

H. L. PALMER.
Stove-Board and Table-Mat.

No. 216,574.

Patented June 17, 1879.

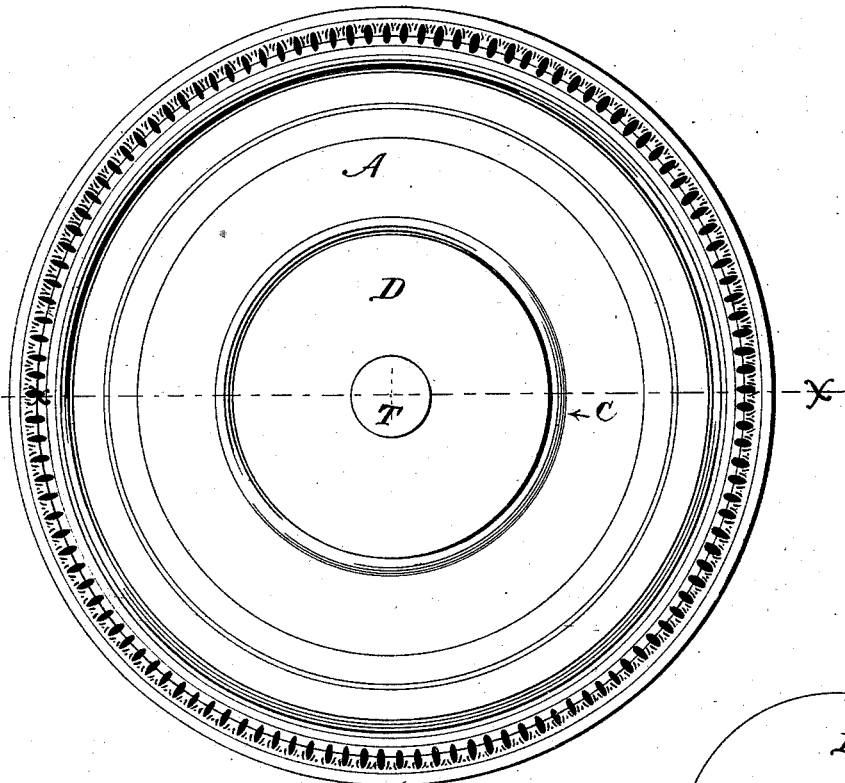


Fig. 1.



Fig. 5.

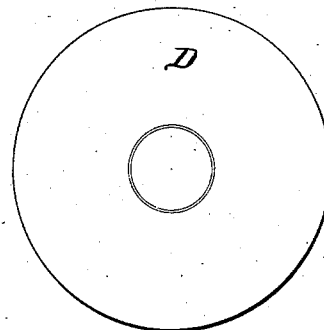


Fig. 2.



Fig. 3.

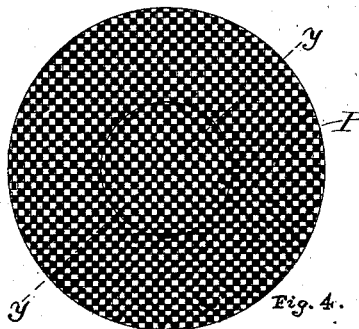


Fig. 4.

Witnesses:
Thos. Houghton.
A. Scott

Inventor:

Henry L. Palmer.
By James A. Skilton
att'y

UNITED STATES PATENT OFFICE.

HENRY L. PALMER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN STOVE-BOARDS AND TABLE-MATS.

Specification forming part of Letters Patent No. **216,574**, dated June 17, 1879; application filed June 26, 1878.

To all whom it may concern:

Be it known that I, HENRY L. PALMER, of No. 143 Lawrence street, in the city of Brooklyn, county of Kings, and State of New York, have invented a new and useful Improvement in Stove Boards or Platforms and Table-Mats, of which the following is a specification.

The invention relates to devices for increasing the non-conducting qualities of stove boards or platforms, table-mats, and other like structures, intended to be used under stoves or other heated articles for purposes of protection.

When such stove-boards, &c., are composed of a sheet of metal, iron, zinc, or tin, without any supporting non-conducting body underneath the sheet, or when an underlying body is provided therefor, but of limited thickness and non-conducting power, and the same is used where the heat is very great, acting for considerable periods, the carpet, table-top, or other article to be protected is not always sufficiently shielded. This difficulty is found to exist especially where sheet-iron is the material of the main part of the stove board or platform, owing to its superior heat-conducting qualities. Consequently, while sheet-iron has been preferred for its stiffness, durability, and cheapness, it has been found unsuitable for use in these structures except in combination with some means of neutralizing this tendency, as by a thick platform of wood or other devices for a like purpose.

The object of my invention is to furnish the necessary additional protection against the effects of heat under such circumstances.

The invention consists in a stove board, platform, or table-mat composed of sheet-iron, provided with a central disk or reflector of sheet-zinc, preferably polished, covering the center only, and placed directly upon the sheet-iron, or with its under-side lining resting thereon.

It also consists in the combination of the lined sheet-metal platform proper, composed of whatever metal, and the lined central disk placed directly thereon.

It also consists in the main sheet, provided with a circular corrugation, and the central disk, provided with a folded or returned edge, so placed as to lie contiguous to and just within the corrugation which forms a molding

or finish therefor; also, in the disk secured to and against the underlying sheet by means of a central tag.

It also consists in the combination of a lining composed of stamped, corrugated, or embossed paper with a sheet-metal stove board, platform, or table-mat.

In the accompanying drawings, in which similar letters refer to similar parts, Figure 1 is a top or plan view. Fig. 2 is a top or plan view of the central disk. Fig. 3 is a sectional view of the entire structure cut on the line *x x*, Fig. 1; and Figs. 4 and 5 are bottom and sectional views, respectively.

The sheet A may be made of iron, zinc, or tin, and may, and preferably does, have a lining of paper or other thin fabric on its under side.

The central disk, D, preferably has its outer edge turned over and under for a finish, and is provided on its under side with a lining of paper or other like sheet material, L. This lining may be attached directly to the back or under side of the disk D, or it may be placed loosely on the center of the sheet A under the disk D, and be held there by means of the tag T, which holds the metal disk in place.

The central portion of the sheet A is bounded by an annular corrugation, C, one or more, within and to which the edge of the disk D is neatly fitted, so as to form a finish thereto, and also for the purpose of guarding against the penetration of dust and dirt under the edge of the disk D. The annular space S outside of the corrugation C is intended to receive the legs of the stove or other heated article thereon, the bottom center of the same being placed over the center of the disk D.

When made of iron the non-conducting qualities of the article are said not to be such as to give requisite protection under all circumstances.

The polishing of a large surface of sheet-iron is expensive, inconvenient, and such a surface on iron lasts comparatively but a short time. Polishing does not sufficiently diminish the heat-conducting properties of this metal. Sheet-iron, however, has a strong affinity for lacquer, japan, &c., and can therefore be easily and cheaply ornamented in various colors and designs, so as to be durable,

while zinc cannot. Hence my invention enables me to use sheet-iron for these structures where it could not before be done satisfactorily.

By placing on the sheet-iron sheet A a central disk, say, of polished zinc, which polishes more easily than iron, and retains its polish for a longer time when exposed to moisture and dampness, with a non-conducting layer (one or more) between it and the sheet A, the protecting power of a sheet-iron structure is materially increased.

I am aware that shields have been attached to stove-supports, as shown in Letters Patent No. 136,589, dated March 11, 1873, No. 137,291, dated April 1, 1873, and No. 137,292, all granted to Walter M. Conger; but in each of these instances there is special provision for air space or spaces between the shield or shields and the main body of the stove-support, which is objectionable, for the reason that it permits more or less of that access of heat near to the carpet or table-top, which it is intended to prevent. In the first-named Letters Patent the shields (one or more) are placed in or under a dome or raised part which incloses and holds an air-space divided into sections by the shields. Now, while inclosed air is a poor conductor of heat, it permits heat to be radiated through it, and is a good carrier of heat. Consequently when such a dome is exposed externally to a considerable degree of heat, the air-chamber underneath it becomes, like an oven, nearly uniformly heated below as well as above the shields. The same difficulties are found to some extent in the cases of the inventions shown in the other Letters Patent referred to. In these inventions the shields are placed above the main body, with air-spaces below the shields. The heated air therefore has access to the main body under the shields, and the shields being raised toward the stove-bottom receive and absorb a larger share of the heat than they otherwise would do, retaining more or less of it at the place which it is desired to free from the presence of heat as much as possible. In my invention, on the contrary, the air-space between the disk or reflector and sheet is treated as undesirable, and even positively injurious; and the central disk, being provided with a non-conducting layer underneath, is placed directly upon the underlying sheet, in which position it helps to reflect or radiate heat away from the support, to be carried away by the natural and unobstructed circulation of the air of the room above the same, or between it and the stove.

As a means of giving increased protection, I employ the stamped, corrugated, or embossed paper P under the sheet in place of the ordinary smooth paper, which allows air to pass between it and the floor, and between it and the sheet, thereby aiding in preventing injury by heat.

Another advantage secured by the combination of this stamped or embossed paper with the metal sheet is increased stiffness of the

entire structure, derived from the increased stiffness given to the paper by the curved lines resulting from its being corrugated or embossed.

In the absence of the paper lining either of the main body A or of the disk D, or of both of them, the reflecting qualities of the polished disk D will aid materially in protecting a carpet or other article beneath the same from the action of the heat of the stove; and even in the case of the ordinary wood-lined stove-board, where the heat to which it is subjected is great, the reflecting-disk D will materially help the non-conducting qualities of the structure.

In some instances the disk D may be made square, oblong, or oval, and placed within a space bounded by the corrugation C, disposed in similar form and size.

I am aware that stove-platforms have been made wherein an underlying body of sheet-iron is entirely covered on one side by a non-conducting sheet of zinc, the outer edge of the zinc being turned under the outer edge of the underlying body. My invention differs from this in leaving a considerable part of the outer edge of the sheet-iron underlying body uncovered by the overlying zinc disk, in the method of attaching the two sheets together, and also in having a lining on the under side of the zinc non-conducting disk to increase its non-conducting qualities.

I am also aware of the construction of stove-platforms wherein there is a sheet-metal center grasping a rim of oil-cloth between flanges or riveted thereto. My invention differs from this in having underneath the sheet-metal center a sheet-metal underlying body, which projects beyond this sheet-metal center, so as to form a margin beyond it for ornamentation and for the feet of the stove to rest upon. It also differs in the manner of attaching the center sheet to the other part of the structure, and in this respect: that in my invention the center disk is secured to the underlying sheet at its center by a single tag or tie, which is capable of being instantly released or secured in place; may be conveniently used to secure two or more disks, D, one over the other, if desired, and which permits the sheets A and disks D to be shipped in separate compact packages composed of each kind alone, and put together after reaching their destination, whereas in the other method of construction referred to the center sheet is secured to the other part by a double flange or rim, or by rivets through its outer edge—a comparatively troublesome and inconvenient method.

I claim as my invention—

1. A metal underlying sheet, A, provided with a lining underneath, in combination with the central disk, D, the edge of the central disk turned under and on itself, and placed directly on the sheet A, as set forth.

2. A metal underlying sheet, A, provided with a lining underneath, in combination with

the central disk, D, provided with a lining, L, and placed directly on the sheet A, as set forth.

3. An underlying sheet, A, provided with a concentric corrugation, C, in combination with a central disk provided with a folded edge, located just within the corrugation, and so that it forms a molding or finish therefor.

4. An underlying sheet, A, provided with a concentric corrugation, C, in combination with

a central disk, located just within the corrugation, and so that it forms a molding or finish therefor.

5. In a stove-platform or mat, a sheet-metal body and a corrugated or embossed lining in combination, as shown and described.

HENRY L. PALMER.

Witnesses:

THEODORE R. SHEAR,

GEORGE A. HAMMEL.