No. 843,653. PATENTED FEB. 12, 1907.

R. WUFFLI.

GAS BURNER FOR SAD IRONS.

APPLICATION FILED JUNE 28, 1906.

Fig 1

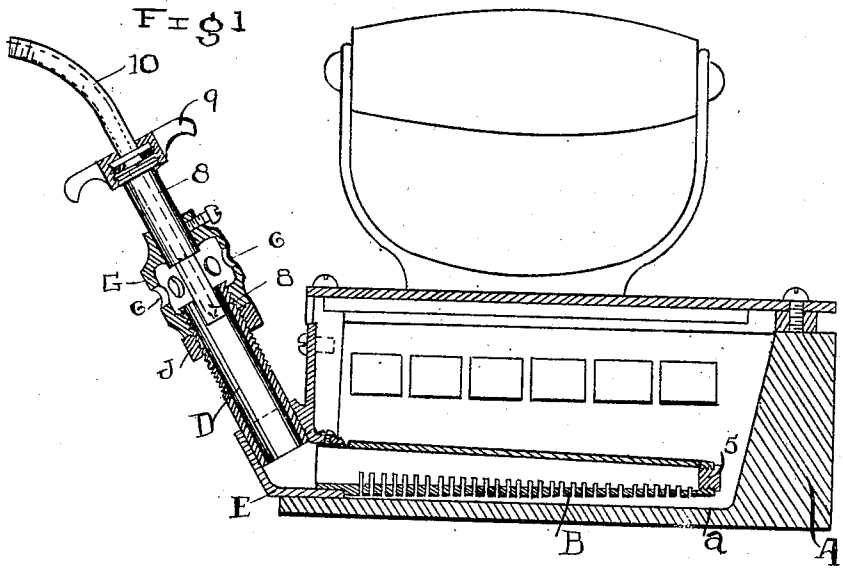


Fig 2

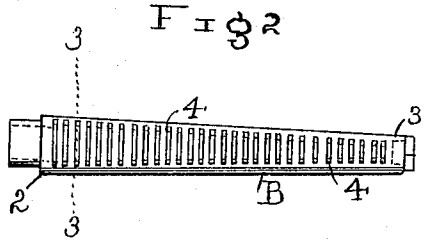
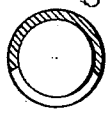


Fig 3



ATTEST

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UNITED STATES PATENT OFFICE.

ROBERT WUFFLI, OF CLEVELAND, OHIO.

GAS-BURNER FOR SAD-IRONS.

No. 843,653. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed June 28, 1906. Serial No. 323,892.

To all whom it may concern:

Be it known that I, ROBERT WUFFLI, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Gas-Burners for Sad-Irons; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which is appertains to make and use the same.

My invention relates to improvements in gas-burners for sad-irons; and the invention consists in the construction of the burner substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal sectional elevation of the sad-iron and of my improved burner located therein and the gas and air connections therewith, as hereinafter more fully described. Fig. 2 is a plan view of the burner-tube or burner proper separate from the other parts; and Fig. 3 is a cross-section on line 3 3, Fig. 2.

In the construction of burners for sad-iron in which the burner is located directly over the bottom of the iron and the bottom is comparatively thin, as measured by the full depth of the iron, it has been somewhat of a problem to get a burner which would distribute the heat uniformly over the surface of the iron and which would not heat one point more than another or produce excessive heat at any given point. It will be understood, of course, that in a device of this kind the gas necessarily is under more or less pressure and which is the normal pressure of the place or town where the sad-iron is to be used. If it be in a town or city and the gas be of the manufactured variety, it will have the pressure that is ordinarily obtained at a gas-jet, and the same is true if natural gas be used and whether it be in a town, city, or other place, because in any event such gas will have to be supplied under pressure or it cannot be supplied at all. Hence there has also been difficulty on this account, because the pressure was liable to drive the gas to the farthest point in the burner rather than to distribute the gas at all points, and I have especially found this to be troublesome in burners having a straight bore and adapted to carry the gas full length without obstructions. For these reasons especially the burner B is fashioned with a gradual taper from its base or inner end 2 to its outer end or extremity 3, thus reducing the bore or interior thereof proportionately with its length and impeding the flow of the gas to the front or forward end, as it has a tendency to do and as would occur if it were of uniform cross-section. Auxiliary to this and having the same purpose in view I provide the burner with transverse exit-slots 4 of gradually-decreasing length or size from base 2 forward to the front end 3, so that there will be more resistance to the outflow of gas from the burner as the farther extremity is approached and the tendency of the gas to jet to the front be counteracted. These two features of construction—the gradual taper and the reduced slots—serve to equalize the discharge of the gas from the burner along the entire length thereof and to maintain an equal flame over the bottom surface *a* of the sad-iron A.

The outer extremity or end of the burner is closed with a plug 5, while the base or inner end is open to the supply of mixed air and gas through short pipe D. The immediate support E for the burner-tube is fixed to the rear of the sad-iron and constitutes the permanent support of the burner therein, as shown.

G is the mixer, which is threaded upon the upper and outer end of tube D and rests against jam-nut J, and the mixer can be run up or down upon tube B, according as more or less air is wanted to mix with the gas and also according to the pressure or kind of gas that is to be used. Obviously if the mixer were run down upon the tube D, so that the upper end thereof were to project in front of the air-inlet openings 6 to the mixer, it would impede the flow of air to the gas, while a reverse position of the mixer would increase such flow. The gas enters tube D through jet-pipe 8, which is fixed in mixer G, and carries a coupling-nut 9, engaging a flange on gas-supply connection 10. Jet 8 projects through the mixer into pipe D, so that air is drawn in about the same and the said jet is adjustable in the mixer.

What I claim is—

1. A gas-burner for sad-irons having a

bore tapered in straight lines uniformly from end to end and outlets for the gas along the bottom of the burner having greatest area nearest the inlet for the gas and smallest area at the opposite extremity of the burner.

2. A gas-burner for sad-irons tapering uniformly internally from its base to its opposite end and provided with transverse slots in its bottom diminishing in length in proportion to the diminution of the cross-section of the bore of said burner.

In testimony whereof I sign this specification in the presence of two witneses.

ROBERT WUFFLI.

Witnesses:
C. A. SELL,
R. B. MOSER.