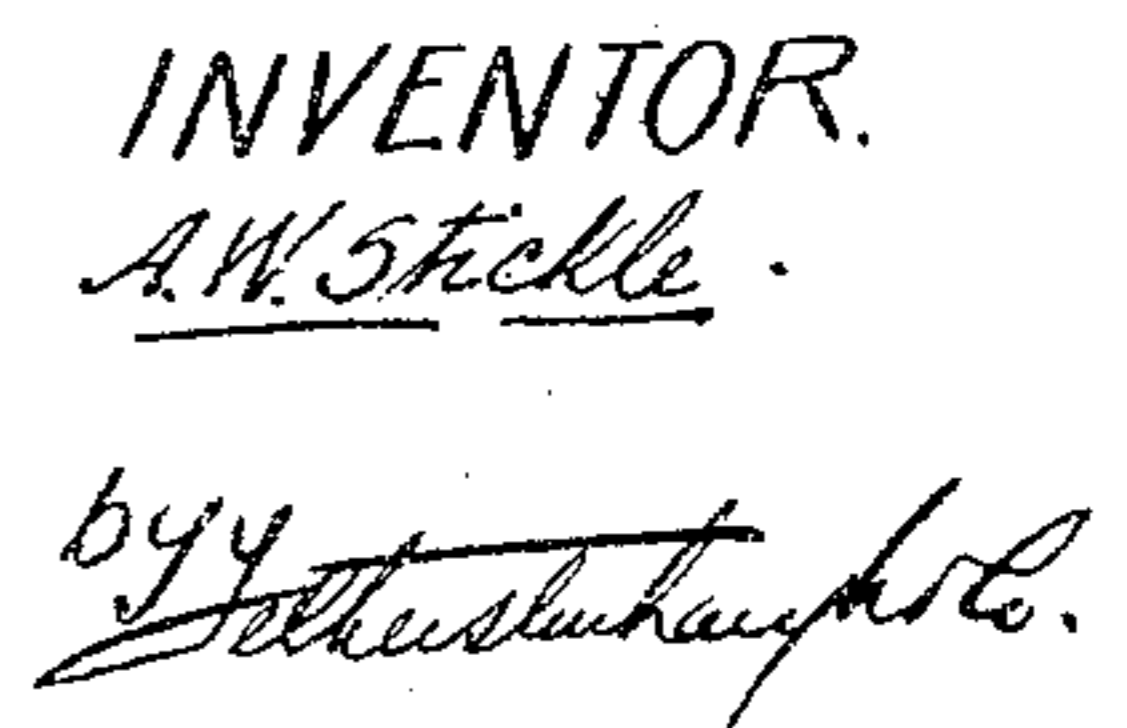


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UNITED STATES PATENT OFFICE.

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CHARCOAL-STOVE.

948,259.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ARTHUR WELLINGTON STICKLE, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Charcoal-Stoves, of which the following is the specification.

My invention relates to improvements in charcoal stoves, and the object of the invention is to devise a cheap and convenient stove for light cooking in which the consumption of fuel will be reduced to a minimum.

A further object is to make the stove readily applicable to any cooking range preferably for summer cooking, so that a draft will be carried up the ordinary flue of the range and yet there will be little radiation of heat from the stove itself.

A still further object is to make the stove readily adaptable as an independent stove for camping or other purposes.

My invention consists of making the main body of the stove of sheet metal and the top preferably of cast metal, a fire pot located within the casing and made of cast metal and having openings in the front near the bottom, a chamber in front of the fire pot into which such openings extend, a down draft pipe provided with a suitable damper extending into the said chamber, a flue plate extending from the fire pot rearwardly, a flue extending downwardly through the plate and designed to communicate with the opening in the range in which the ordinary range lid is placed, a thimble extending out from the back of the stove and provided with a suitable cap, the parts being otherwise constructed and arranged as hereinafter more particularly explained.

Figure 1, is a perspective view showing my improved charcoal stove, portion of the front thereof being broken away to exhibit the interior construction. Fig. 2, is a longitudinal section of the stove and section of the range on which it is placed. Fig. 3, is a longitudinal section showing the stove as an independent stove adaptable for camping or other purposes. Fig. 4, is a cross section through the fire pot.

In the drawings like characters of reference indicate corresponding parts in each figure.

A is the outer casing of the stove, which is preferably made of sheet metal and B the

top, which is preferably made of cast iron and provided with a downwardly extending edge flange to fit over the top edge of the casing. The outer casing comprises the bottom A', the front A², the back A³ and the sides A⁴ A⁴. The top B is provided with the usual bridge B' and lids B².

C is the fire pot, the front C' and back C² of which incline inwardly from top to bottom, the front being provided with perforations C³. The sides C⁴ of the fire pot are located at a distance from the walls A⁴, so as to leave dead air spaces 2, which are closed in front by the front wall C'.

D is a down draft pipe extending into the chamber 3 in front of the fire pot C. The down pipe is provided at the top with a swing plate damper D'.

E is a sheet metal horizontal partition, which is fastened at the front to the horizontal flange C⁵ forming portion of the fire pot and is connected to a downwardly extending vertical plate E' at the back. The plate E is turned up at E² at the sides and suitably riveted to the sides of the casing. The dead air spaces 2 communicate with the dead air space 2' beneath the plate E.

F is a vertical flue extending through the plate E and the bottom A' being suitably flanged at the top and bottom. G is a horizontal flue extending through the back A³. H is a cap designed to normally close the horizontal flue when my charcoal stove is used over a kitchen range. In the case where my charcoal stove is so used the flue F extends down and communicates through the stove opening I in which the lid is placed usually with the flue J of the stove (see Fig. 2).

In Fig. 3, I show my charcoal stove used as a camp or independent stove, and not over a range. In this case the elbow K of the smoke pipe is connected to the flue thimble G. In this case the cap H is fitted into the top of the flue F, so as to close the same and direct the products of combustion toward the flue G and pipe K.

Having now particularly described the nature of my invention I shall now describe its utility. When the damper D' is open a down draft passes through the chamber 3 and openings C³ up through the charcoal or other coal in the fire pot C, thence by the top flue 4 above the plate E and vertical

flue F down to the main flue J of the stove. The double walls A⁴ and C⁴ of the fire pot forming the dead air chambers 2 prevent the radiation of the heat from the fire pot to a great extent and the full benefit of the heat is obtained at the top of the stove.

In order to clean out the fire pot I provide a lid L at the bottom thereof formed after the manner of a stove lid, such lid being immediately over the stove hole, which is usually covered by the ordinary stove lid, but which is left open where my charcoal stove is used for the purpose of allowing the ashes to be precipitated into the ordinary fire box of the stove.

When it is desired to use the stove as an independent stove for camping or other purposes the products of combustion pass outwardly over the plate E and through the pipe K.

Such a stove as I have described is simple, substantial and durable, the radiation of the heat is reduced to a minimum and the greatest benefit possible is obtained from such heat in cooking the victuals.

What I claim as my invention is:

1. A charcoal stove comprising a casing having openings in its top and a flue opening in its rear side, and in its bottom, a fire-pot at one end of the casing, said fire-pot being of less width than the casing whereby a space is left between the sides of the casing and the sides of the fire-pot, and the front wall of the fire pot being perforated near its bottom, and said front wall extending from one side of the casing to the other and forming a front chamber in the casing, and the rear wall of the fire-pot having an opening adjacent its upper end, a horizontal plate connected with said rear wall adjacent the opening, and extending rearwardly and having its sides secured to the sides of the casing so as to form a horizontal flue in the upper part of the casing communicating with the upper portion of the fire-pot and forming a lower air chamber in communication with the side spaces in the casing, a vertical plate supporting the rear end of the horizontal plate, said vertical plate resting on the bottom of the casing, a vertical flue extending downwardly through the horizontal plate and passing through a flue opening in the bottom of the casing, and a cap adapted to either close said flue or the flue opening in the end of the stove.

2. A stove comprising a casing, a fire-pot therein located near one end of the casing, said fire-pot being of less width than the

width of the casing so as to provide air spaces between its sides and the sides of the casing, and the front wall of the fire-pot extending from side to side of the casing and being perforated near its lower end, and said front wall and the front wall of the casing forming an air chamber, a downward draft tube passing through the top of the casing and extending into said air chamber, a movable cover for said tube, a horizontal plate within the casing and secured to the sides thereof and to the rear wall of the fire pot said plate being spaced from the top of the casing, said fire pot at its upper end having an opening therein communicating with the space above said horizontal plate, a flue passing through the horizontal plate and through the bottom of the casing, and a plate extending from the rear end of the horizontal plate to the bottom of the casing and forming with the horizontal plate an air chamber communicating with the air spaces at the sides of the fire pot.

3. A stove comprising a casing, a fire-pot within the casing located near one end thereof, said fire-pot being of less width than the width of the casing, so as to provide air spaces between the sides of the fire-pot and the sides of the casing, and the front wall of the fire pot and the front wall of the casing forming an air chamber, said front wall of the fire pot extending from side to side of the casing and being perforated near its lower end, a tube passing through the top of the casing and extending downwardly into the air chamber, a cover for said tube, the rear wall of the fire-pot being perforated near its upper end to form an outlet, a horizontal plate connected with the said rear wall just below said perforation and having its side edges connected with the sides of the casing, a vertical plate extending from the rear end of the horizontal plate to the bottom of the casing and forming with the said horizontal plate an air chamber communicating with the air spaces, a flue passing through the horizontal plate into the bottom of the casing, a flue passing through the rear end of the said casing, a cap adapted to cover either the last mentioned flue or the flue passing through the horizontal plate, the top of the casing having openings therein, and covers for said openings.

ARTHUR WELLINGTON STICKLE.

Witnesses:

B. BOYD,

R. COBAIN.