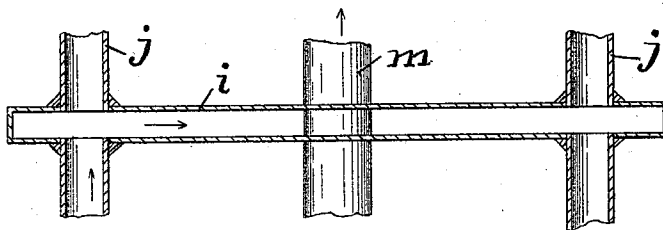
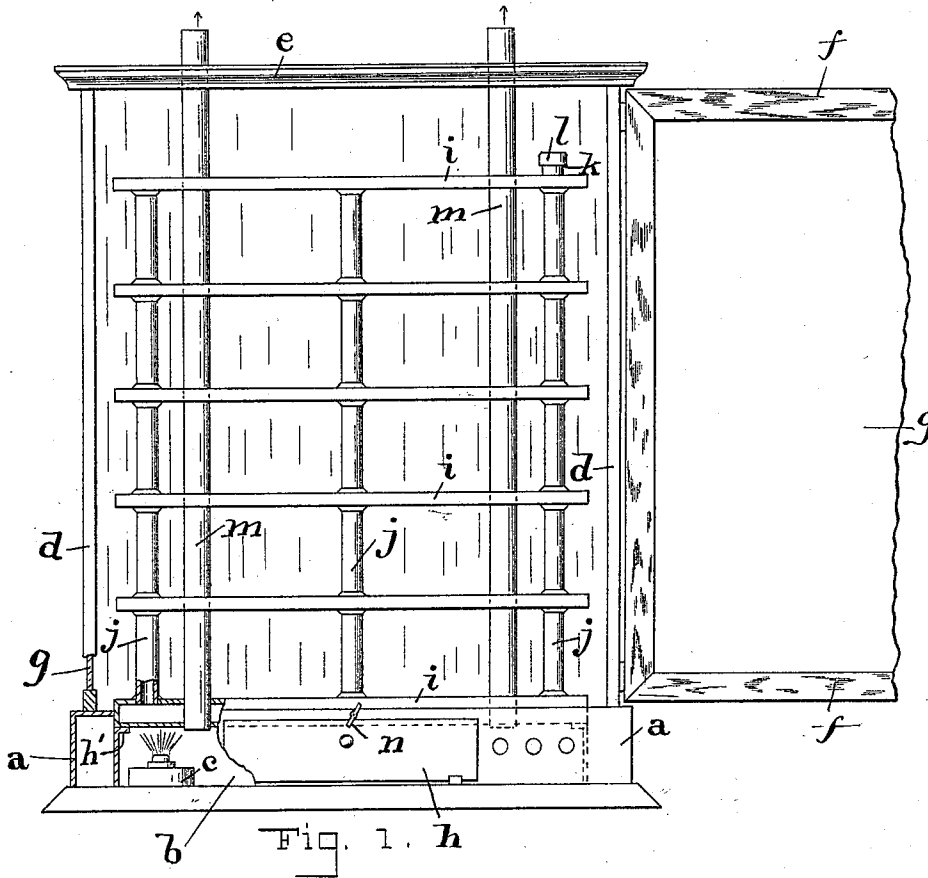


(No Model.)

A. MAAG & F. S. HORN.  
WARMING SAFE.

No. 518,042.

Patented Apr. 10, 1894.



WITNESSES:—

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# UNITED STATES PATENT OFFICE.

AUGUST MAAG AND FRANKLIN S. HORN, OF BALTIMORE, MARYLAND.

## WARMING-SAFE.

SPECIFICATION forming part of Letters Patent No. 518,042, dated April 10, 1894.

Application filed December 19, 1893. Serial No. 494,071. (No model.)

### *To all whom it may concern:*

Be it known that we, AUGUST MAAG and FRANKLIN S. HORN, citizens of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Warming-Safes, of which the following is a specification.

This invention relates to a warming safe to contain pies, biscuits, or any cooked food, and keep the same hot and in readiness to be served. The object is to provide a safe of this character suitable for restaurants, eating houses, lunch counters and similar places.

The invention is shown in the drawings, in which—

Figure 1 is a front elevation of the safe, with its door open, and showing one lower corner of the base broken away to expose to view the construction. Fig. 2 is a view, on a larger scale, of a cross-section of one shelf, of the safe, and the pipes connected with it.

The exterior case of the safe may be made of any material but we prefer to make it of metal and glass.

The letter, *a*, designates the walls of a metal base having a chamber, *b*, for a suitable heater, which in this instance consists of one or more lamps, *c*; posts, *d*, of metal are at each corner and support a top, *e*; one or more doors, *f*, are hinged to the corner posts. Glass panels, *g*, are in the door, and sides and back. A door, *h*, in the base gives access to the chamber, *b*. The series of shelves and the vertical pipes which connect and support them constitute the circulating system, and when in position sit upon the seat, *h'*, of the base-chamber from which they may be readily detached or lifted when desired so that convenient access may be had to repair or replace any leaking or otherwise defective part thereof.

The shelves, *i*, are made of sheet-metal and each shelf is hollow and has communication with all the other shelves through vertical pipes, *j*, which may be continuous and extend from the top-shelf to the bottom one, with an opening into each of the shelves in succession, or may be sectional, each section extending from the top of one shelf to the bottom of the one next above it. This latter arrange-

ment is shown in the drawings but the specific arrangement employed is merely a matter of convenience. It will be seen that the vertical pipes, *j*, serve as supports for the shelves and also as passages for the circulating fluid and that all the shelves above the lowermost one have no support other than that afforded by these pipes. An opening, *k*, is provided in the upper side of the top shelf for convenience in filling the circulating system, which comprises the shelves and the vertical pipes, *j*,—with water. A cap, *l*, closes the opening, *k*, and is so arranged that if the pressure in the circulating system rises, owing to the generation of steam, the said cap will blow off and permit the steam to escape.

The smoke and gases of combustion from the burner, *c*, escape through the flues, *m*, of which there are two shown in the drawings. These flues are open at both ends and extend vertically upward from the chamber, *b*, and preferably through each of the shelves and through the chambers contained therein, in succession. In this manner the heated products of combustion, in passing through the flues, heat the air in the safe and also the water in the circulating system. A large proportion of the heat generated by the burner is utilized, so that for ordinary purposes a lamp will furnish a sufficient degree of heat. As the lamp or lamps in the base chamber is readily accessible through the door, *h*, which is held in closed position by the turn-button, *n*, it is an easy matter to maintain any desired temperature within the case.

In practice, the entire circulating system may be filled with water, or, if preferred, may be only partially filled, and the remaining part will be heated by the steam generated.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the exterior walls of the safe; a base having a chamber; a heater contained in the base-chamber; a series of shelves the lowermost of which rests upon a support in the base-chamber—one shelf being above the other—each shelf consisting of a hollow metal independent chamber having

a top, a bottom and sidewalls; vertical pipes  
each connecting the top of one shelf with the  
bottom of the shelf next above it, and the  
lower and upper ends of each pipe in open  
5 communication with the respective chambers  
in the shelves to which they are connected;  
and the flues open at both ends and passing  
up through the chambers of all the shelves.

In testimony whereof we affix our signatures  
in the presence of two witnesses.

AUGUST MAAG.  
FRANKLIN S. HORN.

Witnesses:

ALVAN MACAULEY,  
A. J. WILL.