Dec. 8, 1925. 1,564,348

W. H. HILL

CONTENTS PRESERVING DEVICE FOR SAFES

Filed May 3, 1924

Fig. 1

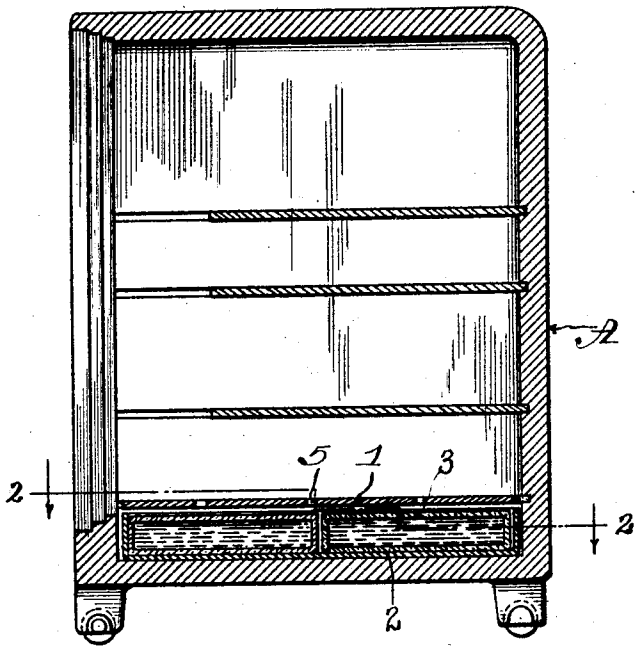


Fig. 2

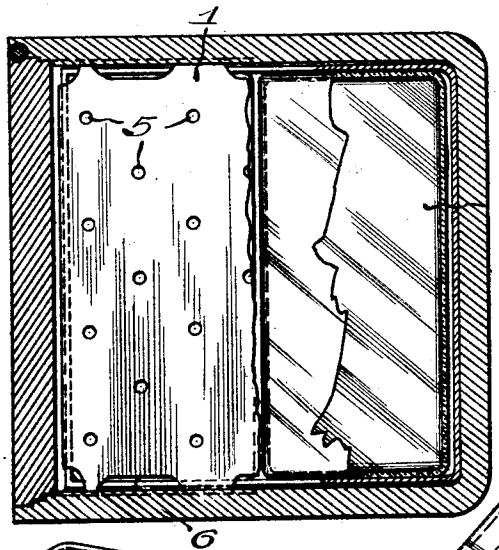


Fig. 3

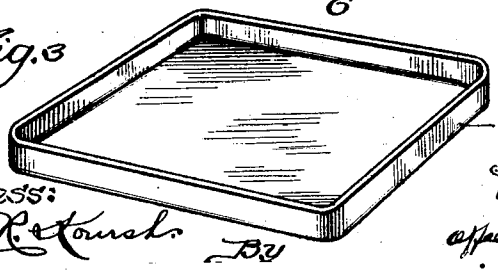
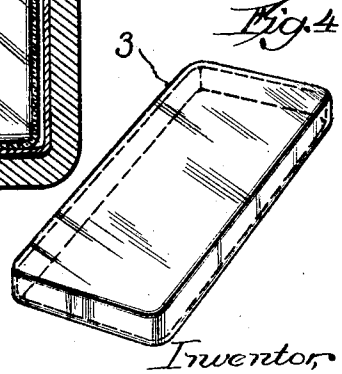


Fig. 4



Witness:
Chas. R. Kousch.

By

Inventor,
William H. Hill,
Appleton, Bulkley, Poole & Pratt. Attys

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UNITED STATES PATENT OFFICE.

WILLIAM H. HILL, OF CLEVELAND, OHIO.

CONTENTS-PRESERVING DEVICE FOR SAFES.

Application filed May 3, 1924. Serial No. 710,884.

To all whom it may concern:

Be it known that I, WILLIAM H. HILL, a citizen of the United States of America, and a resident of Cleveland, Ohio, have invented a certain new and useful Improvement in Contents-Preserving Devices for Safes, of which the following is a specification.

This invention relates to improvements in safes, fire and burglar proof cabinets and the like, and more especially to a feature of construction for preserving the contents of the same in event of fire.

The object of the invention is to incorporate in a safe, a suitable container for water, which will remain intact under normal temperate conditions, but at a predetermined temperature will be broken, thus liberating the water.

The result sought to be attained is not that of flooding or drenching the contents of the safe and for the obvious reason that the water damage might readily be as great as the effect of high temperatures, but rather create a condition within the safe which will counteract the destructive effects of the excessive heat and thus preserve the contents.

The contents of a closed safe which has survived a destructive conflagration are usually found to be intact after the fire, although the intense heat invariably leaves the contents in a very fragile state, due to the charring action that takes place, such as is present wherever combustible material is subjected to heat without sufficient air to support combustion, and as a result, the contents frequently undergo disintegration when removed or in handling after recovery.

It is conceived therefore that combustible materials will withstand much higher temperatures and for longer periods of time without deterioration, in an atmosphere saturated with steam and, for the same reason that live steam introduced into the hold of a vessel will retard the spreading of fire. Although the conditions that exist within a safe subjected to intense heat, and in the hold of a burning vessel may not be entirely analogous, it is believed to be an accurate statement that the presence of steam in a confined space will not only retard combustion, but preserve combustible substances from charring or carbonization.

To apply this idea to a safe it is assumed that the interior is an air tight compartment. Moreover, it is contemplated that a safe may be used for years without going through a fire, and thence provision must be made to maintain a supply of water intact and proof against evaporation for long periods of time and yet available, should the occasion arise. Again, it is manifest that the greater number of safes in use, will never experience a destructive fire, and therefore it would not be practical to equip safes with elaborate apparatus or to materially increase the size of the safe for the purpose of housing such apparatus or device. Hence it is a further object of the invention, to equip a safe with a device which will occupy but a small part of the available space within a safe.

A preferred embodiment of the invention is disclosed in the accompanying drawings in which—

Figure 1 is a view in vertical section of an ordinary safe showing the arrangement contemplated,

Figure 2 is a view in variegated section taken on line 2—2 of Figure 1.

Figure 3 is a perspective view of the pan and

Figure 4 is a perspective view of the water container.

To illustrate the application and use of the invention, an ordinary safe A of standard construction and design has been illustrated in which the interior is divided into smaller compartments or spaces by the usual arrangement of shelves and upright partition walls as desired. At the bottom of the interior of the safe is reserved a relatively shallow compartment separated from the space above by a permanent wall 1, which is the bottom of the available storage space or compartment.

Within this compartment is a relatively shallow tray or pan 2 of metal or other suitable and durable material practically filling the compartment and resting on the bottom thereof, although it is preferred that a small air space separate the pan from the wall just above. Within the tray fits two containers 3, 3, of the same shape and dimensions and substantially occupying the entire space in the pan. The containers are preferably made of glass, porcelain or other frangible material, blown or molded in rectangular form and provide in one wall, such as the top, with an opening having a sealed closure or cap of suitable form, which can be permanently sealed after the containers are filled. Water is preferably used

in filling the containers although other liquids having superior preservative qualities may be substituted. Certain liquid chemicals might be suggested in this connection, but bearing in mind that the object is not to saturate the contents for the purpose of preventing combustion, but rather to preserve the contents in presence of intense heat, chemicals having the property of extinguishing fire may not be found to be any more effective than water.

The filled containers having been placed in the tray and the whole inserted in the compartment, suitable means may be provided for securing the same against movement and removal, as well as necessary padding or packing to prevent the containers being broken in the handling of the safe.

There is one essential feature to be provided for and that is that suitable passages be provided to connect the lower compartment with the space above. This may be accomplished by providing perforations or holes 5 in the top wall, or else by forming marginal slots or openings 6 along the edges and at the corners of said wall. The reason for this will presently be seen.

Assuming then that the safe with its contents locked therein, is subjected to fire, the heat soon raises the temperature of the interior to say 200° at which the containers will break or rupture allowing the water to escape into the pan. As the temperature increases this water will be converted into steam which will circulate upwardly into the space above, through the passages provided in the wall 1.

The presence of the steam as already pointed out, creates an atmosphere of excessive humidity, which makes it possible for the contents to withstand the intense heat and for a long period without charring or being materially affected, to the end that they will be preserved in their original condition when removed from the safe after it has cooled sufficiently to permit the opening thereof.

It will be seen therefore, that this method is not the equivalent of a sprinkling system or any other system that floods a compartment in order to preserve combustible articles, but rather involves the generation of steam or vapor which acts as the preservative agent.

Having set forth the arrangement and purpose of the device embodying the invention, I claim:

1. The combination of a safe or the like having a relatively shallow receptacle beneath the contents holding compartment thereof, and a perforate partition wall therebetween, and a container of frangible material resting in said receptacle and adapted to have a liquid permanently sealed therein.

2. The combination of a safe or the like having a relatively shallow compartment at the bottom of the interior space and communicating therewith, a pan in said compartment, and a glass container resting in said pan and having water sealed therein.

Signed at Elyria, O., this 29 day of April 1924.

WILLIAM H. HILL.