S. S. SCHOLL.

DYNAMITE THAWER.

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978,659.

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Fig. 1

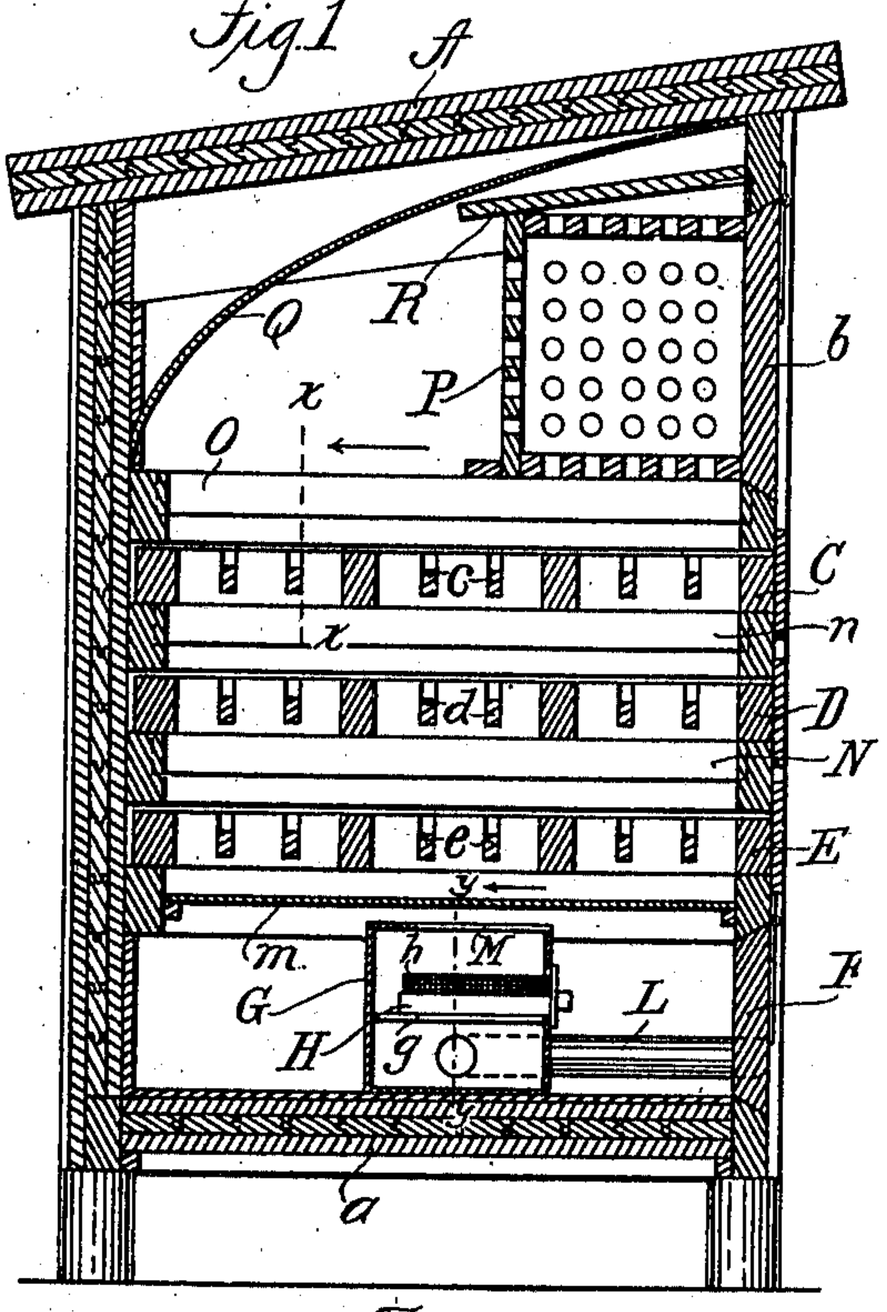


Fig. 2

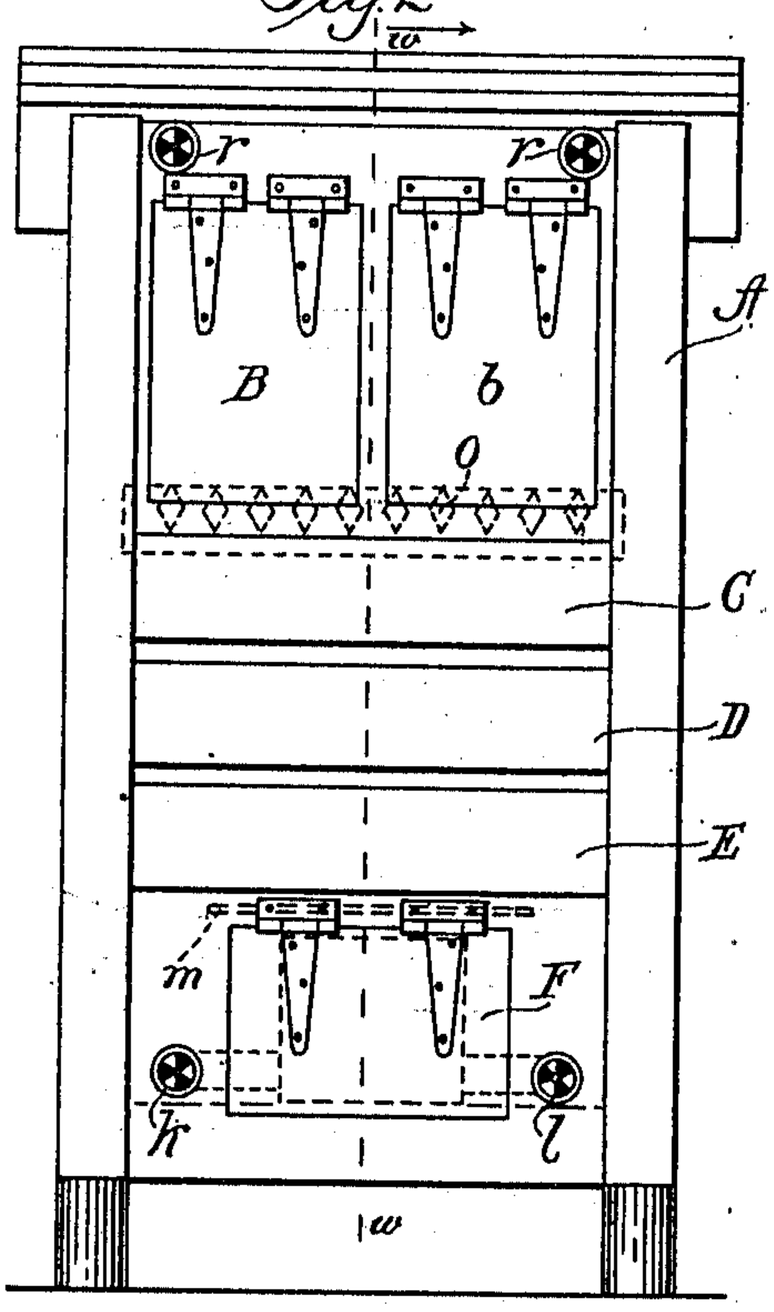


Fig. 3

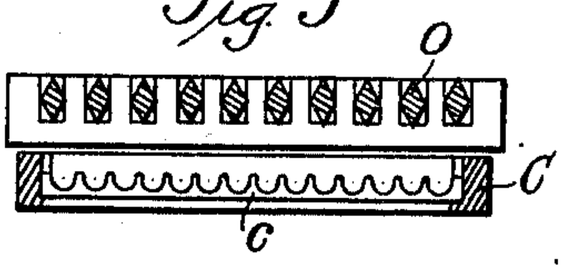


Fig. 4

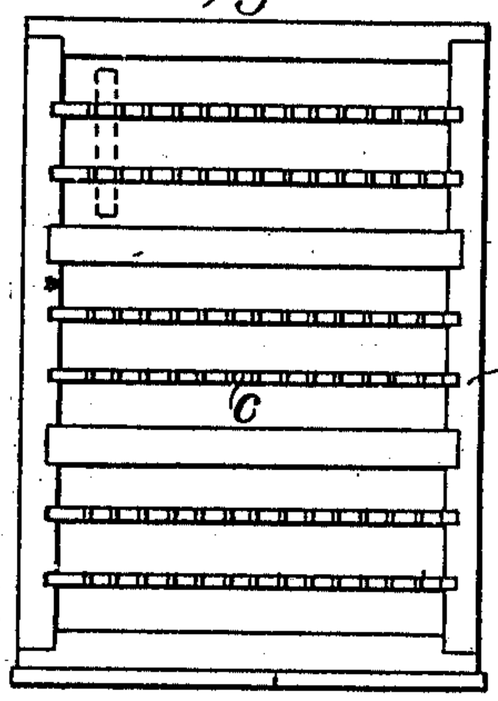
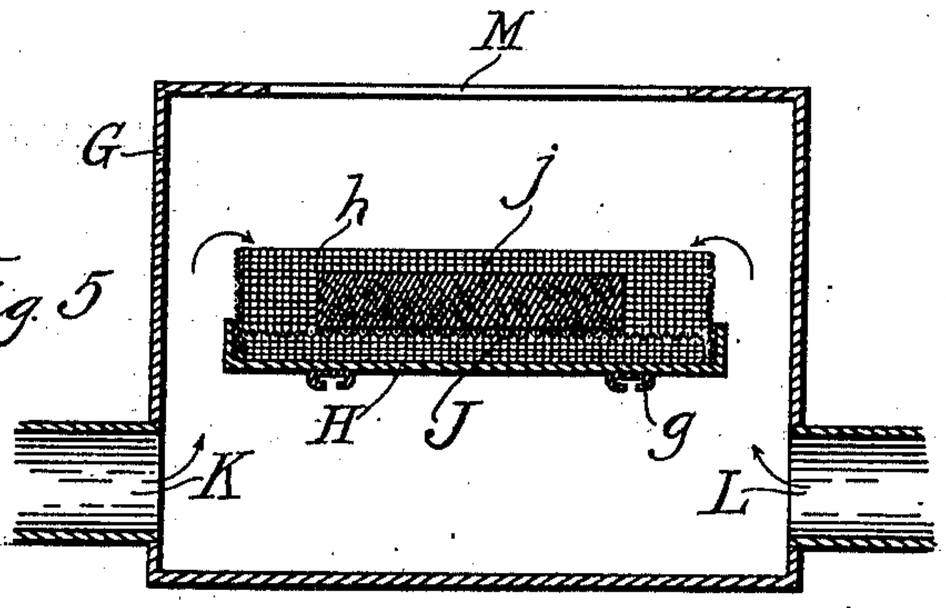


Fig. 5



Witnesses

B. D. Crawford.

Edwin Guthrie

Inventor

Sheridan S. Scholl,

By Charles D. Pennebaker,

Attorney

UNITED STATES PATENT OFFICE.

SHERIDAN S. SCHOLL, OF ROANOKE, VIRGINIA.

DYNAMITE-THAWER.

978,659. Specification of Letters Patent. **Patented Dec. 13, 1910.**

Application filed March 26, 1910. Serial No. 551,631.

To all whom it may concern:

Be it known that I, SHERIDAN S. SCHOLL, citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented certain new and useful Improvements in Dynamite-Thawers, of which the following is a specification.

This invention relates to dynamite thawers, for use in heating the frozen explosive with safety, and bringing it back into normal condition, and keeping it in that condition, regardless of the external temperature.

The object of this invention is the production of a heater for the purpose stated, portable or otherwise, comprising parts of special construction, and particular arrangement, whereby it is believed the raising of the temperature of the cartridges is effected with especial economy and safety, as well as with rapidity and convenience.

In the accompanying drawings, Figure 1 represents a vertical section on a plane passing through the back and front walls of the cabinet. Fig. 2 is a front view, and in this figure is found the broken line *w—w* upon which the sectional view shown in Fig. 1 is taken. Fig. 3 is a section on broken line *x—x* of Fig. 1, and shows a section transversely of one of the skeleton drawers for holding the cartridges, and the baffle bars above it. Fig. 4 is a top plan view of one of the drawers. Fig. 5 is a cross-section, slightly enlarged, of the combustion chamber, on broken line *y—y* of Fig. 1.

Like letters are employed to refer to the same parts throughout the drawings and description.

The cabinet A, constructed of suitable material to prevent the rapid dissipation of heat, has a bottom *a*, and two upper front doors B and *b*. The cabinet A has several drawers, C, D, and E, which are skeleton drawers. In other words, they have no bottoms, but are provided with the recessed cross-pieces *c*, *d*, and *e*, and the cartridges are supported by those pieces in the recesses, as indicated by broken lines in Fig. 4. The cabinet has also a lower front door F, that affords access to the combustion chamber G, within which is the drawer H provided with a wire netting fuel holder having the walls *h* and bottom J. There is an interval between the open-work bottom J and the bottom of the drawer H, into which ashes from the burning brick *j* may fall. The drawer H is movable into and out of the combustion chamber G, upon the rails *g*. Air enters the combustion chamber by way of pipes K and L, and the amount of air entering is governed by the lower dampers *k* and *l*. The heated products of combustion pass upwardly out of the chamber G through the opening M in the top of the chamber, but the hot gases do not ascend directly to the drawers. They are first intercepted by the galvanized iron plate *m* arranged above the combustion chamber. The width of the plate *m* is shown in Fig. 2, and its position in both Figs. 1 and 2. The office of plate *m* is to prevent the cartridges that may have been placed in the lower drawer E from being subjected accidentally to overheated gases or sparks arising from the chamber G.

Between the drawers and above the top one are arranged the baffle bars N, *n*, and O, usually having the cross-section illustrated in Fig. 3. These baffle bars serve to disperse the ascending currents of hot gases and to distribute them equally throughout the interior of the cabinet A.

In the upper portion of the cabinet, as shown in Fig. 1 is the box P, having perforated walls, and arranged to be removed through the front door *b*. It will be understood that there are provided two boxes P, the second one, not shown, being removable through the upper front door B.

Above the drawers and baffle bars, the rising gases are directed to the top and front of the cabinet by the curved plate Q, which is made of non-combustible material, not necessarily metallic.

The reference letter R marks one of the inner doors, of which there are two, that may be lowered when the box P is withdrawn, and thus prevent loss of heat.

The hot gases may be permitted to escape more or less rapidly through the top dampers *r*, *r*, shown in Fig. 2.

The operation of this invention may be explained as follows: To give out the heat there is ordinarily used a carbon brick *j*, which when heated a cherry red in a suitable manner, as, for example, by placing it for a short period in a steam boiler furnace, will burn for a considerable time. It has been found practicable to keep the cabinet adequately heated throughout the night with

one brick. The heated brick is placed upon the bottom J in the drawer H of the combustion chamber G, and the rate of its burning regulated by the arrangement of the dampers described. As the cartridges carried by the drawers are thawed into condition, they may be removed from the drawers and placed in the perforated box P, where they are kept from again freezing and within convenient reach. Other frozen cartridges are placed in the drawers to take the places of those removed. The frozen cartridges undergoing thawing in the drawers, do not come into contact with each other.

It is not essential that a combustible body such as a carbon brick should be always employed in this invention. A block of soapstone properly heated, has been found very useful for the purpose, the inlet dampers being closed and the temperature regulated by the upper dampers alone.

Having now described this invention, and explained the mode of its operation, what I claim is:—

1. In a dynamite thawer, the combination with a cabinet having an upper front door, of a perforated box constructed to be introduced and withdrawn through said door, a series of skeleton drawers arranged below the said perforated box and having supports for the explosive, a source of heat within the cabinet arranged below the drawers, devices arranged between the source of heat and the lowest drawer and between the drawers and between the upper drawer and said perforated box for breaking up the ascending currents of heated gases, and upper and lower dampers constructed and arranged to control the passage of air into and out of the cabinet.

2. In a dynamite thawer, the combination with a cabinet having an upper front door, of a perforated box constructed to be introduced and withdrawn through said door, a curved plate secured within the cabinet and extending from a lower point at the back of the cabinet to a higher point over said perforated box at the front of the cabinet to direct the ascending gases forwardly, a series of skeleton drawers arranged below the said perforated box and having supports for the explosive, a source of heat within the cabinet arranged below the drawers, and upper and lower dampers constructed and arranged to control the passage of air into and out of the cabinet.

3. In a dynamite thawer, the combination with a cabinet, of a perforated box supported within the cabinet, the cabinet having an opening provided with a closure through which the said perforated box may be reached from the outside, a series of skeleton drawers arranged below the perforated box and having supports for the explosive, a source of heat within the cabinet arranged below the drawers, and upper and lower dampers constructed and arranged to control the passage of air into and out of the cabinet.

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

SHERIDAN S. SCHOLL.

Witnesses:
E. W. POINDEXTER,
LOTTIE STEWART.