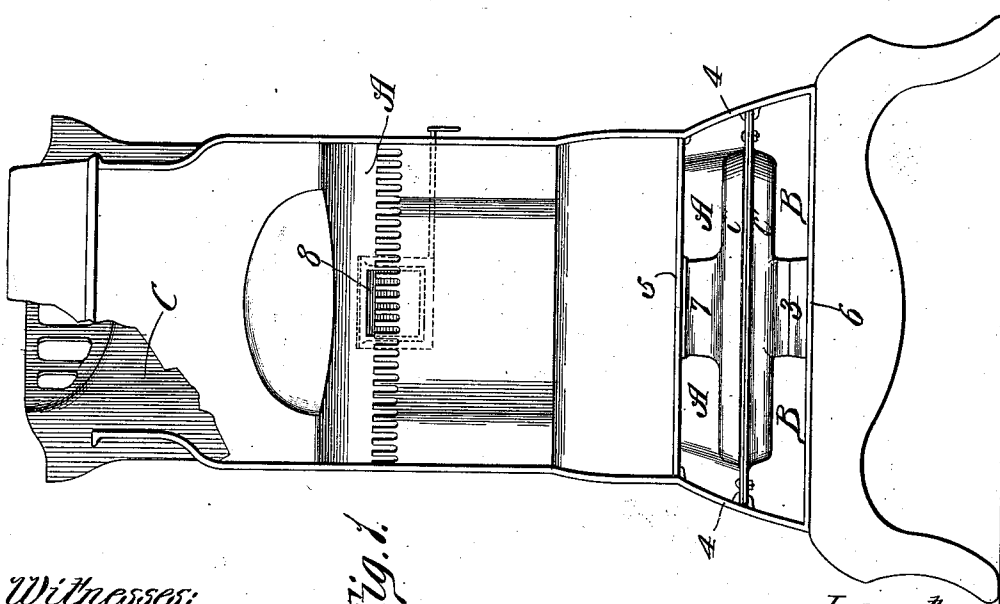
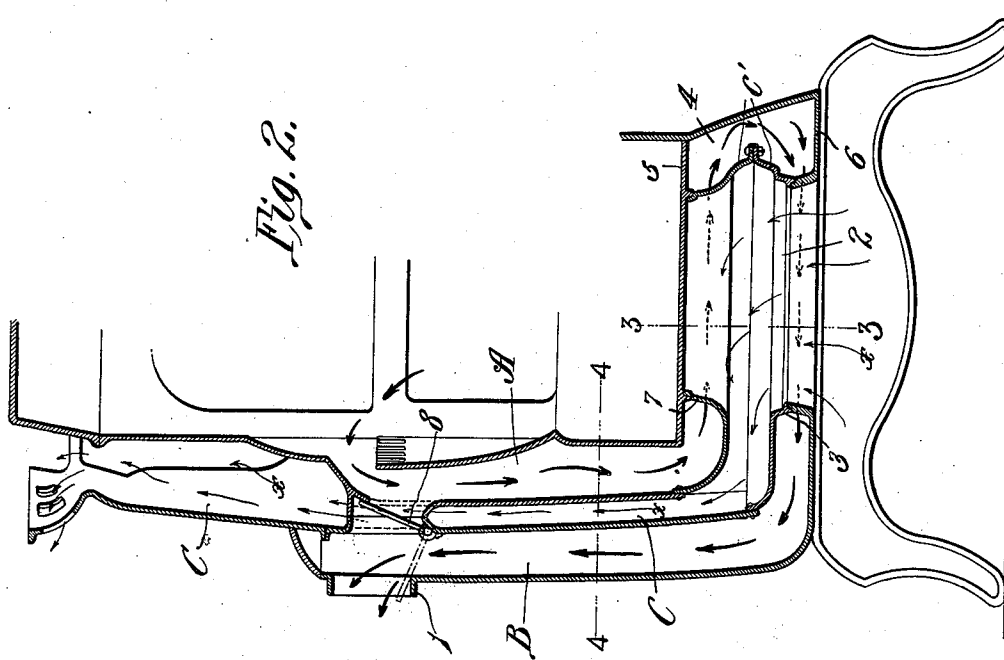


P. A. PAMPLIN.
 BASE BURNER.
 APPLICATION FILED NOV. 8, 1909.

1,023,167.

Patented Apr. 16, 1912.

2 SHEETS—SHEET 1.



Witnesses:
 George R. Radson
 Nels R. Church.

Inventor:
 Peter A. Pamplin.
 By Paul B. Kewell Atty.

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2 SHEETS-SHEET 2.

A perspective view of a double-decked tray. The tray has a central divider (1) and side rails (2). The top deck is labeled 'A' and the bottom deck is labeled 'B'. The central divider is labeled 'C' and 'C''.

A diagram of a harness with three straps. The top strap is labeled *B*, the middle strap is labeled *C*, and the bottom strap is labeled *A*. The harness is shown in a perspective view, with the straps curving upwards at the ends.

Inventor:
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UNITED STATES PATENT OFFICE.

PETER A. PAMPLIN, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE BUCK'S STOVE AND RANGE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

BASE-BURNER.

1,023,167.

Specification of Letters Patent.

Patented Apr. 16, 1912.

Application filed November 8, 1909. Serial No. 526,796.

To all whom it may concern:

Be it known that I, PETER A. PAMPLIN, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Base-Burners, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to stoves, and particularly to base-burners.

The main object of my invention is to provide a base-burner which has a greater amount of heat-radiating surface than the base-burners which have heretofore been in general use.

Another object is to provide a base-burner having an air-circulating flue extending practically the entire width of the stove and surrounded by a diving flue and an uptake flue through which the products of combustion travel.

Another object of my invention is to provide a base-burner of improved construction in which the smoke-flues are so arranged that the inner and outer walls of said flues form radiating surfaces. And still another object of my invention is to provide a base-burner of improved construction in which the smoke-flues are so designed that the products of combustion will come in direct contact with the outer walls of the stove as they travel from the fire-pot to the smoke-pipe, thereby enabling said outer walls to absorb all of the heat units from the products of combustion and radiate them into the surrounding atmosphere.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a front elevational view of a base-burner constructed in accordance with my invention, some of the outer walls of the stove being broken away to more clearly show the arrangement of the flues; Fig. 2 is a vertical sectional view of said stove; Fig. 3 is an enlarged vertical sectional view taken on approximately the line 3—3 of Fig. 2; and Fig. 4 is an enlarged horizontal sectional view taken on approximately the line 4—4 of Fig. 2.

Referring to the drawings which illustrate the preferred form of my invention, A designates a diving flue or down-take flue arranged at the rear of the fire-pot and

having a horizontal portion which extends forwardly through the base of the stove. The flue A extends the entire width of the stove and its upper end is open so that the products of combustion can pass from the fire-pot and dive downwardly through said flue, as indicated by the heavy arrows in Fig. 2, the open end of said flue A extending practically the entire width of the fire-pot, as shown in Fig. 1. An up-take flue B which is arranged at the rear of the stove has a horizontal portion which extends through the base of the stove and communicates with the front end of the diving flue A, thus forming a continuous passageway from the fire-pot to the smoke-pipe 1, the products of combustion traveling through said passageway, as indicated by the heavy arrows in Fig. 2. The flue B also extends the entire width of the stove, as shown in Figs. 3 and 4, and said flue B is spaced away from the flue A so as to form an air-circulating flue C which is so designed that cold air can enter one end of same and become heated before it reaches the opposite end. In the construction herein shown the air flue C is approximately flat or oblong-shape in cross section and is provided with an opening 2 that is surrounded by a flange 3 which extends downwardly through the horizontal portion of the up-take flue B, a thin film of cold air passing through said opening into the flue C and then circulating up through said flue to the upper end thereof, as indicated by the light arrows *x* in Fig. 2.

By referring to Figs. 3 and 4 it will be seen that the air-circulating flue is completely surrounded by the smoke flues A and B through which the products of combustion travel, the metal members or plates which form the walls of the flues C also forming the inner walls of the flues A and B. The sides 4 of the base of the stove form the side walls of the smoke-flues A and B, and the top and bottom walls 5 and 6 of the base form the top wall of the flue A and the bottom wall of the flue B, respectively. The front wall of the base portion of the stove forms part of the outer walls of the flues A and B, and the rear wall of the stove forms the outer wall of the vertical portion of the uptake flue B. By arranging the flues in this manner I obtain the greatest possible amount of heat-radiating surface for the major portion of the walls of the smoke

flues A and B are exposed directly to the atmosphere. Consequently, a base burner of this construction will absorb more heat units from the products of combustion and radiate them into the surrounding atmosphere than a base burner in which the walls of the smoke flues do not come in direct contact with the air in the room.

Another desirable feature of my improved base burner is that the air-circulating flue extends practically the entire width of the stove so that enough air will circulate through same to absorb practically all of the heat which radiates from the inner walls of the smoke flues, this being proven by the fact that when the stove is in use the smoke pipe 1 is cool enough to enable a person to place his hand on same without being burned. I prefer to arrange a deflecting member 7 inside of the horizontal portion of the diving flue A so as to deflect the products of combustion outwardly against the side walls of the base of the stove, the flange 3, which surrounds the opening 2 in the air-circulating chamber, also performing a similar function.

The air-circulating flue C extends upwardly some distance above the smoke-flues A and B, as shown in Fig. 2, and the upper end of said air flue is open so as to permit the heated air to escape into the room. It will, of course, be obvious that a pipe could be arranged in alinement with this air-circulating flue so as to carry the heated air to a room located above the room in which the stove is arranged. The stove is provided with the usual damper 8 which can be moved into the position shown in broken lines in Fig. 2 when the fire is first started so as to permit the products of combustion to pass from the fire-pot directly into the smoke pipe, said damper being thereafter moved into the position shown in full lines in Fig. 2 so as to cause the products of combustion to dive downwardly to the base of the stove.

The castings and plates which constitute the smoke flues and air-circulating flue can be formed in various other ways than that herein shown to accomplish the same results so that I do not wish it to be understood that my broad idea is limited to the exact construction herein shown. I prefer, however, to use two castings C', as shown in Fig. 3, to form the horizontal portion of the air-

circulating flue, and cast the reflecting member 7 and the flange 3 integral with said castings.

While I prefer to use a diving flue and an uptake flue having horizontal portions extending the entire width of the base and arranged one above the other, it will, of course, be obvious that the shape and arrangement of these flues could be changed without departing from the spirit of my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A base-burner provided with a diving flue that leads from the rear side of the fire-pot downwardly and thence forwardly through the base of the stove, an uptake flue spaced away from said diving flue and leading from the front end of said diving flue rearwardly and thence upwardly at the back of the stove, said flues extending the entire width of the stove, an air-circulating flue lying between said diving and uptake flues and formed by the inner walls of same, and means at the front end of said air-circulating flue for directing cold air into same and for causing the products of combustion in the diving and uptake flues to travel in proximity to the side walls of the base of the stove which forms the side walls of the portions of the diving and uptake flues that extend through the base.

2. A base-burner provided with a diving flue, an uptake flue and an intermediate air-circulating flue arranged at the back of the stove and extending approximately the full width of same, a hollow base, a hollow member arranged inside of the base and spaced away from the walls thereof so as to form a continuous passageway for the products of combustion which travel through said diving and uptake flues, said hollow member communicating with the lower end of the air-circulating flue at the back of the stove, and means for directing cold air into said hollow member.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this fourth day of November, 1909.

PETER A. PAMPLIN.

Witnesses:

WELLS L. CHURCH,
GEORGE BAKEWELL.