(No Model.)

E. SPENCER.

APPARATUS FOR THAWING FROZEN PIPES.

No. 246,231. Patented Aug. 23, 1881.

Fig. 1.

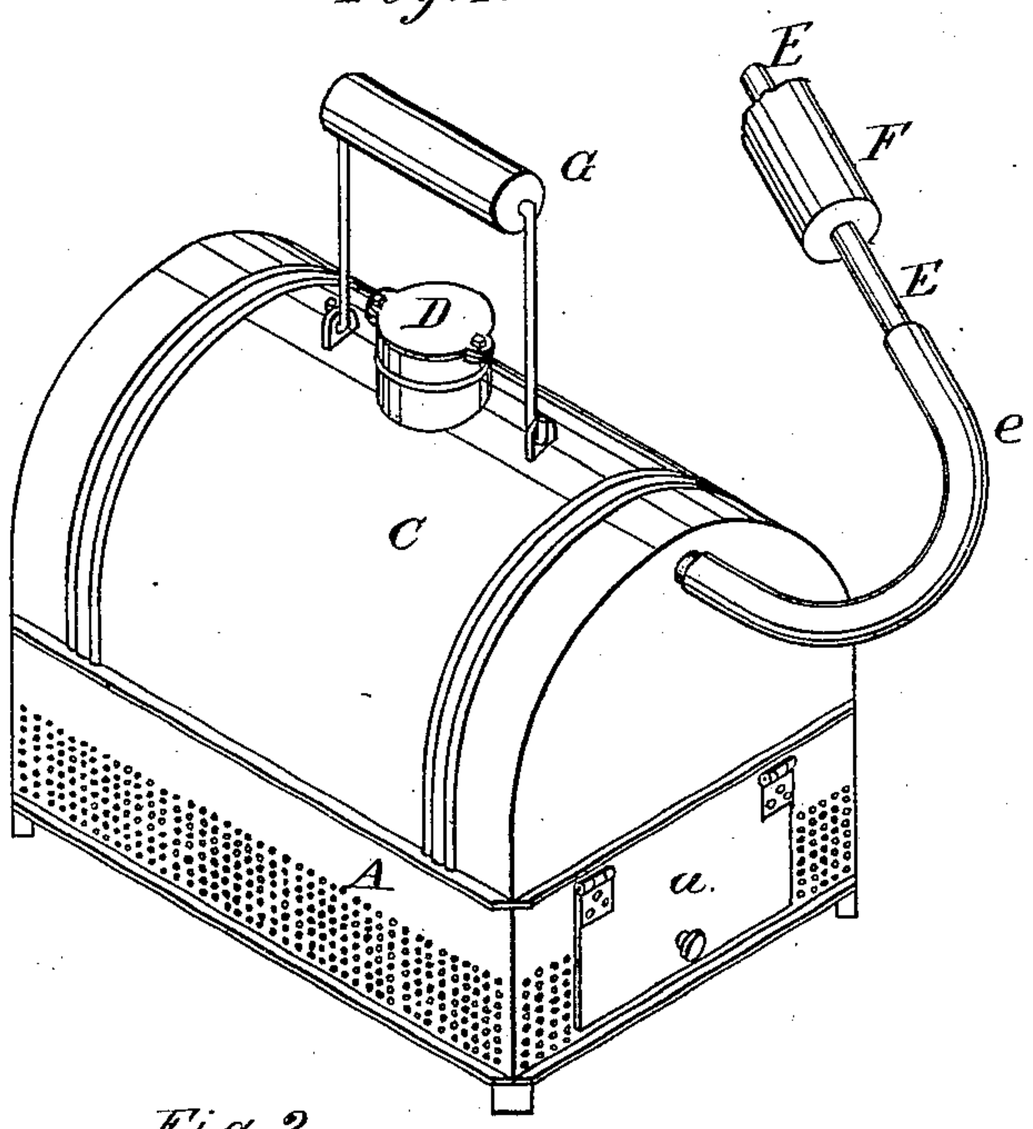
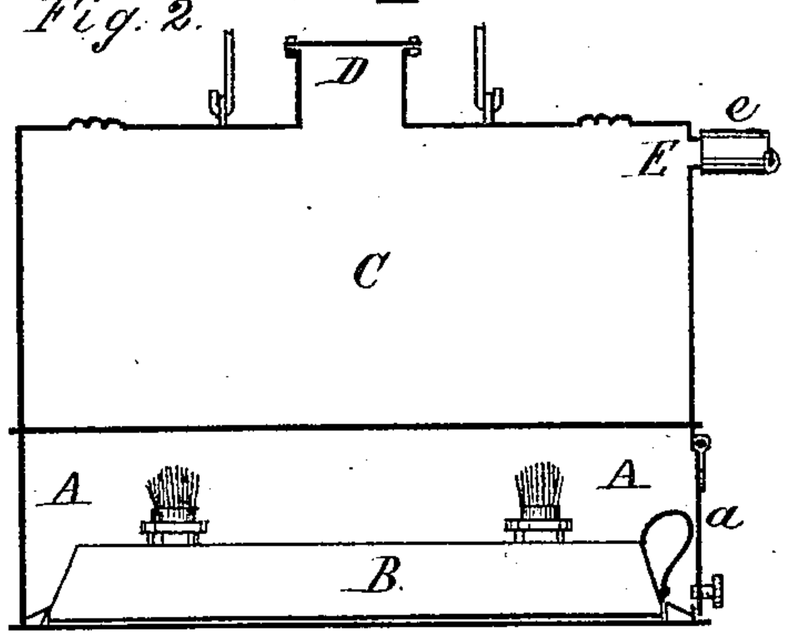


Fig. 2.



Witnesses:
J. E. Knight
L. W. Hopkins

Inventor:
Edward Spencer
By Knight Bros
Attys

UNITED STATES PATENT OFFICE.

EDWARD SPENCER, OF ST. LOUIS, MISSOURI.

APPARATUS FOR THAWING FROZEN PIPES.

SPECIFICATION forming part of Letters Patent No. 246,231, dated August 23, 1881.

Application filed February 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SPENCER, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Apparatus for Thawing Ice in Water-Pipes, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

The object of my invention is the thawing of ice in water and other pipes that may be obstructed thereby.

The apparatus consists of a portable boiler, beneath which is a fixed or removable heating device, that may consist of either coal-oil, spirit or other lamp, or charcoal or other furnace. From the steam-chamber extends a pipe or pipes for the discharge of steam. The pipe is preferably flexible, or has one or more flexible portions, to enable the discharging end or nozzle of the pipe to be directed to any point without changing the position of the boiler. I prefer to supply the steam-pipe with a non-conducting sleeve or handle for the grasp of the hand in directing the steam-jet.

In the drawings, Figure 1 is a perspective view of an apparatus illustrating my invention. Fig. 2 is a longitudinal section of the same.

The drawings show a boiler with a fire-chamber fixed thereto; but I do not confine myself to this construction, as the boiler may be made removable from the fire-chamber or furnace. The apparatus admits of considerable modification in all particulars.

As shown in the drawings, A is a fire-chamber, closed by a door, *a*, and consisting of sheet metal with perforations for the admission of air.

B is a lamp, (shown with two burners.) The lamp may contain alcohol or coal or other oil. In place of the lamp any suitable furnace may be used. When a furnace is used it may be a fire-pot inserted in the fire-chamber, or the fire-chamber may be dispensed with and the boiler be placed upon and supported by the furnace. I attach a bail to the furnace, by which the apparatus may be carried.

Over the fire-box or furnace, as the case may be, is the boiler C, closed at top by a lid, D, which is arranged for removal to allow water to be poured into the boiler.

It is not necessary that the boiler should be made to resist any great steam-pressure, as the steam has free exit through the steam pipe or pipes E, by which it is directed against the object to be warmed or heated. There may be either one or more steam pipe or pipes proceeding from the upper part of the boiler. The pipes E may extend from one or both ends, or from the top of the boiler, or both ends and top. I prefer to make the steam-pipe flexible throughout part or the whole of its length. A flexible part is shown at *e*. The pipe or pipes may be of any length required. They may consist wholly of flexible hose.

F is a sleeve of some non-conducting material for the grasp of the hand. (The pipe E and sleeve F are shown broken at the ends, to indicate indefinite length.)

G is the bail or handle by which the apparatus is carried.

By the use of this apparatus objects not accessible to other means of heating may be easily reached. Thus the steam may be made to fill a chamber containing objects needing thawing when it would be dangerous to introduce heated air from danger of fire or explosion. On the other hand it can be used where the application of hot water would be inadmissible from the injury it would cause by flooding.

It will be seen that the apparatus is simple and cheap in construction and operation, and supplies a want long felt. It is not liable to get out of order. No mechanical skill is required to operate it.

A safety-valve may be supplied to the boiler C, to allow the escape of steam on reaching a certain pressure.

I claim as my invention—

In a portable thawing apparatus, the combination of closed steam-chamber C, fire-chamber A, having heating device B, handle or bail G, and steam pipe or hose E, provided with handle F, as set forth.

E. SPENCER.

Witnesses:
SAML. KNIGHT,
J. E. KNIGHT.