

C. A. PFANSTIEHL.
ELECTRIC STOVE.
APPLICATION FILED NOV. 11, 1912.

1,062,299.

Patented May 20, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

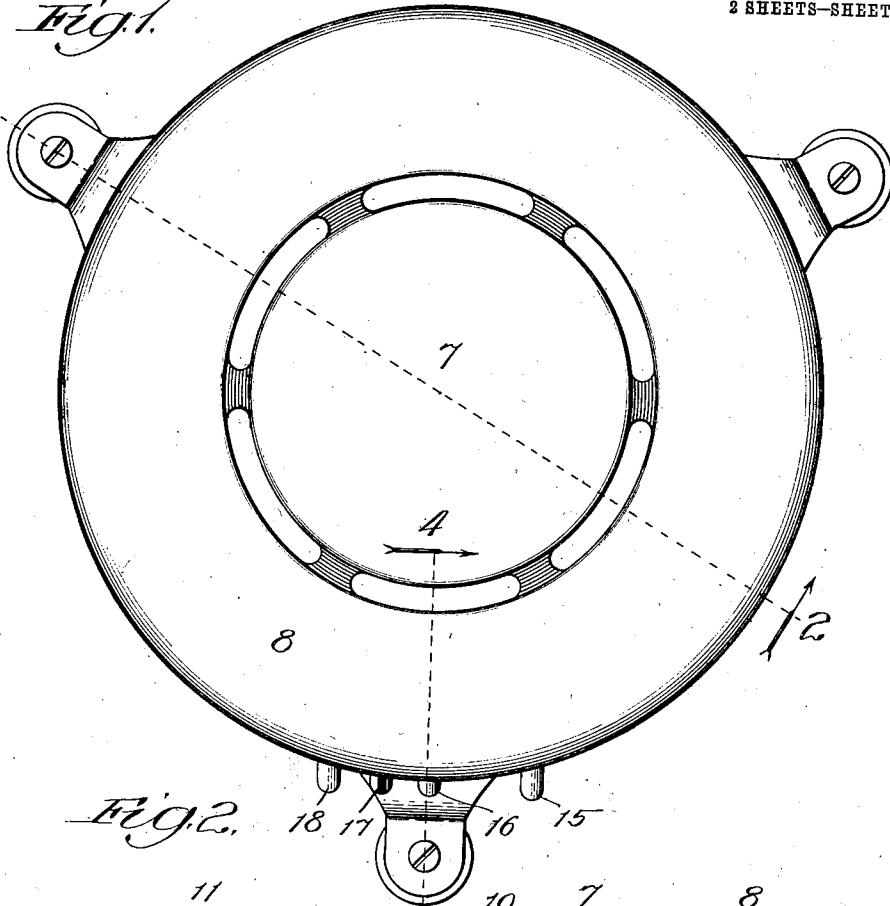
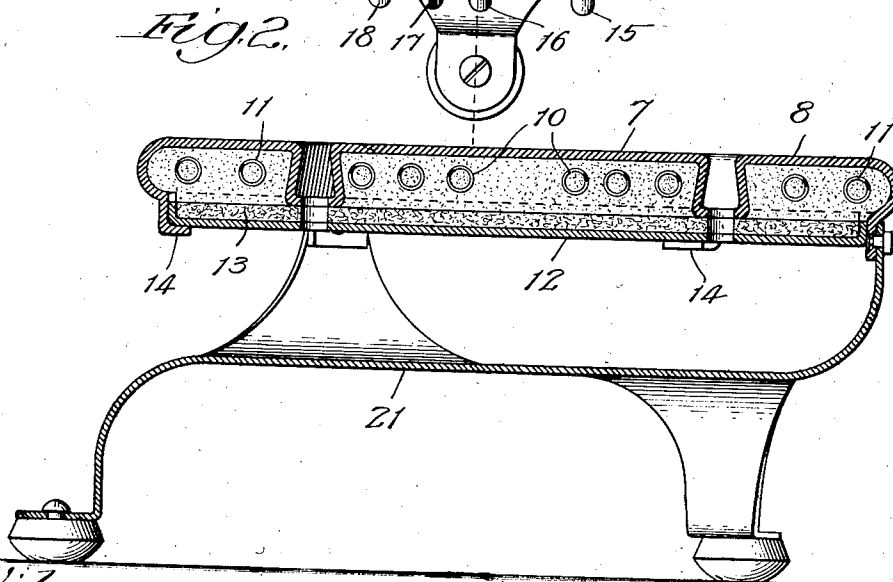


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

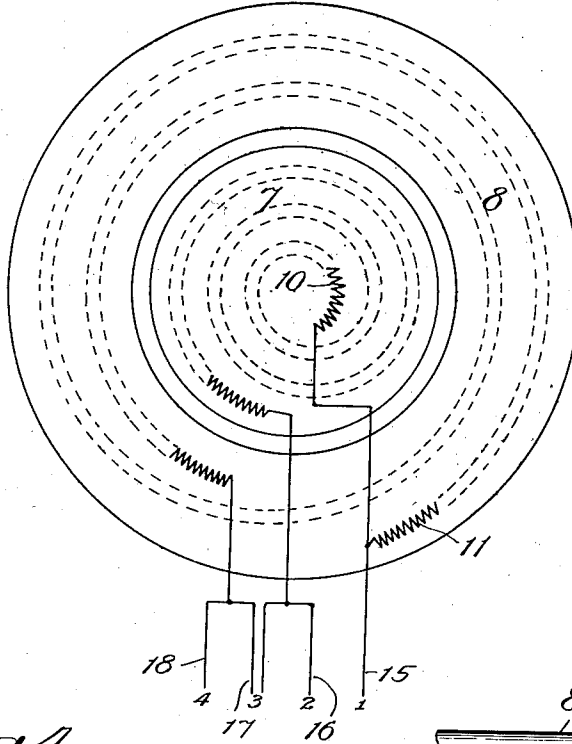


Fig. 4.

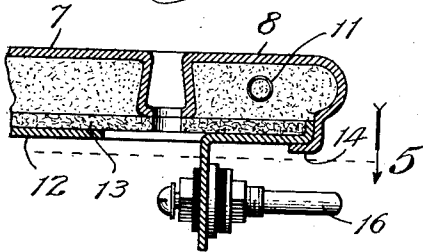


Fig. 6.

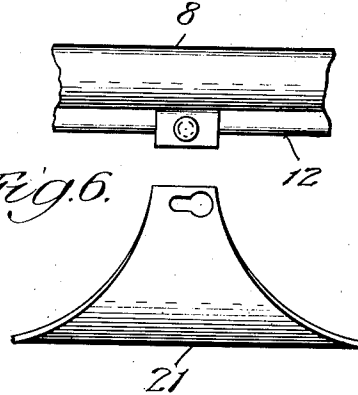
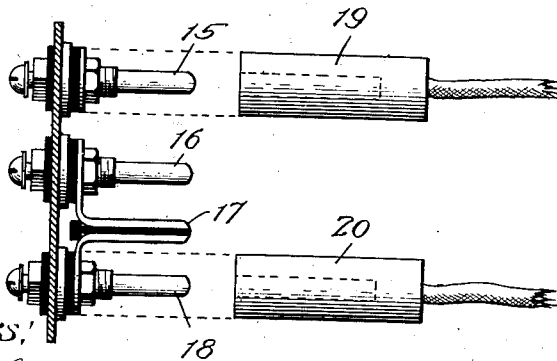


Fig. 5.



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UNITED STATES PATENT OFFICE.

CARL A. PFANSTIEHL, OF NORTH CHICAGO, ILLINOIS.

ELECTRIC STOVE.

1,062,299.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed November 11, 1912. Serial No. 730,634.

To all whom it may concern:

Be it known that I, CARL A. PFANSTIEHL, a citizen of the United States, residing at North Chicago, in the county of Lake and State of Illinois, have invented a new and useful Improvement in Electric Stoves, of which the following is a specification.

My invention relates to certain new and useful improvements in electric stoves, and is fully described and explained in the specification and shown in the accompanying drawings, in which:—

Figure 1 is a plan view of my improved device; Fig. 2 is a diametrical section on the line 2, of Fig. 1; Fig. 3 is a diagrammatic view of the circuit; Fig. 4 is a radial section on the line 4 of Fig. 1; Fig. 5 is a horizontal section on the line 5 of Fig. 4, and Fig. 6 is a side elevation showing the manner in which the upper part of the stove is attached to the base.

Referring to the drawings, 7 is the central part of the top plate of the stove; 8 is an annulus surrounding the same. These two parts being made of sheet-metal separated by an annular depression formed by bending down the sheet-metal of which both the central part and the annulus are composed. The bottom of the depression is punched out to leave short connecting webs between the center and the annulus. The outer margin of the annulus is carried down, in the form illustrated, and the space within the same, as well as that within the central top-plate, is filled with cement in which I thread a spiral coil of a suitable resistor or resistance-element. The coil within the central part of the stove is indicated by 10 and that in the annulus by 11, and as will hereinafter be explained, these coils are made independent and with separate terminals.

Underneath the top part of the stove is a pan 12, perforated, however, by openings which register with the openings in the bottom of the depression between the annulus and central part of the top-plate, and in this pan is a sheet of asbestos or other insulating material 13, likewise similarly perforated, so that any material which falls into the depression between the annulus and center of the stove will fall through the depression and not accumulate and burn. The pan is held in position by ears 14 on the top-plate which are turned underneath the pan 12. Thus, there is provided a very

compact and rigid heating member to which when current is applied and a base attached, nothing else need be added for general purposes. The heating member is made with the central part and the separate annulus for the following reasons: For general cooking, a stove of considerable diameter is required and, in this case, both parts of the heating member will be supplied with current at once. However, for making coffee in the commonly used percolator-type of coffee-pot only a very small heating surface is required, and for such purposes the central part of the present stove is designed. This central member, as shown, is of substantially the exact size required for this purpose, and is satisfactory in such operation when energized alone. The outer member may be energized by itself, when desired, for certain types of cooking, as for instance, where a moderate heat is required as in a chafing-dish at certain times of its operation, or the two members can be energized in series with the consumption of very small current to maintain a gentle heat. To accomplish these results four plugs are provided, as shown in Fig. 5, these being supported as shown in Fig. 4, by a downwardly-projecting flange on the pan 12. These four plugs are indicated, respectively, by 15, 16, 17 and 18. The plug 15 is attached to one end of both the coils of the heating member, as shown in the diagrammatic view in Fig. 3. The plug 16 is attached to the opposite end of the inner coil or that in the central part of the stove, while the plug 18 is attached to the corresponding end of the outer coil, or that in the annulus of the stove. The plug 17 is a compound-plug made of two halves insulated from each other as shown in Fig. 5, one half being in electrical connection with the plug 16 and the other in electrical connection with the plug 18. Thus when connection is made with the plug 17 access is given to one end of both the coils of the stove. 19 and 20 are two jacks mounted on the ends of flexible cords and adapted, at will, to be inserted upon the plugs, but these jacks are made of such diameter and the plugs 16, 17 and 18 are so placed with reference to that diameter that the jacks cannot be placed on two of said plugs which are adjacent to each other. In other words, if one jack is placed on the plug 15, the jack 20 can be placed on either of the plugs 16,

17 or 18, but if the jack 19 be placed on the plug 16, then the jack 20 can only be placed on the plug 18. As a result any desired arrangement can be obtained but it is impossible to get a short circuit as would be obtained were the jacks put say, for instance, on the plugs 16 and 17 simultaneously, or on the plugs 17 and 18 simultaneously. If the jack 19 be put on the plug 15 and the plug 20 on the plug 16, the center of the stove will be heated. If the plug 20 be put on the plug 18 the outer annulus will be energized, and if the jack 20 be put on the plug 17, both sections of the stove will be heated. On the other hand if the jacks 19 and 20 be put on the plugs 16 and 18, the only other possible positions they can occupy, then in an obvious manner, current will flow through both coils in series, thereby heating the entire stove but to a very slight degree.

The entire structure above described is supported by a base 21 which is stamped up out of sheet-metal. This base consists of a plate of sheet-metal with three downwardly-stamped legs and three upwardly-stamped projections, each of which has, as shown in Fig. 6, a slot provided with an enlarged end adapted to engage with a projecting stud upon a downwardly-projecting part of the top-plate of the stove. Thus, by slightly rotating the top-plate with reference to the base and springing out these upward projections thereof, the top-plate can be removed for ready cleaning of the base, but, in practice, the space is such that unless the base requires scouring it can be cleaned off without such removal of the top.

I realize that considerable variation is possible in the details of the construction herein shown and described, and I therefore do not intend to limit myself to such construction specifically; my intention being, in the claims hereinafter set forth, to specify all the novelty which is inherent in the construction illustrated.

What I claim as new and desire to secure by Letters Patent is—

1. An electric stove having a central circular part, an outer annular part concentric therewith, resistors for heating each part independently of the other, and means to lead current to said resistors independently, said two parts being separated to afford between them an annular air-space whereby, when the central part is heated alone the conduction of heat to the outer annulus is substantially prevented.

2. An electric stove having a central circular part, an annular part concentric therewith, resistors for heating said parts independently, means to lead current to said resistors, said parts being separated to afford between them an annular heat-insulating space whereby when the central part is

heated alone the outer annulus remains substantially unheated.

3. An electric stove having a central part and an outer annulus, a resistor in each of said parts, means to lead current to said resistors independently or simultaneously in parallel or in series, said means consisting of four plugs, one connected to one end of both resistors, one to the other end of one resistor and the other to the end of the other resistor, and a fourth having two parts, one of which is connected to one end of one resistor and the other is connected to the corresponding end of the other resistor, and jacks adapted to fit the first-named plug and either of the others, or alternatively, to fit simultaneously the second and third-named plugs, the second, third and fourth plugs being arranged as described at such intervals that the jacks can not fit adjacent plugs of the second, third and fourth simultaneously.

4. An electric stove having a central part and an outer annulus, a resistor in each part, a series of four plugs, the first of which is connected to one end of both resistors, the second of which is connected to the opposite end of one resistor, the fourth of which is connected to the opposite end of the other resistor and the third of which has two parts, one having electrical connection with the second and the other electrical connection with the fourth plugs, jacks adapted to fit said plugs, the second, third and fourth plugs being so placed that the jacks can not simultaneously be placed on adjacent plugs thereof but the first plug being placed at sufficient distance from the second that both jacks can fit the first and second plugs, for the purpose set forth.

5. In an electric stove, a top-plate having a circular depression between its center and circumference whereby it is divided into a central part and an outer annulus, a resistor in each part, a plastic-insulating material surrounding the resistors and filling the top-plate.

6. In an electric stove, a top-plate having a circular depression between its center and circumference whereby it is divided into a central part and an outer annulus, a resistor in each part, a plastic-insulating material surrounding the resistors and filling the top-plate, said depression being cut through at intervals, for the purpose set forth.

7. In an electric stove, a circular plate with a peripheral flange and provided with a circular depression between the flange and the center dividing the top-plate into an inner part and an outer annulus, resistors in said inner part and outer annulus, and a body of cementitious-insulating material filling the central part and the outer annulus thus formed.

8. An electric stove having a top-plate

with a downwardly-turned flange and a circular depression between the flange and the center dividing the top-plate into a circular central part and an outer annulus, resistors
5 in said parts, cementitious-insulating material filling said parts and surrounding the resistors, an asbestos plate beneath the top-plate and its contents, a pan beneath the asbestos plate, and means consisting of inwardly-turned tongues for holding the parts
10 together.

9. In an electric stove, an upper part and a base, the base consisting of a plate with downwardly-turned radial projections to
15 form legs, and upwardly-turned radial projections attached to the top part of the stove, for the purpose set forth.

10. In an electric stove a base consisting of a plate of sheet-metal with downwardly-turned projections to form legs, and upwardly-turned projections to support a heating member. 20

11. In an electric stove a top-plate, a heating element within the same and a downwardly-turned flange integral therewith, and a series of plugs carried by said
25 flange, for the purpose set forth.

In testimony whereof I have hereunto set my hand this 23 day of October, 1912.

CARL A. PFANSTIEHL.

In presence of two subscribing witnesses:

E. D. TUTTLE,

J. LANDERMAN.