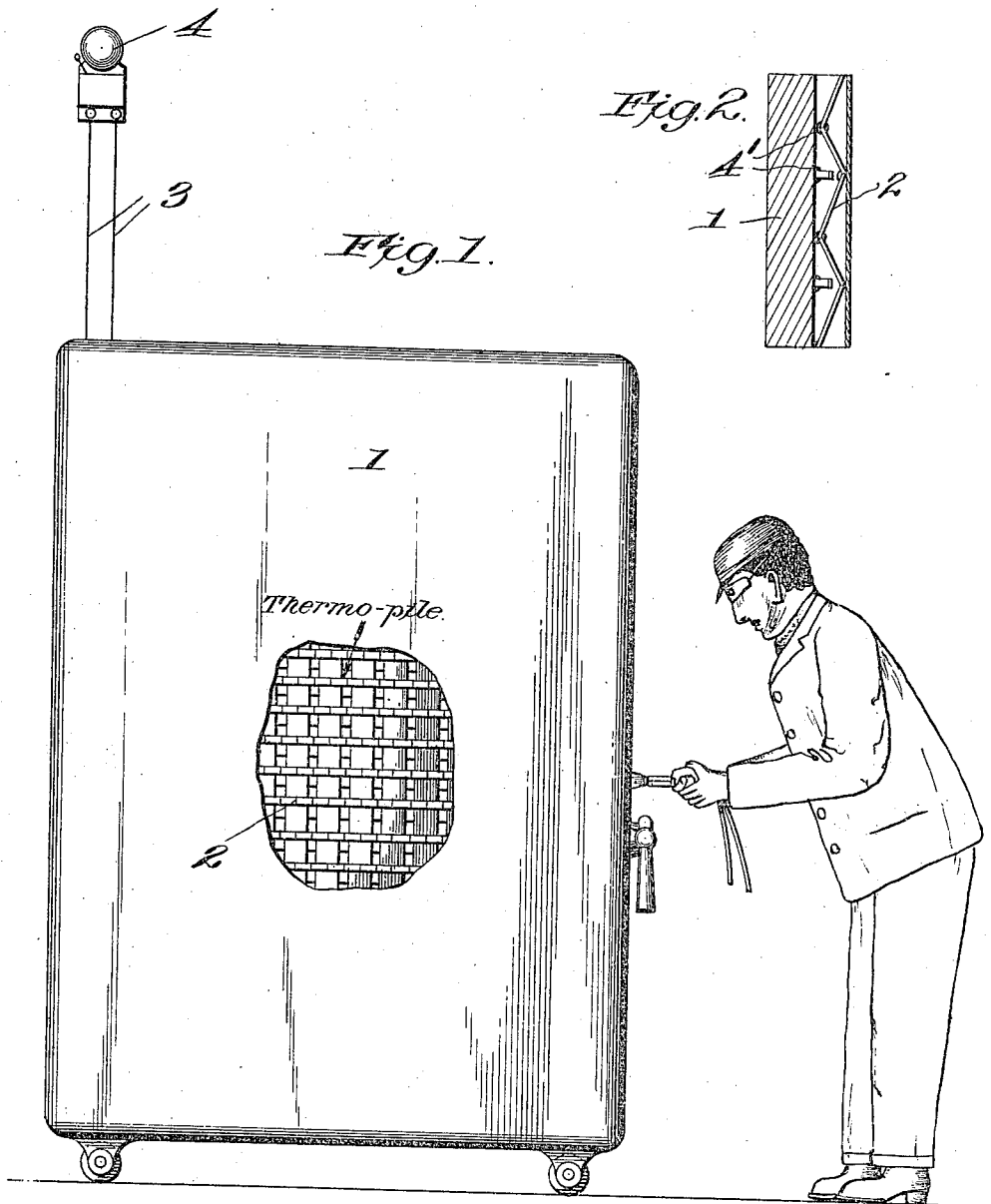


E. MENNE.
SAFE AND VAULT PROTECTOR.
APPLICATION FILED NOV. 8, 1909.

948,929.

Patented Feb. 8, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

ERNST MENNE, OF CREUZTHAL, GERMANY.

SAFE AND VAULT PROTECTOR.

948,929.

Specification of Letters Patent.

Patented Feb. 8, 1910.

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To all whom it may concern:

Be it known that I, ERNST MENNE, chemist, a subject of the German Emperor, and resident of Creuzthal, Westphalia, Germany, have invented a new and useful Safe and Vault Protector, of which the following is a specification.

My invention relates to an improvement in safe and vault protectors and is designed to provide a simple means whereby an electric alarm will be given if heat is applied to the outside of the safe or vault for the purpose of breaking thereinto.

Since the invention of the oxy-acetylene burners and of the electric arc blast device, it has been found comparatively easy for a burglar to penetrate the wall of a safe or door of a vault, no matter how carefully made.

The object of the present invention is to produce a construction whereby when such an attempt is made, an alarm will be given.

In the accompanying drawing—Figure 1 represents an ordinary safe, partly broken away, showing an alarm bell and circuit and showing a burglar attempting to fuse a portion of the front of the safe. Fig. 2 is a cross section on a larger scale of a portion of the wall of the same.

1 represents a safe of ordinary shape. This safe is provided with a lining 2 of thermo-electric elements, forming a thermo-pile, which is connected to wires 3, leading to a signal device 4. The thermo-electric pile is made of long, thin strips with which the inner wall of the safe and safe door can be lined crosswise, so as to form a net-like coating, as shown in the drawing, this coating being preferably protected by a covering plate on the inside. Thus the whole device occupies only a very small space and is

always in working order. It also affords the largest factor of safety, inasmuch as the attempt to fuse even a small hole will affect at least one thermo-element, thereby producing an electric current, which actuates the alarm. One advantage of this form of device is that the heat conduction of the walls of the safe, if an oxy-acetylene burner, for instance, is skilfully handled by a burglar, is only very small, only a little heat being conducted from the cutting line proper to the surrounding parts. This, however, does not render my construction inoperative, because the entire interior of the safe is lined crosswise with a net-like coating.

The thermo-elements are of any desired type, but they are so arranged that the soldered connection 4' is closer to the outer wall of the safe than the remaining portion of the strips.

In actual use, the wires 3 are concealed or so located as not to be easily found, and, if desired, alarm devices may be located within the safe itself, so that they will be set off when the burglar commences his work, thereby frightening him away.

The construction shown is applicable not only to safes, but to vault doors and similar constructions.

I claim:—

A safe provided with a net-like interior coating, composed of thermo-elements forming a thermo-pile, and an alarm device connected thereto, substantially as described.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, October 1909.

ERNST MENNE.

Witnesses:

LOUIS HAMBORG,
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