-pipes and connections in the well for warming adjoining buildings.

In the drawings forming a part of this specification, Figure I illustrates a portion of a roadway and of an adjoining building and my improved valve-well, together with a portion of a steam street-main and means for utilizing the heat from the well, all constructed and arranged according to my invention. Fig. II is a view of said well, showing said street-main and valve in side elevation.

In the drawings, A is the roadway. B is the sidewalk; *e*, the curbing. D is the cellar-wall of a building. *h* is the junction valve-well. *v* is the valve. *d* is the steam street-main. *n* is a horizontal partition across said well over the valve *v*. *m* m^2 is a double cover to said well. *o* indicates lamp-black filling between the outer faces of the cover *m* m^2. *c* *c'* are hot-air pipes leading from the chamber *y* in well *h*.

It is well known that the wells of the junction-connections of steam street-mains as ordinarily constructed and covered radiate so much heat that they warm the earth of the roadway over them to such an extent that any snow falling thereon is soon melted, while other parts of the road remain covered with snow and in good traveling condition.

One object of my invention is to obviate the said radiation of heat to the roadway above the well, and another is to utilize a part of the heat of said well, which would otherwise be wasted, as hereinafter set forth.

The pipes *d*, valve *v*, and the well *h* are arranged much in the usual manner; but instead of allowing the heat from said pipes to act directly upon a single cover applied over said well, as is commonly practiced, I place upon suitable brackets or supports applied to the inner walls of the well, just above the pipes *d* and valve *v*, a removable diaphragm, *n*, closely fitted to the walls of the well, and upon the top of said well a double cover, *m* m^2, having an intermediate space, which I fill closely with lamp-black, asbestus, or other suitable non-conducting material, through which the heat from below cannot pass. Between said diaphragm *n* and said double cover is formed a hot-air chamber, *y*, from which are led two air-pipes, *c* *c'*, into the cellar of an adjoining building, as shown. From inside of the wall D said pipes may be led upward into a compartment above; or the pipe *c* may be so carried and the pipe *c'* be left to communicate with the cellar of the building.

The operation of my improvements is as follows: The heat which comes from the steam-connections in the well *h* passes upward more or less through the diaphragm *n* into the chamber *y*, from which it cannot escape upward, owing to the non-conducting cover *m* m^2, and therefore it passes out of said chamber *y* through the upper hot-air pipe, *c*, into the adjoining building, and cold air flows into chamber *y* from said building through the lower air-pipe, *c'*, said air-currents being in the directions shown by the arrows in Fig. I. If no building is in convenient proximity to said well, the pipes *c* *c'* may lead to the open air, whereby a free escape of heated air from chamber *y* would be provided for.

What I claim as my invention is—

1. A connection-well for steam-heating street-mains, provided with an upper chamber, substantially as described, and having connected therewith two air-pipes, one above the other, substantially as set forth.

2. A connection-well for steam-heating street-mains, provided with a double cover, between the upper and lower sides of which is interposed a body of lamp-black or other similar non-conducting material, and with a diaphragm located between said cover and the steam-connections in said well, forming in the latter an upper chamber, with which are connected two air-pipes, one higher than the other, substantially as set forth.

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